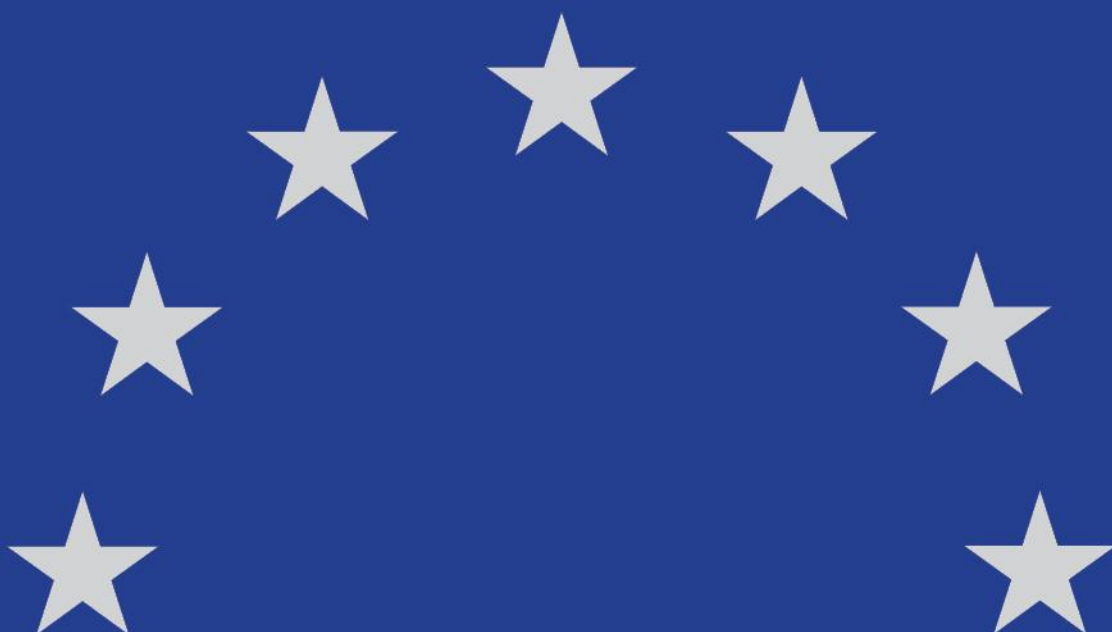


Open Access policies in EU Member States and beyond

Independent Expert Report



Expert study on Open Access policies in EU Member States and beyond

European Commission

Directorate-General for Research and Innovation

Directorate RTD.A — ERA & Innovation

Unit A.4— Open Science and Research Infrastructures

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Open Access policies in EU Member States and beyond

Final Report

Daniel Spichtinger

Contents

Executive Summary	12
1. Introduction	18
1.1. Scope and structure of the report	18
1.2. Methodology	18
1.3. Limitations	19
1.4. Acknowledgements	20
2. Open access in the EU Member States: comparative analysis ..	20
2.1. Policy instrument types	20
2.2. Bindingness of requirements	22
2.3. Scope of policies	23
2.4. Embargoes vs immediate open access.....	24
2.5. Copyright: rights retention and secondary publication rights	26
2.6. Training or guidance for researchers.....	27
2.7. Funding for open access	27
2.8. Repository Requirements Including FAIR Principles, Metadata and Persistent Identifiers	28
2.9. Links to researcher assessment	29
2.10. Identified costs of, or gains from, applying open access policies.....	29
2.11. Policy elements with sparse coverage across Member States	29
2.12. Implementation and monitoring of open access policies	30
2.13. Impact evaluations	32
3. Benchmarking with non-EU countries	33
3.1. Introduction and country selection	33
3.2. General characteristics of open access policies.....	34
3.3. Context of open access policies	36
3.4. Implementation and monitoring of open access policies	40
4. The EU-level framework: state of play and assessment	41
4.1. The Commission Recommendations of 2012 and 2018	41
4.2. Legislation relevant to research data.....	43
4.3. ERA Policy Agenda Actions on Open Access and Open Science	45

4.4.	Council Conclusions on Open Science and Open Access	46
4.5.	OA/OS in the EU Framework Programmes: dedicated projects	47
4.6.	Other relevant initiatives	48
4.7.	Conclusions on the EU level state of play	50
5.	Why do we need to act?	51
5.1.	Problem definition	51
5.2.	What are the problem drivers?	53
5.3.	How likely is the problem to persist?	55
6.	What should be done? (Policy Recommendations).....	55
6.1.	On the Member State level	55
6.2.	On the EU level	62
7.	How should it be done? (Implementation).....	68
7.1.	On the Member State level	68
7.2.	On the EU level	68
8.	Conclusions: the long and winding road to open access	69

Annex A Open Access in Horizon Europe and in the EU Member States⁷¹

1.	Horizon Europe	71
1.1.	General characteristics	71
1.2.	Context of open access policies	72
1.3.	Implementation and monitoring of open access policies	75
2.	Belgium.....	75
2.1.	General characteristics	75
2.2.	Context of open access policies	79
2.3.	Implementation and monitoring of open access policies	82
3.	Bulgaria	83
3.1.	General characteristics	83
3.2.	Context of open access policies	86
3.3.	Implementation and monitoring of open access policies	90

4.	Czechia	91
4.1.	General characteristics	91
4.2.	Context of open access policies	95
4.3.	Implementation and monitoring of open access policies	99
5.	Denmark	101
5.1.	General characteristics	101
5.2.	Context of open access policies	103
5.3.	Implementation and monitoring of open access policies	108
6.	Germany	110
6.1.	General characteristics	110
6.2.	Context of open access policies	113
6.3.	Implementation and monitoring of open access policies	117
7.	Estonia.....	120
7.1.	General characteristics	120
7.2.	Context of open access policies	123
7.3.	Implementation and monitoring of open access policies	126
8.	Ireland.....	128
8.1.	General characteristics	128
8.2.	Context of open access policies	130
8.3.	Implementation and monitoring of open access policies	134
9.	Greece.....	137
9.1.	General characteristics	137
9.2.	Context of open access policies	140
9.3.	Implementation and monitoring of open access policies	143
10.	Spain	146
10.1.	General characteristics	146
10.2.	Context of open access policies	148
10.3.	Implementation and monitoring of open access policies	153

11.	France	156
11.1.	General characteristics	156
11.2.	Context of open access policies	159
11.3.	Implementation and monitoring of open access policies	164
12.	Croatia	167
12.1.	General characteristics	167
12.2.	Context of open access policies	169
12.3.	Implementation and monitoring of open access policies	172
13.	Italy.....	174
13.1.	General characteristics	174
13.2.	Context of open access policies	178
13.3.	Implementation and monitoring of open access policies	183
14.	Cyprus	185
14.1.	General characteristics	185
14.2.	Context of open access policies	187
14.3.	Implementation and monitoring of open access policies	190
15.	Latvia	191
15.1.	General characteristics	191
15.2.	Context of open access policies	193
15.3.	Implementation and monitoring of open access policies	196
16.	Lithuania.....	198
16.1.	General characteristics	198
16.2.	Context of open access policies	200
16.3.	Implementation and monitoring of open access policies	202
17.	Luxembourg	204
17.1.	General characteristics	204
17.2.	Context of open access policies	207
17.3.	Implementation and monitoring of open access policies	210

18.	Hungary	212
18.1.	General characteristics	212
18.2.	Context of open access policies	214
18.3.	Implementation and monitoring of open access policies	218
19.	Malta.....	219
19.1.	General characteristics	219
19.2.	Context of open access policies	221
19.3.	Implementation and monitoring of open access policies	225
20.	The Netherlands.....	227
20.1.	General characteristics	227
20.2.	Context of open access policies	230
20.3.	Implementation and monitoring of open access policies	234
21.	Austria	238
21.1.	General characteristics	238
21.2.	Context of open access policies	241
21.3.	Implementation and monitoring of open access policies	244
22.	Poland.....	246
22.1.	General characteristics	246
22.2.	Context of open access policies	248
22.3.	Implementation and monitoring of open access policies	251
23.	Portugal	253
23.1.	General characteristics	253
23.2.	Context of open access policies	256
23.3.	Implementation and monitoring of open access policies	261
24.	Romania.....	262
24.1.	General characteristics	262
24.2.	Context of open access policies	265
24.3.	Implementation and monitoring of open access policies	269

25.	Slovenia	271
25.1.	General characteristics	271
25.2.	Context of open access policies	274
25.3.	Implementation and monitoring of open access policies	279
26.	Slovakia	281
26.1.	General characteristics	281
26.2.	Context of open access policies	283
26.3.	Implementation and monitoring of open access policies	287
27.	Finland.....	290
27.1.	General characteristics	290
27.2.	Context of open access policies	294
27.3.	Implementation and monitoring of open access policies	298
28.	Sweden	302
28.1.	General characteristics	302
28.2.	Context of open access policies	306
28.3.	Implementation and monitoring of open access policies	311
	Annex B Benchmarking with non-EU countries	313
1.	Brazil.....	313
1.1.	Policy instrument.....	313
1.2.	Binding vs voluntary	313
1.3.	Scope of outputs	314
1.4.	Embargo and openness	314
1.5.	Licensing and rights.....	314
1.6.	Infrastructure	314
1.7.	Funding and incentives.....	315
1.8.	Governance and monitoring	315
2.	Canada.....	315
2.1.	Policy instrument.....	315
2.2.	Binding vs voluntary	316

2.3.	Scope of outputs	316
2.4.	Embargo and openness	316
2.5.	Licensing and rights.....	317
2.6.	Infrastructure	317
2.7.	Funding and incentives	317
2.8.	Governance and monitoring	317
3.	China.....	317
3.1.	Policy instrument.....	317
3.2.	Binding vs voluntary	318
3.3.	Scope of outputs	319
3.4.	Embargo and openness	319
3.5.	Licensing and rights.....	319
3.6.	Infrastructure	319
3.7.	Funding and incentives	320
3.8.	Governance and monitoring	320
4.	Colombia	321
4.1.	Policy instrument.....	321
4.2.	Binding vs voluntary	321
4.3.	Scope of outputs	322
4.4.	Embargo and openness	322
4.5.	Licensing and rights.....	322
4.6.	Infrastructure	323
4.7.	Funding and incentives	323
4.8.	Governance and monitoring	323
5.	Japan	323
5.1.	Policy instrument.....	323
5.2.	Binding vs voluntary	324
5.3.	Scope of outputs	324
5.4.	Embargo and openness	324
5.5.	Licensing and rights.....	325
5.6.	Infrastructure	325
5.7.	Funding and incentives	325
5.8.	Governance and monitoring	326

6.	Switzerland.....	326
6.1.	Policy instrument.....	326
6.2.	Binding vs voluntary	327
6.3.	Scope of outputs	327
6.4.	Embargo and openness	327
6.5.	Licensing and rights.....	327
6.6.	Infrastructure	328
6.7.	Funding and Incentives.....	328
6.8.	Governance and Monitoring	328
7.	United Kingdom	329
7.1.	Policy instrument.....	329
7.2.	Binding vs voluntary	330
7.3.	Scope of outputs	331
7.4.	Embargo and openness	331
7.5.	Licensing and rights.....	332
7.6.	Infrastructure	332
7.7.	Funding and incentives.....	333
7.8.	Governance and monitoring	333
8.	United States	334
8.1.	Policy instrument.....	334
8.2.	Binding vs voluntary	335
8.3.	Scope of outputs	336
8.4.	Embargo and openness	336
8.5.	Licensing and rights.....	336
8.6.	Infrastructure	337
8.7.	Funding and incentives.....	337
8.8.	Governance and monitoring	338
	Annex C Comparative summary tables	339
	Annex D EC Checklist for Open Access Policies	339

Glossary

Concept	Definition as used in this report
Article processing charge (APC)	Fee levied by a publisher to make an individual article openly available upon publication, typically in fully open access (Gold) or hybrid journals. Book processing charges (BPCs) are the equivalent for monographs. Several funders cap, restrict or have withdrawn APC reimbursement, particularly for hybrid journals.
Author's Accepted Manuscript (AAM)	The version of a scholarly article that has been accepted for publication after peer review but before publisher copy-editing, typesetting and pagination. See also Version of Record.
Bibliodiversity	Diversity of scholarly publishing models, venues and languages, including non-commercial, institutional and national publishing channels, pursued as a policy objective to counterbalance concentration in large commercial, APC-based publishing.
Bindingness (Binding vs voluntary)	Whether an open access provision imposes an enforceable obligation (statute, funder grant condition, employment contract) or constitutes a recommendation or encouragement. The report treats formally binding provisions that lack enforcement and implementation mechanisms as analytically equivalent to soft law in their practical effect.
Data management plan (DMP)	Document describing how research data are collected, documented, stored, shared and preserved during and after a project, typically required by funders and aligned with the FAIR principles.
Diamond open access (institutional OA)	Publication in journals or on platforms that are free of charge for both readers and authors (no APCs or BPCs), typically community-driven, institutionally operated and/or publicly funded. Diamond infrastructure avoids the equity and cost-escalation concerns associated with APC-based models but requires sustained public investment.
Embargo	Period following publication during which access to a deposited output (usually a scientific publication) is restricted. The report distinguishes publisher-imposed embargoes (set by contract), funder-imposed maxima (permitted under a mandate, e.g. 6 months STEM / 12 months SSH), and statutory embargoes attached to secondary publication rights. See also Immediate open access.
FAIR principles	Requirement that research data be Findable, Accessible, Interoperable and Reusable. FAIR does not equate to open: data can be FAIR while legitimately restricted.
Funder mandate	Open access requirement attached by a research funding organisation to its grant conditions, covering elements such as deposit, embargo maxima, Licensing and rights.
Gold open access	Immediate open access to the Version of Record through publication in a fully open access venue, frequently financed through APCs.
Green open access (self-archiving)	Open access achieved by depositing a version of the output (usually the AAM) in a repository, where it is made available immediately or after an embargo.

Concept	Definition as used in this report
Hybrid journal	Subscription journal that offers open access for individual articles against payment of an APC. Hybrid publishing is increasingly excluded from funder APC reimbursement and from new publishing agreements.
Immediate open access (zero embargo)	Open availability of an output at the time of publication, without any embargo period, as required by Horizon Europe and Plan S-aligned funder mandates.
National Point of Reference (NPR)	Member State representative designated under the Commission's Recommendation on access to and preservation of scientific information.
Null-and-void clause	Statutory provision rendering contractual terms that conflict with a secondary publication right unenforceable.
Open access (OA)	Free online availability of research outputs, permitting reading and, subject to licensing, reuse.
Open licence	Public licence, often from Creative Commons, defining permitted reuse of a work. Requirements in the ERA currently range from mandatory CC BY to recommended open licences to no specification.
Open peer review	Peer review models in which elements of the process (reviewer identities, review reports, author responses) are made transparent.
Open research data	Research data made available for access and reuse, by default under an open licence and in line with the FAIR principles, subject to the 'as open as possible, as closed as necessary' principle.
Open science (OS)	Umbrella term for practices making the research process and its outputs more transparent, accessible and reusable, encompassing open access to publications, open/FAIR research data and other elements such as open educational resources, open infrastructure, open source, citizen science and research assessment reform.
Persistent identifier (PID)	Long-lasting, resolvable reference to a digital object, person or organisation (e.g. DOI for outputs and data, ORCID for researchers), required or recommended by policies to enable identification, linking and monitoring.
Preprint	Version of a scholarly manuscript shared publicly before (or independently of) peer review, typically via a preprint server. Recognised in some policies as an early-sharing route; distinct from the AAM and the Version of Record.
Read-and-publish agreement (transformative agreement)	Contract between institutions or consortia and a publisher combining reading access to subscription content with open access publishing for affiliated authors. Initially intended as a transitional instrument.
Repository	Digital archive (institutional, disciplinary or national) for deposit, preservation and dissemination of research outputs and data. See also Trusted repository.

Concept	Definition as used in this report
Research assessment reform	Revision of researcher, project and institutional evaluation practices to recognise open science practices and reduce reliance on journal-based metrics, in line with DORA and the CoARA agreement.
Rights retention	Arrangement whereby authors retain sufficient rights over their manuscripts (typically by applying a prior open licence to the AAM) to deposit them immediately regardless of subsequent publisher agreements. Implemented as funder-mandated conditions (Plan S-aligned) or institutional policies; analytically distinct from statutory secondary publication rights.
Secondary publication right (SPR)	Statutory right allowing authors of (publicly funded) research to make their works available through a secondary channel, notwithstanding contractual arrangements with publishers. National SPRs differ in scope, funding thresholds, embargo periods, the presence of null-and-void protection, and retroactive application.
Soft law	Non-binding policy instruments such as recommendations, declarations and strategies.
Text and data mining (TDM)	Automated computational analysis of text and data.
Trusted repository	Repository meeting explicit quality criteria such as certification (e.g. CoreTrustSeal or equivalent), OpenAIRE compatibility, and persistent identifier and metadata standards. Horizon Europe requires deposit in trusted repositories.
Version of Record (VoR)	The final published version of an article as issued by the publisher, after copy-editing, typesetting and pagination. Restrictive copyright agreements attaching to the VoR are a principal obstacle that rights retention and secondary publication rights are designed to overcome. See also Author's Accepted Manuscript.

Executive Summary

This report sets out policy recommendations for strengthening open access to scientific publications and research data across the European Research Area (ERA). It is based on a comparative analysis of all 27 EU Member States, and benchmarking against eight non-EU countries.

Progress and persistent fragmentation

Progress towards open access in the European Research Area has been real but uneven. Over more than a decade, EU soft-law instruments, national strategies, funder mandates and, in some cases, national legislation (including but not limited to Secondary Publication Rights legislation) have undeniably advanced open access. However, they have not produced a coherent, consistent or convergent framework across the ERA. Instead, Member States continue to differ substantially in issues such as their choice of policy instrument, degree of legal bindingness, scope of coverage, embargo periods, copyright mechanisms, repository requirements, funding models, and monitoring arrangements. This fragmentation creates complexity for researchers, institutions and funders, especially in cross-border collaboration.

Key patterns

- Multi-instrument frameworks outperform single-instrument approaches. Where national legislation, funder mandates, and institutional-level support structures reinforce each other OA uptake is higher and most consistent. Purely voluntary approaches yield lower and more uneven results.
- Assessment-linked mandates produce measurable behavioural change. Where countries have meaningfully incorporated open access in assessment, this has accelerated adoption. This is a fast-moving field with around half of Member States now showing integration of open access into research assessment.
- Policies or legislation without institutional operationalisation (such as deposit workflows, library support, and compliance monitoring) do not seem to drive change.
- Diamond OA (sometimes also called institutional OA) is gathering speed. In many country chapters updates or revisions of the initial draft deliverables of this study involved new funding instruments, platform pilots, or journal-flipping programmes. However, most countries still treat Diamond OA as a future aspiration.
- Monitoring fragmentation makes ERA-wide progress difficult to monitor. While a number of countries have set up, or are in the process of setting up, national Open Science monitors, these (and the EOSC observatory) have structural limitations and often measure slightly different things; monitoring of open access in the EU's Horizon Europe Programme is also lacking.

The report identifies several central reasons why action is needed. First, fragmented national regimes impede the free circulation of knowledge (the Fifth Freedom) in the ERA and generate legal and administrative uncertainty. Second, in most Member States research assessment systems remain insufficiently aligned with open access and open science objectives, and researchers therefore often still face incentives that reward prestige and closed publication channels more than openness. Furthermore, the cost dynamics of scholarly publishing, with a significant rise in APC being flagged as a concern in many countries (including outside of Europe) represents an additional structural concern, particularly for under-resourced institutions and researchers (the equity dimension of open access). These problems are unlikely to resolve themselves under the current policy framework. At the same time the international competitive landscape is shifting: the United States, United Kingdom, Switzerland, and Japan have all moved toward or consolidated mandatory immediate open access.¹

The study proposes eleven recommendations at Member State level (MS-1 to MS-11) and eleven at EU level (EU-1 to EU-11). Recommendations at MS level are primarily addressed to national governments, research ministries, national funders, and research-performing organisations. Recommendations at EU level are primarily addressed to the European Commission, with some elements requiring Council and Parliament engagement.

Recommendations for Member States

Recommendation MS-1. Policy Instruments and Level of Obligation

Where not yet the case, establish a multi-instrument OA policy framework (national strategy + binding funder mandates + legislative provisions where feasible). Ensure formal adoption is accompanied by operational infrastructure, institutional capacity and support structures. Open access requirements for publicly funded research should be binding rather than merely aspirational, with clear compliance expectations.

Recommendation MS-2. Scope and Coverage

Cover both publications (at minimum journal articles, with a progressive trajectory toward monographs, book chapters, and other long-form outputs) and research data, with mandatory Data Management Plans aligned with the 'as open as possible, as closed as necessary' principle. These DMPs should evolve from static pdf files to becoming machine actionable (whilst remaining human readable).

¹ However, different countries outside the EU can operate under different licensing conditions or requirements for open access.

Recommendation MS-3. Timing and Embargoes

Move toward immediate open access (zero embargo) for publicly funded journal articles. Where not immediately feasible, set maximum embargoes of 6 months (STEM) and 12 months (SSH), with a trajectory toward elimination (phasing out). Indefinite or publisher-deferred embargoes should not be permitted.

Recommendation MS-4. Rights Retention, Copyright and Licensing

Ensure researchers have a legal basis for self-archiving through statutory secondary publication rights with zero embargo periods (or at least a clear trajectory towards zero), funder-mandated rights retention strategies, or both.

Recommendation MS-5. Licencing

Require CC BY licensing as default for publications and CC BY/CC0 for metadata. Permit justified departures as exceptions (e.g. for monographs).

Recommendation MS-6. Repositories, FAIR Data and Interoperability Requirements

Define minimum technical and governance requirements for trusted repositories (including PID use, open and persistent metadata, machine-readable licences, and APIs to support aggregation and TDM). For research data, require FAIR-compliant repositories. Consider establishing national repository quality certification mechanisms. Ensure national infrastructures connect to European infrastructures such as EOSC.

Recommendation MS-7. Funding and Sustainability

Treat OA related costs (including infrastructure, repositories, data stewardship and training) as part of core research system funding, rather than relying solely on project based or ad hoc allocations. Continue to diversify funding away from pure APC/transformation/read-and-publish models by supporting community based, not for profit and diamond OA publishing, building on emerging good practice. Track expenditure on APCs, reading and open access publishing agreements and infrastructure, including mandating publication of contract terms involving public funding and cost metrics as part of monitoring and reporting (see Rec MS-9).

Recommendation MS-8. Alignment with Research Assessment and Incentives

Formally integrate OA/OS into research assessment at institutional and funder levels. Participate in or align with CoARA. Update assessment frameworks to recognise diverse research output types. Discourage RPOs from providing perverse incentives through bonuses for publication in so-called "A-Tier" journals.

Recommendation MS-9. Monitoring, Reporting and Evaluation

Establish or update systematic national monitoring with a designated responsible body, regular reporting cycles, publicly available indicators (including OA rates by route and APC/public expenditure data). Monitoring methodologies should aim for cross-country comparability and aggregation at the EU level. Results should be publicly available. Provide national open access policy documents in a dedicated space, ideally shared for all Member States.

Recommendation MS-10. Limitations to Openness, Research Security, and Simplification

Coordinate OA policies with national strategies on research security, strategic autonomy and responsible internationalisation, including through ERA structures, treating them as complementary rather than competing agendas to avoid contradictory signals to researchers. Provide proportionate and transparent exceptions consistent with the “as open as possible, as closed (or as secure) as necessary” principle, codifying exception categories with clear criteria, time limits, and review mechanisms.

Recommendation MS-11. Implementation and Governance

Designate a national coordinating entity or mechanism with a clear mandate to align OA strategies and coordinate implementation across stakeholders, with clear milestones, KPIs and reporting lines in each Member State.

Recommendations for the EU level

Recommendation EU-1. Reporting, Monitoring and Guidance

The Commission should strengthen structured coordination and mutual learning mechanisms, by re-activating and upgrading the National Points of Reference (NPR) and by linking it to the ERA governance. The Commission should establish a systematic, periodic ERA-level monitoring and reporting framework for open access (potentially through the NPR). This should comprise a common indicator framework with standardised definitions, data sources, and collection methods. Monitoring data should be systematically reported and summarised, including national best practices, through a periodic follow-up to this study or through upgraded NPR reports with a finer granularity. All ERA-level monitoring data should be publicly available, machine-readable, and openly licensed.

Recommendation EU-2. OA and research data requirements in Horizon Europe 2028–2034 (FP10)

The Commission should maintain and, where justified by evidence, refine OA to publications and research data requirements in Horizon Europe 2028–2034 (FP10) ensuring continuity with existing standards while adjusting for lessons learned. This includes monitoring of OA compliance in Horizon Europe and its successor through the public Horizon Dashboard in a timely and reliable manner and with a high degree of granularity, covering the same indicators as proposed for Member States.

Recommendation EU-3. Simplification

Simplification measures should be designed “digitally by default” with structured templates, open standards, and interoperable tools and not by reducing the substance of open science requirements. The current DMP template should be reviewed, with the aim to make it machine actionable, making it easier to assess and evaluate DMPs.

Recommendation EU-4. Dedicated Open Science Project Funding

The Commission should continue to fund projects to further develop and investigate aspects of Open Science. The EC should use programme design (e.g. in widening, infrastructure or capacity-building actions) to incentivise adoption of baseline OA elements that are at the core of the Recommendations to Member States outlined in this Study.

Recommendation EU-5. Open Research Europe and Non-Commercial Publishing Infrastructure (Diamond OA)

Together with the Member States, the Commission should continue to support not-for-profit, Diamond and community-led publishing (inter alia through Horizon Europe), thus also addressing the equity dimension. Member States not yet participating in the Open Research Europe (ORE) funding consortium should be encouraged to join, and FP10 grant conditions should (continue to) treat ORE and equivalent non-commercial venues as fully eligible publication routes. The Commission should also continue to lead globally by supporting Diamond OA internationally and in particular in the context of the implementation of the UNESCO Recommendations.

Recommendation EU-6. Support for Interoperability, Repositories and Standards

The Commission should continue to invest in open access infrastructure such as the EOSC federation (including the EOSC Open Science Observatory) with clear bridges to national and institutional repositories. The European Union should support Member States with limited infrastructure capacity via targeted funding and technical assistance for repository development, certification and integration into EOSC.

Recommendation EU-7. Research Assessment Reform

The Commission should continue supporting Reforming Research Assessment, explicitly integrating it and the link to Open Access and Open Science in the ERA Act. Research assessment reform according to the CoARA principles should be consistently and ambitiously implemented in HE 2028-34, including in the European Research Council.

Recommendation EU-8. Coherence with the Research Security and Strategic Autonomy Agendas

The Commission should ensure that any open access provisions of the ERA Act and provisions for research security are designed as complementary instruments, not competing agendas. This requires explicit recognition that the majority of publicly funded research is not subject to security-sensitive restrictions and should not be affected by research security measures as well as guidance on maximising the share of materials (metadata, protocols, anonymised data, non-sensitive components) that can remain openly available even where primary outputs are restricted. The Commission should guard against the risk that research security becomes a catch-all justification for closure.

Recommendation EU-9. A European secondary publication right

The Commission should give serious consideration to proposing an EU-wide secondary publication right that provides a common legal basis for all researchers in the EU to make their publicly funded work openly available. The design should be informed by the comparative evidence on existing national SPRs. Key design parameters include (i) the embargo period (which must ultimately reach zero to be effective) and (ii) the public-funding threshold (most national SPRs use 50% but this can be difficult to calculate or verify) as well as (iii) the enforceability of the right against contrary contractual provisions (retroactive nullity). Member States should be required to put in place institutional deposit workflows, library support mechanisms, and compliance monitoring. The ERA Act (see Recommendation EU-11) should consider these aspects within a defined timeframe.

Recommendation EU-10. Interactions with the Evolving EU Data and AI Regulatory Framework

It needs to be ensured that open access policies (including a potential European Secondary Publications Right) and the evolving EU data legislation (Digital Omnibus Regulation Proposal as well as AI/TDM regulatory frameworks) are mutually coherent.

Recommendation EU-11. Implementation at EU level The Commission should use the ERA Act as the primary binding legislative vehicle for translating the recommendations of this study into a durable and enforceable EU-level framework.

In its conclusion the author argues that the “long and winding road” towards open access requires structural reform rather than a single technical fix. No single instrument will solve the problem on its own. Instead, durable progress requires a combination of “sticks” and “carrots”: binding requirements where necessary, but also incentives, support structures, interoperable infrastructure, and reform of the cultural and evaluative environment in which researchers operate. The report’s central conclusion is that the direction of travel is clear, but that the ERA currently still lacks a sufficiently aligned and effective framework to make open access the default for publicly funded research. The ERA Act therefore represents a timely opportunity to move from uneven implementation to a more coherent European approach.

1. Introduction

This report presents the findings and recommendations of an independent expert study on open access policies for scientific publications and research data across EU Member States, with benchmarking against selected non-EU countries, commissioned by the European Commission.

The study aims to provide the European Commission and all other interested stakeholders with a comprehensive, structured, and current overview of open access policies in all Member States, complemented by benchmarking against selected non-EU jurisdictions, and to derive from that evidence base a coherent set of policy recommendations addressed to both Member States and the EU level.

The study is explicitly conceived as an input to the analytical underpinning of future EU policy development. It aims to contribute to the empirical and analytical foundation on which such decisions may be based.

1.1. Scope and structure of the report

This study covers the open access policy frameworks of all 27 EU Member States, encompassing national strategies, funder mandates, and legislative instruments. The study's Terms of Reference provided for the collection of country-level policy information, condensation of that information into comparable form, comparative analysis and policy recommendations. For readability, this final report provides the detailed in-depth findings in several annexes.

The country-by-country policy documentation for all 27 EU Member States² was structured according to a checklist provided by the European Commission. As requested in the Terms of Reference, the provisions of Horizon Europe are also included. This part, reproduced in annex A, is the primary repository of source references and footnotes for the study as a whole. As requested, the study also provides an analysis and benchmarking of key non-EU countries, situating their approaches relative to the EU Member State landscape (annex B).

The study reviews EU-level action on open access so far and draws on the evidence base to address three interconnected policy questions: why action is needed (Problem definition); what should be done (recommendations); and how it should be implemented.

1.2. Methodology

The methodological approach is based on structured comparative desk research. Primary sources drawn upon for each country include: national legislation and legislative histories; national open science and open access strategies and action plans; funder mandates and grant conditions; institutional policies (as far as feasible); official monitoring and reporting documents; National Points of Reference (NPR) reports submitted to the European Commission; and documents produced in the context of the ERA policy agenda s, the European Open Science Cloud (EOSC), OpenAIRE, and the OECD (EU-OECD STIP Open Science Portal).³

Where relevant and feasible, regional activities were also taken into account. Academic literature on open access policy development has been incorporated where available and relevant, including the output of relevant EU funded projects.

² Following the naming protocol order provided in Publications Office of the European Union, Interinstitutional Style Guide, Section 7.1.1, 'Designations and Abbreviations to Use', available at: <https://style-guide.europa.eu/en/content/-/isg/topic?identifier=7.1.1-designations-and-abbreviations> [accessed April 2026].

³ For details see the footnotes in the respective country chapters.

The policy information compiled was then verified and augmented through the National Points of Reference (NPR) on Access to and Preservation of Scientific Information.⁴ The NPR are nominated by the EU Member States to co-ordinate the measures listed in the Recommendation to the Member States on access to and preservation of scientific information (C(2012) 4890 final) relating to open access to publications, open research data, preservation of scientific information, and e-infrastructures; to act as interlocutor with the Commission; and to report on the follow-up of the Recommendation.⁵

To ensure comparability, information has been collected and analysed using a common analytical structure applied consistently across countries. A central methodological tool for this study is an Open Access policy “checklist”, provided by the Commission services to the expert consultant (see annex).

1.2.1. Use of AI

In line with the Commission's developing guidance on the responsible use of AI in research,⁶ Artificial Intelligence (in this context referring to the use of Large Language Models) was used as following in the study:

- Summary of lengthy documentation in Member States national language where regular machine translation was not feasible (e.g. extending maximum word count). Any documents summarised in this manner are clearly indicated in the relevant footnotes.
- Supplementary research to ensure capture of all relevant documentation. Any information retrieved in this manner was reviewed and fact-checked by the expert, as regards the content and availability. The expert takes full responsibility for any remaining errors in the report.
- Document production support, including some assistance with drafting and cross-checking of text. Any and all AI-assisted text was reviewed, revised and approved by the expert before inclusion in any deliverable or the final report.

The specific tools used were Claude, Chat GTP and Perplexity, which were cross-checked with each other. No unpublished third-party work or personal data was shared with the AI system. There was systematic human review of all outputs.

AI tools were not used to generate or substitute for primary source research, to produce or interpret statistical data, or to conduct legal analysis. The use of AI assistance in this study is consistent with the principle that such tools are most appropriately deployed to support, not replace, expert analytical judgement, and should be transparently documented.

1.3. Limitations

Data availability and completeness varies across Member States and selected non-EU countries, particularly regarding recent policy developments. In some countries, formal policy documents are complemented by detailed implementation guidance and monitoring data, while in others information remains fragmented. Evidence on the impact of open access policies is uneven and often limited to partial indicators or qualitative assessments.

The rapid evolution of national policies illustrated by multiple legislative and strategic developments in 2025 and even 2026 means that the comparative picture continues to shift, and some recent changes have not yet generated observable outcomes. The evidence presented in this study should therefore be considered as a “snapshot” of the state of play up to mid-2026.

To mitigate these limitations, the study integrates feedback on the initial research from the NPR. Any remaining data gaps or uncertainties are clearly documented for future follow up.

⁴ See European Commission, Directorate-General for Research and Innovation, Register of Commission Expert Groups and Other Similar Entities: Expert Group on Access to and Preservation of Scientific Information (Group E03477), available at: <https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?lang=en&groupID=3477>

⁵ Op cit.

⁶ European Commission and European Research Area Forum, Living Guidelines on the Responsible Use of Generative AI in Research, 20 March 2024, available at: https://research-and-innovation.ec.europa.eu/document/download/2b6cf7e5-36ac-41cb-aab5-0d32050143dc_en?filename=ec_rtd_ai-guidelines.pdf

Furthermore, a single-expert setup presents inherent capacity limitations. Mitigation measures include regular feedback from the European Commission (as foreseen in the contract) and through the Commission feedback from and input from the NPR.

1.4. Acknowledgements

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2. Open access in the EU Member States: comparative analysis

Based on the in-depth country specific analysis in annex, this chapter develops policy-relevant findings concerning common challenges, emerging good practices, and areas where the European open access landscape shows notable convergence or divergence. The chapter is structured according to the items on the checklist provided by the European Commission (see annex).

Please note that for footnotes to specific documents mentioned in this chapter the reader is directed to the extensive country specific documentation in annex A.

2.1. Policy instrument types

The choice of policy instrument shapes the legal force, coverage, adaptability and political feasibility of open access requirements. EU Member States deploy open access policies through three principal instrument types:

- national strategies
- funder mandate
- and legislation

Often (but not always) two or three of these elements are combined (multi-instrument frameworks). Each instrument type carries distinct trade-offs, as described below.

2.1.1. National strategies

National strategies and voluntary guidelines are important instruments *inter alia* in Germany, Estonia, Poland, Hungary, Croatia, Romania, Slovakia, Malta and Latvia. They lower the political barriers to adoption and allow gradual capacity-building. They can be adopted quickly, adjusted without legislative process, and serve as consensus-building instruments across diverse stakeholders.

Germany demonstrates that a predominantly voluntary national approach can yield high open access rates when accompanied by strong institutional engagement, robust infrastructure and funder support: the German Open Access Monitor reports national rates around 68%, achieved through a combination of the DFG's recommendations (i.e. voluntary), a binding open access clause in BMFTR (formerly BMBF) project funding, the DEAL reading and open access publishing agreements, the statutory secondary publication right, and extensive institutional library support. Sweden, also operating without a binding national mandate, reports 76% immediate open access in 2024 and 81% in 2025 through *inter alia* the Bibsam consortium activities.

However, purely voluntary approaches *without complementary binding elements or strong institutional ecosystems* yield lower and more uneven results. Romania's policy is anchored in the White Book on the Transition to Open Science 2023–2030 (UEFISCDI), strongly aligned with the UNESCO 2021 Recommendation on Open Science; however, implementation of monitoring and evaluation mechanisms remains in an early phase. Slovakia's National Strategy 2021–2028 sets direction but the primary grant agency APVV has not adopted a binding mandate. Luxembourg's FNR (August 2025 revision) and Poland's NCN (Order 39/2025) both moved toward less binding frameworks and issued a fundamentally revised policy in 2025 that effectively makes open access for publications voluntary while maintaining mandatory requirements for research data, two notable cases of policy regression.

2.1.2. Funder mandates

Funder mandates, a dominant instrument in Austria, Finland, Ireland, Denmark, Lithuania, Sweden, Portugal and Cyprus, and an important instrument in many other member states (see multi-instrument approach below) offer faster policy iteration and more granular implementation. Funders can respond to publisher market changes, new business models and emerging best practices. The corresponding disadvantage is incomplete coverage: funder mandates apply only to the research they fund. The asymmetry between funded and unfunded research creates a two-tier system in which compliance obligations depend on funding source rather than the public character of the research.

2.1.3. Legislation

Legislation related to open access has been adopted by Austria, Belgium, Germany, France, Bulgaria, Slovenia, Spain, Italy, the Netherlands, and recently Czechia (in some of these cases in the form of SPR). Legislation offers the widest scope of application and the strongest legal certainty. France's *Loi pour une République numérique* (2016) illustrates this: it creates a statutory self-archiving right for researchers whose work is at least half publicly funded, not merely those funded by the ANR. Bulgaria goes further by combining a statutory secondary publication right (Art. 60(2) Copyright Act) with a zero-embargo publication obligation under the 2024 Law on Promotion of Research and Innovation (Art. 80.2). Spain's Ley 17/2022 similarly establishes immediate open access as a statutory requirement under Article 37.

The corresponding disadvantage is rigidity. Legislative processes are slow relative to the pace of change in scholarly publishing. Italy's Law 112/2013 illustrates this risk: enacted over a decade ago, it covers only articles in periodicals published at least biannually, excludes monographs and research data, and specifies unusually long embargo maxima (18 months for STEM, 24 months for SSH) that are significantly misaligned with both Plan S and Horizon Europe requirements. Where scope, funding thresholds and embargo maxima are fixed in the primary act itself, they can be revised only by primary legislative amendment, which can be difficult to do. Slovenia's more recent ZZrID (2022), by contrast, demonstrates that well-designed legislation can be both comprehensive and operationally precise. ZZrID sets the obligation and its governing principles at framework level while operational parameters are set in a government implementing Decree and an accompanying Action Plan. These can be revised without reopening the Act; for example, the Decree was amended in May 2025 to extend the transitional period.

2.1.4. Multi-instrument frameworks

A substantial group of Member States have developed comprehensive multi-instrument frameworks. France combines legislation with the Second National Plan for Open Science (2021–2024) and ANR funder mandates aligned with Plan S. Similarly, Spain combines binding legislation with the National Open Science Strategy (ENCA 2023–2027) and AEI/ISCIII funder mandates. In Slovenia the ZZrID (2022) provides the legislative backbone, supplemented by a 2023 implementing Decree, an Action Plan, and ARIS funder mandates, with a secondary publication right added in May 2025. The Netherlands combines Art. 25fa of the Copyright Act (Taverne Amendment) with the NPOS2030 strategy and Plan S-aligned NWO/ZonMw mandates. Germany combines its statutory secondary publication right (§38(4) UrhG) with DEAL reading and open access publishing agreements, DFG guidelines, and the 2023 Joint Guidelines signed by the Federal Government and the Länder.

Ideally, a multi-instrument approach creates an enabling environment where the different aspects of the instruments are well designed and go hand in hand. As a risk, it can lead to complexity, especially if different instruments have different requirements and are not internally consistent (e.g. REF requirements and UKRI requirements in the UK).

2.1.5. Advantages and disadvantages of the different policy instruments for open access

The advantages and disadvantages of the different policy instruments and approaches are outlined in the table below:

Summary Table 1. Pros and cons of approach chosen

Approach	Main pros	Main cons
Legislation	Long-term stability, legal certainty, and system-wide coverage irrespective of funding source.	Can be difficult to update, enforceability depends on monitoring architecture.
Funder mandates	Operationally enforceable through grant reporting and can be updated more rapidly than legislation.	Only covers grant recipients.
Strategies	Enable stakeholder alignment, easy to do (low hanging fruits).	Risks remaining aspirational.
Multi-instrument	Multiple reinforcing mechanisms, potentially reaching researchers through different channels.	Can create complexity and inconsistency.

2.2. Bindingness of requirements

The analysis reveals a spectrum from purely voluntary encouragement to legally enforceable obligations, with many Member States combining binding and voluntary elements within their frameworks. For example, Spain pairs a deposit obligation in legislation (Article 37, Ley 17/2022) with the non-binding National Open Science Strategy (ENCA 2023–2027). Slovenia combines the ZZrId Article 41 obligation and its implementing Decree with a programmatic Action Plan. The Netherlands combines an enabling statutory right (Article 25fa Auteurswet), which authors may or may not exercise, with binding NWO/ZonMw grant conditions and the non-binding NPOS2030 strategy. However, a cross-cutting finding is that an implementation gap between formal frameworks and on the ground implementation exists in many Member States. In other words, there are often ambitious formal requirements without proper enforcement infrastructure, dedicated resourcing, or monitoring mechanisms.

Similarly to the chapter above, bindingness can be implemented through different routes, which are discussed below.

2.2.1. Binding through legislation

In one sense Member States with legislative OA provisions create the strongest form of bindingness. However, Secondary Publication Rights legislation, in particular, is enabling rather than enforcing and thus not always binding in a strict sense; that is authors are not forced to exercise their right of secondary publication.

Other forms of OA legislation are binding, however; in particular if it is combined with other measures: Slovenia's ZZrID mandates open access for all research receiving at least 50% public co-financing, with the 2025 SPR amendment making contractual provisions contrary to the right null and void. Spain's amended Art. 37 imposes a legal 'shall' obligation on researchers, and LOSU establishes parallel obligations for university staff. Bulgaria uniquely combines a secondary publication right with a secondary publication obligation, requiring deposit as well as permitting it. Several EU countries have also made progress on making public sector data available due to the transposition of the 2019 Open Data Directive into national law, not because of specific open access legislation. These provisions operate within a public sector information logic and apply only to data already made publicly available; they do not create an obligation to open research data.

2.2.2. Binding through funder mandates

The most common mechanism for creating binding OA requirements is through binding research funder conditions. Horizon Europe sets the benchmark here: OA is a contractual obligation through the MGA. Among Member States, funder mandates from Plan S coalition members or Plan S-aligned funders create binding conditions: NWO/ZonMw (Netherlands), ANR (France), FWF (Austria), Research Ireland/HRB (Ireland), Research Council of Finland (RCF, formerly Academy of Finland)", and Formas/Forte/VR/Vinnova (Sweden) all impose binding OA requirements through grant conditions. The degree of enforcement varies, however.

While Plan S membership or alignment remains a meaningful benchmark of funder-level policy content, it should be noted that cOAlition S adopted a strategy for 2026–2030 in November 2025 which reaffirms the objective of full and immediate open access while repositioning the coalition's activity toward transparency, equity and trust rather than mandate enforcement.⁷

2.2.3. Predominantly voluntary frameworks

Several Member States maintain predominantly voluntary approaches. Slovakia's National Strategy uses recommendatory language throughout ('recommend,' 'foster'); only the SAS institutional policy (from January 2025) introduces specific mandatory elements. Hungary's national Open Science position paper is non-binding strategic guidance (some binding elements exist at funder and institutional level). Poland and Luxembourg are the only Member States that moved in the direction of weaker publication OA requirements during the observation period. Every other Member State either maintained or strengthened publication OA requirements. Poland and Luxembourg therefore function as a showcase of what happens when mandatory funder requirements are not embedded in legislative frameworks or structural funding formulae that make reversal more difficult. This is the strongest available argument for embedding OA requirements at legislative level rather than leaving them to individual funder discretion.

In the same vein, even harder legislative provisions without enforcement architecture are analytically equivalent to soft law in terms of practical effect. In Italy Law 112/2013 establishes a statutory framework with defined embargo maxima, but does not establish implementation mechanisms, enforcement measures or author-centred rights. In Greece, Article 25 of Law 4310/2014 is legally binding but lacks implementing regulations and any national compliance architecture.

2.3. Scope of policies

All 27 Member States address open access to publications and research data in some form, though the depth, bindingness, and maturity of that coverage vary considerably.

Additionally, some Member States extend their scope beyond publications and data to encompass software, citizen science, educational resources, and other research outputs. For example, Slovenia's framework covers publications, data, software, and other digital research objects.

⁷ cOAlition S, 'cOAlition S Strategy for 2026–2030' (12 November 2025). <https://www.coalition-s.org/coalitions-strategy-2026-2030/>. Accessed 19 July 2026. See also Science (AAAS), 'After Coalition S disrupted scientific publishing, new plan retreats from strict requirements' (12 November 2025). <https://www.science.org/content/article/after-coalition-s-disrupted-scientific-publishing-new-plan-retreats-strict-requirements>. Accessed 19 July 2026.

Finland's Declaration for Open Science and Research (2025–2030) and its four supporting national policies collectively encompass the culture of open scholarship, publications, research data and methods, and open education. Spain's ENCA covers articles, data, software, protocols, and other digital objects. Denmark's strategy explicitly includes research-based educational material alongside publications and data. The Netherlands' NPOS2030 extends publications, research data, metadata, software, educational resources and open hardware.

2.4. Embargoes vs immediate open access

Embargo provisions constitute one of the sharpest points of policy divergence among EU member states and sometimes even within different legal regimes in a member state. For instance, in Austria FWF funded publications must be made available immediately while the national Secondary Publication Right would allow for a 12-month embargo.

That said, a number of countries and/or funders have spearheaded immediate open access in line with Plan S such as the FWF in Austria, Bulgaria (zero embargo through statutory obligation and legislative obligation under Art. 80.2 Research Law 2024), Croatia (HRZZ funder mandate binding from 2026), Finland, France (ANR-funded research), the Netherlands (NWO/ZonMw grantees), Ireland, Portugal, and Sweden. Slovenia adopted a zero-embargo requirement under ZZrID Art. 41. Spain also tends to fall in this category although the letter of the law only refers to immediate *deposition* (not access).

Where embargo periods are permitted, these are often but not always aligned with the Commission Recommendation (EU) 2018/790 of 25 April 2018 on access to and preservation of scientific information which recommended that OA should be granted as soon as possible, preferably at publication, and in any case no later than 6 months after the date of publication and 12 months after publication for Social Sciences and Humanities (SSH). However, the instrument for setting embargoes varies between law (e.g. in Secondary Publication Right Laws), funder mandates or only as recommendations.

Other variations in embargoes exist as well. In Austria and Germany, SPR law allows a common embargo of 12 months. Italy is a notable outlier with unusually long statutory embargo periods: Law 112/2013 permits up to 18 months for STM and up to 24 months for SSH, the longest defined periods in any EU Member State and significantly misaligned with both Plan S and Horizon Europe requirements.

Finally, as the worst-case scenario, undefined or publisher-deferred embargoes also exist in a number of cases. Estonia, Malta (in phase 1 of its phased approach), Hungary (NKFIH mandate), Cyprus, and (following the 2025 revision) Luxembourg and Poland accommodate publisher embargoes without defining maximum permissible durations. Their policies acknowledge that publisher conditions may restrict immediate access but impose no ceilings, effectively delegating the timing of public access to commercial publishers.

The answer to the questions of whether immediate open access or an embargo period (and in the latter case, what length the embargo period should be) is the “best” approach to Open Access is multifaceted and depends on a number of factors, which are outlined below.

2.4.1. Advantages and disadvantages of immediate open access (zero embargo)

The most straightforward advantage of immediate open access is timeliness. Research funded by the public is available to the research community, practitioners and the broader public at the point of publication rather than after a delay. This matters particularly for fast-moving fields where an embargo period can substantially reduce the practical value of findings.

Immediate open access can deliver substantial results if paired with the necessary instruments, such as strong rights retention framework, a Secondary Publication Right with zero embargo, a Secondary Publication Obligation and (last but by no means least) support structures. Immediate open access is often supported by transformative agreements which have their own substantial costs. The classic example of a country with immediate OA requirements from funders and very high rates is the Netherlands, which achieves 94.6% for NWO-funded outputs and 95% for Dutch university authors overall.

Furthermore, among the countries analysed in the benchmarking exercise of non-European countries, there seems to be a clear trend towards zero embargo. The 2022 US OSTP Nelson Memo directed all federal agencies to eliminate the 12-month embargo, with implementation by end of 2025.⁸ UKRI, Switzerland (SNSF since January 2023), and Japan (from April 2025 for selected programmes) have similarly moved to immediate access, and Canada is in the process of eliminating its 12-month embargo. This convergence across diverse research systems provides evidence that a zero-embargo standard is operationally feasible at scale.

The principal disadvantage is that immediate OA is only operationally effective when accompanied by a mechanism that gives researchers the legal right to make their work available. Without transformative agreements, rights retention or a secondary publication right, a zero-embargo mandate creates a compliance requirement that researchers may be unable to fulfil for outputs published in subscription or hybrid journals with restrictive copyright agreements, at least for the Version of Record (VoR).

The cost implications are significant and well-documented. Denmark's 2024 evaluation states that total estimated publication costs have increased, with APC costs rising significantly and "this increase cannot be solely attributed to an increase in publication volume." The Netherlands' UNL has documented growing criticism of APC-based models concerning rising costs, inequity for less wealthy institutions and countries (especially in the Global South) and a lack of autonomy and sovereignty.

There is also a disciplinary dimension. Social Sciences and Humanities and certain applied sciences have different publication cultures, longer production cycles and different market structures. Immediate OA requirements may be more difficult to implement for monographs and edited volumes. Austria's FWF data illustrates this: while 92% of journal articles are openly accessible, the rate for monographs and edited volumes drops to 49%.

2.4.2. Advantages and disadvantages of defined embargo periods

Defined embargo periods provide legal certainty while accommodating publisher business models. The discipline differentiation adopted by several Member States and by the 2018 Commission Recommendation (6 months STEM, 12 months SSH) acknowledges the different publication cycles and market structures across fields. For Member States that have enacted statutory secondary publication rights with embargo periods (Germany, Austria, Belgium, France) the embargo is part of a coherent legal package where the law defines both the right and the conditions under which it can be exercised, giving researchers a clear legal basis for self-archiving after the specified period.

The most significant disadvantage of defined embargo periods is that, depending on the length of the embargo period, they can undermine policy intent. Long embargo periods may mean that by the time the work becomes openly available, its immediate relevance may have diminished, and the policy's access objectives are substantially diluted. Embargo-based systems also create monitoring complexity in tracking whether outputs have been made available in time.

2.4.3. Advantages and disadvantages of undefined/publisher-deferred embargoes

The only clear advantage of this approach is the avoidance of friction for researchers in the short term. By not imposing a maximum embargo period, the policy accommodates all publisher terms without creating compliance conflicts. However, this approach though undermines an open access policy's intended access benefit. Where embargo terms are delegated to publishers, the timing of public access is determined by commercial interests rather than public policy. Poland's and Luxembourg's 2025 funder revisionist approaches illustrate the extreme case: by permitting closed-access publishing without any repository deposit requirement, the policy effectively allows indefinite embargo, in the case of Luxembourg reversing the access objectives of the previous Plan S-aligned mandate.

⁸ While there may be attempts to repeal the Nelson memorandum by the Trump administration this has not yet been officially implemented as federal policy.

It should be noted that this study does not address in any depth the effect of embargo regimes on publisher business models or on the scholarly publishing market more broadly. A number of different views on this subject exist.

2.5. Copyright: rights retention and secondary publication rights

Copyright provisions determine whether researchers can legally make their work openly available regardless of publisher agreements, making them a critical enabler (or constraint) for green open access. The evidence reveals three distinct approaches, each with different coverage, operational implications and alignment with Horizon Europe.

- Cluster 1 – Statutory secondary publication rights (SPR): Germany (§38(4) UrhG, 2014, 12-month embargo), Austria (§37a UrhG, 2015, 12-month embargo), France (Article 30, 2016, 6–12 months), Belgium (Code of Economic Law, 2018, 6–12 months), Netherlands (Article 25fa Auteurswet, 'reasonable period'), Bulgaria (2023, zero embargo; Art. 60.4 Copyright unique in combining a statutory right with a publication obligation), Slovenia (ZZrID Art. 41, zero embargo required). These provide legal certainty to authors for self-archiving.
 - A further recent category has emerged with the Finnish University Libraries' (FUN) Prior Licence Model (2026), under which universities grant a prior licence for OA publication before transferring rights to publishers. This constitutes the first systematically deployed *institutional-level rights retention at national scale* in the EU, currently covering 12 universities.
- Cluster 2 – Funder-mandated rights retention (Plan S aligned): FWF Austria, HRZZ Croatia, NWO/ZonMw Netherlands, Research Ireland/HRB, ANR France, FCT Portugal.

As a further practice, the Netherlands' Collective Labour Agreements embed open science obligations including OA expectations in employment contracts. These require authors to retain sufficient rights at submission stage, overriding publisher contract restrictions contractually rather than legislatively.

As we can see, SPR and rights retention are not mutually exclusive and overlap in a number of countries and/or funders in cluster 1 and 2.

- Cluster 3 – No SPR and no formal rights retention: Many Member States, including Greece, Estonia, Poland, Romania, Slovakia, Malta, Denmark, Latvia, Hungary, Lithuania, Luxembourg, Sweden lack statutory SPR or formal rights retention mechanisms.

2.5.1. Pros and cons of Secondary Publication Rights

The principal advantage of SPRs is legal certainty: they create a statutory right that overrides restrictive publisher contracts under defined conditions, enabling repository-based open access without case-by-case negotiation. This right applies broadly, typically to all publicly funded research; often (but not always) meeting a specified threshold of 50% public funding, creating a systemic enabler rather than a per-project solution. Bulgaria's combined right-and-obligation model with zero embargo represents the strongest mechanism identified. The Netherlands' Taverne Amendment, which permits sharing of short scientific works after a "reasonable period" (interpreted to mean six months) has been leveraged through "You share, we take care" library programmes to achieve 80% green availability of paywalled articles by 2024, up from 65% in 2022.

However, there are also some significant disadvantages to SPR, particularly if implemented as a stand-alone mechanism. A statutory right without institutional operationalisation through default deposit workflows (e.g. implemented by library support), is not likely to produce significant behavioural change. Furthermore, conditions vary substantially across jurisdictions in embargo duration, funding threshold, output types and permitted version (Author Accepted Manuscript or Version of Record). Moreover, researchers may not be aware of their SPR or understand the conditions under which it applies, limiting practical uptake without institutional support.

It should be noted that a comprehensive economic analysis of the current scholarly publishing ecosystem and of the likely economic effects of legislative options an EU-wide secondary publication right (SPR) and a strengthened copyright research exception was published by the Commission's Directorate-General for Research and Innovation in April 2026. The reader is referred to these in-depth studies for further information.

2.5.2. Pros and cons of Funder based rights retention

Funder-based rights retention achieves similar effects through grant conditions rather than copyright law. Researchers are contractually required, through the grant agreement, to retain sufficient rights for open access. The advantage is specificity and adaptability: funders can tailor requirements to different output types and update conditions without legislative process. The disadvantage mirrors that of funder mandates generally: coverage is limited to funded research, and enforcement depends on monitoring capacity that varies significantly across funders.

2.5.3. “None of the above” as a worst-case scenario

For researchers in countries with neither SPR nor rights retention the ability to self-archive depends entirely on publisher terms. This constraint may explain why some Member States with formal OA requirements nonetheless show limited green OA uptake: without a legal mechanism to override publisher restrictions, the policy requirement cannot be operationally fulfilled for a significant portion of outputs.

2.6. Training or guidance for researchers

All major research funders provide some form of guidance. Horizon Europe leads with its Programme Guide, Annotated Grant Agreement, and extensive online resources. National funders typically provide guidelines on repository deposit, licensing, and DMP preparation.

Many Member States have established national open access platforms, which often host training or provide links to such. Germany for example funds “open-access.network”, a comprehensive competence platform providing toolkits, training materials, and webinars.

Finland integrates training into its national open science framework, coordinated by TSV/AVOTT. Spain's ENCA places training centrally in its Axis D, targeting researchers, evaluators, and assessment committees. Slovakia operates training through CVTI SR, with a national online platform for open science courses under development. The Netherlands' NPOS2030 embeds training as a strategic priority with dedicated institutional support structures. However, the availability of training infrastructure does not guarantee its reach. In Finland a 2025 study by the Finnish Center for Cultural Policy Research (Cupore) found that researchers continue to cite lack of technical knowledge, uncertainty about legal aspects, and the absence of clear institutional policies as barriers to sharing publications and data.

Training gaps are most apparent in Member States with less developed OA policy frameworks. Cyprus and Lithuania have limited documented national training infrastructure. Romania's SNCISI plans training, but implementation is early stage. In several smaller research systems, the OpenAIRE National Open Access Desks function as de facto national training providers.

2.7. Funding for open access

There are a number of funding models across the EU, each with different implications for OA rates, cost sustainability and equity:

- Most Member States funders treat APCs as eligible grant costs, inter alia Belgium, France Poland, Portugal, Lithuania, Cyprus, Czech Republic, Italy, Ireland, Spain. Several countries have requirements as concerns the maximum amount that can be reimbursed and whether or not hybrid OA is eligible.

- Some countries/funders run separate OA funding programmes. Austria's FWF transitioned on 1 January 2024 from per-project APC reimbursement to an annual Open-Access Block Grant allocated to research institutions on a pro rata basis. Germany (DFG), Luxembourg, and Slovenia also operate dedicated OA funding programmes.
- Reading and open access publishing agreements (formerly called transformative agreements) have become a dominant funding mechanism in several Member States. The KEMÖ consortium (Austria), CzechELib (Czech Republic), Bibsam (Sweden), VSNU/UKB (Netherlands), DEAL (Germany), EISZ (Hungary), and FinELib (Finland) manage multi-million-euro agreements with major publishers. France has developed agreements through the Couperin consortium. Denmark's licensing consortia and Ireland's IReL have negotiated similar arrangements. Smaller Member States including Croatia, Latvia, Lithuania, and Slovakia participate in consortial agreements of more limited scope.

A cross-cutting finding from the review process is that Diamond OA has moved fast: in several cases, the most recent developments involved Diamond OA infrastructure including new funding instruments, platform pilots, or national strategies explicitly naming Diamond OA as a priority. The Netherlands has established a dedicated Diamond OA project alongside a journal-flipping programme; Germany operates a DFG based programme; France supports the Peer Community In (PCI) model through FNSO; Ireland established a pilot Diamond OA platform; Finland's TSV operates the Journal.fi/Edition.fi model with 150+ learned society journals; Sweden's Publicera platform and SUHF 'beyond reading and open access publishing agreements' strategy are advancing; Slovenia's SSOZ and ARIS Diamond publishing fund are operational; and Croatia's HRČAK represents a long-standing structural Diamond OA model. These infrastructure-based approaches avoid the equity and cost-escalation concerns associated with APC models, but they require sustained public investment and do not address the challenge of publishing in international, APC-charging journals.

For several smaller or less wealthy Member States, Recovery and Resilience Facility (RRF) funding has been a driver of open science infrastructure investment, with implications for what happens when RRF programmes close without sustainable domestic funding.

2.8. Repository Requirements Including FAIR⁹ Principles, Metadata and Persistent Identifiers

Most Member States have established national repository networks. Some Member States have designated a primary national repository, most prominently HAL in France. Bulgaria's BPOS serves a similar function and has grown substantially.

The intermediate model, found e.g. in Germany, Austria, Sweden, Denmark, Belgium, Ireland and Portugal, operates through networks of institutional repositories with funder deposit mandates for specific grants. Spain's RECOLECTA (operated by FECYT) serves as the national OA repository aggregator and as the national node for both OpenAIRE and LA Referencia, providing an inter-regional infrastructure dimension connecting the EU and Latin American open access networks. Sweden's DiVA/SwePub system and Portugal's RCAA network also represent well-developed national infrastructure.

FAIR principles are referenced in the policies of almost all Member States (at the strategy level and/or funder level). However, the degree to which FAIR compliance is operationally enforced varies considerably. Similarly, explicit requirements for metadata standards and persistent identifiers (PIDs) vary in specificity. Ireland published a National PID Strategy (October 2024), the most explicit recent national-level PID governance commitment among EU Member States, with IReL a member of both ORCID and DataCite consortia.

⁹ Findable, Accessible, Interoperable and Re-Usable. The FAIR principles were first articulated in a 2016 paper in Scientific Data and have since become a foundational reference point for research data management policy. Original publication: M. D. Wilkinson et al., „The FAIR Guiding Principles for scientific data management and stewardship“, *Scientific Data* 3, 160018 (2016), <https://doi.org/10.1038/sdata.2016.18> (accessed 22 July 2026)

2.9. Links to researcher assessment

The link between OA policies and researcher assessment reform is becoming more prominent, including through the Coalition for Advancing Research Assessment (CoARA) and the Agreement on Reforming Research Assessment.

Several Member States have explicitly linked OA policies with assessment reform. France's Second PNSO dedicated significant attention to responsible metrics and assessment reform; French institutions are among the most active CoARA signatories. Finland's national open science framework explicitly integrates assessment reform, with the RCF applying responsible evaluation principles as a CoARA and DORA signatory and JUFO ratings linked to institutional funding allocations. Slovenia's ZZrID and Action Plan include measures for assessment reform, with ARIS recommendations encouraging quality-based rather than metrics-based assessment.

Two Member States in particular stand out as good examples of structural assessment-OA integration in the EU: Finland, where the JUFO publication rating system is linked to the higher education institution core funding formula, creating a direct financial incentive for institutional OA compliance; and Spain, which has the most operationally advanced individual-researcher-level evaluation integration: LOSU Art. 12.8 mandates that quality agencies include open accessibility among evaluation criteria; Art. 12.9 requires use of institutional repositories for evaluation documentation. ANECA incorporated mandatory deposit as a sexenio criterion in 2023. A letter in Nature (7 October 2025, 'Incentives accelerate progress on open access in Spain') documents the resulting acceleration in OA adoption. Additionally, the Netherlands has been a pioneer, with NWO implementing narrative CVs and VSNU/UNL promoting recognition and rewards reform.

In other countries, research assessment reform is emerging as an issue: Austria has launched a CoARA national chapter in 2026, Denmark's strategy references responsible metrics and Sweden identified assessment reform as a priority in its 2024 national guidelines.

However, assessment reform links are still absent or minimal in the policies of Cyprus, Czech Republic, Lithuania, and Poland; Malta, Romania and Slovakia show emerging engagement.

2.10. Identified costs of, or gains from, applying open access policies

Quantified cost-benefit evidence is available for a limited number of Member States, typically those with the most mature OA ecosystems. The most detailed cost evidence comes from Austria (AT2OA Transition Study finding potential aggregate cost-neutrality but with significant institutional redistribution effects), Sweden (SEK 806 million / c. EUR 67 million annual publishing costs in 2024, with 56% from transformative agreements), the Netherlands (the NWO/ZonMw Open Access Monitor showing 94.6% OA compliance in 2023, at a cost of c. €10.9 million for 3 584 articles;), Germany (ca €74 million in eligible costs reported under the DFG's Open Access Publication Funding programme for 2023; DEAL reading and open access publishing agreements with major publishers), Portugal (ca €12 million APC cost avoidance) and Spain (ENCA ca €23.8 million annually; Ollé, et al. 2023 survey of 666 researchers found a large majority viewed APCs as excessive and poorly correlated with quality). Gains from OA policies are less frequently quantified than costs. The general "gain" arguments advanced in national policy documents are accelerated innovation, reduced duplication, improved quality, citizen engagement.

2.11. Policy elements with sparse coverage across Member States

Several of the items on the EC checklist provided to the expert are characterised by sparse coverage:

- Very few Member States address **peer review** in their OA policies. France's Second PNSO mentions innovative peer review. Austria's national policy encourages open peer review experimentation but without binding requirements. Denmark has some engagement through its national strategy. For the vast majority of Member States, peer review approaches are not addressed in OA policy documents.

- At the national level, explicit **funding thresholds** are relatively rare. The most common threshold is 50% public funding, employed in France (SPR), Germany (SPR), Austria (SPR), Belgium (SPR), Slovenia (ZZrID), and Italy (Law 112/2013), most often in connection to Secondary Publication Rights. Most funder mandates apply to all research funded ‘in whole or in part,’ creating a de facto zero-threshold for the funded proportion. The majority of Member States do not specify explicit percentage thresholds in their OA policies.
- Provisions specifically addressing **small and medium-sized publishers** (SMPs) are among the sparsest sub-items across the EU. Only Italy’s PNSA and Germany’s 2023 Joint Guidelines of the Federal Government and Länder explicitly refer to SME publishers, though in both cases as a statement of recognition rather than a dedicated regulatory or funding mechanism. Some Member States include support for domestic journals and/or national language journals or diamond open access (which could be argued to implicitly support smaller publishers).
- While many EU member states have developed stand-alone research **security policies**, an explicit connection of these policies to open access is rare, although revisions by the NPR in the observation period seem to indicate growing awareness: Romania’s Research Security Concept Note explicitly names open science as a foundational principle while establishing a risk-based security framework. Slovakia’s Action Plan for Open Science 2026–2028 mandates a future ministerial directive on the publication and archiving of research data containing special provisions for sensitive health-research data, defence-related and dual-use projects.
- While Horizon Europe emphasises **simplification**, with a recent review reducing data management description requirements in proposal applications, this is very rarely mentioned as an explicit goal in Member States in relation to Open Access requirements. The clearest case is Poland which justifies relaxing open access requirements on grounds of reducing administrative burden on researchers. Luxembourg refers to flexibility. In Estonia, the discontinuation of mandatory data management plans from 2026 was justified on the ground that they had become a bureaucratic burden. Latvia and the Czech Republic do not go as far but refer in passing to the fact that data management plans should be simple to create.
- **AI** provisions in OA policies remain sparse. References appear in the Swedish background report, Slovenia’s Action Plan (A6.2.1/3.12) and Italy’s PNSA. The most explicit EU Member State AI–OA linkage is Greece’s AI Blueprint (25 November 2024): Proposal 4.13 states that OA to scientific results “is key to promoting AI research, improving the quality of research and the free dissemination of knowledge”.

2.12. Implementation and monitoring of open access policies

2.12.1. The division of responsibilities

The allocation of implementation responsibilities across actor types follows broadly similar patterns across EU Member States, but the balance, clarity and operational depth of these allocations vary considerably and appears to have material consequences for outcomes.

Ministries hold strategic oversight and policy formulation responsibility in almost all Member States, but the depth of ministerial engagement in operational implementation differs markedly. Finland’s Ministry of Education and Culture, for example, not only sets strategic direction through the Declaration for Open Science but actively supports operational implementation through funding for TSV coordination, CSC infrastructure and the biennial monitoring framework. France’s Ministry similarly engages beyond strategy through support for the BSO monitoring infrastructure and institutional coordination. Slovenia’s MVZI holds direct monitoring responsibility, and its Action Plan assigns numbered activities to specific bodies with timelines. By contrast, in many Member States including Romania, Greece, Latvia, and Malta ministerial engagement is limited to strategic documents without documented operational follow-through. Estonia represents a distinctive structural case: as of February 2026, ETAG no longer sets grant conditions independently, all national research funding conditions are set by the Minister of Education and Research (Regulation No. 6/2026), shifting implementation responsibility from research funder to ministry. The only country for which ministerial engagement in OA implementation seems to be absent from ministry level is Luxembourg.

In most Member States **research funding organisations** operationalise policy (if it exists) through grant conditions, providing APC funding, and conducting compliance monitoring. The FWF, NWO/ZonMw, ANR, Research Council of Finland, LMT, FCT and Research Ireland all occupy this intermediary position. The effectiveness of this role depends on whether a single, or a very limited number of public research funders cover a large share of the research system (as FWF does in Austria for basic research, or NWO/ZonMw in the Netherlands). If so, funder-based implementation has near-comprehensive reach.

Where research funding is more fragmented or where funders have divergent policies (e.g. in Belgium) funder-based implementation covers only part of the system. The funder role is also less impactful where mandates remain voluntary (Czechia's GAČR, Germany's DFG, Slovakia's APVV/VEGA/KEGA, Poland's NCN post-2025). The capacity of the funder to monitor (see also discussion below) is also important and diverges among Member States (in some countries there may also be funder monitoring which is not made public).

Research performing organisations usually bear the operational infrastructure burden: operating repositories, providing library-based support services, negotiating transformative agreements, and delivering training. Institutional engagement varies dramatically. Whether they are adequately equipped and funded to do so, is also subject to considerable variation.

In the end, compliance is the responsibility of the **individual researchers**, who need (depending on their national requirements) to deposit publications (and select repositories), manage copyright (including licensing agreements) and prepare data management plans and deposit data. In countries where researchers are actively supported, such as the library-mediated "You share, we take care" programmes in the Netherlands, through institutional OA officers, data stewards, and/or through integrated repository-CRIS systems that minimise manual deposit effort compliance rates improve. Where it is not addressed, even binding requirements may produce limited actual compliance.

2.12.2. Monitoring models and their effectiveness

Capacity to monitor also varies significantly and makes use of different approaches.

National OA monitors

A number of Member States have established dedicated national OA monitors. France's Baromètre de la Science Ouverte (BSO) exemplifies this: a single national tool drawing on Crossref, Unpaywall, HAL and other sources provide a comprehensive, publicly accessible dashboard updated annually, with published methodology documenting data sources, exclusions, and systematic biases. The BSO's design enables year-on-year trend tracking, disciplinary disaggregation, and institutional comparison. Finland's system combines VIRTa (publication information service) with a biennial survey-based monitoring framework coordinated by TSV, reporting publicly through Research.fi. Denmark's OA Indicator provides focused national tracking; The Netherlands coordinates monitoring through NWO reporting, UNL institutional data and public dashboards. Sweden's KB compiles national statistics. Germany's Open Access Monitor aggregates from multiple sources. Bulgaria's BPOS functions as a de facto monitoring point through deposit statistics. Slovenia's Open Science Monitor is emerging as a comparable tool. Ireland launched the National OA Monitor in March 2024. Spain's FECYT functions as a technical observatory for open science with ENCA monitoring indicators and REBIUN periodic OA rate reports.

A structural limitation applies to all OpenAIRE-based national monitors: they exclude proprietary CRIS data and therefore may not present a fully consistent picture.

The strength of centralised monitoring is that it ideally enables cross-institutional comparison, longitudinal trend analysis, and evidence-based policy feedback. Its limitation lies in the significant and sustained investment required.

Funder-level monitoring

Most monitoring occurs (if it occurs at all) at the funder level through grant reporting and compliance checking but this data is not always made public. Austria's FWF conducts annual OA Compliance Monitoring since 2015. NWO/ZonMw publishes annual OA statistics (94.6% OA in 2023). However, the depth of funder monitoring varies considerably: some conduct systematic bibliometric analysis while others rely on self-reported compliance. However, funder-level monitoring provides no systematic view of the broader national system.

Limited or absent monitoring

The third model involves distributed or fragmented monitoring. In Belgium data is dispersed across FWO, F.R.S.-FNRS and institutional repositories in different communities. Italy, the Czech Republic, Poland, Hungary and Estonia each operate variants where data exists at institutional or funder level but is not systematically aggregated. This model can produce useful data points for specific contexts but cannot support national-level policy assessment or cross-national comparison.

Some Member States have minimal or no operational monitoring (or do not make such data public, i.e. it has remained unknown to the author of this study). These include Romania, Greece (until a newly proposed system becomes operational), Malta, Cyprus, Latvia, and to varying degrees Estonia and Poland. For these Member States, policy claims about OA progress cannot be independently verified.

2.12.3. Reporting lines and overall monitoring

Reporting structures for OA policy implementation usually follow standard governmental and research governance hierarchies, which are not always made explicit (since they are inferred to be obvious). In most Member States, the reporting chain runs researchers → institutions → funders → ministry → government. Horizontal reporting also occurs through European-level mechanisms (OpenAIRE, EOSC) or international ones (OGP Independent Reporting Mechanism). The formality and regularity of reporting vary. In the Netherlands, UNL and NWO have sent annual open access figures to the Minister since 2016, with the Minister in turn reporting these to Parliament, including as policy indicators in the ministry's annual budget report. In Sweden, KB and VR both report annually to the Government. In Austria, FWF publishes annual compliance monitoring. In contrast, several Member States lack formal, regular OA-specific reporting protocols, with OA progress subsumed within broader research policy reporting (if at all).

Overall policy monitoring is typically situated at the ministry level, though the depth and regularity of such oversight vary. In well-developed systems, overall monitoring involves multiple actors with defined responsibilities: in France, the Ministry (MESRE) itself produces the BSO, with the Committee for Open Science (CoSO) providing expert oversight; Sweden's KB reports annually to the Government; in Denmark, the ministry-level Danish Agency for Higher Education and Science produces the OA Indicator within an explicitly networked governance model; and in the Netherlands, Open Science NL (hosted by NWO under a ministry mandate) monitors overall NPOS2030 implementation. In less developed systems, monitoring may exist on paper but lack operational substance.

2.13. Impact evaluations

Impact evaluation evidence varies enormously across Member States; however, comprehensive bibliometric analysis is the exception with most MS either providing qualitative assessments or none at all.

2.13.1. Quantitative evaluations with trend data

The most robust evaluations come from Member States with long-standing monitoring systems. The Netherlands reports among the highest OA rates globally: 95% UNL (2024), 94.6% NWO/ZonMw (2023). Sweden tracks OA from 24% (2014) to 81% immediate OA in 2025 (KB annual report). Austria's FWF reports 88% OA (2024), with data from 2015 onward. Denmark's OA Indicator tracks systematic institutional progress. France's BSO provides publication-level OA data.

Greece's KR21 survey (2025) documents significant negative impacts of the current legal and policy environment on Greek researchers providing empirical evidence of researcher-level effects from a country with a fragmented OA framework.

Spain provides the strongest documented policy-to-outcome evidence chain in the EU: a letter published in Nature (7 October 2025, 'Incentives accelerate progress on open access in Spain') demonstrates that ANECA's integration of mandatory deposit as a sexenio criterion has significantly accelerated OA adoption, constituting the clearest EU-level evidence of a specific policy intervention driving measurable researcher-level compliance.

Germany's OA rate was estimated at 68% nationally. Italy's VQR recorded 54% OA (2015–2019), with PROs at 73.1% versus universities at 51.4%. Latvia reports 40.66% OA (WoS 2014–2020); a separate RIS3 Analytical Review, using different figures, ranks Latvia first among the EU-28 for gold OA proportion. Slovenia's Open Science Monitor for publications specifically an increase from 27,94% in 2010 to 60.51% OA in 2025.

2.13.2. Qualitative or limited evaluations

Several Member States have conducted qualitative assessments rather than systematic quantitative evaluations. Romania's OGP IRM assessment found 'limited progress' (2018–2020). Slovakia's strategy includes a SWOT analysis and task completion tracking. Poland's 2018 ministry report noted 'modest' effects. Bulgaria, Croatia, and Hungary lack formal published impact evaluations of their OA policies.

3. Benchmarking with non-EU countries

3.1. Introduction and country selection

This chapter provides an overview of open access policy frameworks in a number of selected countries outside the European Union and then compares and contrasts “non-EU” approaches with predominant approaches identified across EU Member States.

The full analysis in annex B is organised by country, with each country chapter following the following structure: (a) policy instrument, (b) binding vs. voluntary, (c) Scope of outputs, (d) Embargo and openness, (e) licensing and rights, (f) infrastructure, (g) Funding and incentives, and (h) Governance and monitoring.

The benchmarking below follows the Open Access Policy Checklist provided by the EC, organised across the three categories: (1) General characteristics, (2) Context, and (3) Implementation and monitoring and its sub-chapters.

Given the different governance structures and available documentation, the level of analytical granularity varies. As in the analysis of open access in the EU member states, the desk research draws on national legislation, policy strategies and action plans, funder mandates and grant conditions, official monitoring reports, and, where available, academic literature on open access policy development. All sources are referenced in footnotes in the annex.

The eight countries covered as “non-EU countries” are Brazil, Canada, China, Colombia, Japan, Switzerland, the United Kingdom, and the United States. The selection reflects a combination of criteria derived from the Terms of Reference. This selection provides two countries each in Europe (but Non-EU), North America, Central and South America and Asia.

In Europe, Switzerland is a major Horizon Europe associated country with open access policies that are closely aligned to with EU frameworks. The United Kingdom, while no longer an EU Member State, participates in Horizon Europe as an associated country and remains one of the most significant open access policy actors.

In North America, the United States provides the most consequential non-European reference point for funder mandate policy. The 2022 OSTP Memorandum requiring immediate, embargo-free open access for all federally funded research by the end of 2025¹⁰ makes the US de facto aligned with Plan S.¹¹ Canada offers a model of tri-agency coordination, combining funder mandates from three major federal research funders.

¹⁰ However, this memorandum is now being challenged, see American Institute of Physics, FYI Science Policy News, 'Scholarly Publishing Costs Under Scrutiny by Trump Administration' (May 2026). <https://www.aip.org/fyi/scholarly-publishing-costs-under-scrutiny-by-trump-administration> . Accessed 19 July 2026.

¹¹ Two private US funders (the Gates Foundation and HHMI) are also cOAlition S members.

In Asia, China is included on account of its scale and strategic significance, including open access ambitions as a self-proclaimed leading nation among the so-called “Global South”. Japan is included as well given its relatively recent open science policy and its investment in open access infrastructure.

Brazil and Colombia represent the Latin American tradition of open access, which is characterised by a non-commercial, publicly funded model of open access publishing (diamond OA) which has been gaining traction.

The countries are presented in alphabetical order.

3.2. General characteristics of open access policies

3.2.1. Policies formulated as strategies, funder mandates and/or legislation

The predominant EU Member State model combines national strategies or plans with research funder mandates of varying stringency. A growing, yet still low, number of Member States have complemented this approach with binding legislation at national level, often but not always through secondary publication rights enacted in copyright law or through research law provisions establishing repository deposit obligations and sometimes data management requirements.

Funder mandates are also prominent in a number of the non-EU countries analysed. The United Kingdom (UKRI) and Switzerland (SNSF) rely on research council mandates that are similar to the approach of EU funders such as FWF (Austria) or ANR (France). Legislative embedding remains the exception rather than the rule outside the EU; where it does occur (Colombia, and in promotional terms China), it tends to be associated with broader open government agendas, national development, or science reform agendas. The UK’s multi-layered approach combining funder mandate, assessment-linked policy (REF), and private funder requirements (Wellcome) represents the most complex non-EU governance architecture. However, the US federal policy mandate is unique in its scale and government-wide coverage, operating through executive authority rather than legislation. Japan’s 2024 Cabinet-level Basic Policy follows a comparable executive route, implemented through the three major funding agencies.

Noteworthy aspect: in an ambitious scenario the US federal policy could provide inspiration for open access provisions for all EU funders as part of the ERA Act.

3.2.2. Bindingness in terms of implementation

Within the EU, binding requirements are primarily channelled through legislation and/or funder mandates (grant conditions).¹² However, funders vary considerably how strong these binding policies are, and in some cases policy mandates contain only recommendations. National strategies and policies are often but not always non-binding or aspirational, creating a two-tier structure: binding (to various degrees) obligations for third party funded research alongside broader policy signals. A few Member States have also enacted legislation that introduces binding obligations beyond the funder–grantee relationship. Furthermore, on the EU level Horizon Europe makes open access a contractual obligation for all beneficiaries.

Outside the EU, China (as far as it is verifiable), Japan, Switzerland, Canada, the UK and the US also all impose mandatory requirements on publicly funded research as conditions of grant, i.e. through the funder. There is thus a broad convergence on the funder mandate as the primary binding mechanism. However, there is variation in enforcement: US federal agencies link non-compliance to future funding eligibility; the UK couples funder mandates with assessment-linked consequences; Japan and China rely on mandatory language without documented sanctions.

Noteworthy aspect: the explicit linkage between non-compliance and future funding eligibility in the US (NIH model) represents a potentially instructive enforcement mechanism.

¹² The Netherlands has also progressively embedded open science obligations in collective labour agreements. Finnish University Libraries (FUN) introduced a Prior Licence Model in 2026.

3.2.3. Scope

The EU baseline has moved decisively toward broad scope. All 27 Member States address open access to both scientific publications and research data in some way, shape or form and several MS extend their activities further to software, methods, infrastructures and educational resources.

Outside the EU there is broad convergence on a scope focusing on publications and research data consistent with the EU baseline. The inclusion of additional output types (software, Open Educational Resources, Citizen Science) remains exceptional. Canada and Colombia stand out for explicitly encompassing a wider range of outputs.

Noteworthy aspect: The UK's dedicated fund for open access monographs, book chapters and edited collections (£3.5 million, centrally held by UKRI) addresses a gap that several EU Member States have not yet resolved.

3.2.4. Embargoes or immediate open access

The EU landscape is quite mixed in this regard. Horizon Europe requires immediate open access with zero embargo for publications. cOAlition S member funders require immediate OA, although Luxembourg has moved back from this requirement.¹³ Many Member States (or their funders¹⁴) still permit 6–12-month embargoes (6 months for STM, 12 months for SSH, following the EU Recommendation). Several Member States still operate on a 12-month embargo by default, and some are even more lenient or do not specify maximum embargo periods at all.

Outside the EU we do see a more pronounced move towards a zero-embargo model amongst the countries analysed. UKRI and the Wellcome Trust in the UK require immediate OA; however, the REF policy is more permissive.

The US mandates immediate open access with no embargo with agency policies required to be in effect by the end of 2025 and most now operative; however, the underlying OSTP memorandum may be repealed. HHMI mandates preprint posting prior to first journal submission; the Gates Foundation requires immediate preprint posting and repository deposit upon publication. Switzerland requires immediate OA for articles (since January 2023), with a 12-month embargo for books. Canada is in the process of eliminating its 12-month embargo in the revised Tri-Agency policy (delayed into 2026). Japan has transitioned from a 12-month embargo to immediate OA (from April 2025) for specific funding programmes. China retains a maximum 12-month embargo, while Brazil is moving toward immediate access through transformative agreements starting 2026. Colombia promotes an “open by default” principle (although it is not explicitly stated that this means zero embargo).

Noteworthy aspect: the broad move towards elimination of embargoes provides evidence that a government-wide zero-embargo standard is operationally feasible.

3.2.5. Copyright, rights retention and secondary publication rights

The EU landscape presents a distinctive combination of two mechanisms. First, statutory secondary publication rights (SPRs) exist in some Member States, generally permitting authors to make accepted manuscripts available for non-commercial purposes. Embargo periods differ within this group. In some cases, the SPR also includes a provision overriding publisher contracts. Second, rights retention strategies (RRS) are typically implemented through funder mandates (particularly cOAlition S members) and require or encourage authors (project beneficiaries) to retain sufficient rights to comply with open access obligations. However, many Member States have neither in place. Horizon Europe explicitly requires beneficiaries to retain sufficient intellectual property rights and defaults to CC BY licensing.

¹³ The Polish funder has rolled this back as well and has formally left cOAlition S. The Luxembourg funder is nominally still a member at the time of writing.

¹⁴ There is sometimes an internal discrepancy between national legislation or policy and funder policy as regards embargo periods.

Statutory secondary publication rights remain a distinctly European instrument; no benchmark country outside of Europe has adopted an equivalent mechanism – however, while not an EU Member State, a SPR is under consideration in Switzerland. Non-EU countries rely instead on contractual rights retention (UK, CH, CA draft) or do not address the issue (JP, CN). The split between CC BY mandates (UK, CH, BR) and other approaches (US federal licence, JP) is notable. The US private funder–federal funder divergence (CC BY 4.0 vs. no CC mandate) is a distinctive feature.

3.3. Context of open access policies

3.3.1. Training or guidance for researchers

Within the EU training and guidance are provided through national coordination bodies, funder-level guidance, and institutional support services. However, the level of systematisation varies considerably.

Outside the EU, the UK relies on institutional support complemented by UKRI guidance. The US provides guidance through agency-level resources. Canada's Roadmap includes training ambitions. Colombia has invested in participatory policy development through the *Primeros Diálogos Nacionales de Ciencia Abierta* (2023). Evidence gap: systematic data on researcher training programmes is limited for most benchmark countries.

3.3.2. Funding for open access

Horizon Europe treats OA costs as eligible grant expenses but only for fully OA venues (no hybrid APC reimbursement). Member States exhibit a wide range of funding models, sometimes in combination. The most common is treatment of APCs as eligible grant costs. A second group operates dedicated open access funding programmes or block grants. Third reading and open access publishing agreements, formerly termed transformative agreements, have become a dominant mechanism in several Member States. Support for Diamond OA remains limited but is growing in a number of EU member states. Several Member States with smaller research systems report limited or no dedicated OA funding although some have used Recovery and Resilience Facility (RRF) funding for open science infrastructure investment, raising the question of sustainability once RRF programmes close.

The UK provides up to £46.7 million annually through block grants (approximately £40 million for articles, £3.5 million for monographs), the largest dedicated OA funding commitment among the benchmark countries. From 2028/29, UKRI funding will focus exclusively on fully OA publishing and will no longer be available for hybrid OA. Meanwhile JISC has concluded new read and publish agreements, with some opt outs by individual universities.

The US allows reasonable publication costs as grant expenses but provides no dedicated OA fund; the memo is route-neutral, and the White House FAQ states compliance 'does not require expense on the part of the researcher.' The NIH 2024 Public Access Policy (effective 1 July 2025) makes explicit that fees charged specifically for submission of the Author Accepted Manuscript to PubMed Central are unallowable grant costs. A substantially more radical measure, namely a government-wide prohibition on using federal funds for journal subscriptions and APCs was proposed in April 2026 as part of the President's FY2027 Budget Request. The Gates Foundation ceased paying APCs from January 2025; HHMI no longer covers hybrid journal APCs.

Switzerland covers APCs for fully OA journals through SNSF (not hybrid), with APC invoices paid directly via ChronosHub from January 2025 and a maximum cap of CHF 3 500 from January 2027. SNSF also funds OA books up to CHF 15 000 (CHF 12 000 from 2027). From autumn 2026, SNSF participates in Open Research Europe (ORE).

Japan allows APCs as research expenses under JST; J-STAGE supports OA as infrastructure. A significant development is OASE (2024), a government-supported body for collective TA negotiations with global publishers.

In the course of 2026, the Chinese Academy of Sciences (CAS) confirmed that it will no longer cover unusually high APCs for certain international open access journals, including Nature Communications, Cell Reports, and Science Advances, although no official policy text has been published.

Canada allows APCs as grant expenses but has no dedicated fund.

Brazil's CAPES TAs represent an investment estimated at over US\$43 million annually; alongside this, SciELO supports diamond OA at US\$300–400 per article funded through public agencies. The coexistence of commercial TAs and diamond OA is a notable feature of the Brazilian system. Colombia's policy includes components for infrastructure expansion and transformative agreements, but no dedicated national OA funding was documented.

Noteworthy aspects: Switzerland's APC cap (CHF 3 500 from 2027), UK's monograph fund, US private funder move away from APCs, the UK's announced 2028/29 sunset for hybrid OA funding, US NIH APC cap proposal (pending); CAS APC restriction. All of these signal a multi-jurisdictional shift away from the hybrid APC model.

3.3.3. Repository requirements (incl. FAIR principles)

Horizon Europe requires deposit in trusted repositories for publications at the latest at publication time, with FAIR principles for data.

Member States predominantly rely on institutional repositories, with some national platforms (FR/HAL, BG/BPOS, HR/DABAR, CZ/NRP, PT/RCAAP, SE/DiVA). FAIR principles are endorsed across most Member States, though the depth of implementation varies. Core Trust Seal or equivalent certification is referenced in some contexts (IE/DRI, NL/DANS) but is not widely required.

The UK specifies minimum technical standards for repositories (Annex 2 of the UKRI policy): persistent identifiers (DOIs, URNs, Handle), article-level metadata, ORCID support, and registration in OpenDOAR and SHERPA RoMEO. Biomedical articles must be archived in Europe PMC; NERC-affiliated institutions must use NORA. Data repositories are discipline-specific (UK Data Service, Environmental Data Service, Europe PMC).

The US requires agency-designated repositories aligned with 'Desirable Characteristics of Data Repositories for Federally Funded Research' (FAIR-aligned standards). Digital PIDs are required for publications, data, and awards. NIH uses PubMed Central; other agencies maintain their own repositories. Agencies must publish updated metadata and PID plans by December 2026, with implementation by December 2027. The Gates Foundation launched VeriXiv (with F1000), a verified preprint server with pre-publication quality checks.

Japan designates institutional repositories as the standard mechanism, with outputs required to be searchable on the NII Research Data Cloud (CiNii Research). National platforms include J-STAGE, Jxiv, and J-STAGE Data. The government committed approximately ¥10 billion for institutional repository standardisation. Switzerland allows deposit in institutional, disciplinary, or generalist repositories (including Zenodo, arXiv, Europe PMC); for SNSF-BPC-funded books, the author or editor deposits in an institutional or disciplinary repository, with the SNSF forwarding the OA version to the OAPEN Library and the Swiss National Library. Canada's draft revised policy requires deposit in a Canadian institutional repository. China has developed PubScholar, integrating 180 million digital resources and 84 million full-text resources, combining ChinaXiv (preprints), ScienceDB (data), CAS IR, and GoOA. Brazil participates in the LA Referencia network (in which Spain is also a member) and maintains SciELO (over 1 600 journals). Colombia operates REDCOL and participates in LA Referencia.

Noteworthy aspects: LA Referencia model for Latin America (includes also participation of Spain).

3.3.4. Explicit requirement to use metadata and identifiers

Horizon Europe requires repository metadata to be openly licensed (typically CC0), with persistent identifiers (PIDs) including DOIs. Some Member States specify DOI, ORCID, or other PID requirements in their policies. However, metadata and PID requirements are not uniformly codified across Member States. The Barcelona Declaration on Open Research Information (2024) represents a voluntary international framework for open research information; some Member States funders have endorsed it.

The US requires digital PIDs for publications, scientific data, and awards, consistent with NSPM-33 Implementation Guidance, with agency plans for metadata collection and PID assignment due by December 2026. The UK specifies PIDs (DOIs, URNs, Handle), ORCID support, and article-level metadata as minimum repository standards. Japan requires outputs to be searchable on NII Research Data Cloud/CiNii Research, implying PID-enabled discovery. Colombia's data guidelines specify metadata standards aligned with RDA norms and OAI-PMH interoperability protocols. Metadata/PID requirements for CH, CA, CN, and BR are not detailed.

3.3.5. Peer review approaches

Open peer review is mentioned in some contexts but remains marginal in formal policy frameworks. Horizon Europe references open peer review as a recommended (not mandatory) open science practice. Furthermore, the Commission supports Open Research Europe (ORE), as a platform that implements open peer review.

Open peer review is explicitly absent from the open access policies of most EU Member States. Where open peer review does operate, it does so at platform or funding-instrument level rather than as a policy requirement.

Colombia's CONPES 4069 mentions 'piloting open peer review' as a planned action, representing the most explicit reference among the benchmark countries. The Gates Foundation's VeriXiv introduces pre-publication quality checks, which represent a form of enhanced peer review infrastructure. From autumn 2026, the restructured ORE will accept submissions from all researchers in Switzerland through SNSF participation.

3.3.6. Links to researcher assessment

Links between open access and research assessment are gaining prominence in the EU, driven by the CoARA initiative and DORA commitments. Several Member States are reforming their assessment frameworks to recognise open science practices. Horizon Europe integrates open science into proposal evaluation. However, the operational integration of OA compliance into career assessment and institutional evaluation remains uneven.

Outside the EU the UK's REF constitutes the most explicit and consequential research assessment/OA linkage: journal articles and conference proceedings must be open access to be eligible for REF submission, with direct financial implications through QR funding allocation. Colombia's CONPES 4069 proposes 'defining alternative productivity metrics' as a planned action.

Noteworthy aspects: The UK REF model of linking research assessment of *institutions* to OA compliance.

3.3.7. Percentage of public funding thresholds

A minority of EU Member States define a triggering threshold of 50% based on the proportion of public funding, usually in connection with secondary publication rights but the majority of EU Member States do not (and neither does Horizon Europe).

No benchmark country uses a percentage-of-public-funding threshold comparable to the EU SPR model.

3.3.8. Provisions for small and medium publishers

Even within the EU there is very limited explicit attention to small and medium publishers in EU Member State open access policies. Where addressed, provisions tend to be indirect (e.g., support for Diamond OA journals, or for journals in the national language).

There is no evidence of specific SME publisher provisions amongst the benchmark countries. Japan's J-STAGE, which supports OA journal publishing infrastructure, may indirectly benefit smaller publishers. Brazil's SciELO model (diamond OA, publication costs US\$300–400) provides an alternative that structurally reduces dependence on commercial publishers.

3.3.9. Identified costs of, or gains from, applying open access policies

Cost and impact evidence across EU Member States is uneven. Several Member States report OA rates but not systematic cost-benefit analyses. Horizon Europe's monitoring study for Horizon 2020 reported an 83% average OA compliance rate.

The UK's annual investment (£46.7 million from UKRI, plus Jisc-negotiated agreements) represents the most significant quantified commitment among the benchmark countries. A 2022 baseline found 63% of UKRI-funded articles fully policy-compliant. UKRI's own April 2026 reporting puts current OA levels for UKRI-funded articles at approximately 88%. Switzerland tracks OA rates (approximately 70% overall, 80% SNSF-funded) and notes that the OA share 'rose sharply between 2013 and 2020' and 'has stabilised at a consistently high level since 2021.' The original 100% target by 2024 was not achieved; the revised strategy extends to 2032. Brazil's estimated >US\$43 million annual TA investment is documented; however, a critical study asserts the policy 'has been ineffective to improve the impact of Brazilian science.'

3.3.10. Security considerations

Horizon Europe addresses security through the "as open as possible, as closed as necessary" principle, allowing exceptions for confidentiality, trade secrets, competitive interests, and security. Most Member State policies reference this principle for research data. Explicit cybersecurity or geopolitical provisions in OA policies are rare. Finland's 2025–2030 Declaration references "responsible openness." Denmark's FAIR strategy addresses dual use and GDPR. In other words, many Member States have developed stand-alone research security policies but have not (yet?) connected them to open access.

The US allows exceptions for security. The Department of Agriculture (USDA) implements immediate public access while providing that USDA-supported publications should not appear in journals whose publishers maintain editorial offices in foreign countries of concern. Colombia's Article 171 of Law 2294/2023 includes explicit exceptions for intellectual property, personal data, and statistical confidentiality. China's MMSD (2018) includes provisions for hierarchical management and security controls. The UK draft data policy retains the 'as open as possible, as restricted as necessary' principle.

3.3.11. References to regulatory/administrative simplification

Explicit simplification provisions remain extremely rare in formal OA policies. In three Member States (Poland and Luxembourg, Estonia for DMPs) administrative burden is invoked as a policy rationale to justify reducing the open access obligations. Horizon Europe has reduced data management requirements in proposals.

Similarly, there is no explicit reference to simplification in non-EU benchmark countries.

3.3.12. Role of artificial intelligence in open access policies

Artificial intelligence is not explicitly addressed in the open access policies of almost all Member States. Where AI does appear, references are brief and generally confined to strategy or background documents. The most explicit linkage is Greece's AI Blueprint of 25 November 2024, whose Proposal 4.13 states that open access to scientific results is key to promoting AI research and improving research quality.

Non-EU countries do not explicitly link open access and AI (yet?). However, the US requires machine-readability for publications, defined as 'a format that can be easily processed by a computer without human intervention while ensuring no semantic meaning is lost.'

3.4. Implementation and monitoring of open access policies

3.4.1. Responsibility for implementation

Across the EU, implementation responsibility is typically (but not in all cases) distributed across three levels: (a) ministries provide strategic direction and overall coordination; (b) research funders implement OA requirements through grant conditions; and (c) research institutions (universities, research organisations) operationalise compliance through libraries, repositories, and support services. Individual researchers bear primary responsibility for deposit and compliance. Horizon Europe places primary responsibility on grant beneficiaries, supported by institutional functions. The pattern is broadly similar across Member States, but the balance, clarity and operational depth of these allocations vary considerably.

The US distributes implementation across federal agencies (each develops its own public access plan under OSTP guidance), institutions, and researchers. The UK channels implementation through UKRI's block grant mechanism to research organisations, which then manage compliance locally.

Japan's implementation is coordinated by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and funding agencies are responsible for implementing OA requirements within their respective grant programmes.

Canada's Office of the Chief Science Advisor coordinates with an Open Science Steering Committee. Colombia assigns Minciencias as the primary responsible body.

3.4.2. Monitoring of individual policy elements

Monitoring in the EU is predominantly funder-based (through project reporting and grant compliance checks) although this data is not consistently made public and its depth varies considerably: some funders conduct systematic bibliometric analysis while others rely on self-reported compliance. A group of Member States operates dedicated national monitors. Horizon Europe monitors through grant management systems.

The US requires agencies to report to OSTP on implementation status; however, there is no single government-operated national dashboard for tracking OA rates. The UK conducted a light-touch review of its research-articles policy in 2025, with no final report published as of July 2026. UKRI has, however, set out monitoring intentions for the 2026–30 implementation period, including more systematic tracking of open access levels, exploration of an "Open Access Monitor", independent economic analysis of costs, and the reintroduction of block grant reporting in 2026–27. Switzerland operates the Swiss OA Monitor (OAM-CH). Japan's JST has partnered with CHORUS since 2017 for publication monitoring; China has apparently no public monitoring reports, compliance assessments, or systematic reporting cycles. Brazil maintains a CAPES APC Panel tracking expenditures.

3.4.3. Overall policy monitoring

Overall policy monitoring is typically situated at ministry level, although the depth and regularity of oversight vary considerably. In the best-developed systems, overall monitoring involves several actors with clearly delineated roles. In some countries data exists at institutional or funder level but is not consolidated to national level.

The US designates OSTP with the NSTC Subcommittee on Open Science coordinating across agencies. The UK has UKRI as the central body for its policy. Switzerland coordinates through SNSF and swissuniversities. Japan's Cabinet Office holds strategic oversight with MEXT coordinating. Colombia designated Minciencias.

3.4.4. Who reports to whom regarding progress

Reporting lines in the EU typically flow from grantees to funders (project reporting), and from funders/national bodies to ministries (supervisory reporting). The formality and regularity of vertical reporting varies widely. Several Member States lack formalised OA-specific reporting cycles, with reporting often embedded in broader research evaluation or ad hoc exercises.

Reporting also occurs horizontally, through European-level mechanisms including OpenAIRE, and EOSC. On the EU level, the 2012 and later the 2018 European Commission Recommendations established a de facto reporting mechanism through “National Points of Reference”.

In the US agencies report to OSTP ‘when requested’. The UK is reintroducing block grant reporting in 2026–27 through a standardised template; REF compliance is checked through the submission process. Japan requires researchers to report OA status in annual results reports to funders. Canada’s Roadmap required action plans from federal departments by June 2021, but it is not clear whether this has been accomplished. Formal reporting cycles for BR, CN, and CO are not documented.

3.4.5. Results of any impact evaluations of policy

Impact evaluation of OA policies is uneven across the EU. Quantified OA rate monitoring exists in several Member States and for Horizon 2020 (but not yet for Horizon Europe). Systematic cost-benefit analysis remains rare. Most Member States estimate a qualitative rather than a quantitative impact (if at all).

In the non-EU comparison Switzerland provides the most systematic ongoing monitoring: OA rates of approximately 70% overall and 80% SNSF-funded. The UK’s 2022 baseline found 63% compliance for UKRI-funded articles, rising to approximately 88% by April 2026 according to UKRI’s own reporting. Brazil’s CAPES APC Panel tracks expenditures; a critical study questions the policy’s effectiveness in improving research impact. Impact evaluations for Japan, Canada, China and Colombia are not documented.

4. The EU-level framework: state of play and assessment

4.1. The Commission Recommendations of 2012 and 2018

The Commission Recommendation 2012/417/EU of 17 July 2012 on access to and preservation of scientific information represented the EU’s first systematic soft-law instrument addressed to Member States on open access.¹⁵ Adopted alongside the Commission Communication “Towards better access to scientific information: Boosting the benefits of public investments in research”,¹⁶ it called on Member States to define clear policies for the dissemination of and open access to scientific publications resulting from publicly funded research.

The recommendation was structured around five areas: open access to publications, open access to research data, preservation and reuse, e-infrastructures, and multi-stakeholder dialogue. For publications, it specified that open access should be granted “as soon as possible, preferably immediately and in any case no later than 6 months after the date of publication, and 12 months for social sciences and humanities.” For research data, the 2012 text called for data to “become publicly accessible, usable and reusable through digital e-infrastructures” but without specifying timelines or technical standards.

Furthermore, the Recommendation already required the “academic career system” to “support and reward researchers who participate in a culture of sharing” and called for “new, alternative models of career assessment, metrics and indicators”. The recommendation also established the mechanism of National Points of Reference (NPRs).

¹⁵Commission Recommendation 2012/417/EU of 17 July 2012 on access to and preservation of scientific information (OJ L 194, 21.7.2012, p. 39). <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32012H0417>

¹⁶COM(2012) 401 final, “Towards better access to scientific information: Boosting the benefits of public investments in research.” <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52012DC0401>

Commission Recommendation (EU) 2018/790 of 25 April 2018 replaced and substantially expanded the 2012 instrument.¹⁷ Recital 14 explicitly acknowledged that “there have been many advances in the areas dealt with in Recommendation 2012/417/EU...but not all targets have been met and progress has been uneven among Member States.” The 2018 revision reflected the emergence of the broader open science agenda (the Council Conclusions of 2016 on “the transition towards an Open Science system”), the European Cloud Initiative and EOSC proposal, and the Digital Single Market Strategy.

The 2018 recommendation sharpened the timeline for scientific publications, setting 2020 as the latest date by which “all scientific publications resulting from publicly funded research are made available in open access.” It explicitly added provisions on text and data mining and strengthened those on rights retention (“researchers, when entering into contractual agreements with scientific publishers, retain the necessary intellectual property rights”), and extended the transparency requirement for publisher agreements (which the 2012 text had already applied to “big deals”) to cover the related offsetting deals.

As concerns research data the 2018 text introduced the FAIR principles (“findable, accessible, interoperable and re-usable”) and data management planning as “a standard scientific practice,” linked data infrastructures explicitly to the EOSC federation, and adopted the “as open as possible, as closed as necessary” formulation.

Furthermore, the recommendation introduced a section on skills and competences and called on Member States to adjust “the recruitment and career evaluation system for researchers” and “the evaluation system for awarding research grants” so that sharing of research results is rewarded, including through “new generation metrics.”

Member State reporting via the dedicated National Points of Reference (NPRs) produced four cycles of reports (2015,¹⁸ 2018,¹⁹ 2020²⁰ and 2024²¹) which documented gradual but uneven progression. Looking at these reports, we can draw the following conclusions:

- (i) The NPR reports record that Member States perceived the recommendation as valuable and impactful (Report 2 from 2018 explicitly recorded this positive assessment). However, while the recommendation successfully diffused the idea of open access across the EU, it did not produce convergence in actual policy instruments, legal frameworks, or operational requirements.
- (ii) Across all four reporting cycles, a cluster of countries led while another cluster has lagged. However, the fourth report showed that some former “laggards” have now at least adopted policies (Greece, Latvia, Lithuania, Malta, Poland, Slovakia), suggesting some narrowing of the gap, at least in the publications dimension.
- (iii) The fourth report showed an acceleration in the uptake of research data policy.
- (iv) Although both Recommendations asked Member States to define “concrete objectives and indicators to measure progress” as part of their policies, the reports themselves record only partial monitoring. For instance, the fourth report acknowledged that it “cannot isolate concrete objectives and indicators to measure progress, implementation plans, and associated financial planning.”

¹⁷Commission Recommendation (EU) 2018/790 of 25 April 2018 on access to and preservation of scientific information (OJ L 134, 31.5.2018). <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018H0790>

¹⁸ European Commission, Directorate-General for Research and Innovation, Tarazona Rua, M., Spichtinger, D., Dechamp, J., et al. (2016) Access to and preservation of scientific information in Europe: report on the implementation of Commission Recommendation C(2012) 4890 final. Publications Office. <https://data.europa.eu/doi/10.2777/975917>

¹⁹ European Commission, Directorate-General for Research and Innovation, Adoojan, M., Tsoukala, V., Dechamp, J. (2018) Access to and preservation of scientific information in Europe: report on the implementation of Commission Recommendation C(2012) 4890 final. Publications Office. <https://data.europa.eu/doi/10.2777/642887>

²⁰ European Commission, Directorate-General for Research and Innovation, Keesenberg, R., Tsoukala, V., Barbarossa, E., et al. (2020) Access to and preservation of scientific information in Europe report on the implementation of Commission recommendation C(2018)2375 final. Publications Office. <https://data.europa.eu/doi/10.2777/950244>

²¹ European Commission: Directorate-General for Research and Innovation, Access to and preservation of scientific information in Europe – 2023 report on the implementation of the Commission Recommendation 2018/790, Publications Office of the European Union, 2024, <https://data.europa.eu/doi/10.2777/223623>

The fourth report showed acceleration in some policy areas, namely data management, rewards/incentives, and skills among some member states.²² However, this acceleration has not produced convergence across Member States.

4.2. Legislation relevant to research data

4.2.1. The Open Data Directive (2019/1024)

Research data came to be covered by EU data legislation through Directive (EU) 2019/1024, the Open Data Directive, which was adopted on 20 June 2019, and which Member States were required to transpose by 17 July 2021.²³

Article 10 obliges Member States to “support the availability of research data by adopting national policies and relevant actions aiming at making publicly funded research data openly available (‘open access policies’), following the principle of ‘open by default’ and compatible with the FAIR principles. Research data is defined as “documents in a digital form, other than scientific publications, which are collected or produced in the course of scientific research activities and are used as evidence in the research process or are commonly accepted in the research community as necessary to validate research findings and results.”

However, crucially the “open by default” principle applies only to research data that have already been made publicly available. Furthermore, the provisions are not intended to impose extra costs for retrieval or additional curation of data and legitimate exemptions apply in accordance with the principle of “as open as possible, as closed as necessary.” The directive also introduced the concept of “high-value datasets” (Article 14), to be made available free of charge, in machine-readable formats and via APIs.²⁴

Generally, the directive operates through a public-sector information logic covering market access, economic re-use and competition rather than through the scientific norms of reproducibility, verification and cumulative knowledge-building.²⁵

Furthermore, the Commission's Digital Omnibus Regulation Proposal of 19 November 2025 provides for its repeal, see discussion below.

4.2.2. The DSM Directive and text and data mining (Directive 2019/790) and its relation to the AI act

The ability to mine published scientific literature and datasets at scale is a practical dimension of ‘access’ that goes beyond human readability. The Directive on copyright and related rights in the Digital Single Market (DSM Directive), adopted on 17 April 2019,²⁶ introduced two mandatory exceptions for text and data mining (TDM) that are directly relevant to the open science landscape.

²² The fourth reporting cycle draws on the EOSC 2022 survey (situation in 2021; no data for Belgium, Italy and Romania) rather than the NPR questionnaire used in earlier cycles.

²³ Directive (EU) 2019/1024 of the European Parliament and of the Council of 20 June 2019 on open data and the re-use of public sector information (OJ L 172, 26.6.2019, pp. 56–83). <https://eur-lex.europa.eu/eli/dir/2019/1024/oj/eng>

²⁴ The implementing act identified specific datasets within six thematic categories — geospatial, earth observation and environment, meteorological, statistics, companies and company ownership, and mobility — but research data as such were not included as a separate high-value dataset category. Directive (EU) 2019/1024, Article 14; Commission Implementing Regulation (EU) 2023/138 of 21 December 2022 laying down a list of specific high-value datasets and the arrangements for their publication and re-use (OJ L 19, 21.1.2023, p. 43). [https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=PI_COM:C\(2022\)9562](https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=PI_COM:C(2022)9562)

²⁵ For recommendations concerning the open data directive see European Commission: Directorate-General for Research and Innovation, Improving access to and reuse of research results, publications and data for scientific purposes – Study to evaluate the effects of the EU copyright framework on research and the effects of potential interventions and to identify and present relevant provisions for research in EU data and digital legislation, with a focus on rights and obligations, Publications Office of the European Union, 2024, <https://data.europa.eu/doi/10.2777/633395> page 30 (summary)

²⁶ Directive (EU) 2019/790 of the European Parliament and of the Council of 17 April 2019 on copyright and related rights in the Digital Single Market (OJ L 130, 17.5.2019, pp. 92–125). <https://eur-lex.europa.eu/eli/dir/2019/790/oj>

Article 3 provides a mandatory, non-overridable exception permitting research organisations and cultural heritage institutions to carry out reproductions and extractions for the purpose of TDM for scientific research on works to which they have lawful access. Article 4 provides a broader general TDM exception applicable to any person with lawful access, but this exception can be overridden by right holders through opt-out reservations.

The AI Act added a further dimension, requiring providers of general-purpose AI models to put in place a copyright policy to identify and comply with rights reservations under Article 4(3) of the DSM Directive.²⁷

4.2.3. The Data Governance Act and the Data Act

Two further EU data regulations create the broader regulatory environment within which research data sharing operates. The Data Governance Act²⁸ (DGA), adopted on 30 May 2022, establishes conditions for the re-use of certain categories of protected data held by public sector bodies, *including* data protected by intellectual property rights, personal data, and commercially confidential data, that fall outside the scope of the Open Data Directive. The DGA creates a structured framework for re-use of such data through competent bodies, secure processing environments, and conditions that safeguard the underlying protections while enabling access. The DGA also introduces a framework for data intermediation services and a mechanism for 'data altruism', that is voluntary sharing of data for objectives of general interest, including scientific research.

The Data Act,²⁹ adopted on 13 December 2023, primarily addresses data sharing in IoT and cloud contexts, but also includes provisions on international data transfers and interoperability requirements for data spaces that affect research data infrastructure. Its interoperability requirements (Chapter VIII) align with the FAIR principles that underpin EU open science policy. Under the Digital Omnibus proposal (see below), the Data Governance Act would be repealed and its data intermediation and data altruism frameworks folded into the Data Act.

4.2.4. The Digital Omnibus

On 19 November 2025 the Commission tabled the Digital Omnibus Regulation Proposal as part of its simplification agenda. The proposal would inter alia repeal the Open Data Directive, the Data Governance Act and the Free Flow of Non-Personal Data Regulation³⁰ and consolidate their operative provisions into a restructured Data Act through new chapters.³¹ At the time of writing, the proposal was under ordinary legislative procedure.³² This demonstrates that the EU's data acquis is itself a moving target, subject to revision on competitiveness and simplification grounds.

²⁷ See Spichtinger, D. (2026). Perspective Chapter: Fit for Purpose? Creative Commons Licensing for Research Data in the Age of Artificial Intelligence. Data Quality Matters – Best Practices for Integrity and Assurance. IntechOpen. DOI: 10.5772/intechopen.1013402 [Online first, January 2026] <https://www.intechopen.com/online-first/1233275>

²⁸ Regulation (EU) 2022/868 of the European Parliament and of the Council of 30 May 2022 on European data governance (Data Governance Act) (OJ L 152, 3.6.2022, pp. 1–44). <https://eur-lex.europa.eu/eli/reg/2022/868/oj>

²⁹ Regulation (EU) 2023/2854 of the European Parliament and of the Council of 13 December 2023 on harmonised rules on fair access to and use of data (Data Act) (OJ L, 2023/2854, 22.12.2023). <https://eur-lex.europa.eu/eli/reg/2023/2854/oj>

³⁰ The regulation prohibits data localisation requirements for non-personal data within the Union except on public security grounds.

³¹ For a discussion on the potential repercussions for research see TechPolicy.Press, „What the EU's Digital Omnibus Means for Researchers“, December 2025: <https://www.techpolicy.press/what-the-eus-digital-omnibus-means-for-researchers/> (accessed 21 July 2026)

³² European Parliament (2026) Legislative Train Schedule – A New Plan for Europe's Sustainable Prosperity and Competitiveness: Digital Package. Available at: <https://www.europarl.europa.eu/legislative-train/theme-a-new-plan-for-europe-s-sustainable-prosperity-and-competitiveness/file-digital-package> (accessed 21 July 2026).

4.3. ERA Policy Agenda Actions on Open Access and Open Science

4.3.1. ERA Policy Agenda 2022–2024

The ERA Policy Agenda 2022–2024³³ included three actions directly relevant to open access and open science, all implemented through voluntary coordination:

ERA Action 1: Enable Open Science, including through EOSC: This ERA action saw a notable success with the launch of the EOSC EU Node in October 2024.

Nevertheless, the ERA Monitoring 2024 acknowledges that key challenges remain, including “harmonising national contributions, increasing the uptake of EOSC by researchers and ensuring the sustainability of the EOSC Federation beyond 2027,” and that “the success of ERA Action 1 is closely intertwined with other ERA Actions. For instance, the reform of research assessment systems under ERA Action 3 is critical for incentivising Open Science practices.”³⁴

ERA Action 2: Propose an EU copyright and data legislative framework for research: This ERA Action was primarily implemented through expert studies (2022), stakeholder workshops (June 2022, February 2023), and a comprehensive capstone study published in May 2024.³⁵ However, no legislative proposal was tabled during the 2022–2026 period.

ERA Action 3: Reform the assessment system for research, researchers and institutions. This action produced the Agreement on Reforming Research Assessment (ARRA, July 2022) and the establishment of the Coalition for Advancing Research Assessment (CoARA) in December 2022. The ERA Monitoring 2024 states that “challenges remain, such as fostering greater diversity and inclusion in assessment practices, addressing cultural and structural barriers, and ensuring consistent implementation across Member States”. A new study assesses progress in reforming research assessment.³⁶

4.3.2. ERA Policy Agenda 2025–2027

The successor ERA Policy Agenda 2025–2027 elevated open science to an “ERA structural policy”, that is a more long-term policy embedded in national and European governance.³⁷ Planned outcomes include the continued support and development of EOSC, to enable an EU copyright and data legislative and regulatory framework fit for research and assessment of the impact of open science policies through an open science policy intelligence platform.

A new ERA Action on “Applying Equity in Open Science” was also introduced, recognising that access to resources, infrastructures, skills, and incentives varies widely among countries and organisations. The action’s planned outcomes include policy and funding support for high-quality not-for-profit open access scholarly publishing services across the ERA. A study on equity in open science is currently being conducted.³⁸

³³ European Commission, ERA Policy Agenda 2022–2024. https://commission.europa.eu/system/files/2021-11/ec_rtd_era-policy-agenda-2021.pdf (accessed 21 July 2026).

³⁴ European Commission, ERA Monitoring 2024 — Second 18-month review of the implementation of the ERA Policy Agenda (April 2025), prepared by Technopolis Group and EFIS Centre. <https://data.europa.eu/doi/10.2777/5186038>

³⁵ European Commission: Directorate-General for Research and Innovation, Improving access to and reuse of research results, publications and data for scientific purposes – Study to evaluate the effects of the EU copyright framework on research and the effects of potential interventions and to identify and present relevant provisions for research in EU data and digital legislation, with a focus on rights and obligations, Publications Office of the European Union, 2024, <https://data.europa.eu/doi/10.2777/633395>

³⁶ European Commission: Directorate-General for Research and Innovation and Stroobants, K., Implementing research assessment reform – Insights from ARRA action plans and interviews with signatories, Publications Office of the European Union, 2026, <https://data.europa.eu/doi/10.2777/5429449>

³⁷ Council Recommendation of 24 June 2025 on the European Research Area Policy Agenda 2025–2027 (C/2025/3593). https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:C_202503593

³⁸ Information provided by the Commission.

4.4. Council Conclusions on Open Science and Open Access

The Council of the European Union has adopted a series of conclusions over nearly two decades that have progressively expanded the political mandate for open access and open science.

These Conclusions, while not legally binding, represent the collective political will of EU Member States and have influenced Commission policy and the ERA governance framework:

- **Council Conclusions on scientific information in the digital age (2007).**³⁹ The 2007 Council Conclusions represented the first political anchoring of the topic at Council level, inviting further action at both EU and Member State level, establishing open access to scientific information as a legitimate concern of EU research policy and paving the way for the Commission's subsequent legislative and policy initiatives.
- **Council Conclusions on the transition towards an Open Science system (2016).**⁴⁰ Adopted under the Dutch Presidency, these conclusions moved the policy discourse from "open access" to the broader concept of "open science". The conclusions
 - recognised that open science has the potential to increase the quality, impact and benefits of research;
 - welcomed open access to scientific publications as the "option by default" for publicly funded research;
 - agreed to promote a transition to immediate open access as the default by 2020, without embargoes or with as short embargoes as possible;
 - endorsed the FAIR principles for research data and the "as open as possible, as closed as necessary" principle;
 - called for incentive mechanisms to reward researchers for sharing results, acknowledging that assessment systems based on journal impact factors needed to be broadened;
 - stated that optimal access can be enhanced if researchers or their employers retain copyright and invited exploration of legal possibilities;
 - took note of the Communication for a European Open Science Cloud;
 - and called for concerted action with intermediate milestones for 2018 and close monitoring through the NPR mechanism.
- **Council Conclusions on research assessment and implementation of Open Science (2022)**⁴¹ adopted under the French Presidency. These conclusions structure actions around three interconnected areas:
 - reform of research assessment systems,
 - developing a European approach and capacities for academic publishing, and scholarly communication,
 - and promoting multilingualism for European scholarly publications.

On the legal and publishing framework, the 2022 conclusions invited the Commission to "work on improving a regulatory framework so that it enables unimpeded access to and reuse of publicly funded research results [...] and to minimise administrative burdens."

³⁹ Council of the European Union, Conclusions on scientific information in the digital age: access, dissemination and preservation, 22 November 2007 (15362/07).

https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/intm/97236.pdf

⁴⁰ Council of the European Union, Conclusions on the transition towards an Open Science system, 27 May 2016 (ST 9526/16). <https://data.consilium.europa.eu/doc/document/ST-9526-2016-INIT/en/pdf>

⁴¹ Council of the European Union, Conclusions on Research assessment and implementation of Open Science, 10 June 2022 (ST 10126/22). <https://data.consilium.europa.eu/doc/document/ST-10126-2022-INIT/en/pdf>

The conclusions expressed concern about the “financial burden [...] arising from increased spending for access to scientific publications and for open access publishing,” took note of initiatives to contain expenditures and ensure transparency in publisher contracts, and underlined that it is key for the Union and its Member States to establish “a common approach in terms of shared principles for academic publishing and scholarly communication in Europe.” The Conclusions also welcomed open publishing platforms such as Open Research Europe and supported the development of publicly funded research infrastructures.

- **Council Conclusions on scholarly publishing (2023)**⁴² adopted under the Swedish Presidency represent the most detailed and operationally specific Council statement on scholarly communication to date. They are structured around three themes:
 - towards an open, equitable and sustainable scholarly publishing system;
 - supporting diversity and ensuring equity in scholarly publishing;
 - and enhancing trust and ensuring high quality, transparency and integrity.

From 2007 to 2023 each successive set of conclusions has been more specific, more operationally detailed, and more explicit about the insufficiency of existing measures. Taken together, the Council Conclusions constitute a progressively building political mandate for stronger EU action.

4.5. OA/OS in the EU Framework Programmes: dedicated projects

Provisions on open science and open access and their development in Horizon Europe are described in annex of this report. However, the European Commission has also funded a substantial portfolio of projects addressing open science, open access, and related topics in the framework programmes addressing the following policy areas, including (but not limited to):

- Policy development and alignment, e.g. PASTEUR4OA,⁴³ MedOANet,⁴⁴ RECODE.⁴⁵
- Infrastructure: e.g. OpenAIRE projects family, EOSC projects family, OPERAS.
- Training, skills, and researcher support: e.g. FOSTER⁴⁶ and FOSTER Plus⁴⁷ projects, Skills4EOSC,⁴⁸ PATTERN.⁴⁹
- Scholarly publishing, Diamond OA, and peer review: DIAMAS,⁵⁰ CRAFT-OA.⁵¹

⁴² Council of the European Union, Conclusions on high-quality, transparent, open, trustworthy and equitable scholarly publishing, 23 May 2023 (ST 9616/23). <https://data.consilium.europa.eu/doc/document/ST-9616-2023-INIT/en/pdf> See also Council press release: <https://www.consilium.europa.eu/en/press/press-releases/2023/05/23/council-calls-for-transparent-equitable-and-open-access-to-scholarly-publications/>

⁴³ PASTEUR4OA (Open Access Policy Alignment Strategies for European Union Research), FP7, Grant Agreement 611742, 2014–2016. CORDIS: <https://cordis.europa.eu/project/id/611742>

⁴⁴ MedOANet (Mediterranean Open Access Network), FP7, Grant Agreement 288945, 2011–2013. CORDIS: <https://cordis.europa.eu/project/id/288945>

⁴⁵ RECODE (Policy RECommendations for Open Access to Research Data in Europe), FP7, Grant Agreement 321463, 2013–2015. CORDIS: <https://cordis.europa.eu/project/id/321463>

⁴⁶ FOSTER (Facilitate Open Science Training for European Research), FP7, Grant Agreement 612425. 2014–2016. CORDIS: <https://cordis.europa.eu/project/id/612425>

⁴⁷ FOSTER Plus, Horizon 2020, Grant Agreement 741839, 2017–2019. CORDIS: <https://cordis.europa.eu/project/id/741839>

⁴⁸ Skills4EOSC, Horizon Europe, Grant Agreement 101058527. 2022–2025. CORDIS: <https://cordis.europa.eu/project/id/101058527>

⁴⁹ PATTERN Project – Pattern in a Nutshell, <https://www.pattern-openresearch.eu/pattern-in-a-nutshell/>

⁵⁰ DIAMAS (Developing Institutional Open Access Publishing Models to Advance Scholarly Communication), Horizon Europe, HORIZON-WIDERA-2021-ERA-01, Grant Agreement 101058007. 2022–2025. CORDIS: <https://cordis.europa.eu/project/id/101058007>

⁵¹ CRAFT-OA (Creating a Robust Accessible Federated Technology for Open Access), Horizon Europe, HORIZON-INFRA-2022-EOSC-01, Grant Agreement 101094397. 2023–2025. CORDIS: <https://cordis.europa.eu/project/id/101094397>

- Research assessment reform and open science monitoring: GraspOS,⁵² CoARA Boost,⁵³ PathOS,⁵⁴ OPUS.⁵⁵
- Reproducibility and research integrity: TIER2.⁵⁶

4.6. Other relevant initiatives

4.6.1. Open Science Policy Platform

The Open Science Policy Platform (OSPP) was established by the European Commission's Directorate-General for Research and Innovation in May 2016 as a high-level advisory group tasked with advising the Commission on how to further develop and implement its open science policy. The OSPP consisted of 25 representatives of the most important relevant European open science stakeholders drawn from universities and research organisations, scientific societies and academies, research funding organisations, policy-making organisations, citizen science bodies, publishers, and open science platforms.

The Platform operated across two mandates (May 2016–May 2018 and May 2018–May 2020). The Platform's final report, published in 2020 under the title *Progress on Open Science: Towards a Shared Research Knowledge System*,⁵⁷ assessed progress by each stakeholder community and proposed a forward-looking vision of a research system built on shared knowledge by 2030, organised around five priorities: (i) academic career structures that foster open practices, (ii) a reliable and trustworthy research system, (iii) a system that enables innovation, (iv) a research culture that facilitates diversity and equity of opportunity, and (v) evidence-based policy and practice. However, the OSPP was not renewed after 2020.

4.6.2. Open Research Europe

Open Research Europe (ORE) is a Commission-funded, diamond like open access publishing platform launched in 2021.⁵⁸ It provides a venue for beneficiaries of Horizon 2020 and Horizon Europe to publish research results with no article processing charges, under CC BY 4.0 licences, with an open peer review model that makes reviewer reports and author responses publicly available. The 2023 Council Conclusions on scholarly publishing explicitly called for ORE to be developed into a “collective, non-profit, large-scale publishing service for the public good,” and the ERA Policy Agenda 2025–2027’s new action on Equity in Open Science references not-for-profit publishing as a planned outcome. In January 2025, an initial group of ten European research funding organisations signed a Statement of Intent to support ORE as a collective service starting by the end of 2026.⁵⁹

⁵² GraspOS (GraspOS: next Generation Research Assessment to Promote Open Science) Horizon Europe, 2023–2025. Open Science Assessment Framework (OSAF). See: <https://graspos.eu/> Collaboration with DIAMAS and CRAFT-OA on Diamond publishing and assessment: <https://graspos.eu/craft-oa> and <https://graspos.eu/diamas-project>.

⁵³ CoARA Boost. CORDIS: <https://cordis.europa.eu/project/id/101131826>

⁵⁴ PathOS (Open Science Impact Pathways), Horizon Europe, HORIZON-WIDERA-2021-ERA-01, Grant Agreement 101058728, 2022–2025. CORDIS: <https://cordis.europa.eu/project/id/101058728> See also Horizon Europe support for open science: <https://european-research-area.ec.europa.eu/horizon-europe-support-open-science>

⁵⁵ OPUS (Open and Universal Science), Horizon Europe. 2022–2025. CORDIS: <https://cordis.europa.eu/project/id/101058471>

⁵⁶ TIER2 (Enhancing trust, integrity and efficiency in research through next-level reproducibility), Horizon Europe, <https://cordis.europa.eu/project/id/101094817>

⁵⁷ European Commission, Directorate-General for Research and Innovation (2020) Progress on Open Science: Towards a Shared Research Knowledge System. Final Report of the Open Science Policy Platform. Luxembourg: Publications Office of the European Union. <https://op.europa.eu/en/publication-detail/-/publication/d36f8071-99bd-11ea-aac4-01aa75ed71a1>

⁵⁸ Open Research Europe (ORE) launched February 2021. <https://open-research-europe.ec.europa.eu/>.

⁵⁹ The Research Council of Norway, FWF Austrian Science Fund, Agence Nationale de la Recherche, Swedish Research Council for Health Working Life and Welfare, Swedish Research Council for Environment Agricultural Sciences and Spatial Planning, Swedish Research Council, Deutsche Forschungsgemeinschaft, Consejo Superior de Investigaciones Científicas, The Slovenian Research and Innovation Agency, & Foundation For Science And Technology. (2025). Statement of Intent on Open Research Europe. Zenodo. <https://doi.org/10.5281/zenodo.14624287>

On 26 March 2026, CERN and the European Commission⁶⁰ jointly announced the transition of Open Research Europe (ORE) into a significantly expanded new phase, marking a structurally important development in European Diamond Open Access infrastructure. CERN assumes the role of hosting and operating organisation for ORE, with 2026 designated as a year of transition toward full adoption of the new platform infrastructure. The funding consortium currently comprises national research funding and performing organisations from Austria, France, Germany, Italy, the Netherlands, Norway, Portugal, Slovenia, Spain, Sweden, and Switzerland, while the European Commission participates as a permanent observer in the governance body and continues to provide dedicated financial support. The new phase is backed by a budget of nearly €17 million for the period 2026–2031, co-funded by the European Commission by up to €10 million, with operations as a collectively supported publishing service scheduled to commence in autumn 2026.

4.6.3. cOAlition S and Plan S

cOAlition S is an initiative of national research funding organisations, launched on 4 September 2018 with strong Commission support, that requires immediate open access for all scholarly publications resulting from research funded by its members.⁶¹ cOAlition S is relevant for three reasons. First, a number of EU Member State funders are members including those from France, Ireland, Luxembourg (one could argue nominally), the Netherlands, Finland, Slovenia, and Sweden, among others, meaning that Plan S principles directly shape a significant portion of EU-funded research. Second, Horizon Europe’s OA requirements are aligned with Plan S principles, including the zero-embargo requirement, the CC BY default, and the exclusion of hybrid APCs. Third, cOAlition S has developed practical implementation tools, notably the Rights Retention Strategy,⁶² the Journal Checker Tool, and the framework for Transformative Agreements⁶³ that have become reference instruments across the European research landscape.

4.6.4. EOSC and Data Spaces

The European Open Science Cloud (EOSC) constitutes the primary EU-level infrastructure initiative for open science.

The origins of EOSC trace to 2016, when the Commission first proposed creating a trusted open environment for the scientific community. EOSC was given formal institutional architecture through a co-programmed European Partnership under Horizon Europe, governed by a Strategic Research and Innovation Agenda (SRIA). The most recent version of the SRIA (v1.3, approved December 2024) covers the period through 2030 and includes a Multi-Annual Roadmap for 2026–2027 to inform upcoming Horizon Europe Work Programmes.⁶⁴ EOSC is governed by a tripartite structure comprising the European Commission (DG RTD and DG CNECT), the EOSC Steering Board representing EU Member States and Horizon Europe associated countries, and the EOSC Association, an international non-profit organisation established under Belgian law that represents the broader stakeholder community.

The EOSC EU Node, procured by the European Commission and operated by third-party contractors, was technically launched on 10 October 2024 and publicly deployed at the EOSC Symposium in Berlin on 21–23 October 2024.⁶⁵ It serves as the first reference node of the emerging EOSC Federation, providing core services including single sign-on, resource catalogues, knowledge graph, workflow management, compute, storage, data transfer, and interactive collaboration tools.

⁶⁰ European Commission, DG Research and Innovation, A new era for Open Research Europe, 26 March 2026, https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/new-era-open-research-europe-2026-03-26_en

⁶¹ cOAlition S, Plan S: Making full and immediate Open Access a reality, launched 4 September 2018. <https://www.coalition-s.org/>. See also Plan S Principles and Implementation: https://www.coalition-s.org/plan_s_principles/

⁶² cOAlition S, Rights Retention Strategy. <https://www.coalition-s.org/rights-retention-strategy/>

⁶³ Although cOAlition S itself does not longer use this term.

⁶⁴ EOSC Association, Strategic Research and Innovation Agenda (SRIA) v1.3, including Multi-Annual Roadmap 2026–2027, approved by the EOSC Partnership Board, 11 December 2024, <https://eosc.eu/eosc-about/sria-mar>

⁶⁵ European Commission, Technical Launch of the European Open Science Cloud (EOSC) EU Node Sets the Stage for a Successful Deployment, 11 October 2024, https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/technical-launch-european-open-science-cloud-eosc-eu-node-sets-stage-successful-deployment-2024-10-11_en

By the EOSC Symposium 2025 (in October 2025), the EOSC EU Node had welcomed approximately 4 000 users and distributed over 2.5 million virtual credits.⁶⁶ A first wave of 13 EOSC Nodes joined the EOSC EU Node in the build-up of the EOSC Federation and signed a “Memorandum of Understanding on Preparing Operational Integration within the Envisaged EOSC Federation”.⁶⁷ A second wave of 14 EOSC Nodes was approved by the tripartite governance in April 2026.⁶⁸

EOSC operates within a broader EU data strategy framework that has generated a growing ecosystem of Common European Data Spaces. The European Strategy for Data,⁶⁹ adopted in February 2020, set out the path toward data spaces in a series of strategic sectors, initially health, agriculture, manufacturing, energy, mobility, finance, public administration, skills, the European Open Science Cloud, and the Green Deal with the objective of creating an interconnected single market for data. Since then, data spaces have been identified in additional areas including media, language, tourism, research and innovation, and cultural heritage.⁷⁰

The Data Union Strategy, adopted in November 2025, made further proposals to expand data spaces, including the introduction of a Common European Data Space for defence.⁷¹ What underpins all European data spaces are shared data infrastructures and governance frameworks designed to facilitate data pooling, access, and sharing across sectors and borders, supported by operational programmes under Digital Europe and Horizon Europe, including the Data Spaces Support Centre (DSSC) and the Smart Open-source Middleware (SIMPL) platform. The European Health Data Space (EHDS) is the most advanced of the sector-specific data spaces and the first to be adopted as a formal legislative instrument.⁷² Its adoption as a binding Regulation represents a significant precedent for the use of hard law to create data-sharing obligations in a research-relevant domain. EOSC is explicitly recognised as the Common European Data Space for research and innovation within the European Data Strategy framework.

4.7. Conclusions on the EU level state of play

EU-level instruments on open access and open science have evolved and grown in ambition over time; while they have provided boosts to open science activities in a number of Member States these mostly voluntary activities (except for binding data governance legislation, which is much broader than research data⁷³ and the Horizon Europe mandate) have not led to a consistent and convergent open science policy within the European Research Area.

⁶⁶ European Commission, DG CNECT, “The EOSC EU Node at EOSC Symposium 2025,” EOSC EU Node News, 12 November 2025. <https://open-science-cloud.ec.europa.eu/news/eosc-eu-node-eosc-symposium-2025> (accessed 21 July 2026).

⁶⁷ EOSC Association, „Welcome to the EOSC Federation: MoU establishes shared path to operations,” 3 November 2025 (updated 28 January 2026). <https://eosc.eu/news/welcome-to-the-eosc-federation-mou-establishes-shared-path-to-operations> (accessed 21 July 2026).

⁶⁸ European Commission, DG RTD, „New Candidate EOSC Nodes strengthen the EOSC Federation and support the European Research Area,” 23 April 2026. https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/new-candidate-eosc-nodes-strengthen-eosc-federation-and-support-european-research-area-2026-04-23_en (accessed 21 July 2026).

⁶⁹ European Commission, A European Strategy for Data, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, COM(2020) 66 final, 19 February 2020, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0066>

⁷⁰ European Commission, Common European Data Spaces, DG CONNECT, <https://digital-strategy.ec.europa.eu/en/policies/data-spaces>

⁷¹ European Commission, Data Union Strategy — Unlocking Data for AI, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, COM(2025) 835 final, 19 November 2025, <https://digital-strategy.ec.europa.eu/en/library/data-union-strategy-unlocking-data-ai>

⁷² Regulation (EU) 2025/327 of the European Parliament and of the Council on the European Health Data Space, OJ L, 5 March 2025; Council of the EU, European Health Data Space: Council Adopts New Regulation, 21 January 2025, <https://www.consilium.europa.eu/en/press/press-releases/2025/01/21/european-health-data-space-council-adopts-new-regulation-improving-cross-border-access-to-eu-health-data/>

⁷³ Research and innovation are for example almost entirely absent in Werner Stenggs otherwise excellent book on EU Digital Policy (unfortunately not open access). Stenggs, W., Digital Policy in the EU: Towards a Human-Centred Digital Transformation, Edward Elgar Publishing, Northampton, 2024, 330 pp., ISBN 978-1-03533-863-4, <https://www.e-elgar.com/shop/gbp/digital-policy-in-the-eu-9781035338634.html>

5. Why do we need to act?

5.1. Problem definition

Despite over a decade of various mostly voluntary EU policy activities, there are as of yet no effective mechanisms in place to ensure coordination of open access to publicly funded research outputs (primarily scientific publications and research data) *across the whole European Research Area*. This assessment, which summarises in a nutshell the main finding of this expert study on *Open Access in the European Research Area and beyond*, is also confirmed by the preliminary call for evidence for the ERA Act⁷⁴ (in mid-2025), where 68 stakeholder organisations flagged open access as an important issue. Stakeholders emphasised that barriers to accessing and reusing publicly funded research outputs continue to undermine cross-border collaboration, knowledge diffusion, and the free circulation of knowledge in the ERA.

The evidence collected in the expert study reveals three problem areas in particular:

- (a) a very high fragmentation of OA regimes across the 27 Member States in a number of dimensions (analysed in the study based on a checklist provided by the European Commission), most notably choice of policy instrument to implement OA policy, legal bindingness, embargo periods, copyright instruments, leading to researchers having to navigate a complex landscape in cross-border collaboration.
- (b) research assessment incentives which are still misaligned with OA/OS objectives.
- (c) in a number of cases ambitious formal requirements (strategies, funder mandates, and even legislation) exist without enforcement architecture, dedicated resourcing, or monitoring mechanisms

5.1.1. Cross-border implications

The fragmentation described above has structural consequences for the functioning of the European Research Area, specifically the free circulation of knowledge in the ERA, which is one of the *raisons d'être* of the ERA and also prominently referenced in the Treaty on the Functioning of the European Union (TFEU) Article 179 as well as in the Letta Report “Much more than a market”, which explicitly refers to the free circulation of knowledge as the “fifth freedom” alongside the original four (goods, services, people, and capital). Given the significant evidence that knowledge does not, in fact, freely circulate in the ERA what are the implications?

First, researchers participating in multinational projects must navigate multiple, potentially conflicting OA regimes simultaneously. A researcher in a Horizon Europe consortium with partners from Member States with different embargo periods, different copyright tools, different repository requirements, and different licensing norms faces a compliance landscape of considerable complexity.

Second, divergent copyright and licensing frameworks create legal uncertainty for the cross-border reuse of research outputs. The absence of harmonised copyright exceptions and the limited availability of secondary publication rights are identified by stakeholders as structural obstacles constraining researchers' ability to share their work openly, seen as especially problematic in collaborative and transnational research contexts.

Third, the fragmentation of knowledge infrastructures limits the discoverability, accessibility, and reuse of research outputs across the ERA. The lack of interoperability and standardisation across national and institutional knowledge management systems is limiting the potential of cross-border infrastructure initiatives (although EOSC and other activities are trying to address this).

⁷⁴ European Commission, „European Research Area Act,“ Have Your Say portal, initiative 14608.
https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/14608-European-Research-Area-Act_en (accessed 21 July 2026)

Fourth, the risk of divergent operationalisation of the 'as open as possible, as closed as necessary' principle across Member States adds a further layer of potential legal and administrative complexity for multinational research teams.

Box: Cross-border scenario - how policy fragmentation affects a multinational research team

As a concrete and quite realistic example we can imagine a researcher in Slovenia (zero-embargo statutory obligation under ZZrID Art. 41); publishing with a co-author in Germany who must wait 12 months under §38(4) UrhG while a collaborator in Italy faces 18–24 month embargoes under Law 112/2013; and a colleague in Estonia where Regulation No. 6 of 2 February 2026 of the Minister of Education and Research (Section 28) mandates deposit and open access availability in ETIS but accommodates any publisher embargo. Each of these researchers may also face different legal regimes as to the eligibility of article processing charges all of which may even affect the decision which of these researchers is named corresponding author.

For instance, the Principles of Authorship from the London School of Economics openly state: “If one of the authors receives a grant from a funding body that requires the research output to be published open access, and that author’s host institution supports such open access publication, then it is reasonable for the authors to jointly decide to change corresponding authorship to that author”.⁷⁵

5.1.2. Financial implications

Given the uneven and fragmented approach to open access issues such as immediate open access and copyright protection across the Member States (as discussed above) researchers and institutions are often in a weak bargaining position when faced with publisher fees and transformative agreement negotiations, leading to high costs for compliance.

This study refers to documents outlining significant cost dynamics across multiple Member States: Sweden’s total publishing costs reached approximately SEK 819 million in 2025, with transformative agreements accounting for 61%; Slovakia estimated APC expenditures for WoS publications at EUR 3.1–3.7 million in 2021. Denmark’s 2024 evaluation explicitly documents that APC costs rose 60% and total publication expenditure rose 20% between 2018 and 2021 (in 2023-price DKK), confirming that ‘this increase cannot be solely attributed to an increase in publication volume’; Denmark further notes that ‘the green Open Access model is not cost-neutral, as it requires significant administrative resources for realising Open Access rights.’ France documented APC costs tripling between 2013 and 2022, raising sustainability questions about the dominant Gold OA transition model. Portugal documented approximately €12 million in APC cost avoidance associated with national OA agreements — one of the few documented positive cost-impact metrics in the EU, illustrating that coordinated negotiation strategies can produce measurable savings.

Germany provides the largest documented national OA investment figures: DFG’s OA Publication Funding programme reported 34,065 eligible publications with total eligible costs of €74 million (2023 report), with the 2024–2027 phase providing a fixed allowance of €1,400 per publication, reduced by 30% due to oversubscription.

Spain’s ENCA allocates approximately €23.8 million per year (2023–2027) for open science implementation, the second-largest documented national OA investment after Germany, with FECYT providing a dedicated €3 million funding stream specifically for improving OA repositories and institutional Diamond OA publishing. A 2023 Ollé et al. survey found that 70% of respondents had paid APCs in the previous two years, with a majority viewing them as ‘excessive or unnecessary’. Within Europe, Sweden’s Bibsam consortium has adopted an action plan, implemented from 2026, under which no further reading and open access publishing agreements will be concluded for hybrid journals.

⁷⁵ London School of Economics and Political Science, LSE Principles of Authorship, Version 1, approved by LSE Research Committee, February 2024. P.14. Available at: <https://info.lse.ac.uk/staff/services/Policies-and-procedures/Assets/Documents/priOfAut.pdf> [accessed May 2026].

Outside of the European Union, Switzerland is capping APC reimbursement amounts and in the US the Gates Foundation and HHMI have both withdrawn from APC payment. The Chinese Academy of Sciences ceased covering APCs for more than thirty high-fee open access journals with effect from 1 March 2026, although the underlying policy text had not been publicly issued at the time of writing.

Austria's AT2OA Transition Study found that a full transition to OA could be cost-neutral at aggregate national level, but would produce 'significant redistribution effects between institutions,' with high-output institutions facing increased financial pressure. Austria's KEMÖ consortium documented a 74% opt-in rate for OA publishing among corresponding authors compared to 45% nationally and approximately 10% globally — suggesting that coordinated national approaches can significantly exceed baseline market rates. A 2024 Austrian study on consortia cost-sharing found that 'not all consortium members felt the cost-allocation model was fair.' The Netherlands' UNL has documented growing criticism of APC-based models concerning 'rising costs, inequity for less wealthy institutions and countries (especially in the Global South) and a lack of autonomy and sovereignty.' Slovakia's National Strategy identifies 'lack of funding' as the main factor limiting OA publishing, noting that researchers from underfunded institutions 'often cannot afford publication in prestigious journals with high APCs.'

5.2. What are the problem drivers?

5.2.1. Overreliance on soft law instruments on the European level

Relying mostly on soft governance in the form of the 2012 Recommendations on Access to and Preservation of Scientific Information, revised in 2018, initially put open access "on the table" and resulted in a number of policies being developed by Member States, as documented in the periodic reports on the implementation of the recommendation (vulgo "NPR Reports") but did not produce convergence in actual policy instruments, legal frameworks, or operational requirements. Among funders, cOAlition S has not brought all European research funders on board and has, despite the participation of some funders in North America, not succeeded in "going global".

Similarly, the inclusion of open access and open science in the ERA Policy Agenda 2022-2024 and 2025–2027 has yielded some results, notably the launch of the EOSC EU node (action 1) and promoting research assessment reform (action 3) but did not achieve breakthroughs as regards EU copyright (action 2). The "upgrading" of open science to structural policy status in the ERA policy 2025–2027 could be considered an indication that a more long-term approach was considered necessary within the ERA governance. A new ERA Action on "Equity in Open Science" was also introduced, recognising that access to resources, infrastructures, skills, and incentives varies widely among countries and organisations.

The absence of a common legal baseline allows Member States to adopt divergent (or no) approaches to embargoes, copyright tools, licensing, repository requirements, and monitoring, producing the fragmented landscape documented above. It even enables policy regression, as demonstrated by Luxembourg (FNR August 2025 revision: embargoes now permitted without restriction, mandatory licensing removed) and Poland (NCN Order 39/2025: OA for publications reduced to recommendatory status) in 2025. During the same period, Croatia moved in the opposite direction, with its Open Science Plan (May 2025) recommending immediate open access, and the Croatian Science Foundation (HRZZ) making this binding through the grant conditions of its 2026 calls.

At the same time, innovative binding instruments have emerged in isolated cases: the Netherlands has embedded open science obligations in collective labour agreements for universities and research institutions, creating employment-law-based binding requirements that survive changes in funder policy or government direction; Sweden's Government Appropriation Directions (Regleringsbrev) amendment of 5 February 2026 gives universities and HEIs a government assignment to contribute to open science; and Denmark's deliberate phase-out of the Bibliometric Research Indicator (BFI) has opened a structural window for assessment reform, with Aalborg University replacing BFI with an indicator emphasising openness and collaboration.

These examples illustrate both the innovation occurring at national level and the fragmentation that results from it accumulating in the absence of a common framework.

In some cases, the Recovery and Resilience Facility (RRF) has functioned as a de facto EU-level open science infrastructure fund for some Member States, with Slovenia's €4 million SPOZNAJ project, Portugal's PNCADAI €4 million programme, Latvia's €3.44 million DataverseLV programme, and Italy's PNRR M4C2 binding OA grant conditions among the most significant examples. This directly supports the case for sustained dedicated EU-level financial and programmatic support for open science infrastructure as part of any ERA Act implementation framework.

The absence of a harmonised EU-level instrument for secondary publication rights or rights retention means that the legal capacity of researchers to make their work openly available varies fundamentally depending on their Member State of employment (see cross border scenario box above).

Based on the available analysis of the 27 Member States and the global benchmark countries it can therefore be considered self-evident that progress with the realisation of the fifth freedom, the free circulation of knowledge, cannot be achieved by voluntary coordination and soft governance alone. Rather, the ERA Act should enable the Commission to propose more binding measures.

5.2.2. Market failure

The scholarly publishing market exhibits characteristics of market failure:

- **Inelastic Demand:** Libraries must provide access to specific journals because research is not interchangeable; a researcher needing a paper from Nature cannot simply use one from an unrelated journal as a substitute. This allows publishers to hike prices without losing customers.
- **High Market Concentration:** A small number of large commercial publishers (primarily Elsevier, Springer Nature, Wiley, Taylor & Francis, and SAGE) dominate the field, accounting for over 50% of published research in some disciplines and/or countries.⁷⁶
- **Lock-in Effects** The academic "publish or perish" culture forces authors to submit to high-impact journals to secure tenure and funding. This grants these journals immense market power, as their "brand" is an essential asset for a scholar's career (see also the chapter on perverse incentives below).
- **Information & Rights Asymmetry:** Authors often hand over exclusive copyrights to publishers for free in exchange for the "prestige" of being published (by signing copyright transfer agreements or copyright waivers). Publishers then sell that same content back to the authors' own institutions at arguably high costs, profiting from labour they did not pay for.

These structural market features mean that voluntary approaches to OA, including reading and open access publishing agreements (formerly termed transformative agreements), have not resolved the access problem (see also discussion in the chapter "financial implications" above).

5.2.3. Perverse incentives traditional publication-metric-based assessment

The persistence of traditional publication-metric-based assessment in a significant number of Member States constitutes a behavioural and institutional driver. Even where formal OA requirements exist, if career progression and funding allocation continue to reward solely or primarily journal prestige over open science practice, researchers face a rational disincentive to prioritise OA compliance. While there is some progress in the implementation of research assessment reform (notably through CoARA) assessment reform links are still absent or minimal in a number of Member States.

The UK model provides a benchmark contrast: coupling funder mandates with assessment-linked consequences through the Research Excellence Framework creates a strong alignment of incentives and ultimately compliance with OA mandates. Spain operates a comparable model: by incorporating mandatory deposit into the sexenios evaluation criteria (2023), Spain has produced documented behavioural change; a Nature letter (October 2025) confirms that this integration 'significantly accelerated the adoption of the new open access model in Spanish universities.'

⁷⁶ For example, three publishers (Springer Nature, Elsevier, Wiley) account for 59% of German-affiliated publications.

LOSU Article 12.8 further mandates that national and regional quality agencies must include OA accessibility among their evaluation criteria, making Spain one of the few Member States where OA requirements are legally embedded in the research assessment architecture. Finland's higher education institution core funding formula, which rewards OA publications through the JUFO-linked allocation model, represents a second documented case of structural assessment-OA integration. Denmark's ongoing phase-out of the Bibliometric Research Indicator (BFI) represents a third model in transition: by potentially dismantling a metric that privileged journal prestige over open science practice, Denmark is creating the structural conditions for assessment reform without yet having embedded open science criteria as formal requirements.

5.3. How likely is the problem to persist?

The evidence suggests that the problems are likely to persist or in some cases worsen under the current policy framework. Several observations support this assessment.

First, the cases of Luxembourg and Poland in 2025 demonstrate that voluntary coordination can lead to active policy regression. Luxembourg's FNR (a cOAlition S member) reversed its Plan S commitment in August 2025, permitting embargo periods 'without restriction' and removing mandatory licensing requirements. Poland's NCN reduced OA for publications from mandatory to merely recommended through Order 39/2025. In both cases, the regression was structurally enabled by the absence of any binding floor.

Second, the scholarly publishing market dynamics documented in the study suggest that cost pressures will intensify. APC inflation has been documented in multiple Member States, and the negotiating position of individual Member States or institutions vis-à-vis global publishers is structurally weaker than a coordinated EU-level approach would be.

Third, the international competitive context is evolving. The US, UK, Switzerland, Japan and Canada are all moving toward or have already adopted immediate open access⁷⁷ with stronger enforcement mechanisms. If the EU does not achieve greater coherence, European researchers and institutions may face compliance disadvantages in international collaborations, and the ERA's attractiveness as a research destination may be affected. Furthermore, although China's own open science initiatives are de facto quite modest, the country promotes itself as an open science leader among the Global South. With its ongoing activities on Diamond OA and the European open science infrastructure landscape, the European Union is far better placed to claim such leadership but only if it can demonstrate coherent progress across all 27 Member States rather than in isolated national pockets.

6. What should be done? (Policy Recommendations)

6.1. On the Member State level

6.1.1. Policy instruments and level of obligation

The study's evidence shows that multi-instrument- frameworks (legislation plus funder mandates plus institutional policies) are associated with higher OA uptake and clearer operational obligations than purely voluntary approaches, provided that a) binding elements are accompanied by adequate support and monitoring and b) the provisions in different policy instruments do not contradict each other (e.g. as regards immediate OA vs. embargoes). The study also shows that, by and large, purely voluntary approaches yield lower and more uneven results.

In the Dutch "You Share, We Take Care" model university libraries take the legal and technical steps needed to make scientific articles openly available after the embargo period, rather than leaving individual researchers to navigate copyright and deposit requirements alone.

⁷⁷ However, it should be noted that licence requirements for open access vary in these countries.

This support-based model helped raise the green availability of paywalled articles to around 80% by 2024, illustrating how strong institutional mediation can turn a statutory right into real-world open access.

Recommendation MS-1

Where not yet the case, establish a multi-instrument OA policy framework (national strategy + binding funder mandates + legislative provisions where feasible). Ensure formal adoption is accompanied by operational infrastructure, institutional capacity and support structures. Open access requirements for publicly funded research should be binding rather than merely aspirational, with clear compliance expectations.

6.1.2. Scope and coverage

The overwhelming majority of Member States address both publications and research data, though at different maturity levels.

Within publications, the emphasis is on journal articles. For example, Austria's FWF data shows 92% OA for journal articles but only 49% for editions, contributions to edited volumes and monographs (88% across all peer-reviewed publications). Going forward, Member States should progressively address outputs beyond journal articles, especially monographs, book chapters, edited collections and other long-form scholarly works.

This issue is gaining importance in disciplines where books remain central, and there are now official policy precedents for doing so, including UKRI's extension of open access requirements to monographs, book chapters and edited collections from 2024. The growing role of preprints driven by funder policies requiring preprint deposit (Gates Foundation since January 2025, HHMI since January 2026) should also be reflected in scope provisions.

For research data, Member States should define clear obligations for data management planning, FAIR-compliant metadata and repository deposit of datasets underlying publications, applying the "as open as possible, as closed as necessary" principle, with explicit exception criteria for privacy, IP, security and other legitimate constraints, where not yet the case.

Recommendation MS-2

Cover both publications (at minimum journal articles, with a progressive trajectory toward monographs, book chapters, and other long-form outputs) and research data, with mandatory Data Management Plans aligned with the 'as open as possible, as closed as necessary' principle. These DMPs should evolve from static pdf files to becoming machine actionable (whilst remaining human readable).

6.1.3. Timing and embargoes

Embargo provisions remain one of the sharpest points of divergence across the ERA. A cluster of Member States and funders require immediate open access: Austria (FWF), Bulgaria (statutory), Croatia (HRZZ from 2026), Finland, France (ANR), Ireland, the Netherlands (NWO, ZonMw), Portugal, Sweden, and Slovenia. The 2023 Council Conclusions called for immediate and unrestricted open access to publicly funded research. The international trend confirms this direction: the US mandates zero embargo since 2022, Japan is transitioning from April 2025, and Switzerland requires immediate access since January 2023. However, a number of Member States permit longer embargo periods (often 6 to 12 months) and two EU Member States (Luxembourg and Poland) have regressed and now permit embargo periods 'without restriction'.

Member States should thus progressively converge toward immediate OA for journal articles as a policy goal, while recognising the current diversity in legal frameworks, publishing markets and budgetary capacities. The comparative evidence, including non-EU-benchmarks, indicates that zero-embargo-models are operationally feasible at scale, especially when underpinned by robust rights instruments (rights retention or SPR) and/or well-negotiated-agreements, and are aligned with Horizon Europe and Plan S standards.

A six to 12 months embargo period could be considered as part of a phased approach (such as used by Malta) in the context of a transition to immediate open access. However, clear benchmarks and steps in such a phased approach need to be not only defined but also implemented and monitored.

Recommendation MS-3

Move toward immediate open access (zero embargo) for publicly funded journal articles. Where not immediately feasible, set maximum embargoes of 6 months (STEM) and 12 months (SSH), with a trajectory toward elimination (phasing out). Indefinite or publisher-deferred embargoes should not be permitted.

6.1.4. Rights retention, copyright and licensing

Copyright provisions determine whether researchers can legally make their work openly available. The evidence documents a number of approaches within the ERA, namely:

- (i) statutory secondary publication rights (in Austria, Belgium, Bulgaria, France, Germany, the Netherlands, Slovenia),
- (ii) funder-mandated rights retention strategies (cOAlition S members and others),
- (iii) a combination of these, and
- (iv) the absence of either mechanism (the worst-case scenario).

Statutory SPRs embedded in copyright or research legislation offer wide scope and strong legal certainty, particularly when they apply to all publicly funded research outputs and render conflicting contractual clauses null and void after a defined period. Good practice elements include: coverage of all publicly funded research regardless of specific funding source, a zero maximum embargo period for the Author Accepted Manuscript (so as not to conflict with Recommendation MS-3) and explicit retroactive application (as in the case of Slovenia) where constitutionally feasible. Study findings thus by and large support the results of the 2024 ERA Action 2 capstone study, which found that SPRs have at least moderate impact but that researcher awareness remains low and embargo periods limit effectiveness.

This assessment is reinforced by the April 2026 economic analysis commissioned by DG RTD, which applied a synthetic counterfactual methodology to the six Member States with national SPR legislation. The central finding is that national SPR in its current, relatively restrictive form has not produced statistically robust system-wide effects on OA outcomes that can be confidently attributed to SPR alone. The study characterises existing SPRs as functioning as a "legal backstop" enabling some expansion of access beyond publisher-provided routes, rather than as a structural driver of publishing-system change.⁷⁸

A statutory right without institutional operationalisation (i.e. without default deposit workflows, library support, and monitoring mechanisms) may therefore not produce scalable results. SPR design must therefore be accompanied by explicit operationalisation requirements.

At the same time, funder-based- rights retention strategies (e.g. those used by cOAlition S members) can establish immediate OA rights for funded researchers and align with zero-embargo-policies, but their reach is limited to beneficiaries and may create intra-national inconsistencies when not embedded in a broader legal framework.

Furthermore, two newer instrument categories have emerged during the study period and represent promising models: first, Finnish University Libraries (FUN) introduced a Prior Licence Model in 2026, under which universities grant a prior licence for open access publication before transferring rights to publishers, which constitutes the first systematically deployed *institutional-level* rights retention mechanism at national scale in the EU.

⁷⁸ European Commission: Directorate-General for Research and Innovation, Visionary Analytics, Technopolis Group, Opix, Timelex, Ernst & Young, Antanavičius, J., Sadauskaitė, A., Kalanta, M., Pozzo, G., Bernotas, I., Elenskė, A., Eggert, M., Stoy, L., Blandinieres, F., Chekaf, A.-S., Seminaroti, E., Gruber, N., Aslan, Y., Manola, N., Grypari, I., Katsamakis, M., Tsiavos, P., Lempesis, A., Boghaert, L., Sachdev, A., Freguglia, P., Kazmierska, K., Economic analysis of options for improving EU legislative and regulatory frameworks with impact on access and reuse of publicly funded R&I results and of publications and data for scientific purposes – Final report, Nielsen, C. (editor), Publications Office of the European Union, 2026, <https://data.europa.eu/doi/10.2777/8969719>

Second, the Netherlands has progressively embedded open science obligations in collective labour agreements, creating employment-law-based binding requirements that survive changes in funder policy or government direction. These models illustrate that rights retention mechanisms need not be confined to copyright legislation or funder mandates.

Licensing requirements currently range from mandatory CC BY (cOAlition S members, Horizon Europe) to recommended open licences to no specification at all within the ERA.

To reduce legal uncertainty and facilitate cross-border-reuse, Member States should also set minimum licensing expectations; the evidence suggests that mandating, or at least strongly favouring, standard open licences such as CC BY for articles and CC BY/CC0 (or equivalent) for metadata is associated with greater clarity for reuse, though some SPR-based regimes currently limit permissions to non-commercial-reuse. Where national law constrains such licensing mandates, guidance and model licence clauses can still improve consistency.

Recommendation MS-4

Ensure researchers have a legal basis for self-archiving through statutory secondary publication rights with zero embargo periods (or at least a clear trajectory towards zero), funder-mandated rights retention strategies, or both.

Recommendation MS-5

Require CC BY licensing as default for publications and CC BY/CC0 for metadata. Permit justified departures as exceptions (e.g. for monographs).

It should be noted that the most efficient way to achieve Recommendation MS-4 and potentially MS-5 would be through a European secondary publication right, an issue that is discussed in the EU section below, provided institutional operationalisation, including support structures, are also included.

6.1.5. Repositories, FAIR data and interoperability requirements

Most Member States have established repository networks, but standardisation and quality assurance vary considerably. France's HAL serves as a centralised national repository with CoreTrustSeal certification and direct linkage to funder compliance monitoring. Spain's FECYT operates RECOLECTA as the national OA aggregator and has established a Quality Seal (Distintivo de Calidad) for institutional repositories. In other countries there are networks of institutional repositories combined with funder mandates (e.g. Austria, Denmark, Germany, Sweden, Portugal), and nascent national platforms or portals in countries currently upgrading their infrastructure. Obviously, systems with explicit criteria for trusted repositories (e.g. OpenAIRE compatibility, CoreTrustSeal or equivalent certification for data repositories, PID and metadata standards) are better positioned for interoperability with EOSC and for systematic monitoring.

The Barcelona Declaration on Open Research Information (April 2024), signed by over 100 organisations,⁷⁹ commits signatories to making openness the standard for research information. Member States should align repository and metadata policies with this Declaration. Machine-readability requirements (following the US model), also in Data Management Plans, should be considered to enable computational reuse and AI-based discovery.

Recommendation MS-6

Define minimum technical and governance requirements for trusted repositories (including PID use, open and persistent metadata, machine-readable licences, and APIs to support aggregation and TDM). For research data, require FAIR-compliant repositories. Consider establishing national repository quality certification mechanisms. Ensure national infrastructure connects to European infrastructures such as EOSC.

⁷⁹ Kramer, Bianca, Cameron Neylon and Ludo Waltman (coords.), Barcelona Declaration on Open Research Information, 16 April 2024. Available at: <https://barcelona-declaration.org/>, accessed May 2026. PDF: <https://barcelona-declaration.org/downloads/BarcelonaDeclaration.pdf>

6.1.6. Funding and sustainability

The study documents significant concerns about rising costs associated with APCs and reading and open access publishing agreements (formerly termed transformative agreements) within the ERA and beyond (e.g. in China).

There is also (valid) concern that APC-based-and transformative agreement models disadvantage less-resourced- institutions and researchers, both within Europe and in the Global South, by shifting costs to authors and by reinforcing disparities in who can publish openly. The equity dimension should inform policy design, particularly in the context of the ERA's new Equity in Open Science action.

Furthermore, the transition costs associated with replacing subscriptions by read-and-publish arrangements consequently remain opaque since the financial terms of publisher agreements are frequently not disclosed. Recommendation (EU) 2018/790 already calls on Member States to ensure transparency regarding agreements between public institutions and publishers for the supply of scientific information, expressly including 'big deals' and the related 'offsetting deals'. The Council's 2022 conclusions on research assessment and implementation of open science similarly state that Member States and research organisations, in cooperation with the Commission, should take concrete measures against insufficiently transparent contractual arrangements with publishers, and calls for monitoring of the practices and costs of scholarly publication. Nevertheless, other forms of Open Access require investment as well. Spain foresees €3 million FECYT funding for Diamond OA infrastructure demonstrate structured public investment. Austria's feedback reveals the development of a Central Diamond OA Publishing Office under the ERA-NAP 2026–2028, in collaboration between the ministry and OBVSG (Austrian Library Network).

At the same time, the sustainability challenges of Diamond OA require explicit attention: the closure of journals such as *Work Organisation, Labour and Globalisation* in 2025⁸⁰ after moving to Diamond OA illustrates that removing author fees without stable institutional funding can undermine viability. A 2026 study documents more than 440 'diamond fractures', that is journals abandoning the Diamond model for subscription or APC-based publishing and characterises the phenomenon as a systemic risk absent sustained investment in community-governed infrastructure.⁸¹ The Action Plan for Diamond Open Access⁸² thus rightly identifies the need for coordinated capacity-building-, shared infrastructures and common quality and metadata frameworks to support the sustainability and equity of diamond journals across Europe. Support from the EU include the projects DIAMAS and CRAFT-OA.

For research data, sustainable funding is especially needed for data stewardship roles, repository operation, curation and secure processing environments required under data protection-and data governance-rules; the evidence shows that many national strategies acknowledge these needs but concrete, long-term-funding models remain underdeveloped.

Recommendation MS-7

Treat OA-related costs (including infrastructure, repositories, data stewardship and training) as part of core research system funding, rather than relying solely on project-based- or ad hoc allocations. Continue to diversify funding away from pure APC/transformation/read-and-publish models by supporting community-based-, not-for-profit-- and diamond OA publishing, building on emerging good practice. Track expenditure on APCs, reading and open access publishing agreements and infrastructure, including mandating publication of contract terms involving public funding and cost metrics as part of monitoring and reporting (see Rec MS-9).

⁸⁰ See Work Organisation, Labour and Globalisation (Pluto Journals; ISSN 1745-641X / e-ISSN 1745-6428), <https://wolg.wordpress.com/>.

⁸¹ Matthias, L., Alperin, J.P., & Laakso, M. (2026). *Diamond Fractures: Tracing Journal Transitions Away from Diamond Open Access*. arXiv:2606.31302 [cs.DL], submitted 1 July 2026. <https://arxiv.org/abs/2606.31302>, <https://doi.org/10.48550/arXiv.2606.31302>, accessed 21 July 2026. Preprint,

⁸² Ancion, Z. (ANR), Borrell-Damián, L. (Science Europe), Mounier, P. (OPERAS), Rooryck, J. (cOAlition S), & Saenen, B. (Science Europe) (2022). *Action Plan for Diamond Open Access*. Science Europe, cOAlition S, OPERAS and the French National Research Agency (ANR), 2 March 2022. <https://doi.org/10.5281/zenodo.6282402>, accessed 21 July 2026. Also available directly at <https://www.scienceeurope.org/media/t3jqyo3u/202203-diamond-oa-action-plan.pdf>.

6.1.7. Alignment with research assessment and incentives

There is significant evidence that linking OA compliance to research assessment produces measurable results. Spain's reform of ANECA sexenios criteria, requiring OA deposit as a condition for the national six-yearly research evaluation, has been documented as having 'significantly accelerated' OA adoption in Spanish universities. This represents the clearest externally validated evidence from any EU Member State that assessment-linked OA mandates can shift researcher behaviour at scale.

The UK REF model, which makes OA a condition for eligibility of journal articles in the national research assessment exercise, operates on a similar logic but at the institutional level. Finland's core funding formula, which rewards OA publications, provides a structural financial incentive. At the same time, assessment reform links remain absent, minimal or emerging in approximately a third of Member States.

Recommendation MS-8

Formally integrate OA/OS into research assessment at institutional and funder levels. Participate in or align with CoARA. Update assessment frameworks to recognise diverse output types. Discourage RPOs from providing perverse incentives through bonuses for publication in so-called "A-Tier" journals.

6.1.8. Monitoring, reporting and evaluation

A number of Member States now operate dedicated national OA monitors, including France (Baromètre de la Science Ouverte), Finland (VIRTA/TSV biennial monitoring through Research.fi), Denmark (OA Indicator, 2015–present), Germany (Open Access Monitor at Forschungszentrum Jülich), Austria (OAMA) and the Netherlands (annual parliamentary reporting since 2016, with OA data as budget indicators). Sweden's Royal Library provides partial national statistics. However, many Member States lack dedicated OA monitoring. Specifically, APC expenditure monitoring is available for only a few countries and absent at EU-aggregate level.

Furthermore, existing monitoring systems are not methodologically comparable in all aspects and do not always enable EU-level aggregation. Importantly, OpenAIRE's data model depends on metadata deposited into open repositories or reported through open CRIS systems. Publications recorded only in proprietary CRIS systems (common in many institutions) or in publisher platforms without DOI-based open metadata are therefore systematically invisible to OpenAIRE-based monitoring. An EU-level monitoring and reporting framework is therefore not merely desirable but a prerequisite for evidence-based governance of the fifth freedom: what cannot be measured cannot be managed.

In this context, the EOSC Open Science Observatory⁸³ is the most technically advanced EU-level monitoring infrastructure currently operational. The Observatory provides a policy intelligence platform that integrates three distinct data layers: quantitative indicators drawn primarily from the OpenAIRE Graph and Eurostat; structured country narratives co-developed with national stakeholders through a consultative process; and a developing AI-enabled policy resource registry that classifies and summarises national OA policies using natural language processing. However, the Observatory's quantitative layer is subject to the same structural limitations affecting all OpenAIRE-based monitoring: it does not capture publications recorded only in proprietary CRIS systems. It is also to a certain amount dependent on self-reporting and which data sources are used for which outputs is not always clear, making some of the information less than convincing.⁸⁴

⁸³ EOSC Track project, *EOSC Open Science Observatory* [online platform], developed under Horizon Europe Grant Agreement No. 101148217, operated by OpenAIRE Non-Profit Civil Partnership, <https://www.eoscobservatory.eu>, accessed May 2026.

⁸⁴ For instance, it claims that Romania has achieved 96% open data without clarifying which dataset(s) this – very optimistic – assessment is based on. See EOSC Open Science Observatory, Country profile: Romania, EOSC Track project, <https://www.eoscobservatory.eu/country/RO/general>, accessed May 2026.

The Open Science Monitoring Initiative⁸⁵ (OSMI), launched following the Sendai Communiqué (May 2023), published internationally agreed Principles of Open Science Monitoring in July 2025, developed through consultation with 150 experts from 41 countries. OSMI has also undertaken very necessary detailed technical work in systematically capturing and analysing existing monitors.⁸⁶

On a more pragmatic level, it should also be noted that open access policy documents are often not easy to track across the Member States. Links are often outdated (e.g. when the name of a ministry changes). The Netherlands provides a good practice example here, since their open access policy documents are available in a dedicated sustainable space on ZENODO.

Recommendation MS-9

Establish or update systematic national monitoring with a designated responsible body, regular reporting cycles, publicly available indicators (including OA rates by route and APC/cost data). Monitoring methodologies should aim for cross-country comparability and aggregation at the EU level, with published methodology statements covering data sources, exclusions, and systematic biases (following the OSMI Principles of Open Science Monitoring, July 2025). Results should be publicly available. Provide national open access policy documents in a dedicated space, ideally shared for all Member States.

6.1.9. Limitations to openness, research security, and simplification

Study evidence shows that effective open access policies recognise legitimate reasons for restricting or delaying access (e.g. privacy, commercial confidentiality, security, intellectual property protection), especially for research data, and that these are often framed through the “as open as possible, as closed as necessary” principle, even if not always explicitly named. However, exception regimes are not always clearly defined, which can create over-cautious withholding or inconsistent application across institutions and projects.

At the same time, the EU has strengthened its policy focus on research and knowledge security and on “open strategic autonomy”, emphasising the need to keep research systems open while mitigating risks such as undesirable technology transfer, malign foreign influence and misuse of sensitive knowledge. The Council Recommendation of 23 May 2024 on enhancing research security established a framework for “responsible internationalisation” that explicitly applies the “as open as possible, as closed as necessary” principle to international research cooperation, while recommending that Member States develop research security policies, funders put in place safeguards, and research-performing organisations introduce risk management processes. Research security has also been included as a priority action in the ERA Policy Agenda 2025–2027.

This evolving security agenda creates a legitimate new dimension for open access exception regimes. Some research outputs particularly in areas with dual-use potential, in fields identified as critical technologies (AI, quantum, semiconductors, biotechnology), or in projects involving international partners subject to foreign influence risks may justifiably require restricted access or delayed dissemination hence the phrasing “as open as possible, as secure as necessary”, which is also sometimes used.

However, this new dimension also creates significant risks for open science. As one scholar has argued, the “securitisation” of research paradoxically creates new risks by subjecting research to political control measures, potentially undermining the autonomy of scientific research that Article 13 of the EU Charter of Fundamental Rights is designed to protect.⁸⁷ There is a real danger that research security concerns, if not carefully calibrated, become a vehicle for over-broad restrictions, effectively converting the “as closed as necessary” qualifier into a general licence for closure.

This broader context reinforces that limitations to openness must be clearly justified, proportionate and embedded in transparent governance. Restrictions should be documented, limited in time where appropriate, and subject to periodic review, and they should not remove the obligation to provide open metadata or other non-sensitive-information.

⁸⁵ Open Science Monitoring Initiative (OSMI), *About OSMI*, <https://open-science-monitoring.org/>, accessed May 2026.

⁸⁶ Yahia Mohamed Elkheir, L., & Szybisty, T. (2026). Progress report from OSMI Working Group 2: Understanding the Open Science Monitoring Landscape. Open Science Monitoring Initiative. <https://doi.org/10.5281/zenodo.19221943>

⁸⁷ R. Kunz, ‘As Open as Necessary? Research Security, Academic Freedom and the Geopolitics of Science’, VerfBlog, 15 October 2025. <https://verfassungsblog.de/academic-freedom-security/>

Safeguards must distinguish genuinely security-sensitive-elements (e.g. dual-use-details, critical infrastructure vulnerabilities) from the broader bodies of data, code, and protocols that can often be shared in anonymised, aggregated or otherwise risk-mitigated- forms. Even where restrictions apply, they should not remove the obligation to provide open metadata.

In addition, the growing emphasis on knowledge valorisation and strategic autonomy implies that OA policies, IP management and security measures need to be better coordinated, so that the protection and exploitation of strategic assets do not unnecessarily restrict access to publicly funded results or undermine the fifth freedom of free circulation of knowledge in the ERA.

Furthermore, while genuine simplification, that is reducing unnecessary complexity in compliance procedures by adopting structured templates, using open standards and interoperable tools, and designing requirements "digitally by default", is both legitimate and desirable, simplification should not serve as a pretext for rolling back open access policies to merely voluntary status, which, as the comparative evidence demonstrates, does not produce the desired convergence. Simplification should improve the user experience of compliance, not eliminate the obligation itself.

Recommendation MS-10

Coordinate OA policies with national strategies on research security, strategic autonomy and responsible internationalisation, including through ERA structures, treating them as complementary rather than competing agendas to avoid contradictory signals to researchers. Provide proportionate and transparent exceptions consistent with the "as open as possible, as closed (or as secure) as necessary" principle, codifying exception categories with clear criteria, time limits, and review mechanisms.

6.2. On the EU level

No individual Member State, however advanced its own policy framework, can resolve the cross-border fragmentation documented in this study, establish the common legal baselines needed for a functioning single market for knowledge, or provide the infrastructure and monitoring coordination that a continental research area requires. The European Commission in particular, is uniquely positioned to steer, coordinate, incentivise, monitor, support, and, where justified by the evidence, harmonise action across 27 diverse national systems.

6.2.1. Reporting, monitoring and guidance

Evidence from NPR reports and ERA monitoring indicates that Member States value guidance and peer exchange but that such mechanisms have not, on their own, produced convergence on key checklist elements such as embargoes, rights retention and monitoring indicators. The study results do not suggest that every element of national open access policy should (or can) be harmonised through binding EU law. The evidence does, however, strengthen the case for a clearer ERA-level reference framework, better comparability of implementation and a more active role for the Commission in steering Member States.

The National Points of Reference (NPR) mechanism, established under the 2012 Commission Recommendation and continued under the 2018 Recommendation, has been the primary structured channel through which Member States report to the Commission on their open access policies and through which the Commission tracks implementation across the ERA. As described earlier, the mechanism produced four cycles of reports (2015, 2018, 2020 and 2024) documenting variable progress and persistent divergence. However, monitoring through the NPR mechanism also has significant limitations and weaknesses:

- First, there is no common set of core indicators with standardised definitions that would enable meaningful cross-country comparison. When countries report rates of open access they may count different output types, use different data sources, and apply different definitions of what constitutes "open access".
- Second, there is no EU/ERA-level expenditure monitoring. The financial dimension of open access including APC expenditure, publishing agreement charges and Diamond OA investment, is documented for only a handful of countries. Yet the evidence shows that such dynamics are among the most policy-relevant dimensions.

- Third, there is no systematic impact evaluation framework across the ERA level. The study documents that formal impact evaluations of OA policies assessing not merely compliance rates but downstream effects on research quality, reproducibility, innovation, cross-border collaboration, and societal benefit are almost absent across the ERA.⁸⁸ While the EU funded PathOS project has developed an Open Science Impact Indicator Handbook with an operationalised set of indicators for measuring Open Science impact across multiple dimensions, this has, to the knowledge of the author not been applied yet.

Given these weaknesses one may be tempted to overly rely on the EOSC Open Science Observatory for reporting. While this is a useful tool its current drawbacks have been discussed earlier in this report; furthermore, the EU should not only collect information but also allow for exchange of best practice and mutual learning, for which the NPRs are well positioned as a group.

Recommendation EU-1

The Commission should strengthen structured coordination and mutual learning mechanisms, by re-activating and upgrading the National Points of Reference and by linking it to the ERA governance. The Commission should establish a systematic, periodic ERA-level monitoring and reporting framework for open access (potentially through the NPR). This should comprise a common indicator framework with standardised definitions, data sources, and collection methods. Monitoring data should be systematically reported and summarised, including national best practices, through a periodic follow-up to this study or through upgraded NPR reports with a finer granularity. All ERA-level monitoring data should be publicly available, machine-readable, and openly licensed.

6.2.2. Encourage good practice through the Framework Programmes and its monitoring as well as dedicated project funding

Horizon Europe already provides an advanced OA framework for publications and data, aligned with Plan S principles and FAIR data (see discussion in D.1.1.). The 83% OA compliance rate documented for OA to publications in Horizon 2020 demonstrates that binding requirements, applied through grant conditions and supported by institutional infrastructure, can produce high levels of compliance. For the next Multiannual Financial Framework, the Commission should continue to use the Horizon Europe Framework Programme 2028-34 as a tool to set forward thinking standards based on the following principles:

1. Balance openness and protection under the principle “As Open as Possible, As Closed/Secure as Necessary”,
2. Further implement Responsible Research Assessment to incentivise Open Science,
3. Foster Global Collaboration in Open Science specifically,
4. Champion Equity in Open Science,
5. Ensure the sustainability and further development of Open Science infrastructure and practices,
6. Balance technical AI capabilities to leverage open science with responsible research and innovation.⁸⁹

However, monitoring data for Horizon Europe itself remains limited: at the time of writing, no Horizon Europe monitoring report equivalent to the dedicated study produced for Horizon 2020 had been published, and OA-specific indicators were not identified on the public Horizon Dashboard.

⁸⁸ S. Apartis, G. Catalano, G. Consiglio, R. Costas, E. Delugas, M. Dulong de Rosnay, I. Grypari, I. Karasz, Thomas Klebel, E. Kormann, N. Manola, H. Papageorgiou, E. Seminaroti, P. Stavropoulos, L. Stoy, V.A. Traag, T. van Leeuwen, T. Venturini, S. Vignetti, ... T. Willemse. (2025). Open Science Impact Indicator Handbook (1.0.1) [Computer software]. Zenodo. <https://doi.org/10.5281/zenodo.14651106>

⁸⁹ These recommendations for FP10 specifically are taken from Spichtinger, Daniel; Benítez Monforte, Nuria; Lehtsalu, Liise; Dowling, Lindsay; Donovan, John; Ignat, Tiberius; et al. (2026). Realising the fifth freedom: Recommendations for Open Science in future EU research funding. Digital Science. Report. <https://doi.org/10.6084/m9.figshare.31971687.v1>

Furthermore, the Commission's recent emphasis on administrative simplification (including recent reductions in DMP description requirements in proposals) should be approached carefully, ensuring that simplification improves the user experience of compliance without weakening the substance of the open science obligations.⁹⁰ This includes revising the current optional Horizon Europe DMP template⁹¹ to enhance the clarity, interoperability and long-term value of DMPs in Horizon Europe projects. This includes clarifying roles and improving alignment with research workflows with the overarching goal of making DMPs machine actionable.

Recommendation EU-2

The Commission should maintain and, where justified by evidence, refine OA and research data requirements in Horizon Europe 2028-2034 (FP10) ensuring continuity with existing standards while adjusting for lessons learned. This includes monitoring of OA compliance in Horizon Europe and its successor through the public Horizon Dashboard in a timely and reliable manner and with a high degree of granularity, covering the same indicators as proposed for Member States.

Recommendation EU-3

Simplification measures in Horizon Europe should be designed "digitally by default" with structured templates, open standards, and interoperable tools and not by reducing the substance of open science requirements. The current DMP template should be reviewed, with the aim to make it machine actionable, making it easier to assess and evaluate DMPs.

Recommendation EU-4

The Commission should continue to fund projects to further develop and investigate aspects of Open Science. The Commission should use programme design (e.g. in widening, infrastructure or capacity-building- actions) to incentivise adoption of baseline OA elements that are at the core of the recommendations to Member States outlined in this Study.

6.2.3. Open Research Europe and non-commercial publishing infrastructure

The Commission has stated its aim to develop Open Research Europe⁹² (ORE) into a sustainable collectively funded and governed non-profit open access service in partnership with European research funding and performing organisations. In March 2026, the Commission and CERN jointly announced the transition of ORE into a substantially expanded second phase, constituting the most significant institutional development in European non-commercial publishing infrastructure since the platform's establishment. Under this new arrangement, CERN will assume operational and technical stewardship of ORE from autumn 2026.

Governance and editorial oversight will remain with a Funders' Group comprising national research organisations from eleven countries, namely Austria, France, Germany, Italy, the Netherlands, Norway, Portugal, Slovenia, Spain, Sweden, and Switzerland with the European Commission participating as a permanent observer and co-funder.

This evolution firstly offers a model for the type of non-commercial publishing infrastructure that the 2023 Council Conclusions called for when they advocated a not-for-profit, no-cost scholarly publishing model. Secondly, it addresses the equity dimension: a collectively funded platform removes the APC barrier that documented evidence shows disproportionately affects researchers at under-resourced institutions in Europe (and in the Global South). Thirdly, the ORE model demonstrates that Diamond OA publishing at scale is technically and institutionally feasible within the European research system.

⁹⁰ See Spichtinger D. (2025). Make simplification a hedge trimmer, not a chainsaw. Research Professional News. <https://www.researchprofessionalnews.com/rr-news-europe-views-of-europe-2025-12-make-simplification-a-hedge-trimmer-not-a-chainsaw/>

⁹¹ For next generation DMP requirement see Manola, N., Papadopoulou, E., Kontopidi, M., Kakaletis, G., & Spichtinger, D. (2025). D6.4 Policy Briefing I. Zenodo. <https://doi.org/10.5281/zenodo.17377687>. For potential DMP requirements in FP10 see table 10 in Manola, N., Papadopoulou, E., Kontopidi, M., Grypari, I., Spichtinger, D., Kakaletis, G., & Tziotzios, D. (2025). D4.2 Horizon Europe Report. Zenodo. <https://doi.org/10.5281/zenodo.16753141>

⁹² See also general discussion of ORE in previous chapter.

However, the sustainability challenges of Diamond OA require explicit attention. While the ORE transition secures a five-year funding horizon and establishes a replicable collective governance model, the wider ecosystem of community-led Diamond OA journals and platforms, many operating with minimal or precarious resourcing, remains structurally vulnerable.

Recommendation EU-5

Together with the Member States, the Commission should continue to support not-for-profit--, diamond and community-led- publishing (inter alia through Horizon Europe), thus also addressing the equity dimension. Member States not yet participating in the ORE funding consortium should be encouraged to join, and FP10 grant conditions should (continue to) treat ORE and equivalent non-commercial venues as fully eligible publication routes. The Commission should also continue to lead globally by supporting Diamond OA internationally, in particular in the context of the implementation of the UNESCO recommendations.

6.2.4. Support for interoperability, repositories and standards

The study underlines the importance of interoperable repositories, FAIR data and PIDs for cross-border- reuse, and notes that infrastructure capacity is uneven across Member States and disciplines. The fragmentation of repository infrastructure and metadata standards limits the discoverability, accessibility, and reuse of research outputs across the ERA. Although the EOSC EU Node was launched in October 2024 as the first federation node (followed by two further enrolment waves) the ERA Monitoring 2024 acknowledged that key challenges remain, including "harmonising national contributions, increasing the uptake of EOSC by researchers and ensuring the sustainability of the EOSC Federation beyond 2027."

As previously discussed, the EOSC Open Science Observatory is the currently most technically advanced EU-level monitoring infrastructure, although it needs further improvements. To further develop the observatory, long term sustainability is required.

Recommendation EU-6

The Commission should continue to invest in the EOSC federation (including the EOSC Open Science Observatory) with clear bridges to national and institutional repositories and support Member States with limited infrastructure capacity via targeted funding and technical assistance for repository development, certification and integration into EOSC. The European Union should support Member States with limited infrastructure capacity via targeted funding and technical assistance for repository development, certification and integration into EOSC.

6.2.5. Research assessment reform

Research assessment reform is structurally connected to open access implementation. Where career progression, promotion, and funding allocation continue to depend on traditional bibliometric indicators without formal recognition of open science practices, researchers face a rational disincentive to prioritise OA compliance.

Significant progress has been made through CoARA and the EU funded the CoARA Boost project. However, implementation remains voluntary and carries no consequences for non-participation. An independent expert study published by the Commission in June 2026, drawing on 263 submitted action plans and signatory interviews, found reform 'moving from commitment to action' but progress 'uneven across countries and institutions'.⁹³ The strongest externally validated evidence that assessment-linked OA mandates work comes from Spain, where ANECA's reform of sexenios criteria has been documented in Nature as having "significantly accelerated" OA adoption in Spanish universities.

⁹³ European Commission: Directorate-General for Research and Innovation and Stroobants, K., Implementing research assessment reform – Insights from ARRA action plans and interviews with signatories, Publications Office of the European Union, 2026, <https://data.europa.eu/doi/10.2777/5429449>

The UK's REF model which makes OA a condition for eligibility of outputs submitted to the national research assessment exercise, with direct financial consequences through QR funding allocation provides the most consequential institutional mechanism. These models demonstrate that when assessment systems create genuine consequences for OA compliance, researcher behaviour shifts.

Within the current Horizon Europe framework programme concrete steps have already been taken to support research assessment reform, such as removing Journal Impact Factor references from application forms and introducing narrative CV elements in the ERC from 2024 calls.⁹⁴ Horizon Europe 2028-2034 (FP10) should build on this foundation by consistently applying CoARA principles across all evaluation processes including by formalising open science practices as a recognised dimension of research quality in ERC panel guidance.

Recommendation EU-7

The Commission should continue supporting CoARA and the Agreement on Reforming Research Assessment, explicitly integrating it and the link to Open Access and Open Science in the ERA Act. Evaluation reform according to the CoARA principles should be consistently and ambitiously implemented in HE 2028-34, including in the European Research Council.

6.2.6. Coherence with the research security and strategic autonomy agendas

As discussed previously, the EU's research security agenda has evolved rapidly. While there are legitimate grounds for narrower exceptions it must be ensured that the research security agenda does not result in broad, poorly defined, or disproportionate restrictions on the dissemination of publicly funded research as this would undermine the open access objectives that the ERA Act is designed to advance.

Recommendation EU-8

The Commission should ensure that the open access provisions of the ERA Act and the research security framework are designed as complementary instruments, not competing agendas. This requires explicit recognition that the majority of publicly funded research is not subject to security-sensitive restrictions and should not be affected by research security measures as well as guidance on maximising the share of materials (metadata, protocols, anonymised data, non-sensitive components) that can remain openly available even where primary outputs are restricted. The Commission should guard against the risk that research security becomes a catch-all justification for closure.

6.2.7. A European Secondary Publication Right

The fragmentation of national copyright instruments for open access represents an important legal barrier to a functioning ERA for knowledge circulation. The study documents that statutory secondary publication rights exist in seven Member States (Austria, Belgium, Bulgaria, France, Germany, the Netherlands, Slovenia), but with widely varying conditions: embargo periods range from zero (Bulgaria,) to twelve months (Austria, Germany); public-funding thresholds vary from 50%⁹⁵ (Belgium, France, Germany) to none (Bulgaria); some expressly override or nullify contrary contractual provisions (Bulgaria, France, the Netherlands, Slovenia) while others do not; and scope varies from journal articles only (most) to a broader range of outputs. Rights retention strategies, implemented through cOAlition S funder mandates, cover only grant-funded research and create inconsistencies within individual countries depending on the funding source. Several Member States have neither mechanism, leaving researchers entirely dependent on publisher terms.

⁹⁴ See European Research Council, 'ERC Scientific Council decides changes to the evaluation forms and processes for the 2024 calls', 19 December 2022. Available at: <https://erc.europa.eu/news-events/news/erc-scientific-council-decides-changes-evaluation-forms-and-processes-2024-calls>, accessed May 2026.

⁹⁵ "Predominantly" publicly funded in the case of Austria.

This patchwork has direct operational consequences. As the cross-border scenario above illustrates, researchers in a single Horizon Europe consortium may face fundamentally different legal conditions for making the same collaborative output openly available, depending on their Member State of employment. The European Parliament's draft report on copyright and generative AI (June 2025) calls for "further European harmonisation of Member States' national copyright laws",⁹⁶ a formulation that potentially supports aligning OA copyright provisions with the broader harmonisation agenda. The Commission's targeted initiative for a better copyright environment⁹⁷ could provide an opportunity for legislative action on research-related copyright provisions, alongside AI-related concerns (see below).

Recommendation EU-9

The Commission should give serious consideration to proposing an EU-wide secondary publication right that provides a common legal basis for all researchers in the EU to make their publicly funded work openly available. The design should be informed by the comparative evidence on existing national SPRs. Key design parameters include (i) the embargo period (which must ultimately reach zero to be effective) and (ii) the public-funding threshold (most national SPRs use 50% but this can be difficult to calculate or verify) as well as (iii) the enforceability of the right against contrary contractual provisions (retroactive nullity).

Member States should be required to put in place institutional deposit workflows, library support mechanisms, and compliance monitoring.

6.2.8. Interactions with the evolving EU data and AI regulatory framework

The EU's data legislation continues to evolve, and care must be taken that the needs of research and innovation are adequately addressed. As discussed, the Digital Omnibus Regulation Proposal (November 2025) proposes to repeal the Open Data Directive (2019/1024) and consolidate its provisions into the Data Act.

The interaction between open access, copyright, and AI training raises increasingly important policy questions. At national level, Greece's AI Blueprint (A Blueprint for Greece's AI Transformation, 25 November 2024, Proposal 4.13) has explicitly linked OA to AI research promotion, stating that OA to scientific results 'is key to promoting AI research, improving the quality of research and the free dissemination of knowledge'. This makes Greece the most explicit EU Member State framing of OA as an AI enabler. The European Commission launched a stakeholder consultation in December 2025 on technical protocols for expressing reservations of rights against text and data mining under the AI Act and the GPAI Code of Practice.⁹⁸

Recommendation EU-10

It needs to be ensured that open access policies (including a potential European Secondary Publications Right) and the evolving EU data legislation (Digital Omnibus Regulation Proposal as well as AI/TDM regulatory frameworks) are mutually coherent.

⁹⁶ European Parliament, Draft Report on 'Copyright and generative artificial intelligence', June 2025. See: <https://www.globalpolicywatch.com/2026/02/european-parliament-proposes-changes-to-copyright-protection-in-the-age-of-generative-ai/>

⁹⁷ https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/18173-Targeted-initiative-for-a-better-copyright-environment-for-European-creativity-and-innovation_en

⁹⁸ European Commission, Directorate-General for Communications Networks, Content and Technology (DG CONNECT), Commission launches consultation on protocols for reserving rights from text and data mining under the AI Act and the GPAI Code of Practice, published 1 December 2025, consultation period 1 December 2025–23 January 2026 (deadline extended), last updated 16 December 2025, <https://digital-strategy.ec.europa.eu/en/consultations/commission-launches-consultation-protocols-reserving-rights-text-and-data-mining-under-ai-act-and> , accessed 22 July 2026

7. How should it be done? (Implementation)

7.1. On the Member State level

The analysis indicates that effective OA systems distribute responsibilities clearly among ministries, funders, institutions, infrastructure providers and researchers, and that networked governance arrangements with an identified coordinating body function better than highly fragmented setups.

Where not yet the case, Member States should thus designate a national coordinating entity or mechanism for OA and open science (e.g. a ministry department, national council or steering group) with a clear mandate to align strategies, coordinate implementation and oversee monitoring. The most ambitious requirements (e.g. zero-embargo-OA, extensive data-sharing-obligations) should be phased in when adequate support structures are in place, to avoid undue burden and non-compliance-. Monitoring should include clearly defined reporting lines from researchers and institutions to funders and ministries, with OA metrics integrated in regular research information systems as well as periodic public reporting.

Recommendation MS-11

Designate a national coordinating entity or mechanism with a clear mandate to align OA strategies and coordinate implementation across stakeholders, with clear milestones, KPIs and reporting lines in each Member State.

7.2. On the EU level

7.2.1. Option A: Continued soft coordination

Continued soft coordination preserves maximum national flexibility and is less cumbersome than legislation. It remains valuable as a complement to other instruments, particularly for mutual learning, capacity-building, and infrastructure development.

However, the evidence does not support reliance on this approach alone. A decade of Council Conclusions and ERA Policy Agenda actions has not produced convergence on the most critical policy elements. The 2025 regressions of Poland and Luxembourg demonstrate that both voluntary commitments but also funder mandates can be reversed unilaterally without consequences. The Council's own trajectory from the 2007 Conclusions through to the 2023 text, each more specific about the insufficiency of existing measures, implicitly confirms the limitations of the voluntary approach.

7.2.2. Option B: Revising the Recommendation on Access to and Preservation of Scientific Information

This rationale also applies to another revision of the “Recommendation on Access to and Preservation of Scientific Information”, another option. While a strengthened recommendation can be adopted quickly, without a legislative procedure, it is likewise non-binding under Article 288 TFEU.⁹⁹ A recommendation cannot compel a Member State to enact a secondary publication right or set a maximum embargo ceiling. Nor does a recommendation create directly enforceable rights for researchers.

7.2.3. Option C: The ERA Act combined approach with other legislation (preferred)

The ERA Policy Agenda 2025–2027 already designates open science as a structural policy and has introduced a new Equity in Open Science action.

⁹⁹ Consolidated version of the Treaty on the Functioning of the European Union, Article 288 (ex Article 249 TEC), OJ C 326, 26.10.2012, p. 171 — Part Six, Title I, Chapter 2, Section 1 („The legal acts of the Union“). https://eur-lex.europa.eu/eli/treaty/tfeu_2012/art_288/oj/eng (accessed 21 July 2026)

The ERA Act can give legal force to this designation requiring Member States to demonstrate that their national open science frameworks meet minimum performance standards rather than treating ERA priorities as aspirational guidance. This is qualitatively different from what a recommendation or voluntary action through the ERA Policy Agenda alone can achieve.

Second, the ERA Act could provide the natural home for the monitoring and reporting architecture. The NPR mechanism was established under a Commission Recommendation and has produced four reporting cycles. The ERA Act can transform the NPR mechanism from a voluntary self-reporting exercise into a framework of mutual learning and exchange of best practice that we urgently need on the European level; this should be aligned with the EOSC Open Science Observatory.

Third, the ERA Act can serve as the political mandate to produce a coherent and convergent framework on open access across the ERA to reduce complexity, particularly for cross-border research collaborations.

Fourth, the ERA architecture itself is explicitly multi-level and proportionate. It operates through the ERA governance structures (Council working parties, ERA Forum, national ERA contact points) rather than imposing a single legislative text on 27 diverse research systems. The ERA act can establish binding minimum floors while preserving Member State flexibility in implementation, use differentiated timelines, for the various requirements it introduces, and support mechanisms for less advanced systems, and create mutual learning mechanisms alongside compliance requirements. The precise formulation of these requirements will, of course, be a matter for the legislative procedure between the European Parliament and the Council once the Commission has adopted its proposal.

Fifth, TFEU Articles 179 and 182(5) provide the Treaty basis for ERA legislation. Open access to publicly funded research is a direct operationalisation of the free circulation of knowledge, that is the 'fifth freedom' referenced in Article 179. The ERA Act would be the legislative instrument whose primary purpose is the realisation of ERA objectives under Article 179; it is therefore the optimal home for provisions requiring coordinated EU action on knowledge circulation.

Recommendation EU-11

The Commission should use the ERA Act as the primary binding legislative vehicle for translating the recommendations of this study into a durable and enforceable EU-level framework.

8. Conclusions: the long and winding road to open access

“Open Access policy implementation is a tough job” (Armbruster, 2011)¹⁰⁰

Open access to scientific publications and research data has been on the European policy agenda for more than two decades. It is in essence based on the straightforward idea that research paid for by public money should be publicly available. However, the implementation of this idea has proven far less straightforward than imagined by some of the open access pioneers in the early 2000s.

As this study documents, progress has been real but uneven, and, especially from the perspective of early open access advocates, slower than expected. Moments of genuine acceleration have been followed by periods of stagnation, shaped by institutional inertia, perverse incentives, and publishing market dynamics that proved more durable than anticipated. This is a reminder that policy frameworks, however well-designed, cannot by themselves displace entrenched cultural norms around how research is produced, assessed, communicated, and rewarded.¹⁰¹

While different approaches have been tried, it is important to remember that there is no silver bullet and putting “all our money” into one single approach is likely to disappoint in the long term.

¹⁰⁰ Armbruster, C. (2011). Open Access policy implementation: first results compared. *Learned Publishing*, 24(4), pp. 311–324. <https://doi.org/10.1087/20110409>. Open Access: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1927775

¹⁰¹ In this sense not much has changed from my assessment in 2020. See Spichtinger, D. (2020). Not yet the default setting – in 2020 open research remains a work in progress. *LSE Impact Blog*, London School of Economics and Political Science, 17 January 2020. Available at: <https://blogs.lse.ac.uk/impactofsocialsciences/2020/01/17/not-yet-the-default-setting-in-2020-open-research-remains-a-work-in-progress/> [accessed 30 March 2026].

However, as the study results show, some of the most important bottlenecks still lie in the incentive structures and cultural dispositions that shape how individual researchers, institutions, and national systems make decisions about where and how to publish, what counts for career advancement, and how to weigh openness against other pressures.

As some of us open access advocates have argued¹⁰² in order to make open science the “new normal” we need two complementary policy logics: mandatory requirements (sticks) such as policies and mandates compelling data and publication sharing, and positive incentives (carrots) such as revised research assessment criteria, reputational rewards, and infrastructure support that make open practice the path of least resistance for researchers. For researchers open access should thus become an act of “enlightened self-interest”, that is, an activity that is both beneficial for society but also for their own career.

The recommendations proposed in this study would provide a boost to open access by holistically addressing these aspects through a) the gradual build-up of non-commercial publishing infrastructure, b) consistent policies, funder mandates and (to the extent feasible) legislation which is then c) also consistently implemented and monitored and d) where researchers are provided with support structures that *enable* them to comply rather than forcing them to do so. The recommendations that are provided in this report are thus offered not as a comprehensive “one size fits all” solution but as a coherent set of next steps. The road is a long and winding one. But the end goal and the direction are clear, and the ERA Act would provide an excellent opportunity to align in the next steps to more fully realise the free circulation of knowledge in the European Union.

¹⁰² Leonelli, S., Spichtinger, D. and Prainsack, B. (2015). Sticks and carrots: encouraging open science at its source. *Geo: Geography and Environment*, 2(1), pp. 12–16. <https://doi.org/10.1002/geo2.2>

Annex A Open Access in Horizon Europe and in the EU Member States

1. Horizon Europe

1.1. General characteristics

1.1.1. Policies formulated as strategies, funder mandates and/or legislation

Horizon Europe operationalises open access primarily through a funder mandate embedded in (i) EU legislation (the Horizon Europe Regulation¹⁰³) and (ii) legally binding grant obligations (Model Grant Agreement,¹⁰⁴ clarified through the Annotated Grant Agreement¹⁰⁵). The Regulation frames Open Science as the programme's "modus operandi" and establishes the core "ensuring" language for open access to publications and research data. If not indicated otherwise, the information in this section is based on these documents, as well as the Horizon Europe Programme Guide.¹⁰⁶

1.1.2. Bindingness in terms of implementation

The Horizon Europe OA framework is binding for beneficiaries through the MGA (contractual obligation) and anchored in the Regulation's mandatory language ("ensure").

In addition, Horizon Europe embeds Open Science (including OA and responsible research data management-RDM) into the proposal evaluation process: certain Open Science practices are described as mandatory (score-relevant for the selection) and others as recommended (potentially score-enhancing but not mandatory), particularly in Pillar II applications (Global Challenges and European Industrial Competitiveness).

1.1.3. Scope of the policy

Horizon Europe OA provisions are part of a broader Open Science approach and encompass:

- Open access to peer-reviewed scientific publications; and
- Open access to research data and responsible research data management (RDM) aligned with FAIR principles, including a Data Management Plan (DMP).

The AGA/MGA clarifies that information (via repository metadata) about other outputs and tools/instruments needed to validate conclusions (for publications) or to re-use/validate data (for datasets) is also required.

1.1.4. Embargoes or immediate open access

For publications, Horizon Europe requires immediate OA (zero embargo) via repository provision, with deposit at the latest at publication time.

¹⁰³ Regulation (EU) 2021/695 of the European Parliament and of the Council of 28 April 2021 establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination, and repealing Regulations (EU) No 1290/2013 and (EU) No 1291/2013, OJ L 170, 12.5.2021, p. 1–68, available at: <https://eur-lex.europa.eu/eli/reg/2021/695/oj>

¹⁰⁴ E.g. European Commission, Horizon Europe Model Grant Agreement (v1.1), available at: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/agr-contr/unit-mga_he_v1.1_en.pdf

¹⁰⁵ European Commission, AGA — Annotated Model Grant Agreement: General MGA v1.0, available at: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf

¹⁰⁶ European Commission (2023). Horizon Europe Programme Guide: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/programme-guide_horizon_v3.0_en.pdf

Horizon Europe's OA model depends operationally on rights retention (beneficiaries/authors retaining sufficient rights to deposit and license the manuscript/VoR as required).

For data, the rule is "as open as possible, as closed as necessary", enabling justified restrictions (e.g., IPR, privacy, security) with explanation in the beneficiaries' DMP.

1.1.5. Copyright, rights retention and secondary publication rights

Horizon Europe implementation explicitly relies on rights retention in practice, since beneficiaries/authors must "retain sufficient intellectual property rights" to comply with deposit and licensing obligations.

For publications, the default required licence is CC BY (or equivalent); for monographs/other long-text formats, a more restrictive licence may be used (excluding commercial use and/or derivatives).

Metadata must be openly licensed CC0 or equivalent.

1.2. Context of open access policies

1.2.1. Training or guidance for researchers

Horizon Europe provides extensive guidance through the programme guide (proposal-stage expectations; mandatory vs recommended Open Science practices; RDM expectations) as well as through the annotated grant agreement and Commission/agency webpages on Open Science under Horizon Europe.¹⁰⁷ Information and training on open science requirements is also provided in the context of Info Days on the Framework Programme, the EU IPR Helpdesk¹⁰⁸ and through national contact points, EU projects¹⁰⁹ and other organisations such as OpenAIRE.¹¹⁰

1.2.2. Funding for open access

Horizon Europe treats eligible OA costs under grant cost rules, with a major policy steering effect: publication fees are eligible only for fully open access venues (gold OA in fully OA journals/platforms), provided that a copy is also deposited in a repository for compliance. Hybrid OA fees are not eligible for reimbursement.

There is no separate, additional funding for OA costs, although this was piloted in a previous framework programme.¹¹¹ Similarly, costs related to data management and open access to data are eligible costs as part of the grant.

1.2.3. Repository requirements (incl. FAIR principles)

Repositories are a cornerstone of Horizon Europe OA compliance. For publications deposit in a trusted repository for scientific publications at the latest at publication time, with immediate OA provided via the repository, is obligatory.

¹⁰⁷ European Research Executive Agency (REA), Open Science under Horizon Europe, available at: https://rea.ec.europa.eu/open-science_en [accessed April 2026].

¹⁰⁸ European Commission, Intellectual Property Helpdesk, Your Guide to Open Science in Horizon Europe, 3 September 2024, available at: https://intellectual-property-helpdesk.ec.europa.eu/news-events/news/out-now-your-guide-open-science-horizon-europe-2024-09-03_en

¹⁰⁹ E.g. OPUS Project, Understanding Horizon Europe Open Science Requirements: A Practical Guide for Grant Holders, available at: <https://opusproject.eu/openscience-news/understanding-horizon-europe-open-science-requirements-a-practical-guide-for-grant-holders/> [accessed April 2026].

¹¹⁰ OpenAIRE, Open Science in Horizon Europe [video], available at: <https://www.youtube.com/watch?v=9WxUdKaZqpA&t=136> [accessed April 2026].

¹¹¹ European Commission, Directorate-General for Communications Networks, Content and Technology, Results of the FP7 Post-Grant Open Access Pilot, available at: <https://digital-strategy.ec.europa.eu/en/news/results-fp7-post-grant-open-access-pilot> [accessed April 2026].

For research data deposit in a “trusted”¹¹² repository “as soon as possible” and within DMP-set deadlines is mandated and providing open access under appropriate licensing is mandatory unless justified otherwise (“as open as possible, as closed as necessary”).

FAIR is explicitly required practice for research data, and machine-actionable metadata is also mentioned as part of FAIR-aligned practice.

1.2.4. Metadata and persistent identifier requirements

Horizon Europe requirements include open metadata and persistent identifiers. Publication metadata must be open under CC0 (or equivalent) and include, at minimum, bibliographic metadata, funding/grant identifiers, licensing terms, and persistent identifiers for the publication and (where possible) authors/organisations/grant. For research data, metadata must also be open under CC0 (or equivalent) to the extent legitimate interests/constraints are safeguarded, consistent with FAIR.

1.2.5. Peer review approaches

Horizon Europe does not mandate a specific peer review model in the general OA compliance rules. However, open peer review is a recommended (as opposed to obligatory) open science practice that can be taken into account favourably under the Excellence criterion.

1.2.6. Links to researcher assessment

Horizon Europe promotes open access primarily through mandatory and optional practices as part of the proposal evaluation process, which is in itself a form of research assessment. Furthermore, the ERC has implemented some aspects of research assessment reform; in particular the use of journal impact factors is no longer allowed as part of the application process. Furthermore, a narrative CV has been introduced.¹¹³

1.2.7. Public funding thresholds

No explicit public-funding-percentage threshold applies.

1.2.8. Provisions for small and medium publishers

Horizon Europe OA obligations are publisher-neutral. The aspects most relevant to publishers are likely (i) the immediate OA requirement via repositories; and (ii) the non-eligibility of hybrid APCs.

1.2.9. Identified costs of, or gains from, applying open access policies

Horizon Europe rules themselves focus on compliance modalities (e.g. eligibility rules).

Quantified gains/cost-benefit evidence is typically handled through separate programme evaluation and scholarly literature rather than embedded directly in OA provisions.

¹¹² For a discussion of the term “trusted” in this context and the strengthening of these requirements in Horizon Europe vis-à-vis Horizon Europe see Spichtinger, D., ‘The Role of Repositories in Horizon 2020 and Horizon Europe Open Access and Data Management Requirements: A Comparative Perspective’, in Blumesberger, S., Eberhard, I., Hafeneder, E., Novotny, G., and Torgler, E. (eds.), *Handbuch Repositorienmanagement: Grundlagen – Anwendungsfelder – Praxisbeispiele*, Graz University Library Publishing, Graz, 2024, pp. 353–367 (Schriften der VÖB, Nr. 17), <https://doi.org/10.25364/9783903374232>.

¹¹³ European Research Council, *Changes to ERC Applicant Evaluation*, EURAXESS, available at: <https://euraxess.ec.europa.eu/worldwide/india/news/european-research-council-has-changed-how-it-evaluates-applicant> [accessed April 2026].

In this context, the most recent relevant document is the monitoring report of OA in Horizon 2020¹¹⁴ which finds an average OA rate for publications (83%). APC costs proved difficult to estimate but were estimated to be around 2,200 Euros for full open access journals. An analysis of six large research funders in Europe, the UK and the US conducted as part of the monitoring report showed that, on average, APCs in Horizon 2020 were similar to the average for other funders in Europe and USA. The average APC cost for a Horizon 2020 publication in ‘hybrid’ journals was estimated to be around 2,600 Euros, that is more expensive than gold OA. According to the report, a ballpark figure for the overall cost of ‘gold’ publications under Horizon 2020 is 187 million EUR.¹¹⁵ While no such figures are (yet) available for Horizon Europe, evidence indicates that APCs generally have risen significantly in recent years.¹¹⁶¹¹⁷

1.2.10. Security considerations

Security and legitimate-interest constraints appear explicitly in the open data regime of Horizon Europe as part of the “as open as possible, as closed as necessary” principle, allowing exceptions inter alia for confidentiality, trade secrets, Union competitive interests, security rules and IPR, with justification in the beneficiaries’ DMPs. While research security has recently gained more traction as an important aspect of EU research and innovation, this principle, sometimes modified to “as open as possible, as secure as necessary” allows striking a balance between open access and security policies.¹¹⁸

1.2.11. References to simplification regarding open access

The European Commission is generally putting increased emphasis on streamlining procedures, reducing administrative burden and making participation in EU funding programmes more accessible, especially for newcomers and small businesses. A recent review of the proposal template has seen the requirements to describe data management in Horizon Europe proposals cut.

The author of this report holds that simplification should not be interpreted simply as making forms shorter, but rather to design open science requirements “digitally by default”, with structured templates, open standards and interoperable tools, to lighten the burden on participants and make the information collected more useful and interconnected.¹¹⁹¹²⁰

1.2.12. Role of artificial intelligence in open access policies (opportunities and threats)

While the Horizon Europe rules do not establish a dedicated AI-specific regime *specifically for open access*, the policy emphasis on machine-actionable metadata, persistent identifiers, and reusable licensing creates enabling conditions for computational re-use (including AI-based discovery and analysis), while the “closed as necessary” exceptions create safeguards where risks apply.

¹¹⁴ European Commission: Directorate-General for Research and Innovation, Athena Research & Innovation Center, PPMI and UNU-MERIT, Monitoring the open access policy of Horizon 2020 – Final report, Publications Office, 2021, <https://data.europa.eu/doi/10.2777/268348>

¹¹⁵ For context, the overall budget of Horizon 2020 was approximately 79 billion Euro.

¹¹⁶ E.g. Antoine Blanchard, Diane Thierry, Maurits van der Graaf. Retrospective and prospective study of the evolution of APC costs and electronic subscriptions for French institutions. Comité pour la science ouverte. 2022. <https://hal-lara.archives-ouvertes.fr/hal-03909068v1>

¹¹⁷ Hausteijn, S., Schares, E., Alperin, J. P., Hare, M., Butler, L.-A., & Schönfelder, N. (2024). Estimating global article processing charges paid to six publishers for open access between 2019 and 2023 (arXiv:2407.16551). arXiv. <https://doi.org/10.48550/arXiv.2407.16551>

¹¹⁸ On this issue see also European Association of Research Managers and Administrators (EARMA) Open Science Group, Open Science in the Changing Global System: Report of the 2024 EARMA Open Science Group Meeting, figshare, 2024, <https://doi.org/10.6084/m9.figshare.27879564>

¹¹⁹ See Spichtinger, D. (2025). Make simplification a hedge trimmer, not a chainsaw. Research Professional News. <https://www.researchprofessionalnews.com/r-news-europe-views-of-europe-2025-12-make-simplification-a-hedge-trimmer-not-a-chainsaw/>

1.3. Implementation and monitoring of open access policies

1.3.1. Responsibility for implementation

Primary responsibility sits with beneficiaries (coordinator/partners) who must implement the open access obligations laid down in the grant agreement regarding deposit, licensing, metadata/PIDs, and DMP/RDM, supported by their institutional support functions (e.g., libraries, research offices, data stewards).

1.3.2. Monitoring of individual policy elements

Monitoring occurs through grant management (granting authority/executive agencies) via project reporting and deliverable checks (including the DMP due within the project timeline).

1.3.3. Overall policy monitoring

Overall programme monitoring is undertaken by the Commission and its executive agencies through programme monitoring and evaluation systems. Furthermore, the publicly accessible “Horizon Dashboard”¹²¹ is a key monitoring tool, including cross-cutting monitoring dimensions. The figures for Horizon 2020 include open access indicators, but this data is not available for Horizon Europe.

1.3.4. Reporting arrangements

Beneficiaries report to the granting authority through standard project reporting, and delivery of required outputs such as the DMP (month 6, updated during the project), alongside repository-based evidence of deposition and access.

1.3.5. Results of impact evaluations

For Horizon 2020, the official Commission study (“Monitoring the open access policy of Horizon 2020”) provides quantified compliance evidence for publications and research data. With a steady increase over the years and an average compliance rate of 83% open access to scientific publications, key findings indicate that the European Commission’s leadership in the Open Science policy has paid off. The study concludes with specific recommendations to improve the monitoring of compliance with the policy under Horizon Europe.

2. Belgium

2.1. General characteristics

2.1.1. Policies formulated as strategies, funder mandates and/or legislation

Belgian open access has evolved through a combination of policy orientations, funder mandates, institutional rules, and federal legislation, rather than through a single comprehensive national OA strategy.

¹²¹ European Commission, Horizon Dashboard, EU Funding & Tenders Portal, available at: <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/horizon-dashboard> [accessed July 2026].

In the late 2000s the University of Liège approach, based on an “Immediate Deposit / Optional Access”¹²² model, became an influential example for repository-centric OA policies.¹²³ Early political and strategic commitment for open access was articulated in the Brussels Declaration on Open Access (2012), which brought together federal and regional authorities around the (non-binding) principle that publicly funded research outputs should be made openly accessible, preferably through repositories and with limited embargoes.¹²⁴

A major shift in the Belgian OA landscape occurred in 2018 with the inclusion of an Open Access provision into Belgian federal law (amending the Code of Economic Law).¹²⁵ Under this statutory framework, authors of scholarly articles arising from research funded at least 50% by public funds have a legal right to make their accepted manuscript openly accessible after an embargo (commonly 6 months for STM and 12 months for SSH).

This right prevails over conflicting contractual clauses in publishing agreements (a “secondary publication right” logic). This federal law therefore does not *oblige* authors to make works OA but *enables* them to do so.

Furthermore, on the federal level open access policy development and alignment are supported by the Belgian Science Policy Office (BELSPO), which acts as the central coordination body for federal research and science policy.¹²⁶ The ICC-FCC¹²⁷ Open Science, coordinated by BELSPO, handles federal coordination on matters of open science with the federal and federated entities. In a highly decentralised research system, this federal coordination function contributes to policy consistency across federal law, regional funder mandates, and European-level commitments.¹²⁸

BELSPO plays an important role in situating the legal framework within Belgium’s broader science policy architecture and in ensuring coherence with European Open Science and ERA policy priorities.¹²⁹ BELSPO developed an OA mandate applicable to research financed by BELSPO research programs or to research performed by researchers employed as scientific staff at the federal research organisations under its authority. The mandate makes Green Open Access compulsory (immediate deposit, optional access), allowing for embargo periods of 6 months (STEM) or 12 months (SSH), and refers researchers to deposit in institutional repositories, such as the federal open access institutional repository ORFEO. The mandate recommends fair¹³⁰ Gold Open Access and identifies quality and transparency requirements for Gold OA. A revised OA mandate will be published in the course of 2026.¹³¹

Operationalisation of OA has been driven primarily by research funder mandates, in particular those of F.R.S.-FNRS and FWO and corresponding grant conditionality: beneficiaries are required to ensure OA (preferably via deposit in a repository), with compliance embedded in funding rules and reporting expectations.

¹²² Under the Immediate Deposit / Optional Access model deposit in the repository is mandatory upon acceptance, while open access to the deposited file may be deferred (e.g. under publisher embargo) and thus optional;

¹²³ Septon, M., & Van Hee, F. (2015). Open Access in Belgium. Zenodo. <https://doi.org/10.5281/zenodo.54750>

¹²⁴ Brussels Declaration on Open Access (2012)

<https://openaccessbelgium.wordpress.com/wp-content/uploads/2012/10/brussels-declaration-on-open-access.pdf>

¹²⁵ Loi portant des dispositions diverses en matière d’économie / Wet houdende diverse bepalingen inzake economie, Moniteur Belge / Belgisch Staatsblad, 5 September 2018, p. 68691, Article 29 (inserting Article XI.196 into the Code of Economic Law / Code de droit économique / Wetboek van Economisch Recht). PDF of the 5 September 2018 issue available at: https://www.ejustice.just.fgov.be/mopdf/2018/09/05_1.pdf. See <https://www.kuleuven.be/open-science/what-is-open-science/scholarly-publishing-and-open-access/open-access-kuleuven/belgian-oa-legislation>

¹²⁶ OECD, Belgian Science Policy Office (BELSPO) Open Science Policy, in: Access to Public Research Data: A Toolkit, OECD Publishing, Paris, 2024, available at: https://www.oecd.org/en/publications/access-to-public-research-data-toolkit_a12e8998-en/belgian-science-policy-office-belspo-open-science-policy_65195e34-en.html [accessed April 2026].

¹²⁷ ICC stands for International Cooperation Commission, FCC for Federal Cooperation Commission. The ICC coordinates Belgian positions in international and European research fora, while the FCC handles concertation on internal Belgian science policy matters. As open science concerns both dimensions, the two commissions cooperate on this topic.

¹²⁸ Information provided by Belgian NPR.

¹²⁹ Belgian Science Policy Office (BELSPO), Open Science, available at: https://www.belspo.be/belspo/openscience/index_en.stm [accessed April 2026].

¹³⁰ In this context “fair” refers to pricing conditions for gold OA. Alongside the compulsory green route, the mandate recommends publishing in free-of-charge Diamond Open Access journals or platforms run by public organisations, or in commercial Gold Open Access journals with transparent pricing policies and fair prices for genuine added value.

¹³¹ Information provided by Belgian NPR.

In Flanders, there is a dedicated Flemish policy plan on Open Science. The first policy plan, launched in 2019, with the Flemish Open Science Board (FOSB) as an important steering body, also encompasses open access through yearly measurement of an indicator that represents the share of publications published in open access, or under embargo.¹³²

A successor plan for the period 2026–2030, approved by the Flemish Government on 3 April 2026, retains the FOSB as steering body and has its focus on FAIR data and open access to publications.¹³³ In Flanders, the general rule is that any type of open access is acceptable: green, gold, diamond or hybrid. There is no obligation for immediate open access in Flemish funding instruments. All metadata on publications is captured via Flemish Research Information Space (FRIS),¹³⁴ allowing active monitoring of the progress on open access.

2.1.2. Bindingness in terms of implementation

While on the federal level the legislation is enabling (secondary publication right), regional/community funder or institutional rules are binding. On the regional level, the 2018 ‘Open Access Decree’ of the Wallonia-Brussels Federation consolidates the deposit policy of the Universities, stipulating that all scientific articles subsidised by public funds must be deposited in an institutional repository.¹³⁵

Funder mandates impose compulsory deposit obligations as a condition for eligibility in funding, reporting, and evaluation processes. While FWO and F.R.S.-FNRS have an open access obligation, for BELSPO funded research only deposit¹³⁶ is obligatory.

2.1.3. Scope of the policy

Belgium does not operate a single, comprehensive national legal mandate for open access to research data comparable to the statutory secondary publication right for articles. Instead, open access to data is governed through funder mandates, institutional policies, and alignment with European Open Science frameworks. In Flanders, there is a dedicated Flemish policy plan on Open Science, encompassing open access to publications, but also open data, with dedicated indicators to monitor progress across institutions. The 2026–2030 plan sharpens this scope by making FAIR data the first-order priority and extending attention to open research software and other research outputs.

At federal level, BELSPO has framed open research data as part of its broader Open Science agenda, notably through policy strategies applicable to federal research organisations and participation in EOSC governance.¹³⁷

¹³² Departement Werk, Economie, Wetenschap, Innovatie en Sociale Economie (WEWIS), Vlaamse beleidsplan Open Science en oprichting Open Science Board goedgekeurd [Flemish Policy Plan on Open Science and Establishment of Open Science Board Approved], 20 December 2019, available at: <https://www.ewi-vlaanderen.be/nieuws/vlaamse-beleidsplan-open-science-en-oprichting-open-science-board-goedgekeurdv> [accessed April 2026] for the policy period 2019–2024. A new Flemish policy plan on Open Science is currently under construction (information provided by NPR).

¹³³ Departement Werk, Economie, Wetenschap, Innovatie en Sociale Economie (WEWIS), Vlaams beleidsplan Open Science 2026–2030 goedgekeurd [Flemish Policy Plan on Open Science 2026–2030 Approved], 7 April 2026, available at: <https://www.ewi-vlaanderen.be/nieuws/vlaams-beleidsplan-open-science-2026-2030-goedgekeurd> [accessed July 2026]. Source in Dutch; working translation by the author, AI-assisted, unofficial.

¹³⁴ Flemish Research Information Space (FRIS), Research Portal, available at: <https://www.researchportal.be/en> [accessed April 2026].

¹³⁵ While a corresponding legal base does not exist in Flanders, de facto the obligations of the FWO result in very similar obligations.

¹³⁶ But not necessarily providing open access – see discussion of Liege approach above.

¹³⁷ For the link of open data and EOSC see EOSC-Pillar, Legal and Policy Framework for Open Science and Open Data — Belgium (D4.1 Update, v2.3), 2021, available at: https://www.eosc-pillar.eu/sites/default/files/D4.6%20legal_and_policy_framework_D4.1-update_v2_3_Belgium.pdf [accessed April 2026].

The current Open Research Data (ORD) mandate¹³⁸ applies to digital data (and associated metadata), collected or created within the scope of research projects wholly or partially funded by BELSPO. It relates to data needed to validate results in scientific publications but also to other curated and/or raw data specified in the Data Management Plan (DMP). The BELSPO Open Research Data policy complies with FAIR principles, and its conception is to be considered fully within the EOSC framework.

BELSPO expects a provisional DMP upon submission of the grant application, and a completed DMP no later than 6 months after the start date of the project. After the end of the project data should be deposited in a certified and trusted data repository. BELSPO follows the FAIR research data management principles in the template of their DMP. Furthermore, it encourages re-use of research data where possible. A revised Open Research Data mandate will be published in the course of 2026.¹³⁹

At regional level, data openness is operationalised mainly through research funder requirements, particularly those of F.R.S.-FNRS, FWO, and VLAIO. In Flanders, the vision on open data is also incorporated in the Flemish policy plan on Open Science, with indicator measuring the share of research projects with a DMP, and the share of open datasets, while focussing on awareness on FAIR principles through capacity building in and between the institutions via the Flemish Research Data Network (FRDN). FNRS,¹⁴⁰ FWO¹⁴¹ and VLAIO¹⁴² require project-based Data Management Plans, apply a lifecycle approach (initial and updated DMP), align explicitly with FAIR principles, follow the principle “as open as possible, as closed as necessary”, rely on trusted repositories and open metadata and enforce compliance through grant conditions and reporting. Belgian funders thus converge strongly toward European Open Science and Horizon Europe standards.

2.1.4. Embargoes or immediate open access

For publications, Belgium uses a model of immediate deposit with delayed access. BELSPO and FNRS cap embargoes at 6 months (STM) and 12 months (SSH). The FWO does not distinguish explicitly between STM and SSH, instead applying a uniform maximum embargo period of up to 12 months for both STM and SSH.

For research data, BELSPO, FNRS and FWO all follow the principle “as open as possible, as closed as necessary”: data may be released immediately, after an embargo, or under restricted access depending on legal/ethical/commercial constraints, but the DMP must define and justify these conditions.

2.1.5. Copyright, rights retention and secondary publication rights

As described, Belgium is notable for embedding a secondary publication right–type mechanism in federal law allowing self-archiving of accepted manuscripts after embargo where at least 50% of research funding is public and limiting publishers’ ability to contractually prevent this.

FNRS and FWO do not impose mandatory Creative Commons licensing for scholarly publications; however, BELSPO requires CC BY for scientific journal articles and CC BY or CC BY-NC-SA for monographs. All major funders explicitly address licensing for research data through Data Management Plan requirements, encouraging the use of standard open licences (e.g. Creative Commons) where legally and ethically possible, in line with FAIR principles.

¹³⁸ Belgian Science Policy Office (BELSPO), BELSPO Open Research Data Mandate, 3 December 2019, available at: https://www.belspo.be/belspo/openscience/doc/ORD_Policy_Dec2019.pdf [accessed July 2026]. See also the BELSPO Open Science mandate overview page, available at: https://www.belspo.be/belspo/openscience/mandate_en.stm [accessed July 2026]. A revised Open Research Data mandate is announced for publication in the course of 2026 (information provided by NPR).

¹³⁹ Information provided by NPR.

¹⁴⁰ F.R.S.-FNRS, Guide to Data Management Plans, available at: https://www.frs-fnrs.be/docs/DMP/Guide_DMP_EN.pdf [accessed April 2026].

¹⁴¹ Research Foundation — Flanders (FWO), Data Management Plan (DMP), available at: <https://www.fwo.be/en/about-fwo/research-policy/data-management-plan-dmp/> [accessed April 2026].

¹⁴² See Vlaams Agentschap Innoveren en Ondernemen (VLAIO), Subsidiereglement, Section 7.1.2.9 (Datamanagementplan / DMP), available at: <https://www.vlaio.be/nl/media/2397> [accessed April 2026].

2.2. Context of open access policies

2.2.1. Training or guidance for researchers

Belgium shows strong evidence of institution-led compliance guidance, with multiple universities maintaining practical pages explaining: (i) what version can be shared (AAM), (ii) how embargoes apply, and (iii) how the federal legal provision interacts with publisher contracts.¹⁴³ Furthermore, the Open Access Belgium website functions as a cross-institutional information site maintained by Open Science teams of Belgian universities.¹⁴⁴ Additionally, the main funders provide guidance on funder DMP requirements. The Flemish Research Data Network (FRDN) developed the Flemish DMP template,¹⁴⁵ a uniform document representing the minimal requirements of a DMP, and initiated the Knowledge Hub, a self-learning community that supports research data support staff in assisting researchers to make their data open and FAIR.¹⁴⁶

At the federal level, training and researcher support have been strengthened through the Federal Open Science Cloud (FedOSC), an initiative launched on 1 April 2024 under BELSPO's authority and coordinated by Belnet (Belgium's mandated organisation in the EOSC Association) which inter alia includes training activities and learning materials.¹⁴⁷

2.2.2. Funding for open access

Belgium does not operate a single national OA funding mechanism. Instead, OA is financed through institutional budgets and eligibility of project costs under funder rules. A concrete example is F.R.S.-FNRS, which sets conditions for OA compliance and also specifies parameters around OA-related costs and reimbursement rules (including limits and exclusions in some cases). FWO allows for reimbursement of OA-related costs from the project budget without limits and exclusions – except when the panel evaluating the project application deems OA-related costs excessively high.

Belgium does not operate a single national “big deal” authority for scholarly publishing. Instead, library consortia arrangements are organised at regional and institutional level, reflecting Belgium's federal governance structure and the autonomy of universities and research organisations. These consortia play a central enabling role in operationalising open access by negotiating subscription agreements and, in some cases, agreements that include reading and open access publishing with publishers and by managing collective licensing conditions.

2.2.3. Repository requirements (incl. FAIR principles)

For scientific publications Belgian OA implementation is strongly repository-centric (green OA), with funders and institutions expecting deposit in repositories. Prominent examples are ORBi (Université de Liège), ORFEO (BELSPO), and institutional repositories at each Flemish University (LIRIAS at KU Leuven, IRUA at UAntwerp, Document Server at UHasselt, VUBIR at VUB and Biblio at UGent).

For research data, BELSPO's Open Research Data policy explicitly states compliance with FAIR and positions its conception within EOSC. They state: “BELSPO mandates researchers to deposit said data in certified and trusted online repositories and/or data centres with the highest standards for preservation, curation, deposit and reuse”.

¹⁴³ Ghent University, Open Access and Belgian Law, available at: <https://www.ugent.be/en/research/openscience/scholar-publishing/oa-belgian-law.htm> [accessed April 2026].

¹⁴⁴ Open Access Belgium, available at: <https://openaccessbelgium.wordpress.com/> [accessed April 2026].

¹⁴⁵ Flemish Research Data Network (FRDN), Flemish Data Management Plan, available at: <https://www.frdn.be/topics/flemish-data-management-plan/> [accessed April 2026].

¹⁴⁶ Flemish Research Data Network (FRDN), Knowledge Hub, available at: <https://www.frdn.be/community/> [accessed April 2026].

¹⁴⁷ Belgian Science Policy Office (BELSPO), Federal, Interfederal and International Coordination — Research and Development (FedOSC), available at: https://www.belspo.be/belspo/coordination/resDev_openScience_en.stm [accessed July 2026] and FedOSC Learning Community wiki, available at: https://fedosc.miraheze.org/wiki/Main_Page [accessed July 2026].

FNRS expects funded researchers to plan for sharing and preservation via appropriate repositories and to address confidentiality and protection measures within the DMP. FWO uses the DMP to encourage FAIR-compliant data management, implying the use of repositories that support persistent access, documentation, and reuse. In Flanders, research institutions are obligated to register metadata on research results from publicly funded research in FRIS, which implies a de facto obligation to follow the F and A in the FAIR-principles.

2.2.4. Metadata and persistent identifier requirements

For publications. Belgium's OA ecosystem relies heavily on repository deposit, which *implies* use of standard scholarly metadata and identifiers, although this is not explicit in most funder texts, which primarily emphasise deposit and access conditions. In practice, metadata/identifier expectations are often embedded in institutional repository submission requirements and funder reporting infrastructures. In Flanders, metadata on publications are registered in FRIS (often via an automatic connection with the institutional repository), to increase findability. An identifier is part of the metamodel for this registration.

For data, metadata is a core compliance element. FNRS's DMP guidance requires researchers to specify documentation/metadata approaches to enable understanding, reuse, and long-term preservation, and to set out conditions ensuring confidentiality and protection where required. FWO explicitly links the DMP to FAIR compliance, which entails findability and reuse through rich metadata and appropriate identifiers, enforced by requirements of registration in FRIS. All systematically publicly funded research institutions in Flanders have stipulations in their specific funding agreements concerning the obligation to register metadata, with identifiers, in FRIS.

2.2.5. Peer review approaches

No distinctive Belgian OA policy instrument was identified that promotes a specific peer review reform model (e.g., community-led peer review) as a national OA policy element.

2.2.6. Links to researcher assessment

Guidance related to the Fédération Wallonie-Bruxelles OA framework (as implemented in institutional infrastructures such as ORBi) explicitly situates deposit as a prerequisite or strong expectation within research evaluation processes. OpenAccess BE states in this context: "The list of publications produced by the institutional archive is the only one that is officially recognised by the French Community of Belgium and that will be considered by scientific committees or commissions when assessing applications for appointments, promotions, or credits. (e.g., eligibility of outputs in assessment workflows)".¹⁴⁸ In Flanders, FWO explicitly links OA to assessment during the evaluation of reports on funded research, where only publications registered in FRIS are taken into consideration. When evaluating scientific reports, it is verified whether all peer-reviewed scientific articles are 'open' or 'embargoed'.¹⁴⁹

2.2.7. Public funding thresholds

For publications, the federal statutory right (secondary publication) applies when ≥50% public funding is present. For data, FNRS and FWO requirements apply whenever their funding is awarded, and do not rely on a public-funding-percentage threshold.

¹⁴⁸ Open Access Belgium, Open Access Decree of the Wallonia-Brussels Federation, available at: <https://openaccessbelgium.wordpress.com/open-access-decree-of-the-wallonia-brussels-federation/> [accessed April 2026].

¹⁴⁹ Research Foundation — Flanders (FWO), Algemeen Reglement [General Regulations], Article 2 §4 and §5, available at: <https://www.fwo.be/nl/ondersteuningsprogramma-s/reglementen/algemeen-reglement/> [accessed April 2026].

2.2.8. Provisions for small and medium publishers

No dedicated, explicit provisions targeting small/medium publishers were identified as a stable, recurring element of Belgium's OA legal provision or the main funder mandates cited above. Where Belgium engages publishers more directly, it is through licensing, subscription/transformational arrangements at institutional or consortia level. Transformational agreements are not a common practice in Belgium.¹⁵⁰

2.2.9. Identified costs of, or gains from, applying open access policies

Belgium has some evidence of system learning from repository-led OA implementation, particularly via institutional experiences (e.g., ULiège/ORBi) documented in European policy learning projects.¹⁵¹ However, there is no national, system-wide evaluation of costs and benefits.

2.2.10. Security considerations

FNRS requires DMP content addressing confidentiality and protective measures. FWO explicitly frames the DMP as a mechanism to ensure FAIR data management "as much as possible," (which inherently accommodates security and other constraints where openness is not permissible). BELSPO's Open Research Data policy likewise operates within an EOSC/FAIR framing that presumes managed access where needed.

The Flemish policy plan on Open Science 2026–2030 situates open science in relation to knowledge security and strategic autonomy, under the principle "as open as possible, as closed as necessary".

Beyond that, there are no references to more recent discussions on research security in a changing global context. Adopting a policy framework regarding research security in relation to open access is part of the revision of the BELSPO open access and open research mandates and will be implemented through the revised mandates.¹⁵²

2.2.11. References to simplification regarding open access

The main funders offer DMP templates and guidance but these do not explicitly refer to simplification.

In Flanders, administrative simplification is an important point of attention in the R&I policy. The Flemish policy plan on Open Science 2026–2030 sets the ambition that by 2030 researchers should be able to work according to open science principles without additional administrative burden. FRIS is an important instrument on the path towards reducing administrative burdens for researchers in Flanders by reusing the data in FRIS as much as possible.¹⁵³

2.2.12. Role of artificial intelligence in open access policies

No federal Belgian OA policy element was identified that overtly addresses AI. Indirectly, FAIR-aligned metadata and repository practices are enabling conditions for machine reuse of data, but this is implicit rather than explicit.

Adopting a policy framework regarding artificial intelligence in relation to open access is part of the revision of the BELSPO open access and open research mandates and will be implemented through the revised mandates. In the new Flemish policy plan on Open Science approved by the Flemish Government on 3 April 2026, agility ("wendbaarheid") is one of the strategic objectives: the policy framework is designed to respond in an agile manner to the impact of societal, geopolitical and technological evolutions on current and future Open Science policy.

¹⁵⁰ Information provided by NPR.

¹⁵¹ The "Liege approach" was discussed as a case study in the EU project PASTEUR4OA. See Septon, M. and Van Hee, F., Open Access in Belgium, PASTEUR4OA Project, Zenodo, 30 June 2015, <https://doi.org/10.5281/zenodo.54750>.

¹⁵² Information provided by NPR.

¹⁵³ Information provided by NPR.

The plan prioritises FAIR data management with the stated aim, inter alia, of creating datasets suitable for AI applications, and situates open science in relation to knowledge security and strategic autonomy.

2.3. Implementation and monitoring of open access policies

2.3.1. Monitoring of individual policy elements

Implementation responsibilities are distributed; federal implementation for federal research organisations under its authority is coordinated by BELSPO through policy, repository infrastructure (ORFEO), and governance mechanisms; in Flanders, the Department of Work, Economy, Science, Innovation and Social Economy (WEWIS) is responsible for the Open Science policy for Flemish research institutions, governed via the policy plan on Open Science with the Flemish Open Science Board (FOSB) as important steering body. For data, implementation is shared between funders (requirements, DMP processes), institutions (support services, repositories), and researchers (data stewardship actions specified in the DMP).

2.3.2. Who is responsible for monitoring the implementation of each policy element

Monitoring tends to be performed through funder reporting and repository/CRIS infrastructure:

- Funders (e.g., FWO, VLAIO, F.R.S.-FNRS) monitor compliance through grant reporting, publication lists, and audits/eligibility rules anchored in funder regulations. In Flanders, FRIS is an additional source for Flemish funders to monitor OA.
- Institutions monitor via repository deposit statistics and internal research information systems, often tied to assessment workflows (which creates a strong practical compliance signal).

At the federal level, BELSPO provides governance and support mechanisms. An open science monitoring strategy is currently being developed.¹⁵⁴

In Flanders, general progress on Open Science is monitored in the context of the Flemish policy plan on Open Science, with a degree of automation in the measurements via FRIS.¹⁵⁵

2.3.3. Overall policy monitoring

BELSPO coordinates within the federal sector and participates in national/international coordination. At a regional level, the corresponding regional governments are responsible for their policy implementation.

2.3.4. Reporting arrangements

Researchers and institutions report to funders through project reporting and DMP processes; federal research organisations report within BELSPO-coordinated structures. For the broader ecosystem, Open Access Belgium provides an informal information-exchange layer supporting awareness and practice sharing, complementing formal reporting lines.

In the context of the Flemish policy plan on Open Science, the Flemish research institutions report on their open science progress on a yearly basis to the Department of Work, Economy, Science, Innovation and Social Economy (WEWIS). This yearly reporting is also linked to the yearly funding in the context of the policy plan (5 million euros per year for the 2019-2024 plan and 4.9 million euros per year for 2026–2030.) to support Open Science in Flanders.¹⁵⁶

¹⁵⁴ Information provided by NPR.

¹⁵⁵ Flemish Research Information Space (FRIS), Open Science, available at: <https://www.researchportal.be/en/open-science> [accessed April 2026].

¹⁵⁶ Information provided by NPR. No link to report provided.

2.3.5. Results of impact evaluations

Belgium lacks a comprehensive, national-level quantitative impact evaluation measuring OA effects. An EU-funded Open Science mapping exercise notes that monitoring and assessment are distributed across institutions, funders, and regional or federal actors, rather than organised through a single national framework.¹⁵⁷ Available evidence therefore remains fragmented and primarily qualitative or compliance-oriented, consisting of funder reporting, institutional repository statistics, and case studies rather than system-wide impact metrics.

A relevant, frequently cited evidence base concerns repository-mediated OA implementation at institutional level—particularly the ULiège/ORBi model—documented in European policy learning projects (e.g., PASTEUR4OA case material), including descriptive indicators such as deposit volumes and the stabilisation of deposit behaviours from the part of researchers over time.

In 2024, the Flemish Open Science policy was formally evaluated.¹⁵⁸ This evaluation is the basis for the new policy plan that was recently adopted. Results show that progress was made over the past policy period, with a steady increase in the share of publications published in open access, thanks to the monitoring of (non-financially binding) indicators. In the next Flemish policy plan on Open Science, measuring and reducing costs on open access will be a priority, to be achieved through a joint Flemish vision on open access, shared and supported by the Flemish research institutions.¹⁵⁹

3. Bulgaria

3.1. General characteristics

3.1.1. Policies formulated as strategies, funder mandates and/or legislation

Bulgaria has established an open access framework combining legislation with a national strategic instrument; funder-level mandates are not very comprehensive although provisions have recently been updated for research data.

At strategic level, the Ministry of Education and Science adopted the National Plan for Development of the Open Science Initiative in the Republic of Bulgaria (published in the State Gazette, No. 6 of 22 January 2021), which frames open access to both scientific publications and research data as a national priority and foresees the development of a national infrastructure for open science, ultimately in the context of EOSC.¹⁶⁰¹⁶¹ The document sets out objectives and activities with fixed implementation deadlines to support the advancement of open science during the period 2021 – 2025. To date, the plan has not yet been followed by a new strategic document.

At legislative level, Bulgaria introduced a statutory secondary publication obligation (discussed below) as part of the Law on Promotion of Research and Innovation, promulgated on 1 May 2024.¹⁶² Article 80.2 requires authors of publications arising from publicly funded research to provide a digital copy/version for publication in a designated repository, de facto the Bulgarian Open Science Portal (article 78.2).

¹⁵⁷ Foggetti, N., Gerin Laslier, M., Di Giorgio, S., Haile Gebreyesus, N., Müller, S., van Nieuwerburgh, I., Romier, G., Van Wezel, J., Hönegger, L., Bodlos, A. & Vernet, M. (2023). D4.6 Legal and Policy Framework and Federation Blueprint. Zenodo. <https://doi.org/10.5281/zenodo.7615533>

¹⁵⁸ Departement Werk, Economie, Wetenschap, Innovatie en Sociale Economie (WEWIS), Evaluatie van het Vlaams Open Science-beleid — Eindrapport [Evaluation of the Flemish Open Science Policy — Final Report], 2024, available at: <https://www.ewi-vlaanderen.be/sites/default/files/2025-01/Evaluatie%20-%20Open%20Science-beleid%20-%20rapport%20-%202024.pdf>.

¹⁵⁹ Information provided by NPR.

¹⁶⁰ Ministry of Education and Science, *National Plan for Development of the Open Science Initiative in the Republic of Bulgaria* (2021) Available at <https://bpos.bg/en/documents>

¹⁶¹ Methodological note: this document proved difficult to trace since the URL provided at the OECD and RDA is no longer valid. The document is only available in Bulgarian. For the purpose of this study an AI translated version has been used.

¹⁶² State Gazette, *Law on Promotion of Research and Innovation* (1 May 2024).

<https://dv.parliament.bg/DVWeb/showMaterialDV.jsp?idMat=214107> translated via chrome translate function.

This obligation is complemented by amendments to the Copyright and Related Rights Act (promulgated 1 December 2023), which established a statutory secondary publication right for authors of scientific literature produced with public funding, preventing contractual override (Article 60.2).¹⁶³

It is expressly provided in Article 60.4 that: “A publisher may not impose restrictions on the publication of a work of scientific literature solely on the grounds that it has already been published in an educational or scientific repository for non-commercial purposes.”¹⁶⁴

For research data, the Law on Promotion of Research and Innovation, requires projects seeking public funding to comply with principles of open science as defined in Article 5.1,¹⁶⁵ which explicitly includes providing access to research data and wide dissemination of research results (Article 5.2).¹⁶⁶

Operationalisation for both publications and research data is provided through Ordinance No. 1 of 6 March 2025, issued pursuant to Article 78.4 of the Law on the Promotion of Research and Innovation, which regulates the publication and storage of data and publications in the Bulgarian Portal for Open Science (BPOS).¹⁶⁷

The Bulgarian National Science Fund (BNSF) as the main funder does not, on the basis of publicly available programme rules, articulate a standalone, explicit open access policy for publications. The CHIST-ERA call indicates that BNSF does not mandate OA publication or research data sharing; rather, such costs are eligible within project budgets.¹⁶⁸ However, it should be noted that, as of the beginning of 2025, new *Regulations on the Monitoring and Evaluation of Research Activities Conducted by Higher Education Institutions and Research Organisations, as well as the Activities of the National Science Fund*, entered into force (published in the State Gazette, No. 106 of 17 December 2024).¹⁶⁹ Article 13.1 provides that, by the end of March each year, organisations are required to submit to the Ministry of Education and Science a research data management plan, together with other documents. Article 13.2 further specifies the minimum requirements for this plan:

“The research data management plan describes how data will be collected, organised, stored, and shared during a project or scientific research and includes a description of the data, data collection methods, data organisation and structure, data storage and archiving, data sharing and dissemination, personal data management and protection, and procedures for their processing, and defines responsibilities for data management.”¹⁷⁰

¹⁶³ State Gazette, *Amendments to the Copyright and Related Rights Act* (1 Dec 2023).

<https://dv.parliament.bg/DVWeb/showMaterialDV.jsp?idMat=201485> translated via chrome translate function. Full text of Article 60.2: “The author of a scientific work created on the basis of research financed wholly or partly by public funds shall retain the right to make that work, or parts thereof, publicly available in educational or scientific repositories for non-commercial purposes after its acceptance for publication by a publisher, provided that the publisher is acknowledged”. (Unofficial translation by J. Iliev, provided by NPR.)

¹⁶⁴ In practical implementation this would likely mean a CC BY NC licence or equivalent.

¹⁶⁵ Law on the Promotion of Research and Innovation, Article 5.1: “Research activities funded by public funding shall be based on the principle of open science, without prejudice to the principles of intellectual property protection”. (Unofficial translation by J. Iliev, provided by NPR.)

¹⁶⁶ Law on the Promotion of Research and Innovation, Article 5.2: “Open science is the transfer of knowledge through ensuring access to research data and the wide dissemination of research results for which public funding has been provided”. (Unofficial translation by J. Iliev, provided by NPR.)

¹⁶⁷ State Gazette, Ordinance No. 1 of 6 March 2025. <https://dv.parliament.bg/DVWeb/showMaterialDV.jsp?idMat=233335> translated via chrome translate function.

¹⁶⁸ https://tac.r.gov.cz/wp-content/uploads/documents/2019/12/02/1575311249_CHIST-ERA%20Call%202019%20-%20Announcement.pdf

¹⁶⁹ *Naredba za usloviyata i reda za otsenka na nauchnata deynost [Regulations on the Monitoring and Evaluation of Research Activities Conducted by Higher Education Institutions and Research Organisations, as well as the Activities of the National Science Fund]*, published in the State Gazette, No. 106, 17 December 2024, available at:

<https://legislation.apis.bg/doc/6115340> [accessed April 2026; in Bulgarian, provided by NPR].

¹⁷⁰ Unofficial translation by J. Iliev. Provided by NPR.

In 2025, a new *Regulation on the Activities of the National Science Fund* was adopted (published in the State Gazette, No. 46 of 6 June 2025).¹⁷¹ Article 53.3.9 specifies that the scientific description of each project proposal must include measures to ensure compliance with the principle of open science, as set out in Article 5 of the Law on the Promotion of Research and Innovation.

The Regulation also establishes specific requirements concerning research data management. These include: a mandatory requirement for each project to include a research data management plan (Article 76.1.6); the designation of the research data management plan as an integral part of the project funding agreement (Article 76.2); and, for each funded project, the creation of a dedicated project webpage, which must include, where applicable, a link to publicly available research data (Article 90.2.2.b).

However, the regulation does not introduce substantive requirements regarding research data stewardship, such as compliance with the FAIR principles or the mandatory deposit of data in a trusted repository.

According to the same regulation, the results of each funded project must be published on the project website (Article 90.2.2). This publication should include a list of scientific publications produced in connection with the project, with links either to the publications on the journals' websites or to publicly accessible electronic copies deposited in the Bulgarian Portal for Open Science, in accordance with Article 78.1 of the Law on the Promotion of Research and Innovation.

3.1.2. Bindingness in terms of implementation

For scientific publications the 2024 law establishes a statutory obligation for authors of publicly funded research outputs to provide a digital copy/version for repository publication, and the 2025 Ordinance specifies mandatory procedures and scope. The secondary publication right in copyright law is also binding in the sense that it invalidates contractual restrictions on self-archiving.

For research data, bindingness arises primarily through the Ordinance, adopted pursuant to Article 78.4 of the Law on the Promotion of Research and Innovation, which explicitly covers "data and publications" resulting from research financed wholly or partially with public funds and requires their publication or storage in BPOS. The National Plan (2021) itself is non-binding, functioning as a strategic coordination document.

As noted, under the new *Regulation on the Activities of the National Science Fund*, each project proposal must include measures to ensure compliance with the principle of open science, as established in Article 5 of the *Law on the Promotion of Research and Innovation*.

Since mid-2025, certain scientific programmes funded by the BNSF have included funder-level requirements mandating "an irrevocable commitment to the wide dissemination of the results of fundamental scientific research under non-exclusive and non-discriminatory conditions, through teaching, open access databases, open publications, open-source software, or other means, and adherence to the principles of open science, in accordance with Article 5.2 of the Law on the Promotion of Research and Innovation."¹⁷²

3.1.3. Scope of the policy

Bulgaria's policy framework encompasses both publications and research data, although the legal architecture differs between the two domains. Publications are covered by both copyright-based rights and research-law-based obligations.

¹⁷¹ *Pravilnik za deynostta na Fond „Nauchni Izsledvaniya“* [Regulation on the Activities of the National Science Fund], published in the State Gazette, No. 46, 6 June 2025, available at: <https://www.ciela.net/svobodna-zona-darjaven-vestnik/document/2137250926/issue/7392/pravilnik-na-fond-nauchni-izsledvaniya> [accessed April 2026; in Bulgarian, provided by NPR].

¹⁷² See for instance: Call for participation in the "National Science Program Competition Petar Beron. Science and Innovation with Europe – 2025", <https://bnsf.bg/wps/portal/fond-izsledvaniq/home/competitions/Pokana-Petar-Beron-2025> (in Bulgarian); Call for participation in the "Competition for funding fundamental scientific research – 2025", <https://bnsf.bg/wps/portal/fond-izsledvaniq/home/competitions/Pokana-FUND-2025> (in Bulgarian).

Research data are explicitly brought into scope through the 2025 Ordinance and the National Plan, which frame data as part of the national open science ecosystem and repository infrastructure.

3.1.4. Embargoes or immediate open access

For publications, Bulgaria's statutory secondary publication right does not mention embargoes, which legal experts interpret as a zero-embargo right, allowing immediate self-archiving irrespective of publisher policies.¹⁷³ One analysis emphasises that Bulgaria is among the first EU countries to couple a secondary publication *right* with a secondary publication *obligation*.¹⁷⁴

For research data, the Ordinance does not establish a general embargo regime; instead, it regulates publication and storage procedures in BPOS, allowing restrictions to be handled via scope and access conditions.

3.1.5. Copyright, rights retention and secondary publication rights

As discussed, Bulgaria's framework is notable for its secondary publication rights model, rather than an explicit rights-retention strategy. The 2023 amendments to the Copyright and Related Rights Act grant authors of publicly funded scientific works a non-waivable right to make their work available in non-commercial scientific or educational repositories. This secures post-publication dissemination rights but does not require ex ante rights-retention statements or licensing conditions (e.g. CC BY).

3.2. Context of open access policies

3.2.1. Training or guidance for researchers

Guidance for both publications and data is primarily provided through BPOS documentation and support materials, which include instructions for depositing and sharing research outputs. The National Plan also frames training and awareness-raising as necessary implementation measures across the research system. The 16th National Information Day on Open Science, Open Data, Open Access and the Bulgarian Open Science Cloud, held in September 2025, showcased a National Programme for Open and Responsible Science with a dedicated pillar on "Training and Education," closely connected to EOSC.¹⁷⁵

Despite these efforts, an analysis of the Bulgarian open research landscape noted that only about one third of surveyed academics are familiar with EU open access goals and that data-deposit-practices remain rare.¹⁷⁶

In recent years, several projects have been implemented to provide training and guidance for researchers.¹⁷⁷ In early 2026, the Pilot Programme "Open and Responsible Science – Bulgaria 2026" was launched, which aims to advance this objective. Its main goal is "to provide open access to scientific knowledge – including data, datasets, publications, and methodologies – for researchers, librarians, IT professionals, and the public, enabling early use and reuse of research outputs."¹⁷⁸

¹⁷³ Klawitter, E., 'Introducing a Zero-Embargo Secondary Publication Right in Bulgaria', Wolters Kluwer Copyright Blog, 2024, available at: <https://legalblogs.wolterskluwer.com/copyright-blog/introducing-a-zero-embargo-secondary-publication-right-in-bulgaria/> [accessed April 2026].

¹⁷⁴ Knowledge Rights 21, 'Unlocking Knowledge: Bulgaria Takes Next Steps in Open Science Legislation', December 2024, available at: <https://www.knowledgerights21.org/news-story/unlocking-knowledge-bulgaria-takes-next-steps-in-open-science-legislation/> [accessed April 2026].

¹⁷⁵ OpenAIRE, 'Bulgaria Advances on the Open Science Roadmap: National Priorities and Progress', OpenAIRE Blog, 14 November 2025, available at: <https://www.openaire.eu/community/blogs/bulgaria-advances-on-the-open-science-roadmap-national-priorities-and-progress> [accessed April 2026].

¹⁷⁶ Dobрева, M., 'Is Knowledge Exchange the Silver Bullet for Fostering Open and Responsible Research and Innovation? A Case Study on Bulgaria', Edinburgh Open Research, 4 (2025), available at: <https://journals.ed.ac.uk/eor/article/view/10957> [accessed April 2026].

¹⁷⁷ REINFORCING / ORBIT Project, Open Research Bulgaria, available at: <https://openresearch.bg/19/page.html> [accessed April 2026]. Provided by NPR.

¹⁷⁸ REINFORCING / ORBIT Project, Pilot Programme for Open Science — Capacity Building, available at: <https://openresearch.bg/project-capacity-en/page.html> [accessed April 2026]. Provided by NPR.

3.2.2. Funding for open access

No evidence of a comprehensive national APC fund or earmarked data-management fund could be found. The National Plan emphasises investment in infrastructure (notably BPOS) rather than APC/reimbursement schemes. To date, no report or other document has been published on the implementation of the Plan or on whether the planned actions and investments have been carried out. Publicly available BNSF documentation does not evidence a stable, dedicated funding line for OA publishing or data stewardship costs beyond general project eligibility rules.

In support of open access publishing, a three-year national programme, “Stimulating Publication Activity in Authoritative International Scientific Journals and Open Access to Scientific Information” (2022 – 2025), was implemented.¹⁷⁹ A successor programme was published for public consultation from 27 January to 27 February 2026.¹⁸⁰ As of July 2026, its formal adoption had not yet been confirmed.

With regard to encouraging open access publishing, it should also be noted that the Ministry of Education and Science has concluded an agreement with Elsevier to support authors in Bulgaria who wish to publish their work in open access format.¹⁸¹

One article¹⁸² describes a National Programme for Open and Responsible Science, which is currently under development and which will apparently include a pillar on “Open Access Publishing” that supports national journals and expands participation in transformative agreements with international publishers, which implies some allocation of public funds towards open access publication routes, though specific budget lines or systematic cost-sharing mechanisms between RFOs and RPOs are not detailed in publicly accessible sources.

3.2.3. Repository requirements (incl. FAIR principles)

Repository-based compliance is a core element of Bulgaria’s OA framework. The 2025 Ordinance designates BPOS as the national repository and single access point for publications and data arising from publicly funded research. BPOS is operated under the auspices of the National Centre for Information and Documentation (NACID).

In parallel, institutional repositories exist at major Bulgarian universities and research organisations (e.g. Sofia University, Bulgarian Academy of Sciences institutes). While it has been noted¹⁸³ that there are only 11 (now 13) repositories from Bulgaria listed in the Registry of Open Access Repositories (ROAR) although the country has 52 universities this could be due to the fact that BPOS serves as the national access layer. Many institutions rely on the national repository, which currently includes 119 content-provider organisations, primarily universities and research institutions.¹⁸⁴

¹⁷⁹ Ministry of Education and Science of the Republic of Bulgaria, Natsionalna programa ‘Stimulirane na nauchnopublikatsionnata aktivnost v avtoritetni mezhdunarodni nauchni spesaniya i otkrit dostap do nauchnata informatsiya’ 2022–2025 [National Programme ‘Stimulating Publication Activity in Authoritative International Scientific Journals and Open Access to Scientific Information’ 2022–2025], Council of Ministers Resolution No. 733, 1 November 2021, available at: https://www.mon.bg/nfs/2021/11/rms733-nnp-publ_01112021.pdf [accessed April 2026; in Bulgarian, provided by NPR].

¹⁸⁰ Ministry of Education and Science of the Republic of Bulgaria, Public Consultation: Continuation of the National Programme on Publication Activity and Open Access, available at: <https://www.strategy.bg/bg/public-consultations/12122> [accessed April 2026; in Bulgarian, provided by NPR].

¹⁸¹ Elsevier, Open Access Agreement: Bulgaria, available at: <https://www.elsevier.com/open-access/agreements/Bulgaria> [accessed April 2026].

¹⁸² Stanchev, P. (2025). The 16th National Information Day: Open Science, Open Data, Open Access, Bulgarian Open Science Cloud. In Digital Presentation and Preservation of Cultural and Scientific Heritage (DiPP 2025) (pp. 323–336). Institute of Mathematics and Informatics, Bulgarian Academy of Sciences. Retrieved from <https://dipp.math.bas.bg/dipp/article/download/dipp.2025.15.33/651>

¹⁸³ Dobрева, M., ‘Is Knowledge Exchange the Silver Bullet for Fostering Open and Responsible Research and Innovation? A Case Study on Bulgaria’, *Edinburgh Open Research*, 4 (2025), available at: <https://journals.ed.ac.uk/eor/article/view/10957> [accessed April 2026].

¹⁸⁴ Bulgarian Portal for Open Science (BPOS), Registered Organisations, available at: <https://bpos.bg/organizations>, provided by NPR.

Since its launch, BPOS has been listed in the Directory of Open Access Repositories (OpenDOAR),¹⁸⁵ and, as of 2025, it is also included in ROAR.¹⁸⁶

The 2021 National Plan for Development of the Open Science Initiative, advocates creation of new institutional repositories specifically to store and disseminate research outputs, including data, and stresses alignment with FAIR principles for data generated by Bulgarian researchers.

3.2.4. Metadata and persistent identifier requirements

BPOS operational documentation¹⁸⁷ indicates the use of structured metadata as part of its repository functions, implying de facto requirements at infrastructure level, which is also referred to in the BPOS CoreTrustSeal application.¹⁸⁸

The national roadmap for open science is aligned with EOSC and FAIR principles and one of its pillars concerns infrastructure development and connectivity between repositories and e-infrastructures, which typically entails the use of persistent identifiers (such as DOIs or ORCID IDs) and interoperable metadata. However, there is no evidence for specific statutory clauses mandating particular identifier schemes for either publications or research data.

3.2.5. Peer review approaches

Bulgarian OA policies do not address peer review models, specifically open or community-led peer review.

3.2.6. Links to researcher assessment

While there is no legally binding framework on this, recent evidence highlights the AURA initiative, which aims to integrate open science into research assessment, alongside the ORBIT programme, which offers mentoring and training in open and responsible research and innovation and seeks to demonstrate how open access and open data practices can be recognised in researchers' career development.¹⁸⁹

However, neither the 2024 Research and Innovation Promotion Law nor the National Open Science Plan, in their publicly summarised forms, appear to contain detailed provisions mandating the inclusion of open access or open data indicators in formal researcher evaluation, promotion or funding decisions, so while there is clear conceptual alignment with the broader reform of research assessment and Horizon Europe's open science expectations, concrete systemic integration of open practices into assessment seem to remain under development.

At the same time it should be noted that under the *Regulations on the Monitoring and Evaluation of Research Activities Conducted by Higher Education Institutions and Research Organisations, as well as the Activities of the National Science Fund* (published in the State Gazette, No. 106 of 17 December 2024), BPOS is included among the main sources and tools of the assessment system (Article 6.1.9).¹⁹⁰ Among the criteria and indicators for monitoring and evaluating research activities carried out by organisations, there is a dedicated indicator measuring the share of scientific results made available under an open-access regime in relation to the total number of scientific results indexed in Web of Science and Scopus (Annex 2, Table 1, No. 3.3).

¹⁸⁵ OpenDOAR, Bulgarian Portal for Open Science (BPOS), Repository Record 9626, available at: <https://opendoar.ac.uk/repository/9626>, provided by NPR.

¹⁸⁶ Registry of Open Access Repositories (ROAR), Bulgarian Portal for Open Science (BPOS), Repository Record 24569, available at: <https://roar.eprints.org/24569/>, provided by NPR.

¹⁸⁷ Bulgarian Portal for Open Science (BPOS), Documents and Guidelines, available at: <https://bpos.bg/en/documents>

¹⁸⁸ CoreTrustSeal, CoreTrustSeal Assessment Application: Bulgarian Portal for Open Science (BPOS), 7 March 2022, available at: https://www.coretrustseal.org/wp-content/uploads/2022/03/20220307-Bulgarian-Portal-for-Open-Science_final.pdf

¹⁸⁹ OpenAIRE, 'Bulgaria Advances on the Open Science Roadmap: National Priorities and Progress', OpenAIRE Blog, 14 November 2025, available at: <https://www.openaire.eu/community/blogs/bulgaria-advances-on-the-open-science-roadmap-national-priorities-and-progress> [accessed April 2026].

¹⁹⁰ Regulations on the Monitoring and Evaluation of Research Activities Article 6(1)(9).<https://legislation.apis.bg/doc/6115340> (in Bulgarian), provided by NPR.

However, open science is entirely absent from the national regulatory framework governing the evaluation of scientists and researchers and their career development, as established in the Law on the Development of Academic Staff in the Republic of Bulgaria and the Regulations for its Implementation.

3.2.7. Public funding thresholds

The secondary publication right in Article 60(2) of the Copyright and Neighbouring Rights Act applies to works of academic literature created as a result of research funded “in whole or in part” by public funding, there is thus no percentage threshold.

3.2.8. Provisions for small and medium publishers

While there are no specific provisions for small or medium publishers, there is reference¹⁹¹ to support for Bulgarian journals such as Az-buki and increased participation in transformative agreements. However, this support is framed in terms of general publishing sector development rather than as targeted regulatory or financial measures for small and medium enterprises (SMEs) in the publishing domain.

3.2.9. Identified costs of, or gains from, applying open access policies

The National Plan articulates expected qualitative benefits (visibility, reuse, integration with EOSC) but does not provide quantified cost–benefit analysis. No national-level OA cost modelling has been identified. A commentary from Knowledge Rights 21¹⁹² highlights anticipated gains in terms of reducing “double-payment” for access to publicly funded publications, improving access for researchers and taxpayers, and facilitating reuse of research results, especially when coupled with open infrastructures like BPOS, while also noting potential administrative and compliance costs associated with implementing a secondary publication right and obligation but none of this is quantified.

3.2.10. Security considerations

Research Security considerations are not explicitly integrated into Bulgaria’s OA policy instruments. Instead, they generally frame open science as being pursued “while respecting intellectual property rights” and in accordance with applicable legal constraints, which implicitly covers some security-related concerns. The National Open Science Plan emphasises alignment with EU recommendations on access to and preservation of scientific information and FAIR data, but they do not explicitly delineate categories of sensitive publications or datasets that should remain closed or restricted for security reasons, leaving such determinations to horizontal legislation (e.g. on personal data protection, national security, or export controls) and case-by-case assessment at project and institutional level.

3.2.11. References to simplification regarding open access

Simplification is not explicitly addressed, although it could be argued that both the designation of BPOS as a single national access point and the statutory secondary publication right and obligation could be presented as means of simplifying the regulatory landscape for open access.

3.2.12. Role of artificial intelligence in open access policies

Documents on Bulgarian open access and open science do not explicitly address the role of artificial intelligence (AI) as either an opportunity or a threat within the national framework, for publications or research data, and there are no identified clauses in the 2024 Research and Innovation Promotion Law or the National Open Science Plan that specifically reference AI-driven research, text and data mining, or AI-enabled analysis of open datasets. Implicitly, the existence of open repositories such as BPOS creates opportunities for AI-based discovery, text and data mining and large-scale analytics.

¹⁹¹ Op cit. (Stanchev et al., 2025).

¹⁹² Knowledge Rights 21 (see footnote above).

3.3. Implementation and monitoring of open access policies

3.3.1. Who is responsible for implementing each policy element (for example the ministry, the research institution or the individual researcher)

Implementation of Bulgaria's open access and open science policies is shared across several actors, with the Ministry of Education and Science (MES) and the National Centre for Information and Documentation (NACID) playing central roles in the legislative and infrastructural dimensions respectively. For publications, MES oversees the implementation of the Research Law's open science provisions, while NACID operates BPOS.

For research data the National Open Science Plan assigns to research institutions the task of creating and maintaining repositories and data-management procedures, while national coordination initiatives such as the National Programme for Open and Responsible Science, ORBIT and AURA drive capacity-building and community engagement around open data and responsible research practices.

Who is responsible for monitoring the implementation of each policy element

Several actors have potential roles in monitoring, although this is not very explicit. NACID, as the operator of BPOS, should have statistics on deposits and open access publications and thus de facto de capability to monitor compliance with secondary publication obligations.

MES oversees progress on implementing the National Open Science Plan and associated roadmaps, including monitoring milestones related to open access publications, repository development and alignment with EOSC, which covers both publications and data, although detailed indicator frameworks are not documented in public sources.

3.3.2. Overall policy monitoring

Overall monitoring of Bulgaria's open science policy implementation, encompassing both open access to publications and to research data, appears to rest primarily with MES.

3.3.3. Reporting arrangements

Publicly accessible documents do not provide a fully articulated reporting chain for open science implementation in Bulgaria. NACID publishes annual activity reports¹⁹³ containing data on the progress of BPOS, including indicators such as the number of publications and registered users for each calendar year. MES, in turn, issues annual science reports¹⁹⁴ that include information on open science activities at the national level, as well as statistics on the number of open-access scientific publications produced by higher educational institutions and research organisations.

While not formal reporting, the organisation of annual or periodic National Information Days on Open Science, Open Data, Open Access and the Bulgarian Open Science Cloud, as well as national papers presented at these events, provides an opportunity to report progress, challenges and achievements in implementing open access and open data measures to the broader stakeholder community.

¹⁹³ National Centre for Information and Documentation (NACID), Annual Activity Reports, available at: <https://nacid.bg/bg/about/godishen-doklad-za-dejnostta/> [accessed April 2026; in Bulgarian, provided by NPR].

¹⁹⁴ Ministry of Education and Science of the Republic of Bulgaria, Annual Reports on Science, available at: <https://www.mon.bg/nauka/politiki-i-initsiativi/godishni-dokladi-za-nauka/> [accessed April 2026; provided by NPR]. The latest available published report dates from 2022.

3.3.4. Results of any impact evaluations of policy so far (based on indicators or purely qualitative)

Although Bulgaria's national open science framework is relatively recent—particularly the 2024 legislative reforms—there are already partial, mostly qualitative impact assessments, especially for open access to publications; EOSC¹⁹⁵ reports that by July 2022 more than 31 000 scientific publications were available in BPOS, 89% of them open access, from 99 registered content providers including universities, research organisations, hospitals and publishers. More recent ORRI analyses¹⁹⁶ reveal that as of January 2025, 73 759 open access publications had been deposited in BPOS, with 4 292 registered users in a country with around 14 000 researchers. As of January 2026, these figures had increased to 105 329 open-access publications and 5 656 registered scientists.¹⁹⁷

Legal and policy analyses of the Bulgarian secondary publication right and obligation, produced in 2024–2025, characterise the reform as a “landmark” and “comprehensive” approach that positions Bulgaria at the forefront of EU developments in statutory open access mechanisms, but these assessments are largely conceptual and comparative rather than based on long-term quantitative indicators, and there is no evidence yet of a formal, government-commissioned impact evaluation that systematically outcomes of the open access and open data policies.

4. Czechia

4.1. General characteristics

4.1.1. Policies formulated as strategies, funder mandates and/or legislation

Open access (OA) in Czechia¹⁹⁸ is articulated through a combination of government-approved national documents as well as being part of the requirements by the main national funders, and legal provisions on access to research data.

The Czech model is not based on a single central mandate, but on a combination of strategic documents, legislation, and implementation rules for providers,¹⁹⁹ which corresponds to the multi-level management of the R&D&I system in Czechia.

Strategic documents (in particular NRDIP 2021+) provide a binding framework for public administration and support providers, with specific obligations enforced through program rules and legislation. This implementation mechanism is considered a characteristic of the Czech system.²⁰⁰

¹⁹⁵ EOSC Association, *Tripartite Collaboration: Bulgaria*, available at: <https://eosc.eu/tripartite-collaboration/bulgaria> [accessed April 2026].

¹⁹⁶ Stanchev, P. (2025). The 16th National Information Day: Open Science, Open Data, Open Access, Bulgarian Open Science Cloud. In *Digital Presentation and Preservation of Cultural and Scientific Heritage (DiPP 2025)* (pp. 323–336). Institute of Mathematics and Informatics, Bulgarian Academy of Sciences. Retrieved from <https://dipp.math.bas.bg/dipp/article/download/dipp.2025.15.33/651>

¹⁹⁷ National Centre for Information and Documentation (NACID), Annual Report on the Activities of NACID for 2025, available at: https://nacid.bg/att_files/Доклад%20за%20действието%20на%20НАЦИД%20за%202025.pdf [accessed April 2026; in Bulgarian, provided by NPR].

¹⁹⁸ The term “Czech Republic” is retained in this document when reference is made to it in the source.

¹⁹⁹ The term “provider” refers to public administration bodies that allocate R&D&I support from the state budget, that is ministries, funding agencies and the Academy of Science.

²⁰⁰ Input from the NPR.

The National Strategy for Open Access of the Czech Republic to Scientific Information 2017–2020²⁰¹ and a subsequent Action Plan²⁰² operationalise a “green and gold” approach for publicly funded scholarly publications and set out preparatory steps for research data governance. Furthermore, the National Research, Development and Innovation Policy of the Czech Republic 2021+²⁰³ (NRDIP 2021+) mainstreams “open access to R&D results and data” as a strategic objective and establishes “Action 8” explicitly linking OA (publications and data) to upgrading/streamlining the national RDI information system (RDI IS), implementation of EOSC, and continued implementation of the Open Data Directive. There is continuity between the National strategy 2017–2020 and NRDIP 2021+, which incorporated open access into the broader framework of VaVal, i.e. the Czech Research, Development, and Innovation policy. The action plan also laid the foundations for the systematic development of data management infrastructure, which is now being developed through EOSC CZ and the National Repository Platform.²⁰⁴

At the level of research funding organisations, the Czech Science Foundation²⁰⁵ (GAČR) and the Technology Agency of the Czech Republic (TAČR)²⁰⁶²⁰⁷ set (divergent²⁰⁸) OA conditions for funded outputs, covering both OA to publications and data to various degrees. Such conditions are also set by the Programme Johannes Amos Comenius (P JAC)²⁰⁹ of the Ministry of Education, Youth and Sports.

At the legislative level, a 2022 amendment to *Act No. 130/2002 Coll. on support for research and development from public funds (R&D Support Act)*²¹⁰ introduced Article 12a “Access to research data”, which mandates that beneficiaries supported by public funds under the Act provide research data to third parties *upon request* for projects from public competitions, international calls and public contracts announced after 1 August 2022. Data must be made available 12 months after public funding ends, subject to exceptions for intellectual property protection, trade secrets, state security, privacy, and cases where the project was not fully financed from public finances. However, this article does not establish an obligation to actively and openly publish data.

²⁰¹ National Strategy of Open Access of the Czech Republic to Scientific Information 2017–2020], approved by Government Resolution No. 444 of 14 June 2017, available at: <https://www.czechelib.cz/default/files/download/id/181/narodni-strategie-otevreneho-pristupu-k-vedeckym-informacim.pdf> [accessed July 2026]. (Czech Only, translated by AI).

²⁰² Government of the Czech Republic / RDI governance portal: Action Plan for the Implementation of the National Strategy 2017–2020 (PDF). <https://vyzkum.gov.cz/FrontClanek.aspx?ad=1&attid=876344&idsekce=876326> (Czech only, translated by AI).

²⁰³ Government of the Czech Republic, Národní politika výzkumu, vývoje a inovací České republiky 2021+ [National Research, Development and Innovation Policy of the Czech Republic 2021+] (NRDIP 2021+), RDI governance portal, available at: <https://vyzkum.gov.cz/FrontClanek.aspx?idsekce=932081> [accessed April 2026; note: the file extension requires renaming to .pdf before the document can be opened].

²⁰⁴ Input by the NPR.

²⁰⁵ Czech Science Foundation (GAČR), GAČR and Open Science, available at: <https://gacr.cz/en/gacr-and-open-science/> [accessed April 2026]; and GAČR, Open Science at GAČR (policy document, June 2024), available at: https://gacr.cz/wp-content/uploads/2024/06/Open_Science_at_GACR.pdf [accessed April 2026].

²⁰⁶ Technology Agency of the Czech Republic (TAČR), Research Data and Open Access to Outputs/Results (guidance document, May 2025), available at: https://tacrv.gov.cz/wp-content/uploads/documents/2025/05/07/1746619722_Research%20data%20and%20open%20access%20to%20outputs_results.pdf [accessed April 2026].

²⁰⁷ Technology Agency of the Czech Republic (TAČR), Open Access in the KAPPA Programme, available at: <https://opjak.gov.cz/en/open-access-in-the-kappa-programme/> [accessed April 2026].

²⁰⁸ The differences in approach stem from the different nature of the projects supported (basic vs. applied research) and take into account the diversity of disciplines. At the same time, there is a gradual convergence, particularly in the area of data management and FAIR principles. (Input from NPR).

²⁰⁹ Operational Programme Johannes Amos Comenius (P JAC), Open Science Policy (July 2025), available at: <https://opjak.gov.cz/wp-content/uploads/2025/07/P-JAC-Open-Science-Policy.pdf> [accessed April 2026]. Clarification from NPR: Results with mandatory OA may be subject to a 6/12-month embargo, but no later than the end of the project (if they achieve the given result at the end of the project, they cannot use the embargo). Exceptions to non-disclosure of data, particularly for further use, are not related to the embargo and apply to all results and data. Direct use of the result/data by the recipient takes precedence over publication.

²¹⁰ Zákon č. 130/2002 Sb., o podpoře výzkumu, experimentálního vývoje a inovací z veřejných prostředků a o změně některých souvisejících zákonů (zákon o podpoře výzkumu, experimentálního vývoje a inovací) [Act No. 130/2002 Coll. on Support for Research, Experimental Development and Innovation from Public Funds and on Amendments to Some Related Acts (Research and Development Support Act)], as amended, consolidated text available at: <https://www.zakonyprolidi.cz/cs/2002-130> [accessed April 2026; in Czech; translated via browser translation function].

In the new Act No. 328/2025 Coll. on Research, Development, Innovations, and Knowledge transfer, Article 82 introduces rules for publication, and Article 83 provides access to the results of the research. The Ministry of Education, Youth and Sports will be responsible for the coordination of the Open Science agenda from 2027.²¹¹ This Act shall replace Act No. 130/2002 Coll. Among other things, this law stipulates the obligation to store publications in repositories (article 82) and manage data in accordance with FAIR principles.²¹² The research act overrides, in defined circumstances, the general copyright framework (autorský zákon), requiring publication deposit even where the author/institution has assigned economic rights to a publisher. However, the deposit obligation applies only to results published in publikace základního výzkumu (publications of basic research). The Czech Act specifies no maximum embargo period.

4.1.2. Bindingness in terms of implementation

The Czech policy landscape consists of strategic/coordination instruments that are politically endorsed but largely implemented via downstream actors (ministries, funders, infrastructures) and binding requirements embedded in funding conditions and (for research data) legislation. However, NRDPI 2021+ is binding on state administration bodies and support providers as a public policy framework document, which gives it significant implementation impact, even though it is not directly enforceable against individual researchers.

The 2017–2020 National Strategy and Action Plan set national priorities and assign responsibilities but do not, by themselves, constitute a uniformly enforceable OA mandate.²¹³ Similarly, NRDIP 2021+ is a government-approved strategic policy, and thus binding on the government and its agencies as a framework for future measures but not directly enforceable on individual researchers or institutions. However, through its implementation tools (legislation, program rules, reporting), NRDIP 2021+ has an indirect but significant impact on research organisations and recipients of support. Its actions, including A8 on open access to R&D results and data, must be implemented through legislation, funder rules and programme regulations.

In this sense, the binding aspects of Czech OA policy, namely some funder provisions (see below) and Article 12a of Act 130/2002 for research data, are implementation instruments of NRDIP Action A8 (Action A8: “Open access to R&D results and data; upgrade and improved effectiveness of the RDI IS”). The implementation of action A8 is proceeding gradually and is closely linked to the development of the R&D&I information infrastructure and connection to the EOSC.²¹⁴

At the funder level TAČR has introduced mandatory open access to peer-reviewed journal articles²¹⁵ in selected programmes and requires Data Management Plans (DMPs) with FAIR data principles. Similarly, P JAC requires immediate open access to peer-reviewed publications (articles, letters, and reviews), creation and regular updating of DMP, and all data produced within a project must follow the FAIR principles. GAČR has adopted a voluntary approach to open access to publications, encouraging but not requiring OA, while more recently making DMPs obligatory and insisting on FAIR data and traceable “open data” where legally possible.

4.1.3. Scope of the policy

Czech OA policies have evolved from an initially publication-centric OA approach (National Strategy 2017–2020) toward a broader Open Science scope that includes research data management (RDM) and data accessibility. The NRDIP 2021+ includes a dedicated action line (Action 8) oriented toward infrastructure and rules enabling OA to publications and access to research data in conjunction with RDI information systems. Funders also cover both aspects.

²¹¹ Zákon č. 328/2025 Sb., o výzkumu, vývoji, inovacích a transferu znalostí [Act No. 328/2025 Coll. on Research, Development, Innovations and Knowledge Transfer], e-Sbírka (official electronic collection of laws), available at: <https://www.e-sbirka.cz/sb/2025/328?zalozka=text> [input from NPR].

²¹² Input from the NPR.

²¹³ Note from the NPR: The National Strategy and Action Plan were implemented through specific measures, infrastructure projects, and provider rules, so their impact cannot be assessed solely on the basis of the absence of direct enforceability

²¹⁴ Input from the NPR.

²¹⁵ Referred to as Type J results in their policy document.

The current framework includes not only publications and data, but also elements of interoperability, metadata standards, and links to the RDI information system.

4.1.4. Embargoes or immediate open access

For scientific publications, the Action Plan operationalises green OA with an expectation of access “as early as possible,” but in any case, within six months (or twelve months for SSH) after publication. For funder requirements, the regime is heterogeneous: TAČR supports both green and gold OA, generally using the same 6/12-month embargo logic for green OA where required, and allows justified time delays where disclosure could hinder exploitation (notably commercial use²¹⁶), while still expecting disclosure no later than project end in relevant cases. In contrast, P JAC imposes a stricter immediate OA standard for peer-reviewed publications deposited in a trusted repository “without undue delay” and explicitly requires immediate open access without embargo, normally under CC BY 4.0 (with narrow exception logic). GAČR does not mention embargoes since it considers OA to publications voluntary.

For research data, the legislative framework establishes a de facto 12-month embargo rather than immediate access. Act 130/2002 (2022 amendment) requires beneficiaries to provide research data to third parties upon request, but this obligation is triggered only 12 months after provision of support from public finances has concluded. Funder policies on data embargoes vary within the legislative 12-month minimum. Projects funded by P JAC must deposit produced data in a trusted repository, with accessibility following the rule “as open as possible, as closed as necessary”. Any restrictions must be explained in the DMP.

However, the new Act No. 328/2025 Coll. on Research, Development, Innovations, and Knowledge transfer changes that condition. Under article 83, research data²¹⁷ created or used in publicly funded research should be findable, accessible, and reusable. Beneficiaries must provide such data to third parties free of charge where the data have already been made available through an institutional or thematic repository, provided the data are not protected by copyright or by rights in inventions or similar creative results. Protection under the sui generis database right does not exempt data from this obligation where the beneficiary itself is the holder of that right; in other words, a beneficiary cannot rely on its own database right to refuse access.

TAČR requires that data underlying publications be stored in repositories but does not specify a different embargo period from the statutory 12-month rule.²¹⁸ GAČR’s DMPs must address “if and how the data will be shared or published,” implying flexibility in timing, subject to statutory minimums.

The principle of “as open as possible, as closed as necessary” is a unifying principle across providers, although specific implementations vary depending on the type of program.

4.1.5. Copyright, rights retention and secondary publication rights

Czech open access policies do not contain secondary publication rights and provide only recommendatory guidance on rights retention.

TAČR policies recommend but do not mandate rights retention. The TAČR documentation on open access states that beneficiaries “can make an amendment to the publishing agreement” to facilitate self-archiving. TAČR explicitly notes the importance of retaining rights to enable compliance with open access requirements, but places responsibility on individual researchers to negotiate retention with publishers. The policy further recommends publishing under a Creative Commons CC BY license.

²¹⁶ This is a temporal restriction protecting exploitation and does not necessarily entail a CC-BY-NC licence or equivalent.

²¹⁷ Defined as “documents in electronic form (with the exception of scientific publications, which are collected or created in the course of scientific research activities and are used as evidence in the research process, or which are accepted by the research community as necessary for the validation of research findings and results.”

²¹⁸ TAČR - Data is mandatory for all types of results, not just those with OA. Publication must take place by the end of the project; exceptions to publication are based on Czech legislation and EU directives, particularly in the case of commercial use. Input from the NPR.

P JAC requires immediate open access under a Creative Commons BY 4.0 license, creating an implicit rights retention requirement. Beneficiaries cannot comply with this mandate if they transfer exclusive rights to publishers unwilling to permit CC BY licensing. The policy acknowledges this tension, stating: "If a publisher does not allow a CC BY license, a more restrictive license may be accepted in exceptional cases. However, this must be justified, and the recipient must still retain sufficient intellectual property rights."

GAČR maintaining a voluntary approach to open access, provides no rights retention requirements or recommendations.

4.2. Context of open access policies

4.2.1. Training or guidance for researchers

Guidance for researchers is delivered through funder policy documents, national coordination/infrastructure initiatives, and institutional Open Science support structures.

The Action Plan includes measures aimed at preparing information resources for the scientific community on OA publishing and at collecting initial information on data-handling practices.

TAČR provides detailed step-by-step guidance on OA to outputs and underlying data, repository deposition practices, metadata expectations, and DMP-related recommendations (including references to DMP tools and FAIR support resources). Similarly, P JAC embeds guidance in Open Science rules of tender documentation. It also provides detailed Handbook of Open Science and organises webinars for beneficiaries. For research data management (RDM), P JAC references the Horizon Europe DMP template (via DOI) and recommends tools, such as the Data Stewardship Wizard, for producing compliant DMPs.

EOSC CZ positions itself explicitly as a national environment supporting RDM practice and education, indicating a dedicated national competence-building layer tied to the EOSC implementation agenda.²¹⁹

Training activities also take place at the Department of Open Science at the Library of the Czech Academy of Sciences. According to their website, universities are now providing education in Open Science through lifelong learning programs, specifically in the form of micro-certificates. This new approach to lifelong education is part of the broader National Recovery Plan, coordinated by Charles University.²²⁰ A significant proportion of Czech universities have their own Open Science centres.

4.2.2. Funding for open access

P JAC, TAČR and GAČR all recognise APCs as eligible project costs. Similarly, data management costs are broadly eligible. However, there is no extra funding for OA costs related to publications or data management at either funder or policy maker level. Institutional open access funds exist at some Czech universities.

System-level cost management is prominently associated with CzechELib, which implements a strategy of converting subscription models into transformative agreements.²²¹ Transformative agreements implemented through Czech National Library of Technology, CzechELib are a key tool for national cost management and the transition to open publishing.

The Action Plan for the implementation of the National Strategy 2017–2020 includes a dedicated measure to conduct financial analysis of funds in the area of access to scientific information.

²¹⁹ EOSC CZ, Training and Education, available at: <https://www.eosc.cz/en/training> [accessed April 2026].

²²⁰ Vedavyzkum.cz, Mikrocertifikáty: Cesta k získání chybějících dovedností a k lepšímu uplatnění na trhu práce [Micro-certificates: A Path to Acquiring Missing Skills and Better Labour Market Prospects], available at: <https://vedavyzkum.cz/veda/z-domova/mikrocertifikaty-cesta-k-ziskani-chybejicich-dovednosti-a-k-lepsimu-uplatneni-na-trhu-prace> [accessed April 2026; in Czech].

²²¹ CzechELib, Open Access, available at: <https://www.czechelib.cz/cs/440-open-access> [accessed April 2026; in Czech]. For the English-language overview of the transition-to-open-access strategy see also: CzechELib, The Road to Open Access, available at: <https://www.czechelib.cz/en/441-the-road-to-open-access> [accessed April 2026].

4.2.3. Repository requirements (incl. FAIR principles)

For publications, the Action Plan conceptualises the green route via a “network of existing local repositories overseen by the Information System of Research, Development and Innovation (IS VaVal) with the function of a national aggregator”

P JAC requires deposit of publications in a trusted repository and couples this with immediate OA requirements, and it extends the trusted-repository logic to research data deposition as defined in the DMP, with metadata expectations aligned to FAIR and machine-readability.

TACR does not prescribe a single repository but expresses a preference for existing solutions with European or at least nationwide reach, and it explicitly recommends use of trusted repositories, including national and domain-specific options while tying data handling to FAIR principles.

GACR requires DMPs addressing FAIR principles.

At national ecosystem level, EOSC CZ frames its work as building a National Data Infrastructure aligned with EOSC.

Act 130/2002 (2022 amendment) does not use the term “FAIR” explicitly, but mandates that research data be provided in forms enabling reuse and validation, aligning with some aspects of the FAIR principles. However, in the new Act No. 328/2025 Coll. on Research, Development, Innovations, and Knowledge transfer, there is an obligation to store publications in repositories and manage data in accordance with FAIR principles.

National repository infrastructure is under development. The Czech National Repository (data.narodni-repozitar.cz) is currently in pilot operation for research data. The National Repository Platform (NRP), funded through P JAC calls in 2023-2024, is being developed as a distributed infrastructure providing access to national computing infrastructure e-INFRA CZ and local institutional environments.²²²

4.2.4. Metadata and persistent identifier requirements

Explicit metadata and identifier requirements are well developed in Czech OA implementation instruments.

The Action Plan assigns the national RDI information system (IS VaVal/RIV) the function of a national aggregator for openly accessible outputs. In October 2020, the Czech R&D&I Council (which administers and operates the information system) released a call for research organisations to introduce ORCID and request that ORCID iDs be connected to publications reported in the national CRIS.²²³ The introduction of ORCID and the emphasis on persistent identifiers represent a significant shift towards higher-quality research evaluation and international interoperability.²²⁴

TACR requires open access to bibliographic metadata even where full texts may be embargoed, and it specifies metadata elements including embargo length and persistent identifiers (e.g., DOI) while recommending persistent identifiers for persons, organisations, funding, and linkages to underlying data and tools. P JAC requires metadata of both deposited publication and data to be public and machine-readable (FAIR-aligned) and explicitly points beneficiaries to a metadata recommendation resource via DOI, extending similar expectations to research data metadata (public to the extent allowed, machine-readable, FAIR-aligned).

²²² CoNOSC (Community of National Open Science Coordinators), Open Science Policies: Czech Republic, available at: <https://conosc.org/os-policies/#page-content> [accessed April 2026].

²²³ ORCID, Towards a National ORCID Consortium in the Czech Republic, ORCID Blog, October 2021, available at: <https://info.orcid.org/towards-a-national-orcid-consortium-in-the-czech-republic/> [accessed April 2026].

²²⁴ Input from NPR.

4.2.5. Peer review approaches

Czech open access policies do not require community-led peer review models, relying instead on traditional journal-based peer review as the quality assurance standard for defining research outputs. However, the P JAC policy includes “participation in open peer review” as one of several recommended (non-mandatory) practices, thereby signalling openness to transparent peer review models without mandating them.

GAČR's voluntary approach to open access partially reflects concerns in the Czech debate on open access that mandatory policies might push researchers toward lower-quality journals, including predatory venues.

4.2.6. Links to researcher assessment

The Action Plan for the implementation of the National Strategy 2017–2020 states the objective of “preparing the environment and evaluation of science” for changes brought by openness, implying a policy-level recognition that research assessment must adapt to OA/Open Science.

Open science is also taken into account in the Methodology for the Evaluation of Research Organizations in the Higher Education Segment 2025+.²²⁵ Nevertheless, no national policy mandates inclusion of open science indicators in the evaluation of *individual* researchers.

Institutionally, Masaryk University's Open Science Strategy 2022-2028 represents the most comprehensive Czech institutional approach, comprising 24 objectives across six open access goals, five FAIR data goals, and 13 horizontal topics.²²⁶

A panel discussion on “The Future of Open Science in the Czech Republic” (documented by Stratin+ consultancy in 2024) produced recommendations including: “Redefine the criteria for evaluating scientific work to reflect openness, FAIR data management, sharing of results, and real impact. Pilot new methods that go beyond citation counts and journal metrics.” These recommendations reflect growing awareness that assessment reform is necessary to incentivise open science adoption.²²⁷

4.2.7. Public funding thresholds

Czech instruments generally frame OA obligations by reference to outputs generated with public support, not by specifying a quantitative public-funding percentage threshold. However, Act 130/2002 (2022 amendment) Article 12a includes an exception permitting refusal to share data “if the research or development funded through this Act was not fully financed from public finances.” This formulation implies that the data provision obligation applies to research entirely funded by public resources.

4.2.8. Provisions for small and medium publishers

Czech open access policies contain no specific provisions for small and medium-sized publishers, neither imposing restrictions nor providing targeted support for these entities.

²²⁵ Ministry of Education, Youth and Sports of the Czech Republic (MŠMT), Otevřená věda v ČR [Open Science in the Czech Republic], available at: <https://msmt.gov.cz/vyzkum-a-vyvoj-2/otevrena-veda-v-cr?lang=1> [accessed April 2026].

²²⁶ Masaryk University, Open Science Strategy of Masaryk University 2022–2028 (strategic part), available at: <https://openscience.muni.cz/media/3477939/en-a-strategicka-cast-strategie-open-science-mu-2022-2028-uprprebal.pdf> [accessed April 2026].

²²⁷ Stratin+, Recommendations from the Panel Discussion: The Future of Open Science in the Czech Republic, 2024, available at: <https://stratin.cz/recommendations-from-the-panel-discussion-the-future-of-open-science-in-the-czech-republic/> [accessed April 2026].

4.2.9. Identified costs of, or gains from, applying open access policies

Czech policy instruments explicitly recognise both costs and system-level benefits, but systematic quantified costing appears primarily as an *intended* analytical activity. The Action Plan includes a measure to conduct financial analysis of resources in the area of access to scientific information, Funder guidance articulates benefit rationales (e.g., TA ČR links OA to innovation acceleration, transparency of state aid use, and increased citation/impact potential), while also highlighting potential conflicts between openness and commercial exploitation in applied research contexts.

National coordination mechanisms such as CzechELib explicitly frame transformative agreements as a strategy to reallocate expenditure and manage the transition from subscription to OA-enabled publishing, identifying economic mechanisms even if not presented as a full national cost-benefit evaluation.

A national review of the action plan (discussed below) reports a financial analysis by Czech national library of technology estimating 2020 subscription expenditures at ~CZK 400 million (CZK 350 million via CzechELib + CZK 50 million outside CzechELib). It also provides a qualified estimate of APC spending for 2018 at ~CZK 50 million, and notes that a more precise 2020 APC analysis was initiated (data collection is underway beyond the Action Plan scope).

Concerns about excessive publication spending have been voiced publicly: for example, debates around whether “CZK 364 million is too much for publications” in the context of P JAC²²⁸ indicate that parts of the research community view high APC expenditure as potentially diverting funds from research activities. This concern contributed to a 2025 MŠMT adjustment: conference proceedings, book chapters and books were exempted from the strict OA requirement in P JAC, thereby reducing the number of outputs for which APC-funded gold OA is expected.

4.2.10. Security considerations

Security-related considerations appear in Czech OA/Open Science policy through (i) cybersecurity/IT security standards for national infrastructure, and (ii) “legitimate interests” limitations for research data, which are developed for research data but have no counterpart on the publications side.

The Action Plan explicitly states that IS VaVal meets cybersecurity requirements (including SSL and ISO certification), indicating that secure infrastructure operation is part of the OA implementation architecture.

Act 130/2002 (Article 12a) specifies that beneficiaries may refuse to provide research data if doing so would violate state security, intellectual property protection, trade secrets, privacy or legitimate business interests, or where projects are not fully financed from public finances. TAČR, P JAC and GAČR explicitly incorporate this “as open as possible, as closed as necessary” principle into their open science guidance, listing state security and legitimate commercial interests among the justifications for restricting data access.

4.2.11. References to simplification regarding open access

The Czech sources reviewed do not present regulatory or administrative simplification as a reference in connection with OA policy. However, GAČR states that Data Management Plans should be “as simple as possible to create”.

4.2.12. Role of artificial intelligence in open access policies

Neither the national Strategy/Action Plan nor the principal funder policies reviewed contain explicit, structured provisions on artificial intelligence (AI) as a policy dimension for OA/Open Science.

²²⁸ Czech Institute of Informatics, Robotics and Cybernetics, Czech Technical University in Prague (CIIRC CTU), Is CZK 364 Million Too Much for Publications? The Ministry of Education Has Accommodated Researchers and Adjusted Open Access Rules in OP JAK, 2025, available at: <https://www.ciirc.cvut.cz/is-czk-364-million-too-much-for-publications-the-ministry-of-education-has-accommodated-researchers-and-adjusted-open-access-rules-in-op-jak/> [accessed April 2026].

However, machine-readability is discussed (metadata, deposit formats), as a general interoperability and access objective.

The emphasis on metadata, interoperability, and machine readability creates the conditions for the future use of AI tools when working with scientific information. AI is also a major topic in contracts with publishers/suppliers of electronic information resources within the CzechELib framework.²²⁹

4.3. Implementation and monitoring of open access policies

4.3.1. Responsibility for implementation

Implementation responsibilities differ by policy type and by whether the element concerns publications or research data.

In the context of NRDIP 2021+ (Action A8 “Open access to R&D results and data; upgrade and improved effectiveness of the RDI IS”) the responsible actors are the Government of the Czech Republic (as approver), Research, Development and Innovation Council (RDI Council) and the Ministry of Education, Youth and Sports (MŠMT) as authors and coordinators, RDI support providers (TAČR, GAČR, sectoral ministries) as co-responsible implementers.

In the context of legislation (Act No. 130/2002 – Article 12a “Access to research data”) the responsible actors are Ministry of Education and RDI Council (interpret and oversee application in the public RDI funding system) and public R&D&I funders (TAČR, GAČR, MŠMT and other providers under Act 130/2002 adjust grant contracts, templates and guidance to include research data obligations). Individual researchers and project PIs are operationally responsible for preparing DMPs, storing data in appropriate repositories, and responding to legitimate data access requests, subject to exceptions. In the new Act No. 328/2025 Coll. on Research, Development, Innovations, and Knowledge transfer (this Act shall replace Act No. 130/2002 Coll.), Article 82 introduces rules for publication, and Article 83 provides access to the results of the research. The Ministry of Education, Youth and Sports will be responsible for the coordination of the Open Science agenda from 2027.²³⁰

In the context of the National Open Access Strategy 2017–2020 and the Action Plan responsible actors were the (then) Deputy Prime Minister for Science, Research and Innovation together with the RDI Council and MŠMT for drafting and coordinating; R&D&I funders and research institutions for implementing measures on repositories, awareness and DMPs.

At funder level, implementation responsibility is primarily on beneficiaries: P JAC places concrete duties on project beneficiaries for both publications and data (deposition, licensing, DMP creation/updating, repository selection, metadata, referencing, and immediate OA (for publications only)), while TA ČR requires beneficiaries to follow legal data provision rules and, where OA to outputs is mandated by the call, to implement deposit/OA/metadata steps and to manage justified restrictions. With regard to research data, TAČR requires the submission and updating of DMPs through project reporting processes for projects arising from competitions announced after the entry into force of the 2022 data-access amendment (September 2022). GAČR imposes the same DMP submission and updating requirement for projects funded from its 2024 calls onwards, while maintaining a more permissive posture toward OA to publications.

4.3.2. Monitoring of individual policy elements

Monitoring is similarly closely tied to the mechanisms through which policy is implemented. For national strategy measures, monitoring is embedded in government coordination: NRDIP 2021+ (Action A8) identifies the RDI Council (RVVI) and MŠMT as monitoring bodies; NRDIP uses an action-based framework with indicators for each action. The government resolution adopting the strategy assigns tasks and anticipates regular evaluation of implementation, implying oversight by the responsible government/RVVI structures and reporting through the Office of the Government’s coordination channels.

²²⁹ Input by NPR.

²³⁰ Act No. 328/2025 Coll. (see footnote above). Input by NPR.

The Evaluation of the Action Plan constitutes an explicit monitoring output, evidencing that implementation monitoring occurred through formal review against action items and assigned responsibilities.

In the funding domain, monitoring is operational and enforceable through funder reporting and compliance checks: P JAC monitoring is embedded in beneficiary obligations and project management/eligibility logic, while TA ČR explicitly operationalises monitoring through required forms and interim/final report reporting of open access to results and data, linking compliance to programme oversight. GA ČR monitoring occurs through the requirement to submit DMPs with interim/final reporting and to update them as needed, creating an audit trail for RDM commitments.

4.3.3. Overall policy monitoring

At overall-policy level the Czech framework indicates monitoring by central government coordination bodies. The NRDIP 2021+ provides the overarching strategic frame for the RDI system post-2020 and embeds open access-related measures (e.g., Action 8) in broader national policy implementation structures, which—by design—are coordinated through national R&D&I governance (RVVI and responsible ministries). The National Strategy anticipates that implementation will be “regularly evaluated,” and there is also an Action Plan evaluation foreseen; however, if conducted, these evaluations are not publicly available. No national OA observatory or dashboard currently aggregates these data into a single monitoring platform.

4.3.4. Reporting arrangements

In the context of NRDIP 2021+ and Action A8 R&D&I support providers (TAČR, GAČR, MŠMT, others) report on the implementation of their programmes and actions (including OA and data measures) to the RDI Council and the Government.

Beneficiaries report on data management and project outputs to their respective funders via interim and final reports.

Overall, reporting seems to flow primarily bottom-up: researchers → institutions → funders → RDI Council/Government (and, for P JAC, → European Commission), with no dedicated OA reporting stream but OA elements embedded in broader R&D&I reporting.

4.3.5. Results of impact evaluations

In Czechia two evaluations of the OA policies have been carried out.

The Independent Reporting Mechanism (IRM) of the open government partnership²³¹ (OGP) assessed the National Open Access to Scientific Information Strategy (CZ0019).²³² Within Czechia’s 2016–2018 OGP Action Plan, commitment 4.2.3 “Forming the National Open Access to Scientific Information Strategy for 2017–2020” (CZ0019) aimed to address the absence of a national OA framework. In the OGP design assessment, the IRM rated the commitment as verifiable and relevant to OGP values but low in ambition because the commitment focused only on adopting a strategy, not on implementing binding OA measures.

In the end-of-term report for the 2016–2018 Action Plan, the IRM revisited commitment 4.2.3 and retained the “Early Results: Marginal” rating. The report confirms that the main milestone “Government approval of the OA Strategy” had been achieved by mid-term, and that work on the implementation of the Action Plan was underway but delayed due to the transfer of responsibilities from the Government Office to MŠMT.

²³¹ The Open Government Partnership (OGP) is a global initiative launched in 2011 to make governments more transparent, participatory, accountable, and responsive through co-creating and implementing reforms. Open Government Partnership (OGP), About OGP, available at: <https://www.opengovpartnership.org/about/> [accessed April 2026].

²³² See Open Government Partnership, Independent Reporting Mechanism (IRM), Czech Republic: National Open Access to Scientific Information Strategy (CZ0019), available at: <https://www.opengovpartnership.org/members/czech-republic/commitments/CZ0019/> [accessed April 2026].

The report notes that the OA strategy provides a technical definition of “open access”, specifies what should be published, and narrows down possible exceptions (e.g. confidentiality, classified information, trade secrets, protection of personal data), aligning with EU and OECD principles.

Additionally, to the non-bindingness of the strategy the report notes that the strategy did not contain an action plan for implementation; The report also noted that there are no sanctions for failing to comply with the strategy, and no clear timeline or monitoring mechanism attached to it within the OGP framework. On this basis, the IRM concluded that the OA strategy, while adopted, had not yet led to a significant increase in access to scientific information during the 2016–2018 period. The IRM made two key recommendations namely

- (i) Emphasising preparation, implementation and monitoring of the action plan that was envisaged for the strategy, specifying the implementation steps and timeline; and
- (ii) Considering the creation of a multi-stakeholder working group in charge of implementation

It could be argued that some of the weaknesses identified have been rectified within the NRDIP 2021+. NRDIP itself calls for more systematic evaluation of targeted R&D&I support programmes (Action A3) and institutional funding but does not present OA-specific impact metrics.

At the national level, an ex-post implementation review of the Czech Action Plan has been undertaken.²³³ The review reconstructs the Action Plan’s logic as five overarching goals, implemented through 11 measures, grouped into five thematic clusters.

The evaluation concludes that, within its limited timeframe, the Action Plan did deliver on most planned measures and successfully connected the OA strategy to NRDIP 2021+ and major infrastructure investments, but it also confirms that systematic monitoring of OA outcomes and comprehensive legal obligations for publications were still lacking by 2020. The review concludes that eight of 11 measures were fulfilled, while three (Measures 5, 7, 9) were partially fulfilled but expected to continue beyond 2020. It explicitly states that continuity is ensured primarily through NP VaVal 2021+ and the shared-activities project NCIP VaVal (Government Resolution No. 1092/2020).

Funder wise, GAČR reports that the share of GAČR-funded- publications in open access has roughly doubled over the last ten years; although this cannot be classified as a full impact assessment.

The Stratin+ panel on the future of open science in the Czech Republic identified lack of assessment reform, fragmented OA policies and insufficient national coordination as key obstacles, and recommended systemic changes, including integrating open science into evaluation and funding systems. However, this is a qualitative diagnosis rather than a formal evaluation.

5. Denmark

5.1. General characteristics

5.1.1. Policies formulated as strategies, funder mandates and/or legislation

Denmark’s open access framework operates through strategic documents and funder mandates. At the national level, the Ministry of Higher Education and Science established Denmark’s National Strategy for Open Access in 2018²³⁴ (superseding an earlier 2014 strategy).

²³³ Council for Research, Development and Innovation (RDI Council), Vyhodnocení plnění Akčního plánu pro implementaci Národní strategie otevřeného přístupu České republiky k vědeckým informacím na léta 2017–2020 [Evaluation of the Implementation of the Action Plan for the National Open Access Strategy 2017–2020] (PDF), RDI governance portal, available at: <https://vyzkum.gov.cz/FrontClanek.aspx?ad=1&attid=934427&idsekce=876326> [accessed April 2026; in Czech; AI-assisted translation used].

²³⁴ Danish Agency for Higher Education and Science (Ministry of Higher Education and Science), *Denmark’s National Strategy for Open Access* (20 June 2018), <https://dg.dk/wp-content/uploads/2019/05/ENGnational-strategy-for-open-access.pdf>

The public research funding bodies Independent Research Fund Denmark (DFF), Danish National Research Foundation (DNRF), and Innovation Fund Denmark (IFD) adopted a joint Open Access Policy for Public Research Funds and Foundations in April 2019²³⁵ (revising an earlier 2012 funder policy) related to publications. This joint funder policy is mandatory for grant recipients but voluntary at the national level for researchers not holding grants from these bodies.

The national strategy sets the system objective for peer-reviewed articles and conference contributions in journals/proceedings with ISSN, while the funder policy operationalises this objective through grant conditions requiring repository-based parallel publication (Green OA), subject to publisher permission and embargo limits. Individual research-performing institutions, including Danish universities, have implemented institutional open access policies that encourage but typically do not mandate deposit.

By contrast, open access to research data is not governed by an equivalent national “OA-to-data” mandate in the same sense; instead, Denmark has developed an explicitly FAIR-oriented national data *management* strategy developed by the Danish e-Infrastructure Consortium (DeiC) on assignment from the Ministry.²³⁶ From 2026, the FAIR principles are additionally integrated into the Danish Code of Conduct for Research Integrity (Dansk kodeks for integritet i forskning).²³⁷

Denmark does not possess dedicated open access legislation.

5.1.2. Bindingness in terms of implementation

For publications, bindingness is clearest at the funder mandate level: the joint OA policy is framed as a grant-holder obligation to publish in parallel the accepted peer-reviewed version where the journal permits it (Green Open Access), with discipline-dependent embargo maxima (6-12 months), and it explicitly anticipates monitoring and the potential introduction of consequences for non-compliance. The national strategy sets a national target and allocates responsibilities across system actors (institutions, libraries/consortia, funders, ministry/agency) but does not function as a directly enforceable legal act against individual researchers.

For research data, the FAIR data management strategy is policy guidance for national implementation and financing of FAIR practices; it prescribes responsibilities and actions for institutions, DeiC and the Danish National Archives, but it is best characterised as a coordinated implementation framework rather than a single directly enforceable obligation on individual researchers comparable to a funder grant condition.

5.1.3. Scope of the policy

Denmark maintains separate but complementary policies for scientific publications and research data, treating them as distinct policy domains with different maturity levels and implementation approaches. Notably absent from both strategies are provisions for other scholarly outputs increasingly relevant in Open Science discourse: preprints, software code as independent outputs (rather than ancillary to data), protocols, educational resources, and multimedia research materials.

5.1.4. Embargoes or immediate open access

For publications, Denmark’s national approach is embargoed Green OA rather than immediate OA. The national strategy sets the objective of access to all peer-reviewed research articles from 2025 onward with a delay of up to 12 months.

²³⁵ Independent Research Fund Denmark (DFF), Danish National Research Foundation (DNRF), and Innovation Fund Denmark (IFD), Open Access Policy for Public Research Funds and Foundations, April 2019, available at: <https://dg.dk/wp-content/uploads/2019/05/Open-Access-policy-for-public-sector-research-funds-and-foundations.pdf>

²³⁶ Danish e-Infrastructure Consortium (DeiC), commissioned by the Danish Agency for Higher Education and Science, National strategi for data management baseret på FAIR-principper [National Strategy for Data Management Based on the FAIR Principles], 2021, <https://doi.org/10.48715/fm9h-m781>; English version available at: https://eosc.eu/wp-content/uploads/2022/09/EN_National-strategi-for-data-management-baseret-pa-FAIR-principper.pdf [accessed April 2026].

²³⁷ DeiC, Kodeks for integritet i forskning & FAIR, available at <https://www.deic.dk/en/data-management/data-management-deic/code-research-integrity-fair> [accessed July 2026].

The joint funder policy specifies discipline-dependent embargo maxima: 6 months for health, natural sciences, engineering, agricultural/veterinary sciences and 12 months for social sciences and humanities (where journals require embargoes), again conditioned on journal permission.

5.1.5. Copyright, rights retention and secondary publication rights

For publications, Denmark's funder OA policy embeds a rights-retention objective but does so contractually rather than through a statutory right: the policy states that grant-holders should, as far as possible, retain rights to enable parallel publication, and it places responsibility on the grant holder to ensure publishing/copyright agreements are compatible with funder conditions. The funders also provide standard supporting documents (e.g., addendum templates to publication agreements²³⁸) to facilitate authors' ability to reserve the right to deposit/publish in parallel, indicating rights-retention implementation, albeit within publisher contract structures.

Denmark thus does not have a statutory secondary publication right.

For research data, copyright/IP is treated primarily through the FAIR strategy's governance of licences, documentation and risk management (including intellectual property and confidentiality), rather than through a distinct legal "rights retention" mechanism.

5.2. Context of open access policies

5.2.1. Training or guidance for researchers

Danish institutions and national coordination bodies provide structured training and guidance on open access and research data management.

For publications, the joint funder OA policy explicitly assigns a support role to research institutions and professional colleges to inform and assist researchers in using OA infrastructure, including "clear guidelines and assisting staff," pointing to libraries and repository operators as practical support channels.

Denmark also operationalises guidance through the Danish Open Access Indicator,²³⁹ which maintains dedicated guidance resources for institutional implementers and documents annual workflows and recognised repository use, reinforcing a system-level "implementation support" infrastructure around the strategy.

University libraries maintain dedicated open access web pages providing practical information on publication routes (Green, Gold, Diamond), funder requirements, embargo periods, repository deposit procedures, and copyright issues,²⁴⁰ sometimes also guidance to local repository systems (typically PURE²⁴¹-based Current Research Information Systems).

For research data, the FAIR data management strategy positions data management as a continuous process, emphasises the role of data management plans (DMPs), and calls for institutions to support researchers in continuous metadata/documentation practices and to provide knowledge resources addressing GDPR, licences, accessibility and long-term preservation.

²³⁸ See e.g. Independent Research Fund Denmark (DFF), Addendum to Publishing Agreement (template document), available at: <https://dff.dk/media/150p4yqx/tillaeg-til-udgivelsesaftale-paa-engelsk.pdf> [accessed April 2026].

²³⁹ Danish Agency for Higher Education and Science, Danish Open Access Indicator, available at: <https://oaindikator.dk/en/> [accessed April 2026].

²⁴⁰ Examples: Aarhus University, Open Access, available at: <https://medarbejdere.au.dk/en/open-access/> [accessed April 2026]; DTU Library, Open Access, available at: <https://www.bibliotek.dtu.dk/en/publishing/open-access/> [accessed April 2026]; University of Southern Denmark Library, Research / Open Access, available at: <https://sdunet.dk/en/research/>

²⁴¹ Elsevier's commercial research information management system.

How To FAIR²⁴² (howtofair.dk), a national resource developed by DeIC, provides practical guidance on implementing FAIR principles, covering topics such as creating DMPs, selecting appropriate repositories, applying metadata standards, and ensuring long-term preservation. Individual institutions supplement this with local RDM support services, often embedded within library or research administration units.²⁴³

The Danish Reproducibility Network, established in 2024 as a grassroots initiative involving researchers and research support professionals, organises peer support activities and training related to reproducibility, open data, and transparent research practices.²⁴⁴

Funder-specific guidance is provided by DFF, DNRF, and IFD on their websites, including FAQs on the joint open access policy, explanations of embargo periods for different disciplines, and links to repository options. The funders emphasise that researchers should consult library services for practical assistance with deposit, reflecting a division of labour between policy-setting (funders) and implementation support (institutions).

5.2.2. Funding for open access

Denmark's approach to funding open access is characterised by a deliberate emphasis on Green Open Access infrastructure rather than direct financial support for publication charges (APCs). Denmark's national strategy explicitly states that aggregated public expenditure on scientific publishing should not increase markedly due to OA implementation. Consistently, Independent Research Fund Denmark's grant terms stipulate that the fund does not cover costs for OA publishing, since that compliance is expected primarily via Green OA and an embargo period of 6-12 months.²⁴⁵

Importantly, while Danish funders do not fund APCs, some transformative agreements negotiated by the Royal Danish Library²⁴⁶ include APC coverage or waivers for corresponding authors at Danish institutions. These are not direct transfers to RPOs but are embedded in national licensing agreements which function as a systemic financing mechanism distinct from direct RFO-to-RPO OA earmarks.

For research data, the FAIR strategy contains an explicit section on funding and cost allocation principles for data management and repositories, distributing responsibilities among funders, institutions and basic e-infrastructure.

5.2.3. Repository requirements (incl. FAIR principles)

For publications, the funder OA policy requires deposit (parallel publication) of the accepted peer-reviewed article in an institutional or subject-specific repository (digital archive), and the Danish Open Access Indicator operationalises this by maintaining an authority list of recognised repositories and criteria for inclusion, updated with input from universities.

For research data, the FAIR strategy explicitly requires institutions to map stable repository solutions, identify gaps, and collaborate with DeIC²⁴⁷ to operate institutional and national data repositories with sufficient long-term funding and ongoing protection/curation; it also assigns a role to the Danish National Archives in making archived research data as accessible as possible in line with FAIR.

Denmark has not mandated certification under CoreTrustSeal or similar certifications.

²⁴² DeIC (Danish e-Infrastructure Consortium), How To FAIR (national guidance resource on FAIR data implementation), available at: <https://www.howtofair.dk> [accessed April 2026].

²⁴³ See examples in previous footnote

²⁴⁴ Topor, M., Bonnet, P., Cheplygina, V., Dam, V.H. and Wildgaard, L., 'A Grassroots Approach to Peer Support by the Danish Reproducibility Network', BMC Research Notes, 17 (2024), article 256, <https://doi.org/10.1186/s13104-024-06912-7>. PubMed Central: <https://pmc.ncbi.nlm.nih.gov/articles/PMC11389419/>.

²⁴⁵ Independent Research Fund Denmark (DFF), Terms and Conditions for Grants, available at: <https://dff.dk/en/managing-your-grant/when-you-have-received-a-grant/terms-and-conditions-for-grants/> [accessed April 2026].

²⁴⁶ Royal Danish Library, Open Access Licence Agreements, available at: <https://pro.kb.dk/en/licensing/open-access-licence-agreements> [accessed April 2026].

²⁴⁷ Most notably DeIC Dataverse,

5.2.4. Metadata and persistent identifier requirements

Denmark's open access policies do not impose prescriptive technical requirements uniformly across all contexts. The emphasis is on functional standards that ensure discoverability and interoperability.

The National Open Access Strategy does not specify metadata standards but relies on repository systems (PURE-based CRIS) to generate appropriate bibliographic metadata. These systems comply with OpenAIRE guidelines,²⁴⁸ ensuring exported metadata includes standard elements. Denmark joined the ORCID consortium in 2014,²⁴⁹ establishing a national approach to provide ORCIDs to all Danish researchers and integrate these persistent identifiers into CRIS systems and national databases.

For research data, the FAIR strategy frames documentation and metadata as integral to shareability, calls for systematic collection described in DMPs updated throughout the research process, requires institutional support for continuous metadata collection grounded in disciplinary practices, and emphasises the use of international standards for metadata and vocabularies in infrastructure solutions.

The DeIC Dataverse implementation enforces minimum metadata requirements at deposit, including title, author(s), description, subject classification, and license terms, and automatically assigns DataCite DOIs to published datasets. Researchers are encouraged (but not mandated) to provide additional metadata elements. Through DeIC, Denmark also engages with EOSC Interoperability Framework development.

5.2.5. Peer review approaches

The National Open Access Strategy emphasises that "publishing in Open Access should continue to be based on a publishing process with inbuilt quality assurance in the form of peer review." Denmark's OA policies do not introduce alternative peer-review models as a policy objective, nor do they set requirements for community-led peer review infrastructures.

5.2.6. Links to researcher assessment

The joint funder OA policy explicitly accepts that journal quality considerations may be weighted more heavily than the aim to publish in OA journals and recommends OA journals only where they are of recognised high quality within the field.

In the research data domain, Danish debate and strategy framing explicitly acknowledges current career incentives as a constraint on researchers' willingness to share data: already in 2017, the Danish National Research Foundation's annual meeting based on their publication "Open access to data – It's not that simple"²⁵⁰ articulated that open data initiatives should strengthen research while safeguarding researchers' career opportunities.²⁵¹

However, neither the national OA strategy nor the FAIR strategy establishes concrete assessment reforms (e.g., promotion criteria tied to OA/FAIR outputs). Nevertheless, the phasing out of the Bibliometric Research Indicator (BFI) could mean a window of opportunity for reforming research assessment. By 2023, Aalborg University announced it would replace BFI with a new research indicator emphasising collaboration, visibility, and openness.²⁵² Furthermore, Universities Denmark (the organisation of the eight Danish universities) has published a framework for recognising and rewarding knowledge dissemination, including recognition of Open Science.

²⁴⁸ OpenAIRE, PURE is Now OpenAIRE Compliant, available at: <https://www.openaire.eu/pure-is-now-openaire-compliant> [accessed April 2026].

²⁴⁹ ORCID, 'Denmark Adopts ORCID! A Consortium Approach to ORCID Implementation', ORCID Blog, 2014, available at: <https://info.orcid.org/denmark-adopts-orcid-a-consortium-approach-to-orcid-implementation/> [accessed April 2026].

²⁵⁰ Danish National Research Foundation (DNRF), Open Access to Data — It's Not That Simple (publication prepared for the 2017 DNRF Annual Meeting), 2017, available at: <https://dg.dk/wp-content/uploads/2017/11/Open-Access-to-Data-%E2%80%93-It%E2%80%99s-not-that-Simple.compressed.pdf> [accessed April 2026].

²⁵¹ Danish National Research Foundation (DNRF), Open Access to Data — The DNRF Annual Meeting 2017, available at: <https://dg.dk/en/open-access-to-data-the-dnrf-annual-meeting-2017/> [accessed April 2026].

²⁵² Aalborg University, AAU Gets New Research Indicator: How the University Distributes Basic Research Funds Among the Departments, 2023, available at: <https://www.en.aau.dk/aau-gets-new-research-indicator-how-the-university-distributes-basic-research-funds-among-the-departments-n93724> [accessed April 2026].

This may, for example, include efforts to systematise and make research data available. It may also include the publication of research as Open Access. Another aspect is Citizen Science, where citizens are involved in the research process in ways that both promote research and create empowerment among citizens, as well as a broader understanding of the value of research.²⁵³

5.2.7. Public funding thresholds

Denmark's OA instruments do not apply a quantitative "% public funding" threshold. For publications, the joint funder policy applies to articles resulting from full or partial funding by the participating public funders. For research data, the FAIR strategy again does not define quantitative thresholds in policy terms.

5.2.8. Provisions for small and medium publishers

Denmark's national OA strategy and the joint public funder OA policy do not contain targeted provisions for small and medium publishers (e.g., differentiated embargo rules, dedicated support schemes, or transitional compensation mechanisms).

The strategy emphasises that "implementation of Open Access must support the continued possibility for Danish researchers to publish in the most respected national and international journals" and "there must continue to be an opportunity to publish in Danish-language journals."

Tidsskrift.dk, the Royal Danish Library's OJS-based platform, provides free Diamond Open Access publishing infrastructure for Danish scholarly journals, which could be considered an implicit de facto support for small and medium publishers that cannot afford commercial publishing platforms, although it is not phrased as such.

5.2.9. Identified costs of, or gains from, applying open access policies

Denmark has conducted limited cost-benefit analysis of open access policy implementation, but some data on expenditures and benefits exist. Most notably, Appendix 3 of the Working Group on the Evaluation of Denmark's National Open Access Strategy analyses APC expenditure (2016–2021) and licence expenditure (2018–2022) for the eight Danish universities including university hospitals. The key finding is a 20% increase in total publication expenditure from 2018 to 2021 (in 2023 price-level DKK), with APC costs rising 60% and licence costs rising 11% over that period.²⁵⁴ Transition costs associated with renegotiating publisher agreements (Read & Publish models replacing traditional subscriptions) remain opaque. Denmark's consortia negotiations led by the Royal Danish Library involve confidentiality clauses preventing disclosure of precise financial terms.²⁵⁵

²⁵³ Universities Denmark (Danske Universiteter), Rammeværk for meritering af videnudveksling [Framework for Recognising and Rewarding Knowledge Dissemination], June 2024, available at: https://dkuni.dk/wp-content/uploads/2024/06/dkuni_rammevaerk_for_meritering_af_videnudveksling.pdf [accessed April 2026; in Danish].

²⁵⁴ Det Kongelige Bibliotek (Royal Danish Library), Licensservice, Bilag 3: Udvikling i udgifter til videnskabelige publikationer' [Appendix 3: Development in Expenditure on Scientific Publications], in Working Group on the Evaluation of Denmark's National Open Access Strategy, Evaluering af Danmarks Nationale Strategi for Open Access [Evaluation of Denmark's National Open Access Strategy], Uddannelses- og Forskningsstyrelsen (Danish Agency for Higher Education and Science), 8 May 2024, Internet ISBN 978-87-94128-96-4, available at: <https://ufsn.dk/media/ogwh30ar/bilag-3-udvikling-i-udgifter-til-videnskabelige-publikationer.pdf>. Parent report available at: <https://ufsn.dk/publikationer/2024/maj/evaluering-af-danmarks-nationale-strategi-for-open-access/> [both accessed April 2026]. Reference provided by NPR.

²⁵⁵ See also University of Southern Denmark Library, Publishers' Prices, Open Access and Copyright — Background Paper (background paper to a position paper on Springer Nature), 2022, available at: <https://www.sdu.dk/-/media/files/bibliotek/pdf/baggrund-til-budskabspapir-sn-english-2022.pdf> [accessed April 2026].

The Danish Open Access Indicator demonstrates substantial progress: open access to Danish research publications increased from 17% in 2015 to 78% in 2025,²⁵⁶ a quadrupling of openly accessible output within ten years.²⁵⁷ This achievement suggests that the national strategy, despite being non-binding, has succeeded in driving cultural and behavioural change.

While not exclusively an OA publication initiative, ODIN (Open Discovery Innovation Network), a pilot initiative (2020–2023) at Aarhus University funded with 54.5 million DKK from the Novo Nordisk Foundation, demonstrated benefits of open science practices in university–industry collaboration. An interim impact assessment (2022) found that ODIN exceeded most KPIs, engaged over 100 academic group leaders and 40 companies, and fostered precompetitive collaborative research with open results.²⁵⁸

5.2.10. Security considerations

Denmark's open access policies do not explicitly address Security considerations related to cybersecurity, geopolitical risks, or economic competition in the context of open science.

However, the FAIR strategy calls for national and institutional attention to risk management in FAIR data, explicitly naming confidentiality, copyright/IP, dual use, GDPR and national security interests as relevant risk factors to be addressed through governance and guidance.

At funder implementation level, Independent Research Fund Denmark's grant conditions incorporate research Security considerations including reference to the guidelines of the Committee on Guidelines for International Research and Innovation Cooperation (URIS), published in May 2022 by the committee of universities, the three public research funders and the Ministry, and aimed at protecting Danish research against unwanted foreign interference and misuse.²⁵⁹ Furthermore, on the institutional level Aarhus University introduced new guidelines in force from 1 January 2026 on risk assessment of externally funded research collaborations and travel to designated risk countries under the explicitly stated objective that researchers and universities should work "as openly as possible and as securely as necessary."²⁶⁰

5.2.11. References to simplification regarding open access

Denmark's open access policies contain no provisions on regulatory or administrative simplification, though the overall policy architecture implicitly prioritises practical implementation over bureaucratic complexity. In this context, the joint funder policy could be considered a measure of simplification. Furthermore, the FAIR data strategy recognises that "not everyone is expected to be able to use the same solution and not everyone can proceed at the same speed". The strategy also aims to improve workflows between institutional systems/repositories and the Danish National Archives, including an ambition for automation.

²⁵⁶ Danish Agency for Higher Education and Science (Uddannelses- og Forskningsstyrelsen), Ministry of Higher Education and Science, *Danish Open Access Indicator — National Results*, produced and released annually, available at: <https://oaindikator.dk/en/overview/national>

²⁵⁷ Danish Agency for Higher Education and Science, The Danish Open Access Indicator: From 17% in 2015 to 78% in 2025 (presentation at the LERU Open Science meeting, 16 March 2023), available at: https://forskningsportal.dk/wp-content/uploads/2023/04/The-Danish-Open-Access-Indicator_LERU_16Mar2023.pdf

²⁵⁸ Aarhus University / ODIN Project, Impact Assessment of ODIN (Open Discovery Innovation Network) — Midterm Report, August 2022, available at: https://projects.au.dk/fileadmin/projects/odin/ODIN_Impact_Assessment_Midterm_Report_AUG2022.pdf [accessed April 2026].

²⁵⁹ Committee on Guidelines for International Research and Innovation Cooperation (URIS), Guidelines for International Research and Innovation Cooperation, May 2022, official English version available via: https://ufm.dk/media/znknvzhs/uris-guidelines_english-version.pdf [accessed July 2026].

²⁶⁰ Aarhus University, Security in international research and innovation collaboration (URIS guidelines) available at: <https://medarbejdere.au.dk/administration/forskningspraksis/uris> [accessed July 2026].

5.2.12. Role of artificial intelligence in open access policies

The National Open Access Strategy (2018) and joint funder policy (2019) predate the recent surge in generative AI capabilities and contain no references to AI. The FAIR Strategy (2021) similarly does not mention AI, machine learning, or automated text/data mining as relevant considerations for research data management. A separate Danish AI strategy was published in December 2024 but is not conceptually linked to open access or open science.

5.3. Implementation and monitoring of open access policies

5.3.1. Responsibility for implementation

For publications, implementation responsibilities are distributed across the system: the Danish Agency for Higher Education and Science (within the ministry) owns the national strategy framework and monitoring architecture. Research institutions (universities and other research-performing organisations) and their libraries are responsible for ensuring researchers can deposit outputs and, in practice, exercise the parallel-publication rights available to them. The strategy also explicitly anticipates a role for DEFF/research libraries in negotiating publisher agreements that enable OA rights. However, DEFF has since been dissolved, with its licensing functions assumed by the Royal Danish Library. The joint funder policy assigns grant holders responsibility for ensuring publishing agreements permit compliance (parallel publication) while expecting institutions to support researchers operationally.

For research data, the FAIR strategy assigns major implementation roles to research institutions (policies, procedures, support; mapping repository solutions), DeiC (national coordination and infrastructure facilitation), and the Danish National Archives (archiving and enabling FAIR accessibility where possible).

5.3.2. Monitoring of individual policy elements

For publications, monitoring is de facto shared between the Danish Agency for Higher Education and Science via the national indicator infrastructure and the funders via grant reporting and compliance oversight. The joint OA policy states that funders will monitor whether grant holders publish via OA and will consider whether consequences should be introduced for failure to make outputs OA where possible; it also requires grant holders to provide OA information in reporting and to update funders if OA occurs after final reporting.

For research data, a committee of national stakeholders, set up by the Danish Ministry of Higher Education and Science in 2022, coordinates measures that require national coordination and monitors the progress of the implementation of the FAIR strategy. A single national “FAIR indicator” analogous to the publications OA indicator has not been introduced or implemented.

5.3.3. Overall policy monitoring

Overall policy implementation at the national level is monitored by the Ministry of Higher Education and Science which holds overarching responsibility for tracking Denmark's progress toward national OA and FAIR goals. Within the ministry the Danish Agency for Higher Education and Science administratively manages data collection for the OA Indicator and produces reports on Denmark's open science performance.

There is no single coordinating body with enforcement authority over all OA/FAIR policy elements. Instead, Denmark relies on a networked governance model in which the ministry sets strategic direction, funders enforce requirements for their grantees, institutions provide infrastructure and support, and researchers bear ultimate responsibility for compliance.

5.3.4. Reporting arrangements

For publications, grant holders report OA status and repository deposit to funders as part of grant reporting obligations under the joint OA policy. Research institutions/universities provide the underlying publication metadata and repository linkage that enables national monitoring via the OA indicator, which is produced by the Danish Agency for Higher Education and Science (ministry-level).

For research data the FAIR strategy requires follow-up on DMPs and institutional responsibilities for long-term stewardship decisions, and it anticipates workflow-based communication with the Danish National Archives (including metadata transfer), suggesting reporting is embedded in operational processes.

5.3.5. Results of impact evaluations

Denmark has conducted ongoing quantitative monitoring through the Danish Open Access Indicator and initiated qualitative evaluations of policy effectiveness.

The OA Indicator provides the most robust evidence of policy impact since the 2018 strategy revision. The indicator shows remarkable progress from 36% open access in 2018 to 78% open access in 2025. The OA Indicator 2025 is calculated in early 2025 using publication year 2023. When ‘blocked’ outputs are excluded, i.e., publications where OA is not permitted due to publisher rights or embargo constraints, the realised OA rate rises to 86.42%.²⁶¹

The ministry also initiated a comprehensive evaluation of the National Open Access Strategy²⁶² in 2023 (completed in May 2024) to assess whether the 100% by 2025 target is achievable and to identify adjustments needed in approaches, tools, and policy instruments. The report finds a substantial increase in the share of Danish research outputs available in open access since the first strategy in 2014 and the revision in 2018. Open access is now a normalised part of publishing workflows at most universities, and national infrastructure (OA indicator, CRIS-based repositories, national licensing) is functioning as intended. However, the evaluation notes that the 100% OA by 2025 goal is unlikely to be reached. The remaining closed or “blocked” outputs are concentrated in specific disciplines and publisher portfolios where embargoes and rights restrictions remain binding, and in “unused OA” cases where authors hold rights but have not deposited manuscripts.

Regarding publication costs, the strategy has not succeeded in keeping the estimated publication expenses stable in line with its recommendations. The total estimated publication costs have increased. While expenses for publisher licenses²⁶³ have been kept relatively stable, the costs of Open Access publishing with APC (Article Processing Charges), primarily in gold open-access journals, have risen significantly. This increase cannot be solely attributed to an increase in publication volume. This means that Danish universities are increasingly paying for Open Access publishing, either directly or through their Danish or international co-authors. Furthermore, it must be acknowledged that the green Open Access model is not cost-neutral, as it requires significant administrative resources for realising Open Access rights,²⁶⁴ such as time spent on obtaining the accepted manuscript and depositing it in a repository. In general, both researchers, universities, and research funding bodies perceive the most significant challenge related to Open Access as covering publication fees (APC) in connection with gold and hybrid Open Access publishing.

²⁶¹ Danish Open Access Indicator, Detailed Data, available at: <https://oaindikator.dk/en/details/> [accessed April 2026]; and Danish Agency for Higher Education and Science, Open Access Indicator 2023: Technical Documentation, available at: https://oaindikator.dk/oadoocs/technical/Open_Access_Indicator_2023_Technical_en.pdf [accessed April 2026].

²⁶² Working Group on the Danish National Open Access Strategy, Evaluering af Danmarks nationale strategi for open access [Evaluation of Denmark’s National Open Access Strategy], May 2024, Danish Agency for Higher Education and Science, available at: <https://ufsn.dk/publikationer/2024/maj/evaluering-af-danmarks-nationale-strategi-for-open-access/> Please note that many sources contain a typo for this document which makes it difficult to track down. Content is based largely on the English level summary.

²⁶³ i.e. subscription and access agreements for electronic journals and databases, including the read-and-publish agreements negotiated nationally by the Royal Danish Library.

²⁶⁴ The term used in the Danish OA Indicator framework for deposit and parallel-publication entitlements.

The review recommends universities streamline their efforts to realise the untapped Open Access potential, that the Royal Library negotiates Article Processing Charges (APC) for dedicated Open Access journals, and that the Ministry of Higher Education and Science explores possibilities for establishing a national Open Access archive to facilitate universities' work with green Open Access. Furthermore, it is recommended that Danish public and private foundations agree on a common strategy on copyright, drawing inspiration from Plan S's Rights Retention Strategy.

For research data the FAIR Strategy (adopted 2021) does not yet have a published impact evaluation. DeIC tracks DeIC Dataverse usage (number of datasets deposited, institutions participating), but comprehensive data sharing rates across Danish research have not been measured. The absence of a FAIR target comparable to the OA Indicator limits evidence-based assessment of data policy effectiveness.

6. Germany

6.1. General characteristics

6.1.1. Policies formulated as strategies, funder mandates and/or legislation

Germany's open access policy framework reflects the country's federal constitutional structure. At the legislative level, the German Copyright Act (Urheberrechtsgesetz, UrhG) includes a statutory Secondary Publication Right under §38(4), introduced in 2014.²⁶⁵ This provision grants authors of scientific contributions resulting from at least 50% publicly funded research an inalienable right to make the accepted manuscript version publicly accessible online after a 12-month embargo period, even where exclusive rights have been granted to publishers. This right applies to contributions published in periodicals appearing at least twice annually and cannot be waived by contract.

At the strategic policy level, the Joint Guidelines of the Federal Government and the Länder on Open Access, adopted in March 2023 by the then Federal Ministry of Research, Technology and Space (BMBF; since May 2025 the Federal Ministry of Research, Technology and Space, BMFTR) and the Standing Conference of the Ministers of Education and Cultural Affairs (KMK), represent the most recent and comprehensive national policy statement.²⁶⁶ Published in June 2023, the guidelines declare that open access should become the standard for publicly funded research results within the coming years. The guidelines emerged from federal-state dialogue initiated in 2019 and build upon earlier efforts, notably the BMBF's/BMFTR's 2016 Open Access Strategy,²⁶⁷ which established open access as a policy priority and required BMFTR-funded researchers to publish in open access formats.

²⁶⁵ Federal Ministry of Justice (Bundesministerium der Justiz), Urheberrechtsgesetz [German Copyright Act (UrhG)], consolidated text, available in English translation at: https://www.gesetze-im-internet.de/englisch_urhg/englisch_urhg.html [accessed April 2026].

²⁶⁶ English version available at Federal Ministry of Research, Technology and Space (BMFTR) and Standing Conference of the Ministers of Education and Cultural Affairs of the Länder (KMK), Open Access in Germany — Joint Guidelines of the Federal Government and the Länder, June 2023, available at: https://www.bmftr.bund.de/SharedDocs/Publikationen/DE/FS/772970_Open_Access_in_Deutschland_en.pdf?__blob=publicationFile&v=5 [accessed April 2026].

²⁶⁷ Federal Ministry of Education and Research (BMBF), Open Access in Germany: The Strategy of the Federal Ministry of Education and Research, 2016, referenced in OECD STIP Compass, Policy Initiative record 4600, available at: <https://stip.oecd.org/stip/interactive-dashboards/policy-initiatives/2023%2Fdata%2FpolicyInitiatives%2F4600> [accessed April 2026].

Individual Länder have incorporated support for open access into higher education laws and provide funding through milestone agreements and institutional programmes. Open Science has been anchored in Land-level law (Berlin²⁶⁸) or higher education law (Baden-Württemberg²⁶⁹) and, most recently, through an amendment to the Higher Education Act of North Rhine-Westphalia.²⁷⁰

In Baden-Württemberg § 44(6) LHG BW empowered universities to oblige their academic staff by statute to exercise the § 38(4) UrhG secondary publication right. In a landmark order of 24 March 2026²⁷¹ (published 28 April 2026), however, the Federal Constitutional Court declared § 44(6) LHG BW incompatible with the Basic Law and void. The consequence is that mandatory exercise of the secondary publication right can henceforth be introduced, if at all, only by the federal legislator. As of July 2026, no federal legislative initiative responding to the ruling had been announced. Brandenburg the Ministry of Science, Research and Culture (MWFK) published the “Open-Access-Strategie des Landes Brandenburg”,²⁷² funded by MWFK and developed by an expert group led by FH Potsdam. The strategy also covers research data. The “Hessischer Digitalpakt Hochschulen 2020–2024” is a strategic framework agreed between the Land and its universities. It states that Hessian universities aim “to establish Open Science as their common basis in science”.²⁷³ Lower Saxony has recently created a Land-wide OA publication fund and support for diamond OA, alongside an evolving institutional OA policy landscape.²⁷⁴ Further Länder may have additional OA activities.

The funder policy level is dominated by the Deutsche Forschungsgemeinschaft (DFG), Germany's principal research funding organisation. The DFG signed the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities in 2003 and subsequently the Action Plan for Diamond Open Access in 2022.

The DFG's “Guidelines on the Handling of Research Data”,²⁷⁵ adopted in 2015 and operational in DFG funding programmes, encourage (but do not mandate) open access to publications and research data. Applicants are requested to specify in proposals how research data will be made available for reuse, detailing data types, standards, repository choices, and publication schedules. Notably, the DFG is not a member of cOAlition S.

²⁶⁸ Open Research Berlin, Strategy: From Open Access to Open Science — Berlin, available at: <https://www.open-research-berlin.de/en/strategie/index.html> [accessed April 2026]. (originally Open Access, then developed into Open Science)

²⁶⁹ Landeshochschulgesetz Baden-Württemberg (LHG BW), §44(6a), as amended; discussed in: Klimpel, P., ‘Secondary Publication Rights in Baden-Württemberg: A Mandatory Statutory Right’, *sui generis*, 2022, available at: <https://sui-generis.ch/article/view/sg.46/647> [accessed April 2026]. Based on a secondary publication law which has been turned mandatory. However, as of 24 March 2026 the German constitutional court has ruled that the provision empowering universities to oblige academic staff to exercise their §38(4) UrhG secondary publication right incompatible with the Basic Law and void. See Bundesverfassungsgericht, Beschluss des Zweiten Senats vom 24. März 2026, 2 BvL 3/18 https://www.bundesverfassungsgericht.de/SharedDocs/Entscheidungen/DE/2026/03/ls20260324_2bvl000318.html. Accessed 19 July 2026.

²⁷⁰ open-access.network, ‘Open Access as the Standard for NRW: The Hochschulgesetz NRW Amendment’, available at: <https://open-access.network/en/services/news/article/open-access-as-the-standard-for-nrw> [accessed April 2026].

²⁷¹ Bundesverfassungsgericht, Beschluss des Zweiten Senats vom 24. März 2026, 2 BvL 3/18, available at: https://www.bundesverfassungsgericht.de/SharedDocs/Entscheidungen/DE/2026/03/ls20260324_2bvl000318.html; press release No. 24/2026 of 28 April 2026, available at: <https://www.bundesverfassungsgericht.de/SharedDocs/Pressemitteilungen/DE/2026/bvg26-024.html> [both accessed July 2026].

²⁷² Ministry of Science, Research and Culture of the State of Brandenburg (MWFK), ‘Open-Access-Strategie des Landes Brandenburg [Open Access Strategy of the State of Brandenburg]’, 8 August 2019, available at: <https://mwfk.brandenburg.de/mwfk/de/service/publikationen/details/~08-08-2019-open-access-strategie-des-landes-brandenburg-08-08-2019-open-access---strategie-des-landes-brandenburg> [accessed April 2026].

²⁷³ Hessisches Ministerium für Digitales und Innovation / Hessian universities, ‘Hessischer Digitalpakt Hochschulen 2020–2024 [Hessian Digital Pact for Higher Education Institutions 2020–2024]’, available at: https://www.uni-marburg.de/de/universitaet/profil/strategie/dokumente/digitalpakt-hessen.pdf/@download/file/digitalpakt_hessen_v9.pdf [accessed April 2026].

²⁷⁴ open-access.network, ‘Diamond im Fokus: Niedersachsen fördert Open-Access-Publikationen’ [Diamond in Focus: Lower Saxony Promotes Open Access Publications], available at: <https://open-access.network/services/news/artikel/diamond-im-fokus-niedersachsen-foerdert-open-access-publikationen> [accessed April 2026; in German].

²⁷⁵ Deutsche Forschungsgemeinschaft (DFG), ‘Guidelines on the Handling of Research Data’, adopted 2015, available at: <https://www.dfg.de/resource/blob/172098/guidelines-research-data.pdf> [accessed April 2026].

6.1.2. Bindingness in terms of implementation

The German open access policy landscape is characterised by predominantly voluntary and recommendatory requirements rather than binding mandates. The 2023 Joint Guidelines explicitly state that open access "should" (not "must") become standard practice, framing the goal as aspirational rather than compulsory.

The guidelines emphasise that the transformation requires "targeted and coordinated support" from government and relies on the participation of all stakeholders "on a long-term basis," indicating a scholarly-led and consensus-driven approach.

At the funder level, the DFG "requests" and "encourages" open access but does not require it as a binding condition of funding. The DFG website states: "The DFG does not view Open Access as an end in itself, but rather as support for open and research-friendly communication in the sciences."²⁷⁶ DFG policy states that researchers "should" make research data available "as soon as possible" where this does not conflict with third-party rights, but non-compliance does not result in sanctions or funding withdrawal.

By contrast, following the 2016 strategy, BMBF (now BMFTR) project funding includes an open access clause making open access publication a condition of funding:²⁷⁷ results from funded projects are to be published open access immediately or deposited in a repository after an embargo of at most twelve months.

The coexistence of a binding funder mandate (BMFTR project funding) and a deliberately recommendatory approach (DFG) within one system is a structural feature of Germany's pluralist funding landscape.

According to the 2016 strategy, BMFTR funding rules include an open access clause making open access a general precondition of funding for BMFTR-funded research.

6.1.3. Scope of the policy

German open access policies explicitly address both publications and research data, though with differing degrees of development and specificity (see above). The 2023 Joint Guidelines reference the broader concept of "Open Science", positioning open access as "an integral element of Open Science concepts" and noting that "Open Access as part of the research process is a source of innovation." However, the primary operational focus of the guidelines remains on publications.

6.1.4. Embargoes or immediate open access

Germany's policy framework permits embargo periods and does not uniformly require immediate open access. The statutory Secondary Publication Right under §38(4) UrhG stipulates a 12-month embargo period for all disciplines, applying from the date of first publication. This uniform embargo applies to contributions resulting from at least 50% publicly funded research published in periodicals. The secondary publication must use the accepted manuscript version and must not serve a commercial purpose. This non-commercial condition delimits the scope of the statutory right itself (the author's act of secondary publication) and does not impose a licence (such as CC BY-NC) on the deposited manuscript

The DFG encourages deposit and open access "without delay" or "as soon as possible" but does not specify maximum embargo periods and does not enforce immediate open access as a binding requirement. The 2023 Joint Guidelines do not prescribe embargo policies, leaving these to funders and institutions.

²⁷⁶ Deutsche Forschungsgemeinschaft (DFG), Open Access: Funding Opportunities and Programmes — Infrastructure, available at: <https://www.dfg.de/de/foerderung/foerdermoeglichkeiten/programme/infrastruktur/lis/open-access> (translated into English through browser functionality).

²⁷⁷ Bundesministerium für Bildung und Forschung, Open-Access-Klausel in der BMBF-Projektförderung, described at: https://www.bildung-forschung.digital/digitalezukunft/de/wissenschaft_und_forschung/open-access/open-access-initiativen/open-access-initiativen.html [accessed July 2026]

The DEAL transformative agreements²⁷⁸ with Wiley (2019–2023, renewed 2024–2028), Springer Nature (2020–2023, renewed 2024–2028), and Elsevier (2024–2028) provide immediate open access for corresponding authors at participating German institutions publishing in the publishers' hybrid and gold open access journals, covering approximately 80% of German publication output with these publishers. Under these agreements, articles are published immediately open access upon acceptance, with no embargo period. However, participation in DEAL agreements is institutional and voluntary on the side of the institutions.²⁷⁹ For individual corresponding authors at participating institutions, open access publication is the default workflow under the agreements.

For research data, the DFG guidelines request that data be made accessible "as soon as possible," with timing specified in the data management plan, but do not mandate immediate release at the time of publication.

6.1.5. Copyright, rights retention and secondary publication rights

Germany's most distinctive copyright-related OA feature is the statutory secondary publication right in §38(4) UrhG, which strengthens the position of the individual researcher (as author) by granting a legally defined self-archiving right even where publishing contracts assign exclusive exploitation rights to publishers, provided statutory conditions are met, including at least half public funding for the underlying research activity and use of the accepted manuscript.

The 2023 Joint Guidelines and DFG policies encourage the use of Creative Commons licenses, particularly CC BY, to maximise reusability, but do not mandate licensing practices. Germany's approach thus contrasts with rights retention mandates implemented by cOAlition S funders.

6.2. Context of open access policies

6.2.1. Training or guidance for researchers

The BMFTR funds open-access.network,²⁸⁰ a national competence and networking platform that provides extensive information resources, toolkits, training materials, and webinars on open access policies, licensing, repository use, copyright, and publisher negotiations. The platform serves as a central reference point for researchers, librarians, and institutional administrators.

At the institutional level, most German higher education institutions and major research organisations provide open access guidance and support through their libraries. Many institutions offer workshops, online tutorials, and individualised consultations.

For research data, guidance is provided through both funder-linked frameworks (e.g., DFG research data handling guidelines) and a broad RDM support landscape connected to the National Research Data Infrastructure (NFDI), which aims to systematically manage, provide long-term storage, findability and accessibility, and network research data across Germany.²⁸¹

However, training is not mandated at the national level, and provision depends on institutional capacity and initiative.

²⁷⁸ Projekt DEAL Consortium, DEAL — Transformative Agreements with Major Publishers, available at: <https://deal-konsortium.de/> [accessed April 2026].

²⁷⁹ See for example: University of Bayreuth Library, Projekt DEAL: Participation at the University of Bayreuth, available at: https://www.ub.uni-bayreuth.de/en/digitale_bibliothek/e-journals/Projekt-DEAL/index.html

²⁸⁰ open-access.network, Training and Information Resources, available at: <https://open-access.network/en/training> [accessed April 2026].

²⁸¹ Deutsche Forschungsgemeinschaft (DFG), National Research Data Infrastructure (NFDI), available at: <https://www.dfg.de/en/research-funding/funding-initiative/nfdi> [accessed April 2026]. See also: OECD, 'National Research Data Infrastructure (NFDI): Case Study', in Access to Public Research Data: A Toolkit, OECD Publishing, Paris, 2024, available at: https://www.oecd.org/en/publications/access-to-public-research-data-toolkit_a12e8998-en/national-research-data-infrastructure-nfdi_dfd00401-en.html.

6.2.2. Funding for open access

The DFG operates the "Open Access Publication Funding" programme, which provides lump-sum allowances to research institutions (not individuals) to cover open access publication costs. The programme has operated in two phases: the first (2021–2023) supported institutions in establishing central publication cost structures, and the second phase (from 2024 onward) facilitates the transition toward DFG assuming financial responsibility for publications arising from DFG-funded research. Institutions receiving DFG funding must agree to make publication metadata, including cost data, openly accessible to enable system-wide monitoring and cost standardisation. Eligible costs include article processing charges (APCs), book processing charges (BPCs), and infrastructure fees; funding covers staff costs, project-related software/hardware, and usage fees.²⁸² The 2023 report states that a total of over 34 065 eligible publications were reported, with a total eligible cost of 74 075 241 euros.²⁸³ The DFG OA Publication Funding Programme (2024–2027) provides a fixed allowance of €1 400 per publication; due to oversubscription, the approved amount is reduced by 30% across the programme.²⁸⁴

In addition, the German "transformative agreement" approach under Projekt DEAL channels substantial institutional expenditure toward OA publishing through negotiated contracts with major publishers (including dedicated OA publishing fee structures under specific agreements).

Many Länder provide dedicated funding for open access through institutional grants, publication funds, and milestone agreements with universities. Institutional publication funds have been established at most German universities to cover APCs for gold open access publications by affiliated researchers.²⁸⁵

For research data, DFG's research data frameworks and Germany's data strategy measures support data infrastructures and data culture initiatives, and NFDI constitutes a major structurally oriented investment in research data infrastructure and networking.

6.2.3. Repository requirements (incl. FAIR principles)

For publications, Germany operates extensive repository infrastructure via institutional and disciplinary publication services, with trust/quality commonly operationalised through the DINI Certificate.

The DINI Certificate (issued by the Deutsche Initiative für Netzwerkinformation) is a nationally recognised quality standard for document and publication repositories. The certificate assesses repositories against criteria including: server policy, author support, legal compliance, authenticity and data integrity, metadata and indexing quality, subject indexing, export interfaces, usage statistics, and long-term preservation. Certification demonstrates that a repository meets minimum technical and organisational standards, distinguishing it from generic web servers, and supports the open access concept. DINI-certified repositories ensure interoperability through compliance with metadata standards (e.g., Dublin Core, OAI-PMH harvesting protocols), enabling aggregation into national and European discovery services.²⁸⁶

²⁸²Deutsche Forschungsgemeinschaft (DFG), Open Access Publication Funding: Programme Information, available at: <https://www.dfg.de/en/research-funding/funding-opportunities/programmes/infrastructure/lis/funding-opportunities/open-access-publication-funding> [accessed April 2026].

²⁸³Barbers, I., Pollack, P., Herweg, D., Mittermaier, B. and Holzer, A.C. (Forschungszentrum Jülich), Förderprogramm Open-Access-Publikationskosten – Bericht zum Förderjahr 2023 [DFG Open Access Publication Costs Funding Programme – Report on Funding Year 2023], Deutsche Forschungsgemeinschaft, 2025, <https://doi.org/10.5281/zenodo.14809150>. Available at: <https://zenodo.org/records/14809150> in German only

²⁸⁴Details on 2025 submissions (German only) Deutsche Forschungsgemeinschaft (DFG), Open-Access-Publikationskosten – Antragseingang und Entscheidungen im Jahr 2025 [Open Access Publication Costs – Proposals Received and Decisions in 2025], available at: <https://www.dfg.de/resource/blob/383600/bericht-antragstellung-entscheidungen-2025.pdf> [accessed April 2026; in German].

²⁸⁵For example, Länder support: Brandenburg – OA Monograph Fund, Lower Saxony – NiedersachsenOPEN (Land publication fund), Baden-Württemberg – Consortium OA fund. For example, institutional support: University of Tübingen – OA Publication Fund, Freie Universität Berlin – OA Book Publication Fund, Charité – Universitätsmedizin Berlin – Publication Fund, Philipps-Universität Marburg – OA Publication Fund.

²⁸⁶Deutsche Initiative für Netzwerkinformation (DINI), DINI-Zertifikat für Open-Access-Repositorien und -Publikationsdienste [DINI Certificate for Open Access Repositories and Publication Services], available at: <https://dini.de/dienste-projekte/dini-zertifikat> [accessed April 2026].

For research data, the NFDI consortia are building a federated infrastructure of trusted, discipline-specific repositories aligned with FAIR principles. The NFDI framework explicitly requires consortia to adopt "a consistent approach to data use and access as well as findability and re-usability of data based on the FAIR principles" and to ensure "international compatibility" and "efficiency and sustainability."

6.2.4. Metadata and persistent identifier requirements

The use of metadata and persistent identifiers is strongly encouraged and supported by infrastructure requirements but not mandated by national-level binding regulation. The DFG guidelines on the Handling of Research Data require applicants to specify "discipline-specific standards (if applicable)" in data management plans, implicitly covering metadata and identifier use. The NFDI consortia are tasked with developing "cross-disciplinary metadata standards" and ensuring data management measures are "machine-actionable" and interoperable.

DINI-certified repositories must meet standards for metadata quality and export, including support for standardised metadata schemas (Dublin Core, DataCite, discipline-specific schemas) and provision of OAI-PMH interfaces for metadata harvesting. These requirements ensure that repository content is indexed by national and international aggregators, including OpenAIRE and BASE (Bielefeld Academic Search Engine).

For publications, the DFG's Open Access Publication Funding programme requires funded institutions to make "publication metadata (including cost data)" openly accessible via DFG-proposed infrastructure, ensuring transparency and enabling system-level monitoring.

6.2.5. Peer review approaches

German open access policies do not prescribe specific peer review models, and there is no binding national framework for community-led peer review.

Some German institutions (e.g. Berlin University Alliance, Freie Universität Berlin, TU Braunschweig) publicly link their CoARA action plans to reform of internal evaluation, but these are voluntary institutional commitments rather than binding national policy.

Community-led or diamond open access journals encouraged by the DFG's support for the Action Plan for Diamond Open Access²⁸⁷ and by the *Wissenschaftsrat*'s recommendations on scholarly publishing²⁸⁸ often employ society-based or community-led editorial and peer review models, but these operate at the venue level and are not formally embedded in national OA policy.

6.2.6. Links to researcher assessment

The 2023 Joint Guidelines emphasise that sustainable transformation requires cultural change in science and highlight that recognition of "making research data available" and other open science contributions in evaluation and career progression should be strengthened, without prescribing concrete assessment criteria. The BMFTR and DFG have not yet adopted formal rules that, for example, condition future funding on a demonstrated track record of open access publications or data sharing.

CoARA participation introduces a bottom-up linkage between open access and assessment in Germany (see also discussion in the previous section).

²⁸⁷ Deutsche Forschungsgemeinschaft (DFG), 'DFG Signs Action Plan for Diamond Open Access', Information for Science No. 22-26, 2022, available at: <https://www.dfg.de/en/news/news-topics/announcements-proposals/2022/info-wissenschaft-22-26> [accessed April 2026].

²⁸⁸ Wissenschaftsrat (German Council of Science and Humanities), Empfehlungen zur Transformation des wissenschaftlichen Publizierens zu Open Access [Recommendations on the Transformation of Scholarly Publishing to Open Access], Drs. 9477-22, 2022, available at: https://www.wissenschaftsrat.de/download/2022/9477-22_en.pdf?blob=publicationFile&v=22 [accessed April 2026]. English version.

6.2.7. Public funding thresholds

Germany has an explicit public-funding threshold embedded in the copyright enabling framework for publications: §38(4) UrhG applies where the scholarly contribution results from a research activity “at least half funded from public funds” (≥50%), thereby defining a statutory scope condition for the secondary publication right.

For research data, no directly analogous national OA threshold (as a legal trigger for mandatory data OA) is evidenced in the sources identified.

6.2.8. Provisions for small and medium publishers

The 2023 Joint Guidelines stress that “small and medium-sized scientific publishers make a decisive contribution” to a diverse publication system and call on the science system to support non-profit and science-led publication formats, including diamond open access models that charge no fees to authors or readers. The Wissenschaftsrat (German Council of Science and Humanities) similarly recommends strengthening community-based and non-profit OA publishing infrastructures, including institutional and consortia publishing platforms that can host journals and monographs currently run by Small and Medium Publishers (SMPs).

The DFG’s endorsement of the Action Plan for Diamond Open Access and its support for OA infrastructure and publication funding schemes that are open to non-profit venues thus provides indirect financial support for SMPs and community-led initiatives, insofar as institutions can use DFG funds for publications in such venues. In this context, it is also worth noting that the DFG signed a three-year service agreement with DOAJ effective 1 May 2025, strengthening national support for journal indexing infrastructure.²⁸⁹

6.2.9. Identified costs of, or gains from, applying open access policies

For publications, the Open Access Monitor (OAM) and DEAL information provide quantitative data on APC expenditure, hybrid vs. gold OA shares, and per-article fees.

In the joint guidelines stakeholders highlight improved access to German research outputs, greater international visibility, and better alignment with EU open science expectations as key benefits. The Wissenschaftsrat argues that a comprehensive transition to OA improves the efficiency and transparency of scholarly communication and can strengthen German science’s international competitiveness.

For research data, NFDI investment (up to €85 million per year) builds infrastructure and skills that support FAIR-compliant data sharing, with expected benefits in reproducibility, data reuse, and cross-disciplinary discovery, though quantitative reuse indicators are still emerging.

6.2.10. Security considerations

Security framing is not a prominent feature of Germany’s main OA coordination instruments (Joint Guidelines; DEAL).

For research data, security and controlled access considerations are reflected in Germany’s broader data governance landscape: the federal data strategy²⁹⁰ addresses data provision and use alongside data protection and cybersecurity. German practice is structurally compatible with “as open as possible, as closed as necessary” for data.

²⁸⁹ Deutsche Forschungsgemeinschaft (DFG), ‘DFG Signs Three-Year Service Agreement with the Directory of Open Access Journals (DOAJ)’, Information for Research No. IFR 25-33, 2025, available at: <https://www.dfg.de/en/news/news-topics/announcements-proposals/2025/ifr-25-33> [accessed April 2026].

²⁹⁰ Federal Ministry for Economic Affairs and Climate Action (Bundesministerium für Wirtschaft und Klimaschutz, BMWK), ‘Federal Cabinet Adopts National Data Strategy’, press release, 30 August 2023, available at: <https://www.bundeswirtschaftsministerium.de/Redaktion/EN/Pressemitteilungen/2023/08/20230830-federal-cabinet-adopts-national-data-strategy.html> [accessed April 2026]. Note: this relates to public sector information though.

6.2.11. References to simplification regarding open access

The 2023 Joint Guidelines note the need to “reduce legal hurdles” and call for a review of frameworks to make open access easier, including improving cost transparency and simplifying processes for researchers and institutions, but they do not list specific simplification measures or timelines.

6.2.12. Role of artificial intelligence in open access policies

The role of AI is not yet an explicit component of Germany’s open access policy framework.

6.3. Implementation and monitoring of open access policies

6.3.1. Responsibility for implementation

The BMFTR and the Standing Conference of Ministers of Education (KMK) are responsible for implementing the 2023 Joint Guidelines at the political level, mainly through coordination, funding instruments and higher-education contracts rather than direct operational tasks.

Individual Länder ministries (e.g. MWFK Brandenburg, MWK Baden-Württemberg, MKW NRW) implement OA elements via Land-level strategies, OA coordination offices, Land-level publication funds and integration into Hochschulverträge (higher-education performance agreements).

The DFG implements its OA and research data policies by (i) embedding expectations on OA and data management into its funding rules; (ii) running the Open Access Publication Funding programme to enable institutions to pay APCs/BPCs; and (iii) funding infrastructure and coordination projects (NFDI, Transform2Open, openCost, open-access.network).

The DEAL Consortium (under the Alliance of Science Organisations) is responsible for implementing the publish-and-read agreements with Wiley, Springer Nature and Elsevier, including technical workflows, cost allocation and communication with participating institutions.

The NFDI e.V. (association) and the NFDI Directorate coordinate implementation of the National Research Data Infrastructure. Individual NFDI consortia implement discipline-specific data services, repositories, metadata standards and FAIR practices in collaboration with participating institutions and researchers.

6.3.2. Monitoring of individual policy elements

Monitoring responsibilities are fragmented, with no single national authority covering all elements. The DFG monitors implementation of its OA Publication Funding programme and data guidelines. The Open Access Monitor Germany (OAM), operated by Forschungszentrum Jülich, is a central tool for monitoring OA implementation at institutional and national level.²⁹¹ It “analyses data on the publication output of German scientific institutions” and records both publication and subscription costs. MPDL Services GmbH is responsible for monitoring implementation of DEAL agreements.

Within NFDI, monitoring responsibilities are split between the NFDI Expert Committee appointed by DFG, which evaluates consortia proposals and reviews progress from a scientific and infrastructural perspective; the Joint Science Conference (GWK), which takes funding decisions and thus indirectly monitors progress across funding phases; and NFDI’s own governance (Directorate, Scientific Senate).

²⁹¹ Its functionality is described in detail at Mittermaier, B., Barbers, I., Ecker, D., Lindstrot, B., Schmiedicke, H. and Pollack, P., ‘The Open Access Monitor Germany’, O-Bib. Das Offene Bibliotheksjournal, 5(4) (2018), pp. 84–100, <https://doi.org/10.5282/o-bib/2018H4S84-100>.

In Brandenburg, the Vernetzungs- und Kompetenzstelle Open Access (VuK) and its AG Open Access Monitoring perform Land-wide monitoring of OA shares and publication costs for eight higher-education institutions, publishing detailed reports (e.g. Open Access Monitoring Brandenburg). In other Länder (e.g. NRW, Berlin), state initiatives (openaccess.nrw, Open-Access-Büro Berlin) collect and summarise OA data at Land level, though methodologies differ.

6.3.3. Overall policy monitoring

Germany does not exhibit a single centralised national OA compliance authority. OAM is widely used by libraries, DFG and policymakers as the de facto national monitoring infrastructure for publication-side-implementation.

This fragmentation is recognised in workshops such as “Practices and Infrastructures of Open Access Monitoring” (OAT 2025), where DFG-funded projects (OA Datenpraxis, openCost, Transform2Open) discussed the need for standardisation, interoperability and transparent governance in OA monitoring.²⁹²

6.3.4. Reporting arrangements

Reporting on open access implementation in Germany follows several parallel streams that reflect the distributed governance structure. For DFG-related policies, researchers and institutions report directly to the DFG through project final reports, which include information on publications and research data, and, where the Open Access Publication Funding programme is used, through annual applications specifying the number of funded articles and associated costs. The Open Access Monitor (OAM) team at Forschungszentrum Jülich transmits aggregated publication and cost data to the DFG and explicitly states that it “monitors the Open Access Publication Funding programme on an ongoing basis” for the DFG. In turn, the DFG reports on major initiatives such as NFDI and on OA-related programmes to the Joint Science Conference (GWK) and to the broader public via press releases and annual or programme-specific reports.

Under the DEAL agreements, reporting flows primarily between participating institutions and MPDL Services GmbH (the DEAL operating entity). Institutions supply publication statistics and cost data and receive individual account statements and benchmarking information through the DEAL Cost Modelling Tool and annual operational reviews. MPDL Services and the DEAL consortium summarise overall progress, in press releases and annual “Jahresrückblick”-type (i.e. “year-in-review”-type) communications to the Alliance of Science Organisations and the public (but not on a granular level).

Within the National Research Data Infrastructure (NFDI), individual NFDI consortia submit annual scientific and structural reports to the NFDI Directorate and the DFG, and they undergo mid-term and final evaluations by the NFDI Expert Committee appointed by the DFG. Based on these reports and evaluations, the DFG and NFDI governance prepare funding recommendations and progress assessments for the GWK, whose decisions on continuation or expansion of funding mark progress between NFDI phases.

At Land- and institutional levels, universities report to their respective Länder ministries on performance indicators under Hochschulverträge or science plans, and in several Länder these indicators include open access metrics that are then used in Land-level OA monitoring initiatives (for example, Brandenburg’s Open Access Monitoring Brandenburg (OAMBB) and NRW’s openaccess.nrw activities).

6.3.5. Results of impact evaluations

Germany has rich monitoring data but very few formal impact evaluations in the narrow sense.

The Open Access Monitor shows steadily rising OA shares for German-affiliated journal articles, with national OA rates around 68% according to the current dashboard figures.²⁹³

²⁹² openCost Project, ‘Open Access Monitoring: Practices and Infrastructures — Recap from OAT 2025’, available at: <https://www.opencost.de/en/news/open-access-monitoring-practices-infrastructures/> [accessed April 2026].

²⁹³ Open Access Monitor Germany (OAM), Forschungszentrum Jülich, National OA Dashboard, available at: <https://open-access-monitor.de/?culture=en> [accessed April 2026]. The dashboard provides further disaggregation.

A long-term analysis for 2005–2019²⁹⁴ reports that overall publication output increased by 177% between 2005 and 2019, from just over 100 000 to almost 300 000 publications per year, with an average annual growth rate of 8%. Within this growth, closed-access publications grow at about 5% per year, whereas gold OA grows at around 25% per year and hybrid OA at around 30% per year, confirming that OA, and especially gold/hybrid, expands much faster than closed access. Second, the OA share rises in every Land by roughly 20 percentage points over the period, but starting levels and trajectories differ. Third, the study documents a strong publisher concentration: over the full period, Springer Nature, Elsevier and Wiley together account for 59% of German-affiliated publications, while the four main pure OA publishers (PLOS, Frontiers, Copernicus, MDPI) together account for just 3.6%, even though some of them show very high growth rates in recent years. The report also shows how OA patterns differ by field (e.g. green OA dominant in physics and mathematics, relatively high OA in biology and economics, high closed-access shares in chemistry and engineering) and by major funder, including DFG and BMFTR. The authors explicitly note that the dataset covers the period before the full effects of Projekt DEAL and later DFG funding reforms and therefore provides a pre-transformation baseline for future impact assessments.

The companion article “Open access uptake in Germany 2010–2018: adoption in a diverse research landscape”²⁹⁵ establishes that 45% of all considered articles are openly accessible at the time of analysis (2020), with the OA share increasing from 37% in 2010 to 52% in 2018; the absolute number of closed-access articles remains roughly flat or slightly declining after 2013, while OA articles increase continuously. A key result is that subject-specific repositories (notably arXiv and PubMed Central/Europe PMC) are the most prevalent OA route, but publication in fully OA journals and deposition in institutional repositories also show similarly steep growth; many OA articles are simultaneously available via a journal and at least one repository, and 72% of OA articles have more than one OA full-text location. By grouping institutions into major sectors (universities, Helmholtz centres, Fraunhofer institutes, Max Planck Institutes, Leibniz institutes, government research agencies), the authors demonstrate large differences in OA uptake that reflect sectoral missions, disciplinary profiles and governance structures.²⁹⁶

Helmholtz reports that for publication year 2023 the OA rate is approximately 85% across Helmholtz (based on the most current survey as of 2025).²⁹⁷

The federal report “Open Access in Germany – Joint Guidelines of the Federal Government and the Länder” acknowledges these positive trends and positions the federal and Länder measures as contributing to a “significant increase” in freely accessible scientific outputs, yet it does not include a formal, indicator-based impact assessment.

On the cost side, DFG’s Transform2Open project and the Open Access Monitor focus on improving cost transparency and modelling institutional “information budgets” in the shift from subscriptions to publication-based contracts, but the Transform2Open description explicitly notes ongoing “fragmentation” of implementation and the need for better monitoring rather than presenting completed evidence that the transformation has reduced or increased total expenditure.

Transform2Open interim work shows that many institutions are in the process of rebalancing their “information budgets” from subscriptions to publication-based payments, with OAM data used to plan and model these transitions.²⁹⁸

²⁹⁴ Barbers, I. and Pollack, P. (Forschungszentrum Jülich), Open Access in Deutschland — Entwicklung in den Jahren 2005–2019 [Open Access in Germany — Development in the Years 2005–2019], Forschungszentrum Jülich, 2021, 68 pp., available at: <https://user.fz-juelich.de/record/866084> [accessed April 2026; in German].

²⁹⁵ Hobert, A., Jahn, N., Mayr, P., Schmidt, B. and Taubert, N., ‘Open Access Uptake in Germany 2010–2018: Adoption in a Diverse Research Landscape’, *Scientometrics*, 126(12) (2021), pp. 9751–9777, <https://doi.org/10.1007/s11192-021-04002-0>.

²⁹⁶ For a summary of these two studies see also open-access.network, ‘Neue Studien zur langjährigen Entwicklung von Open Access in Deutschland’, available at: <https://open-access.network/services/news/artikel/neue-studien-zur-langjaehrigen-entwicklung-von-open-access-in-deutschland> [accessed April 2026; in German].

²⁹⁷ Helmholtz Association, Open Access at Helmholtz, available at: <https://os.helmholtz.de/en/open-access/> [accessed April 2026].

²⁹⁸ Höhnnow, T. et al. (GFZ German Research Centre for Geosciences / Transform2Open Project), Transform2Open: Cost Monitoring, Criteria, Competencies, and Processes of the Open Access Transformation, 2022, GFZpublic item 5025267, available at: https://gfzpublic.gfz.de/rest/items/item_5025267_1/component/file_5025268/content [accessed April 2026].

For research data, the National Research Data Infrastructure (NFDI) is still in an early consolidation phase. The DFG and GWK describe continued funding for the first NFDI consortia as a sign of successful establishment of key infrastructures and emphasise that the second funding phase will focus on consolidation and broader uptake, yet published materials remain at the level of programme-level progress reporting rather than quantified impact on FAIR compliance or data reuse.

7. Estonia

7.1. General characteristics

7.1.1. Policies formulated as strategies, funder mandates and/or legislation

In Estonia, open access (OA) policy is articulated through funder mandates led by the Estonian Research Council, government-level research, development and innovation (RDI) strategy/implementation planning that references open science and the national research information infrastructure. Broader “open data / re-use” legislation exists for public-sector information adjacent to, but not the same as, OA to scientific publications and research data. However, since a 2021 amendment transposing the Open Data Directive, the Public Information Act contains a research-data-specific provision. The provision thus establishes a conditional statutory re-use obligation for already-published research data.²⁹⁹ The University of Tartu’s Open Science overview thus concludes that “the national policy on open science has not been clearly formulated so far”.³⁰⁰

The previous RDI strategy Knowledge-based Estonia 2014–2020 explicitly encouraged open access to publicly financed research results and research data, and recognised OA principles as an underlying standpoint.³⁰¹ More recently, the document “Open Science in Estonia: Principles and Recommendations” (2016),³⁰² prepared under the coordination of the Estonian Research Council (ETAg) and the Ministry of Education and Research provided recommendations on open access to publications and on research data management and sharing but, as a policy document it has no formal legal status.

The current Estonian Research, Development, Innovation and Entrepreneurship Strategy 2021–2035 (TAIE), adopted by government and parliament as the overarching RDI framework, references open science (article 1.10) and aims to develop policies and a roadmap to support it (in conjunction with high-performance computing (HPC), article 2.5.) It is accompanied by an Open Science framework annex³⁰³ as a working document whose key elements include open access to research publications, preservation and reuse of scientific information, and skills and competences for Open Science.

At the level of funder mandates, the Estonian Research Council (ETAG), as the main public research funding organisation, manages competitive individual and institutional research funding. ETAG requires that articles resulting from publicly funded research be made open with implementation via the Estonian Research Information System (ETIS) acting as a central repository of research publications.

²⁹⁹ As described in University of Tartu, Open Science in Estonia, available at: <https://sisu.ut.ee/andmehaldus/open-science-estonia/?lang=en> [accessed July 2026], quoting the provision in English.

³⁰⁰ op cit

³⁰¹ Government of the Republic of Estonia, Knowledge-Based Estonia: Estonian Research, Development and Innovation Strategy 2014–2020, approved by the Riigikogu, 2014. Summarised in: University of Tartu, Open Science in Estonia, available at: <https://sisu.ut.ee/andmehaldus/open-science-estonia/?lang=en> [accessed April 2026].

³⁰² Estonian Research Council (ETAg), *Open Science in Estonia: Principles and Recommendations for Developing National Policy*, 2016, available at: <https://www.etag.ee/wp-content/uploads/2017/03/Open-Science-in-Estonia-Principles-and-Recommendations-final.pdf> [accessed April 2026].

³⁰³ Ministry of Education and Research of the Republic of Estonia, Eesti avatud teaduse raamistik [Estonian Open Science Framework], working document, 16 November 2020, available at: https://www.hm.ee/sites/default/files/documents/2023-01/eesti_avatud_teaduse_raamistik_16112020.pdf [accessed April 2026; in Estonian; AI-assisted translation used for the purposes of this study].

For research data, ETAG had progressively introduced data management obligations: from 2017, grant applications had to indicate how project data would be managed, and individual grant applicants were required to submit research data management plans for evaluation, with full DMP submission foreseen as a standard requirement. These measures constituted emerging funder-level mandates for research data management and, indirectly, for data openness, aligned with Horizon 2020 and Horizon Europe practices but not a general legal obligation for all publicly funded data. However, regarding DMPs, starting in 2026, ETAG has foregone the requirement for DMPs due to the lack of guidelines for evaluating their content. Therefore, it was argued that they had become an additional bureaucratic burden for both applicant and funder without any meaningful impact.³⁰⁴

7.1.2. Bindingness in terms of implementation

The Open Science in Estonia recommendations and the Open Science framework annex to TAIE, while influential, are formally non-binding. The Public Information Act is binding for public-sector information holders but is not framed as an OA-to-research-outputs mandate.

As to funder level policies, ETAG's principal reference text on open science, "Open Science in Estonia: Principles and Recommendations for Developing National Policy" (2016), states that from 2013 "competition-based funding instruments (institutional and personal research funding) include a requirement for open access: 'The publications that result from the implementation of the research theme shall be freely available to the public in the Estonian Research Information System (ETIS), unless set forth otherwise in the conditions for publication, and for the protection of intellectual property or state or business secrets'."

Under the new Organisation of Research and Development and Innovation Act (as of October 1, 2025), the Estonian Research Council (ETAG) does not have the authority to set conditions for the allocation of research and development funding any more.³⁰⁵ As of 2026, the conditions for national research funding (postdoctoral grant, starting grant and team grant) are therefore regulated by Regulation No. 6 of 2 February 2026 of the Minister of Education and Research "Specific conditions of and procedure for applying for and evaluating the application for national research funding and allocating and reclaiming the funding".³⁰⁶ Section 28 of the Regulation governs the publication of project results as follows:

- (1) The results of the research funding project and, where possible, the data collected in the framework of the project shall be made publicly available, unless disclosure is limited by other legislation or by the need to protect intellectual property.
- (4) The full texts of publications published as a result of the project and referring to the research funding will be made available to the public by the Institution through ETIS, unless this is restricted by other legislation.
- (5) If a publisher restricts access to publications for a certain period of time, the Institution shall make the full texts of the publications available to the public via ETIS after the restriction has ended.

Although not phrased in these terms, this policy is thus clearly a green OA approach.³⁰⁷

³⁰⁴ Perspective provided by the NPR.

³⁰⁵ Important update by the NPR. A previous version of this country fiche discussed the policy set up ETAG.

³⁰⁶ Kristina Kallas (Minister of Education and Research), Riikliku uurimistoetuse taotlemise, taotluse hindamise, toetuse määramise ning toetuse tagasinõudmise täpsemad tingimused ja kord [Detailed Conditions and Procedure for Applying for, Evaluating, Awarding and Recovering National Research Grants], Regulation No. 6, issued 2 February 2026, in force 8 February 2026, Riigi Teataja I, 05.02.2026, 20, available at: <https://www.riigiteataja.ee/akt/105022026020> [accessed April 2026; in Estonian; information provided by NPR].

³⁰⁷ EIFL, Open Access in Estonia: Case Study, August 2014, available at: <https://eifl.net/system/files/resources/201408/oa-case-studystonia-final.pdf> [accessed April 2026]. See also: EIFL, Open Science in Estonia, available at: <https://www.eifl.net/eifl-in-action/open-science-estonia> [accessed April 2026].

7.1.3. Scope of the policy

The TAIE Open Science framework annex is structured around four main elements: research culture, open access to research publications, preservation and reuse of scientific information, and skills and competencies. However, this document only exists as a working draft.

ETAG's practices and materials on open science cover both open access to publications (through ETIS and journal policies) and open research data (through data management planning, data repositories and FAIR-aligned infrastructures such as the Estonian Scientific Computing Infrastructure (ETAIS), a consortium of the University of Tartu, Tallinn University of Technology, and other partners providing shared storage and computing services).

7.1.4. Embargoes or immediate open access

The Open Science in Estonia recommendations and institutional guidance stipulate that publications resulting from competitive research funding must be made freely available to the public through ETIS, "unless set forth otherwise in the conditions for publication, and for the protection of copyright and intellectual property". This wording explicitly accommodates publisher embargoes and restrictive copyright agreements; it does not impose a maximum embargo period, nor does it require rights retention that would override publisher conditions.

For research data, the Open Science in Estonia recommendations state that research data collected with public funding should be freely accessible and reusable "if not restricted by legal requirements" and that data should be made available "at the earliest opportunity, but no later than by the completion of the related research project". This effectively sets a soft deadline for data openness tied to project completion but allows restrictions (including de facto embargoes) where necessary for reasons such as personal data protection, national security or intellectual property. The wider open data framework adopts the EU's "as open as possible, as closed as necessary" principle, emphasising open data by default while respecting legitimate exceptions.

7.1.5. Copyright, rights retention and secondary publication rights

Estonia does not currently have a dedicated national secondary publication right for scholarly articles akin to legislative models in some other EU Member States, and no evidence indicates a statutory right that would allow authors or institutions to self-archive manuscripts irrespective of publisher terms.

The 2016 recommendations state: "Of different content licences, it is *preferable* to use for research publications the Creative Commons Attribution 4.0 International licence (CC BY 4.0) or other licences that meet the definition of free cultural works." (emphasis added). For research data, the same document and related training materials recommend the use of standard open data licences such as CC BY or CC0 to facilitate reuse. The TAIE Open Science framework annex also references CC BY as a preferred licence for supported publications (within the framework's approach to OA timelines and platforms/repositories).

However, these recommendations are voluntary and do not alter underlying copyright ownership. The conditions for national research funding (postdoctoral grant, starting grant and team grant) as regulated by Regulation No. 6 of 2 February 2026 of the Minister of Education and Research stipulate that the full texts of publications must be made publicly available in ETIS, unless this is restricted by other legislation. If a publisher restricts access to publications for a certain period of time, the institution shall make the full texts of the publications available to the public via ETIS *after the restriction has ended*.

Individual research institutions may thus be using Creative Commons or open data licences but without a national rights-retention framework.

7.2. Context of open access policies

7.2.1. Training or guidance for researchers

Training and guidance on open access to publications and research data are provided through a combination of university libraries, national projects and Nordic-Baltic collaborations. The University of Tartu Library is organising annual Open Access Week events since 2010, workshops and seminars on open access publishing, copyright and research data management, and acting as the OpenAIRE National Open Access Desk.³⁰⁸ The Research Data Management and Publishing online resource maintained by the University of Tartu also provides extensive guidance on data management, open data and open access to publications.³⁰⁹

The Nordic e-Infrastructure Collaboration (NeIC) FAIR Data Collaboration project has involved Estonia, offering training on FAIR data stewardship to researchers and data stewards in the Nordic and Baltic region.³¹⁰ Within the EOSC context, Estonia's EOSC Task Force and the University of Tartu as EOSC-Association mandated organisation have facilitated workshops, training sessions and awareness campaigns about EOSC services, research data management and FAIR principles.³¹¹

7.2.2. Funding for open access

Estonia does not operate a large, central national fund for article processing charges. Costs are typically handled at institutional level through library budgets and participation in consortia agreements. ETAG's grant schemes seem to allow project budgets to include publication costs but do not earmark separate open access funds.

The costs related to the publication of research results and data are included in the budgets of research projects for ETAG and similar research funding in Estonia, for example Centres of Excellence, applied science grants etc. as part of the dissemination budget.³¹²

National library-consortium arrangements (ELNET) enable cost-shifting and APC avoidance through transformative/read-and-publish agreements.³¹³ EIFL has negotiated open access publishing terms and APC discounts for Estonian authors with publishers such as SAGE, under which corresponding authors in EIFL member countries (including Estonia) receive reduced APCs in gold OA journals.³¹⁴

7.2.3. Repository requirements (incl. FAIR principles)

For research data, the "Open Science in Estonia" recommendations encourage the use of trusted repositories, preferably international or discipline specific ones, and emphasise secure preservation and reuse. Estonia's participation in the DataCite consortium³¹⁵ and EOSC aligned infrastructures (ETAIS) provides common storage and computing resources to RPOs and is part of Estonia's contribution to EOSC; it underpins local data repositories and services.

³⁰⁸ See OpenAIRE, University of Tartu — National Open Access Desk (NOAD), available at: <https://www.openaire.eu/university-of-tartu> [accessed April 2026].

³⁰⁹ University of Tartu, *Research Data Management and Publishing* (online resource), available at: <https://sisu.ut.ee/andmehaldus/?lang=en> [accessed April 2026].

³¹⁰ NordForsk / Nordic e-Infrastructure Collaboration (NeIC), *FAIR Data Collaboration — Nordics*, available at: <https://www.nordforsk.org/news/fair-data-collaboration-nordics> [accessed April 2026].

³¹¹ EOSC Association, 'Estonia's Digital Strength in the Public Sector Accelerates Open Science', EOSC News, available at: <https://eosc.eu/news/estonias-digital-strength-in-the-public-sector-accelerates-open-science/> [accessed April 2026].

³¹² Information provided by NPR.

³¹³ See ELNET Consortium, Research Databases and Services, available at: <https://www.elnet.ee/language/en/services/research-databases/>

³¹⁴ SAGE Publishing, Open Access Agreements: Estonia — EIFL, available at: <https://www.sagepub.com/journals/information-for-authors/publishing-options/open-access-agreements/estonia-eifl>

³¹⁵ TalTech (Tallinn University of Technology) Library, Research Visibility and DataCite Estonia, available at: <https://taltech.ee/en/library/research-visibility> [accessed April 2026].

Estonia has developed repository options and PID workflows (e.g. DataDOI³¹⁶) aligned with persistent identification and discovery, and institutional repositories such as TalTechData³¹⁷ provide local capacity for data and related materials; these are consistent with FAIR-oriented repository expectations.

The Organisation of Research and Development and Innovation Act Section 19³¹⁸ states:

(5) A research and development institution, university and evaluated professional higher education institution are required to: [...] 2) ensure that scientific publications and data *can be found, are accessible, interoperable and reusable* if this is not restricted by the protection of personal data, intellectual property and business secrets or other restrictions arising from legislation;

Therefore, compliance with the FAIR principles is required for the publication of research data in repositories.³¹⁹

7.2.4. Metadata and persistent identifier requirements

The 2016 Recommendation includes explicit references to use of metadata and persistent identifiers for both publications and research data, but these expectations are primarily advisory.

Practically, implementation is supported by the Estonian DataCite Consortium, established in 2015 by the University of Tartu and other universities with backing from the Academy of Sciences and ETAG. The consortium assigns DOIs to datasets and other research outputs to improve their international visibility and citability. For publications, ETIS enhancements include OA metadata capture (automatic OA information import into publication forms).³²⁰

7.2.5. Peer review approaches

Estonian national open access or Open Science policies do not explicitly address peer review approaches, including community-led models, as part of their open access framework.

7.2.6. Links to researcher assessment

ETAG joined the Coalition for Advancing Research Assessment (CoARA) and adopted an action plan, positioning assessment reform as an aligned governance track; this provides a policy channel through which open science practices (including OA outputs) can be recognised more explicitly in evaluation over time.³²¹

In the 2024 state organised regular evaluation, which assessed the level of research and development activities of all Estonian universities and research and development institutions, one of the criteria for assessing scientific impact was the share of open access scientific articles.³²² Therefore, it can be argued that Estonia also applies open science principles in the evaluation of research and development activities.³²³

³¹⁶ DataDOI, Estonian Research Data DOI Service, available at: <https://datadoi.ee/> [accessed April 2026].

³¹⁷ TalTech (Tallinn University of Technology) Library, TalTechData — Research Data Repository, available at: <https://taltech.ee/en/library/research-data-repository>

³¹⁸ Organisation of Research and Development and Innovation Act (Teadus- ja arendustegevuse ning innovatsiooni korralduse seadus), Riigikogu, consolidated text as of 16 October 2025, Riigi Teataja I, 12.07.2025, 1, English translation available at: <https://www.riigiteataja.ee/en/eli/ee/Riigikogu/act/516102025001/consolide>

³¹⁹ Information provided by the NPR.

³²⁰ Estonian Research Information System (ETIS), Development Updates, available at: <https://www.etis.ee/Portal/Developments> [accessed April 2026].

³²¹ Estonian Research Council (ETAg), CoARA Action Plan, November 2024, available at: <https://etag.ee/wp-content/uploads/2024/11/Estonian-Research-Council-CoARA-action-plan.pdf>

³²² Estonian Research Council (ETAg), *Regular Evaluation Guidance 2024*, Tallinn: ETAg, 2024, available at: <https://etag.ee/wp-content/uploads/2024/05/Regular-Evaluation-Guidance-2024.pdf> provided by NPR.

³²³ Assessment provided by NPR.

Institutionally, the University of Tartu and other universities are increasingly engaged in discussions on responsible research assessment, including through participation in alliances such as the European University Alliance ENLIGHT and alignment with broader European reforms. The ENLIGHT Open Science principles signed by rectors emphasise open access, FAIR data and responsible research assessment as interconnected dimensions.³²⁴

7.2.7. Public funding thresholds

No explicit national threshold rule was identified for either publications or research data in the reviewed Estonian policy/strategy and guidance sources. Instead, they use broader concepts such as “publicly funded research” or “research data collected with the support of public funding”.

7.2.8. Provisions for small and medium publishers

No explicit Estonia-specific OA provisions targeting small and medium publishers were identified in the reviewed sources.

The dominant affordability/market-intervention mechanism evidenced is the library-consortium model (ELNET) and publisher agreements, which are structurally neutral regarding publisher size, even if in practice such agreements often prioritise larger publishers and packages.

The Open Science in Estonia recommendations and related national discussions recognise the importance of Estonian scholarly journals, many of which are published by universities or learned societies and often operate as gold open access outlets without APCs, that is de-facto diamond OA.

7.2.9. Identified costs of, or gains from, applying open access policies

Available studies identify and discuss potential costs and benefits of implementing open access policies in qualitative and analytical terms;³²⁵³²⁶ however, no comprehensive, quantitative national-level cost-benefit assessment has been conducted.

For publications, there are reports in Estonia that present limited access to paywalled research as an economic issue (e.g. news reporting citing the cost of providing nationwide access to scientific publications³²⁷).

On the benefits side, EIFL case studies and national Open Science narratives stress that open access has increased the visibility and accessibility of Estonian research.

Open data policy assessments highlight that making public data—including research-related datasets—open is expected to foster transparency, innovation and re-use by businesses and researchers, and that Estonia’s open data maturity has improved significantly since 2018, especially in terms of impact.³²⁸

³²⁴ As described at University of Tartu, Open Science in Estonia (overview), available at: <https://sisu.ut.ee/andmehaldus/open-science-estonia/?lang=en>

³²⁵ Toom, K., Olesk, A., Ruusalepp, R., Kaal, E., Mandre, S. and Vaikmäe, R., Avatud teadus Eestis ja Euroopas: erinevate sihtrühmade vaatenurgast [Open Science in Estonia and Europe: Possibilities and Potential from the Viewpoint of Different Target Groups], Tallinn University and Estonian Academy of Sciences, Tallinn, 2017 (in Estonian; English executive summary pp. 12–16), available at: https://www.etag.ee/wp-content/uploads/2018/02/Avatud-teadus-Eestis-ja-Euroopas_T%C3%9C-ja-ETA.pdf

³²⁶ Kelli, A., Mets, T., Vider, K. and Kull, I., Avatud teadus Eestis ja Euroopas: õiguslik ja majanduslik käsitlus [Open Science in Estonia and Europe: Legal and Socio-Economic Aspects], University of Tartu, Tartu, 2017 (in Estonian; English executive summary pp. 6–9), available at: https://www.etag.ee/wp-content/uploads/2018/02/Avatud-teadus-Eestis-ja-Euroopas_T%C3%9C.pdf

³²⁷ ERR News (Estonian Public Broadcasting), ‘Academic Publishers’ Billion-Dollar Business Paywalling Estonian Research’, 18 September 2025, available at: <https://news.err.ee/1609804398/academic-publishers-billion-dollar-business-paywalling-estonian-research> [

³²⁸ European Commission / Publications Office, Open Data Best Practices in Europe: Estonia, Slovenia and Ukraine (case study report), available at: https://data.europa.eu/sites/default/files/report/Open_Data_Best_Practices_in_Europe_Estonia_Slovenia_and_Ukraine.pdf [accessed April 2026].

7.2.10. Security considerations

Open science policy documents in Estonia acknowledge the need to preserve research data securely but they do not elaborate a detailed security policy framework specifically for open access to publications or data.

The Public Information Act establishes that access to public information may be restricted where necessary to protect the inviolability of private life, national security, defence, or business secrets, and that only information free of such restrictions qualifies as “open data” for re-use.

7.2.11. References to simplification regarding open access

There are no explicit references to regulatory simplification in open access policies. However, the discontinuation of mandatory data management plans justified on the ground that they had become a bureaucratic burden for applicant and funder without meaningful impact can be seen as a simplification measure (if one accepts this logic).

As in other cases, it could be argued that some structural features of the OA landscape result in simplification, such as using ETIS as a central platform for managing research information and open access publications or participation in national infrastructures such as ETAIS and in EOSC-related initiatives aiming to streamline data storage and sharing.

7.2.12. Role of artificial intelligence in open access policies

No explicit treatment of AI either as an opportunity (e.g. automated metadata enrichment) or a threat (e.g. large-scale text/data mining risks, integrity concerns) was identified in the reviewed Estonia-specific OA/open science policy pages, strategy excerpts, and guidance sources for either publications or research data.

7.3. Implementation and monitoring of open access policies

7.3.1. Responsibility for implementation

At the governmental level, the Ministry of Education and Research is responsible for overall RDI policy, including developing RDI strategies (Knowledge-based Estonia; TAIE), coordinating the Open Science framework annex, and preparing relevant legislation such as the Organisation of Research and Development and Innovation Act. The ministry sets strategic expectations for open access and Open Science but delegates implementation to funders, research performing organisations and infrastructure operators. For open data more broadly (including research data held by public authorities), the Ministry of Justice and Digital Affairs together with the national open data coordination team operating the Estonian open data portal (avaandmed.eesti.ee), are responsible for implementing the open data provisions of the Public Information Act and the Open Data and Data Management Action Plans, including the national open data portal and guidelines for data providers.³²⁹ ETAG is the central actor for implementing funder mandates on open access. However, as discussed, the terms and conditions for national research funding are since 2026 newly regulated by Regulation No. 6 of 2 February 2026 of the Minister of Education and Research “Specific conditions of and procedure for applying for and evaluating the application for national research funding and allocating and reclaiming the funding”.

Research performing organisations are responsible for implementing open access in their own operations and providing guidance (notably University of Tartu and Tallinn University of Technology).

³²⁹ Republic of Estonia, Estonian Open Data Portal, available at: <https://avaandmed.eesti.ee> [accessed July 2026]; Ministry of Justice and Digital Affairs (Justiits- ja Digiministeerium), available at: <https://www.justdigi.ee/en> [accessed July 2026]. On the portal's establishment and governance see Nikiforova, A. et al., ‘Exploring Estonia's Open Government Data Development as a Journey towards Excellence’, in Proceedings of dg.o 2024, available at: <https://dl.acm.org/doi/fullHtml/10.1145/3657054.3657161> [accessed July 2026],

7.3.2. Monitoring of individual policy elements

The Ministry of Education and Research, often in cooperation with Statistics Estonia and ETAG, monitors the implementation of national RDI strategies, including indicators related to research outputs and infrastructures.

For ETAG's own OA and RDM mandates, ETAG monitors compliance primarily through project reporting and ETIS entries: publications arising from funded projects must be reported and deposited in ETIS. These indicators are also reported, but no active monitoring is taking place.³³⁰

For legal open data obligations, the Data Protection Inspectorate (*Andmekaitse Inspeksioon*) is responsible for supervising the implementation of the Public Information Act, including ensuring that public bodies meet their obligations to publish information and protect privacy.

7.3.3. Overall policy monitoring

There is no single national body with a formal mandate to monitor overall implementation of open access and Open Science policy in Estonia. However, the Government of the Republic and the Parliament (Riigikogu) monitor the implementation of the national RDI strategy (TAIE), with the Minister of Education and Research reporting annually to the Riigikogu on execution of the strategy and on the state budget for research. TAIE includes Open Science as one of its cross-cutting themes, so in principle, progress in open access to publications and research data could be part of the overall RDI monitoring, although concrete figures do not seem to be available.

7.3.4. Reporting arrangements

Reporting lines run through funder and infrastructure governance.

ETAG, as a funder operating within the national RDI governance context and using ETIS as an operational system, is positioned to aggregate information from funded projects and institutional records, while ELNET reports on procurement and consortium-level access arrangements financed via the Ministry of Education and Research budget. Together these create de facto reporting streams from institutions, although there is no evidence that this is linked or systematised. For research data, reporting is more likely to occur through project-specific grant reporting and formerly DMP processes reflecting the fact that deposit of research data is not a universal mandatory requirement.

7.3.5. Results of impact evaluations

In general, available evidence on impacts is fragmented, combining descriptive indicators, case studies and international comparative analyses. The TAIE Open Science framework has not yet been subject to ex post evaluation, as it is still in an early phase of being implemented.

However, there have been two major qualitative studies regarding Open Access: "Open Science in Estonia and Europe: feasibility and potential from the perspective of different stakeholders" and "Open Science in Estonia and Europe: a legal and economic approach" which provide some insight into the impact of open science policies.³³¹

³³⁰ Estonian Research Information System (ETIS), Teadussilm — Open Access Dashboard, available at: <https://www.etis.ee/Teadussilm/dd3282b8-0c77-46f4-b410-d5a588b3f045> [accessed April 2026].

³³¹ Information provided by NPR.

The first study³³² examined attitudes toward open science and its perceived feasibility in the Estonian context. The principal finding relevant to impact evaluation is structural rather than quantitative: while researchers broadly acknowledged the principles of open science and open access as important, they identified significant practical barriers to implementation — including lack of motivation, absence of incentive structures in researcher assessment, and a perceived shortage of potential users of open science outputs outside academic circles. Researchers did not feel there was sufficient institutional or societal demand to justify the operational effort that open access compliance requires.

The second study³³³ found that Estonia spends approximately €4 million per year on research database licences, and that establishing a functional national open science system would require approximately €0.7 million per year in 2018–2019. On the legal side, the study examined the copyright framework applicable to Estonian researchers and found the existing statutory basis for open access insufficient; it identified the absence of a secondary publication right as a structural gap. It also recommended that research data publication be treated as a citable research output (so that data sharing can be recognised in research evaluation and career assessment and thereby incentivised).

8. Ireland

8.1. General characteristics

8.1.1. Policies formulated as strategies, funder mandates and/or legislation

Ireland's open access (OA) policy landscape is primarily driven by research funder mandates and a national coordination/strategy instrument.

The foundational policy instrument is the National Framework on the Transition to an Open Research Environment³³⁴ (published July 2019), which articulated the first comprehensive national objectives for open research across five strategic areas: open access to publications; enabling FAIR research data; infrastructures; skills and competencies; and incentives and rewards.

This framework was superseded by the National Action Plan for Open Research 2022–2030,³³⁵ launched 21 November 2022 by the National Open Research Forum (NORF). From 2020 until recently, NORF was housed under the Digital Repository of Ireland (DRI) at the Royal Irish Academy, which provided the secretariat and hosted the National Open Research Coordinator (NORC) post. The National Action Plan serves as a non-binding roadmap for system-wide coordination, endorsed and funded by the Department of Further and Higher Education, Research, Innovation and Science (DFHERIS), through the Higher Education Authority (HEA). This plan operates under Impact 2030: Ireland's Research and Innovation Strategy, positioning open research as a cross-cutting national priority.

The National Action Plan is structured according to three themes: establishing a culture of open research; achieving 100% open access to research publications (with a target date of 2030); and enabling FAIR research data and other outputs.

In April 2026, DFHERIS issued a formal mandate transferring NORF's hosting function to IReL (Irish Research eLibrary), following a governance review. IReL is to be fully operational as NORF's host by end of 2026.³³⁶ The role of NORF Coordinator is being transferred to the new host, IReL, as part of this arrangement.

³³² Toom et al. (2017) see previous footnote.

³³³ Kelli et al. (2017), see previous footnote

³³⁴ Department of Enterprise, Trade and Employment / Government of Ireland, National Framework on the Transition to an Open Research Environment, July 2019, available at: <https://enterprise.gov.ie/en/publications/publication-files/national-framework-on-the-transition-to-an-open-research-environment.pdf> [accessed April 2026].

³³⁵ National Open Research Forum (NORF), National Action Plan for Open Research 2022–2030, available at: <https://norf.ie/wp-content/uploads/2022/11/National-Action-Plan-for-Open-Research-webversion.pdf> [accessed April 2026].

³³⁶ IReL (Irish Research eLibrary), IReL to Host the National Open Research Forum (NORF)', press announcement, April 2026, available at: <https://irel.ie/irel-to-host-the-national-open-research-forum-norf/> [accessed April 2026];

The practical consequence of this transition is that national coordination of the Action Plan no longer has a dedicated standalone executive capacity; responsibility is consolidated within IReL's existing consortium governance.

Binding OA requirements for publications are set at funder level, notably by Research Ireland³³⁷ (successor to Science Foundation Ireland and the Irish Research Council) and by the Health Research Board³³⁸ (HRB) through their formal policy documents and grant conditions. However, it has been noted that responsibility for compliance rests with the institutions with little funder oversight.³³⁹

Individual research performing organisations have developed various open access policies. The National Action Plan identifies policy alignment as a key action (A4.5).

8.1.2. Bindingness in terms of implementation

The strongest "binding" instruments in Ireland are funder mandates: Research Ireland's Interim Open Research Policy (effective for publications submitted on/after 7 April 2025) sets mandatory OA requirements for covered peer-reviewed publications arising from its funding, and positions monitoring/compliance within grant reporting. HRB's OA policy (Version 2.0, effective 1 January 2025) similarly states immediate availability (no embargo), CC BY licensing, and mandatory rights-retention wording for manuscripts submitted for publication, and it specifies that HRB will monitor compliance via reporting of OA status.

For research data, Research Ireland's policy "encourages" FAIR data practices and data sharing but does not mandate them. The HRB requires Data Management Plans (DMPs) as a first deliverable for applicable grants³⁴⁰ (formal sign off/endorsement by the institution).

The National Action Plan itself is explicitly non-binding. Its preamble states: "open research requires collective action. The transition to a national open research environment is a shared responsibility across the research system, with local efforts required to implement policies, infrastructure and incentives within research performing and research funding organisations."

8.1.3. Scope of the policy

The National Action Plan is structured around three themes: Theme 1 (Open Research Culture), Theme 2 (Open Access to Publications), and Theme 3 (FAIR Research Data), reflecting a comprehensive approach.

Research Ireland's Interim Policy covers peer-reviewed publications (journal articles), requires data access statements, and encourages FAIR data practices. The HRB addresses both domains through separate but linked policies: the Open Access Policy for publications and the Policy on Management and Sharing of Research Data.

8.1.4. Embargoes or immediate open access

For publications, Ireland's major funders have moved toward immediate open access requirements aligned with Horizon Europe and Plan S. Research Ireland's Interim Policy requires "immediate open access (with no embargo period)" for either the VoR via Gold/Diamond OA or the AAM via Green OA. The HRB, from January 2025, similarly mandates immediate open access.

No formal embargo periods are specified in research data policy.

³³⁷ Research Ireland, Interim Open Research Policy April 2025, available at: <https://www.researchireland.ie/wp-content/uploads/2025/04/Interim-Open-Research-Policy.pdf> [accessed April 2026].

³³⁸ Health Research Board (HRB), HRB Policy on Open Access to Research Publications, Version 2.0, available at: <https://www.hrb.ie/wp-content/uploads/2025/01/HRB-Policy-on-Open-Access-to-Research-Publications-V2.0.pdf> [accessed April 2026].

³³⁹ Input from consulted expert in lieu of NPR input (not provided).

³⁴⁰ Health Research Board (HRB), HRB Policy on Management and Sharing of Research Data, Version 2.0, 2025, available at: <https://www.hrb.ie/wp-content/uploads/2025/08/HRB-Policy-on-Management-and-Sharing-of-Research-Data-Version-2.0-2025.pdf> [accessed April 2026].

8.1.5. Copyright, rights retention and secondary publication rights

Principal RFOs (HRB, Research Ireland- formerly SFI) have adopted or are aligned with Plan S rights retention principles, which favour retention of copyright by authors rather than transfer to publishers or institutions. Research Ireland's policy encourages authors to "retain copyright of their research outputs" and provides two Rights Retention statements that grant recipients may use when submitting work for publication.

Ireland does not yet have secondary publication rights embedded in copyright law. The National Action Plan explicitly identifies this gap: Action A4.2 calls for "a legal assessment of ways to support Irish researchers retain their rights and make their work open access immediately," including potentially "introducing secondary rights retention into Irish copyright legislation."

The SCOIR initiative (Secondary Copyright, Open Access, Institutional policy Rights) was awarded funding by NORF to actively working toward legislative change. They have developed a draft proposal for the 'Heads' of a Bill to introduce a secondary publication rights obligation, subject to certain exceptions, into Irish copyright law.³⁴¹ SCOIR also developed templates for OA policies, both for RPOs and RFOs in the context of the requirement for alignment in the National Action Plan.³⁴² In April 2026, the University of Galway became the first Irish institution to adopt a Research Publishing Policy explicitly built on the SCOIR framework making rights retention the default mechanism for immediate open access, with the university proactively notifying publishers rather than relying on author-inserted statements.³⁴³

8.2. Context of open access policies

8.2.1. Training or guidance for researchers

Training and guidance for researchers on open access is delivered primarily through institutional library services,³⁴⁴ research offices and (at least until the recent reorganisation) NORF-coordinated initiatives. The National Action Plan identifies upskilling researchers and professional support staff as a foundational goal (G3.1) and mandates development of a national open research training programme (A3.1.1).

The National Action Plan's Theme 1 ("Establish an Open Research Culture") includes actions to develop training resources and build capacity across the research community. For research data, training focuses on Data Management Plan (DMP) preparation, FAIR principles, and repository selection.

The NORF funded project Training for Open Research in an Irish Context (TROPIC) delivered a targeted national response to the need for practical and accessible open research training.³⁴⁵ The TROPIC II project is strengthened by the active involvement of individuals and initiatives supported through the NORF Open Research Fund, demonstrating cohesive progress toward the goals of the National Action Plan. Key contributors include leaders from NORF-funded projects such as Sonraí, ORI, iFrame, SCOIR, the National Open Access Monitor, Diamond OA Hub and MOSS-I whose expertise in data stewardship, repository alignment, infrastructure development, training and policy informs TROPIC II's design and delivery.

³⁴¹ Knowledge Rights 21, 'SCOIR Autumn 2025 Roadshow: Secondary Publication Rights and Open Access in Irish Copyright Law', October 2025, available at: <https://www.knowledgerights21.org/news-story/scoir-autumn25-roadshow/>

³⁴² Input from consulted expert in lieu of NPR input (not provided by the time of publication).

³⁴³ University of Galway, „QA237 Research Publishing Policy,“ approved 8 December 2025, <https://library.universityofgalway.ie/media/jameshardimanlibrary/content/QA237-Research-Publishing-Policy.pdf>

³⁴⁴ See for example University College Dublin Library, Open Access at UCD, available at: <https://libguides.ucd.ie/openaccess> [accessed April 2026]; Trinity College Dublin Library, Plan S and Rights Retention, available at: <https://libguides.tcd.ie/planS/rights-retention> [accessed April 2026].

³⁴⁵ TR.OP.IC — Training for Open Research in an Irish Context, project website, available at: <https://norf-tropic.my.canva.site/tr-op-ic> [accessed July 2026]. Information provided by NPR.

8.2.2. Funding for open access

For publications, Research Ireland permits grant funds to be used for APCs in fully open access journals, but expressly prohibits use of grant funds for hybrid journal APCs, in line with Plan S. The HRB similarly allows APC funding from grants.

At national level, IReL³⁴⁶ (Irish Research eLibrary) manages more than 20 publishing agreements with major publishers, enabling Irish researchers at participating institutions to publish open access at no direct cost to the researcher.³⁴⁷

For implementation, NORF has administered significant government funding: with a total of €4.33 million pledged for National Action Plan implementation with €3.38 million being allocated to date in funding under the National Open Research Fund Calls (2022-2025).³⁴⁸

8.2.3. Repository requirements (incl. FAIR principles)

For publications, Research Ireland requires deposit "in an open repository" without specifying certification requirements such as CoreTrustSeal. Acceptable repositories include institutional repositories (e.g., TARA at Trinity, CORA at UCC), disciplinary repositories (e.g., PubMed Central, arXiv), and publisher repositories meeting OA requirements as well as generalist repositories such as Zenodo and Figshare.³⁴⁹

For research data, the Digital Repository of Ireland (DRI) holds CoreTrustSeal certification and serves as Ireland's national trusted digital repository for social and cultural data, also functioning as an accredited National Aggregator for Europeana. However, a general paucity of data repositories has been argued.³⁵⁰

FAIR principles (Findable, Accessible, Interoperable, Reusable) are embedded in Theme 3 of the National Action Plan, with the goal of establishing "a mature ecosystem of infrastructures" by 2030. The National Action Plan calls for certification of repositories meeting international standards (A5.2.2: "certify repositories according to established international standards, such as CoreTrustSeal").

Research Ireland and HRB "encourage" FAIR data practices but do not mandate FAIR compliance or deposit in certified repositories.

A further forthcoming policy instrument relevant to FAIR data implementation is the iFrame project, a NORF-funded investigation into the support for research data management across Irish higher education and research organisations, tasked with developing a national framework for RDM support. The project concluded its public engagement and consultation phase in March 2026 and is expected to deliver a national RDM framework document during 2026.³⁵¹ If adopted, this would constitute Ireland's first formal national framework specifically governing RDM practice at institutional level.

³⁴⁶ described in University College Dublin Library, Open Access Publishing and IReL, available at: <https://libguides.ucd.ie/oapublishing>

³⁴⁷ IReL (Irish Research eLibrary), Resources — Open Access Agreements, available at: <https://irel.ie/resources/> [accessed July 2026]

³⁴⁸ Information provided by NPR

³⁴⁹ Input from consulted expert in lieu of delayed NPR input

³⁵⁰ Input from consulted expert in lieu of delayed NPR input

³⁵¹ Digital Repository of Ireland, 'March 2026 — NORF News Round-Up', available at: <https://dri.ie/news/march-2026-norf-news-round-up/> [accessed April 2026]. The iFrame project is also referenced in: Consortium of National University Libraries (CONUL), 'Development of a National RDM Costing Model', available at: <https://conul.ie/wp-content/uploads/2025/03/Development-of-a-National-RDM-Costing-Model.pdf>

8.2.4. Metadata and persistent identifier requirements

For publications, Research Ireland's Interim Policy explicitly requires "full metadata" including DOIs and ORCIDs as persistent identifiers. NORF published Ireland's National Persistent Identifier (PID) Strategy and Roadmap in October 2024.³⁵² IReL manages the Irish ORCID Consortium³⁵³ and Irish DataCite Consortium.³⁵⁴

For research data, Research Ireland requires a "data access statement" in all research articles, which should include identifiers for any associated datasets. The HRB's data management policy references FAIR principles. The National PID Strategy addresses research data identifiers as part of its scope, though implementation timelines extend to 2030.

The National Action Plan specifies that repositories must "standardise metadata in line with international initiatives" (A4.1.1).

8.2.5. Peer review approaches

The National Action Plan does not address community-led peer review models.

However, HRB Open Research, launched in 2018, operates on an open peer review model (F1000Research platform), where reviewer reports are published alongside articles, representing one implementation of transparent peer review in the Irish context.³⁵⁵ However, this is a platform-specific feature rather than a policy requirement.

8.2.6. Links to researcher assessment

Irish open access and open research policies are increasingly linked to researcher assessment. The National Framework on the Transition to an Open Research Environment (2019) identified "incentives and rewards" as one of five strategic areas, emphasising the need to reform how research and researchers are assessed to recognise and reward open practices. The National Action Plan reaffirms and strengthens this objective through Theme 1 ("Establishing a culture of open research"), with explicit goals to "strengthen the system-wide recognition and reward of open research practices" (G3.2, G3.3) and to "align research assessment with the principles of open research" (G3.4). Actions A3.3.1 and A3.3.2 call for Irish stakeholders to sign and enact DORA and to develop a national statement on the adoption of responsible research metrics (RRM). Action A3.3.2 specifies that responsible research metrics should be "embedded into all relevant processes and policies, e.g. recruitment and promotion, quality reviews, strategic planning, career development frameworks, grant applications, peer review." However, these actions are framed as recommendations and ongoing initiatives.

NORF has funded a project on Adopting Best Practices in Open Research and Data Management" (ABOARD)³⁵⁶ with a capstone conference in early 2026. This event marks the release of national recommendations for incentivising Open Research practices in Ireland.

NORF also provides a training on the responsible use of research metrics.³⁵⁷

³⁵² OECD, 'Ireland's National Persistent Identifier Strategy and Roadmap', case study in Access to Public Research Data: A Toolkit, OECD Publishing, Paris, February 2025, available at:

https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/02/access-to-research-data-from-public-funding-toolkit_14d72de8/ireland-s-national-persistent-identifier-strategy-and-roadmap_7d66988e/a6cb5844-en.pdf

³⁵³ IReL, ORCID Consortium, available at: <https://irel.ie/orcid-consortium>

³⁵⁴ IReL, 'IReL to Lead Irish DataCite Consortium from 2024', news item, available at: <https://irel.ie/irel-to-lead-irish-datacite-consortium-from-2024/>

³⁵⁵ HRB Open Research, About the Platform, available at: <https://hrbopenresearch.org/>

³⁵⁶ ABOARD — Roadmap to Embedding Open Research Practices in Ireland, project outputs, University College Cork, available at: <https://www.ucc.ie/en/aboard-project/aboardprojectoutputs/> Information provided by NPR

³⁵⁷ National Open Research Forum (NORF), Pilot Training for the Responsible Use of Research Metrics (RURM), NORF-funded open educational resource, launched 31 March 2025, available at: <https://norf.ie/responsibleuserresearchmetrics/>

HRB's policy statement notes HRB's commitment to "responsible research assessment," and HRB has funded development of guidance on reforming research assessment. HRB is also a member of CoARA and DORA signatory. In total there are 17 Irish DORA signatories, which also includes Research Ireland (under its previous designation SFI).³⁵⁸

8.2.7. Public funding thresholds

Irish open access policies do not apply differential requirements based on public funding thresholds. Instead, policies apply uniformly to all research resulting from public funding, without specifying a minimum threshold percentage.³⁵⁹

8.2.8. Provisions for small and medium publishers

No Ireland-specific OA provisions explicitly tailored to small and medium publishers have been identified.

However, the National Action Plan explicitly articulates support for diverse publishing models (Theme 2). The National Action Plan also identifies support for Diamond OA as a strategic goal (G4.4: "address equity of choice and access to funds to support open access publishing"), recommending diverse pathways and investigating means of supporting varied publishing practices across disciplines.

A dedicated project to conduct a feasibility study into creating a national diamond OA publishing platform for Ireland ran from 2022 to April 2025 called "Publish OA Ireland".³⁶⁰ The final reports' findings³⁶¹ point to Ireland's fragmented Diamond OA journal landscape, which comprises approximately 55 titles, of which 22 are indexed in the DOAJ and 32 are library-hosted and use highly heterogeneous infrastructure. Many journals are person-dependent and institutionally precarious, lacking the technical capacity, standards compliance, or resources needed to meet the requirements of the National Action Plan, Plan S, and emerging funders' mandates. Without a national platform, the report concludes, Ireland's scholarly bibliodiversity is under active threat. The report concludes that a technically viable and standards-compliant national Diamond OA publishing platform is immediately feasible if funding is secured. With the support of the NORF, a Pilot Diamond Open Access Publishing Platform has been established by Diamond Capacity Hub Ireland.³⁶²

8.2.9. Identified costs of, or gains from, applying open access policies

The National Action Plan emphasises that open access "maximises the impact of research processes and outputs" and that making research "openly and freely accessible contributes to an informed citizenship, the democratisation of knowledge."

The €4.33 million allocated for National Action Plan implementation represents documented government investment. A mid-term assessment of progress achieved under Ireland's National Action Plan for Open Research 2022-2030 will be published later in 2026. IReL's annual expenditure on transformative agreements is not publicly reported in aggregate.

³⁵⁸ Input from consulted expert in lieu of delayed NPR input

³⁵⁹ E.g.: Research Ireland's policy applies to "research publications... arising in whole or in part from Research Ireland-funded research,"

³⁶⁰ <https://www.ria.ie/publishing-house/publishoa/>

³⁶¹ Brennan, N., Hegarty, R., Hogan, L., Kane, D., Madden, F., Rankin, K. and Schwamm, H., Diamond Open Access Platform — Pilot and Feasibility Report (v1.0), PublishOA Project (Royal Irish Academy / Trinity College Dublin Long Room Hub), funded by the National Open Research Forum (NORF) and Higher Education Authority (HEA), May 2025, <https://doi.org/10.5281/zenodo.15311004>. PDF also available at: <https://www.ria.ie/assets/uploads/2025/05/Publish-OA-Diamond-Open-Access-platform-%E2%80%93-pilot-and-feasibility-report-v1.0.pdf> [accessed April 2026].

³⁶² Information provided by the NPR.

8.2.10. Security considerations

The National Action Plan adopts the principle "as open as possible, as closed as necessary" for research data, which implicitly recognises that not all data should be openly accessible due to security, privacy, or confidentiality concerns. A small project on open science and research security has recently received funding.³⁶³

The Department of Further and Higher Education, Research, Innovation and Science is working closely with the national R&I community to develop Ireland's national approach to research security and raise awareness of the risks and opportunities of open international research and innovation collaboration. The Research Security Guidelines for Ireland are due to be published shortly.³⁶⁴

8.2.11. References to simplification regarding open access

Irish open access policies do not extensively address administrative simplification.

Implicitly, the National OA Monitor, integrated with OpenAIRE infrastructure, aims to reduce reporting burden by automating compliance tracking.³⁶⁵ IReL's transformative agreements simplify researcher workflows by enabling direct OA publishing without individual APC payments. However, in practice workflows are not standardised necessitating significant manual intervention and support from the institution.³⁶⁶

8.2.12. Role of artificial intelligence in open access policies

Irish open access policies do not contain specific provisions addressing artificial intelligence, either as opportunity or threat. The National Action Plan (published November 2022) predates the rapid emergence of generative AI policy concern. However, these and other emerging themes are being examined as part of the mid-term review of the National Action Plan.³⁶⁷

8.3. Implementation and monitoring of open access policies

8.3.1. Responsibility for implementation

The National Open Research Forum (NORF) project serves as the coordinating body for system-wide implementation. NORF is funded by the Department of Further and Higher Education, Research, Innovation and Science (DFHERIS) through the Higher Education Authority (HEA). The role of the National Open Research Coordinator has been based at the Digital Repository of Ireland (DRI), providing executive coordination for the period 2022-2026. The role of NORF Coordinator is being transferred to its new host IReL in 2026.

Individual research funders are theoretically responsible for implementing and enforcing open access requirements on their grantees; in practice implementations seems to be undertaken more by research institutions.³⁶⁸

Irish universities and research institutes are responsible for implementing open access policies within their institutions. The National Action Plan notes that "structures and staffing to support open research vary across institutions.

³⁶³ Input from consulted expert in lieu of NPR input (not provided by the time of publication).

³⁶⁴ Information provided by NPR.

³⁶⁵ NORF / IReL / OpenAIRE, National Open Access Monitor Ireland, launched March 2024, available at: <https://oamonitor.ireland.openaire.eu/>

³⁶⁶ Input from consulted expert in lieu of delayed NPR input.

³⁶⁷ Information provided by NPR.

³⁶⁸ Input from consulted expert in lieu of NPR input (not provided by the time of publication).

8.3.2. Monitoring of individual policy elements

For publications, monitoring responsibility lies primarily with research funding organisations through their grants management systems. However, this seems to be a “light touch” mechanism with unclear follow up in case of non-compliance.³⁶⁹

Research Ireland monitors compliance through grant reporting requirements; publications must be reported and OA status verified. The HRB similarly monitors through grant management processes.

At national level, the National Open Access Monitor (launched March 2024), developed through NORF-IRel-OpenAIRE collaboration, provides automated tracking of Irish research OA status across institutions and funders.

For research data, monitoring is less systematic. HRB monitors DMP submission as a grant deliverable but comprehensive data sharing compliance monitoring is not established. No national monitor equivalent to the publications monitor exists for research data.

8.3.3. Overall policy monitoring

Overall policy implementation monitoring rests with the National Open Research Coordinator, and implementation is overseen by DFHERIS and the HEA.³⁷⁰ The National Open Access Monitor aims to provide the technical infrastructure for systematic monitoring. 69 organisations, including 48 RPOs and 21 RFOs, have registered dashboard managers.³⁷¹

The National Action Plan includes periodic reviews scheduled every three years (2025, 2028) to assess progress toward 2030 targets. The 2022-2025 review is due to be published later this year.³⁷²

8.3.4. Reporting arrangements

Reporting flows through Ireland's research governance structure. Individual researchers report to their host institutions and funders through grant management systems. Research performing organisations report to the HEA through performance compacts and strategic dialogue processes established under the Higher Education Authority Act 2022. NORF reports to DFHERIS, which has ministerial responsibility for research policy.

8.3.5. Results of impact evaluations

No comprehensive impact evaluation of Irish open access policy has been published.

The National Open Research Landscape Report (2021), identified key trends in Ireland's transition toward open access (OA) between 2015 and 2019.³⁷³ The report documented a significant shift in how Irish research is made available:

- Repository-Mediated (Green) OA: Experienced "steady growth" as researchers increasingly deposited their work in institutional and disciplinary repositories.
- Publisher-Mediated (Gold) OA: Saw a marked "increase from 2015 onwards," driven by the rise of transformative agreements and OA journal publishing.

³⁶⁹ Input from consulted expert in lieu of NPR input (not provided by the time of publication).

³⁷⁰ Information provided by the NPR.

³⁷¹ OpenAIRE, 'Open Insights: Future Pathways for Open Access Monitoring in Ireland and Beyond', available at: <https://www.openaire.eu/open-insights-future-pathways-for-open-access-monitoring-in-ireland-and-beyond>

³⁷² Information provided by the NPR.

³⁷³ Joy, C. (National Open Research Coordinator, Digital Repository of Ireland), National Open Research Landscape Report: Ireland's National Framework on the Transition to an Open Research Environment — Landscape Report, National Open Research Forum (NORF), 2021, <https://doi.org/10.7486/DRI.5Q485C938>. Available at the Digital Repository of Ireland: <https://repository.dri.ie/catalog/5q485c938>

- Overall OA Rate: By the time of the 2021 analysis, Ireland's national OA rate for scholarly publications was estimated to be in the range of 47–54%.

The third version of the Landscape report on scholarly publishing in Ireland published in 2025³⁷⁴ aimed to assess the feasibility of establishing a centralised, publicly owned Diamond Open Access publishing platform for Irish scholarly publishing. The PublishOA findings confirm that smaller Irish publishers face significant challenges transitioning to OA and may require dedicated support. The report concludes:

Policies supporting a mixed model of Green, Gold and Diamond OA are likely to be the optimal way forward to meet the national objective of 100% OA for Irish scholarly publications resulting from publicly funded research by 2030...Widespread OA publishing in Ireland would require ongoing multi-year funding from universities, institutions, and/or the State.

The National Open Access Monitor, launched in March 2024 by NORF, IReL and OpenAIRE, tracks OA status for over 500,000 publications associated with Ireland from 2007 to the present.

The national dashboard shows that a significant and growing proportion of Irish research outputs is available OA, with time-series “historical snapshots” documenting a continuous increase in OA share since 2007³⁷⁵ although no percentage figures are given. However, open access figures are given per RPO, showing between 52 and 69% OA³⁷⁶ and RFO, showing between 66 and 90%.³⁷⁷ Because the dashboard updates continuously, absolute percentages will differ modestly by access date; however, the broad pattern that RFO-level OA shares substantially exceeding RPO-level averages has remained stable.

However, the Monitor excludes publication records considered proprietary by publishers. These figures should therefore be considered conservative, since they reflect those publications visible to OpenAIRE rather than comprehensive institutional output.³⁷⁸

IReL's 2024/25 Executive Report, which draws on the Monitor and publisher data, reports that Ireland ranked number 1 globally in ESAC Market Watch for OA progress and that over 10 000 Irish research articles had been published OA under IReL agreements.³⁷⁹

The analytical picture that emerges is of a policy framework that is ambitious and well-designed at the level of formal instruments, but whose implementation infrastructure has weakened materially during 2025–2026. The transfer of NORF hosting and of the coordinator role to IReL, the pending publication of the mid-term Action Plan review, and the acknowledged limitations of the national monitoring instrument suggest a potential fragility in execution capacity.

³⁷⁴ PublishOA Project (Royal Irish Academy and Trinity College Dublin Long Room Hub), Landscape Report on Scholarly Publishing in Ireland: Feasibility and Readiness for Open Access (third version), 10 June 2025, <https://doi.org/10.5281/zenodo.15721574> [accessed April 2026].

³⁷⁵ NORF / IReL / OpenAIRE, National Open Access Monitor Ireland — Historical Snapshots, available at: <https://oamonitor.ireland.openaire.eu/national/dashboard/overview/historical-snapshots>

³⁷⁶ NORF / IReL / OpenAIRE, National Open Access Monitor Ireland — Research Performing Organisations Dashboard, available at: <https://oamonitor.ireland.openaire.eu/rpo>

³⁷⁷ NORF / IReL / OpenAIRE, National Open Access Monitor Ireland — Research Funding Organisations Dashboard, available at: <https://oamonitor.ireland.openaire.eu/rfo> [accessed April 2026].

³⁷⁸ Input from consulted expert in lieu of NPR input (not provided by the time of publication).

³⁷⁹ IReL (Irish Research eLibrary), *IReL Executive Report 2024/2025*, Zenodo, 2025, <https://doi.org/10.5281/zenodo.17709486> [accessed April 2026].

9. Greece

9.1. General characteristics

9.1.1. Policies formulated as strategies, funder mandates and/or legislation

Greece does not currently have a binding national open access mandate, though several policy instruments and legislative provisions create a framework of sorts. At the legislative level, Article 25 of Law 4310/2014³⁸⁰ requires the General Secretariat for Research and Innovation (GSRI) and public research organisations to ensure that "open access is provided to the outputs of its research staff" and that a "digital form of the final version of the outputs of the research staff, whose research is funded with public funds, is made available to public subject open access repositories". Article 4 of Law 4485/2017 on higher education missions further refers to the development of "common, open resources in education, research, technology and culture".³⁸¹ These legislative provisions constitute a legal basis but lack detailed implementing regulations.

Greece enacted Law 5188/2025³⁸² (Government Gazette 49/A, 28 March 2025) to implement Regulation (EU) 2022/868 (the Data Governance Act) at national level. The law establishes the regulatory framework for the re-use of public sector information. Of direct relevance to open access, Article 3 introduces the principle of "open access by design and by default," under which public sector bodies are required to create and make their data available in formats and structures that facilitate anonymisation and reuse. The Ministry of Digital Governance is designated as the competent authority to assist public sector bodies in granting or denying access to data for reuse.

At the strategic level, a National Plan for Open Science³⁸³ (NPOS) was published in June 2020 by the (then informal) Task Force for Open Science, now organised under the Hellenic Open Science Initiative (HOSI).

In December 2024, HOSI published a substantially updated National Plan for Open Science (NPOS v2), prepared with contributions from fifteen national academic and research organisations and twenty-six national infrastructures and initiatives.³⁸⁴

³⁸⁰ Republic of Greece, Νόμος 4310/2014: Έρευνα, Τεχνολογική Ανάπτυξη και Καινοτομία [Law 4310/2014 on Research, Technological Development and Innovation], Φύλλο Εφημερίδας Κυβερνήσεως (FEK), No. 258/A, 8 December 2014. Policy analysis in English available at: OECD STIP Compass, Policy Initiative record 4914, available at: <https://stip.oecd.org/stip/interactive-dashboards/policy-initiatives/2025%2Fdata%2FpolicyInitiatives%2F4914> [accessed April 2026]. Full Greek text of the Law (not open, subscription required):

<https://www.kodiko.gr/nomothesia/document/100926/nomos-4310-2014> [accessed April 2026; in Greek].

³⁸¹ Republic of Greece, Νόμος 4485/2017: Οργάνωση και λειτουργία της ανώτατης εκπαίδευσης [Law 4485/2017 on the Organisation and Operation of Higher Education], Article 4, FEK, No. 114/A, 4 August 2017. English-language discussion available at: HEAL-Link Scholarly Portal, <https://scholarly.heal-link.gr/en/open-science/>

³⁸² Hellenic Republic (2025). Law 5188/2025 on the implementation of Regulation (EU) 2022/868 of the European Parliament and of the Council on European data governance (Data Governance Act). For an English-language analysis, see: EY Greece (2025). 'Act no. 5188/2025: The Greek Supplementary Act to the Data Governance Act'. EY Tax Alerts, 2025. Available at: https://www.ey.com/en_gr/technical/tax/tax-alerts/5188-2025-greek-supplementary-act-to-data-governance-act [accessed 3 May 2026]. Initial reference provided by independent expert in lieu of input from NPR (not provided by the time of publication).

³⁸³ Open Science Task Force — Hellenic Open Science Initiative (HOSI), National Plan for Open Science in Greece, Version 1.0, June 2020. Announced at: NI4OS-Europe, 'National Plan for Open Science in Greece is Released', 3 July 2020, available at: <https://ni4os.eu/2020/07/03/national-plan-for-open-science-in-greece-is-released> [accessed April 2026]. English version available at: https://inn.demokritos.gr/wp-content/uploads/2022/05/OSP-v1.0-pub_EN.pdf [accessed April 2026]. Greek version with full text on Zenodo: <https://zenodo.org/records/4656150> [accessed April 2026; DOI: 10.5281/zenodo.4656150].

³⁸⁴ Spiros Athanasiou, Vasilis Amiridis, Vasilakaki, N., Maria Gavrilidou, Evangelos Gerasopoulos, Alexandros Dimopoulos, Zorba (Zormpa), I., Iliakis, A., Georgina Kaklamani, Fotis Karagiannis, Iraklis Klampanos, Dimitra Kondili, Kostas Koumantaros, Konstantinidis, E., Panos Konstantopoulos, Konstantopoulos, S., Katerina Lenaki, Angelos Likiardopoulos, Natalia Manola, ... Evangelia Chrysina. (2025). National Plan for Open Science. Zenodo. <https://doi.org/10.5281/zenodo.14808290>. Reference provided by external expert in lieu of NPR feedback by the time of publication.

The plan articulates comprehensive objectives for open access to publications, research data, research software, and national research infrastructures, and aligns with Horizon Europe requirements, Plan S, the EOSC Strategic Research and Innovation Agenda, and the 2022 EU Council Conclusions on academic publishing. As with its June 2020 predecessor, NPOS v2 has not been formally adopted as a binding national strategy by the Greek government, and its legal status remains that of a detailed policy proposal from the Greek research community.

The Digital Transformation Strategy 2020-2025, introduced by the Greek Ministry of Digital Governance in 2020, includes several actions regarding Open Science policies and contains as a key target the adoption of the National Open Science Strategy developed by HOSI. Open Science is framed as one of the accelerators of digital transformation, particularly in the sections dealing with data, cloud computing, high-performance computing and interoperability. However, the “Digital Transformation Bible”³⁸⁵ translates this into infrastructure and platform projects, rather than into a dedicated Open Science governance framework with its own monitoring system and targets. Some activities from the NPOS are part of the “bible”. A successor strategy, the Digital Transformation Bible 2026–2030, was in preparation by the Ministry of Digital Governance at the time of writing.³⁸⁶

HOSI, established in February 2022 among 13 Greek research and technology organisations,³⁸⁷ and comprising 16 member organisations as of 2024 with potentially further organisations having joined since then, serves as the primary coordination and advocacy body for open science policy adoption, but does not possess regulatory or enforcement authority.³⁸⁸

At the funder level, the Hellenic Foundation for Research and Innovation (HFRI), established as the main public research funding organisation for investigator-driven basic research, requires Data Management Plans (DMPs) with compliance verified at reporting stages as a condition of grant fulfilment. These requirements apply across HFRI's portfolio, including PhD scholarship and postdoctoral research programmes.³⁸⁹ The General Secretariat for Research and Innovation (GSRI) similarly includes open science requirements as a condition in its calls, as documented in the 2023 expressions of interest call.³⁹⁰

At institutional level, HEAL-Link's 2018 Declaration on Open Access in Greece³⁹¹ encourages universities and research centres to adopt institutional open access policies and self-archiving mandates, but survey evidence indicates that, by 2021, most institutions had mandatory deposit only for theses and dissertations and merely recommended self-archiving of research articles, so institutional policies remain heterogeneous and often soft-law.³⁹²

³⁸⁵ Ministry of Digital Governance (Υπουργείο Ψηφιακής Διακυβέρνησης), Βίβλος Ψηφιακού Μετασχηματισμού 2020–2025 [Digital Transformation Bible 2020–2025], approved by ministerial decision published in Government Gazette (FEK) 2894/B, 5 July 2021. English overview at <https://digitalstrategy.gov.gr/en/>. „Digital Transformation Bible“ is the strategy's official designation. ←

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³⁸⁷ Hellenic Open Science Initiative (HOSI/ΕΠΙΑΕ), Members [webpage]. Available at: <https://www.hellenicopenscience.gr/en/welcome-to-os-greece/hosi-members-desc> [accessed 2 May 2026].

³⁸⁸ OpenAIRE, ‘Building Open Science Together: HOSI Driving Policy Adoption in Greece’, OpenAIRE Blog, available at: <https://www.openaire.eu/building-open-science-together-hosi-driving-policy-adoption-in-greece> [accessed April 2026]. See also: Ioannidou, P. et al., The Hellenic Open Science Initiative — HOSI: A Regional Success Story (lightning talk, RDA Plenary), Zenodo, 2025, <https://doi.org/10.5281/zenodo.17723570>.

³⁸⁹ Information provided by external expert in lieu of NPR feedback by the time of publication.

³⁹⁰ General Secretariat for Research and Innovation, Call for Expression of Interest: Support for MBP 2014–2020-funded Research Infrastructures transitioning into full operation, 24 November 2023, available at: https://gsri.gov.gr/wp-content/uploads/2023/11/Call-for-expressions-of-interest_TC_final_EN_24_11_2023.pdf Input by external expert in lieu of NPR feedback by the time of publication.

³⁹¹ HEAL-Link (Hellenic Academic Libraries Link), Declaration on Open Access in Greece, 2018, available at: https://www.heal-link.gr/librarians_files/other/Declaration%20on%20Open%20Access%20in%20Greece.pdf [accessed April 2026].

³⁹² ZBW MediaTalk, ‘Open Access Survey in Greece: Status Quo, Surprising Findings and Starting Points’ (reporting findings of a 2021 survey conducted by I. Tsoukalas and A. Giannopoulos), 9 May 2022, available at: <https://www.zbw-mediatalk.eu/2022/05/open-access-survey-in-greece-status-quo-surprising-findings-and-starting-points/> [accessed April 2026].

9.1.2. Bindingness in terms of implementation

Law 4310/2014 is binding but has been criticised as not providing a national compliance/monitoring architecture in the manner of funder-driven mandates. The SPARC Europe/DCC analysis of open science policies in Europe (v4, 2019)³⁹³ noted that Greece "does not have a national Open Access/Open Science policy" despite the existence of these legislative provisions. The National Plan for Open Science (2020), while detailed in its proposed commitments, explicitly notes that implementation requires adoption as a National Strategy and that the "required legal framework" should be implemented "by 2021"—a target that has not been met. However, the NPOS v2 update resets all principal implementation deadlines to 2025, including mandatory green OA, open data by default, open source by default, and the establishment of institutional framework policies.

At the institutional level, the 90th Hellenic Universities Rectors' Synod (March 2019) recommended that all academic institutions develop and implement open access policies, make self-archiving a precondition for institutional funding, and provide resources to cover APCs, but this resolution is non-binding. The 71st Rectors' Synod (2012) had already urged institutions to sign the Berlin Declaration and promote open access.³⁹⁴ However, the synod output seems to be non-binding to institutions.

9.1.3. Scope of the policy

The National Plan for Open Science (2020) explicitly addresses four pillars: (i) open access to scientific publications, (ii) open access and reuse of research data, (iii) development and management of research software, and (iv) open access to research infrastructures and e-infrastructures. For publications, the plan distinguishes peer-reviewed publications, books and monographs, conference proceedings, doctoral dissertations, and grey literature. For research data, it introduces the principle of "open data by default" with standardised exceptions following the "as open as possible, as closed as necessary" approach, mandates Data Management Plans (DMPs), and requires FAIR compliance.

Article 25 of Law 4310/2014 refers to "outputs of research staff" without distinguishing between publications and data, though it seems that it refers primarily to on publications.

9.1.4. Embargoes or immediate open access

The National Plan for Open Science (2020) followed EU Recommendation C(2012)4890 by permitting embargo periods of 6 months for STEM disciplines and 12 months for social sciences and humanities for Green Open Access. NPOS v2 (December 2024) now requires immediate open access to the full text of publications deposited via the green route, without any embargo period, as well as immediate access to bibliographic metadata. This aligns NPOS v2 with Plan S requirements. However, this requirement has no binding force in the absence of formal government adoption.

9.1.5. Copyright, rights retention and secondary publication rights

Greece does not have a statutory secondary publication right. NPOS v2 states as a policy objective that the plan aims to "ensure the retention of copyright by the authors of scientific publications". For research data and software, the plan requires open licences with attribution-only restriction as the recommended default. These provisions remain non-binding proposals, however, and no legislative instrument implementing a right of secondary publication or an author rights retention requirement has been identified.

³⁹³ SPARC Europe / Digital Curation Centre (DCC), Open Data and Open Science Policies in Europe, Version 4, September 2019, available at: https://www.ouvrirelascience.fr/wp-content/uploads/2019/09/SPARC-DCC_Open-Data-and-Open-Science-Policies-in-Europe_v4.pdf [accessed April 2026]

³⁹⁴ As reported in HEAL-Link Scholarly Portal, Open Science in Greece — Policy History at: <https://scholarly.heal-link.gr/en/open-science/> [accessed April 2026].

9.2. Context of open access policies

9.2.1. Training or guidance for researchers

NPOS v2 retains and substantially elaborates the skills development pillar from the 2020 plan. The core principle is stated as equipping the Greek R&D community with the qualifications, digital skills, incentives and reward mechanisms for a managed transition to open science. Implementation actions now specify design and delivery of training programmes for the Greek R&D community covering open access, open data management, open software, and open science across the full research lifecycle; strengthening and extension of existing support structures (OpenAIRE NOAD, HEAL-Link, National Research Infrastructure Offices) for continuous researcher support; and HOSI-led establishment of both a national Open Science Support Office and a national open science coordination network.

A notable new provision assigns responsibility for designating data librarian or data steward roles within research organisations alongside Data Protection Officers. Concerning curriculum integration, the plan calls for revision of study programmes at all levels of higher education to embed open science principles and methods, integration of certified open science courses across the tertiary education system, and alignment with EOSC standards and the EU New Digital Skills objectives.

Additional training provisions address data science professionals, digital literacy for postgraduate students, cross-border staff exchanges among universities and research infrastructures, and the development or reuse of open educational resources through GUNet and the Kallipos repository. All provisions remain non-binding proposals.

A number of HOSI members are active in open science training. Athena Research Center, as the Greek OpenAIRE National Open Access Desk (jointly with HEAL-Link), delivers workshops and webinars covering open access compliance, research data management, and EOSC requirements.³⁹⁵

HEAL-Link, through the EU Horizon project PATTERN, runs the "Quickstart to Open Science" programme for early-career researchers, delivered online in cohorts sessions.³⁹⁶ GRNET/ΕΔΥΤΕ coordinates the Greek Open Science Cloud Competence Centre (EOSC-GR).³⁹⁷ Previously, the National Documentation Centre (EKT) had also provided training. The Open Technologies Alliance (GFOSS) provides training seminars on open standards, open data, and free and open-source software. HEAL-LINK provides information about open access agreements with publishers.³⁹⁸

9.2.2. Funding for open access

The HEAL-Link consortium has negotiated transformative or read-and-publish agreements with major publishers (including Elsevier, Springer Nature, and participation in the Open Library of Humanities), which provide affiliated researchers at member institutions the ability to publish open access without direct APC payment. The 2018 HEAL-Link Declaration on Open Access urged institutions to "make resources available to cover Article Processing Charges "to support the Gold OA route". However, there is no national APC fund.

³⁹⁵ E.g. OpenAIRE (2024). 'Athena Research Center & OpenAIRE AMKE, in collaboration with the National Library of Greece, organised a Training Seminar on Open Science & Data Management'. OpenAIRE News, 10 December 2024. Available at: <https://www.openaire.eu/athena-research-center-and-openaire-amke-in-collaboration-with-the-national-library-of-greece-organised-a-training-seminar-on-open-science-and-data-management> [accessed 2 May 2026].

³⁹⁶ E.g. HEAL-Link Scholarly Communication Unit (2025). 'Successful completion of the third „Quickstart in Research Data Management“'. *HEAL-Link Scholarly Communication News*, 16 December 2025. Available at: <https://scholarly.heal-link.gr/en/news-en/third-quickstart-rdm/> [accessed 2 May 2026]. (*Cohort 3: 5 November – 3 December 2025.*)

³⁹⁷ GRNET/ΕΔΥΤΕ (n.d.). 'Greek Open Science Cloud Competence Center (EOSC-GR)'. GRNET Project Directory. Horizon Europe Programme, European Research Executive Agency, commenced 1 September 2022, ongoing. Available at: <https://grnet.gr/en/business-directory/greek-open-science-cloud-competence-center/> [accessed 2 May 2026].

³⁹⁸ HEAL-Link (Hellenic Academic Libraries Link), Open Access Agreements with Publishers (current transformative and read-and-publish agreements), available at: <https://www.heal-link.gr/en/open-access-agreements/> [accessed April 2026].

NPOS v2 introduces an explicit policy position on publication cost eligibility that was absent from the 2020 plan. The updated plan states that APC costs incurred to ensure Gold Open Access are eligible expenditure in publicly funded R&D projects and may be covered by R&D bodies, universities, foundations, organisations, and library consortia. Diamond OA participation and publication costs are treated identically.

9.2.3. Repository requirements (incl. FAIR principles)

NPOS v2 requires that the institutional or thematic repository used for deposit of scientific publications must follow the metadata schema of the OpenAIRE European infrastructure. On research data NPOS v2 requires compatibility with FAIR principles (Findable, Accessible, Interoperable, Reusable) as a mandatory condition for data made openly available. It also requires the assignment of permanent digital identifiers (PIDs) to research data, and mandates that data be made available under open, standardised, machine-readable licences, with attribution-only restrictions as the recommended default.

NPOS v2 proposes that researchers should be required to deposit data in the national data repository HELIX Data, in the HEAL-Link academic data infrastructure HARDMIN, or, where appropriate, in another institutional or thematic data repository that is compatible and interoperable with the national repository. The implementation actions section of NPOS v2 explicitly calls for certification of data repositories against quality standards, citing CoreTrustSeal, Nestor, and ISO as the applicable frameworks. Beyond data, the implementation actions call for integration of PID services across research entities: ORCID for researchers, DOI/DataCite and Handles for research data, and RAIDs for projects.

The national data infrastructure HELIX (Hellenic Data Service), operated in partnership with GRNET and other national actors, is positioned as the primary platform for research data hosting, with the expectation that it will support EOSC compliance. The HARDMIN repository for research data,³⁹⁹ associated with HELIX, applies specific data lifecycle guidelines aligned with FAIR principles. Both entities are OpenAIRE compliant.⁴⁰⁰ For publications, OpenArchives.gr (operated by EKT) harvests OAI-PMH compatible metadata from a large number of institutional and other collections.⁴⁰¹

However, no national-level mandatory requirement exists for researchers to deposit in certified or trusted repositories.

9.2.4. Metadata and persistent identifier requirements

NPOS v2 proposes that for publications repositories must follow the OpenAIRE metadata schema, and versions must be in machine-readable format. Immediate access to bibliographic metadata is required regardless of any embargo on full text. For research data, the plan proposes requiring assignment of permanent digital identifiers (PIDs) to all datasets, documentation with machine-readable metadata following common standard schemas and linkage of research data to associated publications and, where appropriate, research software. On PIDs more broadly, the implementation actions section specifies ORCID for researchers, DOI/DataCite and Handles for research data, and RAIDs for projects.

The HELIX data service infrastructure is designed to support DOI assignment and metadata standards.

9.2.5. Peer review approaches

No specific policy provisions addressing open peer review were identified in Greek legislation, the National Plan for Open Science, or funder policies.

³⁹⁹ HEAL-Link Scholarly Portal, HARDMIN — Hellenic Academic Research Data Management Infrastructure (English-language description), available at: <https://scholarly.heal-link.gr/en/hardmin-in-english> [accessed April 2026]

⁴⁰⁰ Information provided by external expert in lieu of NPR feedback by the time of publication.

⁴⁰¹ EKT (National Documentation Centre), OpenArchives.gr — National Aggregator of Open Access Digital Content, available at: <https://www.openarchives.gr/aggregator-openarchives/portal?language=en> [accessed April 2026].

A 2020 study surveying perceptions of open peer review in a Greek medical and health sciences community found that while academics recognised the importance of open science principles, experience with open peer review remained limited.⁴⁰²

HEAL1000 is an open research publishing gateway launched in early 2023 through a partnership between HEAL-Link and F1000 (Taylor & Francis Group), hosted on the F1000Research platform. The gateway implements open access, open peer review, and open data as its operating model. However, it seems closed to new publications.⁴⁰³

9.2.6. Links to researcher assessment

NPOS v2 substantially expands the researcher assessment provisions of the 2020 plan. The updated plan retains references to DORA and the Leiden Manifesto and adds CoARA. Most notably, v2 introduces a detailed enumerated list of open science criteria recommended for adoption in researcher assessment processes, covering open access publishing, repository deposit, FAIR data management and reuse, open-source software development, citizen science participation, scientific integrity, open peer review contribution, and participation in open science infrastructure development.

The three institutional implementation provisions from v1 are retained and updated: embedding of open science principles in evaluation and accreditation processes of the Hellenic Authority for Higher Education (ETHAAE); embedding of open science criteria in the evaluation of research centres supervised by GSRI under the Ministry of Development; and introduction of open science incentives in new R&D programme calls issued by GSRI and HFRI. These provisions remain non-binding proposals. No evidence has been identified that ETHAAE, GSRI or HFRI have formally incorporated open science criteria into their evaluation or grant procedures since the 2020 plan, and the v2 update does not report any implementation progress on these points.

The EC Policy Support Facility Open report (2023)⁴⁰⁴ noted that open science should be included in the Key Performance Indicators (KPIs) required of National Research Infrastructures, recommending that publications and open science metrics be among the minimum obligatory reporting indicators.

Currently, there are four Greek CoARA signatories.

9.2.7. Public funding thresholds

Neither Greek legislation nor the National Plan for Open Science specifies a public funding threshold (e.g., 50% or higher) that would trigger open access requirements. Article 25 of Law 4310/2014 refers to "research funded with public funds" without defining a minimum percentage.

9.2.8. Provisions for small and medium publishers

No provisions addressing the specific circumstances of small and medium publishers were identified in Greek open access policy documents. The National Plan for Open Science refers to supporting "bibliodiversity". NPOS 2.0. refers more strongly to diamond open access and also emphasises Greek language publications.⁴⁰⁵

9.2.9. Identified costs of, or gains from, applying open access policies

Neither the National Plan for Open Science (2020) nor its V2 update includes a quantified economic analysis of the costs or benefits of open access implementation.

⁴⁰² Delikoura, E. and Kouis, D., 'Open Research Data and Open Peer Review: Perceptions of a Medical and Health Sciences Community in Greece', Publications, 9(2) (2021), article 14, <https://doi.org/10.3390/publications9020014>.

⁴⁰³ See HEAL-Link / F1000Research (n.d.), 'HEAL1000 — Gateway of HEAL-Link, the consortium of Greek academic libraries', F1000Research. Available at: <https://f1000research.com/heallink> [accessed 2 May 2026].

⁴⁰⁴ European Commission, Directorate-General for Research and Innovation, Open Science Policy Report: Greece — Policy Support Facility (PSF), final report, GSRI/MoD / EC DG RTD, August 2023, available at: https://gsri.gov.gr/wp-content/uploads/2023/10/230831-Final-Report_PSF-Open-Greece_FINAL-VERSION.pdf [accessed April 2026].

⁴⁰⁵ Input provided by external expert in lieu of NPR feedback at the time of publication.

However, the introduction to the update states that open science is "the new standard of practices, means and collaboration for the production and dissemination of scientific work and research results, with direct scientific, economic and social impact," and that individual Greek actions "are not sufficient for the substantial, economic and developmental benefit of the country." In the national research infrastructures section, the plan states that a long-term plan is needed for "maximisation of long-term national investments, creation of added value and maintenance of the country's leading position in South-East Europe."

9.2.10. Security considerations

No explicit Security considerations (cybersecurity, geopolitical risks, or economic competition concerns) were identified in Greek open access policy documents. The National Plan for Open Science and its successor acknowledge the need for exceptions to open data based on national provisions and laws, including data protection (GDPR), but do not articulate security-related criteria for restricting access.

9.2.11. References to simplification regarding open access

The reviewed documents do not include provisions for regulatory or administrative simplification of open access processes.

The 2022 ZBW interview with Greek open access experts noted the absence of a national mandate and suggested that the decentralised nature of the Greek policy landscape creates complexity for researchers navigating open access requirements.⁴⁰⁶

9.2.12. Role of artificial intelligence in open access policies

Greece's national AI strategy, A Blueprint for Greece's AI Transformation, published by the Prime Minister's High-Level Advisory Committee on Artificial Intelligence on 25 November 2024, contains several provisions relevant to the open access and AI. The most direct engagement with open access appears in Proposal 4.13, which states that open access to scientific results "is key to promoting AI research, improving the quality of research and the free dissemination of knowledge in society and the economy". The proposal assigns to the Greek OpenAIRE NOAD (Athena Research Center) responsibility for webinars on open access trends in AI-related publications and research data, workshops, and training on OpenAIRE services — framing open access instrumentally as an enabler of AI research rather than addressing its rights dimensions.⁴⁰⁷

9.3. Implementation and monitoring of open access policies

9.3.1. Responsibility for implementation

At the governmental level, the General Secretariat for Research and Innovation (GSRI), a body of the Ministry of Development and Investments, has the statutory mandate under Law 4310/2014 to ensure open access to publicly funded research outputs and was designated as the "National Point of Reference" for open science in Greece.

The National Plan for Open Science proposed that GSRI, in coordination with the National Council for Research, Technology, and Innovation, should lead horizontal coordination and monitoring of open science implementation.

⁴⁰⁶ ZBW MediaTalk, 'Open Access Survey in Greece', op. cit

⁴⁰⁷ Hellenic Republic, High Level Advisory Committee on Artificial Intelligence / Special Secretariat of Foresight, Presidency of the Government (2024). A Blueprint for Greece's AI Transformation. Athens, 25 November 2024. Available at: <https://foresight.gov.gr/en/studies/A-Blueprint-for-Greece-s-AI-Transformation/> (PDF: https://foresight.gov.gr/wp-content/uploads/2024/11/Blueprint_GREECES_AI_TRANSFORMATION.pdf) [accessed 2 May 2026].

At the coordination level, the Hellenic Open Science Initiative (HOSI), established in 2022, brings together 16 research and technology organisations to implement open science policies and support national representation in EOSC. HOSI operates through working groups (including a Policy Working Group) and organises annual symposia, but functions as a voluntary consortium rather than a regulatory body. The National Documentation Centre (EKT), supervised by the Ministry of Digital Governance, provides infrastructure services including repository platforms and the PhD thesis archive.

HEAL-Link, the academic libraries consortium, manages licensing and transformative agreements with publishers and has a mandate to promote open access policies.

9.3.2. Monitoring of individual policy elements

No designated body currently monitors implementation of open access policy at the national level in Greece. The National Plan for Open Science proposed that monitoring be conducted by the National Council for Research, Technology, and Innovation, with support from a new National Open Science Support Office, but these mechanisms have not been operationalised. The plan also recommended participation in the EU Open Science Monitor and OpenAIRE/EOSC monitoring frameworks to track national progress.

NPOS v2 reassigns the national monitoring function to HOSI in direct collaboration with interested stakeholders. Three distinct monitoring mechanisms are proposed across different sections of the plan: a national publications OA monitoring system with indicators aligned to the EU Open Science Monitor and OpenAIRE/EOSC standards; a research data monitoring system with European or international standard indicators; and a national open science monitoring mechanism to be implemented by HOSI. The plan additionally calls for upgrading research funder information systems to enable automated tracking of research outputs and their impact, and for linkage of national APC expenditure data with the OpenMP system. None of these mechanisms has been operationalised as a functioning national monitoring system.

The PSF Open report (2023) recommended establishing a database requiring all National Research Infrastructures to report online their KPI performance, including publications and open science metrics, and suggested that this database include an open access repository of FAIR research data. At the institutional level, the Hellenic Authority for Higher Education (HAHE) conducts quality assurance evaluations of universities, and the National Plan proposed embedding open science principles in these assessments, but implementation has not been verified.

A significant development in the monitoring landscape is ABACUS (Academic Bibliometrics and Assessment Computational Utility Service), announced in January 2026 as Greece's first unified national research monitoring service. Commissioned by HEAL-Link and developed in collaboration with OpenAIRE AMKE, the three-year project will design, deliver, and operate a national data platform providing a reliable, coherent view of scholarly research produced by Greek academic institutions. Its key objectives include tracking and analysis of bibliometric data related to the research production of Greek academic institutions, measuring the adoption and impact of open science practices across all Greek academic institutions, and enhancing interoperability by interlinking research outputs, projects, and funding information.

The platform is built on five central axes: comprehensive bibliometric monitoring, tracking and assessing the adoption of open science, linking research results with projects and funding, full alignment with EOSC, and integration with HARDMIN and ARGOS to form a unified open science ecosystem covering the entire research cycle.⁴⁰⁸ ABACUS represents a substantive, if partial, response to the monitoring gap identified in this chapter.

⁴⁰⁸ OpenAIRE (2026). 'ABACUS: A new national service for monitoring Greek research and Open Science'. OpenAIRE News, 13 January 2026. Available at: <https://www.openaire.eu/abacus-a-new-national-service-for-monitoring-greek-research-and-open-science> [accessed 3 May 2026]. Information about ABACUS provided by independent expert in lieu of NPR input by the time of publication.

It is, however, a consortium-driven infrastructure initiative rather than a governmental open access policy monitoring mechanism: it is commissioned by HEAL-Link and built on the OpenAIRE Graph, without a statutory mandate or formal reporting relationship to the ministry or the National Council for Research, Technology, and Innovation. ABACUS cannot yet be assessed: as of 25 July 2026, it is an announced three-year development project, and no methodology documentation, indicator set, or published figures were available.

9.3.3. Overall policy monitoring

No designated body currently monitors implementation of open access policy at the national level in Greece. The National Plan for Open Science and its successor propose that monitoring be conducted by the National Council for Research, Technology, and Innovation, with support from a new National Open Science Support Office, but these mechanisms have not been operationalised. The plan also recommended participation in the EU Open Science Monitor and OpenAIRE/EOSC monitoring frameworks to track national progress.

The PSF Open report (2023) recommended establishing a database requiring all National Research Infrastructures to report online their KPI performance, including publications and open science metrics, and suggested that this database include an open access repository of FAIR research data. At the institutional level, the Hellenic Authority for Higher Education (HAHE) conducts quality assurance evaluations of universities, and the National Plan proposed embedding open science principles in these assessments, but implementation has not been verified.

9.3.4. Reporting arrangements

No formal reporting chain for open access policy implementation has been established in Greece. The National Plan for Open Science proposed that reporting flow through the National Council for Research, Technology, and Innovation to the political leadership, but this mechanism appears not operational.

Authority for research and innovation actions concerning the open science agenda falls under the supervision of three ministries: the Ministry of Development and Investments, the Ministry of Digital Governance, and the Ministry of Education, Religious Affairs and Sports. Within this structure, distinct vertical reporting lines operate in parallel. National research centres are supervised bodies of the General Secretariat for Research and Innovation (GSRI) under the Ministry of Development and Investments, open access compliance is not, however, a specified reporting category within this relationship. GRNET, which operates the national research and education network and key open science infrastructure including HELIX and the EOSC-GR competence centre, operates under the auspices of the Ministry of Digital Governance and acts as its advisor on the design of advanced information systems and infrastructure. Universities report to the Ministry of Education through standard governance channels.

Horizontal coordination across this dispersed landscape is provided not by a governmental body but by HOSI, a bottom-up stakeholder consortium.

The new ABACUS service will constitute the closest approximation to a national monitoring function in this area.

9.3.5. Results of impact evaluations

No formal impact evaluation of open access or open science policy in Greece has been conducted. However, an evaluation of HFRI has found that HFRI-funded projects produced around 1 849 publications by late 2021, of which roughly half (846) were open access, showing that HFRI support contributes significantly to Greece's OA output, despite the absence of a formal mandate.⁴⁰⁹

⁴⁰⁹ HFRI (Hellenic Foundation for Research and Innovation), Evaluation of the Hellenic Foundation for Research and Innovation — Final Report, external evaluation conducted by an international panel, January 2022, available at: https://www.elidek.gr/wp-content/uploads/2022/01/HFRI-Evaluation_Final-report_R5.pdf [accessed April 2026].

The 2025 KR21 survey⁴¹⁰ documents significant negative impacts of the current legal and policy environment on researchers' ability to access and reuse information: many respondents report frequent inability to obtain needed publications and data, high legal uncertainty around copyright and contracts, administrative burdens, underfunding of access and OA fees, and a perception of bureaucratic and regulatory obstacles.

In the future ABACUS will be the first infrastructure that will make impact evaluation of Greek open science policy systematically possible at national level.

10. Spain

10.1. General characteristics

10.1.1. Policies formulated as strategies, funder mandates and/or legislation

Spain combines binding legislation, national strategies, and funder mandates for open access.

The principal legislative instrument is Ley 17/2022, de 5 September, which amends Ley 14/2011, de 1 de junio, de la Ciencia, la Tecnología y la Innovación, with Article 37 (entitled “Ciencia Abierta”) establishing the core open access requirements for publicly funded research. This legislation constitutes a binding legal mandate.⁴¹¹ A second legislative pillar is provided by the Ley Orgánica 2/2023, de 22 de marzo, del Sistema Universitario (LOSU), which in its Article 12 establishes specific obligations for universities regarding open science, including mandatory deposit requirements for teaching and research staff.⁴¹²

This legal basis is complemented by government strategies, in particular the Spanish Science, Technology and Innovation Strategy 2021–2027 (EECTI)⁴¹³ and in this context the National Open Science Strategy (ENCA) 2023–2027⁴¹⁴ adopted by the Ministry of Science, Innovation and Universities (MICIU), which position open access to scholarly literature, FAIR research data management, open source digital infrastructures and rewards, incentives and training as cross-cutting priorities.

The implementation and monitoring of the National Open Science Strategy is conducted by the Governance Commission for Open Science (COS-Gob) and the Technical Commission for Open Science (COS-Tec), both coordinated by the Ministry of Science, Innovation and Universities and supported by the Spanish Foundation for Science and Technology (FECYT). These bodies bring together representatives from research funding organisations, research performing organisations, and research assessment agencies of the Spanish RTI system to coordinate the operational implementation of open science measures.⁴¹⁵

⁴¹⁰ HEAL-Link / Open Data and Intellectual Property Institute (ODIPI) / Knowledge Rights 21 (KR21), Scientific Information in Greece: Access and Reuse in the Research Ecosystem (KR21-supported report), Zenodo, February 2026, <https://doi.org/10.5281/zenodo.17652377>.

⁴¹¹ Ley 17/2022, de 5 de septiembre, por la que se modifica la Ley 14/2011, de 1 de junio, de la Ciencia, la Tecnología y la Innovación [Law 17/2022 of 5 September amending Law 14/2011 of 1 June on Science, Technology and Innovation], Boletín Oficial del Estado (BOE), No. 214, 6 September 2022, pp. 124223–124255, consolidated text available at: <https://www.boe.es/buscar/act.php?id=BOE-A-2022-14581> [accessed April 2026; translated via browser translation function].

⁴¹² Ley Orgánica 2/2023, de 22 de marzo, del Sistema Universitario [Organic Law 2/2023 of 22 March on the University System (LOSU)], Boletín Oficial del Estado (BOE), No. 70, 23 March 2023, available at: <https://www.boe.es/eli/es/lo/2023/03/22/2> [accessed April 2026; translated via browser translation function].

⁴¹³ Ministry of Science, Innovation and Universities (MICIU), *Estrategia Española de Ciencia, Tecnología e Innovación 2021–2027* [Spanish Science, Technology and Innovation Strategy 2021–2027 (EECTI)], Government of Spain, 2021, available at: <https://www.ciencia.gob.es/site-web/InfoGeneralPortal/documento/1f4e85ac-9e50-49b4-a978-6c15a5195c88>

⁴¹⁴ Ministry of Science, Innovation and Universities (MICIU), *Estrategia Nacional de Ciencia Abierta 2023–2027* [National Open Science Strategy 2023–2027 (ENCA)], Government of Spain, 2023, available at: <https://www.ciencia.gob.es/en/Estrategias-y-Planes/Estrategias/ENCA.html> [accessed April 2026].

⁴¹⁵ Input provided by NPR.

Public funder mandates build on this framework: the State Research Agency (AEI)⁴¹⁶ and Instituto de Salud Carlos III (ISCIII) require open access to publications and research data management planning⁴¹⁷ in their calls.

10.1.2. Bindingness in terms of implementation

Article 37 (Ley 14/2011 as amended) imposes a legal “shall” obligation on public-sector researchers (or those whose research activity is predominantly publicly funded) who disseminate results through scientific publications to deposit the final accepted version and the data associated with those publications in OA repositories, simultaneously with publication. The same Article also binds beneficiaries of predominantly publicly funded RDI projects to comply “at all times” with OA obligations set out in the relevant regulatory bases or grant agreements, thereby allowing funder instruments to be legally enforceable through grant conditions.

The LOSU similarly establishes binding obligations for university teaching and research staff, stating that they “deberá depositar” (must deposit) copies of accepted manuscripts and associated data.

Funder policies (AEI, ISCIII) are binding for grant holders through grant agreements, requiring compliance with open access and data obligations as a condition of funding.

10.1.3. Scope of the policy

Spanish policies explicitly cover both scientific publications and research data, and this is reflected in funders’ mandates.

ENCA operationalises open science across four axes (digital infrastructures, FAIR data management, open access to scholarly publications, and incentives/training), emphasising that open access covers articles, research data, software, protocols and other digital research objects, with particular attention to FAIR-compliant data and integration into EOSC. The ENCA is deployed through a set of specific implementation measures aligned with these four axes, aimed at transforming research practices, infrastructures and evaluation systems across the Spanish RTI system. The ENCA also establishes the principle that scholarly publications and scientific outputs funded directly or indirectly with public funds should be open and freely accessible by default, reinforcing the Spanish legal framework.⁴¹⁸

EECTI 2021–2027 likewise frames open access as part of a wider open science agenda including data, infrastructures and reforms to research assessment and governance.

Spain also operates a coordinated national infrastructure for open access repositories through RECOLECTA (Recolector de Ciencia Abierta), a service operated by the Spanish Foundation for Science and Technology (FECYT). RECOLECTA aggregates metadata from open access institutional repositories across Spain, promotes interoperability standards, and provides national guidelines and validation services for repositories, facilitating compliance with the legal open access requirements established in Article 37 of the Science Act. Besides, it is the national node for OpenAIRE and LA Referencia.⁴¹⁹

⁴¹⁶ References to specifics in call conditions, State Research Agency (Agencia Estatal de Investigación, AEI), Condiciones Aplicables a las Ayudas [Conditions Applicable to Grants], AEI, November 2025, available at: <https://www.aei.gob.es/sites/default/files/inline-files/20251110%20AEI%20Conditions.pdf> [accessed April 2026; in Spanish; translated via browser translation function]

⁴¹⁷ Described inter alia in internal training: Instituto de Salud Carlos III (ISCIII), Sesión informativa: El acceso abierto en el ISCIII, aclarando conceptos [Information session: Open access at ISCIII, clarifying concepts], BVS Salud ISCIII Blog, 19 June 2024, available at: <https://bvsalud.isciii.es/blog/2024/06/19/sesion-informativa-el-acceso-abierto-en-el-isciii-aclarando-conceptos/> [accessed April 2026; in Spanish; translated via browser translation function].

⁴¹⁸ Input from NPR.

⁴¹⁹ Input from NPR.

10.1.4. Embargoes or immediate open access

Under the original Ley 14/2011⁴²⁰ (before amendment), a maximum embargo period of 12 months was permitted for repository deposit. However, the reformed Article 37.2 of Ley 17/2022 requires deposit “de forma simultánea a la fecha de publicación” (simultaneously with the date of publication), effectively mandating immediate deposit. Article 12.2 of the LOSU mirrors this requirement for university staff.

However, while deposit must be simultaneous with publication, the legislation does not explicitly prohibit embargoed access to the deposited content. The CNEAI sexenios criteria clarify that deposit must occur, but the content may be “embargado, con acceso restringido o completamente cerrado” (embargoed, with restricted access or completely closed) pending rights clearance or embargo expiration set by publishers.

10.1.5. Copyright, rights retention and secondary publication rights

Spain does not have a statutory secondary publication right.

Article 37.3 of Ley 17/2022 states that “Los beneficiarios de ayudas y subvenciones públicas se asegurarán de que conservan los derechos de propiedad intelectual necesarios para dar cumplimiento a los requisitos de acceso abierto” (Beneficiaries of public grants and subsidies shall ensure that they retain the intellectual property rights necessary to comply with open access requirements). This places the obligation on researchers to ensure they retain necessary rights but does not specify the mechanism.

10.2. Context of open access policies

10.2.1. Training or guidance for researchers

Spain has developed extensive training and guidance infrastructure for researchers.

ENCA places training centrally in its Axis D (incentives, recognition and training), explicitly targeting not only researchers but also evaluators and assessment committees, and it foresees structured awareness-raising and continuous training (including micro-credentials) to support adoption of open science practices, which in practice covers both OA publishing/deposit behaviours and research data management competencies.

The Fundación Española para la Ciencia y la Tecnología (FECYT) facilitates compliance with Article 37 of the Science Law, which requires researchers to deposit public-funded research in open access repositories.⁴²¹ FECYT provides extensive training and guidelines for researchers, librarians, and institutions on OA, Open Data, and metadata management. It also runs the national harvester, RECOLECTA,⁴²² which pools all Spanish scientific repositories to improve visibility (see also discussion above).

The Network of Spanish University Library REBIUN also provides material and training on open access.⁴²³

For research data specifically, AEI's publication of DMP guidance (and associated expectations embedded in call documentation) functions as a principal national funder-level guidance instrument.⁴²⁴

⁴²⁰ Ley 14/2011, de 1 de junio, de la Ciencia, la Tecnología y la Innovación [Law 14/2011 of 1 June on Science, Technology and Innovation], Boletín Oficial del Estado (BOE), No. 131, 2 June 2011, consolidated text available at: <https://www.boe.es/eli/es/l/2011/06/01/14> [accessed April 2026; translated via browser translation function]

⁴²¹ For bibliographic services see interview: Fundación Española para la Ciencia y la Tecnología (FECYT) / Universitat Oberta de Catalunya (UOC), ‘The goal of FECYT: scientific journals that are more visible, more open, more inclusive and higher quality’, UOC Library News, available at: <https://biblioteca.uoc.edu/en/news/news/The-goal-of-FECYT-scientific-journals-that-are-more-visible-more-open-more-inclusive-and-higher-quality/> [accessed April 2026].

⁴²² OSTrills Project, FECYT — Organisation Profile, available at: <https://www.ostrails.eu/component/tags/tag/fecyt>

⁴²³ Red de Bibliotecas Universitarias Españolas (REBIUN), *Acceso abierto — General* [Open Access — General], available at: <https://www.rebiun.org/acceso-abierto/general> [accessed April 2026; in Spanish; translated via browser translation function].

⁴²⁴ State Research Agency (AEI), *Plan de Gestión de Datos — Guía para solicitantes* [Data Management Plan — Guide for Applicants], AEI, 2020, available at: https://www.aei.gob.es/sites/default/files/convocatory_info/2023-07/Plan%20de%20Gesti%C3%B3n%20de%20Datos%202020.pdf [accessed April 2026; in Spanish; translated via browser translation function].

10.2.2. Funding for open access

The ENCA allocates an indicative annual budget of approximately €23.8 million for the period 2023-2027 to support open science implementation, covering infrastructure, training, and coordination activities.

In kind contributions to open science are made by RPOs through sustaining open access repositories and Diamond OA institutional publishing services under an intramural funding scheme.⁴²⁵ FECYT provides public funding to improve digital platforms for open science, i.e. open access repositories and institutional publishing services operating under the Diamond OA mode, through a dedicated €3M funding stream.⁴²⁶

A significant portion of open access publishing costs is covered through transformative agreements negotiated between CRUE-CSIC and major publishers.⁴²⁷

AEI's calls under the State Plan refer to covering reasonable costs associated with open access to publications (including APCs in fully OA journals or platforms) and with data management (e.g. curation, storage in certified repositories) when justified in the proposal and aligned with Horizon Europe rule.

10.2.3. Repository requirements (incl. FAIR principles)

Spain's legislative and strategic framework explicitly links open access obligations to the use of repositories that meet defined interoperability and, for data, FAIR standards.

Article 37 of Ley 17/2022 requires deposit in “repositorios institucionales o temáticos de acceso abierto” (institutional or thematic open access repositories). The ENCA explicitly requires that repositories be interoperable with international infrastructures, particularly the European Open Science Cloud (EOSC) and OpenAIRE.

ENCA's Axis A (Digital infrastructures) defines repositories as core components of national open science infrastructure.

For research data, the FAIR principles are explicitly incorporated into legislation. Article 37 of Ley 17/2022 requires promotion of initiatives “de acuerdo a los principios internacionales FAIR (sencillos de encontrar, accesibles, interoperables y reutilizables)” Article 12.5 of LOSU requires that data “deberán seguir los principios FAIR” and, where possible, be disseminated in open access.

ENCA's Axis B (Management of research data following FAIR principles) explicitly adopts FAIR as the guiding standard for research data, requiring that data and associated digital objects be findable, accessible, interoperable and reusable through appropriate metadata, licensing and repository services.

As for “trusted repositories” (even if that term is not explicitly used), RECOLECTA provides quality-oriented evaluation guidance⁴²⁸ and, more recently, FECYT has launched/maintained a quality distinction scheme for OA repositories (including good practice recognition relevant to research data management), which functions as an ecosystem-level trust/quality signal.⁴²⁹

⁴²⁵ Rico-Castro, P., de Pablo Llorente, V., & Bonora, L. V. (2026). Landscape Report on Diamond Open Access Publishing in Africa, Europe, and Latin America: Executive summary. Zenodo. <https://doi.org/10.5281/zenodo.18637662> Provided by NPR.

⁴²⁶ OECD, 'María de Guzmán: Funding Call for Open Science Infrastructures', case study in Access to Public Research Data: A Toolkit, OECD Publishing, Paris, 2024, available at: https://www.oecd.org/en/publications/access-to-public-research-data-toolkit_a12e8998-en/maria-de-guzman-funding-call_e9bf4014-en.html [accessed April 2026]. and euroCRIS / FECYT, 'Workshop: Funding Open Science Infrastructures', euroCRIS News, available at: <https://eurocris.org/news/eurocris-fecyt-workshop-funding-open-science-infrastructures> [accessed April 2026].

⁴²⁷ See e.g. explanation at Universitat Oberta de Catalunya (UOC) Library, Publish in Open Access: The Transformative Agreements, available at: <https://biblioteca.uoc.edu/en/page/Publish-in-open-access-the-transformative-agreements/> [accessed April 2026].

⁴²⁸ Universitat Pompeu Fabra (UPF) Repository, RECOLECTA Quality Evaluation Guidelines (summary document), available at: <https://repositori.upf.edu/bitstreams/bf6d0d8d-1f3c-4387-be1b-0dedd8d5ca51/download> [accessed April 2026; summarised via AI-assisted translation for the purposes of this study].

⁴²⁹ Fundación Española para la Ciencia y la Tecnología (FECYT), FECYT publica la resolución definitiva del Distintivo de Calidad de repositorios de acceso abierto [FECYT publishes the final resolution of the Quality Seal for open access repositories], FECYT News, available at: <https://www.fecyt.es/actualidad/fecyt-publica-la-resolucion-definitiva-del-distintivo-de-calidad-de-repositorios-de> [accessed April 2026; translated via browser translation function].

FECYT has established a quality evaluation process and a Quality Seal for institutional repositories, known as the “*Distintivo de Calidad FECYT para repositorios de acceso Abierto*”.

This certification evaluates repositories against a set of quality criteria related to policies, interoperability, metadata, preservation strategies, usage statistics and support for research data management, providing a national recognition mechanism for repositories that meet established best practices.⁴³⁰ RECOLECTA also plays a central role in aligning Spanish repositories with international interoperability frameworks, particularly OpenAIRE guidelines, ensuring that metadata from Spanish repositories can be harvested and integrated into European and global open science infrastructures.

10.2.4. Metadata and persistent identifier requirements

While Article 37 itself does not list specific metadata fields or identifier schemes, ENCA requires the use of standardised metadata and persistent identifiers for open publications and datasets as part of interoperability and FAIR commitments (axis B). ENCA's digital infrastructure axis (axis A) calls for “properly articulated interoperable digital infrastructures” that rely on standardised metadata, and its data-management axis stipulates that datasets must be described with metadata enabling findability and reusability, in line with FAIR.

RECOLECTA's repository certification and FECYT guidelines specify minimum metadata requirements for institutional repositories (e.g. authors, titles, abstracts, funder information, project identifiers). For data, funder DMP templates and institutional RDM guidance typically instruct researchers to assign persistent identifiers to datasets (e.g. DOIs via institutional dataverses or disciplinary repositories) and to include rich, standards-based metadata, distinguishing between metadata requirements for data underlying publications and other curated datasets produced by the project.

AEI's DMP guidance is the most direct national funder vehicle for establishing expectations around documentation, discoverability and reuse planning. Identifier requirements have also been operationalised on the assessment side: since 2023, and most recently under the criteria for the 2025 sexenios call, outputs submitted for evaluation must be deposited with a persistent identifier.⁴³¹

10.2.5. Peer review approaches

Spanish open access policies acknowledge open peer review as one dimension of open science but do not mandate specific peer review approaches. The ENCA identifies “*revisión por pares abierta*” (open peer review) as contributing to greater scientific rigour, transparency, and accountability.

ENCA emphasises the diversification of mechanisms for publishing research results and explicitly supports non-commercial models such as institutional publishing services and open platforms (e.g. Open Research Europe), provided they ensure peer review and robust quality assurance.

10.2.6. Links to researcher assessment

Open access compliance has been integrated into national researcher assessment mechanisms, representing a significant policy lever.

Article 12.8 of the LOSU mandates that “Las agencias de calidad estatal y autonómicas incluirán entre sus criterios y requisitos de evaluación la accesibilidad en abierto de los resultados científicos del personal docente e investigador” (State and regional quality agencies shall include open accessibility of research results among their evaluation criteria and requirements). Article 12.9 further requires quality agencies to use institutional repositories as the means of accessing documentation for evaluation processes.

⁴³⁰ RECOLECTA (Recolector de Ciencia Abierta), Services, FECYT, available at: <https://recolecta.fecyt.es/en/services> [accessed April 2026]. Provided by NPR.

⁴³¹ ANECA, Evaluation criteria for the Call for Research Six-Year Periods – 2025 available at: <https://www.aneca.es/web/guest/criterios-de-evaluaci%C3%B3n-convocatoria-de-sexenios-de-investigaci%C3%B3n-2025> [accessed 25 July 2026].

ENCA's fourth axis on incentives, recognition and training aims to “establish new research evaluation mechanisms and a system of incentives and recognition” that promote open science practices, including open access to publications, data sharing and citizen science, and it calls on funding agencies (AEI, ISCIII) and assessment bodies (ANECA) to incorporate these practices into evaluation criteria.

In 2023, the National Agency for Quality Assessment and Accreditation (ANECA) thus decided to incorporate the legal obligation to deposit all research results as an assessment criterion in the annual research activity evaluation calls for which researchers compete every six years (known as ‘research sexenios’).⁴³² The criterion has been maintained in subsequent calls. A letter published on October 7, 2025, by the prestigious journal *Nature* (“Incentives accelerate progress on open access in Spain”⁴³³) highlights how the measures adopted by ANECA have significantly accelerated the adoption of the new open access model in Spanish universities.

AEI and ISCIII have started to reflect these principles in their calls and evaluation guidelines, for example by requiring narrative CVs that highlight open access practices, data sharing and broader contributions.

Spain's active participation in CoARA (Coalition for Advancing Research Assessment), with a National Chapter coordinated by ANECA, CRUE, CSIC, and ISCIII, also reflects commitment to aligning research assessment with open science principles.⁴³⁴

10.2.7. Public funding thresholds

Article 37 of Ley 17/2022 applies to research personnel “cuya actividad investigadora esté financiada mayoritariamente con fondos públicos” (whose research activity is financed primarily with public funds). The term “mayoritariamente” (primarily or mainly) indicates a threshold above 50% public funding, though no precise percentage threshold is specified in the legislation.

10.2.8. Provisions for small and medium publishers

ENCA's situational analysis acknowledges the dominance of large commercial publishers and the associated risks of oligopoly, cost escalation and “opportunistic behaviour,” and it explicitly calls for strengthening non-commercial-publishing models, including institutional platforms and public infrastructures, as an alternative. However, neither the Science Law nor ENCA sets out detailed, dedicated support schemes or regulatory provisions tailored specifically to small and medium-sized-publishers. However, ENCA's objective to diversify publishing mechanisms, supporting non-commercial- models like Open Research Europe and institutional publishing services, may create opportunities for scholarly society journals and smaller publishers to transition to open access.

FECYT operates quality-oriented certification schemes for Spanish scholarly journals, and books, with a particular emphasis on Diamond Open Access, consolidating their recognition both nationally and internationally.⁴³⁵ FECYT conducts biennial evaluations of Spanish Scholarly Journals based on public, transparent criteria co-created with the academic community and award the FECYT Quality Seal as recognition of good editorial practices.⁴³⁶ Besides, FECYT collaborates with the National University Presses Association (UNE) and with ANECA in the evaluation of monographs and monograph series for the awarding of the CEA-APQ Quality Seal. These actions are complemented and reinforces through Spain strong engagement in the European Diamond Capacity Hub (EDCH).⁴³⁷

⁴³² National Agency for Quality Assessment and Accreditation (ANECA), Open Access Week 2025: ANECA and Open Access, ANECA news, May 2025, available at: <https://www.aneca.es/en/-/2025-05-openaccesweek> [accessed April 2026].

⁴³³ Melero, R., Abadal, E., Ollé, C. and Rico-Castro, P., ‘Incentives Accelerate Progress on Open Access in Spain’, *Nature*, 646 (2025), p. 288, <https://doi.org/10.1038/d41586-025-03276-1>.

⁴³⁴ For details see CoARA (Coalition for Advancing Research Assessment), National Chapter Spain, available at: <https://www.coara.org/national-chapters/coara-national-chapter-spain/> [accessed April 2026].

⁴³⁵ Fundación Española para la Ciencia y la Tecnología (FECYT), Calidad de Revistas Científicas Españolas [Quality of Spanish Scientific Journals] (FECYT Quality Seal for Journals portal), available at: <https://calidadrevistas.fecyt.es/> [accessed April 2026].

⁴³⁶ Fundación Española para la Ciencia y la Tecnología (FECYT), Evaluación de Revistas Científicas Españolas — ARCE [Evaluation of Spanish Scientific Journals — ARCE], available at: <https://evaluacionarce.fecyt.es/> [accessed April 2026].

⁴³⁷ Information provided by NPR.

10.2.9. Identified costs of, or gains from, applying open access policies

ENCA identifies both the costs and expected benefits of implementing open access and broader open science policies. ENCA'S approved budget includes an indicative amount of approximately €23.8 million per year from 2023 to 2027 to support open science measures, such as building interoperable infrastructures, supporting repositories and covering some publishing costs, signalling recognition of substantial upfront and ongoing costs for national implementation.

ENCA articulates several anticipated gains from open access and open data, including increased transparency, participation, cooperation, reusability of research work, impact, reproducibility and sustainability of the R&D system, as well as enhanced knowledge transfer and societal engagement.

The Rectors Conference (CRUE) commitment document (2019) includes among its ten actions “Compile and make public university spending on access to electronic information resources and on publishing results and analyse the additional cost or savings that a transition from the current pay-to-access system to immediate open access would represent”. However,⁴³⁸, comprehensive published cost analyses are not readily available in the public domain.

The transformative agreement structure is explicitly designed to avoid global increases in costs while transitioning publishing expenditure from “pay-to-read” to “pay-to-publish” models, though evidence on whether cost neutrality has been achieved is not available at the time of writing. Partial cost data are published at regional and institutional level: the Catalan university consortium CSUC has monitored open access publishing expenditure since 2018 and reports that, in 2022, 45.5% (€6.69 million) of the €14.7 million total scholarly-communication expenditure of Catalan universities went to open access publishing, against 54.5% (€8.01 million) for subscriptions.⁴³⁹

10.2.10. Security considerations

Security and protection considerations are acknowledged primarily through “as open as possible” style boundary conditions embedded in broader legal and policy frameworks. Article 37(6) explicitly states that open access requirements must be compatible with intellectual and industrial property law, plant variety protection and trade secret regulations, thereby acknowledging economic competition and IP-related security.

10.2.11. References to simplification regarding open access

OA-specific administrative simplification is not articulated explicitly.

However, article 12.9 of the LOSU explicitly aims to “garantizar la agilidad de los procedimientos de evaluación” (ensure the agility of evaluation procedures) by using repositories as the primary documentation access point.

10.2.12. Role of artificial intelligence in open access policies

Spanish open access policies do not contain specific provisions addressing artificial intelligence, either as an opportunity or threat in the context of open science.

⁴³⁸ Conferencia de Rectores de las Universidades Españolas (CRUE), Compromisos de las universidades españolas ante la ciencia abierta [Commitments of Spanish Universities to Open Science], 20 February 2019, available at: https://www.crue.org/wp-content/uploads/2020/02/2019.02.20-Compromisos-CRUE_OPENSCIENCE-VF.pdf [accessed April 2026; in Spanish; translated via browser translation function].

⁴³⁹ Consorci de Serveis Universitaris de Catalunya (CSUC), Acuerdos transformativos — CORA (Catalan Open Research Area), available at: <https://cora.csuc.cat/en/open-access/transformative-agreements/>

10.3. Implementation and monitoring of open access policies

10.3.1. Responsibility for implementation

Implementation responsibilities are distributed across ministries, funding agencies, assessment bodies and research-performing institutions, with MICIU providing overall policy leadership supported by FECYT. For legislative elements (i.e. Article 37), MICIU, in coordination with other ministries and autonomous communities, are responsible for adopting regulations, guidelines and funding programmes that translate legal obligations into practice, and for ensuring that public RPOs and universities develop institutional open access and RDM policies.

ENCA explicitly lists key implementation actors for its four axes, including MICIU, former MUNI, AEI, ISCIII, FECYT, ANECA, CRUE, CSIC and SOMMA, assigning them roles in building infrastructures, promoting FAIR data, ensuring open access to publications and reforming research assessment and training.

For funder-level implementation, AEI and ISCIII are responsible for integrating open access and data requirements into their calls, templates and grant agreements, for providing guidance (e.g. on DMPs, repositories) and for enforcing compliance at the project level.

At institutional level, universities, public research organisations and health research institutes implement policies by operating repositories, providing support and training, defining internal deposit mandates and integrating open access and data practices into researcher evaluation and promotion, with libraries, IT services and research offices playing central operational roles.

Ultimately, individual researchers are responsible for following the obligations of Article 37 which are directly targeted towards them.

10.3.2. Monitoring of individual policy elements

ENCA defines a monitoring indicator framework and explicitly allocates monitoring responsibility for many measures to FECYT (notably for OA compliance and repository linkage indicators) and, for specific RDM capacity measures, to combinations of AEI/ISCIII/FECYT and ministries.

For funder-driven research data management requirements, monitoring typically sits with the funder (e.g., AEI) through grant reporting and review procedures tied to DMP expectations

Overall monitoring of national open science policy implementation is coordinated by FECYT under the direction of the Ministry of Science, Innovation and Universities.

10.3.3. Overall policy monitoring

Overall monitoring of open science policy implementation at national level is anchored in the governance structures of the Spanish Science, Technology and Innovation Strategy (EECTI), particularly its Monitoring Committee, which is charged with overseeing both the strategy and associated thematic strategies such as ENCA. ENCA states that its monitoring and evaluation will be carried out by this committee, which includes representatives from MICIU, former MUNI, autonomous communities, social and economic actors and funding agencies.

FECYT acts as a technical arm for monitoring by operating national information systems and repositories (e.g. RECOLECTA, SICTI components) that provide data: (1) Through its management of RECOLECTA and other national information systems, FECYT effectively acts as a technical observatory for open science implementation, providing data and analytical support to the Ministry and other stakeholders involved in monitoring national open science policies. (2) Monitoring of open science developments also benefits from the broader Sistema de Información sobre Ciencia, Tecnología e Innovación (SICTI), which collects and harmonises data on research activity in Spain and supports policy evaluation within the framework of the national science strategy.⁴⁴⁰

⁴⁴⁰ Information provided by NPR.

10.3.4. Reporting arrangements

Reporting flows follow the governance lines of EECTI and ENCA: RPOs and universities report internally to their governing bodies (rectorates, councils) on open access and data management and provide data to FECYT. FECYT compiles indicators and may produce reports for the MICIU, the EECTI Monitoring Committee and relevant stakeholders, informing the biennial ENCA monitoring cycle and the interim (2025) and final evaluations envisaged by the strategy. As of 25 July 2026, however, neither a biennial monitoring report nor the interim evaluation foreseen for 2025 had been published; the ENCA reporting cycle must therefore be qualified as envisaged but not yet publicly evidenced.

Funding agencies AEI and ISCIII receive project-level-reports from grantees on open access and data management.

10.3.5. Results of impact evaluations

Comprehensive impact evaluations of Spain's open access and open science policies are still emerging; however, several sources provide partial assessments. ENCA establishes a specific set of indicators to monitor progress in areas such as open access publication rates, repository interoperability, research data management capacity and training activities, providing the basis for periodic evaluation of the strategy.⁴⁴¹

A first analysis was done by FECYT in 2016.⁴⁴² The “Informe de la Comisión de Seguimiento sobre el Grado de Cumplimiento del Artículo 37 de la Ley de la Ciencia” (Report of the Monitoring Committee on the Degree of Compliance with Article 37 of the Science Law). This report provides an initial assessment of how well article 37 of the 2011 Science Law had been fulfilled. It served as a starting point for monitoring policies and future actions. In that time, measuring compliance presented significant challenges, particularly due to the lack of an official database of publications resulting from national R&D projects and incomplete metadata linking publications to funded projects in institutional repositories aggregated by RECOLECTA. Despite these limitations, the report adopted an approximate methodology to produce a first reference indicator, intended to raise awareness and encourage progress toward open access. The initial estimate indicated that only 9% of relevant publications complied with the law, highlighting the need for measures to increase both compliance and the accuracy of monitoring.

The REBIUN reports provide tracking of open access rates across Spanish universities and the Spanish National Research Council (CSIC).⁴⁴³ The first REBIUN report, “Medición del Acceso Abierto en las universidades españolas y el CSIC (2014–2018)”,⁴⁴⁴ was produced by the REBIUN Open Access Subgroup as the response to CRUE's first Open Science commitment, namely to diagnose the state of open access in Spain's universities and CSIC and to provide continuous monitoring. In terms of substantive findings for 2014–2018, the first study observes a steady increase in the total number of publications per year and a progressive rise in the share of outputs available in open access. For the system as a whole, when all OA routes are combined (gold, green, hybrid, bronze), the OA share increases progressively until it reaches approximately 50% in 2017. When disaggregating by route, gold OA is the dominant and growing mode across the period, with green OA also significant but showing a relative decline in the last two years examined, which the authors attribute to embargo periods and delays in depositing articles in repositories rather than a structural fall in deposit behaviour.

⁴⁴¹ Information provided by NPR.

⁴⁴² Fundación Española para la Ciencia y la Tecnología (FECYT) / Comisión de Seguimiento, Informe de la Comisión de Seguimiento sobre el Grado de Cumplimiento del Artículo 37 de la Ley de la Ciencia [Report of the Monitoring Committee on the Degree of Compliance with Article 37 of the Science Law], FECYT / RECOLECTA, 2016, available at: <https://www.recolecta.fecyt.es/sites/default/files/documents/CumplimientoOA.pdf> [accessed April 2026; in Spanish; translated via browser translation function].

⁴⁴³ Available from Red de Bibliotecas Universitarias Españolas (REBIUN), Ciencia Abierta — Recomendaciones [Open Science — Recommendations], Complutense University Library guide, available at: <https://biblioguias.ucm.es/ciencia-abierta/Recomendaciones> [accessed April 2026].

⁴⁴⁴ Red de Bibliotecas Universitarias Españolas (REBIUN) / Subgrupo de Acceso Abierto, Medición del Acceso Abierto en las universidades españolas y el CSIC (2014–2018) [Measurement of Open Access in Spanish Universities and CSIC (2014–2018)], CRUE / REBIUN, 2019, available at: https://www.crue.org/Boletin_SG/2019/Bolet%C3%ADn%20229/Medicion_acceso_abierto_REBIUN_2014_2018_informe%20final.pdf [accessed April 2026; in Spanish; summarised via AI-assisted translation for the purposes of this study].

Hybrid and bronze OA follow similar trajectories at low single-digit percentages, with hybrid rising slightly and bronze decreasing in later years, a pattern the report tentatively links to the spread of funder mandates pushing publishers to clarify OA models. When aggregating all OA routes, the proportion of open access publications rises progressively until it reaches approximately 50% in 2017, indicating that by that year half of the article output indexed in WoS/Scopus with a DOI was openly accessible.

The second report, “Medición del Acceso Abierto en las universidades españolas y el CSIC (2016–2020)”,⁴⁴⁵ updates this analysis for the 2016–2020 period and explicitly positions itself as a follow-up (“REBIUN OA 2021”) to the initial 2019 study. It applies the same overall methodology: WoS/Scopus article lists with DOIs from all REBIUN institutions, combined and queried in Unpaywall but incorporates a significant methodological refinement: the use of Unpaywall’s newer “oa_status” field, which directly classifies each DOI as gold, hybrid, bronze, green or closed based on location and licence terms. The main empirical conclusions for 2016–2020 indicate a continued increase in the total number of distinct DOIs analysed. For the first time, the overall number of publications in open access across all routes surpasses the number of non-OA- publications. The report provides an overall figure of 63,21% open access in 2019, with a slight dip to 61,28% in 2020 (probably due to delayed OA due to embargoes).

In terms of routes, gold OA remains the predominant⁴⁴⁶ and steadily growing form of open access, with its proportional share increasing even within the overlapping years between the two studies (2016–2018); the report quantifies this growth, noting, for example, increases on the order of several percentage points per year for gold OA in those overlapping years and suggesting that changes in Unpaywall’s coverage, journal policy shifts (e.g. from bronze or hybrid to full gold) and transitions of closed journals to gold OA could be contributing factors. Hybrid and bronze OA continue to occupy relatively small but non-negligible-shares (roughly in the 3–8% range). Green OA also shows a notable increase in the new study compared to the earlier one: for example, the proportion of green OA in 2018 rises from around 12% in the earlier analysis to over 20% under the updated methodology, and the earlier decline seen in 2017–2018 is largely overcome when the longer time window is considered, although a comparable dip reappears in 2020, again plausibly due to embargoes and deposit delays.

Three further editions of the REBIUN measurement have since been published, with a change of data source from WoS/Scopus lists queried in Unpaywall to OpenAlex which limits comparability of absolute figures with the earlier editions. The 2018–2022 edition reports growth in the open access share of articles from 64.2% (52,731 publications) in 2018 to 75.6% (77,731 publications) in 2022, counting articles either published openly in journals or deposited in institutional repositories.⁴⁴⁷

The 2019–2023 edition reports a rise to 80% (82,413 publications) in 2023 and provides figures for the Diamond route for the first time, in the range of 13–14 percent of all articles.⁴⁴⁸

The most recent edition, covering 2020–2024 and published in early 2026, finds open access publication consolidated in a sustained 70–80% range, at 75.6% in 2024 against a 2022 maximum of 81%. It reports a diamond OA share of 19,5% and 23% but is critical of these figures, attributing them to transition effects in the use sources (it notes that this edition uses the OpenAlex “Walden” version, operative since November 2025)⁴⁴⁹

⁴⁴⁵Red de Bibliotecas Universitarias Españolas (REBIUN) / Subgrupo de Acceso Abierto, Medición del Acceso Abierto en las universidades españolas y el CSIC (2016–2020) [Measurement of Open Access in Spanish Universities and CSIC (2016–2020)] (REBIUN OA 2021), REBIUN, 2021, available at:

https://repositorio.rebiun.org/bitstream/handle/20.500.11967/858/medicion_acceso_abierto_REBIUN_2021%282%29.pdf [accessed April 2026; in Spanish; summarised via AI-assisted translation for the purposes of this study].

⁴⁴⁶ The authors stress that because Unpaywall prioritises publisher hosted locations when determining the “best_oa_location”, gold OA is identified before green OA, meaning that many articles available both in journals and in repositories will be counted as gold even if they are also deposited.

⁴⁴⁷ Red de Bibliotecas Universitarias Españolas (REBIUN), Línea 2, Subgrupo de Acceso Abierto, Medición del Acceso Abierto en las universidades españolas y el CSIC (2018–2022), REBIUN, 2023, available at: <https://repositorio.rebiun.org/handle/20.500.11967/1346> [accessed July 2026; in Spanish; summarised via AI-assisted translation for the purposes of this study].

⁴⁴⁸ REBIUN, Línea 2, Medición del Acceso Abierto en las universidades españolas y el CSIC (2019–2023), REBIUN, 2025 available at <https://hdl.handle.net/20.500.11967/1437> [accessed July 2026; in Spanish; summarised via AI-assisted translation for the purposes of this study].

⁴⁴⁹ REBIUN, Línea 2, Medición del acceso abierto en las universidades españolas y el CSIC (2020–2024), REBIUN, 2026, available at: <https://repositorio.rebiun.org/handle/20.500.11967/1483> [accessed July 2026; in Spanish; summarised via AI-assisted translation for the purposes of this study].

A scientific article from 2023 (Ollé et al⁴⁵⁰) provided a critical assessment. The authors drew a sample of corresponding authors of Web of Science articles with Spanish affiliations published in 2020–2021, emailing 8 188 researchers and obtaining 666 responses (554 complete), predominantly from public universities and public research centres, with health and life sciences particularly represented. The findings show that awareness of the concept of “open science” remains partial: while a quarter of respondents state they know and support its principles and another 37% recognise the scale of the change but think the system is not yet ready, roughly one third either have never heard of open science or have only a vague notion of it, despite the existence of legal and policy mandates in Spain. In terms of open access to publications, most respondents are active publishers (over 60% reported more than seven articles in 2020–2021), and around 22% say all their articles were made openly available and 37.7% that at least half were, whereas about 7.5% reported none.

Regarding the publication process, the survey indicates that journal selection is driven primarily by indexing status and quartile (impact factor), and by disciplinary fit, rather than by open access status or copyright retention; publication speed and APC levels are less decisive, even though 70% of respondents had paid APCs in the previous two years and a large majority view APCs as excessive or unnecessary, or poorly correlated with journal quality as reflected in quartiles. APCs are mostly funded from research projects or from the operating budgets of the researchers' own research groups, with some institutional support from universities or libraries and very limited recourse to personal funds, and researchers express concern that APC-based models exacerbate inequalities between well-funded groups and emerging teams or less well-resourced countries.

For research data, about 43% of respondents report having openly shared data and a similar proportion not doing so, with a further 14.5% intending to share in future; among those who share, the most frequent deposit locations are institutional repositories (33.6%), disciplinary or general-purpose repositories (e.g. Zenodo, Figshare) and dedicated data repositories (e.g. Dryad, GenBank, Dataverse), and leading motivations include transparency, visibility, enabling validation of results and facilitating reuse. Those who do not share cite privacy and confidentiality, absence of explicit mandates, lack of knowledge about how or where to deposit data, and concerns about misuse or unfair exploitation of costly datasets as main reasons; many prefer to share data selectively on justified request rather than fully open, and only 37% report having reused colleagues' data, often preferring data already associated with peer-reviewed publications.

11. France

11.1. General characteristics

11.1.1. Policies formulated as strategies, funder mandates and/or legislation

France has developed an open access framework combining legislation, national strategies, and funder mandates.

At the legislative level, the Law for a Digital Republic (*Loi pour une République Numérique*), enacted on October 7, 2016, established the foundational legal framework through Article 30 (codified as Article L. 533-4 of the Research Code) creating a statutory secondary publication right for authors whose research is financed at least 50% by public funds. Article 30 applies to scientific writings published in journals appearing at least once per year and authorises authors to make available the final manuscript version accepted for publication in an open format via digital channels, even after granting exclusive rights to a publisher.

⁴⁵⁰ Ollé, C., López-Borrull, A., Melero, R., Boté-Vericad, J.-J., Rodríguez-Gairín, J.-M. and Abadal, E., 'Habits and Perceptions Regarding Open Science by Researchers from Spanish Institutions', PLOS ONE, 18(7) (2023), e0288313, <https://doi.org/10.1371/journal.pone.0288313>.

The legislation also addresses research data through Article 30 (II), establishing that publicly funded research data, when not protected by specific rights or regulations and made public by the researcher or institution, may be freely reused. Additionally, Article 38 introduces a text and data mining exception for public research purposes.⁴⁵¹⁴⁵²

At the strategic policy level, France has implemented two successive National Plans for Open Science. The First Plan⁴⁵³ (2018-2021) established three core commitments: (i) generalising open access to publications, (ii) structuring and opening research data, and (iii) participating in sustainable European and international open science dynamics. The Second National Plan (2021-2024)⁴⁵⁴ outlines four primary action lines:

- (i) Generalising open access to publications: This reinforces existing efforts to make all scientific publications resulting from publicly funded projects openly accessible, supporting "diamond" open access models and setting a goal of 100% open access by 2030.
- (ii) Structuring, sharing and opening up research data: This involves ensuring data produced by French public research conforms to the FAIR principles (Findable, Accessible, Interoperable, Reusable), leading to the creation of the national platform Recherche Data Gouv to manage and share research datasets.
- (iii) Opening up and promoting source code produced by research: A new commitment to the plan, this axis promotes the dissemination of research source code under an open licence, recognising it as a scientific production in itself and vital for reproducibility.
- (iv) Transforming practices to make open science the default principle: this involves adapting evaluation criteria for researchers and institutions, developing training programs, and formalising open science policies to integrate these practices into the daily work of the research community.

Both plans are coordinated by the Committee for Open Science (Comité pour la Science Ouverte, CoSO), presided by the Director General for Research and Innovation of the Ministry of Higher Education, Research and Space (Ministère de l'Enseignement supérieur, de la Recherche et de l'Espace, MESRE) and comprising five operational colleges covering publications, research data, source codes and software, competencies and formation, and European/international coordination. As of July 2026, no successor to the Second National Plan (2021–2024) has been published.

At funder level, the Agence Nationale de la Recherche (ANR) articulates binding open science requirements for ANR-funded projects (from 2022 onward) covering immediate open access routes for publications and data management planning, thereby translating strategy into grant conditions.⁴⁵⁵

At the funder level, ANR, France's primary public research funding agency and a founding member of cOAlition S, mandates immediate open access to all publications resulting from projects funded since 2022. The ANR requires deposit in HAL (France's national open repository) or institutional archives under a CC-BY license or equivalent, with no embargo period.

⁴⁵¹ Loi n° 2016-1321 du 7 octobre 2016 pour une République Numérique [Law No. 2016-1321 of 7 October 2016 for a Digital Republic], Journal Officiel de la République Française (JORF), No. 0235, 8 October 2016, text No. 1, available at: <https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000033202746> [accessed April 2026].

⁴⁵² Centre National de la Recherche Scientifique (CNRS), The French Law for a Digital Republic and Open Science — White Paper (October 2016), CNRS Open Science, 2019, available at: <https://www.science-ouverte.cnrs.fr/wp-content/uploads/2019/07/White-Paper-digital-republic-October-2016.pdf> [accessed April 2026]. (implementation study)

⁴⁵³ Ministry of Higher Education, Research and Innovation (MESRI), National Plan for Open Science: Generalise Open Access, Structure and Share Research Data, Second National Open Science Plan (First National Plan, 2018–2021), Committee for Open Science (CoSO), 4 July 2018, available at: https://www.ouvrirelascience.fr/wp-content/uploads/2019/08/National-Plan-for-Open-Science_A4_20180704.pdf [accessed April 2026].

⁴⁵⁴ Ministry of Higher Education, Research and Innovation (MESRI), Second French Plan for Open Science: Generalising Open Science in France 2021–2024, Committee for Open Science (CoSO), October 2021, available at: https://www.ouvrirelascience.fr/wp-content/uploads/2021/10/Second_French_Plan-for-Open-Science_web.pdf [accessed April 2026].

⁴⁵⁵ Agence Nationale de la Recherche (ANR), La science ouverte [Open Science], ANR commitments page, available at: <https://anr.fr/fr/lanr/engagements/la-science-ouverte/> [accessed April 2026].

The ANR policy permits three compliance routes: publication in native open access journals, publication in subscription journals within transformative agreements or through Article Processing Charges (APC), or publication using ANR's specific rights retention strategy (see below). Major research-performing organisations including CNRS, INSERM, and INRAE have adopted complementary open access policies aligned with the national framework in requiring deposit in HAL.

11.1.2. Bindingness in terms of implementation

Article 30 of the Law for a Digital Republic is a public-policy (ordre public) provision: any contractual clause that conflicts with the rights it grants is itself deemed null and void ("réputée non écrite"). Publisher contracts therefore cannot override the statutory secondary publication right; the statute prevails over contract, not the reverse. However, the law creates an enabling *right* rather than *an obligation*, i.e. it authorises authors meeting the 50% public funding threshold to deposit their manuscripts openly but does not mandate that they do so.

The national plans themselves are government strategies (not legislation) and are therefore primarily programmatic, with bindingness achieved indirectly via implementation through funder and institutional policies.

For ANR-funded research, requirements are binding through the funding instrument: ANR specifies that project leaders/partners funded from 2022 "commit" to compliant publication routes (including rights-retention via the "Stratégie de Non-Cession des Droits" - SNCD) and to deposit in HAL, and it requires a data management plan within six months of project start.

11.1.3. Scope of the policy

French open access policies encompass a comprehensive scope extending beyond publications to research data, software, and broader open science practices.

The 2018 National Plan for Open Science frames action around making publications openly available by default while also addressing the structuring and opening of research data, supported by national infrastructures and financing mechanisms. The 2021–2024 plan extends scope further by explicitly including research data and also software/source code as policy objects, with a major implementation vehicle being the national federated platform Recherche Data Gouv⁴⁵⁶ for data sharing and stewardship. At funder level, ANR mirrors this broader scope: it separates commitments on immediate open access to publications from requirements and guidance on data management and sharing (and recommendations on open licensing/archiving for software).

11.1.4. Embargoes or immediate open access

Whereas statutory rights permit embargoes up to specified maximums, evolving funder mandates increasingly require immediate open access without embargo.

Under Article 30 of the Law for a Digital Republic, publishers may impose embargo periods of 6 months for publications in science, technology, and medicine (STM), and 12 months for humanities and social sciences (SHS). However, the law stipulates that if a publisher makes the publication freely available digitally, the author may deposit immediately without waiting for the embargo period to expire.

⁴⁵⁶ Recherche Data Gouv, National Federated Platform for Research Data, available at: <https://recherche.data.gouv.fr/fr> [accessed April 2026].

The ANR policy since 2022 mandates immediate open access with no embargo for all publications from funded projects in line with Plan S⁴⁵⁷ through three compliant routes: publishing in an OA journal, publishing under transformative arrangements or APC, or using rights retention (“SNCD”) to enable immediate repository access.⁴⁵⁸ For research data, ANR requires a data management plan within six months and promotes “as open as possible, as closed as necessary,” implying that openness is the default but may be constrained by legitimate exceptions (e.g., legal, ethical, security, commercial).

The Couperin consortium's negotiating framework for transformative agreements with publishers requires that such agreements support both Article 30 rights (with embargoes) and SNCD implementation (immediate access with CC-BY).⁴⁵⁹ The framework has been renewed for the 2025 negotiation round (agreements taking effect in 2026),

11.1.5. Copyright, rights retention and secondary publication rights

For publications, France has a clear “secondary publication right” in national law. However, ANR explicitly incorporates the cOAlition S-aligned rights retention “Stratégie de Non-Cession des Droits (SNCD)” into its publication compliance pathways for projects funded from 2022, enabling immediate open access by ensuring authors retain sufficient rights at the point of submission/publication.

For research data, the legal baseline focuses on re-use: if data from eligible publicly funded research are not subject to specific rights/regulation and have been made public by the researcher or organisation, their re-use is free. ANR’s open science policy promotes explicit licensing choices for software and encourages structured sharing.

11.2. Context of open access policies

11.2.1. Training or guidance for researchers

The First National Plan for Open Science (2018-2021) included as a strategic commitment to “generalise open science skills,” specifying objectives to “inform scientific communities about the implications of the French Digital Republic Act on the open dissemination of science publications and data,” “create an ‘Open Science’ certification for postgraduate schools,” and “develop research data skills, especially through online training courses aimed at the scientific community”. Universities have responded with structured doctoral training sessions covering research data management (RDM), writing Data Management Plans (DMPs), and implementing FAIR principles, offered in both French and English to accommodate international doctoral students.⁴⁶⁰ The Committee for Open Science has also published detailed guides in French and English.⁴⁶¹

At the doctoral level, the Ministry of Higher Education and Research published the Passport for Open Science,⁴⁶² a practical guide specifically designed for PhD students across all disciplines.

⁴⁵⁷ Committee for Open Science (CoSO), Plan S Recommendations, available at: <https://www.ouvrialscience.fr/plan-s-recommendations/> [accessed April 2026].

⁴⁵⁸ Agence Nationale de la Recherche (ANR), Open Science — ANR’s Commitments, available at: <https://anr.fr/en/anrs-role-in-research/commitments/open-science/> [accessed April 2026].

⁴⁵⁹ Couperin Consortium, 2024 Negotiations for 2025 Agreements — Scoping Letter for the Negotiation of Electronic Resources, 2024, available at: <https://www.couperin.org/negotiations/ressources/2024-negotiations-for-2025-agreements-scoping-letter-for-the-negotiation-of-electronic-resources/> [accessed April 2026].

⁴⁶⁰ FAIRsFAIR / OpenAIRE, Open Research in France — Country Presentation (workshop document), FAIRsFAIR Project, available at: https://www.fairsfair.eu/sites/default/files/1_France_FAIRsFAIR_OpenAIRE%20workshop.pdf [accessed April 2026].

⁴⁶¹ E.g. Committee for Open Science (CoSO), Implementing the Rights Retention Strategy for Scientific Publications, CoSO guidance document, available at: <https://www.ouvrialscience.fr/implementing-the-rights-retention-strategy-for-scientific-publications/> [accessed April 2026].

⁴⁶² Ministry of Higher Education, Research and Innovation (MESRI) / Committee for Open Science (CoSO), Passport for Open Science: A Practical Guide for PhD Students (2nd edition, February 2024), originally published July 2020, licensed under CC BY-SA 4.0, available at: https://www.ouvrialscience.fr/wp-content/uploads/2021/10/SO_21-10-14-WEB-EN.pdf [accessed April 2026].

First published in July 2020 and updated in February 2024, the Passport is licensed under Creative Commons CC-BY-SA and is listed as a UNESCO resource. Université Paris Cité launched an "Open Science Certification" in the 2021-2022 academic year for doctoral students, comprising a 9-hour program designed as an extension of the Open Science training cycle.⁴⁶³

For research data, the DoRANum platform provides self-paced learning resources on data management and sharing aligned with FAIR principles, explicitly positioned as a national training offer for the research community.⁴⁶⁴ The ANR provides Data Management Plan templates integrated into the OPIDoR platform.⁴⁶⁵

11.2.2. Funding for open access

A key national mechanism is the Fonds national pour la science ouverte (FNSO), which—according to the Ministry's reporting—accumulated €12 346 623⁴⁶⁶ over 2019–2021. The FNSO operates successive calls supporting open scientific publishing (including infrastructures and platforms), reinforcing bibliodiversity and non-APC models relevant to publications. In 2022, FNSO allocated €70 000 to the Directory of Open Access Journals (DOAJ).⁴⁶⁷ In 2023, FNSO provided €385 000 total to four international infrastructures selected by SCOSS.⁴⁶⁸

For APC funding, the ANR's policy states that "costs of publishing open access articles (the APC, or 'article processing charge') can be calculated and financed as part of research projects – H2020 projects, for example". Transformative agreements negotiated by the Couperin consortium include APC coverage for participating institutions.

Regarding Diamond open access support specifically, the Second National Plan commits to "support open access economic publishing models that do not require the payment of articles or books processing charges ('diamond' model)". The ANR co-launched the Action Plan for Diamond Open Access alongside cOAlition S, OPERAS, and Science Europe.⁴⁶⁹ However, detailed quantitative allocation data for Diamond-specific funding streams from RFOs to individual journals or platforms operated by RPOs are currently not fully available: the TSOSI platform is being launched by France to fill that gap worldwide.⁴⁷⁰

For research data, major resourcing has taken the form of national infrastructure development (e.g., the federated ecosystem Recherche Data Gouv), which provides a shared service layer intended for RPO uptake.

⁴⁶³ Université Paris Cité, 'New at Université Paris Cité: The Open Science Certification' available at: <https://u-paris.fr/language/en/new-at-universite-paris-cite-the-open-science-certification/> [accessed April 2026].

⁴⁶⁴ DoRANum, Formation en ligne sur la gestion et le partage des données de recherche [Online Training on Research Data Management and Sharing], available at: <https://doranum.fr/> [accessed April 2026]

⁴⁶⁵ OPIDoR (Outil en ligne pour un Plan de gestion de Données de la Recherche), Planifier [Plan], Inist-CNRS, available at: <https://opidor.fr/planifier/> [accessed April 2026]

⁴⁶⁶ Committee for Open Science (CoSO) / Fonds National pour la Science Ouverte (FNSO), FNSO Activity Report 2019–2021, January 2023, available at: https://www.ouvrirelascience.fr/wp-content/uploads/2023/01/FNSO_Activity_Report_2019-2021.pdf [accessed April 2026].

⁴⁶⁷ Directory of Open Access Journals (DOAJ), 'DOAJ Receives Funding from the French National Fund for Open Science', DOAJ Blog, 7 April 2022, available at: <https://blog.doaj.org/2022/04/07/doaj-receives-funding-from-the-french-national-fund-for-open-science/> [accessed April 2026].

⁴⁶⁸ Sustainable Coalition for Open Science Services (SCOSS), 'The French National Open Science Fund Provides Long-Term Support for International Open Science Infrastructures', SCOSS news, available at: <https://scoss.org/the-french-national-open-science-fund-provides-long-term-support-for-international-open-science-infrastructures/> [accessed April 2026].

⁴⁶⁹ Agence Nationale de la Recherche (ANR), Open Science — ANR's Commitments, op. cit.

⁴⁷⁰ Transparency to Sustain Open Science Infrastructure (TSOSI), available at: <https://tsosi.org/> [provided by NPR].

11.2.3. Repository requirements (incl. FAIR principles)

HAL, created in 2001 and managed by the Centre pour la Communication Scientifique Directe (CCSD)—a joint service unit of CNRS, INRIA, and INRAE—serves as France's central open access repository infrastructure for scientific publications.⁴⁷¹ HAL is formally inscribed in both National Plans for Open Science as the primary repository for French research papers. The platform has achieved CoreTrustSeal certification (awarded February 2025). ANR requires deposit of the full text in HAL (at the latest at publication) for outputs arising from ANR-funded projects from 2022, linking compliance to grant management.⁴⁷²

FAIR principles are explicitly embedded in France's data policy framework. The Second National Plan includes as a core measure to "promote widespread adoption of data policies that cover the whole lifecycle of research data, to ensure that they are Findable, Accessible, Interoperable and Reusable (FAIR)". The CNRS Research Data Plan⁴⁷³ states that "the FAIR principles underpin all the actions and tools presented" and specifically mentions repositories that "integrate approaches to certification" as implementation mechanisms.

French policy explicitly recommends use of certified repositories. The ANR guidance states: "It is recommended to choose a deposit location ensuring the permanence of access to the publication, such as HAL (<https://hal.archives-ouvertes.fr/>) or the open institutional archive of the author's establishment".

The OPIDoR Data Management Plan platform, developed by Inist-CNRS, is described as "machine actionable" and "facilitates the saisie and interactions with services involved in data management," supporting FAIR data practices from the planning stage. The platform uses the Science Europe DMP template adopted by ANR, CNRS, and Institut Pasteur.

For research data, France's principal national "trusted" approach is the federated Recherche Data Gouv ecosystem, designed to support data deposit, curation and dissemination through a national portal, repository services, and institutional spaces; its framing is explicitly about enabling sharing and opening of research data at scale. The Second National Plan emphasises governance and community control, stating that "Recherche Data Gouv is founded on shared governance by stakeholders in French higher education and research, and will guarantee that the scientific community retains sovereignty" over research data infrastructure. This aligns with trustworthiness dimensions beyond technical compliance.

11.2.4. Metadata and persistent identifier requirements

For the HAL repository, metadata requirements are formally defined, including references to metadata documentation.⁴⁷⁴ HAL actively promotes use of author persistent identifiers. The platform supports two primary author identifier systems: IdHAL (HAL's internal identifier) and ORCID (Open Researcher and Contributor ID). ANR instructs deposit in HAL with linkage to the ANR project reference and explicitly calls for associating a persistent identifier (e.g., DOI) where applicable, making this a binding condition for ANR-funded projects.

The ANR Data Management Plan⁴⁷⁵ policy emphasises metadata and identifiers within the DMP framework. The ANR uses the Science Europe DMP template, which includes dedicated sections on metadata standards and persistent identifiers.

⁴⁷¹ Centre pour la Communication Scientifique Directe (CCSD), HAL — Open Archive, CCSD (joint service unit of CNRS, INRIA and INRAE), available at: <https://www.ccsd.cnrs.fr/en/hal-en/>

⁴⁷² Centre pour la Communication Scientifique Directe (CCSD), 'HAL obtient la certification CoreTrustSeal : une reconnaissance internationale de sa fiabilité' [HAL obtains CoreTrustSeal certification], CCSD news, 20 February 2025, available at: <https://www.ccsd.cnrs.fr/en/2025/02/hal-is-now-a-coretrustseal-certified-repository-international-recognition-of-its-reliability/>

⁴⁷³ Centre National de la Recherche Scientifique (CNRS), CNRS Research Data Plan, CNRS, March 2021, available at: https://www.cnrs.fr/sites/default/files/download-file/Cnrs_Research-Data-Plan_mars21.pdf

⁴⁷⁴ HAL Documentation, Déposer — Métadonnées du document [Deposit — Document Metadata], available at: <https://doc.hal.science/deposer/metadonnees-document/> [accessed April 2026].

⁴⁷⁵ Agence Nationale de la Recherche (ANR), ANR Data Management Plan Template (English version), ANR, 2019, available at: https://anr.fr/fileadmin/documents/2019/ANR_DMP_Template_EN.pdf

Furthermore, DoRANum explicitly frames data sharing around FAIR principles (which include findability via metadata and identifiers), and Recherche Data Gouv provides the national deposit environment where such practices are operationalised.

11.2.5. Peer review approaches

The French National Plans for Open Science do not explicitly address peer review models as policy objectives. However, France has supported the development of community-led peer review initiatives, most notably Peer Community In (PCI).

PCI is a non-profit organisation providing free, public, peer review of preprints by communities of researchers, organised into discipline-specific "Peer Communities" Under the PCI model, authors deposit preprints on platforms like bioRxiv or HAL, then recommend them to a relevant Peer Community. If accepted for review, the manuscript undergoes peer review managed by "recommenders" (equivalent to editors); if the review is favourable, PCI publishes a "recommendation" (a form of endorsement) along with the peer reviews and author responses, all openly accessible. Authors may then choose to publish the endorsed preprint in Peer Community Journal, a Diamond open access journal that publishes PCI-reviewed articles at no cost to authors or readers.⁴⁷⁶

11.2.6. Links to researcher assessment

The Second National Plan for Open Science states as a goal: "to act in favour of open science being effectively taken into account in both individual and collective assessments for research".

France is a founding participant in the Coalition for Advancing Research Assessment (CoARA), with a French national chapter established in October 2023.⁴⁷⁷

Major French institutions have adopted assessment policies explicitly incorporating open science criteria, e.g. Sorbonne.⁴⁷⁸

11.2.7. Public funding thresholds

France has established a 50% public funding threshold as the criterion determining applicability of statutory open access rights under the Law for a Digital Republic (article 30). This applies to both scientific publications and research data. The system operates on an author attestation basis.

In contrast, the ANR mandate contractually applies to all outputs generated under the funded grant, without an additional percentage threshold beyond the grant's scope. ANR grants are public funds, so outputs of ANR-funded projects will in most cases also satisfy the statutory 50% threshold. The two mechanisms nevertheless differ in legal basis: the statutory right depends on the share of public funding of the research concerned, assessed case by case on author attestation, whereas the ANR obligation attaches to the grant agreement and covers all project outputs irrespective of the overall funding mix. The distinction matters in ANR instruments involving private co-funding partners (for example collaborative projects with enterprises), where the public share of funding of a given output may vary but the contractual open access obligation applies regardless.

⁴⁷⁶ Peer Community In (PCI), About PCI, available at: <https://peercommunityin.org/> [accessed April 2026].

⁴⁷⁷ Committee for Open Science (CoSO), 'Creation of the French National Chapter of CoARA — the Coalition for Advancing Research Assessment', CoSO news, October 2023, available at: <https://www.ouvrirelascience.fr/creation-of-the-french-national-chapter-of-coara-the-coalition-for-advancing-research-assessment/>

⁴⁷⁸ Sorbonne Université, CoARA — Engagement for Responsible Research Assessment, press release, November 2022, available at: https://www.sorbonne-universite.fr/sites/default/files/media/2022-11/PR%20CoARA_Final_0.pdf [accessed April 2026].

11.2.8. Provisions for small and medium publishers

The National Fund for Open Science (FNSO) provides direct financial support to publishing infrastructure, which serves small and medium publishers. FNSO has funded the Mir@bel project⁴⁷⁹ (Mir@bel2022 and Mir@AO), a knowledge base describing over 22 000 periodical publications and providing a policy declaration service specifically designed to enhance visibility of French journals. Mir@bel helps small publishers by serving as a "trusted third party" to register journal policies in international databases like Sherpa Romeo (replaced by Jisc's open policy finder⁴⁸⁰) and the Directory of Open Access Journals (DOAJ).

11.2.9. Identified costs of, or gains from, applying open access policies

The Digital Republic law explicitly required a governmental evaluation of the effects of the secondary publication right on the scientific publishing market and circulation of ideas/data, and France established reporting through the Comité de suivi de l'édition scientifique (CSES), including a final report consolidating findings and recommendations.⁴⁸¹ A central conclusion is that open-archive full-text deposits by authors remained low (2010–2018) and therefore were not destabilising for the economic equilibrium of French journals during the observed period. The report also notes that authors deposit on average around two years after publication, which further reduces market disruption risks. It argues that the principal effect of the law was to clarify the rules for deposit (embargoes and conditions) in line with European recommendations and to clarify author–publisher relations, while reaffirming that deposit is voluntary from the author (in the spirit of the legislator's intent). However, the publication of this report occurred only one year after the publication of the first national plan for open science, the effect of which could thus not be grasped. A more recent study⁴⁸² shows the evolution of article publication charges in France, which has tripled from 2013 to 2022.

The explanatory memorandum of the Digital Republic Law emphasises that "open science will also help businesses looking to innovate, particularly SMEs which do not have the resources to invest in R&D", framing open access as enabling economic spillovers, but provides no quantitative estimates.⁴⁸³

For efficiency gains, the Second National Plan states that open science "builds an ecosystem in which science becomes better substantiated and more transparent, reproducible, effective and cumulative". The Plan argues that open access is "useful for teaching and training, and for the economy, public policy, citizens and society as a whole", but does not quantify these benefits.

⁴⁷⁹ Committee for Open Science (CoSO), 'Enhancing the Visibility of French Scientific Journals: Publication Policies and the Mir@bel Project', CoSO news, available at: <https://www.ouvrialscience.fr/enhancing-the-visibility-of-french-scientific-journals-publication-policies/> [accessed April 2026].

⁴⁸⁰ <https://openpolicyfinder.jisc.ac.uk/>

⁴⁸¹ Comité de suivi de l'édition scientifique (CSES), Rapport final du Comité de suivi de l'édition scientifique [Final Report of the Scientific Publishing Monitoring Committee], Ministry of Culture / Ministry of Higher Education and Research, 12 December 2019, available at: https://www.culture.gouv.fr/content/download/262099/file/Rapport-CSES_FINAL_12_12_2019.pdf [accessed April 2026; in French; conclusions and recommendations section translated via Google Translate for the purposes of this study].

⁴⁸² Blanchard, A., Thierry, D. and van der Graaf, M., Retrospective and Prospective Study of the Evolution of APC Costs and Electronic Subscriptions for French Institutions, Comité pour la science ouverte, 2022, <https://doi.org/10.52949/27>. Available at: <https://hal-lara.archives-ouvertes.fr/hal-03909068v1> [accessed April 2026]. Original link to <https://www.ouvrialscience.fr/retrospective-and-prospective-study-of-the-evolution-of-apc-costs-and-electronic-subscriptions-for-french-institutions-2/> provided by NPR.

⁴⁸³ Government of France, Digital Republic Bill — Explanatory Memorandum (Rationale), available at: <https://www.republique-numerique.fr/pages/digital-republic-bill-rationale> [accessed April 2026].

11.2.10. Security considerations

Security and controlled-access considerations are integrated in the research data domain through the principle “as open as possible, as closed as necessary,” which ANR places at the centre of its approach to data sharing and openness. Other than that, no explicit security provisions appear in the Law for a Digital Republic Article 30, the First or Second National Plans for Open Science, ANR open access policies, or Committee for Open Science guidance documents.

11.2.11. References to simplification regarding open access

There are no explicit references to simplification in relevant documents. The 2018 National Plan includes an objective to support HAL and to simplify deposit for researchers.

11.2.12. Role of artificial intelligence in open access policies

France’s core OA instruments (law, national plans, funder mandates) do not currently explicitly address-related opportunities/risks in making publications or research data open.

11.3. Implementation and monitoring of open access policies

11.3.1. Responsibility for implementation

At the ministerial level, the Ministry of Higher Education, Research and Space (MESRE) holds overall strategic responsibility. The Ministry launched both National Plans for Open Science (2018 and 2021), with the Minister making policy announcements and allocating budgets. The Ministry’s Directorate General for Research and Innovation (DGRl) houses key implementing structures. Within DGDS, the National Coordinator for Open Science and supporting team coordinate policy execution. The Sub-Directorate for Information Systems and Statistical Studies (SIES) produces the French Open Science Barometer.⁴⁸⁴

The Committee for Open Science (CoSO), presided by the Director General for Research and Innovation, provides governance and coordination. CoSo’s five colleges (publications, research data, source codes and software, competencies and formation, Europe and international) and two permanent expert groups develop operational guidance and coordinate stakeholder actions. The forum (300+ members) engages professionals across institutions. CoSO’s role is to “assure the coordinated implementation, with operators of higher education and research, of the national open science strategy” and “coordinate France’s action in the domain of open science at European and international scale”.

Practical implementation is carried by (i) research-performing organisations (RPOs) and universities via deposit workflows and support services, and (ii) national infrastructures, chiefly HAL (operated by CCSD/CNRS) enabling deposit and dissemination, Recherche Data Gouv, (operated mainly by INRAE) enabling data management, sharing and publication and Software Heritage (operated by Inria) enabling software archiving.⁴⁸⁵

For ANR-funded publications, ANR implements its mandate through grant conditions, requiring compliant OA routes (including rights retention) and deposit in HAL, thereby placing primary compliance responsibility on project coordinators and beneficiaries, with ANR as enforcing actor through funding instruments. For research data, implementation is shared between funders (ANR DMP requirement; openness principle), RPOs (data stewardship and governance), and national infrastructure operators (Recherche Data Gouv ecosystem), supported by training platforms (DoRANum) that build operational capacity.

⁴⁸⁴ Committee for Open Science (CoSO), The Committee for Open Science, available at: <https://www.ouvrirlascience.fr/the-committee-for-open-science/>

⁴⁸⁵ Information provided by NPR.

11.3.2. Who is responsible for monitoring the implementation of each policy element

At the national strategic level, the Ministry of Higher Education, Research and Space (MESRE), specifically the Sub-Directorate for Information Systems and Statistical Studies (SIES), produces and maintains the French Open Science Barometer (BSO).⁴⁸⁶ The BSO, launched in 2018 as a commitment of the First National Plan, measures "the proportion of open access to French scientific publications and its progression categorized by the type of access and by discipline". The BSO is updated annually and covers publications (since 2018), doctoral theses, clinical trials, research data and software (since 2022) and institutional open science policies (since the 2024). For ANR-funded publications, the Agence Nationale de la Recherche (ANR) operates a dedicated Open Science Monitor, built as a "local adaptation" of the national BSO methodology. Several RPOs, including universities have implemented their own local adaptation.

For research data, monitoring is at an earlier stage. The 2024 BSO edition published, for the second time, indicators on "research data and codes and software associated with publications".

At the institutional level, universities and research organisations are responsible for monitoring their own policy implementation.⁴⁸⁷

11.3.3. Overall policy monitoring

At the strategic level, the Ministry of Higher Education, Research and Space (MESRE) is the primary body monitoring overall implementation of national open science policy. The Second National Plan for Open Science explicitly states that the Open Science Monitor is "a steering tool that supports those formulating open science policies and wishing to assess their subsequent impact". The Committee for Open Science (CoSO) provides expert oversight and qualitative monitoring.

11.3.4. Reporting arrangements

Reporting relationships in France's open access policy implementation follow the hierarchy of governance and funding, with data and analyses flowing upward from institutions and infrastructures to MESRE and CoSO.

Vice-versa, the ministry's open science function reports progress publicly through BSO releases and related ministerial communications, providing transparency to stakeholders (research community, institutions, funders) and enabling policy steering. For funder mandates, ANR reports progress through its own barometer publications and policy pages.

11.3.5. Results of impact evaluations

France has relatively strong indicator-based monitoring for publication OA and emerging indicators for data/code, which can be used to assess the impact of French OA policies.

At the time of writing, the current BSO website states that 62% of French scientific articles published in 2024 are available in open access, based on Crossref DOIs and at least one French affiliation.⁴⁸⁸ This compares favourably with 2018, the start of the monitoring, where only 38% of publications were open access.⁴⁸⁹

⁴⁸⁶ Ministry of Higher Education, Research and Space (MESRE), French Open Science Monitor (Baromètre de la Science Ouverte, BSO), available at: <https://frenchopensciencemonitor.esr.gouv.fr/> [accessed April 2026].

⁴⁸⁷ Information provided by NPR.

⁴⁸⁸ Ministry of Higher Education, Research and Space (MESRE), Sub-Directorate for Information Systems and Statistical Studies (SIES), Le Baromètre français de la Science Ouverte 2025 [The French Open Science Monitor 2025], Note Flash du SIES n° 2026-04, 26 February 2026, available at: <https://www.enseignementsup-recherche.gouv.fr/fr/le-barometre-francais-de-la-science-ouverte-2025-100994> [translated into English in browser]

⁴⁸⁹ The 2025 figures are not directly comparable with earlier editions: a methodological change in Unpaywall, the monitor's underlying data source, produced a uniform downward revision of open access rates for the whole series back to 2013, and

The 2024 edition reports that for 2023 publications, 52% of open access is via publisher platforms and 47% via repositories, reflecting growth in both Gold/Hybrid routes (influenced by transformative agreements) and Green routes (influenced by Article 30 and repository policies). These two categories are not mutually exclusive: a publication available through both channels is counted in both; which is why they sum to well above the overall open access rate of 67%; roughly one third of 2023 publications were available via both routes. However, recent editions note that repository-based open access is relatively stagnant, while publisher-based open access continues to grow, potentially due to APC-driven models.⁴⁹⁰

The BSO identifies disciplinary differences in impact: life and earth sciences, health sciences, and physical sciences show higher open access rates, while humanities and social sciences lag behind.

The BSO also tracks the rising number of institutions declaring that they have an open science policy and its year of adoption. In the 2025 edition, 64% of the institutions considered had an open science policy (although in recent years this has stagnated).⁴⁹¹

For ANR-funded publications, ANR's Open Science Monitor provides direct evidence of mandate impact. The monitor shows that since ANR introduced open access requirements in 2019, the share of ANR-funded publications in open archives has increased sharply: the overall open access rate of ANR-funded publications rose from 65.3% for 2019 publications to 88.6% for 2023 publications, and 81% of 2023 publications from ANR-funded projects were registered in an open archive at the 2024 observation date.⁴⁹² ANR concludes that "since 2019, the implementation of an open science policy in the ANR's calls for proposals contributes to the increase of publications that are available on an open archive (since 2020: HAL), regardless of the publication route chosen.

For research data, the 2025 edition of the BSO reports that, among publications published in 2024 that mention the creation of a dataset, 27% declare its availability, an increase of 2 percentage points on the previous edition. The 2024 monitor had noted "increased sharing of research data but less communication of clinical trial results".⁴⁹³ The 2025 edition partially reverses the latter finding, reporting significant progress in the communication of clinical trial results (59% of trials completed between 2012 and 2021 share their results, up from 54% in the 2024 edition), driven mainly by academic sponsors. The improvement follows targeted implementation measures: an inter-ministerial report on the communication of clinical trial results (May 2025, approved by the open science steering committee), a structured dialogue with academic sponsors, and a sponsor-support cell established at the National Coordination Committee for Research.⁴⁹⁴

the 2024 edition had recorded 67% for publications published in 2023 on the pre-revision basis. The long-run trend nevertheless remains clearly positive relative to the start of the monitoring,

⁴⁹⁰ See also Committee for Open Science (CoSO), 'Publication of the 2024 French Open Science Monitor: Increased Sharing of Research Data but Less Communication of Clinical Trial Results', CoSO news, available at:

<https://www.ouvri.lascience.fr/publication-of-the-2024-french-open-science-monitor-increased-sharing-of-research-data-but-less-communication-of-clinical-trial-results/> [accessed April 2026].

⁴⁹¹ Ministry of Higher Education, Research and Space (MESRE), French Open Science Monitor — Institutional Policies: Genres of Openness, available at: <https://frenchopensciencemonitor.esr.gouv.fr/declinaisons/institutional-policy?id=general.genres-ouverture> [accessed April 2026].

⁴⁹² Agence Nationale de la Recherche (ANR), The ANR Open Science Monitor, available at: <https://anr.fr/en/anrs-role-in-research/commitments/open-science/the-anr-open-science-monitor/> [accessed April 2026].

⁴⁹³ Committee for Open Science (CoSO), 'Publication of the 2024 French Open Science Monitor', op. cit.

⁴⁹⁴ Committee for Open Science (CoSO), Open Science Monitor 2025: significant progress in the sharing of clinical trial results, CoSO news, available at: <https://www.ouvri.lascience.fr/the-2025-french-open-science-monitor-significant-progress-in-the-communication-of-clinical-trial-results/>

12. Croatia

12.1. General characteristics

12.1.1. Policies formulated as strategies, funder mandates and/or legislation

Croatia's open access (OA) framework consists of a (i) a national strategy-type document, (ii) funder-level rules and templates, and (iii) infrastructure-led implementation.

The Croatian Open Science Plan was officially adopted by the Minister of Science, Education and Youth on 19 May 2025,⁴⁹⁵ representing the first comprehensive national strategic framework. The Plan sets out national objectives and recommendations covering both OA to publications and open research data, and positions Croatia's approach explicitly in relation to European/international principles.⁴⁹⁶

The Act on Higher Education and Scientific Activity (Official Gazette 119/2022), effective 22 October 2022, emphasises open science as a foundational principle and mandates the repository deposit of theses and dissertations, but does not impose binding open access obligations for journal articles or monographs.⁴⁹⁷

Croatia has introduced legislative provisions that require public bodies to make research data funded by public resources, and already available via institutional and thematic repositories, accessible for reuse in machine-readable and open formats, in accordance with open standards (Official Gazette, amendment 69/2022 Article 28(6)).⁴⁹⁸

At funder level, the Croatian Science Foundation (HRZZ) has included mandatory Research Data Management Plans (RDMP/DMP) for publicly funded projects.⁴⁹⁹ Since 2023, HRZZ-funded projects must publish their DMPs in DABAR (Digital Academic Archives and Repositories), provide open access to publications whenever possible, archive research data in digital repositories in accordance with FAIR principles whenever possible, and record all project results in CroRIS (Croatian Research Information System).⁵⁰⁰ As of 2026, providing open access to publications (without an embargo period) and archiving research data in digital repositories in accordance with FAIR principles becomes mandatory.⁵⁰¹

The Research Infrastructure Development Roadmap 2023-2027 highlights open science and FAIR-based research data management as key priorities. The Roadmap provides a detailed description of systems such as CroRIS, EOSC (European Open Science Cloud) and notably the HR-OOZ (National Open Science Initiative) which provides an integrated platform for publishing, discovering, and reusing research resources. The HR-OOZ currently comprises 21 organisations.⁵⁰²

⁴⁹⁵ Ministry of Science, Education and Youth of the Republic of Croatia (MZOM), 'Croatian Open Science Plan — Adoption Notice', 6 June 2025, available at: <https://mzom.gov.hr/news/croatian-open-science-plan/7315> [accessed April 2026].

⁴⁹⁶ Ministry of Science, Education and Youth of the Republic of Croatia (MZOM), Croatian Open Science Plan (revised version, English), May 2025, available at: <https://mzom.gov.hr/UserDocsImages/dokumenti/Znanost/Otvorena-znanost/croatian-open-science-plan-revised-mzom-eng.pdf>

⁴⁹⁷ Zakon o visokom obrazovanju i znanstvenoj djelatnosti [Act on Higher Education and Scientific Activity], Narodne novine, No. 119/2022, 22 October 2022, available at: https://narodne-novine.nn.hr/clanci/sluzbeni/2022_10_119_1834.html [accessed April 2026; translated via browser translation function].

⁴⁹⁸ Zakon o pravu na pristup informacijama [Act on the Right of Access to Information], amendment Narodne novine, No. 69/2022, available at: https://narodne-novine.nn.hr/clanci/sluzbeni/2022_06_69_1025.html [accessed April 2026; translated via browser translation function].

⁴⁹⁹ Croatian Science Foundation (Hrvatska zaklada za znanost, HRZZ), Plan upravljanja istraživačkim podacima za projekte Hrvatske zaklade za znanost [Research Data Management Plan for Croatian Science Foundation Projects], policy page, available at: <https://hrzz.hr/plan-upravljanja-istrazivackim-podacima-za-projekte-hrvatske-zaklade-za-znanost/> [accessed April 2026; translated via browser translation function].

⁵⁰⁰ CroRIS (Croatian Research Information System), available at: <https://www.croris.hr/> [provided by NPR].

⁵⁰¹ Information provided by NPR.

⁵⁰² OSC Association, 'Building a Digital Infrastructure to Advance Open Science in Croatia — Interview with Ivan Marić of Srce', EOSC News, available at: <https://eosc.eu/news/building-a-digital-infrastructure-to-advance-open-science-in-croatia-interview-with-ivan-maric-of-srce> [accessed April 2026].

At community and infrastructure level, Croatia has long-standing national platforms that operationalise OA—e.g., HRČAK (Portal of Croatian scientific and professional journals)⁵⁰³ which underpins an ecosystem of OA journals, and DABAR for institutional/thematic repositories,⁵⁰⁴ providing de facto routes for compliance and dissemination for both publications and, increasingly, datasets.

12.1.2. Bindingness in terms of implementation

Both binding and voluntary elements are present in Croatia.

In Croatia, binding open access requirements are set by HRZZ, which mandates immediate open access to publications arising from its funded projects, the mandatory deposition of research data in trusted repositories in accordance with FAIR principles, and the preparation of a DMP that is archived in the DABAR repository system, with persistent identifiers assigned to each plan.⁵⁰⁵

On the other hand, more broadly the Croatian Open Science Plan articulates that "publications, educational materials, theses, and other resources presenting the results or procedures of research that are fully or partially funded by public funds **should** be made available in open access through institutional, thematic, or other digital repositories under an appropriate open licence immediately after publication." (emphasis added) This indicates a strong recommendation rather than a binding requirement.

However, some institutions have adopted more mandatory open science policies. For example, the Ruđer Bošković Institute Open Access Mandate (2015)⁵⁰⁶ and the University of Zagreb's Open Science Policy (2024) requires authors to deposit publications in institutional repositories under open licences.⁵⁰⁷

12.1.3. Scope of the policy

Croatia's most recent national framework is explicitly broader than publications. The Croatian Open Science Plan structures its recommendations across five pillars: (1) Open Access to Publications, (2) Open Research Data, (3) Open Science Infrastructure, (4) Open Science Evaluation System, and (5) Support, Education, Competencies and Citizen Science.

At funder level, HRZZ's approach references OA to publications and also addresses research data management and FAIR-aligned deposition of research data. Croatia's infrastructure ecosystem likewise spans both domains.

12.1.4. Embargoes or immediate open access

Although Croatia's policy framework supports immediate open access, it allows for embargoes for publications. The Croatian Open Science Plan states:

"Publications, educational materials, theses, and other resources presenting the results or procedures of research that are fully or partially funded by public funds should be made available in open access through institutional, thematic, or other digital repositories under an appropriate open licence immediately after publication. If this is not possible, they should be made available after a short embargo period".⁵⁰⁸

⁵⁰³ HRČAK — Portal of Croatian Scientific and Professional Journals, University Computing Centre (Srce) / MZOM, available at: <https://hrcak.srce.hr/>

⁵⁰⁴ DABAR — Digital Academic Archives and Repositories, University Computing Centre (Srce), available at: <https://dabar.srce.hr/>

⁵⁰⁵ Information provided by the NPR.

⁵⁰⁶ The Ruđer Bošković Institute Open Access Mandate (2015) is available via the Institute's open science pages at: <https://www.irb.hr/eng/Science/Open-Science>

⁵⁰⁷ University of Zagreb, Open Science Policy of the University of Zagreb, University of Zagreb, 2024, available at: https://www.unizg.hr/fileadmin/rektorat/O_Sveuclistu/Dokumenti_javnost/Dokumenti/Javne_rasprave/Pet_strateskih_dokumenata_01.2014/Ostali_strateski_dokumenti/UniZg_Open_Science_Policy.pdf [accessed April 2026].

⁵⁰⁸ Ministry of Science, Education and Youth of the Republic of Croatia (MZOM), Croatian Open Science Plan, Zagreb, May 2025, available at: <https://mzom.gov.hr/UserDocsImages/dokumenti/Znanost/Otvorena-znanost/croatian-open-science-plan-revised-mzom-eng.pdf> [accessed April 2026] official translation referenced by NPR.

The term "short embargo period" is undefined, leaving determination to institutional policies or publisher agreements.

At the funder level, as of 2026, immediate open access to publications arising from HRZZ-funded projects becomes mandatory, along with the deposition of research data in trusted open repositories in accordance with FAIR principles.

12.1.5. Copyright, rights retention and secondary publication rights

The Croatian Open Science Plan stresses that open access must comply with intellectual property rights. It recommends CC BY or "another suitable open licence" for publications and CC BY or CC0 for research data and software.

The plan recommends that authors "make informed decisions by considering the open access and archiving-only options offered by selected journals and, when all other conditions are equal, give preference to publishers that support immediate open access." This represents a voluntarist approach relying on researcher agency.

For projects approved for funding from 2026 onward, authors funded by HRZZ must retain sufficient copyright to make their articles available in open access, and the use of open licenses, such as CC BY or equivalent licenses, is recommended.⁵⁰⁹

Croatia has not adopted a dedicated OA-specific statutory right comparable to "secondary publication rights" regimes in some other jurisdictions; instead, copyright is governed by the general Copyright and Related Rights Act framework.

12.2. Context of open access policies

12.2.1. Training or guidance for researchers

Croatia's policy ecosystem includes commitments to guidance and support for researchers, with the national plan assigning a role to libraries and service providers in providing guidance on OA and research data management. The Ruđer Bošković Institute serves as OpenAIRE's National Open Access Desk in Croatia and provides training and guidance to the Croatian research community on open science topics, as well as access to OpenAIRE's e-learning platform OpenPlato, which offers freely available self-paced courses on open science.⁵¹⁰ HRZZ operationalises guidance particularly through RDMP requirements and accompanying documentation,⁵¹¹ including a reference to a 2020 Manual from the University Computing Centre of the University of Zagreb (SRCE)⁵¹² as well as providing a DMP template in Croatian.⁵¹³

12.2.2. Funding for open access

The HRZZ includes open access publication costs as eligible expenses in all major funding programs; for research projects up to €15 000⁵¹⁴ can be used for OA to publication costs in this context.

⁵⁰⁹ Information provided by NPR.

⁵¹⁰ Information provided by NPR.

⁵¹¹ Croatian Science Foundation (HRZZ), Priprema izvještaja [Preparation of Reports], project implementation guidance (drop-down menu), available at: <https://hrzz.hr/provedba/priprema-izvjesca/> [accessed April 2026; translated via browser translation function].

⁵¹² University Computing Centre of the University of Zagreb (Srce), How to Manage Research Data? — Handbook for the Croatian Research Community, produced under the RDA Europe 4.0 project in cooperation with the University of Rijeka Library, University of Split Library, City and University Library Osijek, and the National and University Library in Zagreb, 2020. <https://repozitorij.srce.unizg.hr/object/srce:327> [accessed April 2026; translated via browser translation function].

⁵¹³ Croatian Science Foundation (HRZZ), Plan upravljanja istraživačkim podacima — Predložak [Research Data Management Plan — Template], available at: <https://hrzz.hr/wp-content/uploads/PUIP.docx> [accessed April 2026; in Croatian].

⁵¹⁴ Corrected from 13.000€ to 15.000€ by NPR.

Croatia also participates in consortia transformative agreements negotiated by national actors (notably the National and University Library in Zagreb acting for the Croatian academic library consortium), enabling OA publishing without direct APC payments by individual researchers in covered cases.⁵¹⁵

For research data, funding support is reflected more through infrastructure provision (e.g., national repository services) and project-level eligibility of related costs rather than explicit national-level earmarked data-sharing funds.

12.2.3. Repository requirements (incl. FAIR principles)

Repository expectations are explicit on the policy level for research data and more implicit/operational for publications. The Croatian Open Science Plan recommends depositing research data/software/code in appropriate disciplinary/institutional/general-purpose repositories and states that repositories should implement procedures that build trust and ensure content complies with FAIR, also referencing the application of FAIR and CARE principles in data storage.

The plan explicitly identifies repository options, including the DABAR system, established in 2015, which serves as the national repository-as-a-service platform for Croatian higher education and research institutions. DABAR was developed by partner institutions, namely the University of Zagreb, including its Faculty of Humanities and Social Sciences, School of Medicine, and the University Computing Centre (Srce), as well as the Ruđer Bošković Institute and the National and University Library in Zagreb. DABAR is provided as a service by the University Computing Centre (Srce) and is governed by a Coordinating Committee representing the above-mentioned institutions.⁵¹⁶

The national OS plan encourages storage and open access dissemination of publicly funded outputs through appropriate repositories and also permits deposit in recognised international repositories (e.g., Zenodo; GitHub for code). In HRZZ's framework, beneficiaries are expected to deposit research data in repositories aligned with FAIR principles. For publications, Croatia's repository infrastructure (DABAR, institutional repositories, plus HRČAK for journals) provides established deposition routes."

12.2.4. Metadata and persistent identifier requirements

The Croatian Open Science Plan states that "stored data should be well documented" and that repositories must ensure "metadata is publicly available from the moment of deposit," regardless of content access restrictions. DABAR's technical specifications require depositing authors to provide a defined set of metadata fields.

The plan requires that "scientists store research data, software and code in digital repositories, where they are assigned persistent identifiers (DOI, URN-NBN and/or others) and linked to publication records whenever possible."

12.2.5. Peer review approaches

Croatia's national plan mentions "open dialogue, peer review and evaluation" but does not set out a detailed, binding national model for community-led peer review.

A 2017 national survey of 152 Croatian open access journal editors (covering 217 peer-reviewed journals in the HRČAK portal) found that all surveyed journals employed peer review, almost exclusively via traditional double-blind or single-blind models. Only a small minority of editors expressed willingness to experiment with open peer review.⁵¹⁷

⁵¹⁵ For Wiley: National and University Library in Zagreb (NSK), 'Croatian Researchers Enabled to Publish Open Access — Nearly 130 Papers in Wiley and IEEE Journals', NSK news, available at: <https://nsk.hr/en/news/croatian-researchers-enabled-to-publish-open-access-nearly-130-papers-in-wiley-and-ieee-journals/> [accessed April 2026]

⁵¹⁶ Information provided by NPR.

⁵¹⁷ Baždarić K, Vrkić I, Arh E, Mavrinac M, Gligora Marković M, Bilić-Zulle L, Stojanovski J, Malički M. Attitudes and practices of open data, preprinting, and peer-review-A cross sectional study on Croatian scientists. PLoS One. 2021 Jun 21;16(6):e0244529. doi: 10.1371/journal.pone.0244529. PMID: 34153041; PMCID: PMC8216536. <https://pmc.ncbi.nlm.nih.gov/articles/PMC8216536/>

12.2.6. Links to researcher assessment

The Croatian Open Science Plan links Open Science to research system performance and monitoring (including via CroRIS).

The Plan mentions including “open science as a criterion in the evaluation of researchers, research projects, and institutions” as a main goal (Goal 4), with a dedicated section on “Open Science Evaluation System” (Section 4.4). The Plan stipulates: “The evaluation system takes open science activities into account when assessing scientific activities and promotes the responsible and ethical conduct of research.”

12.2.7. Public funding thresholds

Croatia’s national plan frames expectations around outputs generated by research partially or fully funded by public funds, without operationalising a specific percentage threshold (e.g., “≥50% public funding”). Furthermore, all HRZZ-funded projects regardless of co-funding from other sources must comply with DMP requirements (although some data may remain closed under the “as open as possible as closed as necessary” principle).

12.2.8. Provisions for small and medium publishers

Croatia’s infrastructure and publishing ecosystem includes substantial diamond OA and community-led journal publishing (e.g., HRČAK), which could potentially be considered advantageous for smaller publishers by providing visibility and a hosting/dissemination layer.

The Croatian Open Science Plan recommends that “domestic publishers of scientific and professional publications should provide open access, apply the CC BY or another suitable open licence, and publish content on the Portal of Croatian Scientific and Professional Journals — HRČAK.” However, there are no explicit provisions (e.g., dedicated subsidies, regulatory exceptions, or structured support schemes) specifically framed as “SME/small publisher provisions” within OA policy.

A 2023 study concludes that “OA to scholarly books is almost entirely in the domain of non-commercial publishers” (higher education institutions, scholarly and professional associations, research institutes).⁵¹⁸

12.2.9. Identified costs of, or gains from, applying open access policies

The Croatian Open Science Plan provides normative and strategic gains (accessibility, collaboration, reuse, system relevance), but Croatia has not published economic analyses of open access costs or benefits.

12.2.10. Security considerations

Croatia’s national plan explicitly recognises legitimate constraints on openness for research data, including for reasons of national security. This high-level principle is operationalised through the “as open as possible, as closed as necessary” doctrine for research data. Furthermore, the Act on the Right of Access to Information (2022) includes general exemptions for information whose disclosure would harm national security, defence, or foreign relations. Croatia has dedicated cybersecurity legislation.

⁵¹⁸ Melinščak Zlodi, I. The Landscape of Scholarly Book Publishing in Croatia: Finding Pathways for Viable Open Access Models. Publications 2023, 11, 17. <https://doi.org/10.3390/publications11010017>

12.2.11. References to simplification regarding open access

Explicit regulatory simplification measures are not prominent in the core policy texts reviewed. (Very) implicitly, the reliance on integrated infrastructures (CroRIS, DABAR) can be interpreted as enabling simplification by centralising deposition/metadata/monitoring.

HRZZ provides standardised DMP templates and guidelines. The shift from submitting DMPs as separate Word/PDF files to publishing them directly in DABAR repositories with hyperlinks in reports (effective April 2023) reduces duplication and facilitates updates.

12.2.12. Role of artificial intelligence in open access policies

Croatia's national plan explicitly references AI as an opportunity driver, noting that open research data and robust infrastructures enable training advanced AI models and thereby support scientific progress and innovation. Threats are not explicitly mentioned. However, Croatia is preparing a National Plan for the Development of Artificial Intelligence for the period to 2032, together with an accompanying Action Plan for 2026–2028; drafting was mandated by Government decision in May 2025 and, as of July 2026, the plan had not yet been formally adopted.⁵¹⁹

12.3. Implementation and monitoring of open access policies

12.3.1. Responsibility for implementation

At the national level, the Ministry of Science, Education and Youth is responsible for policy development and for establishing a monitoring body for the Open Science Plan, while infrastructure and service providers (e.g., University Computing Centre (Srce), Ruđer Bošković Institute, and the National and University Library) support operational enablement.

At the funder level, HRZZ embeds OA/open data requirements into funding rules and grant management; beneficiaries (Principal Investigators and host institutions) implement these obligations through deposition, licensing decisions, and RDMP completion/updates.

For publications and data at the institutional level, public universities/research institutes are expected (per the plan's "Activities") to adopt institutional Open Science policies/action plans and provide support services for data management and repository deposit.

12.3.2. Monitoring of individual policy elements

For the Open Science Plan, monitoring is assigned to a body appointed by the Ministry of Science, Education and Youth and composed of multiple stakeholders (Ministry, HRZZ, universities, research institutions, National and University Library, scientists/experts), tasked with regularly evaluating implementation of recommendations and activities. However, as of early 2026, there is no public information on whether this monitoring body has been formally appointed, and no operational framework (terms of reference, reporting templates, performance benchmarks) has been published.

For HRZZ-funded projects, monitoring is primarily through the funder project management and reporting processes, including RDMP-related documentation and compliance expectations embedded into HRZZ procedures.

For institutional policies, monitoring depends on institutional governance, but the national monitoring body (once appointed) will evaluate implementation progress at system level under the plan.

⁵¹⁹ Ministry of Justice, Public Administration and Digital Transformation of the Republic of Croatia (MPUDT), 'Sjednica Vlade: Pri izradi planova kojima će se regulirati umjetna inteligencija, u fokusu sigurnost građana i njihovih podataka' [Government Session: In drafting the plans regulating artificial intelligence, the focus will be on the security of citizens and their data], May 2025, available at: <https://mpudt.gov.hr/vijesti-8/sjednica-vlade-pri-izradi-planova-kojima-ce-se-regulirati-umjetna-inteligencija-u-fokusu-sigurnost-gradjana-i-njihovih-podataka/30074> [accessed July 2026, translated via google translate in browser]

CroRIS, operational since July 2023, serves as the technical backbone for monitoring. It gathers comprehensive data on all scientific and research activities within Croatian research institutions (publications, projects, organisations, persons, research equipment, events etc.).

12.3.3. Overall policy monitoring

Overall implementation monitoring of the Croatian Open Science Plan is foreseen by a ministry-appointed monitoring body described above, which will evaluate progress and submit reports with proposed revisions at least every five years. The timing of the first evaluation cycle is left flexible to accommodate the initial implementation phase.⁵²⁰

This is complemented by funder-level oversight within HRZZ for funded projects (monitoring within its grant lifecycle).

12.3.4. Reporting arrangements

The Croatian Open Science Plan sets a governance logic in which the monitoring body evaluates implementation.

Beneficiaries report to HRZZ through project reporting processes and required documentation.

12.3.5. Results of impact evaluations

Impact evaluations of Croatia's open access policies have not yet been conducted, reflecting the recent policy adoption timeline (May 2025). Although not an impact evaluation, qualitative evidence from a THECUC 2025 panel indicates the following challenges: "lack of time, skills and guidance" for researchers; need for "multi-professional support teams"; dependency on "everyday practice" rather than policy documents alone for cultural change.⁵²¹

The Croatian Open Science Plan's monitoring framework specifies that the ministry appointed body will conduct the first comprehensive five-year evaluation.

Prior to the adoption of the 2025 plan, the most substantive empirical assessment of Croatia's OA landscape was provided by Macan, Škorić and Petrak (2020).⁵²² The study examined the open access landscape of Croatian scientific output through a case study of all Croatian-affiliated publications indexed in the Web of Science Core Collection (WoSCC) for 2017 — four indexes (SCI-EXP, SSCI, AHCI, ESCI). The primary dataset comprises 5 176 articles and reviews published in 117 Croatian and 2 018 foreign journals. The study found 74.4% OA overall and 99.8% OA for Croatian journals. The study reached this figure through a methodological correction (basically an extrapolation): the initial WoSCC OA filter identified 57.3% of papers as OA, but analysis of a randomised sample of the apparent non-OA subset revealed that 40.1% of those papers were in fact openly accessible (mostly via green repositories), raising the overall estimate to 74.4%.

Of the 5 176 papers in the primary dataset, 30.7% (1 588) were published in 117 Croatian journals; 99.8% of these were open access, almost entirely via publisher websites. The authors conclude that because Croatian journals are publicly funded and OA is a condition of that funding, the non-commercial, not-for-profit character of national journal publishing produces structural OA at scale without requiring an institutional mandate or rights retention mechanism targeted at individual researchers.

⁵²⁰ Information provided by the NPR.

⁵²¹ IP4OS Project / THECUC 2025, 'Open Science Practice: Preconditions, Challenges and Sustainability in the Croatian Context', panel report, 2025, available at: <https://www.ip4os.eu/news/open-science-practice-preconditions-challenges-and-sustainability-croatian-context> [accessed April 2026]

⁵²² Macan, B., Škorić, L. and Petrak, J., 'David among Goliaths: Open Access Publishing in Scientific (Semi-)Periphery', *Learned Publishing*, 33(4) (2020), pp. 410–417, <https://doi.org/10.1002/leap.1320>. Accepted manuscript deposited in Dr Med — University of Zagreb School of Medicine Digital Repository, permanent link: <https://urn.nsk.hr/urn:nbn:hr:105:262440> [accessed April 2026].

The authors note that this model may offer a blueprint for other semi-peripheral countries⁵²³ seeking to increase OA without APC dependency. However, as the figures show, this approach works primarily in the national context.

13. Italy

13.1. General characteristics

13.1.1. Policies formulated as strategies, funder mandates and/or legislation

Italy's open access framework includes a limited legislative basis, complemented by policy instruments and institutional strategies rather than relying on comprehensive statutory mandates. The main legislative reference is Article 4 of Law 112/2013 (converted from Decree-Law 91/2013), which introduced Italy's first national provision addressing open access to publicly funded research.⁵²⁴

The law requires public bodies responsible for managing research funding to promote open access to research results funded at least 50% with public resources, when published as scientific articles in periodical journals.

It explicitly allows both gold and green open access and sets maximum embargo periods of 18 months for Science, Technology and Medicine (STM) and 24 months for Social Sciences and Humanities (SSH).

The provision applies exclusively to journal articles and does not extend to monographs, research data, or other research outputs. While embargo periods are clearly defined, the law does not establish detailed implementation mechanisms, enforcement measures, or author-centred rights, leaving practical application largely to funding bodies and research institutions.

The legislative framework was later complemented by Legislative Decree 200/2021, transposing Directive (EU) 2019/1024 on open data and the reuse of public sector information. While this decree includes provisions specifically addressing research data, it operates primarily within an open data and reuse perspective and does not constitute a comprehensive open science or open access mandate.⁵²⁵

⁵²³ Research systems that are neither part of the large, predominantly English-language scientific 'centre' nor fully peripheral.

⁵²⁴ Republic of Italy, Legge 7 ottobre 2013, n. 112, recante conversione in legge, con modificazioni, del decreto-legge 8 agosto 2013, n. 91, recante disposizioni urgenti per la tutela, la valorizzazione e il rilancio dei beni e delle attività culturali e del turismo [Law No. 112 of 7 October 2013, converting with amendments Decree-Law No. 91 of 8 August 2013 on urgent provisions for the protection, enhancement and recovery of cultural assets and activities and of tourism], Gazzetta Ufficiale della Repubblica Italiana, Serie Generale, No. 236, 8 October 2013, available at: <https://www.gazzettaufficiale.it/eli/gu/2013/10/08/236/sg/pdf> [accessed April 2026; in Italian; translated via browser translation function] and University of Palermo (Università degli Studi di Palermo), Legge 7 ottobre 2013, n. 112 — testo annotato con riferimenti all'accesso aperto [Law No. 112 of 7 October 2013 — annotated text with references to open access], available at: <https://www.unipa.it/0ab69c7f-6fca-11ed-b5f2-005056010139/> [accessed April 2026; translated via browser translation function].

⁵²⁵ Republic of Italy, Decreto Legislativo 8 novembre 2021, n. 200: Attuazione della direttiva (UE) 2019/1024 del Parlamento europeo e del Consiglio, del 20 giugno 2019, relativa all'apertura dei dati e al riutilizzo dell'informazione del settore pubblico (rifusione) [Legislative Decree No. 200 of 8 November 2021 implementing Directive (EU) 2019/1024 of the European Parliament and of the Council of 20 June 2019 on open data and the reuse of public sector information (recast)], Gazzetta Ufficiale della Repubblica Italiana, Serie Generale, Supplemento Ordinario, No. 285, 30 November 2021 (codice redazionale 21G00213). Normattiva consolidated text available at: <https://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:decreto.legislativo:2021-11-08;200> [accessed April 2026; in Italian; translated via browser translation function].

The Italian National Plan for Open Science (Piano Nazionale per la Scienza Aperta, PNSA) 2021–2027⁵²⁶ was established by Ministerial Decree 268 of 28 February 2022 as an integral component of the National Research Programme (PNR) 2021–2027. Within the structure of the PNR, the PNSA is conceived as a horizontal plan, alongside the national plan for research infrastructures, and applies across all thematic research areas rather than to a specific disciplinary domain. Developed by a working group appointed by the Ministry of Universities and Research (MUR), the PNSA identifies five main axes of intervention addressing scientific publications, research data, research assessment, open science community engagement, and data sharing in response to societal and public health challenges. Its cross-cutting scope reflects the intention to embed open science principles systematically within the national research system. The PNSA is programmatic in nature and provides strategic guidance and recommendations rather than binding requirements. While it assigns MUR a coordinating and supervisory role in supporting implementation across the research system, it does not define enforcement mechanisms or sanctions for non-compliance.

At the level of public research funding, the Ministero dell'Università e della Ricerca has incorporated open access requirements into some of its main competitive funding schemes. In particular, the PRIN (Progetti di Ricerca di Interesse Nazionale) 2020 call⁵²⁷ (Directorial Decree 1628/2020, Article 13), subsequently confirmed in PRIN 2022, requires open access to publications resulting from funded projects. These provisions primarily concern scholarly articles and are not accompanied by explicit monitoring procedures or enforcement mechanisms.

In addition, several projects funded under the Piano Nazionale di Ripresa e Resilienza (PNRR), particularly within Mission 4, include open science–related requirements as part of their funding conditions.⁵²⁸ These typically extend beyond open access to publications and encompass eligible costs and obligations related to FAIR research data management, data management plans, open science training, and the development of open research infrastructures. While these requirements are binding at the level of individual grant agreements, they are programme-specific and do not yet constitute a single, unified national open science mandate.

In addition, some private research funders, such as Telethon⁵²⁹ and Fondazione Cariplo,⁵³⁰ have adopted policies supporting open access to funded research outputs, including the coverage of publication costs, contributing to the broader uptake of open access practices within the Italian research landscape.

13.1.2. Bindingness in terms of implementation

The Italian open access and open science policy landscape reflects a complex governance model that combines statutory provisions, contractual funding conditions, and soft-law instruments.⁵³¹ These instruments display differing degrees of binding force depending on their legal nature and on the actors to whom they are addressed.

⁵²⁶ Ministry of Universities and Research (MUR), Italian National Plan for Open Science — Piano Nazionale per la Scienza Aperta (PNSA) 2021–2027 (courtesy English translation; in case of discrepancy the Italian language original prevails), established by Ministerial Decree No. 268 of 28 February 2022 as part of the National Research Programme (PNR) 2021–2027, MUR, Rome. English PDF available at: https://www.mur.gov.it/sites/default/files/2023-01/PNSA_2021-27_ENG.pdf [accessed April 2026].

⁵²⁷ Ministry of Universities and Research (MUR, formerly MIUR), Decreto Direttoriale n. 1628 del 16 ottobre 2020: Bando PRIN 2020 — Programma per lo sviluppo di Progetti di Rilevante Interesse Nazionale [Directorial Decree No. 1628 of 16 October 2020: PRIN 2020 Call], registered at the Court of Auditors on 29 October 2020 (No. 2068), MUR, Rome, available at: <https://www.mim.gov.it/documents/20182/4708557/Decreto+Direttoriale+n.1628+del+16-10-2020.pdf/e6163f8c-ad19-edfe-4fb3-019a71237b15?version=1.0&t=1603982835401> [accessed April 2026; in Italian; translated via browser translation function]

⁵²⁸ Information provided by NPR.

⁵²⁹ Fondazione Telethon, Open Access Policy and Guidelines, Fondazione Telethon, Rome, available at: <https://www.fondazionelethon.it/en/open-access-policy-guidelines/> [accessed April 2026].

⁵³⁰ Fondazione Cariplo, Open Access Policy (English version), Fondazione Cariplo, Milan. https://www.fondazionecariplo.it/static/upload/pol/policy_open_access_en.pdf at the time of writing not functional. Policy available at https://scholar.google.com/mandates/cariplo_it-2021-02-13-en.pdf

⁵³¹ The article Lucilla Gatt, 'L'Open Science fra hard law e soft law: guida alle normative in tema di scienza aperta', Open Science Italia, 22 May 2024, available at: https://open-science.it/article?rpk=302464&prs_sel=p_researcher&tpc_sel=t_openscience . [accessed April 2026; in Italian; translated via browser translation function] situates Italian provisions vis-a-vis European provisions. Reference provided by NPR.

With regard to publications, national statutory provisions establish a legal framework aimed at promoting open access but do not impose a direct, fully binding obligation on individual researchers. Article 4 of Law 112/2013 places an obligation on public bodies responsible for research funding to adopt measures promoting open access to eligible research outputs, subject to defined applicability conditions (notably the level of public funding and the type of publication). However, the law does not prescribe mandatory implementation procedures or repository deposit requirements, thereby leaving operationalisation to funding bodies and institutional policies.

No specific national legislation currently establishes a general statutory obligation to make all research data produced from publicly funded research openly accessible. However, Italy's transposition of Directive (EU) 2019/1024 through Legislative Decree 200/2021, especially the binding guidelines issued by the Agenzia per l'Italia Digitale (AgID),⁵³² sets out a robust open data framework applicable to research data held by public sector bodies. Within this guideline's framework, research data are subject to an "open by default" approach, in line with the principle "as open as possible, as closed as necessary", and must comply with FAIR principles, open licensing, and free access for re-use, subject to legitimate exceptions such as data protection, intellectual property rights, security, and commercial confidentiality.

More clearly binding requirements emerge at the level of research funding through contractual mechanisms. Open access obligations included in PRIN (Progetti di Ricerca di Interesse Nazionale) calls are formally binding as conditions attached to grant agreements and apply to beneficiaries of specific funding schemes, primarily with regard to access to resulting scholarly publications. Similar contractual approaches are adopted by some private research funders. In these cases, the binding nature of the requirements is limited in scope to funded projects and is generally not accompanied by systematic enforcement or sanctioning mechanisms.

In addition, binding open science requirements have been introduced through several funding programmes under the National Recovery and Resilience Plan (PNRR), particularly within Mission 4, Component 2 (M4C2), which supports research, innovation, and advanced infrastructures. Many PNRR-funded projects include explicit obligations concerning open access to publications and the preparation and implementation of Data Management Plans, reflecting alignment with EU-level practices under Horizon Europe and the European Open Science Cloud. These requirements, while contractual in nature, have had a significant systemic impact due to the scale of funding involved and the large number of participating institutions.⁵³³

By contrast, the National Open Science Plan (Piano Nazionale per la Scienza Aperta) operates as a soft-law instrument. It is defined as a programmatic document providing strategic guidance and recommendations addressed to multiple actors, including the Ministry of Universities and Research, research-performing organisations, and individual researchers without creating legally binding mandates or enforcement mechanisms.

13.1.3. Scope of the policy

Italy's binding national legal provision on open access, established by Law 112/2013, is narrowly focused on scientific publications, specifically peer-reviewed journal articles resulting from research funded at least 50% with public resources. Italy's open science policy framework, as articulated in the Piano Nazionale per la Scienza Aperta (PNSA), adopts a significantly broader scope. The PNSA explicitly conceptualises open science as an integrated ecosystem encompassing scientific publications, research data, methods and protocols, software and analysis tools, research infrastructures, and educational resources.

Within this broader framework, the PNSA dedicates a specific axis of intervention to research data. It promotes the systematic adoption of FAIR data principles across the national research system and alignment with European initiatives, including the European Open Science Cloud.

⁵³² Agenzia per l'Italia Digitale (AgID), Linee Guida nazionali per la valorizzazione del patrimonio informativo pubblico [National Guidelines for the Valorisation of Public Information Assets] available at: <https://www.agid.gov.it/it/linee-guida> [accessed April 2026; in Italian; translated via browser translation function]. Reference provided by NPR.

⁵³³ Information provided by NPR.

The plan recommends that the Ministry of Universities and Research incorporate FAIR data and data management plan requirements into publicly funded research calls, and that research institutions adopt DMPs aligned with European and international standards. These measures are explicitly framed as strategic and programmatic recommendations rather than as binding mandates. Italy's transposition of Directive (EU) 2019/1024 through Legislative Decree 200/2021, together with binding guidelines issued by the Agenzia per l'Italia Digitale (AgID), establishes a comprehensive open data framework applicable to research data held by public sector bodies. Within this framework, publicly funded research data falling under the remit of public administrations are subject to an "open by default" approach, in line with the principle "as open as possible, as closed as necessary", and must comply with FAIR principles, open licensing, and free access for re-use, subject to legitimate exceptions such as personal data protection, intellectual property rights, security, and commercial confidentiality.

In addition, the PNSA explicitly promotes Open Educational Resources as part of its broader vision of an open research and knowledge ecosystem, further extending its scope beyond the traditional focus on scientific publications.

13.1.4. Embargoes or immediate open access

Italy's binding national open access provision, established by Law 112/2013, explicitly allows embargo periods that vary by disciplinary area. Scientific publications in the Science, Technology and Medicine (STM) fields may be made openly accessible no later than 18 months after publication, while publications in the Social Sciences and Humanities (SSH) may be subject to embargoes of up to 24 months. The law permits compliance through both gold open access and green open access routes.

These embargo provisions are reflected in the implementation of open access requirements within major national funding schemes, including the PRIN calls issued by the Ministry of Universities and Research (MUR), where open access to publications is mandatory but embargo periods consistent with Law 112/2013 are allowed.⁵³⁴

By contrast, the Piano Nazionale per la Scienza Aperta (PNSA) adopts a more ambitious policy stance. The plan explicitly identifies immediate open access to publicly funded scientific publications as a strategic objective, aligning with the principles set out in Commission Recommendation (EU) 2018/790. However, this position is articulated as a policy goal and recommendation for future regulatory evolution, rather than as a legally binding requirement under the current national framework.

13.1.5. Copyright, rights retention and secondary publication rights

Italy's current statutory open access model operates primarily through a deposit-and-embargo mechanism and does not establish an explicit rights retention or secondary publication right for individual researchers. Law 112/2013, which constitutes the core national legal provision on open access, probably does not qualify as a secondary publication right since it places an obligation on public bodies, rather than being an enabling right for authors, as SPRs usually are. The law states:

Public bodies responsible for providing or managing scientific research funding shall, **in their autonomy**, adopt the necessary measures to promote open access to the results of research funded by public funds for a share equal to or greater than 50 percent, when documented in articles published in scientific journals with at least two issues per year. Article 4, paragraph 2 (emphasis added).

As such, while the law mandates open access outcomes under certain conditions, it does not grant authors an autonomous legal right to republish their works, nor does it override contractual arrangements with publishers. The provision is also not explicitly embedded within Italy's copyright legislation, reinforcing its character as an institutional mechanism rather than an author-centred secondary publication right.

⁵³⁴ See e.g. University of Modena and Reggio Emilia (Unimore), Research Open Access and Publishing Office (POP — Promozione dell'Open Publishing), How to Comply with Open Access Requirements available at: <https://www.pop-en.unimore.it/how-to-comply-with-open-access-requirements/>

This limitation is explicitly acknowledged in the Piano Nazionale per la Scienza Aperta (PNSA), which identifies the absence of a clear secondary publication right as a structural gap in the national framework. The PNSA calls for the introduction of “the inalienable and non-negotiable right of immediate republication” for authors of publicly funded research outputs, framing this as a legislative priority aligned with European open science principles.

In this context, a legislative proposal commonly referred to as the Legge Gallo (Draft Law No. 1146, authored by Francesco Gallo)⁵³⁵ sought to introduce an explicit Secondary Publication Right into Italian copyright law. The proposal aimed to grant authors of publicly funded scientific publications an inalienable right to republish their works in open access, irrespective of any contractual terms agreed with commercial publishers. Any contractual clause restricting this right would be rendered null and void. The draft law also envisaged shorter embargo periods than those currently permitted under Law 112/2013. However, the proposal has not been enacted, and its legislative status seems lapsed.

Alongside formal legislative and policy developments, Italy has seen the emergence of coordinated scholarly and institutional initiatives aimed at promoting secondary publication rights and rights retention in practice. These include the Right2Pub project⁵³⁶ and related national advocacy activities involving research institutions and legal scholars, which seek to advance awareness, policy alignment, and future legislative reform in this area. While these initiatives do not create binding legal rights, they contribute to shaping the national debate and aligning Italy with broader European discussions on authors' rights and open science.

13.2. Context of open access policies

13.2.1. Training or guidance for researchers

The PNSA emphasises training as “a prerequisite for the full involvement of the national scientific community” in open science. The plan's action items include: creating university training courses for “data scientists” and “data stewards” with European accreditation; initiating basic training for all researchers and technologists on FAIR data management; expanding data literacy across all training curricula; and contributing to youth training on “the logic and methods of open science.” However, these remain programmatic recommendations rather than established programmes.

At the institutional level, a number of Italian universities and public research organisations provide practical guidance and training activities to support researchers in implementing open access and open science practices. Major universities⁵³⁷ have developed detailed guidelines and training resources, often coordinated through university libraries and research support offices. These materials typically address open access compliance, repository deposit procedures, embargo periods, licensing options, publisher policies, research data management, and alignment with national and European infrastructures. The Italian Computing and Data Infrastructure (ICDI) Competence Centre, established as a collaboration among major Italian research organisations, provides training and support on open science, FAIR principles, and EOSC participation.⁵⁴⁰

⁵³⁵ Italian Senate, Disegno di Legge n. 1146: Proposta di legge recante disposizioni in materia di diritto di ripubblicazione delle opere scientifiche [Draft Law No. 1146 on Secondary Publication Rights for Scientific Works] (authored by Senator Francesco Gallo), Senate of the Republic of Italy, available at: <https://www.senato.it/service/PDF/PDFServer/BGT/01106196.pdf> [accessed April 2026; in Italian; translated via browser translation function].

⁵³⁶ Right2Pub Project available at: <https://www.right2pub.eu/> [accessed April 2026]. Information provided by NPR.

⁵³⁷ Politecnico di Milano Library, Open Access — Servizi per i ricercatori [Open Access — Services for Researchers], available at: <https://www.polimi.it/campus-e-servizi/biblioteche-e-archivi/biblioteche/servizi/open-access>

⁵³⁸ Open Science Italia (ISTI-CNR / OpenAIRE NOAD Italy), ‘La formazione dei data steward all’Università di Torino. Annotazioni preliminari sull’esperienza’ [Training Data Stewards at the University of Turin: Preliminary Notes on the Experience], Open Science Italia portal, available at: https://open-science.it/article?rpk=318079&prs_sel=p_datasteward&tpc_sel=t_gestione_dei_dati_della_ricerca [accessed April 2026; in Italian; translated via browser translation function].

⁵³⁹ Area Science Park, MDMC — Master in Data Management and Communication (call for applications, advanced training in open science and FAIR data management), available at: <https://www.areasciencepark.it/call/mdmc/> [accessed April 2026].

⁵⁴⁰ Italian Computing and Data Infrastructure (ICDI), ICDI Competence Centre, available at: <https://www.icdi.it/en/activities/competence-centre> [accessed 2 May 2026].

In parallel, national-level information and awareness-raising activities are supported through the open-science.it portal.⁵⁴¹ The platform serves as a central reference point for the Italian research community, providing up-to-date information on open access and open science policies, legal developments, national and European initiatives, training opportunities, and practical guidance for researchers and institutions.⁵⁴²

In addition, Italy has seen the emergence of community-based and profession-oriented initiatives dedicated to open science skills development, most notably the Italian Data Steward Community. This national network brings together data stewards, librarians, and research support professionals to develop shared competencies, training materials, and professional standards for data stewardship. It contributes significantly to the dissemination of FAIR data practices, support for data management plan implementation, and alignment with European open science and EOSC-related developments.⁵⁴³

13.2.2. Funding for open access

In Italy, there is no single, centrally managed national fund dedicated exclusively to open access (OA) publishing costs. Instead, funding for open access and broader open science activities is provided through a combination of funding mechanisms operated by the Ministero dell'Università e della Ricerca (MUR) and other ministries, institutional arrangements within research performing organisations (RPOs), and eligibility of open science costs within publicly funded research projects.

A primary mechanism supporting open access publishing costs is represented by transformative (Read & Publish) agreements negotiated at national level by the Conferenza dei Rettori delle Università Italiane through its CARE consortium.⁵⁴⁴ These agreements, in place since 2020, allow corresponding authors affiliated with participating universities and research organisations to publish open access without paying individual Article Processing Charges (APCs), as costs are covered centrally through institutional subscription budgets.⁵⁴⁵ While not a direct RFO-to-RPO funding instrument, these agreements constitute a major systemic channel for covering OA publishing costs in Italy.

At the level of competitive public research funding, the Ministry of Universities and Research (MUR) recognises dissemination and communication activities, including open access publication costs, as eligible expenses within its main funding programmes (PRIN, projects funded within the Piano Nazionale di Ripresa e Resilienza⁵⁴⁶).

Some public research organisations have also integrated open science funding into their institutional strategies. In particular, the Consiglio Nazionale delle Ricerche (CNR) has received targeted resources through the Fondo Ordinario per gli Enti di Ricerca (FOE) to support open science-related activities and has included open science objectives within its institutional planning. These resources are primarily directed towards infrastructure development, policy implementation, training, and support services rather than the systematic coverage of APCs.⁵⁴⁷

At European level, Italy participates in collective initiatives aimed at providing open access publishing without costs to authors. In this context, the Ministry of Universities and Research is currently involved in supporting Open Research Europe, the European Union co-funded open access publishing platform. An agreement between MUR and the platform has recently been announced.⁵⁴⁸

⁵⁴¹ <https://open-science.it/>

⁵⁴² Information provided by NPR.

⁵⁴³ Information provided by NPR.

⁵⁴⁴ Example: IEEE, 'IEEE and CRUI Sign Three-Year Transformative Agreement to Accelerate Open Access Publishing in Italy', IEEE Open news, available at: <https://open.ieee.org/ieee-and-crui-sign-three-year-transformative-agreement-to-accelerate-open-access-publishing-in-italy/> [accessed April 2026].

⁵⁴⁵ See discussion in Morais, R., Borrell-Damián, L. and Bosman, J., 'Transformative Agreements in Italy: The CRUI-CARE Experience', *Learned Publishing*, 36(1) (2023), pp. 34–42, <https://doi.org/10.1002/leap.1627>. Available at: <https://onlinelibrary.wiley.com/doi/full/10.1002/leap.1627>

⁵⁴⁶ In this context, funding may be used not only to support open access to publications, but also a wider range of open science-related activities, including research data management and FAIRification of research outputs, data stewardship, training and capacity building, development of open science infrastructures, and compliance with open science and EOSC-related requirements.

⁵⁴⁷ Information provided by NPR.

⁵⁴⁸ Information provided by NPR.

Overall, while Italy does not operate a dedicated national OA fund, open access and open science activities are supported through a distributed funding model that combines transformative agreements, eligibility of OA and open science costs within national and PNRR-funded projects, and targeted institutional funding streams within major public research organisations.

13.2.3. Repository requirements (incl. FAIR principles)

The Piano Nazionale per la Scienza Aperta (PNSA) recommends that research institutions establish and maintain open access institutional repositories for scientific publications. Where this is not feasible, institutions are encouraged to indicate an alternative certified European repository that is fit for purpose. The plan specifies that repositories should ensure validation of deposited metadata and content, long-term preservation, and interoperability with national-level infrastructures.

With regard to research data, the PNSA strongly endorses the adoption of the FAIR principles (Findable, Accessible, Interoperable, Reusable) as the foundational framework for research data management. While the plan does not define a formal national certification scheme for “trusted” repositories, it promotes the use of repositories that support persistent identifiers, standardised metadata, interoperability protocols, and alignment with European infrastructures, including those connected to the European Open Science Cloud.

In addition, Italy’s broader open data framework, stemming from the transposition of Directive (EU) 2019/1024 and the binding guidelines issued by the national digital authority, reinforces FAIR-aligned requirements for research data held by public sector bodies. These provisions require that data be made available using open, machine-readable formats, standard metadata, and open licences, subject to legitimate legal exceptions

13.2.4. Metadata and persistent identifier requirements

Italy does not currently impose a single binding national legal requirement mandating the use of specific metadata standards or persistent identifiers when making research outputs openly accessible. However, the PSNA promotes the development of a national research data infrastructure aligned with open science guidelines and suitable for all disciplines, including a public portal to collect, index, and make searchable scientific outputs deposited in repositories. Within this framework, the PNSA explicitly encourages the adoption of standardised metadata and persistent identifiers to enhance discoverability, interoperability, and reuse.

In particular, the plan strongly recommends the widespread use of ORCID identifiers for researchers, highlighting their role in enabling service interoperability, linking publications and datasets to authors, and improving citation tracking. Similar expectations regarding persistent identifiers and metadata are reflected in institutional repository practices and in data management requirements linked to publicly funded research projects.

Overall, Italy relies on policy recommendations and alignment with European best practices, rather than on mandatory national rules, to promote the systematic use of metadata standards and identifiers in open research.⁵⁴⁹

13.2.5. Peer review approaches

Italy does not currently have nationally established or mandated peer review approaches of a research community-led type. However, national open science policy documents explicitly promote the evolution of peer review and research evaluation practices in this direction.

The Piano Nazionale per la Scienza Aperta (PNSA) recognises the need to align research evaluation and peer review with open science principles and encourages the adoption of open peer review models within national assessment activities, including the Valutazione della Qualità della Ricerca (VQR). These references, however, are framed as strategic objectives rather than operational requirements.

⁵⁴⁹ Assessment of NPR.

In practice, the integration of open and community-led peer review within national evaluation systems remains limited and contested. The relationship between Italy's national research evaluation agency, ANVUR, and open peer review has been particularly visible in debates surrounding the recognition of Open Research Europe, which applies an open peer review model. Following initial decisions that excluded such venues from parts of the evaluation framework, ANVUR introduced transitional provisions to accommodate open peer review, signalling incremental adaptation rather than a fully established national approach.⁵⁵⁰

13.2.6. Links to researcher assessment

Reform of research assessment is identified as a priority action in the PNSA, which calls for reforming researcher assessment to reduce reliance on journal-based metrics (e.g. Impact Factor, h-index) and to recognise open science practices. It references international frameworks such as San Francisco Declaration on Research Assessment (DORA), the Leiden Manifesto, and the Amsterdam Call for Action on Open Science. These objectives are operationalised in the PNSA's accompanying implementation documents,⁵⁵¹ which identify research assessment reform as a cross-cutting priority area and map existing national and institutional initiatives, while acknowledging fragmentation and uneven uptake.

At the operational level, ANVUR, Italy's national research evaluation agency, is a signatory of the Coalition for Advancing Research Assessment (CoARA) agreement,⁵⁵² committing to diversify evaluation criteria and reduce metric-based assessment. The "Valutazione della Qualità della Ricerca" (VQR) 2015-2019 Expert Review Panel Report⁵⁵³ positioned open science as integral to research assessment, requiring submitted research products to be freely accessible via university repositories, open subject repositories, or personal websites. In the most recent VQR, the role of bibliometric indicators has been reduced.⁵⁵⁴

Nevertheless, the civil society organisation Associazione Italiana per la Scienza Aperta (AISA) has documented persistent reliance on journal rankings and metrics in ANVUR evaluation practices, showcasing a gap between policy commitments and consistent implementation.⁵⁵⁵

13.2.7. Public funding thresholds

As noted above, Law 112/2013 establishes a 50% public funding threshold: only research publications arising from projects funded at least 50% by public entities fall under the mandatory open access requirement.

13.2.8. Provisions for small and medium publishers

The PNSA explicitly recognises the diverse Italian publishing landscape and advocates for approaches that support smaller publishers.

⁵⁵⁰ Associazione Italiana per la Scienza Aperta (AISA), 'ANVUR's Rule: State Evaluation and Open Peer Review in Italy', AISA Blog, available at: <https://aisa.sp.unipi.it/anvurs-rule-state-evaluation-and-open-peer-review-in-italy/>

⁵⁵¹ Castelli, D., 'PNSA, i due documenti sulle azioni prioritarie per la scienza aperta' [PNSA: the two documents on priority actions for open science], Open Science Italia, 4 October 2024, available at: https://open-science.it/it/article?rpk=321298&prs_sel=p_researcher&tpc_sel=t_piano_nazionale_scienza_aperta [accessed 2 May 2026].

⁵⁵² CoARA (Coalition for Advancing Research Assessment), Coalition Members — ANVUR, available at: <https://www.coara.org/coalition/membership>

⁵⁵³ ANVUR Expert Review Panel, Report of the Expert Review Panel on VQR 2015–2019, National Agency for the Evaluation of Universities and Research Institutes (ANVUR), Rome, February 2025, available at: https://www.anvur.it/sites/default/files/2025-02/Expert-Review-Panel_Report-on-VQR-2015-2019.pdf

⁵⁵⁴ Research on Research Institute (RoRI), Research Assessment Observatory — Italy Country Profile, available at: <https://researchonresearch.org/observatory/italy/>

⁵⁵⁵ Associazione Italiana per la Scienza Aperta (AISA), 'On Statistics and Virtue: ANVUR's Criteria for the Evaluation of Research Quality (VQR 2020–2024) and the European Reform of Research Evaluation (CoARA)', AISA Blog, available at: <https://aisa.sp.unipi.it/on-statistics-and-virtue-anvurs-criteria-for-the-evaluation-of-research-quality-vqr-2020-2024-and-the-european-reform-of-research-evaluation-coara/>

The plan states that the "open access ecosystem must focus on non-commercial publishing (e.g. journals managed by universities and research bodies or by national or European scientific associations; open access platforms; open access archives), also leveraging added value commercial services offered by small and medium-sized Italian and European publishing companies."

Despite these recognitions, Italian policy does not include specific regulatory provisions or dedicated funding mechanisms to support small and medium publishers in transitioning to open access models.

13.2.9. Identified costs of, or gains from, applying open access policies

The PNSA asserts that open science will "increase the effectiveness of collaborative work," "increase collaboration possibilities," and "ensure greater return on investment in public research" through faster knowledge dissemination and innovation, but quantitative outcome measures for Italy specifically are not documented in available policy sources.

On the cost side, the plan explicitly highlights APCs and proposes monitoring OA publication costs.

13.2.10. Security considerations

In addition to national strategy documents such as the PNSA, Italy has engaged actively in international efforts connecting open science with research security and integrity. Under Italy's 2024 G7 Presidency, the G7 Science and Technology Ministers' Declaration reaffirmed the value of open science while stressing the need for coordinated approaches to research security and integrity, including risk mitigation, protection of intellectual property and personal data, and the promotion of trusted research collaboration. Italy also hosted a G7 Conference on Security and Integrity of the Global Research Ecosystem.⁵⁵⁶

13.2.11. References to simplification regarding open access

No explicit, operational "simplification" measures (e.g., reduced administrative burden via harmonised repositories, standardised workflows, or streamlined reporting) were identified.

Implicitly the National Plan for Open Science does emphasise interoperability and infrastructure interconnection (including through OpenAIRE-aligned approaches), which can indirectly support administrative simplification by standardising pathways for deposit and metadata aggregation. Furthermore, the PNSA envisions "a public portal that will collect and make searchable and accessible the scientific production deposited in archives" and calls for establishing "a national Research Registry".

13.2.12. Role of artificial intelligence in open access policies

The PNSA implementation documents⁵⁵⁷ address artificial intelligence mainly in an implicit and transversal manner, particularly in relation to research data infrastructures, FAIR principles, research evaluation, and skills development.

At the same time, the documents reflect growing awareness of risks associated with increased automation, including challenges to research integrity, transparency, accountability, and responsible evaluation practices. These concerns are addressed indirectly through calls for reform of research assessment, strengthened integrity frameworks, and improved digital and data-related competences, rather than through specific regulatory measures targeting AI.

Overall, Italy can be characterised as being in an early, exploratory phase, where AI is increasingly recognised as both an opportunity and a challenge for open science, but where discussions remain embedded within broader policy domains.

⁵⁵⁶ Information provided by NPR.

⁵⁵⁷ Op cit Castelli.

13.3. Implementation and monitoring of open access policies

13.3.1. Responsibility for implementation

Italy does not currently have a single, fully operational national body responsible for systematic monitoring of open access and open science implementation.

The PNSA assigns overall supervisory responsibility to the Ministero dell'Università e della Ricerca (MUR), stating that the ministry will oversee implementation and monitor consistency between initiatives and the Plan's objectives. However, neither the PNSA nor its implementation documents define binding indicators, reporting obligations, or enforcement mechanisms.

The plan and its accompanying documents recommend the creation of a national open science monitor to aggregate data from institutions and track progress across policy areas, but this infrastructure is not yet operational.

For specific funding instruments (e.g. PRIN, PNRR funded projects and other MUR-funded programmes), monitoring of open access compliance is carried out within grant management and reporting processes overseen by MUR or its delegated bodies.

At institutional level, universities and public research organisations with open access or open science policies are responsible for monitoring researcher compliance, typically via institutional repositories and research information systems. Monitoring practices, however, remain heterogeneous and largely non-standardised across the country.⁵⁵⁸

13.3.2. Overall policy monitoring

Unlike some Member States that have established dedicated open science offices or observatories, Italy does not have a single body with comprehensive responsibility for monitoring open access policy implementation. The PNSA assigns overall implementation supervision to MUR.

13.3.3. Reporting arrangements

Italy's open access and open science policy framework does not establish a single, formalised national reporting chain specifying who reports to whom on progress across all policy elements.

The Piano Nazionale per la Scienza Aperta assigns overall responsibility for supervision of implementation to the Ministero dell'Università e della Ricerca, stating that the ministry will monitor consistency between initiatives undertaken by the research system and the objectives of the plan. However, the PNSA does not define standardised reporting cycles, common indicators, or mandatory reporting obligations for institutions or funders.

The two implementation documents accompanying the PNSA clarify roles in practice, even if informally. They envisage a distributed and participatory model, where universities and public research organisations are expected to self-report and document activities already in place.

At the funding programme level, reporting obligations are clearer but remain programme-specific. For PRIN and other MUR-funded schemes, beneficiaries report compliance with dissemination and open access requirements directly to MUR as part of project reporting and final deliverables. This reporting is contractual rather than policy-wide and is not aggregated into a comprehensive national open access monitoring system.

At the evaluation level, the national research assessment agency ANVUR collects information on open access status of submitted research outputs within the VQR exercise. Institutions report OA availability and provide links to repositories or publications. While this generates nationally comparable data, it serves research evaluation purposes rather than constituting a dedicated monitoring mechanism for open access or open science policy implementation.

⁵⁵⁸ Information provided by NPR.

Finally, the PNSA recommends the creation of a national Open Science Monitor to aggregate institutional data and track progress across multiple dimensions of open science. At present, this monitor remains a planned but non-operational instrument, and reporting continues to rely on fragmented, bottom-up information flows rather than a formal reporting hierarchy.⁵⁵⁹

13.3.4. Results of impact evaluations

Italy has not produced a comprehensive national impact evaluation of open access or open science policies based on a dedicated monitoring framework.

Partial evidence is available through the VQR reports, which include descriptive indicators on the share of evaluated research outputs made openly accessible. The VQR 2015–2019 (the most recently completed VQR cycle for which full results are publicly available)⁵⁶⁰ states:

Overall, out of the 181 280 products submitted for evaluation, over 54% were made available to the public in open access. In 22% of cases, universities have indicated that the product is still subject to an embargo, while a further 22% of the products were not made available because they were not at least 50% publicly funded.

The share of products available in open access varies greatly by discipline, ranging from a maximum of 86,7% in physics to a minimum of 22% in law studies. In general, the share of products available in open access is higher in the STEM+LS areas, lower in the social sciences, even lower in humanities and law studies. Differences among areas in the share of open access products are probably also due to the different types of publication prevailing in the areas themselves.

The fraction of assessed products available in Open Access (OA) remains remarkably stable over time (53.6% - 54.3%, VQR Report, Fig. 2.3.11) throughout the evaluation period. Public Research Organisations score significantly higher (73.1%) than universities (51.4%) in terms of the proportion of OA outputs. The report notes:

Among the causes of lack of open access products, one may note that in universities research that is not at least 50% publicly funded prevails. By contrast, this factor is of little relevance to research institutes, where the main reason for not having open access to publications is the persistence of publication embargoes.

The report also notes:

It can be noted that the share of open access products is systematically higher for publications in English than in Italian and other languages. This suggests a low uptake of open access publication methods by national publishers.

However, these data are collected for research quality assessment purposes rather than for systematic policy evaluation.

In their publication “Open Science in Italy: Lessons Learned En Route to Opening Scholarship” Pagliaro and Ciriminna (2023)⁵⁶¹ note that despite Italy being ranked sixth for the number of citable documents indexed in Scopus and achieving an average citation rate second only to the United Kingdom among the top ten countries, uptake of open access has been slow. The authors argue that Law 112/2013, and early attempts to tie open access to the national research evaluation exercise VQR had little practical impact, stating that nearly all researchers ignored the law and continued to publish behind paywalls, signalling a sharp gap between formal policy and actual practice. A similar pattern is described in relation to institutional policies: by 2016, out of roughly one hundred Italian universities, forty-nine had signed the CRUI “Road Map to Open Access” but only sixteen had actually adopted an open access policy, suggesting that symbolic endorsements did not translate into institutional change.

⁵⁵⁹ Information provided by NPR.

⁵⁶⁰ ANVUR (National Agency for the Evaluation of Universities and Research Institutes), VQR 2015–2019 — Evaluation Reports, available at: <https://www.anvur.it/en/research/evaluation-research-quality/evaluation-reports/vqr-2015-2019> [accessed April 2026].

⁵⁶¹ Ciriminna, R. and Pagliaro, M., ‘Open Science in Italy: Lessons Learned En Route to Opening Scholarship’, European Review, vol. 31, no. 6, December 2023, pp. 647–661, <https://doi.org/10.1017/S1062798723000121>.

The article then turns to the 2022 National Plan for Open Science PNSA, emphasising that the plan contains neither monitoring nor verification mechanisms nor dedicated funding, which the authors interpret as a sign that openness remains a low political priority. The assessment is not entirely negative, as the authors also underline the proactive role of bottom-up initiatives. They review the establishment of AISA (Italian Association for Open Science) in 2015, the Italian Open Science Support Group (IOSSG), and the Italian Reproducibility Network (ITRN), crediting these communities of practice with spearheading education, advocacy, and policy models such as the CRUI open access model policy, and organising events that seek to shift research culture towards greater openness and reproducibility. Nonetheless, the conclusion remains pessimistic about the systemic impact of these efforts: while transformative agreements are acknowledged as an area where institutions are seriously engaged, the authors see them as a publisher-centred solution that does little to address broader cultural and structural barriers to open science.

The article ultimately reads as a reflection on the limits of goodwill and fragmented activism in the absence of strong, funded, and monitored public policy, concluding that Italy's journey towards open scholarship remains incomplete and heavily dependent on a relatively small group of pioneers.

The paper “An Overview of Open Science in Italy”⁵⁶² by Bardi and colleagues provides a more systematic, empirically grounded overview of Italian open science implementation, focusing on institutional policies, open access outputs, and services as captured in several public information systems. Their analysis reveals that institutional policies have grown in number over time and increasingly extend beyond publications, but still predominantly focus on literature, with fewer policies explicitly addressing data, software, or infrastructures, indicating an expanding but still incomplete institutionalisation of open science. They find that the proportion of open access publications shows a gradual, steady increase without sudden leaps.

14. Cyprus

14.1. General characteristics

14.1.1. Policies formulated as strategies, funder mandates and/or legislation

Cyprus' core national instrument is the “National Policy of the Republic of Cyprus for Open Science Practices” (approved by the Council of Ministers in May 2022; effective date stated as 27/11/2022), developed under the Deputy Ministry of Research, Innovation and Digital Policy (DMRID) and positioned explicitly as a revision of the earlier 2016 national open access policy.⁵⁶³ The 2022 policy is a government policy document (not a parliamentary act) that explicitly covers both open access to publications and research data management including open access, and frames implementation in line with EU-level developments (including Horizon Europe and EOSC).

Cyprus' 2022 National Policy for Open Science Practices adopts a phased approach for the implementation of open and FAIR research data requirements. Rather than introducing an immediate mandatory regime, the policy foresees a gradual transition intended to allow research organisations, funders, infrastructures, and researchers to adapt operationally and culturally to Open Science practices.

⁵⁶² Bardi, A., Manghi, P., Manola, N., Assante, M., Atzori, C. and La Bruzzo, S., ‘An Overview of Open Science in Italy’, in Proceedings of the 3rd Conference on CEUR Workshop Proceedings, CEUR-WS, Vol. 3643 (2024), available at: <https://ceur-ws.org/Vol-3643/paper13.pdf> [accessed April 2026].

⁵⁶³ Deputy Ministry of Research, Innovation and Digital Policy (DMRID), Republic of Cyprus, National Policy of the Republic of Cyprus for Open Science Practices, available at: <https://www.gov.cy/media/sites/13/2025/03/National-OS-policy.pdf>

In parallel, Cyprus' principal public research funder, the Research and Innovation Foundation (RIF), is explicitly tasked with operationalising national requirements through its multiannual programme framework (RESTART), where compliance with the national OA/OS policy is embedded in programme rules and call conditions for funded projects.⁵⁶⁴

Several research-performing organisations maintain a repository and/or have OA policies for publications (e.g., Open University of Cyprus;⁵⁶⁵ Cyprus University of Technology;⁵⁶⁶ Cyprus Institute⁵⁶⁷), rather than a single national repository mandate uniformly implemented across all RPOs.

14.1.2. Bindingness in terms of implementation

The 2022 National Policy for Open Science Practices declares that, where research is publicly funded in whole or in part, the policy is mandatory for both publications and research data after a "defined transition period". However, the transition period does not seem to be defined; it seems likely that this refers to the phased approach, which, however, applies only to research data not scientific publications.

For publications, the policy requires that peer reviewed scientific outputs arising from public funding be made openly accessible, with an obligation on researchers and institutions to deposit outputs in suitable repositories, and funders are instructed to take appropriate measures in cases of non-compliance; this establishes a clear binding regime for open access to publications while leaving open access to privately funded work as voluntary.

For research data, the policy introduces a phased approach: an initial phase of voluntary open and FAIR data, followed by a transition to a regime where research data underlying publications and other key datasets must be deposited in repositories and open/FAIR "by default, as open as possible, as closed as necessary" with possible opt outs, so that obligations gradually shift from mostly voluntary to predominantly binding for publicly funded projects. The "by default" phase for open/FAIR data would have been due from late 2025; however, no public documentation was identified, as of 26 July 2026, that the phase transitions have been formally declared or operationalised.

In funder implementation, RIF's RESTART Work Programme establishes binding grant conditions requiring OA/OS compliance by funded beneficiaries and links compliance to project reporting (e.g., metadata referenced in progress reports), with "appropriate measures" for non-compliance assigned to funders. At institutional level, repository deposit requirements and OA policies vary by organisation.

Private funders and non-public stakeholders are explicitly encouraged, but not required, to adopt the national policy, and institutional policies and community initiatives (e.g. the National Open Science Cloud Initiative, NOSCI) are framed as voluntary instruments that support implementation rather than creating additional binding legal duties.

14.1.3. Scope of the policy

Cyprus' 2022 National Policy adopts an explicit Open Science framing with a broader scope, covering (a) open access to scientific publications, (b) the management of research data, including open access to data, (c) the use of infrastructures, tools and services for open science, and (d) the uptake of other open science practices such as citizen science, open peer review and open educational resources. The policy also encourages institutions to embed open science practices into recruitment and research assessment, signalling an intention to move beyond narrow publication-centric-open access towards system-wide-reform.

⁵⁶⁴ Research and Innovation Foundation (RIF), RESTART 2016–2020 Programme / May 2022–June 2025 Work Programme, available at: <https://iris.research.org.cy/file/public/8e61aadc-50e5-ef11-81a9-005056ab00f0> [accessed April 2026].

⁵⁶⁵ Open University of Cyprus (OUC), Institutional Open Access Policy available at: https://www.ouc.ac.cy/images/kypseli/Institutional_Open_Access_Policy_OUC_en.pdf

⁵⁶⁶ Cyprus University of Technology (CUT) Library, KTISIS Institutional Repository, available at: <https://library.cut.ac.cy/en/institutional-repository-ktisis> [accessed April 2026]; Management Policy, available at: <https://library.cut.ac.cy/en/management-policy> [accessed April 2026]. the KTISIS repository policy focuses primarily on theses and dissertations

⁵⁶⁷ Cyprus Institute (Cyl), Repository Policy, available at: <https://www.cyi.ac.cy/index.php/repository-policy.html>

RIF's RESTART Work Programme reflects this evolution: it contains a dedicated "Open Access / Open Science" section, distinguishing publication OA routes and introducing OS-policy compliance for calls launched from December 2022 onwards (including research data requirements).

14.1.4. Embargoes or immediate open access

For publications, the 2022 national policy is structured as a deposit mandate rather than an immediate-open-access mandate: it requires researchers to deposit in suitable repositories a machine-readable electronic copy of the full text (published article, "Author Approved Manuscript" or final peer-reviewed manuscript, in the policy's own terminology) together with the related metadata "before, at the same time or after publication", and requires the metadata to be made openly accessible even where the publication itself is closed. For monographs, deposit is mandatory but access remains closed until the publisher embargo elapses. Because the deposit obligation is decoupled from an open access timing requirement, the point at which deposited articles must become openly accessible is not regulated at national policy level and is determined by publisher terms.

RIF's RESTART work programme similarly recognises a Green OA route *with a possible embargo period if required by the publisher*, while requiring that metadata remain openly accessible and that full text becomes openly available when the embargo expires.

For research data, the 2022 policy articulates "as open as possible, as closed as necessary" and sets out a phased approach intended to result in Open/FAIR data "by default" with opting out, including an explicit statement that data should be open immediately (no embargoes) in the "by default" phase, subject to justified opt-out.

14.1.5. Copyright, rights retention and secondary publication rights

Cyprus' 2022 National Policy contains rights-retention-oriented language for publications, encouraging the research community to retain copyright ownership and to license publishers only necessary rights, and requiring authors to retain sufficient IPR to comply with OA requirements. The policy concretely points to a SPARC contract addendum in this regard (footnote 3 of the policy). However, there is no clearly articulated statutory secondary publication right anchored in national copyright legislation (i.e., an explicit legal override enabling secondary publication irrespective of contract). Concrete rights-retention-mechanisms (such as mandatory Creative Commons licensing or a funder-level-rights-retention-clause) are also not present.

For research data, the policy "encourages" "the release of data and content under open and standard open licenses" under the section "other open science practices".

14.2. Context of open access policies

14.2.1. Training or guidance for researchers

The National Policy for Open Science Practices explicitly assigns the Republic of Cyprus responsibility for supporting the transition to open access and open science through education, training and awareness-raising actions targeting researchers and other staff, and frames OS skills as integral to professional training and career development.

In the national ecosystem, the University of Cyprus Library has acted as the OpenAIRE National Open Access Desk and provides national-facing awareness and support activities (workshops, webinars, dissemination) as part of the OpenAIRE network role⁵⁶⁸ and beyond.⁵⁶⁹

⁵⁶⁸ OpenAIRE, Open Science in Cyprus — Country Profile, available at: <https://www.openaire.eu/os-cyprus>

⁵⁶⁹ Young European Research Universities Network (YERUN), 'Advocating Open Science through Educational Actions: University of Cyprus Case Study', October 2023, available at: <https://yerun.eu/2023/10/advocating-open-science-through-educational-actions/> [accessed April 2026].

Under a National Initiative for Open Science and its Ad Hoc Advisory Group (the National Open Science Cloud Initiative, NOSCI) coordinated by the Deputy Ministry, stakeholders such as the Research and Innovation Foundation, the University of Cyprus and the Cyprus Institute contribute to EOSC related activities.⁵⁷⁰

14.2.2. Funding for open access

At funder level, RIF's RESTART work programme explicitly recognises Gold OA costs as potentially eligible project expenditure when chosen by researchers.

The national policy mandates that the Republic of Cyprus (acting by or in collaboration with the Open Science Initiative in Cyprus) collects information on publishing costs under green and gold routes and engage in discussions with publishers concerning "agreements".⁵⁷¹ The same provision extends to the collection of information on Research Data Management (RDM) costs.

14.2.3. Repository requirements (incl. FAIR principles)

Cyprus' 2022 National Policy defines repository expectations by recommending that infrastructures meet trusted quality standards, be OpenAIRE compatible, meet FAIR principles, and be linked with EOSC, including registration in appropriate registries and interoperability through the OpenAIRE Metadata Schema for repositories.

Institutionally, Cyprus has an established repository landscape each with governance/policy documentation that establishes what needs to be deposited.⁵⁷² While the policy also encourages the establishment of a national repository, there is no evidence that this has been accomplished.

RIF's RESTART Work Programme defines "suitable repositories" in OpenAIRE-interoperability terms and explicitly recommends the use of alternative repositories (including Zenodo) if an organisation lacks a compliant repository.

14.2.4. Metadata and persistent identifier requirements

Cyprus' 2022 National Policy requires metadata deposit alongside full text, including explicit requirements that metadata be openly accessible even where the publication is closed, and requires that research data be provided with persistent identifiers. The 2016 National Policy defines "suitable repositories" by their ability to provide quality metadata and enable citation via persistent identifiers (explicitly referencing DOI as an example). RIF's RESTART work programme similarly mandates open metadata for all funded publications and anchors repository suitability in interoperability and persistent identifiers.

14.2.5. Peer review approaches

Cyprus' national OS policy framework encourages experimentation with OS practices beyond Open Access to publications and Open Research Data (OA/ORD), explicitly referencing open peer review as an example area that stakeholders should embed in recruitment and assessment considerations.

14.2.6. Links to researcher assessment

The 2022 National Policy explicitly encourages the embedding of Open Science practices in recruitment, research assessment and evaluation criteria, extending beyond OA to publications and data and including practices such as citizen science, open peer review, Open Educational Resources (OER) and open-source software.

⁵⁷⁰ The initiative does not seem to have its own website. NI4OS-Europe, National Open Science Cloud Initiatives: Cyprus (NOSCI), available at: <https://ni4os.eu/15-national-osc-initiatives/cyprus/>

⁵⁷¹ This is not further specified, and no such documentation seems to be available at the present moment.

⁵⁷² These requirements do not seem to be uniform.

14.2.7. Public funding thresholds

Cyprus' 2022 National Policy refers to research that is publicly funded "in whole or in part". For publications, this means that any level of public funding, even partial, triggers the obligation to provide open access under the policy. For research data, the same "in whole or in part" criterion governs the applicability of data-sharing and FAIR requirements, though the phased implementation allows for an initial voluntary phase before obligations become fully effective.

14.2.8. Provisions for small and medium publishers

No specific provisions targeting small/medium publishers are evident in the core national OS policy text (2022), the earlier national policy (2016), or the RIF RESTART work programme provisions reviewed (which focus on deposit, metadata openness, and compliance mechanisms rather than publisher-market interventions).

14.2.9. Identified costs of, or gains from, applying open access policies

The national policy requires authorities to "compile information and produce reports related to publishing costs when following the Green or Gold route respectively and [to] engag[e] in discussions concerning agreements with publishers", indicating recognition that the financial impacts of open access need to be monitored, but no quantified national-level cost and benefit analyses are (yet?) available. The Research and Innovation Foundation (RIF) and research organisations are expected to track APC expenditures and repository-related costs, and to report on them as part of policy monitoring; yet there is no comprehensive national study quantifying savings or additional costs attributable to open access.

For research data, the policy similarly foresees the collection of information on research data management costs (e.g. data stewardship, repositories, storage) and acknowledges potential gains in re-use and innovation, but systematic economic evaluation is not publicly documented.

14.2.10. Security considerations

The national policy explicitly notes "the need to balance openness and protection of scientific information, commercialization and Intellectual Property Rights, privacy concerns, and security, following the principle 'as open as possible, as closed as necessary'".

The national policy provides an opt-out logic for data where openness conflicts with confidentiality, personal data protection, security issues, or legitimate interests (including commercial exploitation).

However, there is no separate research security regime inside OA/OS policy instruments.

14.2.11. References to simplification regarding open access

The national policy does not set out an explicit simplification agenda as a discrete policy element. Where operational streamlining exists, it is implicit (standardised repository deposit expectations; common metadata requirements; DMP framing) but not labelled as regulatory/administrative simplification.

14.2.12. Role of artificial intelligence in open access policies

The national OS policy and the RIF RESTART work programme provisions reviewed do not contain a dedicated discussion of AI in relation to OA/OS (e.g., text/data mining governance, generative AI risks, automated curation, or integrity threats).

14.3. Implementation and monitoring of open access policies

14.3.1. Responsibility for implementation

Under the 2022 National Policy, researchers are responsible for timely deposit of publications and associated metadata in suitable repositories and for research data deposit (where applicable) aligned with DMP requirements, including provision of persistent identifiers.

The Republic of Cyprus (via the national OS initiative/coordination under DMRID) is assigned responsibilities for training and awareness, supporting repositories and encouraging development of a national repository infrastructure, and encouraging institutional OS policies aligned with the national policy.

Funders are positioned as enforcing compliance through grant conditions, including non-compliance measures. Concretely, RIF operationalises publication and data requirements through RESTART programme rules and call conditions, making beneficiaries responsible for deposit and reporting.

14.3.2. Monitoring of individual policy elements

The 2022 National Policy assigns monitoring of compliance through comparison of repository content with indexing services and usage data, to be implemented by/in collaboration with the Open Science Initiative in Cyprus (under the Republic's responsibilities).

At funder level, RIF requires that OA-related metadata be referenced in progress reporting and positions funders to take measures for non-compliance, which implies a funder monitoring function embedded in grant management. In addition, the 2022 policy explicitly provides for a compliance-monitoring mechanism to be developed in collaboration with; no public documentation on the establishment or operation of this mechanism was identified as of 26 July 2026.

14.3.3. Overall policy monitoring

Overall implementation of the National Policy for Open Science Practices is overseen at government level by the Council of Ministers and the Deputy Ministry of Research, Innovation and Digital Policy, working in coordination with the National Open Science Initiative. The National Open Science Initiative, which includes representatives of key stakeholders such as RIF, universities and research institutes, serves as the coordinating body that tracks progress, identifies gaps and proposes adjustments to the action plan covering both open access to publications and research data.

At the European level, Cyprus's participation in EOSC governance and in projects like NI4OS-Europe and EOSC-related coordination actions means that progress on open science implementation is also indirectly monitored via European reporting mechanisms.

14.3.4. Reporting arrangements

The national policy states that reports on open access and open research data implementation will be compiled using a) a monitoring mechanism to be developed in collaboration with RIF, (b) publicly available information concerning publications and research projects, (c) periodic reports submitted by research organisations and (d) data extracted from repositories by measuring content by institution, discipline and year, suggesting that institutions and repositories report upwards to national authorities.

For publications, it could thus be assumed that research organisations and repositories are expected to transmit data to the National Open Science Initiative and relevant ministries, while RIF reports on compliance and cost information derived from funded projects.

For research data, funders and institutions presumably report on data management plans, data deposits and usage patterns to the same national bodies, although formalised reporting lines (e.g. legal obligations for annual reports) are not detailed in publicly available sources.

14.3.5. Results of impact evaluations

Cyprus has not published an impact evaluation of its open access and open science policy.

Any evidence is thus partial and mainly derived from European observatories and project-level analyses. For publications, indicators such as the proportion of Cypriot outputs available in open access are monitored through platforms like OpenAIRE,⁵⁷³ showing gradual growth in open access uptake in line with the 2016 and 2022 policies, but national evaluation reports (e.g. cost-benefit analyses, discipline-specific compliance rates) are not publicly accessible (if they exist at all).

For research data, the phased rollout means that robust indicators are likely not yet available.

The most clearly evidenced “evaluation-like” mechanism is the policy’s built-in revision cycle (review at least every five years).

15. Latvia

15.1. General characteristics

15.1.1. Policies formulated as strategies, funder mandates and/or legislation

Latvia's open access policy framework is established through a combination of primary legislation and strategic policy documents. The foundational legal basis is provided by Section 9 of the Law on Scientific Activity (Zinātniskās darbības likums), originally adopted on 14 April 2005 and subsequently amended, which establishes the principle of transparency for publicly funded research. Section 9 stipulates that information regarding scientific research financed from the state or local government budget shall be transparent, and that institutions responsible for such research must ensure general access to research results.⁵⁷⁴

The principal policy instrument is the Latvian Open Science Strategy 2021-2027, approved by the Ministry of Education and Science in March 2022.⁵⁷⁵ The strategy operationalises the legislative transparency requirements through three pillars: Pillar I on open access to scientific publications, Pillar II on FAIR research data and Pillar III on citizen science into specific open access mandates, infrastructure development plans, and implementation timelines. The strategy was developed following a policy research initiative commissioned by the ministry in 2020, which involved eleven researchers including an expert from EIFL.⁵⁷⁶

The strategy is further anchored within broader national research policy through the Guidelines for Science, Technology Development, and Innovation 2021-2027, action direction 2.1.1.⁵⁷⁷ approved by Cabinet of Ministers Order No. 246 on 14 April 2021.⁵⁷⁸ This policy hierarchy ensures that open access requirements are integrated into Latvia's overall innovation policy governance structure.

⁵⁷³ OpenAIRE Open Science Observatory, Cyprus — Country Overview, available at: <https://osobservatory.openaire.eu/country/CY/overview>

⁵⁷⁴ Republic of Latvia, Zinātniskās darbības likums [Law on Scientific Activity], adopted 14 April 2005, Section 9 (Transparency of Scientific Activity), consolidated text available in English via WIPO Lex at: <https://www.wipo.int/wipolex/en/text/520645>

⁵⁷⁵ Ministry of Education and Science of the Republic of Latvia (IZM), Latvian Open Science Strategy 2021–2027 available at: <https://www.izm.gov.lv/en/article/latvian-open-science-strategy-2021-2027-now-english>

⁵⁷⁶ EIFL (Electronic Information for Libraries), ‘Open Science Policy Development in Latvia’, EIFL News, 2021, available at: <https://www.eifl.net/news/open-science-policy-development-latvia> [accessed April 2026].

⁵⁷⁷ Cabinet of Ministers of the Republic of Latvia, Order No. 246 of 14 April 2021, Par Zinātnes, tehnoloģijas attīstības un inovācijas pamatnostādņēm 2021.–2027. gadam [On the Guidelines for Science, Technology Development, and Innovation 2021–2027], consolidated English text available at: <https://likumi.lv/ta/en/en/id/322468-regarding-guidelines-for-science-technology-development-and-innovation-20212027>

⁵⁷⁸ Ministry of Economics of the Republic of Latvia, Innovation Policy, available at: <https://www.em.gov.lv/en/innovation-policy> [accessed April 2026].

15.1.2. Bindingness in terms of implementation

The obligation in Section 9 of the Law on Scientific Activity is binding on institutions carrying out scientific research financed from the State or local government budget and thus imposes a legal duty to ensure openness of research results.

The Latvian Open Science Strategy establishes binding requirements⁵⁷⁹ for all state-funded research. The policy applies mandatory open access provisions to scientific publications produced within the framework of all publicly funded research programmes launched from 1 January 2023 onwards.

Although the strategy itself is not legally binding, this represents a hard mandate not only because of the prescriptive language but also by requiring compliance as a condition of receiving state funding. In effect, the strategy thus functions as the OA mandate of the Latvian Council of Science (LCS), which administers the principal competitive funding programmes including Fundamental and Applied Research Projects (FARP) and State Research Programmes (SRP). Its binding provisions require immediate open access and mandatory DMPs.

University of Latvia,⁵⁸⁰ Riga Technical University,⁵⁸¹ Latvia University of Life Sciences and Technology⁵⁸² and Riga Stradiņš University⁵⁸³ have their own policies. In a 2025 RPO survey 24 organisations indicated that they have policies, recommendations, regulations, and laws that are relevant for EOSC and Open Science, seven do not have any and 11 indicated that these are part of other documents.⁵⁸⁴

15.1.3. Scope of the policy

The policy framework has a broad scope extending well beyond publications. The strategy is explicitly structured around three pillars: Pillar I addresses open access to scientific publications; Pillar II addresses FAIR research data including data management plans, repository infrastructure, and data stewardship; Pillar III addresses citizen science including public engagement in research processes.

15.1.4. Embargoes or immediate open access

For scientific publications, the Latvian Open Science Strategy explicitly requires immediate open access for State-funded research: it states that scientific publications resulting from all publicly funded research programmes launched as of 1 January 2023 must be freely available in green or gold open access “without an embargo period.” However, University of Latvia allows embargo periods in its institutional policy and Riga Technical University explicitly follows publishers’ embargoes.

15.1.5. Copyright, rights retention and secondary publication rights

Latvia does not currently have a statutory secondary publication right for authors of publicly funded research. The strategy encourages researchers and research institutions “as far as possible” to retain copyright in their scientific publications but this is formulated as a recommendation rather than a binding requirement.

⁵⁷⁹ As such it is an outlier to most other national strategies who are often aspirational/non-binding.

⁵⁸⁰ University of Latvia, Open Access Policy of the University of Latvia, available at: https://www.lu.lv/fileadmin/user_upload/LU.LV/www.lu.lv/Dokumenti/Dokumenti_EN/2/Open_Access_Policy_of_the_University_of_Latvia.pdf

⁵⁸¹ Riga Technical University (RTU), RTU Open Access Policy (English version), available at: https://files.rtu.lv/public/science/RTU_OA_Policy_en_1.pdf

⁵⁸² Latvia University of Life Sciences and Technologies (LBTU; *Latvijas Biozinātņu un tehnoloģiju universitāte*), LBTU Open Science Policy, Jelgava: LBTU, available at: https://www.lbtu.lv/sites/default/files/files/lapas/LBTU_Open_Science_Policy.pdf

⁵⁸³ Information provided by NPR. Document not public.

⁵⁸⁴ Information provided by NPR.

The strategy also requires that all open access publications and digital objects be assigned a clear licence and indicates a preference for Creative Commons licences, particularly CC BY for scientific articles, and for CC0 or CC BY licences for research datasets deposited from publicly funded programmes, thereby fostering a licensing environment that supports broad reuse of both publications and data.

15.2. Context of open access policies

15.2.1. Training or guidance for researchers

The Strategy incorporates substantial provisions for researcher training and guidance. A Data Stewards programme has been established.⁵⁸⁵ The Latvian Data Curators Network VPC,⁵⁸⁶ coordinated by the Higher Education and Science Information Technology Shared Service Centre (an association founded by four Latvian research universities) has developed a comprehensive Research Data Management Guide providing practical advice throughout the research lifecycle.⁵⁸⁷

The strategy specifies that standardised and accredited skills for open science should be provided for researchers at all career levels, including research students and supervisors. Training is to be tailored to different disciplines and embedded into curricula. The strategy also emphasises the important role of academic libraries and Latvia's OpenAIRE National Open Access Desk (NOAD) in providing guidance on open access publishing and open science.

15.2.2. Funding for open access

RFO significant funding (largely from EU instruments rather than from RFO budgets) has been allocated for open access implementation. The EU Recovery and Resilience Facility provides EUR 3.44 million for the project "Support for implementing Open Science, developing solutions for shared use of research data, and participation in the EOSC".⁵⁸⁸ This funding supports the DataverseLV repository network, data stewards programme, and related infrastructure.⁵⁸⁹ According to the Strategy, VPC is planned as a central IT service provider for higher education and research, with co-financing of at least EUR 100 000 annually.

The strategy does not specify dedicated funding streams for Article Processing Charges. Coverage of APCs depends on research project budgets and institutional arrangements rather than a centralised national fund.

15.2.3. Repository requirements (incl. FAIR principles)

The strategy requires that data, metadata, and e-infrastructures intended for long-term preservation and reuse must meet FAIR principles to the greatest extent possible.

⁵⁸⁵ See also Higher Education and Science Information Technology Shared Service Centre (VPC), Data Stewards, available at: <https://vpc.lv/data-stewards/> [accessed April 2026].

⁵⁸⁶ VPC derives from the centre's Latvian designation as the unified service centre (Vienotais pakalpojumu centrs).

⁵⁸⁷ Latvian Data Curators Network / VPC, DataverseLV — Research Data Management Guide, available at: <https://dataverse.lv/en/>

⁵⁸⁸ Cabinet of Ministers of the Republic of Latvia, Par 2.1.3.1.i. investīcijas projekta "Atbalsts atvērtās zinātnes ieviešanai praksē, kā arī izveidoti risinājumi zinātnes datu koplietošanai un dalībai ES atvērtajā zinātnes mākonī" pases un centralizētās funkcijas vai koplietošanas pakalpojuma attīstības plāna apstiprināšanu [On the Approval of the Project Passport and Centralised Function or Shared Service Development Plan for Investment Project 2.1.3.1.i "Support for Implementing Open Science in Practice, as well as the Development of Solutions for Research Data Sharing and Participation in the European Open Science Cloud"]. Latvian legislation database Likumi.lv, document ID 340883, available at: <https://likumi.lv/ta/id/340883> [accessed April 2026]; in Latvian; translated via browser translation function, provided by NPR]. See also: Riga Technical University, Open Access Initiative, available at: <https://www.rtu.lv/en/research/open-access-initiative> [accessed April 2026].

⁵⁸⁹ See Higher Education and Science Information Technology Shared Service Centre (VPC), DataverseLV — About the Project (Par projektu), available at: <https://dataverse.lv/en/par-projektu/> [provided by NPR].

DataverseLV serves as the national research data repository, operational since September 2025⁵⁹⁰ and integrated into the OpenAIRE Explore search engine and European Open Science Cloud.⁵⁹¹ The repository implements FAIR principles through quality control review by data curators, mandatory metadata standards, persistent identifier assignment (DOI), and structured licensing. DataverseLV is integrated with OpenAIRE Explore, contributes to EOSC search tools, participates in the FIDELIS project focusing on FAIR data and security, and aims to obtain CoreTrustSeal certification.⁵⁹²

15.2.4. Metadata and persistent identifier requirements

Latvian open science policy imposes explicit requirements for metadata and persistent identifiers for both publications and research data, with a higher level of specificity for datasets. The National Open Science Strategy states that all open access publications and digital objects must be provided with persistent identifiers such as DOIs and that a licence type must be indicated, preferably a Creative Commons licence like CC BY, thereby ensuring that publications deposited in repositories or published in OA journals can be reliably identified and reused.

For research data, the strategy lists minimum metadata elements that must accompany datasets deposited from publicly funded programmes: authors, title, date of publication, programme/activity/grant number, licensing terms. Digital Object Identifiers (DOI) are required for publications and datasets. Researcher identification through ORCID is mandated. Research Organisation Registry (ROR) identifiers are specified for institutional attribution.

The strategy also emphasises that data should be findable and accessible via indexing and that metadata should remain available even if the underlying data are no longer accessible.

15.2.5. Peer review approaches

According to the strategy, Latvian universities and publishers are "encouraged to publish open access and pilot open peer review."

15.2.6. Links to researcher assessment

The National Open Science Strategy explicitly calls for aligning open science with researcher assessment and institutional evaluation, addressing both publications and research data: it recommends that research institutions include research data management criteria in the assessment of research personnel, incorporate open science skills and practices into research reports and encourage the use of open citations, indicating a desire to recognise and reward open access and data sharing in career progression. Furthermore, the strategy notes that MoES plans to integrate open science elements into the criteria for the international evaluation of scientific institutions scheduled for 2025. Latvia's 2025 International Evaluation of Scientific Institutions (ZISI), run by Technopolis for the Ministry of Education and Science uses a methodology explicitly stated to be compliant with the San Francisco Declaration on Research Assessment (DORA) and CoARA, and without new bibliometric indicators or fixed quantitative thresholds.⁵⁹³ Ability to ensure Open Access to research results" appears as one of five explicit "particular factors to take into account" under Criterion D (research environment and infrastructure).⁵⁹⁴ Latvia has CoARA (Coalition for Advancing Research Assessment) signatories among its research organisations.⁵⁹⁵

⁵⁹⁰ Higher Education and Science Information Technology Shared Service Centre (VPC), 'DataverseLV Research Data Repository Launched', DataverseLV News, September 2025, available at: <https://dataverse.lv/en/atklats-dataversely-petniecibas-datu-repozitorijs/> provided by NPR.

⁵⁹¹ Latvian Public Broadcasting (LSM), 'DataverseLV Research Data Repository Launches', 12 September 2025, available at: <https://eng.lsm.lv/article/society/education/12.09.2025-dataversely-research-data-repository-launches.a614118/>

⁵⁹² Op cit.

⁵⁹³ IZM, "International Evaluation of Scientific Institutions Activity" (results presentation deck), <https://www.izm.gov.lv/lv/media/32825/download?attachment>

⁵⁹⁴ IZM, "International Evaluation of Scientific Institutions of Latvia — Methodology" (June 2025), Table 9, Criterion D: Research Environment and Infrastructure, <https://www.izm.gov.lv/lv/media/29432/download?attachment>

⁵⁹⁵ CoARA (Coalition for Advancing Research Assessment), Signatories Register — Latvia, available at: <https://coara.eu/agreement/signatories/> [accessed April 2026; filter by country: Latvia].

15.2.7. Public funding thresholds

Latvia's policy framework does not specify a numerical public-funding threshold for open access obligations. Instead, the Law on Scientific Activity applies Section 9's openness requirement to all scientific research financed from the State or local government budget, and the National Open Science Strategy subsequently applies its immediate-OA requirements to all scientific publications created under publicly funded research programmes launched as of 1 January 2023. This implies that any degree of State or local government funding in a research project is sufficient to trigger the openness obligation for publications and, by extension, to underlying research data.

15.2.8. Provisions for small and medium publishers

The strategy does not contain specific financial support mechanisms, capacity-building programmes, or dedicated provisions targeting small and medium publishers.

15.2.9. Identified costs of, or gains from, applying open access policies

For publications, the strategy notes that by promoting open access publishing in the long term, it is possible to reduce subscription fees to scientific publications, particularly if licensing contracts include open access conditions that avoid "double payment" for both publishing and subsequent access, and it emphasises that open access increases the reach, citability and commercialisation potential of publications while ensuring that taxpayers have access to research results they fund.

For research data, the strategy highlights that improved reusability of data reduces costs associated with data collection, processing, licensing and storage, promotes greater efficiency and productivity in research, reduces the risk of duplicated funding and expands opportunities for interdisciplinary research and economic use of data in the national economy

There is some quantitative information available. One source estimates the socio-economic impact of increased scientific competitiveness and innovation activity resulting from EOSC integration at up to EUR 49.4 million.⁵⁹⁶

Investment costs are quantified: EUR 3.44 million from the Recovery and Resilience Facility plus EUR 18.49 million from ERDF for infrastructure development.⁵⁹⁷

However, the strategy does not present a detailed cost-benefit analysis comparing implementation costs against projected gains, nor does it quantify ongoing operational costs for researchers or institutions.

15.2.10. Security considerations

The strategy does not contain explicit provisions addressing cybersecurity, geopolitical considerations, or economic competition concerns related to open access. The "open by default" principle includes standard exceptions for personal data protection, commercial confidentiality.

Section 9 of the Law on Scientific Activity provides that access to information related to scientific research may be restricted "in cases specified by law".

⁵⁹⁶ EU Structural Funds in Latvia (ESFONDI), 'Latvia to Join the European Open Science Cloud and Develop a Modern Digital Research Infrastructure', available at: <https://www.esfondi.lv/en/about-eu-funds/news/latvia-to-join-the-european-open-science-cloud-and-develop-a-modern-digital-research-infrastructure> [accessed April 2026; note: reported accessible via Microsoft Edge but not Chrome].

⁵⁹⁷ See Riga Technical University, Open Access Initiative, op. cit. and Ministry of Education and Science of the Republic of Latvia, Latvian Open Science Strategy 2021–2027, op. cit.

15.2.11. References to simplification regarding open access

The Open Science Strategy does mention that data management plans for publicly funded research projects should minimise the administrative burden on researchers by requiring only the most important information.

Beyond this, the strategy does not contain explicit provisions for regulatory or administrative simplification. The adoption of standardised tools (e.g. DataverseLV for data deposit) may implicitly simplify compliance but this is not framed as a simplification objective.

15.2.12. Role of artificial intelligence in open access policies

The strategy does not address artificial intelligence, either as an opportunity for enhancing open access (such as text and data mining, automated metadata generation, or AI-assisted curation) or as a threat (such as AI-generated content or intellectual property concerns). This possibly reflects the strategy's 2022 adoption date, preceding the prominence of generative AI in policy discussions.

In recent years, universities have been developing guidelines that directly or indirectly apply to researchers in terms of the use of AI⁵⁹⁸ but these are not directly linked to open science.

15.3. Implementation and monitoring of open access policies

15.3.1. Responsibility for implementation

The strategy's action plan assigns responsible and co-responsible authorities for each of 33 specific activities.

The Ministry of Education and Science is responsible for overall policy coordination; mandatory open access provisions; ensuring availability of ESFRI digital research infrastructures; introducing data management principles; and international representation including EOSC tripartite governance.

The Latvian Council of Science is responsible (or co-responsible) for implementing DMP requirements in funded projects; monitoring compliance with FAIR principles; and administering research programmes with embedded open access conditions.

The Higher Education and Science IT Shared Service Centre (VPC) is responsible for developing and operating the DataverseLV repository network; coordinating data stewards; and representing Latvia in the EOSC Association.⁵⁹⁹

Research institutions registered in the Register of Research Institutions are responsible for ensuring researcher compliance; establishing institutional policies; and appointing data stewards.

Individual researchers bear responsibility for: preparing Data Management Plans depositing publications and data in repositories; and applying appropriate licenses.⁶⁰⁰

15.3.2. Monitoring of individual policy elements

For open access to publications, the National Open Science Strategy stipulates that open access monitoring should be carried out by using automatic solutions such as the OpenAIRE Monitor and by aligning data with the National Scientific Activity Information System (NZDIS), which is under the remit of MoES and related agencies. At the time of writing no national open access monitor publishing its own methodology was identified for Latvia. LCS is responsible for monitoring compliance with open access conditions within their programmes.

⁵⁹⁸ Input by NPR.

⁵⁹⁹ EOSC Association, Tripartite Collaboration: Latvia, available at: <https://eosc.eu/tripartite-collaboration/latvia> [accessed April 2026].

⁶⁰⁰ Implicit in DMP and deposit requirements.

For research data, monitoring of FAIR-data implementation and repository usage is tied to the DataverseLV infrastructure and NZDIS integration: the strategy states that regular analysis of FAIR-maturity should be conducted across the DataverseLV network, which would thus fall under the responsibility of its operator VPC.

15.3.3. Overall policy monitoring

The Ministry of Education and Science is responsible for overall policy monitoring as the authority responsible for "planning, coordination, implementation and monitoring of science policy." The strategy anticipates establishment of a National Open Science Coordinator to facilitate cross-system implementation, though the status of this position is not confirmed in available documentation.

15.3.4. Reporting arrangements

The strategy does not specify formal reporting relationships or intervals.

Presumably the Latvian Council of Science reports to the Ministry of Education and Science on research programme administration, as the council operates under ministerial supervision per Cabinet Regulations No. 408. Similarly, VPC reports to its founding universities and to the ministry regarding state-delegated functions and EOSC-related activities.

Research institutions report on research activities through annual reports required under Section 19 of the Law on Scientific Activity.

15.3.5. Results of impact evaluations

There is no comprehensive, ex-post impact evaluation of Latvia's open access policies to date, but some baseline assessments and infrastructure-development milestones provide partial insight into their effects on publications and research data.

The Open Science Strategy refers to Web of Science InCites data to show that 40.66% of Latvian publications in the 2014–2020 period were available in open access and that Latvia occupies an average position among EU-27 countries but with rapid relative growth.

The document "Analytical Review of the Latvian Smart Specialisation Strategy (RIS3): The Progress of Latvian Science (2008-2019)" also includes data on open access and reports that

The share of open access scientific publications, i.e. publications available to readers free of charge, has significantly increased in the total number of scientific publications. For example, the share of open access publications in the Web of Science database has increased 2.2 times since 2016, surpassing the EU-28 average by 11% (Figure 4.3), incl. ranking 1st among the EU-28 in terms of the proportion of publications published in Gold Open Access journals.

Figure 4.3. puts the proportion of open access publications in Latvia and the EU-28 average for 2019 at 55% and 48% respectively. This diverges from the figure in the Open Science Strategy.⁶⁰¹

The Analytical Review of the Latvian Smart Specialisation Strategy (RIS3) further states

Comparing publishing trends among scientific fields, the number of publications has increased the most in Natural Sciences (Figure 4.4), but this is largely related to the Memorandum of Cooperation between Latvia and the European Organisation for Nuclear Research (CERN) concluded in 2015 [...]. There has been a steady increase in the number of publications in the Medical and Health Sciences sector, but the number of publications has remained low in humanities and agricultural sciences, while engineering and technology and social sciences have the most pronounced annual fluctuations.

⁶⁰¹ Given that Web of Science is not open access, it is not possible for the author to verify either figure.

The National Open Science Strategy draws on a 2020 study on open science and policy roadmap development in Latvia, which is only available in Latvian.⁶⁰² The analytical part emphasises a threefold justification for open science: normative (society's right to access publicly funded knowledge resources), sociological (science as a collective social process whose results belong to society) and economic (the existing subscription model means "double payment", as society finances both the conduct of research and, later, access to its results). The report concludes that in Latvia open access to scientific publications and research data had developed over the past decade but is not yet uniform or structurally embedded.⁶⁰³

For research data, observable impacts are mostly infrastructural:

- Over 70 state-funded projects have been supported through the ARGOS DMP system as of September 2024.⁶⁰⁴

These represent output indicators rather than outcome or impact evaluation.

16. Lithuania

16.1. General characteristics

16.1.1. Policies formulated as strategies, funder mandates and/or legislation

Lithuania's open access framework is anchored in the Law on Science and Studies / Higher Education and Research, Article 51 on "Publicity of the results of scientific activities".⁶⁰⁵ However, this is a general obligation to communicate results, not as a detailed statutory open access mandate.

Article 51 is operationalised through research funder rules issued by the Research Council of Lithuania (LMT – English RCL). Lithuania has had soft-law guidance since 2016 via LMT's *Guidelines on Open Access to Scientific Publications and Research Data*, which were framed as principles and recommendations.⁶⁰⁶ In 2024, the Chair of the LMT adopted Order No. V-385 approving the *Description of the Procedure for Open Access to the Results of Research and Experimental Development* (covering both scientific publications and research data).⁶⁰⁷ The previous guidelines are invalid as from end 2028 but many of the provisions of the order take effect before that date.

⁶⁰² Latvian Council of Science / Ministry of Education and Science, Pētījums par atvērtās zinātnes principiem un politiku Latvijā [Study on Open Science Principles and Policy in Latvia], 2020, available at: https://www.izm.gov.lv/sites/izm/files/petijums-atverta_zinatne_21_2.pdf [accessed April 2026; in Latvian; AI-assisted English summary used for the purposes of this study].

⁶⁰³ This predates the 2022 policy

⁶⁰⁴ OpenAIRE, 'Latvian Council of Science and Latvian Researchers' Community on the Way to Open Data and FAIR with ARGOS', OpenAIRE Blog, September 2024, available at: <https://www.openaire.eu/latvian-council-of-science-and-latvian-researchers-community-on-the-way-to-opendata-and-fair-with-argos>

⁶⁰⁵ Republic of Lithuania, Mokslo ir studijų įstatymas [Law on Science and Studies / Law on Higher Education and Research], No. XI-242, adopted 30 April 2009, as amended, Article 51 ('Mokslinės veiklos rezultatų viešinimas' / 'Publicity of the Results of Scientific Activities'). English version available via ILO NatLex: <https://natlex.ilo.org/dyn/natlex2/natlex2/files/download/84081/LTU-84081.pdf> [accessed April 2026].

⁶⁰⁶ Research Council of Lithuania (LMT), Resolution No. V-218 of the Chairman of the Research Council of Lithuania on Approval of the Guidelines on Open Access to Scientific Publications and Research Data (English version), adopted 31 October 2014, amended 2016, available at: <https://lmt.lrv.lt/media/viesa/saugykla/2024/2/k4okYXifKO.pdf> [accessed April 2026].

⁶⁰⁷ Research Council of Lithuania (LMT), Order No. V-385 of the Chairman of the Research Council of Lithuania on Approval of the Description of the Procedure for Open Access to the Results of Research and Experimental Development (English version), adopted 7 October 2024, available at: <https://lmt.lrv.lt/public/canonical/1736489852/3941/ATVIROSIOS+PRIEIGOS+TVARKOS+APRA%C5%A0AS.pdf>

At strategic level, there is no separate national open science or open access strategy document comparable to an Open Science roadmap. In April 2026, however, the LMT published a feasibility study on Lithuania's integration into the European Open Science Cloud (EOSC). The study maps a fragmented national research data ecosystem, identifies the underdeveloped data steward workforce as a key constraint, and recommends establishing a national EOSC-LT node.⁶⁰⁸

16.1.2. Bindingness in terms of implementation

The binding elements arise from legislation and from LMT funding conditions: the V-385 Description explicitly requires repository deposit of publications, open metadata for publications and datasets, FAIR-aligned management of data, and establishes a warning/suspension mechanism for repeated non-compliance within an LMT-funded project.

Provisions apply to programmes and measures administered by the RCL for calls published from 1 January 2025, with some key paragraphs (on repository deposit and institutional procedures) entering into force from 2026 and 2030 respectively.

At the same time, V-385 contains recommendations too, for example in relation to repository characteristics and wider uptake by other funders and institutions.

16.1.3. Scope of the policy

Lithuania's current funder-level procedure is explicitly broader than publications. The V-385 order's description encompasses "results of research and experimental development financed from the state budget", including scientific publications (and parts thereof), research datasets, and other forms of dissemination for experimental development, and incorporates sections on dissemination, citizen engagement, and monitoring.

16.1.4. Embargoes or immediate open access

For publications, the 2016 guidelines require immediate deposit upon acceptance, but allow embargo periods on access: in biomedicine, physical, technological and agricultural sciences, embargoes up to six months are permitted, while in humanities and social sciences embargoes up to twelve months may apply.

V-385 reiterates immediate repository deposit after publication and immediate opening if no embargo is set but *does not restate explicit discipline-specific embargo ceilings* in article 8, which is in force as of January 1, 2026.

For research data, V-385 states that datasets and metadata "shall be opened" at the time and conditions (levels) set by a research organisation or a funding institution, and it explicitly allows temporary closure, "opened upon request", or closed data (with metadata always open), consistent with "as open as possible, as closed as necessary".

16.1.5. Copyright, rights retention and secondary publication rights

Neither the 2016 Guidelines nor the 2024 Order No. V-385 introduce a statutory rights retention mechanism or create an explicit secondary publication right.

Order No. V-385 upgrades the mandate for the use of creative commons licences from a recommendation (2016 guidelines) to an obligation, stating that scientific publications for which APC or BPC are paid must be granted a CC-BY licence, advising researchers not to transfer copyright to publishers, and defining open access in terms that allow text and data mining and other re-use under open licences.

⁶⁰⁸ Research Council of Lithuania. (LMT). Greater visibility, interoperability, and coordination for Lithuanian research data. <https://lmt.lrv.lt/news/greater-visibility-interoperability-and-coordination-for-lithuanian-research-data-TcY/> [study summary in English]

16.2. Context of open access policies

16.2.1. Training or guidance for researchers

Order No. V-385 recommends that research and higher education institutions allocate financial and human resources for opening research and development (R&D) results, regularly provide training on open science practices at different career stages, and educate and attract data managers able to assist researchers with data management and storage; it also states that recommendations and consultations on open access are provided by the LMT/RCL.

For publications, this guidance covers selection of publishing models (green, gold, diamond), quality and ethics, and rights management; for data, it covers FAIR principles, data management plans, and repository selection, indicating an integrated approach but still largely framed as institutional and funder recommendations rather than enforceable training mandates.

There is also institutional library guidance on open access and licensing.⁶⁰⁹

16.2.2. Funding for open access

The V-385 Description establishes that research and higher education institutions and/or R&D funding institutions “must allocate funds” for making results ready for opening, publication, opening, and storage, and it clarifies an LMT funding principle that state budget allocations administered by LMT will not be used to open publications in hybrid journals. Other funders and institutions are recommended to follow this principle.

16.2.3. Repository requirements (incl. FAIR principles)

For publications, V-385 requires deposit in a “reliable repository” and recommends that repositories ensure machine-readable format, long-term storage, and no restriction on text and data mining. For research data, it requires storage in a reliable data repository with a permanent identifier, mandates that metadata remain fully open and accessible even after data destruction and codifies FAIR principles in detail as requirements for data management and opening.

16.2.4. Metadata and persistent identifier requirements

V-385 states that metadata for publications/preprints must be fully open, searchable and machine-readable even during embargo; and metadata for datasets must be fully open, searchable and machine-readable, including remaining accessible after data destruction.

For datasets, V-385 also requires storage in a repository with a permanent identifier, and FAIR findability requirements include permanent unique identifiers and comprehensive metadata.

In terms of platform capabilities, Lithuania’s repository ecosystem eLABa⁶¹⁰ supports ORCID import functionality.⁶¹¹

16.2.5. Peer review approaches

Lithuanian open access policies acknowledge the importance of peer review for scientific publications but they do not prescribe or promote specific peer review models, including community-led approaches.

⁶⁰⁹ E.g. Vilnius University Library, Open Access (guidance for researchers), available at: <https://biblioteka.vu.lt/en/science/open-access> [accessed April 2026].

⁶¹⁰ established in 2006 as a national aggregated open access repository. eLABa (Elektroninė Lietuvos akademinių bibliotekų informacinė sistema / Lithuanian Academic Electronic Library), available at: <https://www.elaba.lt/elaba-portal/en/pradzia>

⁶¹¹ Vilnius University Library, ‘ORCID iD Import Capability in eLABa Repository’, news item, available at: <https://biblioteka.vu.lt/en/about/news/2176-orcid-id-import-capability-in-elaba-repository> [accessed April 2026].

16.2.6. Links to researcher assessment

V-385 recommends that research and higher education institutions "implement open science promotion and evaluation tools for lecturers, researchers and administrative staff" (paragraph 23.4), indicating recognition that assessment systems should reflect open science values. However, V-385 does not prohibit the use of journal-based metrics.

The Research Council of Lithuania signed the CoARA Agreement on Reforming Research Assessment in December 2022 and developed an action plan (2024-2028) for implementing CoARA principles within its activities.⁶¹²

16.2.7. Public funding thresholds

There is currently no explicit national percentage threshold of public funding (e.g. 50% public funding) in Lithuanian open access policies instead, the scope is anchored in "research and experimental development financed from the state budget" and in "projects funded by the Council", without a proportional funding trigger.

16.2.8. Provisions for small and medium publishers

V-385 does not contain specific provisions for small and medium publishers. V-385 does encourage diamond open access publishing (paragraph 5.7), which may indirectly support small and medium publishers, particularly scholarly societies, that operate on non-commercial models.

16.2.9. Identified costs of, or gains from, applying open access policies

The RCL has commissioned and used an evaluation of the implementation of the 2016 guidelines, which the 2024 V-385 cites as part of its legal and policy basis.⁶¹³ It is more of a "state of play" document pre-2024. The report's empirical findings highlight weak embedding of research data management and openness in funded-project practice, as captured through the project-leader questionnaire and related monitoring data. The recommendations to LMT were orientated toward updating the policy instrument and professionalising the national OA infrastructure and monitoring.

For publications, the 2016 guidelines and the 2024 V-385 recognise advantages such as wider dissemination, increased international visibility, enhanced credibility and societal and economic return, as well as costs associated with APC/BPC and repository operations.

For data, these documents underline benefits related to reliability, transparency, and re-use and foresee that data access may involve ongoing maintenance costs, which may be compensated financially for users under equal treatment principles, but these are not quantified on the national level.

16.2.10. Security considerations

V-385 embeds the "as open as possible, as closed as necessary" principle and enumerates legitimate reasons for not opening data, including personal data protection, third-party IP, professional/commercial/state secrets, and national security/defence, law enforcement and public safety, alongside other legitimate reasons.

⁶¹² Research Council of Lithuania (LMT), Coalition for Advancing Research Assessment (CoARA) — RCL Signatory Page and Action Plan 2024–2028, available at: <https://lmt.lrv.lt/en/science-policy-implementation/coalition-for-advancing-research-assessment-coara/>

⁶¹³ Research Council of Lithuania (LMT), Atvirosios prieigos prie mokslinių publikacijų ir duomenų rekomendacijų taikymo praktikos ir pasiektos pažangos vertinimas [Evaluation of the Practices of Application of the Guidelines on Open Access to Scientific Publications and Data and of Progress Achieved], 2022, available at: <https://lmt.lrv.lt/public/canonical/1696846638/130/> [accessed April 2026; in Lithuanian; AI-assisted summary used for the purposes of this study].

16.2.11. References to simplification regarding open access

Lithuanian open access instruments do not frame their provisions in terms of “regulatory or administrative simplification”.

16.2.12. Role of artificial intelligence in open access policies

The policy documents do not discuss the role of AI in OA.

16.3. Implementation and monitoring of open access policies

16.3.1. Responsibility for implementation

Implementation responsibilities in Lithuania's open access framework are distributed across multiple actors, with the Research Council of Lithuania holding central coordination authority.

The council provides recommendations and consultations on open access (paragraph 21 V-385). The council carries out monitoring of open access to R&D results in accordance with its own procedures (paragraph 26 of V-385). The council is mandated to prepare and approve by 31 December 2026: (i) Description of the Procedure for Monitoring Open Access to R&D Results, and (ii) Action Plan for Open Access to R&D Results (paragraph 3). The council enforces compliance by issuing warnings for first-time non-compliance and reserving the right to suspend project funding for repeated non-compliance (paragraph 33).⁶¹⁴ Other R&D funding institutions must include requirements on open access to scientific publications, research datasets, and other forms of dissemination into project funding agreements (paragraph 32).

Project leaders ensure preservation of data generated during projects and transfer of data to institutions and/or repositories upon project completion. Researchers are responsible for selecting appropriate publishing venues.

Institutions must establish procedures for managing and opening R&D results (paragraph 31 of V-385). Institutions must allocate funds for making R&D results ready for opening, for publication, opening, and storage (paragraph 30). Institutions are recommended to allocate financial and human resources, provide training, educate data managers, and implement open science promotion and evaluation tools (paragraph 23). Institutions carry out institutional monitoring in accordance with their own procedures (paragraph 27). Institutions coordinate research data management and set requirements for data management plans (paragraph 18). Data holders (typically institutions or researchers) set levels of data opening (paragraph 17).

Vilnius University Library manages services and infrastructure of the national open access repository eLABa and the national open access data archive MIDAS.

16.3.2. Monitoring of individual policy elements

V-385 sets out an explicit chapter on monitoring, stating that monitoring of open access to research results is carried out by the Research Council of Lithuania in accordance with its procedures, and that research funding institutions, research and higher education institutions conduct institutional monitoring according to their own procedures.

It also mandates the council to prepare a Description of the Procedure for Monitoring Open Access to research results by the end of 2026. For publications, monitoring focuses on open access to scientific publications, repository infrastructure and institutional practices, while for data it extends to access to research data, costs, citizen science activities and other aspects of open access infrastructure, thereby expanding the scope of monitoring beyond compliance to encompass systemic performance.

⁶¹⁴ See also Research Council of Lithuania (LMT), Open Science, policy implementation page, available at: <https://lmt.lrv.lt/en/science-policy-implementation/open-science/> [accessed April 2026].

16.3.3. Overall policy monitoring

The Research Council of Lithuania is the principal body responsible for overall monitoring of open access policy implementation, acting under the Law on Higher Education and Research and its own Regulations.

16.3.4. Reporting arrangements

Reporting lines for open access implementation are primarily defined within the funding relationship between project implementers and the council, supplemented by institutional reporting to the council and potentially to other R&D funding institutions. Under the 2016 guidelines, project implementers must report on compliance with open access obligations and any legal or technical barriers in interim and final reports, specifying repository locations, metadata and embargo periods; these reports are submitted to the council as funder, which evaluates them and may request additional evidence. V-385 essentially maintains this structure.

16.3.5. Results of impact evaluations

There is no systematic impact evaluation of Lithuania's open access policies. The most significant evaluation exercise is the 2022 study "Evaluation of the practices of application of the Guidelines on Open Access to Scientific Publications and Data and of progress achieved," commissioned by the Research Council of Lithuania to assess implementation of the 2016 guidelines. However, this document seems to primarily contain a baseline on the status quo (see the discussion in subchapter cost and gains).

More significantly, the academic article "*Turning Open Access to Reality: The Case of Lithuania*"⁶¹⁵ analyses how the share of open access publications by Lithuanian authors has evolved between 2014 and 2023 and how national and institutional OA policies have influenced these trends. Using bibliometric analysis of Web of Science and Scopus data, the study finds that OA publications by Lithuanian authors almost doubled over the decade, with the OA share rising by about 33% in WoS and 31% in Scopus, while OA outputs funded by the Research Council of Lithuania (RCL) increased by 24% (WoS) and 37% (Scopus), and OA outputs by Kaunas University of Technology (KTU) authors rose by 31% (WoS) and 26% (Scopus).

Across the national, RCL-funded and KTU subsets, Gold and Green OA routes dominate, with hybrid OA remaining marginal, partly because APCs in hybrid journals are discouraged and not funded by the RCL, and Bronze OA represents a small share, typically in institutionally published journals without explicit licences.

The disciplinary breakdown indicates that RCL-funded OA outputs are concentrated in natural and technical sciences, with very high OA shares in medical and health sciences and natural sciences, whereas at national level the largest OA growth is observed in fields such as economics, management and education, which reflects both funding priorities and disciplinary traditions.

The article concludes:

The policy of research funding bodies with requirements for open access publications has a definite impact on the growth of open access publications. The data show an increasing trend in the share of open access publications in the total number of publications indexed in databases, both in the total sample of Lithuanian authors and in the sample of publications by authors of research funded by the Research Council of Lithuania or by research and study institutions. This shows the impact of funding institutions on the choice of authors to open access their publications.

⁶¹⁵ Tautkevičienė, G., 'Turning Open Access to Reality: The Case of Lithuania', University Library at a New Stage of Social Communications Development: Conference Proceedings, No. 9 (UniLibNSD-2024), 2024, UDC 001.8(474.5). available at: <https://talpykla.elaba.lt/elaba-fedora/objects/elaba:216251023/datastreams/MAIN/content> [accessed April 2026].

It can also be observed that when open access requirements for authors are a mandatory, the number of publications increases faster than when open access publication is provided in the form of recommendations. To assess the full range of publications by national authors, metrics and tools are needed to track all publications by Lithuanian authors.

17. Luxembourg

17.1. General characteristics

17.1.1. Policies formulated as strategies, funder mandates and/or legislation

Luxembourg does not have a national open access law or ministerial regulation with the force of legislation.

On 14 December 2015, Luxembourg's major research institutions collectively signed and adopted a set of common principles on open access, establishing an overarching framework for open access to publications, which they call the national open access policy.⁶¹⁶ These principles were adopted as a voluntary national policy by the University of Luxembourg, the Luxembourg Institute of Health (LIH), the Luxembourg Institute of Science and Technology (LIST), the Luxembourg Institute of Socio-Economic Research (LISER), the National Library of Luxembourg (Bibliothèque nationale du Luxembourg, BnL), and the Luxembourg National Research Fund (FNR). This national policy functions as a coordination framework rather than enforceable legislation, providing common principles that individual institutions may elaborate through their own specific policies.

The primary binding instrument for open access to publications in Luxembourg is thus the mandate of the Luxembourg National Research Fund (FNR), which became mandatory for all FNR-funded projects with funding decisions made after 1 January 2017 for peer-reviewed scientific publications and after 1 January 2023 for academic books.

On 12 August 2025, the FNR announced a significant update to its open access policy for publications,⁶¹⁷ effective 1 August 2025.⁶¹⁸ The FNR presents the update as being "designed to offer greater flexibility and to align our requirements more closely with the diverse practices of the research institutions we support"; in substance, however, it relaxes previously binding open access obligations and places the FNR's policy at variance with the cOAlition S requirements to which the FNR remains formally committed. For research data, the FNR Policy on Research Data Management, introduced with effect from 1 January 2021,⁶¹⁹ applies to all FNR-funded projects where the funding decision was made after that date.⁶²⁰ This policy implements a funder mandate approach based on the principle "as open as possible, as closed as necessary," requiring data management plans, FAIR-compliant data deposit in trusted repositories, and the sharing of data underpinning publications at the time of publication.

⁶¹⁶ University of Luxembourg, Luxembourg Institute of Health (LIH), Luxembourg Institute of Science and Technology (LIST), Luxembourg Institute of Socio-Economic Research (LISER), Bibliothèque nationale du Luxembourg (BnL), and Luxembourg National Research Fund (FNR), National Policy on Open Access, signed 14 December 2015. Available at <https://fnrlu.sharepoint.com/sites/Website/General%20Guidelines%20%20Policies/Forms/AllItems.aspx?id=%2Fsites%2FWebsite%2FGeneral%20Guidelines%20%20Policies%2FOPEN%20ACCESS&p=true&ga=1>

⁶¹⁷ Luxembourg National Research Fund (FNR), 'Update to FNR Open Access Policy', FNR news, 12 August 2025, available at: <https://www.fnr.lu/update-to-fnr-open-access-policy/> [accessed April 2026].

⁶¹⁸ Luxembourg National Research Fund (FNR), 'FNR Open Access Policy (version effective 1 August 2025)', available via FNR SharePoint portal (access requires institutional authentication): <https://fnrlu.sharepoint.com/sites/Website/General%20Guidelines%20%20Policies/Forms/AllItems.aspx?id=%2Fsites%2FWebsite%2FGeneral%20Guidelines%20%20Policies%2FOPEN%20ACCESS&p=true&ga=1>

⁶¹⁹ Luxembourg National Research Fund (FNR), 'Open Science: New FNR Policy on Research Data Management', FNR news and policy announcement, December 2020, available at: <https://www.fnr.lu/open-science-new-fnr-policy-on-research-data-management/> [accessed April 2026].

⁶²⁰ Luxembourg National Research Fund (FNR), 'FNR Policy on Research Data Management (full text, PDF)', available at: <https://storage.fnr.lu/index.php/s/TMy1UFOVhVhsvz/download> [accessed April 2026].

The FNR's data management policy is explicitly aligned with the Science Europe Core Requirements for Data Management Plans and with European Commission policies.

At the institutional level, the University of Luxembourg established a mandatory deposit policy for its institutional repository ORBilu in 2012, requiring all university researchers to deposit peer-reviewed journal articles and published conference proceedings.⁶²¹

17.1.2. Bindingness in terms of implementation

The 2015 National Policy on Open Access, while adopted by all major research institutions, functions primarily as a voluntary coordination framework establishing common principles. The policy text uses aspirational language ("must be disseminated," "should be published"), but as a collective declaration without legislative force or enforcement mechanisms, it does not impose legally binding obligations on individual researchers or institutions.

The FNR Open Access Policy, applicable to all FNR-funded projects with funding decisions after 1 January 2017, constitutes a binding contractual requirement for publications and since 1 January 2021 for research data. Grant recipients must comply with FNR open access and data management requirements as conditions of funding, with compliance evaluated as part of project reporting processes. The FNR explicitly states that it will evaluate whether research data has been managed and shared in line with these requirements as part of the reporting process.

However, "flexibility" introduced in the August 2025 policy update means that a number of provisions are *de facto* voluntary.

Under the revised policy, if a researcher's host institution does not have an open access mandate, the FNR no longer enforces a separate mandate, effectively making FNR open access requirements conditional on institutional policy rather than uniformly binding. This represents a shift from mandatory to conditionally binding requirements, where the bindingness depends on the presence and strength of institutional policies.

Nevertheless, for FNR-funded projects, some specific requirements remain binding: researchers must use the ChronosHub platform for article processing charge (APC) management to access FNR Open Access Fund support,⁶²² and all projects must have a data management plan available at project start and kept up to date at reporting deadlines.

The University of Luxembourg's ORBilu deposit mandate, established in 2012, constitutes a binding employment requirement for all university researchers. The mandate requires researchers to deposit full-text electronic copies of all peer-reviewed journal articles and published conference proceedings immediately upon acceptance for publication (maximum delay: one month), applying to all publications since 1 January 2009. The university explicitly links compliance to internal evaluation: "That only references from publications submitted to ORBilu be used for the internal evaluation of researchers." This creates strong incentives for compliance, as researchers' promotion, tenure, and performance evaluations depend on publications being deposited in ORBilu. However, the mandate distinguishes between the binding requirement to deposit (mandatory) and the encouragement to provide open access (voluntary): authors must deposit their work but may choose restricted access levels depending on publisher agreements and copyright constraints.

17.1.3. Scope of the policy

Luxembourg's open access policies explicitly cover both publications and research data.

The 2015 National Policy on Open Access focuses primarily on publications.

The FNR Open Access Policy, mandatory since 1 January 2017, initially focused on peer-reviewed scientific publications, subsequently extending to academic books and monographs from 1 January 2023.

⁶²¹ University of Luxembourg, ORBilu Deposit Mandate, available at: <https://orbilu.uni.lu/page/Deposit%20Mandate>

⁶²² Luxembourg National Research Fund (FNR), Open Access Fund, available at: <https://www.fnr.lu/funding-instruments/open-access-fund/> [accessed April 2026].

The policy covers journal articles, conference proceedings, and books resulting from FNR-funded or co-funded research.

Research data became subject to comprehensive policy coverage through the FNR Policy on Research Data Management, effective 1 January 2021.

The University of Luxembourg's ORBilu mandate primarily addresses publications that is peer-reviewed journal articles and published conference proceedings.

17.1.4. Embargoes or immediate open access

The 2015 National Policy on Open Access articulates a clear preference for immediate open access, stating: "Open access to the full text paper should be made immediately upon deposit or upon the publication date at the latest" but is not legally binding.

Prior to August 2025, the FNR Open Access Policy, as a cOAlition S member implementing Plan S principles, required immediate open access without embargo periods. The 12 August 2025 FNR policy update fundamentally altered Luxembourg's position on embargoes. The updated policy explicitly states: "Increased Flexibility: We are lifting previous restrictions to better accommodate the needs of our research community.

Publications in hybrid OA journals are once again eligible for FNR funding, and embargo periods are permitted without restriction."

This represents a dramatic shift from mandatory immediate open access to permitting embargoes of any duration, arguably marking Luxembourg's departure from Plan S compliance. Under the August 2025 policy framework, embargo permissions effectively depend on institutional policies. This creates a variable embargo landscape across Luxembourg's research system.

The University of Luxembourg's ORBilu mandate does not itself require immediate open access,

recognising that publisher policies often impose embargo periods. The university's guidance states: "The publisher who owns the journal or book in which you published, may impose an embargo (6-24 months) before you can deposit an article." Researchers are nevertheless required to deposit at least the Author's Accepted Manuscript (AAM) immediately upon acceptance. During any publisher embargo, the deposited full text the AAM, or the Version of Record (VoR) where publisher conditions permit its deposit remains under closed (restricted) access in the repository; only the metadata are openly available immediately. Open access to the deposited full text is provided after the end of the embargo period.

For research data, the FNR policy requires that "data underpinning research papers must be made available to other researchers at the time of publication, as openly and as freely as possible via a trusted repository."

17.1.5. Copyright, rights retention and secondary publication rights

Luxembourg does not have national legislation establishing secondary publication rights.

The 2015 National Policy on Open Access expresses a clear preference for open licensing, stating: "Nationally funded research outputs should be published with a CC-BY attribution licence, allowing the information to be copied and reused". This principle establishes Creative Commons Attribution (CC BY) as the recommended licensing standard for publicly funded research, promoting maximum reusability with minimal restrictions beyond attribution. However, the policy's use of "should" rather than "must" indicates a recommendation rather than a binding requirement, and it applies to "nationally funded research outputs" without specifying enforcement mechanisms or compliance monitoring.

Prior to August 2025, the FNR Open Access Policy aligned with Plan S requirements on Licensing and rights. The FNR's implementation of these principles meant that FNR-funded researchers were expected to publish under open licenses (typically CC BY or CC BY-NC) that permit immediate open access and reuse. The FNR provided guidance and support for researchers to negotiate with publishers to retain necessary rights or to use rights retention strategies to ensure compliance.

The 12 August 2025 policy update fundamentally altered the FNR's approach to copyright and licensing removing any mandatory licensing requirements, allowing researchers to publish under any license acceptable to their chosen publisher. This is referred to as "freedom of licensing".

Regarding rights retention, the August 2025 FNR policy similarly relaxed requirements: "Optional Rights Retention: The use of a Rights Retention Statement in manuscripts is now recommended but optional."

The University of Luxembourg frames its approach to copyright as encouragement rather than requirement: the university "encourages all University members to: Retain copyright ownership of published papers wherever possible."

The university provides guidance on rights retention: "Always check what the Publisher will allow you to do. Your Author Accepted Manuscript (AAM), which has been peer-reviewed, is your intellectual creation and valuable, do not give your rights away!"⁶²³ The university provides templates and guidance for researchers to include rights retention statements in cover letters to publishers.

For research data the FNR Policy on Research Data Management does not mandate specific data licenses but requires that data be made available "as openly and as freely as possible" and that data management plans address intellectual property issues.

17.2. Context of open access policies

17.2.1. Training or guidance for researchers

The FNR offers guidance documents and resources on its website covering open access publication requirements, the Open Access Fund application process, and research data management policies.⁶²⁴

The University of Luxembourg provides researcher guidance through its Luxembourg Learning Centre (LLC), which offers information, support, and resources on publishing and open access.⁶²⁵

While structured, curriculum-based academic training remains limited, both the FNR and the Luxembourg Learning Centre (LLC) provide regular webinars and informational sessions. These include FNR-hosted applicant webinars on navigating the ChronosHub platform and practical LLC workshops addressing self-archiving and rights retention strategies.⁶²⁶

17.2.2. Funding for open access

The FNR Open Access Fund⁶²⁷ provides financial support directly to researchers and institutions for article processing charges, while also allowing data management costs to be included in project budgets. The FNR established the Open Access Fund in 2017 to help grantees comply with open access policy requirements by providing compensation for article processing costs resulting from open access publication of peer-reviewed research results funded or co-funded by FNR. The fund operates as a dedicated instrument separate from regular research project grants, though eligibility is tied to FNR funding. The Open Access Fund is accessible for up to three calendar years after the end date of the project as stipulated in the grant contract, recognising that publications may appear after project completion. Eligibility requires that at least one Luxembourg-based member of the project team be a co-author of the publication, and for specific grant types (PRIDE, AFR, or Industrial Fellowship grants), the PhD candidate must be a co-author. The fund covers APCs for open access peer-reviewed scientific articles and monographs that are compliant with FNR Open Access Policy requirements.

⁶²³ University of Luxembourg, Open Access at ORBilu (researcher guidance page), available at: <https://orbilu.uni.lu/page/open-access> [accessed April 2026].

⁶²⁴ Luxembourg National Research Fund (FNR), Open Science (policy and guidance hub), available at: <https://www.fnr.lu/open-science/> [accessed April 2026].

⁶²⁵ University of Luxembourg, Luxembourg Learning Centre (LLC), Publishing and Open Access, available at: <https://www.uni.lu/llc-en/services/publishing-open-access/> [accessed April 2026].

⁶²⁶ Luxembourg National Research Fund (FNR), 'Information webinar for FNR Applicants – slides available!', FNR news, webinar held 5 February 2024, available at: <https://www.fnr.lu/information-webinar-for-fnr-applicants/>, [information provided by NPR]

⁶²⁷ Luxembourg National Research Fund (FNR), Open Access Fund, op. cit.

The FNR mandates use of the ChronosHub platform for all researchers and institutions seeking APC coverage through the Open Access Fund.

In parallel, Luxembourg's Consortium Luxembourg⁶²⁸ (hosted by the National Library of Luxembourg) negotiates read-and-publish/transformative agreements intended to remove article-level payment barriers for participating institutions, which acts as an indirect systemic funding mechanism supporting OA publishing.⁶²⁹

For research data management, the FNR does not operate a separate fund analogous to the Open Access Fund. Instead, costs related to data management are eligible for funding in FNR projects and should be included in the project budget.

A notable development within these systemic funding mechanisms occurred on 1 January 2026, when the centralised APC payment contract under the national Frontiers agreement expired for authors affiliated with LIST and LIH. Researchers from these institutions publishing in Frontiers journals must now secure and request reimbursement internally rather than relying on automatic payments through the central consortium account.⁶³⁰

17.2.3. Repository requirements (incl. FAIR principles)

The FNR Policy on Research Data Management requires that "research data should be deposited in a trusted repository in such a way that the data are as findable, accessible, interoperable and reusable (FAIR) as possible."

The FNR policy provides guidance on repository selection, distinguishing between disciplinary and multi-disciplinary repositories. Disciplinary repositories are recommended as "generally a good choice, since they are adapted to subject-specific data and are likely to be well-known in the disciplinary community." Multi-disciplinary repositories are acknowledged as accepting any type of data, with some offering excellent data management services, with Zenodo explicitly mentioned as an example. The policy directs researchers to online services such as FAIRsharing and re3data (the Registry of Research Data Repositories) for assistance in identifying suitable data repositories.

Regarding what constitutes a "trusted" repository, the FNR policy refers to "minimum criteria that trustworthy data repositories should meet" as described in the Science Europe practical guide to the international alignment of Research Data Management.⁶³¹

17.2.4. Metadata and persistent identifier requirements

The 2015 National Policy on Open Access establishes a clear metadata release requirement: "Repositories shall release the metadata immediately upon deposit".

The FNR Policy on Research Data Management mandates that "a persistent identifier (such as a Digital Object Identifier – DOI) should be applied to each data set, so that data can be reliably and efficiently located and referred to".

17.2.5. Peer review approaches

Luxembourg's open access policies do not address alternative or innovative peer review models.

⁶²⁸ Consortium Luxembourg (national library consortium coordinated by the Bibliothèque nationale du Luxembourg), available at: <https://www.consortium.lu/> [accessed April 2026].

⁶²⁹ E.g. Consortium Luxembourg, Open Access Agreements and Read-and-Publish Agreements, available at: <https://www.consortium.lu/?cat=19> [accessed April 2026]; and Bibliothèque nationale du Luxembourg (BnL), 'Open Access Publishing', press release, 2021, available at: https://bnl.public.lu/de/a-la-une/actualites/communiqués/2021/open_access_publishing.html [accessed April 2026].

⁶³⁰ Frontiers, 'Luxembourg and Frontiers strike national Open Access publishing agreement', Frontiers news, 14 June 2021, with update note dated 1 January 2026, available at: <https://www.frontiersin.org/news/2021/06/14/luxembourg-and-frontiers-strike-national-open-access-publishing-agreement>, [information provided by NPR]

⁶³¹ Science Europe, Practical Guide to the International Alignment of Research Data Management (2nd edition), Science Europe, Brussels, 2021, available at: <https://www.scienceeurope.org/our-resources/practical-guide-to-the-international-alignment-of-research-data-management/>

17.2.6. Links to researcher assessment

FNR explicitly presents itself as a signatory/supporter of DORA and as a member of CoARA. In the follow up to CoARA commitments, the FNR introduced a narrative-style CV template for Principal Investigators (PIs) and Co-PIs requesting funding from FNR programmes.⁶³²

At the University of Luxembourg repository deposit is explicitly integrated into evaluation procedures. The University is also a member of CoARA and has published an action plan.

17.2.7. Public funding thresholds

Luxembourg's open access policies do not establish explicit public funding percentage thresholds that determine whether research outputs must comply with open access requirements

17.2.8. Provisions for small and medium publishers

Luxembourg's open access policies do not include explicit provisions, support measures, or special accommodations for small and medium-sized publishers.

17.2.9. Identified costs of, or gains from, applying open access policies

Luxembourg's open access policy documents acknowledge costs associated with open access publishing and research data management, providing some financial support mechanisms, but comprehensive cost-benefit analyses or systematic evaluations of economic impacts are not documented in publicly available sources.

The FNR explicitly recognises article processing charges as a cost of open access compliance, establishing the Open Access Fund to provide financial support. However, the total budget allocated to the Open Access Fund, the actual expenditures to date, or analyses of whether available funding adequately covers demand are not disclosed in publicly available documents.

The FNR Policy on Research Data Management explicitly addresses data management costs: "Costs related to data management are eligible for funding in FNR projects and should be included in the project budget (Section 'Other Costs' in the project budget template)." However, the policy does not provide estimates of typical data management costs, guidance on what constitutes reasonable budgeting for such costs, or analysis of actual costs incurred by Luxembourg researchers in complying with data management requirements.

The FNR's policy documents emphasise benefits of open access and research data management. The Research Data Management policy articulates multiple benefits: "Accessibility: third parties can (where appropriate) access and build upon research outputs with minimal barriers to access.

Sustainability: important datasets will not be lost or become unusable if they are properly managed. Impact: on average, data linked to publications are more frequently accessed, downloaded, re-used or cited. Speed: The research process becomes faster, which can be vital in tackling global challenges. Efficiency: Data collection can be funded once, and the data re-used many times."

Similarly, open access publications are described by the University of Luxembourg as beneficial because they "contribute to a more efficient use of research results, boost the potential for innovation, increase the visibility of researchers and their research institutions, and create better conditions for a return on investment of public money."

⁶³² Luxembourg National Research Fund (FNR), Narrative CV, available at: <https://www.fnr.lu/narrative-cv/> [accessed April 2026].

17.2.10. Security considerations

For research data, FNR explicitly recognises legitimate reasons to restrict access (privacy, security, commercial interests) and frames the governing principle as “as open as possible, as closed as necessary.”

17.2.11. References to simplification regarding open access

While the term “simplification” is not used, the FNR’s August 2025 policy update includes explicit language about reducing administrative complexity and burden: “This policy evolution is designed to offer greater flexibility and to align our requirements more closely with the diverse practices of the research institutions we support.”

However, the update’s removal of strict licensing requirements, permission of embargo periods, and mandates based on institutional policies de facto weakens the country’s open access provisions.

17.2.12. Role of artificial intelligence in open access policies

While Luxembourg’s open access dissemination policies do not yet explicitly regulate artificial intelligence, the FNR has introduced official Guidelines on Generative AI. These guidelines establish clear ethical, copyright, and confidentiality boundaries for using AI tools during the proposal preparation and peer-review processes, indicating that AI use is formally monitored during the initial research funding stages.⁶³³

17.3. Implementation and monitoring of open access policies

17.3.1. Responsibility for implementation

Implementation responsibilities for open access to publications and research data in Luxembourg are distributed between the main public funder (FNR) and research-performing organisations, with no evidence of a dedicated national enforcement body beyond funder and institutional governance structures.

FNR is responsible for designing and implementing its OA and RDM policies and for ensuring that grant conditions require compliance with open access expectations, while universities and research institutes (notably the University of Luxembourg via ORBilu, and organisations such as LIH, LIST and LISER) are expected to support researchers in complying through local policies, repositories and RDM services.

For research data, the RDM policy explicitly states that researchers and institutions are expected to ensure appropriate stewardship and curation of research data, including preservation for at least ten years and deposit in trusted repositories, and requires a Data Management Plan for all FNR-funded projects, thereby assigning day-to-day implementation responsibilities to principal investigators and their host institutions under FNR oversight.

17.3.2. Monitoring of individual policy elements

Monitoring responsibility in Luxembourg’s open access policy framework is concentrated primarily at the FNR for funded research and at the institutional level for institutional mandates, with no evidence of systematic, comprehensive monitoring across the entire research system.

The FNR monitors compliance with its data management policies through project reporting. For publications, the FNR’s use of ChronosHub for APC management provides built-in monitoring capacity; however, none of this data seems to be publicly available.

⁶³³ Luxembourg National Research Fund (FNR), FNR Guidelines on Generative Artificial Intelligence (AI), available at: <https://www.fnr.lu/fnr-guidelines-on-generative-artificial-intelligence-ai/>, [input provided by NPR]

The August 2025 policy update, which makes FNR mandates conditional on institutional policies, potentially complicates monitoring by requiring the FNR to understand and track multiple institutional policies.

The University of Luxembourg monitors compliance with its ORBilu deposit mandate through integration with evaluation processes.

17.3.3. Overall policy monitoring

No single entity clearly assigned comprehensive responsibility for monitoring the entirety of open access policy implementation across publications and data, all funding sources, and all research institutions. The 2015 National Policy on Open Access, as a voluntary inter-institutional agreement, does not specify a monitoring body or mechanism for assessing collective implementation.

17.3.4. Reporting arrangements

At the project level, FNR-funded researchers report to the FNR on open access and data management compliance as part of regular project reporting.

The FNR, as a public institution, presumably reports to the government, specifically to the Ministry of Higher Education and Research, as part of normal institutional accountability. However, there is no evidence of specific open access reporting by the FNR.

17.3.5. Results of impact evaluations

Luxembourg does not appear to have conducted or published comprehensive, systematic impact evaluations of its open access policies, representing a significant gap in evidence-based policy development. No publicly available reports, academic studies, or official evaluations specifically assess the outcomes, effectiveness, costs, benefits, or unintended consequences of the 2015 National Policy on Open Access, the FNR Open Access Policy, or the FNR Policy on Research Data Management.

Qualitative evidence of policy impact—such as researcher experiences, institutional administrator perspectives, or publisher feedback—appears not to have been systematically collected through surveys, interviews, or consultation processes, or if collected, has not been made publicly available.

Within the scientific literature the article “*The Luxembourg National Research Fund and ChronosHub: Lessons learned from implementing an Open Access Management platform*” describes ChronosHub as an Open Access Management platform that integrates with many parts of the research information ecosystem and applies FAIR principles and persistent identifiers to automate data flows between authors, institutions, funders and publishers. The authors report that the platform significantly improves communication between FNR, institutions, publishers and authors, reduces manual data collection and eligibility checking, and lowers the risk of errors and ineligible funding requests.⁶³⁴

⁶³⁴ Beard, R., Jakobs, T. and Jagerhorn, M., ‘The Luxembourg National Research Fund and ChronosHub: Lessons Learned from Implementing an Open Access Management Platform’, *Procedia Computer Science*, 211 (2022), pp. 210–217, <https://doi.org/10.1016/j.procs.2022.10.153>. Available at: <https://www.sciencedirect.com/science/article/pii/S1877050922016453> [accessed April 2026]

18. Hungary

18.1. General characteristics

18.1.1. Policies formulated as strategies, funder mandates and/or legislation

National-level OA policy is primarily articulated through the non-binding National Position Paper on Open Science⁶³⁵ (2021) developed by the Open Science Advisory Board, which was established on the initiative of the National Research, Development and Innovation Office and brings together ministries and key science organisations.⁶³⁶ The position paper sets out principles for open access to publications and for FAIR and CARE⁶³⁷-compliant research data management, but it functions as a consensus-based strategic document rather than a mandate. For scientific publications, the position paper promotes immediate open access, preferably under Creative Commons CC BY licences and with strong use of institutional repositories and transitional (read-and-publish) agreements, while for research data it emphasises creation of a national research data management infrastructure and repositories aligned with FAIR/CARE, but without specifying detailed binding conditions.

At the legislative level, the sole binding open access requirement for publications derives from Act CCIV of 2011 on National Higher Education, as modified in 2012, which mandates that PhD dissertations must be made openly accessible and assigned Digital Object Identifiers (DOIs).⁶³⁸

At the funder mandate level, two principal mandates operate for open access to publications. First, the National Research Excellence Programme (NKKP), previously known as the Hungarian Scientific Research Fund (OTKA), maintains an open access mandate covering both publications and research data, requiring all publications resulting from their funding to be made openly accessible via either gold or green routes.⁶³⁹ OTKA has been restructured and renamed, with the mandate continuing and the funding for research recently increased.⁶⁴⁰ The NKFIH explicitly states that winning researchers must make their publications open access, with dedicated funds provided to cover associated costs.⁶⁴¹

Second, the Hungarian Academy of Sciences (MTA) has maintained an open access mandate since 2012, requiring publications from MTA-funded research to be deposited in the REAL repository or equivalent disciplinary repositories.⁶⁴²

⁶³⁵ Open Science Advisory Board / National Research, Development and Innovation Office (NRDI Office / NKFIH), National Position Paper on Open Science, Budapest, 18 October 2021. Available at: <https://nkfi.gov.hu/openscience/position-paper-on-open-science> [accessed April 2026]. PDF download available from the same page.

⁶³⁶ National Research, Development and Innovation Office (NKFIH), Open Science (hub page listing the Open Science Advisory Board, its membership, and associated initiatives), available at: <https://nkfi.gov.hu/openscience> [accessed April 2026].

⁶³⁷ Collective benefit, Authority to control, Responsibility, Ethics. Carroll, S.R. et al., „The CARE Principles for Indigenous Data Governance,” *Data Science Journal*, 19:43 (2020), setting out Collective Benefit, Authority to Control, Responsibility and Ethics as principles for the governance of data relating to Indigenous peoples, complementing the FAIR principles. Available at: <https://doi.org/10.5334/dsj-2020-043>, accessed 27 July 2026.

⁶³⁸ NI4OS-Europe, National Open Science Cloud Initiatives: Hungary, available at: <https://ni4os.eu/15-national-osc-initiatives/hungary/> [accessed April 2026].

⁶³⁹ For the previous OTKA mandate see Holl, A. (MTA KIK), Hungary Open Access Case Study (PASTEUR4OA Project, FP7 Grant Agreement No. 611742), 24 November 2014, available at: <https://openaccess.mtak.hu/wp-content/uploads/Hungary-Case-Study.pdf> [accessed April 2026]. <https://openaccess.mtak.hu/wp-content/uploads/Hungary-Case-Study.pdf>

⁶³⁹ NKFIH, „This year's OTKA call has been published: HUF 13.5 billion to support Hungarian research,” 2023, <https://nkfi.gov.hu/english/online/this-years-otka-call-has-been-published>

⁶⁴⁰ National Research, Development and Innovation Office (NKFIH), „NRDI Fund 2025’, press release, available at: <https://nkfi.gov.hu/english/press-releases/nrdi-fund-2025> [accessed April 2026].

⁶⁴¹ National Research, Development and Innovation Office (NKFIH), „This Year's OTKA Call Has Been Published: HUF 13.5 Billion to Support Hungarian Research’, 2023, available at: <https://nkfi.gov.hu/english/online/this-years-otka-call-has-been-published>

⁶⁴² Hungarian Academy of Sciences, Library and Information Centre (MTA KIK), REAL Repository — Open Access Mandate, available at: <https://real.mtak.hu/eprints/mandate.html> [accessed April 2026].

For research data, the NRDIO/NKFIH policy articulation is more recent and is primarily expressed through Data Management Plan (DMP) and repository-deposit expectations (i.e., a funder-policy instrument rather than a national statute), with explicit FAIR framing and conditional openness.⁶⁴³

18.1.2. Bindingness in terms of implementation

The Open Science position paper is framed as a “common position” and principle-setting instrument and therefore functions as strategic guidance rather than an enforceable national legal mandate. By contrast, the MTA OA mandate is explicitly described as “obligatory” for covered researchers’ publications (submitted after 1 January 2013) and therefore constitutes a binding institutional policy with defined compliance pathways (repository deposit and/or OA publishing). In parallel, NRDIO/NKFIH describes OA to publications from NRDIO-funded projects as mandatory and links research data expectations to required DMP submission and subsequent validation against implemented actions, which indicates a funder-driven compliance model.

18.1.3. Scope of the policy

Hungarian open access policies address both publications and research data, though with different degrees of development. For publications, coverage is more developed through the PhD thesis mandate (legislative), OTKA/NKPP requirements (funder mandate), and MTA mandate (funder/institutional).

For research data, coverage is more limited and primarily aspirational, with the position paper endorsing FAIR principles and calling for data management plans, but without binding national-level requirements. The HUN-REN Data Repository Platform (ARP), launched in March 2024, provides emerging infrastructure for FAIR data management across the research network.⁶⁴⁴

The Position Paper explicitly covers eight pillars of Open Science: open access to research outputs, FAIR and CARE research data management, research integrity, next-generation metrics in research assessment, new types of rewards and initiatives, international cooperation networks, Citizen Science, and education and skills. However, this broad scope represents policy aspiration rather than binding coverage.

18.1.4. Embargoes or immediate open access

The position paper advocates making articles openly available at the moment of publication where possible. However, this is not legally binding.

For publications, the OTKA/NKPP mandate and MTA mandate are described as allowing both gold (immediate) and green (potentially embargoed) open access routes, making them “colour-neutral.”⁶⁴⁵ The MTA mandate accepts deposit in REAL repository or established disciplinary repositories (such as arXiv or PubMed Central). The current version of the MTA mandate explicitly tolerates publisher-imposed embargo periods of up to 12 months for STEM and up to 24 months for SSH; where a publisher permits no form of open access, closed-access deposit in REAL is nevertheless required.

NRDIO/NKFIH’s public DMP guidance confirms mandatory OA to publications from NRDIO-funded projects but, in the cited document, does not itself specify a uniform embargo duration.

For research data, the position paper calls for data to be “findable, accessible, interoperable, reusable” but does not specify timelines or embargo provisions.

⁶⁴³ National Research, Development and Innovation Office (NKFIH), Research Data Management Plan — Guidance for ADVANCED25 Call Applicants (Research data management plan magyarázati), available at: <https://nkfi.gov.hu/palyazoknak/nkfi-alap/advanced-kutatasi-palyazat-advanced25/palyazati-csomag/research-data-management-plan-magyarazati>

⁶⁴⁴ HUN-REN Research Network, Data Repository Platform (ARP), available at: <https://researchdata.hu/en> [accessed April 2026].

⁶⁴⁵ PASTEUR4OA Hungary Case Study (2014): “The MTA mandate is ‘color-neutral’: it allows both gold and green open access.”

18.1.5. Copyright, rights retention and secondary publication rights

Hungary does not have a statutory secondary publication right.

The position paper states that “articles should be published under the Creative Commons CC-BY licence” as a requirement for open access publication, but this is a recommendation rather than a binding norm. The position paper also notes that “whenever possible, articles by Hungarian authors should be made openly available from the moment of publication,” but without specifying a rights retention mechanism to ensure this.

The MTA OA mandate provides an author addendum/cover letter (contractual support to secure deposit/OA) and prescribes a default licence (CC BY-NC-ND, allowing more liberal licences where acceptable). The employer of the MTA unit could waive the Open Access requirement, but in such cases closed access deposit to REAL is required.

The transformative agreements negotiated through EISZ⁶⁴⁶ typically include Creative Commons licensing (CC-BY, CC-BY-NC, CC-BY-NC-ND depending on the publisher), which addresses copyright for gold open access publishing within those agreements.

18.2. Context of open access policies

18.2.1. Training or guidance for researchers

The University of Debrecen, serving as the National Open Access Desk (NOAD) for OpenAIRE since 2010 and coordinator of HUNOR (Hungarian Open Access Repositories consortium since 2008), plays a leading role in researcher training.⁶⁴⁷ The University maintains the openscience.hu⁶⁴⁸ portal as a national information resource.

The HUNOR consortium and HRDA (Hungarian node of Research Data Alliance) jointly organise meetup series on research data management, which have covered topics including FAIR principles, data management plans, the European Open Science Cloud, and data repositories.⁶⁴⁹

The position paper explicitly calls for “systematic and continuous improvement of skills and capacity-building activities” covering digital literacy, digital collaboration, and FAIR data management. The position paper notes the need for “accredited training programmes for data stewards” and states that “the efficient operation of Open Science also requires professionals who, in collaboration with the scientific community, manage and maintain e-resources, repositories for publications and research data.”⁶⁵⁰ The National Laboratory for Digital Heritage (DH-LAB) was reported as intending to launch Hungary’s first data steward degree course.⁶⁵¹

Institutional-level guidance is provided by university libraries, including MTMT (Hungarian Scientific Bibliography) user support and guidance on using EISZ transformative agreements for open access publishing.⁶⁵²

⁶⁴⁶ Electronic Information Service National Programme (EISZ), Open Access Agreements, MTA KIK, available at: <https://eisz.mtak.hu/index.php/en/open-access-english/open-access-agreements.html> [accessed April 2026].

⁶⁴⁷ OpenAIRE, ‘Supporting Open Science in Hungary’, OpenAIRE Blog, available at: <https://www.openaire.eu/blogs/supporting-open-science-in-hungary> [accessed April 2026].

⁶⁴⁸ openscience.hu, available at: <https://openscience.hu> [accessed April 2026; in Hungarian only].

⁶⁴⁹ Hungarian Research Data Alliance (HRDA), Events, available at: <https://hrda.hu/events> [accessed April 2026].

⁶⁵⁰ Position Paper on Open Science (Hungary), October 2021, pages 4, 7. Op.cit

⁶⁵¹ NI4OS-Europe, ‘The European Open Science Cloud (EOSC) and Hungary 2021 — National Dissemination Event in Hungary’, 29 July 2021, available at: <https://ni4os.eu/2021/07/29/the-european-open-science-cloud-eosc-and-hungary-2021-national-dissemination-event-in-hungary/> [accessed April 2026].

⁶⁵² Budapest University of Technology and Economics (BME), OMIKK (National Technical Information Centre and Library), MTMT — Hungarian Scientific Bibliography (guidance for researchers), available at: <https://www.omikk.bme.hu/en/research-and-publication/publication/mtmt> [

18.2.2. Funding for open access

The OTKA/NKFP programme explicitly earmarks a portion of the project budget overhead (previously identified as 1/8th) for supporting open access, and the NKFIH states that “OTKA provides dedicated funds for the projects to cover these costs.”⁶⁵³

The MTA OA mandate recognises that available research funds may be used to cover OA processing charges, indicating that OA costs are expected to be financed through project/institutional resources where applicable.

The Electronic Information Service National Programme (EISZ), operated at the Library and Information Centre of the Hungarian Academy of Sciences with support from NKFIH, negotiates and funds transformative “read and publish” agreements at the national consortium level.⁶⁵⁴ These agreements cover APC costs for affiliated corresponding authors across participating publishers.

The position paper states that “open access publishing requires higher education institutions and research institutes to set up their own financial fund, which is eligible for financial support in the funding programmes operated by research funding organisations and covers the costs of open access publications by authors affiliated with the institutions.” The extent to which institutions have established such dedicated funds is not systematically documented.

18.2.3. Repository requirements (incl. FAIR principles)

For publication repositories, Hungary has a developed network of institutional repositories operating under the HUNOR consortium, established in 2008. The REAL repository (Repository of the Academy’s Library) serves as the primary repository for MTA-funded research and OTKA project outputs.⁶⁵⁵

The MTMT (Hungarian Scientific Bibliography) database, which is legally mandated to record publications from publicly funded research, can link to repository full-texts.⁶⁵⁶

The position paper states that “the strategic objective is to have national or international accreditation of data repositories” and supports “repository journals and independent, platinum open access journals” having “(national or foreign) accreditation.”

For research data repositories, Adattár is the first institutional research data repository in Hungary, established at the University of Debrecen and officially launched in November 2020.⁶⁵⁷ In September 2025 the SZTE Data Repository launched in 2025 (University of Szeged).⁶⁵⁸ The HUN-REN Data Repository Platform (ARP), launched in March 2024, explicitly aims to implement FAIR principles across the Hungarian research network.⁶⁵⁹

The position paper endorses FAIR principles in detail. It also references CARE principles (Collective benefit, Authority to control, Responsibility, Ethics) for indigenous data governance alongside FAIR.

⁶⁵³ NKFIH, ‘This Year’s OTKA Call Has Been Published’, op. cit. PASTEUR4OA Hungary Case Study noting OTKA earmarks 1/8th overhead for OA.

⁶⁵⁴ Electronic Information Service National Programme (EISZ), About EISZ, MTA KIK, available at: <https://eisz.mtak.hu/index.php/en/> [accessed April 2026].

⁶⁵⁵ Hungarian Academy of Sciences, Library and Information Centre (MTA KIK), REAL Repository — Repository of the Academy’s Library, available at: <https://real.mtak.hu/> [accessed April 2026].

⁶⁵⁶ MTMT — Hungarian Scientific Bibliography, available at: <https://mtmt.hu/en/> [accessed April 2026].

⁶⁵⁷ University of Debrecen, University and National Library, Adattár — University of Debrecen Research Data Repository (Dataverse instance), available at: <https://adattar.unideb.hu/> [accessed April 2026]. Information provided by NPR.

⁶⁵⁸ University of Szeged, Klebelsberg Library (Klebelsberg Könyvtár, EK), SZTE Data Repository (InvenioRDM instance), available at: <https://datarepo.ek.szte.hu/> [accessed April 2026]. Information provided by NPR.

⁶⁵⁹ HUN-REN Research Network, Data Repository Platform (ARP) — Our Activities, available at: <https://researchdata.hu/en/our-activities> [accessed April 2026].

18.2.4. Metadata and persistent identifier requirements

The position paper states that “permanent identifiers” should be used for research data and that “the data and the permanent identifier of the published datasets are entered in the Hungarian Science Bibliography (MTMT).” The MTMT database serves as Hungary’s national current research information system (CRIS).

The PhD thesis mandate under Act CCIV of 2011 explicitly requires Digital Object Identifiers (DOIs) to be assigned to dissertations.

The EISZ consortium transformative agreements facilitate metadata capture through publisher systems.

ORCID identifiers are promoted, with MTA KIK as well as University of Debrecen & National Library⁶⁶⁰ being a member of ORCID.

18.2.5. Peer review approaches

There is no explicit endorsement of open peer review, post-publication peer review, or registered reports in the position paper. Diamond (platinum) open access journals, which do not charge APCs and may employ community-led peer review, are supported, with the position paper stating that Signatories “support the publication in platinum open access journals and the operation of domestic platinum open access journals”.

18.2.6. Links to researcher assessment

The position paper includes a dedicated section on “Next generation metrics in research assessment,” calling for “a revision of the practice of benchmarking based on quantitative methodologies, by introducing a new, holistic approach that considers the research assessment processes as a fundamental quality assurance condition for the creation of new knowledge and innovation.” It states that “the evaluation should primarily focus on the content of the research” and that “methods for evaluating scientific performance should support evaluators in carrying out qualitative assessments that take into account a broad spectrum of research outputs and activities.”

The position paper calls for organisations to “unambiguously define the meaning of any terms they use to describe research performance (e.g., “excellence”), clearly highlighting where evaluation methods use different, discipline- or career stage-specific criteria to define quality.” Signatories recommend that “all research assessment organisations publish freely accessible and user-friendly guidelines on all the processes they follow when conducting assessments.”

In 2023, major Hungarian institutions joined forces to establish the CoARA Hungarian National Chapter with the shared objective of transforming research culture through more responsible assessment practices. The mission of the Hungarian National Chapter is to coordinate and align the development and continuous updating of research assessment systems across participating Hungarian organisations at the national level, in line with the CoARA commitments, with the aim of creating an interoperable assessment framework.⁶⁶¹

18.2.7. Public funding thresholds

No specific public funding threshold (e.g., percentage of total project funding from public sources) triggering open access requirements has been identified in Hungarian policy documents. The OTKA/NKKP mandate applies to all projects receiving funding through these programmes, and the MTA mandate applies to all research “achieved by public fund.” Act CCIV of 2011 applies to all PhD theses regardless of funding source.

⁶⁶⁰ Information provided by NPR.

⁶⁶¹ Coalition for Advancing Research Assessment (CoARA), *CoARA National Chapter Hungary*, last updated 18 December 2025, available at: <https://www.coara.org/national-chapters/coara-national-chapter-hungary/> Information provided by NPR.

18.2.8. Provisions for small and medium publishers

The position paper does not include explicit provisions addressing the needs or challenges of small and medium publishers in transitioning to open access models.

However, it could be argued that support for domestic publishing capacity is implicit in the endorsement of “platinum open access journals”.

18.2.9. Identified costs of, or gains from, applying open access policies

The position paper acknowledges costs and resource implications in general terms without providing specific quantification. It states that open access publishing “requires higher education institutions and research institutes to set up their own financial fund.” It further argues that open access provides opportunities “to replace the current, in many respects unsustainable, scholarly communication system with a transparent, interoperable, competitive, durable, fundable model that follows scientific output.”

A key stated benefit is the potential for “shifting to open access” to “lead to a reduction in the current subscription fees.” The position paper also emphasises increased visibility: “open access contributes to increased visibility of Hungarian scientific work at an international level.”

Regarding research data infrastructure, the position paper notes that “the allocation of financial resources to further develop the range of services offered by each institutional repository” is needed and calls for “the costs covered by the state budget” for a “national repository search platform.”

No formal cost-benefit analysis or economic impact assessment of open access policy implementation in Hungary was identified.

18.2.10. Security considerations

Hungarian open science policy acknowledges the importance of responsible and secure handling of research data. However, no explicit provisions addressing Security considerations (cybersecurity, geopolitical sensitivities, economic competition) in relation to open access policies were identified in the position paper or other Hungarian policy documents examined.

The position paper’s emphasis on FAIR principles and EOSC integration suggests general alignment with European frameworks that include data governance considerations.

18.2.11. References to simplification regarding open access

The position paper states that “research funding organisations should streamline evaluation processes to ensure transparency and reduce the burden on evaluators and applicants” and recommends “standardisation and interoperability of the whole application process within organisations and in line with other national and international organisations.”

The EISZ transformative agreements are presented as an administrative simplification for researchers, who “will no longer need to arrange direct payment of open access publication fees” as publishing costs are handled centrally through consortium arrangements.⁶⁶²

⁶⁶² American Chemical Society, ‘American Chemical Society Signs Their First Transformative Agreement with the Hungarian EISZ Consortium’, ACS Open Science News, 12 November 2019, available at: <https://acsopscience.org/2019/11/12/american-chemical-society-signs-their-first-transformative-agreement-with-hungarian-eisz-consortium/> [accessed April 2026].

18.2.12. Role of artificial intelligence in open access policies

The Open Science position paper explicitly references the relevance of artificial intelligence within the Open Science paradigm (including opportunities linked to increased openness and machine-enabled use):

To take advantage of the opportunities offered by Open Science, the research community, higher education and research institutions and Citizen Science initiatives require complex digital skills and broad competences, including for example analytics, statistics, machine learning, **artificial intelligence**, visualisation, and the responsible use of code writing and algorithms. (emphasis added)

However, no specific discussion of AI-generated content, AI-assisted peer review, text and data mining rights, or AI-related copyright issues in open access contexts was identified.

18.3. Implementation and monitoring of open access policies

18.3.1. Responsibility for implementation

For national Open Science coordination, NKFIH established the Open Science Advisory Board in March 2021 which developed the position paper. KIFÜ (Governmental Agency for IT Development) represents Hungary in EOSC activities and coordinates e-infrastructure. The University of Debrecen serves as National Open Access Desk (NOAD) for OpenAIRE and coordinates HUNOR activities.

For OTKA/NKPP-funded research, the principal investigator and host institution bear implementation responsibility as grant conditions. NKFIH administers the programme and has oversight of compliance through project reporting.

For MTA-funded research, both individual researchers and their institutions are responsible for ensuring open access compliance. The MTA KIK (Library and Information Centre) operates the REAL repository and coordinates compliance monitoring.

For EISZ transformative agreements, the EISZ Consortium Department at MTA KIK negotiates and manages agreements. Institutional libraries at member organisations facilitate author uptake. Individual corresponding authors bear responsibility for utilising open access options during the publication process.

For research data management infrastructure, HUN-REN Headquarters (formerly ELKH Secretariat) oversees the Data Repository Platform (ARP), implemented by SZTAKI, the Centre for Social Sciences (TK), and the Wigner Research Centre for Physics.

18.3.2. Monitoring of individual policy elements

For national-level Open Science implementation, no single monitoring body exists. The Open Science Advisory Board at NKFIH has a coordination role. The position paper does not establish specific monitoring mechanisms or KPIs for overall policy implementation.

For publications under the MTA mandate, monitoring is structurally enabled through required entry of OA URLs in MTMT and the use of repository deposit pathways (REAL or permitted repositories).

NRDIO/NKFIH monitors funded projects through project monitoring processes (interim/final reporting) and, for research data, explicitly states that DMP plans will be compared to actions taken, implying monitoring through document-based verification and deliverable checks.

For EISZ agreements, monitoring of uptake is typically embedded in publisher reporting dashboards and eligibility verification. Hungary-specific public reporting of uptake rates was not identified in the sources reviewed here.

18.3.3. Overall policy monitoring

Overall implementation of open science policy in Hungary appears to be overseen in a coordinating sense by the NRD Office, which chairs the Open Science Advisory Board.

The position paper calls for various monitoring activities but does not establish a central monitoring authority.

18.3.4. Reporting arrangements

Evidence of consolidated national reporting (e.g., annual public OA compliance reports by a central authority) was not identified in the reviewed sources.

NRDIO/NKFIH's monitoring approach indicates that project beneficiaries report through written interim/final reports and related administrative processes. For the MTA mandate, reporting is operationalised through repository deposit and MTMT registration.

18.3.5. Results of impact evaluations

No comprehensive impact evaluation of Hungarian open access policy has been identified. EISZ reports on articles published under transformative agreements.⁶⁶³

The PASTEUR4OA Hungary case study (2014) reports partial compliance and identifies stronger maturity for publications than for research data at that time. While this provides evaluative insight, it is likely outdated.

19. Malta

19.1. General characteristics

19.1.1. Policies formulated as strategies, funder mandates and/or legislation

Malta's open access framework is anchored in the National Open Access Policy 2021,⁶⁶⁴ a comprehensive strategy document adopted by the government in December 2021 following support from the European Commission's Policy Support Facility (PSF).⁶⁶⁵

The policy does not constitute binding legislation but rather a strategic roadmap coordinating RPOs and RFOs toward enhanced open science practices. The document explicitly addresses open access to scientific publications and open/FAIR research data alongside enabling actions on awareness raising, skills training, and researcher assessment.

At research funder level, Malta's national R&I funding schemes administered under Xjenza Malta/MCST structures include grant conditions and deliverable structures that can require open access publication outputs and evidence of dissemination in at least one instance, namely the FUSION programme.⁶⁶⁶

No national legislation specifically governing open access to publicly funded research has been enacted in Malta.

⁶⁶³ Electronic Information Service National Programme (EISZ), Milestones from the Recent History of the EISZ Project, available at: <https://eisz.mtak.hu/index.php/en/389-milestones-from-the-recent-history-of-eisz-project.html> [accessed April 2026].

⁶⁶⁴ Malta Council for Science and Technology (MCST, now Xjenza Malta), National Open Access Policy 2021, officially adopted December 2021, implementation commenced January 2022, available at: <https://eosc.eu/wp-content/uploads/2022/11/National-Open-Access-Policy-2021.pdf>

⁶⁶⁵ European Commission, Directorate-General for Research and Innovation, Open Access: An Opportunity for Malta (Horizon 2020 Policy Support Facility Specific Support to Malta, PSF/SS/MT/2019-2020), Publications Office of the European Union, Luxembourg, April 2020, Project page available at: <https://projects.research-and-innovation.ec.europa.eu/en/statistics/policy-support-facility/specific-support-malta>

⁶⁶⁶ Xjenza Malta (formerly MCST), Technology Development Programme (TDP) 2024 — Rules for Participation (Version A), November 2024, available at: <https://xjenzamalta.mt/wp-content/uploads/2024/11/TDP-2024-Rules-for-Participation-A.pdf> [accessed April 2026].

19.1.2. Bindingness in terms of implementation

The National Open Access Policy 2021 established a graduated obligation structure transitioning from voluntary to mandatory requirements through a three-phase approach extending to end 2025. For scientific publications, Phase 1 encourages voluntary deposit in institutional repositories whilst respecting publisher embargo periods. Phase 2 introduces mandatory deposit requirements for research outputs from nationally funded programmes, with case-by-case flexibility for sensitive research involving government security or confidential information. Phase 3 advances toward immediate open access through rights retention mechanisms.

At the University of Malta (UM), researchers are required to deposit research outputs in OAR@UM in accordance with the institutional Open Access Policy.⁶⁶⁷ This mandatory requirement, implemented in June 2021, applies to all staff holding an appointment made by the Council of the University of Malta, the University's governing body, covering peer-reviewed articles, conference proceedings, books, and book *chapters* produced under UM auspices. Books themselves fall outside the mandatory scope of the policy, although their deposit is encouraged. Under the policy, the full text of publications is to be made openly available at the time of deposit or as soon as possible thereafter, subject to publisher agreements and the UM's Intellectual Property Policy; exceptions require a justification reviewed case by case by a dedicated committee. Where publisher restrictions preclude immediate openness, deposit remains required, metadata must be made immediately openly accessible, and open access follows once the embargo lapses.

For research data, the National Open Access Policy maintains voluntary compliance during Phase 1, encouraging researchers to adopt FAIR principles and deposit data underlying publications in recognised repositories. The policy strongly recommends but does not mandate Data Management Plans (DMPs) for nationally funded projects during this initial phase, though DMPs are required for Horizon Europe participation.

19.1.3. Scope of the policy

The National Open Access Policy 2021 has comprehensive scope encompassing both open access to scientific publications (Section 5.1) and open/FAIR research data (Section 5.2).

Beyond publications and data, the policy incorporates enabling dimensions including researcher assessment reform, awareness raising campaigns, skills training, and institutional capacity building (Section 6.1). The policy recommends adoption of tools such as the Open Science Career Assessment Matrix (OS-CAM) and the Declaration on Research Assessment (DORA) to incentivise open science practices beyond traditional publication metrics. Section 6.2 outlines awareness raising strategies, calling for institutional Open Access Champions and dedicated Open Science Departments at RPOs. Section 6.3 addresses skills training across four identified categories: open access publishing expertise, research data management capabilities, disciplinary community engagement, and citizen science interaction.

For funder instruments, the evidence reviewed shows explicit requirements for publication-related outputs while research data obligations are not explicit at least in the FUSION programme.

19.1.4. Embargoes or immediate open access

The National Open Access Policy 2021 adopts a phased approach to embargo provisions, progressing from acceptance of publisher-imposed embargoes toward immediate open access by end 2025. During Phase 1, depositing and providing Open Access to research outputs in accordance with the embargo periods stipulated by the respective publishers is encouraged but will remain voluntary for Maltese researchers.

⁶⁶⁷ University of Malta Library, Open Access Policy for the University of Malta (updated June 2021), available at: https://www.um.edu.mt/library/oar/bitstream/123456789/20022/12/OA%20Policy%20for%20the%20UM_upgrade_17.06.2021.pdf [accessed April 2026]

In phase 2 dedicated support and an easy deposition process should be established. Once this is in place, in phase 3 publication processes with zero embargo periods are phased in, fostering a state of immediate Open Access. The policy recommends that RPOs establish Creative Commons licensing at institutional level enabling authors to retain copyright and grant only specific licenses to publishers rather than transferring full copyright. The implementation window for these phases closed at the end of 2025; as of 27 July 2026, no public documentation confirming that the Phase 3 objective of immediate open access has been operationalised has been identified

The University of Malta Open Access Policy does not specify maximum permissible embargo durations. The institutional policy requires researchers to deposit materials in OAR@UM, as soon as possible upon publication, whilst allowing researchers to select access levels during deposit. The policy emphasises that researchers are free to publish in journals of their choice, with copyright obligations determined by individual publisher agreements.

For research data, immediate openness is encouraged but not mandated. The National Open Access Policy recommends that researchers set suitable embargo periods upon data deposit before opening data access. The policy strongly encourages immediate opening of metadata regardless of embargo status on underlying datasets, enhancing discoverability even where access remains temporarily restricted.

19.1.5. Copyright, rights retention and secondary publication rights

In the national policy, phase 3 of the publications roadmap explicitly promotes copyright retention, recommending that RPOs establish institutional Creative Commons licensing frameworks enabling researchers to retain copyright ownership whilst granting publishers only specified licenses for publication. The policy recommends that RPOs set up Creative Commons licensing at institutional level and encourages researchers to use such licenses when depositing in repositories.

However, the University of Malta Open Access Policy requires that when works have been published in journals or books, researchers must establish agreements with publishers and attain copyright clearance before deposit in OAR@UM.

The policy states:

Authors must also ensure that a Creative Commons Licence of their choice is indicated when their research publication is made available in Open Access.

Malta does not have a secondary publications right law.

19.2. Context of open access policies

19.2.1. Training or guidance for researchers

The National Open Access Policy 2021 dedicates substantial attention to skills training and researcher support as enabling factors for successful open access implementation. Section 6.3 identifies four categories of necessary open science skills: expertise in open access publishing (both green and gold approaches), research data management and FAIR data principles, capacity to act within and beyond disciplinary communities, and skills for citizen science engagement. The policy recommends that RPOs phase in establishment of institutional skills, competencies, and training centres for open science, encompassing training for researchers on open access publishing and research data management, skills development for support personnel on technical, legal, ethical and business aspects, and coordinated helpdesk services offering knowledge-based support on open science matters.

The National Open Access Policy emphasises that training must be tailored to all four researcher career stages (R1 to R4 according to the European Framework for Research Careers), with R3 and R4 researchers expected to provide leadership and drive cultural change. The policy recommends integrating open science skills as a standard component of education, training and career development paths.

The University of Malta Library has operationalised these recommendations through its Open Science Department, established to support UM academics and researchers with dissemination of intellectual output, research and data. The department provides information and training on open access through a dedicated website offering guidelines on open science practices.⁶⁶⁸

19.2.2. Funding for open access

The National Open Access Policy 2021 recommends allocation of funding by central government to RPOs for institutional budgets dedicated to article processing charges (APCs) for gold open access publishing. The policy advises RPOs adopting such institutional budgets to govern funding with clear criteria including maximum cost per publication ceilings, maximum publications per individual researcher limits, and exclusion of hybrid open access journals from eligibility. The policy recommends pilot implementation with regular monitoring and evaluation to inform evidence-based decisions regarding continuation and establishment of permanent gold open access funds. However, systematic implementation of institutional APC funds across Maltese RPOs is not documented in available sources.

In 2024, Xjenza Malta introduced the Open Access Journal Support⁶⁶⁹ component within the Research Networking Scheme, providing financial assistance up to €4 000 to researchers who previously benefited from Xjenza Malta research grants to publish in peer-reviewed open access journals. The scheme operates through competitive calls, with applications assessed on alignment with National R&I Strategy goals.

For research data, the National Open Access Policy recommends that research funders allow data stewardship costs to become eligible expenses in nationally funded projects, enabling provision of technical support to researchers for rendering datasets FAIR. The policy notes that costs associated with open access to research data, including DMP creation, should be claimable as eligible costs.

19.2.3. Repository requirements (incl. FAIR principles)

The National Open Access Policy 2021 emphasises repository infrastructure as foundational for green open access implementation. For publications, the policy distinguishes between institutional repositories operated by RPOs and the concept of a Common Access Point (CAP) potentially linking existing repositories.

OAR@UM,⁶⁷⁰ established by the University of Malta Library in 2014, serves as Malta's primary and quasi-national repository, collecting, preserving and disseminating scholarly materials produced under UM auspices and accepting works of importance to Malta's cultural heritage and identity.

The National Open Access Policy encourages Maltese institutions lacking repositories but engaging in research to develop institutional repositories, seeking advice and collaborating with stakeholders having relevant knowledge and experience to ensure high-quality implementation. The policy recommends budget allocation to assist institutions willing to develop repositories.

For research data, during Phase 1, the policy encourages RPOs to consider setting up or upgrading institutional repositories to allow data storage and sharing, whilst recommending that researchers use EU e-infrastructure data repositories and services in the interim. The policy strongly encourages use of well-recognised, accredited data repositories with persistent identifiers, unrestricted APIs for machine readability, metadata coherent with OpenAIRE and DataCite guidelines, and discipline-specific metadata standards. Researchers are encouraged to deposit in repositories offering Creative Commons licensing options (CC BY or CC 0) to facilitate reusability.

⁶⁶⁸ University of Malta Library, Open Science Department — Open Access (guidance and resources for UM academics and researchers), available at: <https://www.um.edu.mt/library/openscience/oa/> [accessed April 2026].

⁶⁶⁹ Xjenza Malta, Research Networking Scheme (RNS) — Application Status Overview, 26 August 2024, available at: <https://xjenzamalta.mt/2024/08/26/research-networking-scheme-rns-application-status-overview/> [accessed April 2026].

⁶⁷⁰ University of Malta Library, OAR@UM — Open Access Repository of the University of Malta, established 2014, available at: <https://www.um.edu.mt/library/oar/> [accessed April 2026].

FAIR principles receive explicit emphasis in the data provisions. The policy promotes rendering datasets findable through persistent identifiers and rich metadata, accessible via standard protocols, interoperable through domain metadata and OpenAIRE/DataCite compatibility, and reusable through open licensing and clear provenance documentation. The National Open Access Policy recommends that during Phase 1, researchers voluntarily adopt FAIR practices with technical support from data stewards, whose costs should become eligible in nationally funded projects. The policy identifies EOSC, Zenodo, and pan-European data cluster projects (PaNOSC, EOSC-Life, SSHOC, ESCAPE) as appropriate services and repositories.

19.2.4. Metadata and persistent identifier requirements

The National Open Access Policy 2021 explicitly addresses metadata and persistent identifiers as essential for research discoverability and FAIR compliance. For research data, the policy strongly encourages researchers to immediately open metadata regardless of embargo status on underlying datasets, enhancing findability even where access remains temporarily restricted. The policy specifies that metadata should provide information about dataset contents, context, quality, structure, and accessibility, including contact information, geographic locations, units of measure, abbreviations, codes, instrument and protocol information, survey details, provenance, and version information.

The policy recommends that researchers use data repositories producing metadata coherent with OpenAIRE and DataCite Metadata Guidelines, together with discipline-specific domain metadata to enhance interoperability. For persistent identifiers, the policy encourages researchers to seek repositories offering persistent identifiers (such as DOIs or Handles) for deposited datasets.

The National Open Access Policy recommends that all research outputs should be assigned persistent identifiers, noting that OAR@UM is registered with OpenAIRE and other indexing services to maximise discoverability. The University of Malta Open Access Policy requires that deposit of materials in OAR@UM must be accompanied by sufficient metadata describing content, provenance and formats. The policy does not specify compliance with particular metadata standards.

19.2.5. Peer review approaches

Neither the National Open Access Policy 2021 nor the University of Malta Open Access Policy addresses peer review models or encourages adoption of community-led peer review approaches.

The National Open Access Policy references open peer review briefly in its definitions section as a modification of traditional peer review potentially involving open identities (mutual awareness of authors and reviewers), open reports (published review reports), and open participation (wider community contribution beyond assigned reviewers). However, the policy does not recommend or incentivise such practices in its substantive provisions.

19.2.6. Links to researcher assessment

The National Open Access Policy 2021 dedicates substantial attention to researcher assessment reform as an enabling factor for open science adoption. Section 6.1 explicitly addresses research and researcher evaluation, noting that current evaluation methods practised by employers of researchers in Malta rely mainly on journal prestige and Journal Impact Factor. The policy strongly encourages employers to incorporate open science practices as criteria in researcher performance evaluation and career progression, rather than basing assessment solely on journal impact factors.

The National Open Access Policy recommends adoption of two specific tools: the Open Science Career Assessment Matrix (OS-CAM) and the Declaration on Research Assessment (DORA). OS-CAM provides a framework for evaluation systems applicable at individual and group levels for recruitment, promotion, grant applications, and institutional funding models.

The policy recommends that RPOs and RFOs introduce researcher assessment methods using multi-dimensional criteria providing more realistic measurement of quality, eliminating discrimination inherent in single-metric approaches. Researchers at all career stages (R1-R4) should be incentivised and supported to practice open science, with evaluation criteria fair and equitable regardless of career level.

Research funding organisations are encouraged to include open science practices in evaluation criteria for funding proposals.

The National Open Access Policy acknowledges that changing researcher evaluation methods engrained in local culture is complex, representing the main barrier to reform. The policy recommends a phased approach, possibly with pilot actions, for employers to introduce more nuanced assessment reflecting open science practices.

The policy calls for institutional research assessment and evaluation practices to be adjusted by end 2025 to adequately reward and incentivise open access practices, though this represents an aspirational target rather than a mandate.

No evidence exists of systematic implementation of OS-CAM, DORA, or similar reformed assessment frameworks at Maltese RPOs as of available documentation.

19.2.7. Public funding thresholds

Neither the National Open Access Policy 2021 nor the University of Malta Open Access Policy establishes public funding thresholds determining when research outputs fall under open access requirements. The National Open Access Policy applies its recommendations and phased implementation roadmap to publicly funded R&D.

19.2.8. Provisions for small and medium publishers

The national policy includes explicit attention to the national publishing ecosystem by addressing the improvement and visibility of Maltese open access journals and encouraging alignment with international indexing/quality infrastructures (e.g., DOAJ registration), which can be interpreted as a supportive measure for smaller publishers/journals operating in a small-state context.

19.2.9. Identified costs of, or gains from, applying open access policies

The National Open Access Policy 2021 references an economic model for open access and open research data funding developed by the PSF expert panel (Annex I of the PSF Report).⁶⁷¹ Based on a survey and comparative data from the Netherlands it estimates costs for the University of Malta and MCAST in different categories, most notably for data stewards in the range of 10,5 and 2,0 million € respectively, and for central research supporters in the range of 1,2 and 2,0 million € respectively.

The policy document itself does not present detailed cost projections or quantified estimates of expenditures required for full implementation by 2025. The policy notes that average APC fees are approximately 1 400€ per article, with high-impact journals from major publishers charging around 2 000€.

Benefits are framed qualitatively: improved reproducibility enhancing research quality, increased citation rates for open access publications, enhanced researcher visibility leading to collaborations and employment opportunities, acceleration of research through earlier reuse of results, prevention of duplication conserving limited resources, facilitation of industry-academia collaboration, and broader societal engagement with research. The policy emphasises that for Malta as an outward-looking island-based EU Member State, better circulation of knowledge provides clear advantages.

⁶⁷¹ European Commission, Directorate-General for Research and Innovation, Open Access: An Opportunity for Malta (Horizon 2020 Policy Support Facility Specific Support to Malta, PSF/SS/MT/2019-2020), Publications Office of the European Union, Luxembourg, April 2020, Annex I (economic model for open access and open research data funding in Malta). <https://data.europa.eu/doi/10.2777/835>

19.2.10. Security considerations

The National Open Access Policy 2021 incorporates Security considerations primarily through the “as open as possible, as closed as necessary” principle.

19.2.11. References to simplification regarding open access

The National Open Access Policy 2021 does not explicitly address regulatory or administrative simplification concerning open access compliance.

19.2.12. Role of artificial intelligence in open access policies

Neither the National Open Access Policy 2021 nor the University of Malta Open Access Policy addresses the role of artificial intelligence in open access policies. The policy documents predate widespread discussion of generative AI impacts on research and scholarly communication.

19.3. Implementation and monitoring of open access policies

19.3.1. Responsibility for implementation

Section 7 of the National Open Access Policy 2021 delineates the roles: national government (through the Malta Council for Science and Technology, since rebranded as Xjenza Malta) bears responsibility for policy development, coordination, oversight, and national awareness campaigns; RPOs, particularly the University of Malta and Malta College of Arts, Science & Technology, are responsible for implementing institutional open access policies, establishing and operating repositories, providing researcher training and support, developing institutional APC funds where appropriate, and adjusting researcher evaluation practices; RFOs, primarily Xjenza Malta, are responsible for incorporating open access deliverables in funding programme terms and conditions, providing funding for APCs and data management through grant programmes, and requiring Data Management Plans in project proposals.

Individual researchers hold responsibility for depositing research outputs in repositories, selecting appropriate publication venues, managing research data according to FAIR principles, and completing DMPs for funded projects. The University of Malta Library, through its Open Science Department, implements training programmes, manages OAR@UM, provides technical support for deposits, and serves as the OpenAIRE National Open Access Desk for Malta. For the Common Access Point (CAP) potentially linking institutional repositories (a beyond-2025 consideration), the National Open Access Policy specifies that the Executive Committee (see below) would discuss and decide establishment, management and ownership, with Xjenza Malta responsible for dissemination and marketing.

The policy’s governance structure assigns coordinating authority to a National Open Access Committee (constituted as the Executive Committee) comprising high-level representatives from all key stakeholders. This committee executes the policy objectives and ensures specific actions for each stakeholder are followed up. Thematic working groups provide expert support on specific domains such as publications, data, training, and assessment.

19.3.2. Monitoring of individual policy elements

The National Open Access Policy 2021 assigns monitoring oversight to the Xjenza Malta (the policy text refers to MCST, its predecessor). Section 8 establishes a monitoring framework with Xjenza Malta conducting monitoring exercises in 2023 and 2025 to gather information through specific indicators.

Xjenza Malta bears responsibility for collecting this data.

The National Open Access Committee, as the coordinating body, presumably receives monitoring reports from Xjenza Malta to inform ongoing implementation adjustments, but the frequency and format of such reporting are not specified in the policy.

19.3.3. Overall policy monitoring

Overall policy implementation monitoring is the responsibility of Xjenza Malta

The National Open Access Policy explicitly states that MCST (Xjenza Malta's former name) will retain oversight of the level of implementation of this policy until the end of 2025. This oversight function encompasses tracking progress across all policy dimensions.

The National Open Access Committee, chaired by Xjenza Malta with membership from key stakeholders, serves as the governance mechanism for overall implementation oversight, reviewing progress, addressing implementation challenges, and coordinating stakeholder actions.

Whether the first monitoring exercise (scheduled for 2023) has been completed and whether findings have been publicly reported is not confirmed in available documentation.

19.3.4. Reporting arrangements

The National Open Access Policy 2021 does not establish detailed reporting lines for policy implementation progress.

Based on the governance structure described in Section 7, the implicit reporting relationships are: individual researchers and RPOs report implementation data (deposit rates, open access publications, training participation) to Xjenza Malta through monitoring exercises and indicator collection; the National Open Access Committee (Executive Committee) receives progress reports from Xjenza Malta and from thematic working groups addressing specific policy domains; Xjenza Malta, as coordinating authority, reports overall implementation status to the government ministry responsible for research and innovation (Ministry for Education, Sport, Youth, Research and Innovation); and the National Open Access Committee reports to the broader research community and public through policy review and consultation processes.

19.3.5. Results of impact evaluations

As the National Open Access Policy was adopted in December 2021 with implementation commencing in January 2022, comprehensive impact evaluations covering the full implementation period are not yet available. The policy established a monitoring framework with exercises scheduled for 2023 and 2025, culminating in policy review at end 2025.

No publicly available reports documenting results of the 2023 monitoring exercise have been identified through desk research. Available documentation primarily comprises the policy document itself, the 2020 PSF report providing the policy foundation, and general information on Xjenza Malta and University of Malta websites describing ongoing open access activities.

The European Commission's PSF specific support report for Malta provides qualitative analysis of pre-policy conditions and recommendations, but it predates full policy implementation and thus cannot be treated as an evaluation of the NOAP's effects; similarly, international overviews (OpenAIRE, EOSC, OECD) describe Malta's policy framework and governance initiatives but do not offer quantitative impact evaluations or detailed compliance statistics for publications or research data.

The policy review scheduled for end 2025 had not been publicly documented as of 27 July 2026. Its eventual publication will be critical for assessing whether the phased approach has achieved intended outcomes and for determining appropriate next-phase policy directions.

As of July 2026, data from the Curtin Open Knowledge Initiative indicates that approximately 56% of University of Malta's published research (covering 2000-2025) is freely available online.⁶⁷²

⁶⁷² Curtin Open Knowledge Initiative (COKI), University of Malta — Open Access Report, available at: <https://open.coki.ac/institution/03a62bv60/> [accessed July 2026].

20. The Netherlands

20.1. General characteristics

20.1.1. Policies formulated as strategies, funder mandates and/or legislation

The Netherlands' open access framework is best characterised as a multi-instrument mix spanning (a) strategy/agenda-setting via the National Programme Open Science (NPOS) 2030 Ambition Document & Rolling Agenda (b) funder mandate for the Dutch Research Council (NWO) and ZonMw, (c) copyright-law enabling legislation via the Auteurswet provision commonly referred to as the "Taverne amendment" (Art. 25fa) and (d) coordination platforms and implementation mechanisms, including publisher agreements.

The NPOS2030 Ambition Document and Rolling Agenda⁶⁷³ (December 2022), endorsed by the Ministry of Education, Culture and Science and implemented via Open Science NL at the Dutch Research Council (NWO) articulates a comprehensive national vision for open science. The strategy states that "by 2030, scientific knowledge will be freely available, accessible, and reusable for everyone, with transparent processes that benefit science and society." The strategy is built on five guiding principles: (1) scientific knowledge as a public good with universal access rights; (2) outputs as open as possible and restricted only as necessary; (3) reproducibility and scrutiny as essential for quality and integrity; (4) diversity, equity, and inclusiveness as crucial values; and (5) safeguarding academic and digital sovereignty.

As regards the funders, the Dutch Research Council (NWO)⁶⁷⁴ and ZonMw⁶⁷⁵ (Netherlands Organisation for Health Research and Development) are cOAlition S members, thus mandating immediate open access without embargo for all peer-reviewed articles. The policy requires publication under CC BY 4.0 licence (CC BY-ND permitted for monographs by NWO).

As for legislation Article 25fa of the Auteurswet (Taverne Amendment, 2015): The Dutch Copyright Act⁶⁷⁶ includes a statutory secondary publication right enabling researchers to make short scientific works publicly available after a "reasonable period" following first publication, provided the research was wholly or partially funded by Dutch public funds.⁶⁷⁷

This right supersedes any contractual agreement with publishers. Dutch universities, coordinated by UNL (Universities of the Netherlands), have operationalised this provision through the "You Share, We Take Care" initiative, interpreting the reasonable period as six months for journal articles and book chapters.⁶⁷⁸

An article documenting the 2019 pilot "You Share, We Take Care" in which all Dutch universities participated found that the gold route alone cannot deliver 100% OA: despite being the preferred national route since 2015, the Netherlands was on track for only 70–75% OA by 2020. Article 25fa offers a complementary and cost-effective green route that bypasses publisher embargo policies entirely, but realising its potential requires active institutional implementation rather than researcher-initiated action. University libraries played a central role in building trust among researchers, developing workflows for systematic deposit, and raising awareness of authors' rights under the amendment. The move toward

⁶⁷³Open Science NL / National Programme Open Science (NPOS), Open Science 2030 in the Netherlands — NPOS2030 Ambition Document and Rolling Agenda, December 2022, NWO, The Hague, available at: https://www.openscience.nl/sites/open_science/files/media-files/final_npos2030_ambition_document_and_rolling_agenda.pdf [accessed April 2026].

⁶⁷⁴ Dutch Research Council (NWO), Open Access Publishing, available at: <https://www.nwo.nl/en/open-access-publishing> [accessed April 2026]. NWO specifies that this applies to projects funded as of 2021.

⁶⁷⁵ ZonMw (Netherlands Organisation for Health Research and Development), *Open Access Policy*, available at: <https://www.zonmw.nl/en/open-access-policy> [accessed April 2026].

⁶⁷⁶ Kingdom of the Netherlands, Auteurswet [Copyright Act], Article 25fa (Taverne Amendment, in force 1 July 2015), consolidated text available at: https://wetten.overheid.nl/BWBR0001886/2018-10-11/#Hoofdstukla_Artikel25fa [accessed April 2026; translated via browser translation function].

⁶⁷⁷ Also explained at OpenAccess.nl, Open Access in Dutch Copyright Law — The Taverne Amendment, available at: <https://www.openaccess.nl/en/policies/open-access-in-dutch-copyright-law-taverne-amendment> [accessed April 2026].

⁶⁷⁸ As outlined e.g. at University of Groningen Library, Taverne Amendment — Self-Archiving via Pure, available at: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment> [accessed April 2026].

institutional opt-out default procedures, i.e. libraries proactively depositing accepted manuscripts after six months unless authors object, is the key operational step that scales the amendment's impact.⁶⁷⁹

For research data, NPOS Ambition Document and Rolling Agenda 2030 sets national direction towards FAIR and openness "in as far as regulations allow," while operational rules are largely implemented through funder and institutional RDM/FAIR policies and trusted repositories/infrastructures (e.g., DANS as a national data repository and expertise centre).

The Dutch Research Council (NWO) implemented its Research Data Management (RDM) policy across all funding instruments effective 1 October 2016. The policy operates on the guiding principle that research data should be "as open as possible, as closed as necessary." Under this framework, all grant applicants must include a data management section in their proposals addressing how data will be collected, stored, and shared. Upon funding award, project leaders are required to elaborate this into a full Data Management Plan (DMP) before the project can start. The Dutch Research Council (NWO) requires that research data underlying publications be deposited in trusted repositories aligned with Science Europe criteria, with a minimum preservation period of ten years unless discipline-specific guidelines dictate otherwise. Software and algorithms developed during projects that are necessary to access and interpret the data should also be made openly available. The Netherlands Organisation for Health Research and Development (ZonMw) also applies a research data management approach guided by the FAIR principles, with policy explicitly aimed at creating reusable data and promoting the reuse of existing datasets. ZonMw's requirements are closely aligned with NWO's framework.

20.1.2. Bindingness in terms of implementation

A clear binding/voluntary distinction exists by instrument type: funder conditions (NWO/ZonMw) for publications and data (as above) function as binding obligations for beneficiaries, whereas NPOS 2030 and Open Science NL is predominantly a strategic/coordination instrument that sets shared objectives and governance/monitoring ambitions but does not, in itself, constitute a directly enforceable legal mandate on individual researchers.

For publications, the Auteurswet Art. 25fa provides a statutory right that enables (but does not compel) public access through secondary publication routes; in practice, Dutch universities have implemented streamlined workflows ("you share, we take care") that can operate as institutional opt-out defaults, but this enforceability is organisational rather than statutory (see discussion above).

20.1.3. Scope of the policy

NPOS2030 defines scientific knowledge broadly to include publications, research data, metadata, software, educational resources and open hardware, and sets strategic goals for open scholarly communication and FAIR/open research outputs, indicating a systemic ambition beyond publications alone.

The two main research funders deal primarily with open access to scientific publication and research data.

20.1.4. Embargoes or immediate open access

For publications, the dominant trend in Dutch funder policy is towards immediate OA with no embargoes for outputs from publicly funded research.

The Dutch Research Council (NWO)'s and ZonMw's OA policies are Plan S compliant in that they require that publications resulting from its funding be immediately open access on publication, either via fully OA journals, compliant hybrid journals under transformative agreements, or repositories that support immediate OA under an appropriate licence; embargoes are not accepted for compliance.

⁶⁷⁹ Sondervan, J., Schalken, A., Jan de Boer, & Saskia Woutersen-Windhouwer. (2021).

Sharing published short academic works in institutional repositories after six months: The implementation of the article 25fa (Taverne Amendment) in the Dutch Copyright Act. LIBER Quarterly: The Journal of the Association of European Research Libraries, 31(1), 1–17. <https://doi.org/10.5337/lq.10915> Article reference provided by NPR.

National publisher deals likewise underpin this by enabling immediate OA for corresponding authors in covered journals without embargo periods.

However, the legislative secondary publication right (Article 25fa) allows self-archiving after a “reasonable period” that is operationalised as six months.

The statutory secondary publication right therefore plays a complementary rather than a primary role in the Dutch immediate-OA landscape: it operates as a safety net covering the residual share of publications that remain behind a paywall after the funder mandates and publisher agreements have taken effect, and it applies to all publicly funded short scientific works irrespective of funder.

20.1.5. Copyright, rights retention and secondary publication rights

Copyright for individual researchers and their employers in the Netherlands is shaped by a combination of statutory secondary publication rights, funder-mandated rights retention strategies and publisher agreements.

Open science principles, including open access to publications, are increasingly embedded in Dutch collective labour agreements (CAOs) for universities and research institutions. The CAO Nederlandse Universiteiten 2025–2026 (CAO-NU, in force 1 July 2025–30 June 2026, signed 23 July 2025) states explicitly in its preamble that “societal and scientific challenges require more collaboration and a multidisciplinary and impactful, open approach to scientific practice, partly based on Open Science principles,” and commits CAO parties to integrating Open Science into the recognition and reward of researchers.⁶⁸⁰

The parallel CAO Onderzoeksinstellingen 2025–2026 (CAO-OI, in force 1 October 2025–1 October 2026, covering employees of the Dutch Research Council (NWO), NWO-I institutes, and the Koninklijke Bibliotheek) contains analogous provisions.⁶⁸¹ The inclusion of Open Science in both CAOs represents a significant structural step, as it embeds open science obligations including the use of the Taverne Amendment (Article 25fa) and FAIR data practices into the employment relationship itself rather than leaving them solely to funder mandates or institutional policies.

Article 25fa Auteurswet creates a statutory secondary publication right for authors of short scientific works that are the result of research funded in whole or in part by Dutch public funds; this right is non-waivable, non-exclusive and overrides conflicting contract clauses, allowing authors to make the AAM publicly available after a reasonable term on an institutional repository or similar platform.

Several universities (e.g., Tilburg University,⁶⁸² University of Groningen⁶⁸³) have implemented opt-out procedures whereby publications are automatically made available via institutional repositories after six months under Article 25fa, unless authors explicitly opt out.

Rights retention in the Plan S sense is implemented primarily via the Dutch Research Council's (NWO) and ZonMw's OA policies, which require that authors retain sufficient rights to make their publications OA under an open licence (typically CC BY for articles) and to deposit AAMs or VoRs in repositories. This is achieved through funder metadata statements and guidance to authors when signing publishing agreements.

⁶⁸⁰ Universities of the Netherlands (UNL) / Universiteiten van Nederland, *CAO Nederlandse Universiteiten 1 juli 2025 tot en met 30 juni 2026* (signed 23 July 2025; text finalised 15 October 2025), preamble (.Inleiding'), available at: https://www.universiteitenvannederland.nl/files/publications/UNL-20879-10-CAO%20Nederlandse%20Universiteiten%20NL%202025-2026_0.pdf [accessed April 2026; in Dutch]. Information provided by NPR.

⁶⁸¹ Werkgeversvereniging Onderzoeksinstellingen (WVOI) / FNV / CNV / AOOb, *Cao Onderzoeksinstellingen 2025–2026* (in force 1 October 2025–30 September 2026), PDF available at: <https://www.nwo-i.nl/wp-content/uploads/2025/12/Cao-Onderzoeksinstellingen-2025-2026.pdf> [accessed April 2026; in Dutch]. Information provided by NPR.

⁶⁸² Tilburg University, *Open Access Procedural Regulations* (EN, 2024 version), Tilburg, 2024, available at: https://www.tilburguniversity.edu/sites/default/files/download/1b_Open_Access_Procedural_Regulations_EN_2024.pdf [accessed April 2026].

⁶⁸³ University of Groningen Library, *Taverne Amendment*, op. cit.

As of mid-2026, an UKB (a partnership of Dutch university libraries and the KB, National Library of the Netherlands) Open Access working group is additionally preparing advice on how a rights-retention policy could be implemented in the Netherlands beyond the funder-level requirements.⁶⁸⁴

20.2. Context of open access policies

20.2.1. Training or guidance for researchers

Training and guidance for researchers on open access to publications and research data are widely available in the Netherlands, embedded in institutional support structures and national open science initiatives.

The NPOS2030 Ambition Document identifies “Make Open Science easy through Support & Training” as one of five cross-cutting requirements and envisages national coordination of training on topics including OA publishing, FAIR data, software, and citizen science, with the aim of embedding open science skills in curricula and professional development for researchers, teachers and support staff.

The website openaccess.nl, coordinated by the Dutch University Libraries, provides practical guidance on OA routes (publisher deals and repository pathways) and complements funder compliance.⁶⁸⁵

The NPOS report on professionalising data stewardship in the Netherlands highlights that Dutch universities are building capacity through local Digital Competence Centres (DCCs), data steward networks and coordinated training activities for data stewards and researchers, including recurring courses such as “Essentials 4 Data Support” and joint “DCC spring training days”.⁶⁸⁶

ZonMw provides structured instructions for project leaders and applicants on FAIR data management, including expectations around data stewardship, DMP preparation, reporting, and output registration.⁶⁸⁷

The Data Archiving and Networked Services (DANS) positions itself as a national centre of expertise and repository for research data, including training offers to improve RDM knowledge.⁶⁸⁸

20.2.2. Funding for open access

For open science more broadly, including OA to publications and data, the Ministry of Education, Culture and Science initially committed €20 million per year from 2023 until 2032 to Open Science NL, which funds national infrastructures, community initiatives and strategic projects. While this was reduced to 10 million from 2025 due to government budget cuts⁶⁸⁹ the Dutch Research Council (NWO) has largely compensated for these reductions.⁶⁹⁰

⁶⁸⁴ UKB Open Access working group page, available at: <https://ukb.nl/en/ukb-working-groups/open-access/> [accessed 27 July 2026].

⁶⁸⁵ OpenAccess.nl (Dutch university libraries coordination platform for open access), available at: <https://www.openaccess.nl/en> [accessed April 2026].

⁶⁸⁶ Jetten, M., Grootveld, M., Mordant, A., Jansen, M., Bloemers, M., Miedema, M. and van Gelder, C.W.G., Professionalising Data Stewardship in the Netherlands: Competences, Training and Education. Dutch Roadmap towards National Implementation of FAIR Data Stewardship (v1.1, NPOS-F project final report, accepted by NPOS Steering Committee 11 February 2021), Zenodo, 2021, <https://doi.org/10.5281/zenodo.4623713>. Available at: https://www.openscience.nl/sites/open_science/files/media-files/professionalising_datastewardship.pdf and Jetten, M. et al., ‘Data Stewardship as a Profession: Results of a Survey among Data Stewards in the Netherlands’, IFLA Journal, 48(4) (2022), pp. 581–595, <https://doi.org/10.1177/03400352221085536>. Author copy available at: <https://pure.knaw.nl/ws/portalfiles/portal/2713961/AuthorCopyIFLA674027.pdf>

⁶⁸⁷ ZonMw, Instructions for Project Leaders on FAIR Data Management, available at: <https://www.zonmw.nl/en/instructions-fair-data-project-leaders> [accessed April 2026]; and ZonMw, Everything about FAIR Data Management, available at: <https://www.zonmw.nl/en/everything-about-fair-data-management>

⁶⁸⁸ Data Archiving and Networked Services (DANS), Training, available at: <https://dans.knaw.nl/en/training/> [accessed April 2026].

⁶⁸⁹ Open Science NL, ‘Dutch Government Officially Cuts Funding for Open Science’, news item, 2025, available at: <https://www.openscience.nl/en/news/dutch-government-officially-cuts-funding-for-open-science> [accessed April 2026].

⁶⁹⁰ Open Science NL, ‘Work Programme 2026–2027: The Netherlands Takes the Next Step towards Open Science’, Open Science NL News, 20 November 2025, available at: <https://www.openscience.nl/en/news/work-programme-2026-2027-the-netherlands-takes-the-next-step-towards-open-science> [accessed April 2026]. Information provided by NPR.

In 2024 over €20 million was awarded across multiple instruments: €12.4 million for DCCs, €1.1 million for Citizen Science Netherlands, €5.2 million allocated for Replication Studies, and €5.4 million for Research Software Sustainability Programme.⁶⁹¹

In December 2025, the UNL project *Infrastructures for Diamond Open Access in the Netherlands* (part of the programme “Strengthening Diamond Open Access in the Netherlands”⁶⁹²) was awarded €1.5 million from NWO Open Science NL to support non-profit open access publishing alternatives.⁶⁹³

On 14 November 2025 the Open Science NL Steering Board approved the programme for 2026 and 2027. It outlines thirteen funding instruments covering the full spectrum of open science, ranging from citizen science hubs, AI and replication studies to open science infrastructure.⁶⁹⁴

The dominant funding mechanism supporting OA publishing in the Netherlands is the system of national publisher agreements negotiated by Dutch university libraries (often in collaboration with university sector bodies), which aim to enable corresponding authors to publish OA without paying individual APCs at point of publication.⁶⁹⁵ Several of these agreements are quota-capped, and the caps are binding in practice: during 2025, the annual open access publication quotas under, inter alia, the Oxford University Press and American Chemical Society agreements were exhausted before year-end.⁶⁹⁶

The Dutch Research Council (NWO) and ZonMw allocate funding for OA publishing through their budgets and via participation in full OA agreements / pilots,⁶⁹⁷ as Plan S funders, they commit to covering costs of compliant OA routes, including APCs in transformative or full OA journals, so that authors are not individually charged for complying with funder OA requirements. The NWO also has supported academic journals that wish to transition from a subscription model to an open access model in which authors do not have to pay publication fees.⁶⁹⁸ Project leaders or co-applicants of awarded NWO research projects can apply for funding of the costs of Open Access publishing of academic books that result from NWO funding.⁶⁹⁹

RDM and FAIR are supported through infrastructure providers (DANS, SURF,⁷⁰⁰ institutional data services) and through project-level resources embedded in grants.

20.2.3. Repository requirements (incl. FAIR principles)

NPOS2030 stresses that infrastructures for research outputs and metadata should support FAIRness and be governed based on public values and digital sovereignty, and it envisages an interconnected network of institutional, national and domain-specific repositories for both publications and data.

For research data, “trusted repository” and FAIR expectations are implemented primarily through funder requirements and national data services Both the Dutch Research Council (NWO) and ZonMw mandate depositing research data in “trusted repositories” and require open access to data underlying publications.

⁶⁹¹ Open Science NL, ‘What a Year: Open Science NL Awarded over €20 Million in 2024’, news item, 2025, available at: <https://www.openscience.nl/en/cases/what-a-year-open-science-nl-awarded-over-20-million-in-2024> [accessed April 2026].

⁶⁹² The distinction between the specific project and the larger programme was pointed out by the NPR.

⁶⁹³ OpenAccess.nl, ‘Grant for National Academic-Led Publication Platform: €1.5 Million for “Strengthening Diamond Open Access in the Netherlands”’, news item, December 2025, available at: <https://www.openaccess.nl/en/events/grant-for-national-academic-led-publication-platform> [accessed April 2026].

⁶⁹⁴ Open Science NL, ‘Open Science NL Work Programme 2026–2027 (approved by Steering Board 14 November 2025; published 20 November 2025)’, Zenodo, 2025, <https://doi.org/10.5281/zenodo.17579089>. [accessed April 2026].

⁶⁹⁵ OpenAccess.nl, ‘Publisher Deals available at: <https://www.openaccess.nl/en/publishing/publisher-deals>’ [accessed April 2026].

⁶⁹⁶ Openaccess.nl, ‘Publisher deals. Universities of the Netherlands. <https://www.openaccess.nl/en/publishing/publisher-deals>’ [accessed July 2026]

⁶⁹⁷ See also: Dutch Research Council (NWO), ‘NWO and ZonMw Participate in Open Access PLOS Deal’, NWO News, 10 April 2025, available at: <https://www.nwo.nl/en/news/nwo-and-zonmw-participate-in-open-access-plos-deal> [accessed April 2026]. Information provided by NPR.

⁶⁹⁸ Dutch Research Council (NWO), ‘Funding for Flipping Journals to Diamond Open Access’, news item, available at: <https://www.nwo.nl/en/news/funding-for-flipping-journals-to-diamond-open-access> [accessed April 2026].

⁶⁹⁹ Dutch Research Council (NWO), ‘Open Access Books (funding call)’, available at: <https://www.nwo.nl/en/calls/open-access-books> [accessed April 2026].

⁷⁰⁰ SURF describes itself as “the IT cooperative of Dutch education and research”; the name derives historically from Samenwerkende Universitaire Rekenfaciliteiten but is no longer used as an acronym. See <https://www.surf.nl/en/about> [accessed 27 July 2026].

DANS provides national repository services explicitly oriented to making data available for reuse and supporting verifiability/reproducibility.⁷⁰¹

20.2.4. Metadata and persistent identifier requirements

NPOS2030 describes a target environment in which all scholarly outputs (publications, data, software, etc.) are accompanied by FAIR metadata and persistent identifiers and are interconnected across infrastructures; this applies to both publications and data and is presented as a strategic requirement for an integrated open science ecosystem.

The Dutch Research Council (NWO) and ZonMw have endorsed the Barcelona Declaration on Open Research Information (2024), committing to making research metadata as openly accessible as possible. Persistent identifiers and metadata practices are explicitly reinforced in Dutch funder guidance for data: ZonMw and NWO require that delivered products (including databases and publications) be registered after project completion and explicitly references the use of persistent identifiers such as DOIs.

20.2.5. Peer review approaches

NPOS2030 sets an objective that by 2030 publication, review and curation will be decoupled, with preprints becoming the norm and post-publication peer review platforms recognised and supported; this applies to the full scholarly communication process around publications and their associated data and software. These goals aim to increase transparency and reproducibility and to facilitate early and open dissemination, complementing OA policies that focus on access to the published record. In the 2025 Open Science Infrastructure funding round a project received 1.44M € to implement and adopt the publish-review-curate (PRC) model for open scholarly communication. The project focuses on creating user-friendly PRC workflows.⁷⁰²

While some Dutch institutions and initiatives already promote preprint servers⁷⁰³ and Dutch diamond open access initiatives may incorporate community-led peer review approaches, in practical implementation, Dutch OA delivery through publisher deals remains closely tied to conventional peer-reviewed journals (including hybrid models), indicating that policy aspiration for distributed review co-exists with an implementation reality still centred on journal publishing and consortia agreements.

20.2.6. Links to researcher assessment

Links between OA (for publications and data) and researcher assessment are strong in the Dutch context.

NPOS2030 identifies “Make Open Science rewarding through incentives & recognition & rewards” as a key requirement and calls for integrating open science criteria into recruitment, promotion and evaluation processes at institutions.

The 2019 national position paper *Room for everyone's talent*, jointly issued by VSNU, KNAW, NFU, NWO, and ZonMw, frames open science as “inextricably” linked to modernising assessment and reward systems and calls for reduced emphasis on quantitative publication counts and greater emphasis on quality, integrity, societal contribution, and open science.⁷⁰⁴

⁷⁰¹ Data Archiving and Networked Services (DANS), Repository Services, available at: <https://dans.knaw.nl/en/data-services/>

⁷⁰² Open Science NL, ‘45 Projects Strengthen Dutch Open Science Infrastructure’ (announcement of funded projects under the Open Science NL Infrastructure call, including Next-generation publishing: Advancing the publish-review-curate model, PI: Prof. Ludo Waltman, CWTS, Leiden University; award: €1.44 million), Open Science NL News, January 2026, available at: <https://www.openscience.nl/en/news/45-projects-strengthen-dutch-open-science-infrastructure> [accessed April 2026]. Information provided by the NPR.

⁷⁰³ See Utrecht University Library, Open Access Publishing — Preprints, available at: <https://www.uu.nl/en/university-library/advice-support-to/researchers/open-access-publishing/preprints> [accessed April 2026]; and Vrije Universiteit Amsterdam, ‘Open Access Week Highlights Preprint Servers’, VU news, October 2024, available at: <https://vu.nl/en/news/2024/open-access-week-highlights-preprint-servers> [accessed April 2026].

⁷⁰⁴ VSNU, KNAW, NFU, NWO and ZonMw, *Room for Everyone's Talent: Towards a New Balance in the Recognition and Rewards of Academics*, position paper, November 2019, available at: <https://recognitionrewards.nl/wp-content/uploads/2020/12/position-paper-room-for-everyones-talent.pdf> [accessed April 2026]

Consequently, the national framework for research assessment, the Strategy Evaluation Protocol (SEP) 2021-2027 includes Open Science as one of four policy areas to be assessed (alongside PhD policy, academic culture, and HR policy). The protocol requires adherence to DORA recommendations and mandates narrative descriptions rather than numerical scoring.⁷⁰⁵ The successor protocol, SEP 2027–2033, was approved by the executive boards of UNL, NWO and KNAW at the end of 2025 and published in March 2026; it retains Open Science as one of four key elements to be assessed (alongside PhD policy and training, responsible research practices, and academic culture) and continues the alignment with DORA.⁷⁰⁶

ZonMw and the Dutch Research Council (NWO) published a joint CoARA action plan with concrete actions through 2027, including evaluating the evidence-based CV and exploring how open science practices could be assessed within proposal evaluation.⁷⁰⁷

20.2.7. Public funding thresholds

Dutch OA policies do not use explicit percentage thresholds of public funding to trigger OA obligations. Article 25fa Auteurswet applies to research "wholly or partially" funded by Dutch public funds, with no minimum percentage threshold explicitly specified in the legislation. NWO and ZonMw mandates apply to all research receiving funding from these organisations.

20.2.8. Provisions for small and medium publishers

There are no detailed, targeted Dutch OA measures specifically tailored to small and medium publishers, but the national strategy's emphasis on diamond OA and publicly governed infrastructures indirectly supports non-commercial and smaller actors.

20.2.9. Identified costs of, or gains from, applying open access policies

The Netherlands has extensive experience with OA implementation, and multiple sources discuss costs and gains, but there is no single, comprehensive government-led-cost-benefit-evaluation specific to OA policies.

The NWO/ZonMw 2023 Open Access Monitor estimated total costs of €10.9 million for making 3 584 NWO/ZonMw-funded articles open access (average approximately €3 000 per article).⁷⁰⁸

Gains include improved access to publications for researchers and the public, higher visibility of Dutch research, with NWO and ZonMw reporting OA shares around 95% or higher for their funded outputs.⁷⁰⁹ Qualitative benefits cited in NPOS2030 include broader societal impact of research, enhanced reproducibility and research integrity, and stimulation of citizen and stakeholder engagement in science.

⁷⁰⁵ Association of Universities in the Netherlands (VSNU / UNL), Royal Netherlands Academy of Arts and Sciences (KNAW), and Netherlands Federation of University Medical Centres (NFU), Strategy Evaluation Protocol 2021–2027: Protocol for Assessment of Research Units (SEP 2021–2027), adopted June 2021, available at: https://storage.knaw.nl/2022-06/SEP_2021-2027.pdf [accessed April 2026].

⁷⁰⁶ Universities of the Netherlands (UNL), Dutch Research Council (NWO) and Royal Netherlands Academy of Arts and Sciences (KNAW), Strategy Evaluation Protocol (SEP) 2027–2033, published March 2026, available at: <https://www.universiteitenvanonderland.nl/files/publications/Strategy%20Evaluation%20Protocol%202027-2033%20v6.pdf>; publication page: <https://www.knaw.nl/en/publications/strategy-evaluation-protocol-sep-2027-2033> [accessed 27 July 2026].

⁷⁰⁷ Dutch Research Council (NWO), 'ZonMw and NWO Publish Joint Action Plan for Reforming Research Assessment', news item, available at: <https://www.nwo.nl/en/news/zonmw-and-nwo-publish-joint-action-plan-for-reforming-research-assessment>

⁷⁰⁸ Dutch Research Council (NWO) and ZonMw, 'NWO and ZonMw Analyse Open Access Publishing Costs in 2023 Monitor', news item, available at: <https://www.nwo.nl/en/news/nwo-and-zonmw-analyse-open-access-publishing-costs-in-2023-monitor> [accessed April 2026]. full monitor at Hettne, K. et al., NWO and ZonMw Open Access Monitor 2023, Zenodo, 2024, <https://doi.org/10.5281/zenodo.12685800>, including a note on estimating the costs of OA publishing at <https://zenodo.org/records/13885012>

⁷⁰⁹ NWO and ZonMw Open Access Monitor 2023 Op cit.

20.2.10. Security considerations

NPOS2030 adopts a standard open science framing that outputs should be “as open as possible, as restricted as necessary,” however the NPOS2030 strategy also includes “safeguarding academic and digital sovereignty” as one of five guiding principles. The international committee that conducted the first independent evaluation of Open Science NL (published June 2026) explicitly called for continued attention to open science where it may come under pressure from geopolitical tensions and from developments concerning digital autonomy and knowledge security.⁷¹⁰

20.2.11. References to simplification regarding open access

NPOS2030 discusses system reform and enabling conditions but does not, in the sections reviewed, foreground administrative simplification as a standalone regulatory objective

20.2.12. Role of artificial intelligence in open access policies

In the latest Open Science NL work programme, there is a funding instrument to investigate what is needed in terms of AI in relation to open science Implementation and monitoring of open access policies.⁷¹¹

20.3. Implementation and monitoring of open access policies

20.3.1. Responsibility for implementation

Implementation responsibilities for OA to publications and research data are distributed across several actors according to their roles as legislator, funder, institution, infrastructure provider and coordinator.

The Dutch legislature and government are responsible for framework laws like the Auteurswet (including Article 25fa) and for overall open science policy direction; however, they do not directly implement OA workflows for publications or data.

Open Science NL is responsible for coordinating system-wide implementation through its Work Programmes, guided by the NPOS 2030 Rolling Agenda, funding targeted projects and aligning stakeholders, but not for direct enforcement at project level.

The Dutch Research Council (NWO) and ZonMw are responsible for implementing OA and RDM requirements within their funding schemes: they include OA and RDM conditions in calls and grant contracts, provide guidance and financial support for OA publication routes, and review DMPs and compliance reports.

Universities, and other RPOs, represented by UNL, are responsible for implementing OA and RDM at institutional level, including establishing OA and data policies, running repositories, supporting researchers with training and guidance, and adjusting assessment and HR practices to recognise OA outputs and open data.

SURF manages national publisher deals and some repository services, while DANS provides trusted repositories and data services for research data.

⁷¹⁰ Dutch Research Council (NWO), ‘Evaluation: With Open Science NL, the Netherlands is among the international leaders’, NWO News, 11 June 2026, available at: <https://www.nwo.nl/en/news/evaluation-with-open-science-nl-the-netherlands-is-among-the-international-leaders>; full evaluation report available at: <https://zenodo.org/records/19130486> [accessed 27 July 2026].

⁷¹¹ Information provided by the NPR.

20.3.2. Monitoring of individual policy elements

For publications at system level, the www.openaccess.nl website's monitoring infrastructure (Open Access Monitor) provides aggregated measurement of OA percentages across Dutch universities.⁷¹² Universiteiten van Nederland also monitor, as is evidenced in a letter to the minister⁷¹³ with the most recent data on OA uptake, discussed in detail below. This is based on one of the first letters on open access to Parliament of 23 January 2015 by the then open science responsible state secretary Sander Dekker who wrote a paragraph dedicated to the monitoring of open access, including the request to the mentioned organisations to annually present the OA percentages, which these organisations are achieving as from 2016. In several years since 2016 these OA percentages were sent by the minister to the parliament and also included as policy indicators in the annual budget report of the ministry to the parliament.⁷¹⁴

The Dutch Research Council (NWO) and ZonMw monitor compliance with funder OA mandates.

Institutions monitor OA implementation through their repositories and CRIS platforms.

For research data, NWO monitors DMP submission, approval and updates, and may check whether data have been deposited in trusted repositories according to the plan.

DANS and institutional data services monitor repository usage and accessibility of datasets, though these metrics are not yet integrated into a unified national data monitor comparable to the OA publication monitor.

Public-facing monitoring of OA to publications at the national level is also undertaken via openaccess.nl and by the Centre for Science and Technology Studies (CWTS) and partners, who produce indicators on OA shares across institutions and over time.

20.3.3. Overall policy monitoring

Overall implementation of OA and broader open science policies is monitored by Open Science NL. Open Science NL is hosted by the Dutch Research Council (NWO) and has a mandate from the Ministry of Education, Culture and Science to coordinate and supervise the implementation of the NPOS2030 Ambition Document; it monitors progress on the strategic goals.

20.3.4. Reporting arrangements

Reporting lines for OA and RDM implementation are primarily contractual within the funding system. Researchers report to funders (NWO, ZonMw) on compliance with OA and RDM requirements through project deliverables, DMPs and final reports; these reports feed into funders' internal monitoring and public statistics. Researchers also report compliance indirectly to their institutions via repository deposit, CRIS records and internal evaluation procedures.

Institutions, in turn, report to sector bodies such as UNL and UKB on OA performance and contribute to national monitoring initiatives run in cooperation with SURF and CWTS. The Dutch Research Council (NWO) and other stakeholders report progress on OA and open science components to Open Science NL, which aggregates these data and reports to the Ministry of Education, Culture and Science and the wider stakeholder community.

⁷¹² See OpenAccess.nl, Open Access Monitor, available at: <https://www.openaccess.nl/en/about-open-access/open-access-monitor> [accessed April 2026].

⁷¹³ Universities of the Netherlands (UNL) / van den Berg, C., Letter to the Minister of Education, Culture and Science on Monitoring Open Access Figures 2024, UNL, 2025, available at: <https://www.universiteitenvannederland.nl/files/publications/Brief%20aan%20OCW%20monitoring%20open%20access%20cijfers%202024.pdf>

⁷¹⁴ Information provided by the NPR.

20.3.5. Results of impact evaluations

Impact evaluation of OA policies in the Netherlands is mainly carried out through indicators of OA uptake and qualitative analyses of policy effectiveness.

NWO/ZonMw reported around 94,6% OA for their funded outputs in 2023.⁷¹⁵ Another monitoring exercise by Universities of the Netherlands (UNL) reported that the Open Access percentage of peer-reviewed articles by authors affiliated with a Dutch University or University Medical Center (UCM) has increased from 92% in 2023 to 95% in 2024.⁷¹⁶ This data includes a quality check done by UKB and institutions.⁷¹⁷ The letter from the Head of UNL to the minister of 5 November 2025⁷¹⁸ contains more details in the annex: depending on the calculation method in 2016–2023, gold OA grew from 13% to 30%, hybrid and non-DOAJ OA from 20% to 44–47%, and green-only- OA from 9% to around 18–19%, with the total OA share rising to over 90%. Applying the old method to 2024 yields 30% gold, 47% hybrid/non-DOAJ and 19% green.

UNL explains that the green share appears stable largely because, under the definitional framework, green is counted only for items not already OA via gold or hybrid routes. Since a positive evaluation of the “You share, we take care” pilot universities have strengthened support for the green route, including moving towards opt-out- implementations where libraries proactively make articles available via Taverne unless authors object. As a result, by 2024, 80% of paywalled articles have been made available via the green route, up from 65% in 2022 and 69% in 2023. However, the letter notes that this Taverne-based green route does not comply with cOAlition S funder requirements.

The monitor observes that the strongest relative growth has occurred in the “hybrid and non-DOAJ OA” category, driven by more hybrid OA articles where Dutch researchers are co-authors in journals covered by OA deals abroad and by slightly increased coverage of Dutch deals for corresponding authors; this growth signals that transformative agreements have expanded access, but UNL regards the continuing dominance and expansion of hybrid journals as problematic because the intended transition to fully OA journals is too slow and new hybrid titles continue to appear. The annex recalls that the golden route was designated as the preferred route by the government in 2015, but that criticism has grown concerning rising costs, inequity for less wealthy institutions and countries (especially in the Global South) and a lack of autonomy and sovereignty. In response, UNL has decided to increase investment in community-driven-or “diamond” open access.

In any case the monitoring figures from both NWO/ZonMw and UNL indicate that funder mandates, publisher deals and institutional policies have been effective in increasing OA to publications.

The article “Advancing open access in the Netherlands after 2020”,⁷¹⁹ argues that, because the Netherlands has already achieved relatively high levels of open access through national policies and transformative agreements, the next phase of policy should focus on qualitative dimensions of openness rather than just raising percentages.

⁷¹⁵ NWO and ZonMw Open Access Monitor 2023, op. cit.

⁷¹⁶ UKB (consortium of Dutch university libraries and the Koninklijke Bibliotheek), ‘Percentage of Open Access Articles at Dutch Universities and UMCs Increases to 95%’, news item, 2025, available at: <https://ukb.nl/en/news/percentage-open-access-articles-dutch-universities-and-umcs-increases-to-95/> [accessed April 2026].

⁷¹⁷ See UKB / Universities of the Netherlands, Open Access Dataset 2024, Zenodo, 2025, <https://doi.org/10.5281/zenodo.17141707> [accessed April 2026].

⁷¹⁸ Universities of the Netherlands (UNL), letter to the Minister of Education, Culture and Science, ‘Monitor Open Access 2024 en vervolg’, ref. UNL 25/062 U, 5 November 2025, Annex 1, available at: <https://www.universiteitenvannederland.nl/files/publications/Brief%20aan%20OCW%20monitoring%20open%20access%20cijfers%202024.pdf> [translated via AI, accessed 27 July 2026]

⁷¹⁹ Bosman, J., Frantsvåg, J.E., Kramer, B., Langlais, P.-C. and Proudman, V., ‘Advancing Open Access in the Netherlands after 2020: From Quantity to Quality’, Insights, 34 (2021), article 16, pp. 1–15, <https://doi.org/10.1629/uksg.545>.

Similarly, a 2025 article on the website of UNL⁷²⁰ follows up on the letter to the minister and argues that the ambition now goes beyond high percentages and focuses on greater control for researchers over their publications and fairer business models with publishers. It warns that some new OA business models incentivise publishers to maximise publication volume and may lead to minimal quality assurance, reinforcing “publish or perish” pressures and calling, in line with the national Recognition & Rewards programme, for a new publication culture that prioritises quality over quantity.

UNL argues that a new approach is needed in which universities gain more control over how research is published and can enhance researchers’ autonomy in publication processes, advocating a more autonomous publication system to strengthen accessibility and societal impact of scientific knowledge. To this end, Dutch universities want to discuss with the Ministry of Education, Culture and Science (OCW) a transition to a more inclusive and autonomous publication system led by the academic community, which will require financial impulses, further embedding in (inter)national legislation and regulation, international cooperation, and an active stance from the ministry and politics.

This ambition has since been formalised: a revised National Open Access Strategy was adopted by UNL in December 2025, with implementation action lines that include support for new academic-led publication channels (Netherlands University Presses, publish-review-curate platforms and pre-printing).⁷²¹ In addition, the first independent evaluation of Open Science NL (covering 2023–2025, published June 2026) concluded that the programme operates in a relevant, coherent, efficient and effective manner and described it as a possible model for other European countries, while stressing that sustained funding, infrastructure and clear responsibilities are needed to secure results beyond 2031.⁷²²

Regarding international cooperation the Netherlands:⁷²³

- contributed €100 000 in 2024-2025 to Unesco in support of the UNESCO Recommendation on Open Science (2021), including the development of methods for monitoring open science and the organisation of international workshops on open science.
- been actively participating in last decade in open science processes in e.g. EU, OECD, UNESCO, G20-context.
- mentioned open science as area of cooperation / knowledge exchange in bilateral MoUs with various countries and includes the topic e.g. in (bi-)annual Joint Committee Meetings/round tables/webinars under these MoUs.
- together with France and Finland, is a founding country of CoNOSC, and actively participating in it with two members (Director OSNL and policy officer from the ministry).

Dutch OS and ministerial experts have been regularly invited to participate in international meetings / conferences etc, such as presentation of OSNL in the Max Planck Institutes Open Science Days (10-11 November) 2025.⁷²⁴ The Netherlands is also actively contributing to the extension of Open Research Europe.

720 van den Berg, C. (Head of Universities of the Netherlands), ‘Nederland koploper met 95 procent open access, maar vernieuwing strategie is nodig’ [The Netherlands a Frontrunner with 95% Open Access, but Strategy Renewal is Needed], Universiteitenvannederland.nl, 2025, available at: <https://www.universiteitenvannederland.nl/actueel/nieuws/nederland-koploper-met-95-procent-open-access-maar-vernieuwing-strategie-is-nodig> [accessed April 2026; translated via Google Translate for the purposes of this study].

721 Universities of the Netherlands (UNL), ‘Nederland koploper met 95 procent open access, maar vernieuwing strategie is nodig’ [The Netherlands a Frontrunner with 95% Open Access, but Strategy Renewal is Needed], UNL news item, 2025, available at: <https://www.universiteitenvannederland.nl/actueel/nieuws/nederland-koploper-met-95-procent-open-access-maar-vernieuwing-strategie-is-nodig> [translated via google translate in browser; accessed July 2026].

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723 Information provided by NPR.

724 Sondervan, J. (Open Science NL), ‘Resilience of Open Science in Times of Crisis’ (invited presentation, slides), Open Science Days 2025, Max Planck Digital Library / Max Planck Society, Berlin, 10–11 November 2025. Slides available at: https://pure.mpg.de/rest/items/item_3680505_1/component/file_3680506/content [accessed April 2026]

For research data the Dutch Research Council (NWO) undertook an impact assessment (even if it is not referred with this term) in the context of the proposed revision of its research data management policy.⁷²⁵ The website summarising this research⁷²⁶ notes that this policy has successfully raised awareness of data management and prompted institutions to strengthen RDM support, but also that an internal assessment revealed various challenges: researchers sometimes perceive the DMP as a purely administrative exercise, NWO's DMP review capacity and disciplinary expertise are limited, and NWO lacks good oversight of what datasets are actually produced and shared, because datasets are not centrally registered and are difficult to trace across repositories. In response, NWO has set up a working group with representatives from across the organisation to prepare a revision of the RDM policy, aiming to make the policy more effective, better aligned with institutional practices and more focused on the actual sharing and reuse of research data and software.

21. Austria

21.1. General characteristics

21.1.1. Policies formulated as strategies, funder mandates and/or legislation

In Austria, open access provisions are framed through a combination of a cross-ministerial Open Science policy, research funder mandates (in particular those of the Austrian Science Fund, FWF), institutional policies, and coordination platforms such as Open Science Austria (OSA).

On 23 February 2022 the Federal Government adopted the Open Science Policy Austria (Österreichische Policy zu Open Science und der European Open Science Cloud),⁷²⁷ Earlier, the Open Access Network Austria (OANA now replaced by OSA) had developed recommendations for such a recommendation in 2016.⁷²⁸ Austria does thus not have a binding national OA law, it instead relies on a combination of the national Open Science strategy with research funder mandates, notably those of the Austrian Science Fund (FWF), and support structures.

At the legislative level, Austria introduced a secondary publication right through the Copyright Law Amendment Act 2015 (Urheberrechtsgesetz-Novelle 2015), which grants authors of scientific contributions published in periodicals and predominantly financed from public funds the right to make their work publicly accessible after twelve months, even if they had previously granted exclusive rights to a publisher.⁷²⁹ This provision, modelled on the German copyright law provision introduced in 2014, applies only to the author's accepted manuscript version and only for non-commercial purposes.

⁷²⁵ Teperek, M. (with input from de Jonge, H. and Scharroo, J.), 'NWO Research Data Management Policy Revision Started', Open Science NL, 28 February 2025, available at: <https://www.openscience.nl/en/cases/nwo-research-data-management-policy-revision-started> [accessed April 2026]. Reference to document provided by NPR.

⁷²⁶ Op cit

⁷²⁷ See Federal Ministry of Education, Science and Research (BMBWF), Federal Ministry for Digital and Economic Affairs (BMDW), and Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK), Open Science Policy Austria — Österreichische Policy zu Open Science und der European Open Science Cloud, adopted by the Federal Government 23 February 2022, Federal Ministry of Education, Science and Research, Vienna, available at: <https://www.bmfwf.gv.at/wissenschaft/leitthemen/digitalisierung/open-science/open-science-policy-austria.html> [accessed April 2026]. PDF version: <https://www.osa-openscienceaustria.at/wp-content/uploads/2023/06/PDF-Version-der-Open-Science-Policy-1.pdf>

⁷²⁸ Open Access Network Austria (OANA), Empfehlungen für die Umsetzung von Open Access in Österreich [Recommendations for the Implementation of Open Access in Austria], 23 May 2016, Zenodo, <https://doi.org/10.5281/zenodo.51799>. PDF: https://zenodo.org/records/51799/files/OANA_OA-Empfehlungen_23-05-2016_DEU.pdf [accessed April 2026; in German].

⁷²⁹ Republic of Austria, Urheberrechtsgesetz-Novelle 2015 [Copyright Law Amendment Act 2015], Federal Law Gazette I No. 99/2015, introducing §37a UrhG (secondary publication right). The specific amendment is documented at: <https://www.ris.bka.gv.at/Dokument.wxe?Abfrage=Gesamtabfrage&Dokumentnummer=NOR40173343> [accessed April 2026; in German].

As concerns research funders, the Austrian Science Fund (FWF), has been one of the early European research funding organisations to adopt and continuously strengthen comprehensive open access and open science requirements.⁷³⁰ Its policies cover peer-reviewed publications, open data and research data management. Their website also mentions Citizen Science, Open Science Infrastructures, and Open Science Funding.⁷³¹

In addition to national policy steering and funder requirements, Austria has invested in system-level implementation programmes designed to support and operationalise the transition to open access across the research system centred on the initiatives Austrian Transition to Open Access (AT2OA)⁷³² and its successor AT2OA². The AT2OA programme was conceived as a nationwide, collaborative implementation framework involving universities, research institutions, libraries, and research funders. Its primary objective was to enable a structured and financially sustainable transition from subscription-based publishing models towards open access, in line with European policy objectives and Plan S principles. A central component of AT2OA was the collective negotiation and implementation of transformative agreements with major scholarly publishers.⁷³³

Beyond licensing negotiations, AT2OA explicitly addressed capacity building and system readiness. The programme supported the development of institutional expertise in open access management, legal and contractual issues, metadata standards, and reporting workflows.

The follow-up programme, AT2OA² (2021-2024), builds on this foundation by consolidating transformative agreements and extending the focus towards monitoring, impact analysis, and long-term sustainability of the open access transition. AT2OA² places increased emphasis on evidence-based assessment of costs, publication volumes, compliance patterns, and systemic effects of transformative publishing models.

The Open Access Monitor Austria (OAMA) gathers publication data from various sources (e.g. CRIS systems) to enable Austria-wide open access monitoring.⁷³⁴

Another programme, shared RDM project (Shared Research Data Management) focuses on the coordination and professionalisation of research data management services across Austrian universities.⁷³⁵

As a support structure, Open Science Austria⁷³⁶ (OSA) is an interdisciplinary stakeholder platform operating under the umbrella of the Austrian Universities Conference (UNIKO). OSA is dedicated to providing information and disseminating knowledge, as well as coordinating and networking in the various areas of Open Science at the national and international levels. OSA's goal is to develop recommendations and guidelines that promote the establishment of Open Science, particularly within the Austrian higher education landscape.

21.1.2. Bindingness in terms of implementation

On the national level the Open Science Policy Austria signals policy commitment/steering and functions as a steering instrument addressed to research institutions and funders.

⁷³⁰ As one of the first signatories of the 2003 Berlin Declaration, the FWF introduced its first open access policy in 2004.

⁷³¹ Austrian Science Fund (FWF), Open Science at FWF, available at: <https://www.fwf.ac.at/en/about-us/what-we-do/open-science> [accessed April 2026].

⁷³² Austrian Transition to Open Access (AT2OA) project, Federal Ministry of Education, Science and Research (BMBWF) / consortium of Austrian universities, 1 January 2017–31 December 2020, project website: <https://at2oa.at> [accessed April 2026].

⁷³³ See also Kooperation E-Medien Österreich (KEMÖ — Austrian Academic Library Consortium), Open Access, available at: <https://www.kemoe.at/english/open-access> [accessed April 2026].

⁷³⁴ Austrian Academic Library Network (OBVSG) / AT2OA², Open Access Monitor Austria (OAMA), available at: <https://oamonitor.obvsg.at/> [accessed April 2026].

⁷³⁵ See Forschungsdaten.at, Shared Research Data Management (SharedRDM) project, Federal Ministry of Education, Science and Research (BMBWF), available at: <https://forschungsdaten.at/en/sharedrdm/> [accessed April 2026].

⁷³⁶ Open Science Austria (OSA), Open Science Austria Platform, Österreichische Universitätenkonferenz (uniko), available at: <https://www.osa-openscienceaustria.at/> [accessed April 2026].

In practice it can serve as a reference point in the periodic performance agreements (Leistungsvereinbarungen) concluded between the competent Federal Ministry and each public university under the Universities Act 2002, through which federal funding is allocated to universities; the policy itself foresees support for repositories "in the course of performance agreements with universities.

At the FWF level OA requirements are binding as grant conditions for beneficiaries.

In RPOs implementation often occurs through university policies, repository deposit workflows, and library-led support, although these are in most cases not mandatory.

21.1.3. Scope of the policy

While the Austrian National Policy covers OA to publications and data as core aspects, it goes beyond them in being structured around the eight core pillars derived from the European Commission's Open Science Agenda, thus also addressing Rewards and Incentives, Research Indicators, EOSC, Research Indicators, Research Integrity, Skills and Education and Citizen Science.⁷³⁷

FWF open access requirements primarily encompass peer-reviewed publications and data, they are embedded in a broader open science orientation that emphasises transparency, reusability, and long-term accessibility of research outputs. Researchers must document compliance in final project reports, including by providing persistent identifiers (such as DOIs or repository links) pointing to openly accessible versions of publications.

21.1.4. Embargoes or immediate open access

At national strategy level, Austria's policy does not prescribe specific embargo periods for publications.

However, the FWF requires "immediate open access" in line with Plan S. Funded researchers are required to include a standard acknowledgement statement asserting that a Creative Commons Attribution (CC BY) licence applies to the author accepted manuscript for open access purposes. This enables immediate repository-based open access independently of publisher embargo policies.

The secondary publication right in Austrian copyright law (§ 37a UrhG) permits a twelve-month embargo from the date of first publication, after which authors may exercise their statutory right to make the accepted manuscript version (not the publisher's version of record) publicly accessible for non-commercial purposes. The statutory right applies to authors who created the contribution as members of the scientific staff of a research institution financed at least half from public funds, for contributions published in collections appearing periodically at least twice a year; contractual derogations to the author's detriment are void.

21.1.5. Copyright, rights retention and secondary publication rights

Austria grants authors of scientific works a statutory Secondary Publication Right (§ 37a UrhG) since 2015, allowing them to make their work openly accessible for non-commercial purposes after a 12-month embargo, even if they've granted exclusive rights to a publisher, facilitating Green Open Access (OA) self-archiving in repositories.⁷³⁸

Austria's Open Science Policy endorses the use of open licences and stresses the principle "as open as possible, as closed as necessary".

At funder level, FWF operationalises copyright considerations through a rights-retention approach rather than reliance on secondary publication rights. By mandating a licensing declaration at submission stage, FWF ensures that authors retain sufficient rights to make their accepted manuscripts openly available under a CC BY licence.

⁷³⁷ Op cit

⁷³⁸ Op cit

21.2. Context of open access policies

21.2.1. Training or guidance for researchers

The national policy explicitly identifies skills development and education as prerequisites for effective implementation. In practice, guidance is often delivered through institutional services, especially university libraries and research support units.

The FAIR Data Austria project (2020–2022), funded by the Federal Ministry of Education, Science and Research (BMBWF), developed extensive training programs and resources across partner universities (TU Graz, TU Wien, University of Vienna, Medical University of Graz, University of Innsbruck, Academy of Fine Arts Vienna).⁷³⁹ The follow-up project "Shared RDM Infrastructure and Services" (2023-2026) continues this training infrastructure development across an expanded consortium. The GO FAIR Office Austria, a consortium of TU Wien, Graz University of Technology, and the University of Vienna, facilitates FAIR knowledge building and sharing of implementation practices.⁷⁴⁰

Additionally, the national initiatives AT2OA and AT2OA² have played a significant role in building institutional capacity by supporting expertise in open access workflows, licensing, metadata, and reporting.

FWF provides guidance on its open access rules and research data management requirements, including a DMP template.

21.2.2. Funding for open access

Funding for open access publication costs is provided through several channels.

The FWF introduced the Open-Access Block Grant programme on 1 January 2024, replacing the previous "Peer-Reviewed Publications" programme.⁷⁴¹ This block grant is provided annually to Austrian research institutions where FWF projects have been approved in the previous five years. The grant is calculated on a pro rata basis per research institution, based on the FWF's annual budget for new approvals. The block grant covers:

- Costs for peer-reviewed publications under a CC BY license in DOAJ-listed gold open-access journals.
- Fees for diamond open-access platforms and alternative OA publishing platforms (publications under CC BY license without embargo).
- Fees for bilateral and transformative national and consortium OA agreements concluded.

Since APCs are reimbursed through this funding scheme, they are not eligible project costs within the regular budget of an FWF project. FWF also offers a centrally hosted programme to reimburse book charges.⁷⁴²

The AT2OA/AT2OA² projects supported and the Austrian Academic Library Consortium (KEMÖ)⁷⁴³ continues to support APC coverage through central "read and publish" or "publish and read" transformative agreements with large publishers; these mechanisms are policy tools of the research funder and consortium (not statutory obligations).

⁷³⁹ Forschungsdaten.at, FAIR Data Austria project (2020–2022), Federal Ministry of Education, Science and Research (BMBWF), available at: <https://forschungsdaten.at/en/fair-data-austria/> [accessed April 2026].

⁷⁴⁰ GO FAIR Austria, GO FAIR Office Austria (consortium of TU Wien, Graz University of Technology, and University of Vienna), available at: <https://www.go-fair.org/national-offices/go-fair-austria/>

⁷⁴¹ Austrian Science Fund (FWF), Open-Access Block Grant available at: <https://www.fwf.ac.at/en/funding/portfolio/communication/open-access-block-grant> [accessed April 2026].

⁷⁴² Austrian Science Fund (FWF), Open Access Policy for Peer-Reviewed Book Publications, available at: <https://www.fwf.ac.at/en/about-us/what-we-do/open-science/open-access-policy/open-access-policy-for-peer-reviewed-book-publications> [accessed April 2026].

⁷⁴³ Op cit

Project-based infrastructure funding has been provided by the Federal Ministry of Education, Science and Research for initiatives including FAIR Data Austria, AT2OA RIS Synergy, Austrian DataLab and Services.⁷⁴⁴

21.2.3. Repository requirements (incl. FAIR principles)

The national policy states that “researchers will be encouraged to deposit data in certified data repositories. Priority will be given to national and European research infrastructures, in particular subject-based and subject-specific repositories”. Furthermore, the policy states that Austria “supports the development of repositories (e.g. AUSSDA, GAMS, ARCHE, PHAIDRA, Visual Library, etc.) for research data and digital objects, for example in the context of participation in European Research Infrastructures or in the course of performance agreements with universities.” The FAIR principles are mentioned a number of times in the document.

The FWF policy mentions institutional, discipline-specific, or interdisciplinary repositories, where research data “may” be hosted. Its reporting requirements reinforce repository use by requiring persistent identifiers or stable links to openly accessible versions of outputs.

Since March 2025, a working group from OSA/uniko has been developing recommendations for guidelines and shared services for research data management at Austrian universities. The aim is to ensure that existing services in this area are used efficiently and collaboratively, and that new services are only developed where they are necessary.⁷⁴⁵

21.2.4. Metadata and persistent identifier requirements

While the national policy does not enumerate specific metadata standards or identifier systems in prescriptive terms, it places strong emphasis on discoverability, interoperability and the FAIR principles in general as well as EOSC compatibility. In practice, these principles are operationalised through funder and institutional requirements.

FWF requires that open access outputs be documented in final project reports using persistent identifiers or equivalent stable references.

21.2.5. Peer review approaches

The national policy encourages innovation in scholarly communication, including experimentation with open peer review and new publication formats. However, there are no binding requirements regarding community-led peer review approaches at national or funder level.

21.2.6. Links to researcher assessment

The Open Science Policy Austria explicitly recognises the need to reform research assessment and aligns itself with international initiatives such as DORA and the Leiden Manifesto. It calls for greater recognition of open science practices and a shift from quantity-based metrics towards quality-oriented evaluation. The policy's section on "Rewards and Incentives" specifies: "Scientific work must be carried out in accordance with the Open Science principles and must be promoted through appropriate recognition and rewards. Incentive systems should be established to encourage scientists and citizens to practice open science in their daily work. Open Science practices should be reflected in scientific careers and made more desirable for researchers".

On research indicators, the policy states: "New ways of evaluating research will be explored, especially to accommodate open science practices".

However, these commitments remain aspirational and de facto voluntary for research organisations. A number of organisations from Austria have signed CoARA but the level of implementation seems to vary.

⁷⁴⁴ An overview of data related initiatives is available at <https://forschung-daten.at/en/>

⁷⁴⁵ Input provided by the NPR.

Several important universities and the rectors conference (UNIKO) have thus far not signed the agreement. As the representative of Austria's public universities, UNIKO can only sign CoARA if all 22 public universities (or a majority of them) have passed a resolution to that effect. However, several universities and research institutions joined forces at the beginning of 2026 and submitted an application to establish a CoARA National Chapter,⁷⁴⁶ which has been approved and was officially launched in May 2026.⁷⁴⁷

Since November 2024, a working group from OSA/uniko has been working on national recommendations for reforming research assessment at Austrian universities. This working group was commissioned by the Ministry of Education, Science and Research as part of the ERA-NAP 2022-2025 and is continuing its work in the current ERA-NAP 2026-2028. Following a round of feedback with stakeholders in the Austrian higher education sector, the recommendations are to be published in early 2027.⁷⁴⁸

21.2.7. Public funding thresholds

Both the Austrian policy and the FWF as a funder do not define explicit percentage thresholds of public funding that trigger open access obligations.

The FWF Open Access Policy applies to research that is funded "in whole or in part" by the FWF. The national Open Science Policy refers to "publicly funded research" and "data generated by publicly funded research" without specifying precise percentage thresholds.

However, the secondary publication right in Austrian copyright law requires that research be "at least 50% publicly funded" for the statutory right to apply. The 50 % criterion attaches to the employing institution rather than to the funding of the individual research output.

21.2.8. Provisions for small and medium publishers

While the policy expresses support for bibliodiversity and alternative publishing models, neither the national policy nor funder requirements contain explicit provisions targeting small and medium-sized publishers.

21.2.9. Identified costs of, or gains from, applying open access policies

The FWF has published annual Open Access Compliance Monitoring datasets since 2015, which track publication costs financed through the FWF's funding programmes.⁷⁴⁹ The analysis for 2024 shows that 88% of the peer-reviewed publications listed in the final project reports submitted in 2024 were openly accessible (2019: 89%, 2020: 84%, 2021: 82%, 2022: 85%, 2023: 84%). The most frequently chosen option was hybrid open access (43%). The share of gold open access was 31%, the share of green open access 14%, and no open access 12%. The majority of peer-reviewed publications submitted were journal articles (85%), 92% of which were openly accessible. The lowest rate of compliance with the FWF's Open Access Policy could be found in editions, contributions to edited volumes, and monographs 49%.

The sub programme 1 of the AT2OA looked at impact primarily in terms of costs. It included a transition study which looked at whether the findings of the Max Planck Digital Library Open Access Policy White Paper are applicable for Austria. It finds that at aggregate national level, a transition to OA could be cost-neutral, provided that existing subscription expenditures are redirected to cover APCs and APCs remain within defined thresholds.⁷⁵⁰ Crucially, the study identifies significant redistribution effects between institutions, which arise because subscription spending reflects what an institution's members *read*, whereas APC spending reflects what (and where) its researchers *publish*.

⁷⁴⁶ Information provided by the NPR.

⁷⁴⁷ Information communicated to the author by the applicants.

⁷⁴⁸ Information provided by the NPR.

⁷⁴⁹ Most recently for 2024, see Kunzmann, M. (Austrian Science Fund / FWF), Austrian Science Fund (FWF) Open Access Compliance Monitoring 2024 (v2), dataset, FWF Austrian Science Fund, Zenodo, 16 June 2025, <https://doi.org/10.5281/zenodo.15690324>.

⁷⁵⁰ 2.476 € without VAT.

If publishing charges replace subscription charges,** institutions with high publication output relative to current subscription spending would face increased financial pressure, while institutions that publish comparatively little relative to their current subscription spending could experience cost relief.⁷⁵¹ A conclusion is therefore that while OA is feasible at system level, it generates “winners” and “losers” at institutional level, necessitating coordinated governance and compensatory mechanisms rather than isolated institutional action.

A 2024 study on "Preparing institutions for the transition: consortia cost-sharing models in transformative agreements in Austria" detailed how institutional participation fees for consortium agreements that include reading and open access publishing are calculated and distributed.⁷⁵² The study found that not all consortium members felt the cost-allocation model was fair. There are challenges in equitably distributing the participation fees for such agreements, which bundle former subscription payments and open access publishing charges (including APCs) into a single consortium fee, based on institutional publishing output, size, and disciplinary profile. Larger and research-intensive institutions expressed concern about absorbing increased participation fees under publication-based cost allocation while smaller institutions reduce their payments.

Nevertheless a 2021 study found a 74% opt-in⁷⁵³ rate for gold and hybrid combined among authors in the KEMÖ consortium (Kooperation E-Medien Österreich, the Austrian Library Consortium), compared to 45% of articles with corresponding authors in Austria overall and 10% globally.⁷⁵⁴

As part of the ERA-NAP 2026-2028, a working group from the ministry is collaborating with the OBVSG (Austrian Library Network) to assess requirements and develop a business and financing model for a central Diamond Open Access Publishing Office.⁷⁵⁵

21.2.10. Security considerations

While research security has received more significant attention recently, in the policy this is primarily addressed through the “as open as possible, as closed as necessary” principle. It thus mentions exceptions to data openness “if the data in question are professional secrets, statistical secrets, industrial and commercial secrets, personal data or copyrighted content, as well as if the data are considered sensitive due to national security, defence or public safety and health.”

21.2.11. References to simplification regarding open access

Neither the Austrian policy nor the FWF refer to open access in the context of simplification.

21.2.12. Role of artificial intelligence in open access policies

Neither the Austrian policy nor the FWF currently refer to artificial intelligence in the context of open access. In the case of the Austrian policy, this can be possibly explained by the fact that it is from 2022, that is before the mainstream arrival of large language models.

21.3. Implementation and monitoring of open access policies

21.3.1. Responsibility for implementation

Responsibility is distributed in the Austrian system as follows:

⁷⁵¹ Bauer, B., Formanek, D. and Hölbling, L., AT2OA Nachtransition-Studie [AT2OA Post-Transition Study], Austrian Transition to Open Access (AT2OA), Vienna, 2021, Zenodo, <https://doi.org/10.5281/zenodo.4629848> [in German].

⁷⁵² Leitner, E., Luger, S., Kaier, C. and Ulrych, U., „Preparing Institutions for the Transition: Consortial Cost-Sharing Models in Transformative Agreements in Austria“, Insights, 37 (2024), article 19, <https://doi.org/10.1629/uksg.671>.

⁷⁵³ That is, the share of eligible articles whose corresponding authors actively chose the open access publishing option available under the consortium's agreements rather than publishing closed access.

⁷⁵⁴ Pinhasi, R., Hölbling, L. and Kromp, B., „Austrian Transition to Open Access: A Collaborative Approach“, Insights, 34(1) (2021), article 25, <https://doi.org/10.1629/uksg.561>.

⁷⁵⁵ Information provided by the NPR.

- Federal ministries⁷⁵⁶ provide strategic direction through national policy.
- Research funders: the FWF implements OA via grant conditions, mandatory acknowledgements,⁷⁵⁷ and reporting requirements.
- For scientific publications, the obligation lies de jure with "all funding recipients, principal investigators, and project participants", on whom the FWF's Open-Access Policy is binding as a condition of the grant. In practice, research organisations de facto are also responsible for following up on the FWF requirements with their researchers: since the introduction of the Open-Access Block Grant in 2024, the research institutions administer the open access funds and monitor compliance with the policy's guidelines, while the FWF verifies compliance through the mandatory final project reports.
- For research data, a DMP must be submitted together with the FWF Grant Agreement for an approved project. At the present moment, the FWF follows up on this with the researcher(s) in question.
- KEMÖ (Kooperation E-Medien Österreich, the Austrian Library Consortium) negotiates agreements with publishers.

21.3.2. Monitoring of individual policy elements

Likewise, monitoring responsibilities are distributed. FWF monitors compliance with open access requirements through mandatory project reporting and/or with the hosting organisation. Research organisations monitor implementation through repository statistics and internal reporting mechanisms. AT2OA² contribute analytical evidence for many but not all Austrian research organisations. There is no evidence of centralised national-level monitoring of Open Science Policy implementation. The policy document itself does not specify monitoring mechanisms or responsible entities for tracking implementation.

21.3.3. Overall policy monitoring

There is no single central authority responsible for overall monitoring of open access policy implementation in Austria. Instead, monitoring is fragmented across ministries, funders, institutions, and national initiatives. The Open Access Monitor Austria (OAMA)/Austrian Datahub, developed under AT2OA² and continued at OBVSG together with KEMÖ for 2025–2027, contributes analytical evidence for many but not all Austrian research organisations.

21.3.4. Reporting arrangements

Researchers and institutions report open access compliance primarily to research funders, notably FWF, through project reporting. National initiatives report to public authorities through programme-level reporting. Additionally, to the OA monitor, which covers most but not all research organisations, there is no consolidated national reporting mechanism aggregating all open access indicators across the system.

21.3.5. Results of impact evaluations

Impact evaluations of open access policy in Austria have not been conducted through a single, permanent national evaluation framework, nor through statutory reporting mechanisms. Instead, impact assessment has been carried out predominantly within the AT2OA programme.

⁷⁵⁶ The policy was the result of the cooperation between three ministries.

⁷⁵⁷ The acknowledgement is a standard text that must be included in all publications at submission and doubles as a rights-retention statement: „This research was funded in whole or in part by the Austrian Science Fund (FWF) [grant DOI]. For open access purposes, the author has applied a CC BY public copyright license to any author accepted manuscript version arising from this submission.”

Within AT2OA, impact evaluation is most clearly articulated in Task 1 (Teilprojekt 1). As documented in the AT2OA final report (Abschlussbericht⁷⁵⁸), the evaluation focuses on three interrelated dimensions: (i) analysis of Austrian publication output as a baseline for policy modelling, (ii) economic modelling of a transition from subscription-based publishing to Open Access, and (iii) assessment of the system's capacity to monitor OA on a sustained basis.

As for point (i) the final report emphasises that Austrian publication output is structurally heterogeneous. For point (ii) the Transition Study and Post-transition (Nachtransition) Study find that a large-scale shift to OA could be cost-neutral in aggregate, while simultaneously producing significant redistribution effects between institutions. However, the studies explicitly frame their results as scenario-based modelling ("Gedankenexperimente"), thereby avoiding claims of predictive precision.

For point (iii) the programme concludes that Austria lacked the technical and organisational prerequisites for continuous OA monitoring, due to fragmented CRIS systems, inconsistent metadata, and limited interoperability. This diagnosis highlights structural barriers that limit the effectiveness of OA policies. The successor AT2OA² thus places stronger emphasis on data integration (TP 2, i.e. Task 2). Its central output, the Austrian Datahub for Open Access Negotiations and Monitoring, has been continued at OBVSG together with KEMÖ since the programme's conclusion.

The FWF's annual monitoring reports provide the most systematic output indicators. As discussed in section costs/benefits the FWF analysis shows that 88% of the peer-reviewed publications listed in the final project reports submitted in 2024 were openly accessible (2019: 89%, 2020: 84%, 2021: 82%, 2022: 85%, 2023: 84%). The most frequently chosen option was hybrid open access (43%). The share of gold open access was 31%, the share of green open access 14%, and no open access 12%.

22. Poland

22.1. General characteristics

22.1.1. Policies formulated as strategies, funder mandates and/or legislation

Poland's open access policy framework operates through a combination of non-binding ministerial strategy, legally grounded funder mandates, and limited legislative provisions.

At the legislative level, the Act of 20 July 2018 on Higher Education and Science (Prawo o szkolnictwie wyższym i nauce, Dz.U. 2018 item 1668, as amended) Article 401 establishes the programme "Wsparcie dla czasopism naukowych" ("Support for Scientific Journals"), administered by the minister responsible for higher education and science (the Minister of Science and Higher Education at the programme's launch); under the programme's implementing regulation of 20 September 2018, participating Polish journals are required to make articles available in open access, free of charge and without technical restrictions, no later than six months after publication of the issue.⁷⁵⁹

The Act of 11 August 2021 on Open Data and Re-use of Public Sector Information (Dz.U. 2021 item 1641),⁷⁶⁰ implementing EU Directive 2019/1024, gives research data held by public research organisations a clear legal status as reusable "public sector information", sets conditions for free re use, and mandates a national open data policy for publicly funded research data.

⁷⁵⁸ Austrian Transition to Open Access. (2021). AT2OA Abschlussbericht. Zenodo. <https://doi.org/10.5281/zenodo.4616381>

⁷⁵⁹ Republic of Poland, Ustawa z dnia 20 lipca 2018 r. — Prawo o szkolnictwie wyższym i nauce [Act of 20 July 2018 on Higher Education and Science], Dziennik Ustaw 2018, item 1668, as amended. Consolidated text available at: <https://isap.sejm.gov.pl/isap.nsf/download.xsp/WDU20180001668/U/D20181668Lj.pdf> [accessed April 2026; in Polish; article 401 translated into English via google translate.]

⁷⁶⁰ Republic of Poland, Ustawa z dnia 11 sierpnia 2021 r. o otwartych danych i ponownym wykorzystywaniu informacji sektora publicznego [Act of 11 August 2021 on Open Data and Re-use of Public Sector Information], Dziennik Ustaw 2021, item 1641, implementing Directive (EU) 2019/1024 of the European Parliament and of the Council. Full text available at: <https://isap.sejm.gov.pl/isap.nsf/download.xsp/WDU20210001641/T/D20211641L.pdf> [accessed April 2026; in Polish; summarised by AI for the purposes of this study].

The act does not itself force public disclosure of all research data; rather, it regulates the terms of re use for data that have already been made publicly accessible via institutional or thematic repositories or other tele information systems.

At the ministerial strategy level, the Ministry of Science and Higher Education issued in October 2015 the document "Kierunki rozwoju otwartego dostępu do publikacji i wyników badań naukowych w Polsce" (Directions for the Development of Open Access to Scientific Publications and Research Results in Poland).⁷⁶¹

For research data, the most explicit cross-sector policy instrument is the Ministry's 2025 "Policy on open access to research data financed from public funds"⁷⁶² which positions openness as the default ("as open as possible, as closed as necessary") and treats this as the first step towards a broader national open science policy, detailing the national approach to organisational roles, standards, and infrastructure, and explicitly addressing multiple public agencies as stakeholders, including the National Science Centre (Narodowe Centrum Nauki, NCN), the National Centre for Research and Development (Narodowe Centrum Badań i Rozwoju, NCBR), the Medical Research Agency (Agencja Badań Medycznych, ABM), the Polish National Agency for Academic Exchange (Narodowa Agencja Wymiany Akademickiej, NAWA) and the Foundation for Polish Science (Fundacja na rzecz Nauki Polskiej, FNP).

At the funder mandate level, the NCN, Poland's primary basic research funder, established a comprehensive open access policy in May 2020 modelled on Plan S requirements. However, on 26 June 2025, NCN issued a fundamentally revised policy through Director's Order No 39/2025,⁷⁶³ which represents a significant relaxation of open access requirements for publications while maintaining mandatory requirements for research data.⁷⁶⁴ NCN's membership agreement with cOAlition S expired on 31 December 2024 and was not extended.⁷⁶⁵

22.1.2. Bindingness in terms of implementation

The 2015 ministerial "Directions" are explicitly framed as recommendations to research funders, institutions and publishers and are therefore voluntary; they set expectations for gradual adoption of OA but do not create sanctions or legal obligations.

By contrast, NCN's OA instruments are embedded in Director's Orders issued under the NCN Act and organisational regulations and thus constitute binding conditions for NCN-funded projects, fellowships, scholarships and related activities, although the 2025 NCN Director's Order recalibrates what is mandatory and what is only recommended. Under Order No 39/2025, which applies to projects selected under national calls announced from 15 September 2025 (certain international calls excepted), routes for OA publishing of journal articles (gold, green, and transformative agreements) are presented as recommended options, which applies to projects selected under national calls announced from 15 September 2025 (certain international calls excepted); however closed-access publishing is permitted without an obligation to deposit the author accepted manuscript (AAM) or preprint, which means OA for publications is no longer strictly binding as a condition of funding.

⁷⁶¹ As described on Ministry of Science and Higher Education of the Republic of Poland (MNiSW), Kierunki rozwoju otwartego dostępu do publikacji i wyników badań naukowych w Polsce [Directions for the Development of Open Access to Scientific Publications and Research Results in Poland], Warsaw, 23 October 2015. Overview and access available at: <https://www.gov.pl/web/nauka/otwarty-dostep-do-publikacji-naukowych> [accessed April 2026; in Polish; translated via browser translation function].

⁷⁶² Ministry of Science and Higher Education of the Republic of Poland (Ministerstwo Nauki i Szkolnictwa Wyższego), Polityka otwartego dostępu do danych badawczych finansowanych ze środków publicznych [Policy on Open Access to Research Data Financed from Public Funds], Warsaw, July 2025, available at: <https://www.gov.pl/attachment/c1b854c1-957e-464e-bcdb-54a65d4d343a> [accessed April 2026; in Polish; AI summary used for the purposes of this study].

⁷⁶³ National Science Centre (Narodowe Centrum Nauki, NCN), Order of the Director of the National Science Centre No. 39/2025 of 26 June 2025 on Open Access to Publications and Research Data from Projects Funded by the National Science Centre (English translation), available at: https://www.ncn.gov.pl/sites/default/files/pliki/zarzadzenia-dyrektora/zarzadzenieDyr-39_2025_ang.pdf [accessed April 2026].

⁷⁶⁴ As described at National Science Centre (NCN), Open Science available at: <https://www.ncn.gov.pl/en/finansowanie-nauki/otwarta-nauka>

⁷⁶⁵ National Science Centre (NCN), summary of Resolution No 116/2024 of the NCN Council, available at: <https://ncn.gov.pl/node?page=7> [accessed 27 July 2026; translated via google translate in browser].

In contrast, the same order explicitly states that research data sharing regulations “shall be mandatory” for key datasets underpinning publications arising from NCN-funded projects, subject only to justified exceptions.

The Ministry’s 2025 research data policy is directed at the broader publicly funded system and sets an intended governance and standards trajectory.

22.1.3. Scope of the policy

Poland's open access policy framework addresses both scientific publications and research data.

For publications, the policy scope under NCN Order No 39/2025 covers: articles published in scientific journals (including peer-reviewed articles).

For research data, NCN Order No 39/2025 covers "key datasets" (podstawowe zbiory danych) underlying scientific publications.

Software, source code, and other research outputs are not explicitly addressed in the main policy instruments.

22.1.4. Embargoes or immediate open access

The embargo provisions in Polish open access policy have changed significantly, with the June 2025 NCN revision effectively eliminating the immediate open access requirement for publications. The policy permits closed access publishing without any requirement to deposit the AAM or the preprint in a repository, effectively allowing unlimited embargoes (or no open access at all). The 2015 ministerial strategy had recommended maximum embargoes of six months for STEM and twelve months for SSH.

For research data, NCN Order No 39/2025 requires data underlying publications to be shared in open repositories without specifying embargo periods.

22.1.5. Copyright, rights retention and secondary publication rights

Polish open access policy instruments do not include a statutory secondary publication right.

Regarding licensing, NCN Order No 39/2025 recommends (but does not require) the use of Creative Commons CC BY 4.0 licence for open access publications. For research data, the Order recommends sharing under Creative Commons Public Domain (CC0) or CC BY 4.0 licence "or equivalent licences that ensure the same degree of data openness and reuse." The shift from mandatory CC BY (under the 2020 policy) to recommended CC BY represents a relaxation of licensing requirements.

22.2. Context of open access policies

22.2.1. Training or guidance for researchers

The Ministry of Science and Higher Education’s 2015 strategy document recommended that research funders and institutions undertake information and training activities on open access.

NCN maintains informational pages on open access requirements⁷⁶⁶ including on the policy relaxation.

The updated national Research Data Open Access policy released in 2025 explicitly envisages the creation of a National Open Research Data Competence Centre and regional competence centres to support standard implementation and staff training, indicating a planned, more structured national training infrastructure, though these bodies are still in the development phase.

⁷⁶⁶ National Science Centre (NCN), Open Science, op. cit.

22.2.2. Funding for open access

Under both the 2020 Policy and the 2025 revision, Article Processing Charges (APCs) incurred for publication in fully OA journals (Route 1), subscription/hybrid journals where OA is purchased (Route 2), and journals under transformative agreements (Route 3) are eligible costs, though NCN recommends avoiding APCs for Route 2 when AAM or preprints can be deposited without charge; APCs must be covered from indirect costs, while Book Processing Charges (BPCs) for open access monographs can in some cases covered from direct costs, subject to specific call conditions. The 2025 NCN Policy continues to support OA costs while relaxing OA obligations.

At national level, Poland participates in transformative agreements negotiated through the Virtual Library of Science (Wirtualna Biblioteka Nauki), which provides central funding support for OA publishing in selected journals.

22.2.3. Repository requirements (incl. FAIR principles)

For publications, NCN's 2025 policy recommends that, where authors choose green OA, AAMs or preprints be deposited in "recognised open repositories" registered in the Open Directory of Open Access Repositories (OpenDOAR), giving a clear preference for established, trusted repositories but not mandating a specific national repository.

The ministry's 2025 research data policy treats FAIR-aligned storage, findability and reuse as a central design requirement and frames the creation of a national ecosystem enabling storage, discovery, access and reuse of distributed datasets, with monitoring enabled through that ecosystem.

NCN Order No 39/2025 requires that data underlying publications be "well-documented in compliance with the principles of findability (machine-readable or manual search), accessibility, interoperability and reusability (FAIR Data)" and "shared in open repositories."

The order explicitly references the Wilkinson et al. (2016) article establishing the FAIR Guiding Principles and the FORCE11 principles.

National e-infrastructure initiatives such as the National Data Store, PLGrid, and the PIONIER network are explicitly referenced in the 2025 Research Data Open Access policy as components of the storage and sharing infrastructure for research data, showing the link between OA data policies and trusted e-infrastructures.

Poland's repository infrastructure includes the national publication repository formerly operated as the Centre for Open Science (CeON) repository (depot.ceon.pl) and relaunched as the Open Research Publications Repository OPEN (Repozytorium Otwartych Publikacji Naukowych OPEN, open.icm.edu.pl), operated by the Interdisciplinary Centre for Mathematical and Computational Modelling of the University of Warsaw (ICM UW), which serves as a general-purpose publication repository,⁷⁶⁷ and RepOD⁷⁶⁸ (Repository for Open Data), operated by ICM since 2015, which is registered in re3data and assigns DOIs to datasets and institutional repositories at universities.⁷⁶⁹

22.2.4. Metadata and persistent identifier requirements

The Ministry of Science and Higher Education's 2025 research data policy explicitly plans for the selection and rollout of metadata standards, recommended open formats, persistent identifiers (PIDs), and licensing approaches through the national/domain competence centre structures.

⁷⁶⁷ Interdisciplinary Centre for Mathematical and Computational Modelling (ICM), University of Warsaw, CEON — Centre for Open Science Repository (depot.ceon.pl), available at: <https://open.icm.edu.pl/home> [accessed April 2026].

⁷⁶⁸ Interdisciplinary Centre for Mathematical and Computational Modelling (ICM), University of Warsaw, RepOD — Repository for Open Data, available at: <https://repod.icm.edu.pl/> [accessed April 2026].

⁷⁶⁹ See SHERPA, Repository List by Country: Poland, SHERPA/RoMEO, University of Nottingham, available at: https://v2.sherpa.ac.uk/view/repository_by_country/Poland.html

NCN's policy contains explicit requirements for rich metadata and encouragement of persistent identifiers, particularly for research data. For datasets, the policy stipulates that all published data must include "complete metadata" consistent with domain requirements, including title, authors, date of creation or collection, methodology, data format and structure, terms of sharing and licensing, and funding acknowledgement with the NCN project registration number.

For persistent identifiers, RepOD assigns Digital Object Identifiers (DOIs) to all deposited datasets.

There is no explicit requirement in Polish policy instruments for the use of ORCID identifiers by researchers.

22.2.5. Peer review approaches

Polish open access policy instruments do not contain provisions specifically addressing peer review approaches or promoting community-led peer review models.

22.2.6. Links to researcher assessment

Open access or open science practices are not explicitly listed as assessment criteria in standard academic promotion procedures at Polish universities.

NCN states that its proposal and report assessment procedures are "informed by the principles of DORA – the San Francisco Declaration on Research Assessment"⁷⁷⁰ but there does not seem to be any publicly available evidence that assessment is currently linked to open access.

22.2.7. Public funding thresholds

Polish open access policy instruments do not establish explicit public funding thresholds determining when outputs fall under open access requirements.

22.2.8. Provisions for small and medium publishers

Polish open access policy instruments do not contain specific provisions for small and medium publishers or mechanisms to support their transition to open access.

However, the ministry's "Support for Scientific Journals" programme, which carries an open access requirement under Article 401, provides financial support to Polish scientific journals, which includes smaller publishers.

22.2.9. Identified costs of, or gains from, applying open access policies

Policy documents and mappings emphasise qualitative gains such as better circulation of scientific content, improved research quality through increased transparency and reduced plagiarism, enhanced social impact of research, and more efficient use of public funds;

The 2018 ministry report on implementation of the 2015 strategy (covering 2015-2017) did not include comprehensive cost data.

22.2.10. Security considerations

Polish OA and data policies acknowledge the need to balance openness with security, privacy, and competitive interests, particularly in the context of research data.

⁷⁷⁰ National Science Centre (NCN), Open Science, op. cit.

NCN Order No 39/2025 permits exceptions to data sharing requirements for "national security" reasons, listed alongside personal data protection, trade secrets, and intellectual property rights.

The Act of 11 August 2021 on Open Data subjects the re-use of public sector information (including research data) to "restriction in the scope and under the conditions specified in the provisions on the protection of classified information and other statutorily protected secrets."

22.2.11. References to simplification regarding open access

While the word simplification is not used as such, NCN Order No 39/2025 was explicitly justified on grounds of reducing administrative burden on researchers.

22.2.12. Role of artificial intelligence in open access policies

AI is addressed more explicitly in the research data policy context than in publications policy, and primarily as an opportunity and preparedness requirement rather than as a risk.

The Act of 11 August 2021 on Open Data references the use of (any kind of) data "for the needs of AI solutions" as one purpose for which increased data availability is intended, in the context of general re-use of public sector information

The ministry's 2025 research data policy identifies "adapting to AI technology requirements" as part of the expected benefits of open data.

22.3. Implementation and monitoring of open access policies

22.3.1. Responsibility for implementation

Implementation responsibilities for open access policy in Poland are distributed across multiple actors.

The Ministry of Science and Higher Education (MNiSW) is responsible for issuing national-level strategic guidance on OA and open science, such as the 2015 "Directions" and the 2025 Research Data Open Access policy, but implementation of these non-binding recommendations largely falls to funders and institutions.

NCN is responsible for implementing its own OA and research data policy elements by incorporating them into call documentation, grant agreements, and project reporting templates, and by providing guidance to applicants and beneficiaries.

Research institutions (universities, institutes of the Polish Academy of Sciences, and other RPOs) are responsible for establishing and operating repositories, local OA policies, and RDM support services, thereby implementing both national recommendations and funder mandates through internal regulations and workflows; academic libraries often act as operational units for repository management and OA support.

For research data under the Open Data Act, the Act of 11 August 2021 designates specific categories of public sector bodies as "obligated entities" responsible for making data available. Research institutions fall within this framework when data has been placed in official repositories.

22.3.2. Monitoring of individual policy elements

Monitoring responsibilities for open access policy implementation in Poland are fragmented, with no single body exercising comprehensive oversight.

NCN monitors implementation of its policy through project reporting requirements. Researchers must report on publications and data outputs, though the practical enforcement mechanisms under the relaxed 2025 policy (where open access for publications is recommended rather than required) are unclear. NCN does not publish compliance statistics specific to open access requirements.

The Ministry of Science and Higher Education has oversight of the higher education and science system and commissioned the 2018 report on implementation of the 2015 strategy (covering 2015-2017). The ministry also supervises NCN as a government agency.

22.3.3. Overall policy monitoring

There is no single designated body with clear responsibility for monitoring overall open access policy implementation across the Polish research system.

The Ministry of Science and Higher Education has the broadest oversight role for science policy, including open science as identified in the 2022 National Science Policy. However, the Ministry's monitoring activities appear to be periodic (such as the 2018 report) rather than continuous.

The 2015 ministerial strategy did not establish a monitoring framework, contributing to the fragmentation observed in the 2018 implementation report, which noted challenges in assessing policy uptake.

22.3.4. Reporting arrangements

Reporting lines for open access policy implementation are embedded within existing institutional and funding structures rather than constituting a dedicated open access reporting framework.

Grant holders report to NCN through standard project reporting mechanisms on publications and other outputs. NCN reports to the Ministry of Science and Higher Education as its supervisory authority, though the specific content of such reports regarding open access is not publicly documented.

The 2018 ministry report on open access implementation (2015-2017) was prepared by the ministry's working group on open access and represents an ad hoc reporting exercise rather than a regular reporting cycle.

22.3.5. Overall policy monitoring

There is no single designated body with clear responsibility for monitoring overall open access policy implementation across the Polish research system.

The Ministry of Science and Higher Education has the broadest oversight role for science policy, including open science as identified in the 2022 National Science Policy. However, the ministry's monitoring activities appear to be periodic (such as the 2018 report) rather than continuous, and no dedicated open access monitoring unit exists.

EOSC Poland, coordinated by NCN, serves as a national structure for EOSC-related activities and could potentially play a coordination role, but its functions focus on information sharing and community building rather than compliance monitoring.

The 2015 ministerial strategy did not establish a monitoring framework, contributing to the fragmentation observed in the 2018 implementation report, which noted challenges in assessing policy uptake.⁷⁷¹

22.3.6. Results of impact evaluations

Systematic impact evaluations of Polish open access policies are limited, with available evidence being largely qualitative or fragmentary.

The 2018 ministry report on implementation of the 2015 strategy⁷⁷² (covering 2015-2017), prepared by a ministerial working group on open access, provided qualitative assessment of policy uptake.

⁷⁷¹ Ministry of Science and Higher Education of the Republic of Poland (MNiSW), Raport z realizacji polityki otwartego dostępu do publikacji naukowych i wyników badań naukowych (2015–2017) [Report on the Implementation of the Open Access Policy for Scientific Publications and Research Results (2015–2017)], Warsaw, 2018, prepared by the Ministry's Working Group on Open Access. Available at: <https://www.gov.pl/attachment/39be7405-7ba5-460e-9a66-56487dd05fe2> [accessed April 2026; in Polish; AI summary used for the purposes of this study].

⁷⁷² Op. cit. — Ministry of Science and Higher Education, Raport z realizacji polityki otwartego dostępu

It concludes that while the Ministry of Science and Higher Education and key stakeholders initiated coordination structures, awareness-raising and some infrastructure work, the overall effect on systemic uptake of open access was modest because recommendations were not backed by hard obligations, dedicated funding or national infrastructure.

In terms of systemic effects, the report stresses that OA remained largely a bottom-up and fragmented movement, driven by individual institutions, libraries and projects rather than by binding national rules or strong incentives. Open access did not feature in the evaluation of institutions or in career assessment, so there was little performance-based motivation to change publication behaviour, and most OA-related tasks had to compete with other priorities within general institutional budgets.

No published evaluation of the NCN 2020 open access policy was identified prior to the June 2025 revision. The justification for the policy relaxation cited the need to reduce administrative burden but did not present evidence from formal evaluation.

23. Portugal

23.1. General characteristics

23.1.1. Policies formulated as strategies, funder mandates and/or legislation

At the national government level, the Resolution of the Council of Ministers n° 21/2016 (RCM 21/2016)⁷⁷³ of the 11th of April 2016, established guiding principles for a National Open Science Policy. This resolution was not binding legislation but rather a strategic policy orientation that mandated the Minister of Science, Technology and Higher Education to create an inter-ministerial working group to develop a strategic plan for implementing open science practices in Portugal. The resolution articulated three core principles: (a) open access to publications from publicly funded research, (b) open access to scientific data from publicly funded research, and (c) preservation of publications and data to enable reuse and continued access. The first Portuguese report on the (national) implementation of the 2021 UNESCO Recommendation on Open Science⁷⁷⁴ asserts that, despite this resolution, Portugal does not yet have a single consolidated national open science strategy.

Decree-Law No. 63/2019⁷⁷⁵ (“Science Law”) revising the legal framework for R&D institutions, requires these institutions to contribute to open science by ensuring free and open access to scientific knowledge, which provides a legislative basis for institutional responsibilities but does not itself set detailed operational obligations or sanctions; implementation depends on subsequent institutional and funder-level policies.

⁷⁷³ Council of Ministers of the Republic of Portugal, Resolução do Conselho de Ministros n.º 21/2016 [Resolution of the Council of Ministers No. 21/2016 of 11 April 2016, establishing guiding principles for a National Open Science Policy], Diário da República, 1st series, No. 70, 11 April 2016, available at: <https://diariodarepublica.pt/dr/detalhe/resolucao-conselho-ministros/21-2016-74094659> [accessed April 2026; translated via browser translation function]. Original PDF: <https://files.diariodarepublica.pt/1s/2016/04/07000/0119101193.pdf> [accessed April 2026; in Portuguese].

⁷⁷⁴ Provided to the author by the EC via NPR. Also available at Foundation for Science and Technology (FCT), First National Report on the Implementation of the 2021 UNESCO Recommendation on Open Science (Portugal), FCT, Lisbon, February 2025, available at: <https://www.fct.pt/wp-content/uploads/2025/02/first-national-report-on-the-implementation-of-the-2021-recommendation-from-UNESCO-on-open-science.pdf> [accessed April 2026].

⁷⁷⁵ Republic of Portugal, Decreto-Lei n.º 63/2019 de 16 de maio [Decree-Law No. 63/2019 of 16 May 2019 on the Legal Framework of R&D Institutions (Science Law)], Diário da República, 1st series, No. 94, 16 May 2019. Consolidated text available at: <https://diariodarepublica.pt/dr/legislacao-consolidada/decreto-lei/2019-122312810> [accessed April 2026; translated via browser translation function]. Original PDF: <https://files.diariodarepublica.pt/1s/2019/05/09400/0246602475.pdf> [accessed April 2026; in Portuguese].

At funder level, the Foundation for Science and Technology (FCT), the main public research funding organisation, adopted a binding Open Access Policy for Scientific Publications from FCT funded research in 2014 (focusing on repository deposit and allowing embargoes) and replaced it with a new Policy on Open Access to Scientific Publications in February 2025, which is explicitly mandatory for all scientific publications, including articles, books, chapters, monographs, doctoral theses and master's dissertations arising from calls whose application period ends after 7 February 2025.⁷⁷⁶

For research data, FCT adopted a separate Policy on the Availability of Data and Other Results from R&D Projects Financed by FCT on May 5, 2014, which has not undergone the same comprehensive revision as the publications policy.⁷⁷⁷ However, a dedicated national research data policy is under preparation.⁷⁷⁸ According to the UNESCO report, FCT is implementing a "Plan and Strategy for Open Access to Research Data" through the National Programme for Open Science and Open Research Data (PNCADAI), funded by the Recovery and Resilience Plan (RRP),⁷⁷⁹ which aims to provide tools, services and infrastructures and to establish a national network for research data management.

The RCAAP (Repositórios Científicos de Acesso Aberto de Portugal) initiative, operated by FCT's unit FCCN in collaboration with the University of Minho, functions as a national coordination and infrastructure platform for open access to publications, and since 2013 has also been the legally established instrument for legal deposit of theses and dissertations.

23.1.2. Bindingness in terms of implementation

The 2014 FCT publications policy required deposit of peer-reviewed outputs from FCT-funded research in repositories of the RCAAP network "as soon as possible" after acceptance, but allowed embargo periods before full-text became openly available.⁷⁸⁰ The 2025 policy shifts towards immediate open access and alignment with Plan S and Horizon Europe, stating that, for articles, embargo periods are not permitted and requiring that at least the author accepted manuscript be made openly available: The policy stresses that there are three routes to do so, namely the gold route (immediate open access publication in an open access journal or platform); the green route (immediate deposit of at least the AAM in a repository of the RCAAP network under a CC BY or FCT-approved equivalent licence, relying on the policy's rights retention strategy); and open access publication in a hybrid journal under an agreement that includes reading and open access publishing (designated 'via transformativa' in the policy). Regardless of the chosen route, deposit in the RCAAP repository is mandatory.

The UNESCO Open Science Report for Portugal confirms that 'the requirements for Open Access outlined in the Open Access Policy for Scientific Publications...became mandatory for FCT beneficiaries.'

For research data, FCT's 2014 policy employs non-binding language throughout. The policy 'encourages' researchers to make data available in appropriate open access databases and 'recommends' that funding applicants include data management plans but does not mandate these actions. However, a research data policy, aligned with European Commission research funding requirements, has been drafted and is now pending approval.

⁷⁷⁶ Foundation for Science and Technology (FCT), Policy on Open Access to Scientific Publications (effective 7 February 2025), FCT, Lisbon, February 2025. Policy hub page: <https://www.fct.pt/en/sobre/estudos-e-planeamento-estrategico/politicas-de-ciencia-aberta/acesso-aberto-a-publicacoes-cientificas/> [accessed April 2026].

⁷⁷⁷ Foundation for Science and Technology (FCT), Política de Acesso Aberto a Dados de Investigação [Policy on Open Access to Research Data / Policy on the Availability of Data and Other Results from R&D Projects Financed by FCT], FCT, Lisbon, 5 May 2014, available at: https://www.fct.pt/wp-content/uploads/2023/01/PoliticaAcessoAberto_Dados.pdf [accessed April 2026; in Portuguese; AI-assisted translation used for the purposes of this study]. OECD summary in English: https://www.oecd.org/en/publications/access-to-public-research-data-toolkit_a12e8998-en/policy-on-making-available-data-and-other-results-of-scientific-research-politica-de-acesso-aberto-a-dados-de-investigacao_14859d19-en.html [accessed April 2026].

⁷⁷⁸ CoNOSC (Council for National Open Science Coordination), Open Science Policies — Portugal, available at: <https://conosc.org/os-policies/#page-content> [accessed April 2026].

⁷⁷⁹ FCCN 'Portugal Resiliente: Competências Digitais — Programa Nacional de Computação e Dados Abertos em Investigação (PNCADAI)', FCCN Blog, available at: <https://www.fccn.pt/en/blog/portugal-resiliente-competencias-digitais/> [accessed April 2026].

⁷⁸⁰ Foundation for Science and Technology (FCT), Política de Acesso Aberto a Publicações Científicas da FCT [FCT Open Access Policy for Scientific Publications] (2014 version, superseded), FCT, Lisbon, 2014, available at: https://www.fct.pt/wp-content/uploads/2023/01/PoliticaAcessoAberto_Publicacoes.pdf [accessed April 2026; in Portuguese; AI-assisted translation used for the purposes of this study]

23.1.3. Scope of the policy

Portugal's open access policy framework explicitly covers both scientific publications and research data. The Resolution of the Council of Ministers nº 21/2016 articulates three guiding principles, with separate provisions for publications (principle a) and research data (principle b), alongside a cross-cutting principle on preservation (principle c).

In the UNESCO report the coverage of both publications and research data (the first two of the resolution's three guiding principles) focus is further operationalised through three FCT plans and strategies: for open access to scientific publications, for open access to research data (via PNCADAI), and for models of scientific communication, which together extend the scope from access conditions to broader issues of infrastructures and scientific communication models.

The report also mentions citizen science and public engagement as integral parts of Portugal's open science ecosystem, with the National Citizen Science Network at the centre of these efforts. The report also mentions the Portuguese Reproducibility Network (PTRN), a peer association promoting replicable, transparent and rigorous research practices. Its relevance to open access policy lies in the dependence of reproducibility on openly available publications, data and code:

23.1.4. Embargoes or immediate open access

Portugal's open access policies have evolved from permitting embargoes to requiring immediate open access, with a significant policy shift occurring in 2025. The FCT Open Access Policy for Scientific Publications adopted in February 2025 is based on the principle of not allowing embargo periods for the availability of open access content and retaining rights over published content, which ensures that at least the accepted manuscript version is made available in open access.⁷⁸¹ However, for thesis, dissertations and books embargoes are allowed.⁷⁸²

Under the former 2014 FCT policy, embargoes were permitted with discipline-specific variations. Documentation from this earlier period indicates that publications in social sciences, humanities, or arts were allowed embargo periods of up to 12 months, while publications in other fields of knowledge were limited to 6-month embargoes. Books and book chapters could have embargoes up to 18 months. Doctoral theses under the 2014 framework could have embargoes of up to 36 months. During the transitional phase of implementing Plan S, FCT indicated it would accept embargo periods longer than defined standards if publishers required them, though deposit in RCAAP repositories was mandatory regardless of the publisher-imposed embargo.

For research data, FCT's 2014 data policy does not specify embargo periods but instead encourages researchers to share data 'within the shortest time possible' according to best practices in their scientific discipline.

23.1.5. Copyright, rights retention and secondary publication rights

The FCT 2025 publications policy establishes 'the retention of rights over published content' as a cornerstone principle alongside the elimination of embargo periods. This rights retention approach ensures that 'at least the accepted manuscript version is made available in open access', meaning authors must retain sufficient rights to enable open sharing even when publishing in subscription or hybrid journals. FCT has created a support website with information on the rights retention strategy, which ultimately leads to the coalition S journal checker.⁷⁸³

⁷⁸¹ Foundation for Science and Technology (FCT), 'New FCT Policy on Open Access to Scientific Publications Promotes the Visibility of Scientific Production', FCT News, 7 February 2025, available [https://www.fct.pt/en/nova-politica-sobre-acesso-aberto-a-publicacoes-cientificas-da-fct-promove-a-visibilidade-da-producao-cientifica/\[accessed July 2026\]](https://www.fct.pt/en/nova-politica-sobre-acesso-aberto-a-publicacoes-cientificas-da-fct-promove-a-visibilidade-da-producao-cientifica/[accessed July 2026]).

⁷⁸² As also reported in EOSC Association, Stay Up to Date on Open Science Developments with EOSC-A Country Pages (Portugal profile), available at: <https://eosc.eu/news/stay-up-to-date-on-open-science-developments-with-eosc-a-country-pages>

⁷⁸³ Foundation for Science and Technology (FCT), Acesso Aberto FCT — Portal de Apoio à Política de Acesso Aberto [FCT Open Access Support Portal], available at: <https://acessoaberto.fct.pt/> [accessed April 2026]

For FCT-funded publications the default is that individual researchers retain non-exclusive rights to share the AAM in repositories under open licences, while publisher rights remain for the version of record (VoR). The UNESCO report explicitly lists the Rights Retention Strategy, alongside Transformative Agreements, Subscribe-to-Open and diamond OA initiatives, as one of the models of scientific communication promoted by FCT to advance open access in line with Plan S.

Neither the science law nor other Portuguese horizontal legislation provide for a general statutory secondary publication. However, the Portuguese community is actively working toward this goal.⁷⁸⁴ On 5 February 2026, a coalition of academics and civil-society organisations presented, at the Academy of Sciences in Lisbon, a legislative proposal entitled 'Publicação secundária em acesso aberto: um direito e uma obrigação' ['Secondary publication in open access: a right and an obligation'], proposing statutory mechanisms establishing both a secondary publication right and a corresponding open access obligation. At the time of writing this has not been introduced as a government or parliamentary bill, however.⁷⁸⁵

For research data, the 2014 FCT data policy recommends that 'all results of R&D projects funded, totally or partially, by FCT, that are made available in databases or other forms of access must include reference to this funding' in accordance with applicable publicity norms. The policy addresses intellectual property in data management plans, recommending that applicants specify 'access and sharing policies including appropriate privacy, confidentiality, security, intellectual property protection provisions and other rights or requirements.'

23.2. Context of open access policies

23.2.1. Training or guidance for researchers

Portugal provides training and guidance for open access practices through multiple channels.

FCT has established a dedicated support website to accompany the implementation of its 2025 Open Access Policy for Scientific Publications. This website includes links to frequently asked questions and a document explaining the rights retention mechanism, providing researchers with practical guidance on navigating the three routes (Gold, Green, and Transformative) for achieving open access.

The UNESCO implementation also mentions the Lusophone Open Science Conference (ConfOA) and the FCCN Conference (Jornadas FCCN) and the widespread use of International Open Access Week as an occasion for institutions to organise events and campaigns on the benefits of open access.

For research data management, Portugal has established annual Research Data Management Forums to build capacity and share good practices within the research data management community,⁷⁸⁶ as well as working groups dedicated to relevant topics, such as policies and strategies, competencies and research data repositories.

The UNESCO implementation report notes that a national "train-the-trainer" programme and a research data management training programme was developed under PNCADAI's Re.Data consortium.⁷⁸⁷ It also points to the NAU MOOC "The Essentials of Research Data Management" for researchers and doctoral students, the use of open educational resources for open science training, and Portuguese participation in international projects such as FAIRsFAIR⁷⁸⁸ that produce reusable teaching materials and handbooks on FAIR data and data management.

⁷⁸⁴ Knowledge Rights 21 / secondarypublication.com, Secondary Publication Rights (resource platform), available at: <https://www.secondarypublication.com/> [accessed April 2026]. Provided by NPR.

⁷⁸⁵ Communia Association, 'Portuguese Civil Society Proposes Secondary Publication Rights and Obligation', 20 March 2026, available at: <https://comunia-association.org/2026/03/20/portuguese-civil-society-proposes-secondary-publication-rights-and-obligation/> [accessed July 2026]

⁷⁸⁶ RCAAP / FCT, Fórum de Gestão de Dados de Investigação [Research Data Management Forum] (annual national event), available at: <https://forumgdi.rcaap.pt/> [accessed April 2026]. 2025: The 12th Forum (2025) is documented at: FCT, '12.º Fórum de Gestão de Dados de Investigação', available at: <https://www.fct.pt/en/12o-forum-de-gestao-de-dados-de-investigacao/> [accessed April 2026].

⁷⁸⁷ Re.Data Consortium (national research data management competence centre network under PNCADAI), available at: <https://redata.pt/> [accessed April 2026]. Input provided by NPR.

⁷⁸⁸ European Commission, CORDIS, 'Fostering FAIR Data Practices in Europe' (FAIRsFAIR), Grant Agreement No 831558, Horizon 2020, available at: <https://cordis.europa.eu/project/id/831558>, accessed 27 July 2026. DOI: 10.3030/831558.

Portugal was involved in the FAIRsFAIR project (2019-2022), which included Work Package 7 led by the University of Minho focused on integrating FAIR data principles in university curricula. This work produced an adoption handbook titled 'How to be FAIR with your data – A teaching and training handbook for higher education institutions' with model lesson plans covering FAIR data, data management plans, repositories, and data creation and reuse.⁷⁸⁹ University of Minho and FCT were also involved in the PathOS project.⁷⁹⁰

23.2.2. Funding for open access

According to the first national report on the implementation of the 2021 UNESCO Recommendation on Open Science, FCT has been funding initiatives and infrastructures related with open access and open science, especially the RCAAP (Scientific Open Access Repositories of Portugal) project since 2008. The report specifies that, under the National Programme for Open Science and Open Research Data (PNCADAI), FCT has launched two calls to create a national network for research data management, involving around four million euros of investment in 14 competence centres and one consortium, and that it directly funds digital services and infrastructures such as RCAAP (national green OA initiative), PTCRIS (National CRIS initiative), PUB IN (national diamond initiative), INDEXAR (directory of PT repositories and journals), POLEN (national research data initiative), b-on (National Digital Library Consortium) and NAU (national initiative on open educational resources).

The Recovery and Resilience Plan-funded implementation cycle of PNCADAI formally closed in February 2026, with FCT declaring the resulting national research data management network — 13 centres for research data management and the Re.Data consortium, per FCT's closing communication — operational, and the programme entering a post-RRP phase intended to consolidate and expand these structures.⁷⁹¹

FCT's most significant investment in open access has been through transformative agreements with major publishers. Starting in 2021, FCT initiated a process to implement transformative agreements for the 2022-2024 triennium through negotiations with publishers present in b-on (Biblioteca do Conhecimento Online, the national digital library consortium).⁷⁹² These agreements, now extended through 2025-2027,⁷⁹³ cover article processing charges (APCs) for corresponding authors at participating Portuguese institutions. These transformative agreements represent a multi-million-euro annual investment and represent a significant shift, as the system began to prioritise open access models and transformative agreements instead of traditional subscriptions. In 2025 it is estimated to have published 4 300 articles under TA that are equivalent to non-spent 12 million euros.⁷⁹⁴

For publications, the FCT policy explicitly recognises that article processing charges (APCs) in full open access journals may be eligible costs under FCT funding instruments (subject to the rules of specific calls), and it similarly addresses book processing charges (BPCs).

⁷⁸⁹ European University Association (EUA), FAIRsFAIR Project (Horizon 2020, 2019–2022), project page: <https://www.eua.eu/our-work/projects/eu-funded-projects/fairsfair.html> [accessed April 2026].

⁷⁹⁰ European Commission, CORDIS, 'Open Science Impact Pathways' (PathOS), Grant Agreement No 101058728, Horizon Europe, coordinated by Athena Research and Innovation Center (Greece), 1 September 2022 – 31 August 2025, available at: <https://cordis.europa.eu/project/id/101058728>, accessed 27 July 2026. DOI: 10.3030/101058728.

⁷⁹¹ Foundation for Science and Technology (FCT), 'Rede Nacional de Gestão de Dados de Investigação consolida ecossistema de dados abertos em Portugal' [National Research Data Management Network consolidates the open data ecosystem in Portugal], FCT News, March 2026, available at: <https://www.fct.pt/rede-nacional-de-gestao-de-dados-de-investigacao-consolida-ecossistema-de-dados-abertos-em-portugal/>,

⁷⁹² University of Coimbra, Open Science Policies —available at: <https://www.uc.pt/en/openscience/about/policies/portugal/> [accessed April 2026].

⁷⁹³ b-on (Biblioteca do Conhecimento Online — National Digital Library Consortium), Open Access, available at: <https://www.b-on.pt/aceso-aberto/> [accessed April 2026].

⁷⁹⁴ Information provided by NPR. It is presumed that this amount refers to the money that individual authors or their institutions did not have to spend on APCs themselves, because these were covered under the agreement.

23.2.3. Repository requirements (incl. FAIR principles)

Repository requirements are a core contextual element for publications: FCT's policies direct researchers to deposit outputs in repositories belonging to the RCAAP network, which aggregates a large number of institutional repositories and journals. RCAAP applies the OpenAIRE 4.0 Schema as its common standard metadata framework to ensure interoperability and enhance data discoverability. This metadata standardisation enables RCAAP to serve as the Portuguese national aggregator for OpenAIRE.

For research data, the 2014 FCT data policy encourages deposit "in appropriate open access databases" (including established domain repositories) and references international examples such as DDBJ/EMBL/GenBank and structural biology databases. Currently, Portugal is developing infrastructure explicitly aligned with FAIR principles. POLEN provides a Research Data Repository service designed to facilitate aggregation, storage, preservation, management, and access provision for research datasets. The repository itself, POLEN DataHub, was launched in December 2025 as a national generalist research data repository for FCT beneficiaries and adhering institutions, complemented by POLEN Blueprint (data management plans) and POLEN Sync (active data management).⁷⁹⁵

The UNESCO Open Science Report confirms that Portugal's national current research information system (PTCRIS) is 'designed to facilitate the management, production, and access to information about the country's scientific activities' and that digital services developed by FCT through FCCN 'play an essential role' in promoting FAIR principles.

While Portugal does not yet have a comprehensive national certification scheme for trusted repositories, the country participates in European initiatives addressing repository quality and trustworthiness. Portuguese institutions, particularly the University of Minho, were involved in the FAIRsFAIR project which developed standards for FAIR certification of repositories.

RCAAP's integration with OpenAIRE and alignment with OpenAIRE guidelines provides an implicit quality framework. However, there is no evidence of systematic implementation of frameworks such as CoreTrustSeal certification.

23.2.4. Metadata and persistent identifier requirements

The FCT 2014 data policy recommends that data management plans include specifications for 'standards to be used for data formats and metadata content,' with applicants expected to document cases where appropriate standards do not exist or are judged inappropriate and propose alternative solutions.

For persistent identifiers, the PTCRIS (Portuguese Current Research Information System) program has implemented a national framework for researcher identification and authentication. For research data, POLEN is being designed to support comprehensive metadata practices aligned with FAIR principles, including the use of appropriate metadata schemas and persistent identifiers for datasets. The UNESCO report stresses that these services are intended to ensure compliance with national and international standards, including EOSC, The Research Data Alliance (RDA) and the FAIR data principles, reinforcing the role of metadata and identifiers in Portugal's open science infrastructure.

The emphasis thus appears to be on infrastructure readiness and researcher capacity building rather than strict technical compliance requirements.

23.2.5. Peer review approaches

Although Portugal has not yet developed explicit policies or systematic initiatives to promote research community-led peer review approaches as part of its open access framework, a pilot project has been launched in collaboration with Peer Community In (PCI), aiming to explore and test this innovative peer review model in the national context.⁷⁹⁶

⁷⁹⁵ FCCN / FCT, POLEN — Research Data Repository Service, available at: <https://polen.fccn.pt/>

⁷⁹⁶ Information provided by NPR.

The 2025 publication policy explicitly notes the relevance of preprints for open research practices but excludes preprints from the policy's scope due to the difficulty of uniformly verifying peer review standards, which further indicates that peer review innovation is not a targeted policy lever within the OA mandate itself.

23.2.6. Links to researcher assessment

Portugal has begun integrating open science principles into researcher assessment frameworks, particularly through FCT's R&D Units Evaluation system and participation in the Coalition for Advancing Research Assessment (CoARA). Open science principles were first incorporated into the FCT R&D Units Evaluation in the 2017/2018 cycle, where the criterion on 'quality, merit, relevance, and internationalisation of R&D activity' explicitly included 'the preservation, curation and dissemination of R&D results and data, respecting the principles and practices of Open Science'.⁷⁹⁷ In the most recent 2023/24 evaluation cycle, FCT introduced narrative CVs as one of the first evaluation systems in Europe to implement this format, reflecting CoARA principles.

Portugal's CoARA National Chapter, co-chaired by FCT along with the University of Minho and INESC-TEC, was officially approved in February 2024 and includes 18 national institutions (nine universities, eight research institutions, and FCT).⁷⁹⁸

FCT participates in CoARA's Working Group on Improving Practices in the Assessment of Research Proposals, which addresses criteria for project selection, innovative approaches to review processes, reviewer selection and guidance, and evidence and indicators used in assessment.⁷⁹⁹

Additionally, Portugal hosts the TREASURE project, an institutional pilot that aims to reward master's and PhD candidates for integrating reproducible, reusable, and open research practices into their thesis research, aligning with the 10 commitments outlined in the Agreement on Reforming Research Assessment.⁸⁰⁰ The UNESCO report presents these assessment reforms and pilots as key mechanisms for embedding open science, including open access, into the incentive structures of the Portuguese research system.

23.2.7. Public funding thresholds

The FCT policies apply to research 'funded, totally or partially' by FCT.

23.2.8. Provisions for small and medium publishers

While Portugal's open access policies do not contain explicit provisions specifically addressing the needs or challenges of small and medium publishers, it is worth noting that embargo periods for books are, in part, motivated by a concern to safeguard smaller publishers and allow them the opportunity to economically benefit from the publication of books. This consideration reflects an understanding of the particular vulnerabilities faced by small and medium publishers within the open access landscape.⁸⁰¹

The PUB IN initiative, referenced in the UNESCO implementation report 'aims to promote the integrated management of Portuguese OA scientific journals in national and international directories, modernise editorial management platforms, and support the adoption of OS practices such as open peer review and open annotations,' suggesting support services that could particularly benefit smaller publishers.

⁷⁹⁷ Research on Research, Research Assessment Systems — Portugal, available at: <https://researchonresearch.org/observatory/portugal/> [accessed April 2026].

⁷⁹⁸ Foundation for Science and Technology (FCT), 'Aprovada a criação do Capítulo Nacional Português da CoARA' [Approval Granted for the Creation of the Portuguese CoARA National Chapter], FCT News, 29 February 2024, available at: <https://www.fct.pt/en/aprovada-a-criacao-do-capitulo-nacional-portugues-da-coara/> [accessed April 2026].

⁷⁹⁹ CoARA (Coalition for Advancing Research Assessment), Working Group on Improving Practices in the Assessment of Research Proposals, available at: <https://www.coara.org/working-groups/wg-improving-practices-in-the-assessment-of-research-proposals/>

⁸⁰⁰ As reported in the UNESCO implementation report

⁸⁰¹ Information provided by NPR.

The same report situates PUB IN within FCT's Plan and Strategy for Models of Scientific Communication, which also encompasses support for SciELO Portugal and other diamond open access services targeted at non-commercial and smaller publishers.

23.2.9. Identified costs of, or gains from, applying open access policies

Publicly available sources do not provide detailed quantified analyses of costs or economic gains from implementing open access policies in Portugal. RCM 21/2016 acknowledges that 'promoting and defending a generalised practice of Open Science represents a collective, political, cultural, economic and social challenge' but does not present cost-benefit calculations.

The resolution articulates qualitative benefits including democratisation of knowledge, contribution to equality in scientific training and capacity building, facilitation of knowledge transfer, and stimulation of social appropriation of science.

The FCT 2025 policy announcement emphasises benefits such as greater dissemination of scientific production, increased visibility for scientific output and authors, facilitation of interdisciplinarity, acceleration of innovation, and strengthening of collective knowledge production, but does not quantify these gains in economic terms. However, it is important to highlight that the implementation of transformative agreements has resulted in savings of approximately 12.5 million euros.⁸⁰² No publicly available studies were identified that calculate the costs to FCT, institutions, or researchers of complying with open access mandates. The UNESCO report notes significant investments (e.g. around four million euros for PNCADAI competence centres and direct funding of several national open science infrastructures).

23.2.10. Security considerations

Portugal's open access policy documents do not explicitly address Security considerations related to cyber threats, geopolitical concerns, or economic competition. The 2014 FCT data policy frames data availability as subject to legal constraints and stipulates that data sharing must not compromise the privacy or security of individuals or entities, thereby recognising confidentiality, personal data protection, and security as limits to open data.

23.2.11. References to simplification regarding open access

Portugal does not use the term "simplification" in its OA policy documents. However, implicitly the combination of b-on transformative agreements⁸⁰³ and a national repository network can be interpreted as a "system simplification" approach (centralised contracting and centralised deposit pathways). For data, the move toward shared national digital services (e.g., data management support and platform roll-out) and shared training and consultancy services (through the Re.Data consortium, the national research data management competence network established under PNCADAI) could similarly be argued to suggest simplification.

23.2.12. Role of artificial intelligence in open access policies

Artificial intelligence does not feature in Portugal's open access policy documents as either an opportunity or threat.

⁸⁰² Information provided by NPR.

⁸⁰³ The national digital library consortium providing access to subscription content and coordinating transformative agreements.

23.3. Implementation and monitoring of open access policies

23.3.1. Responsibility for implementation

At the national strategy level, RCM 21/2016 mandated the Minister of Science, Technology and Higher Education to create the inter-ministerial working group and coordinate development of the strategic implementation plan. The working group included representatives from FCT, university rectors, polytechnic institutes, and other stakeholders. The UNESCO report confirms that FCT has since assumed the central role in operationalising the Recommendation on Open Science at national level, coordinating many implementation activities.

For FCT's funder mandates, primary implementation responsibility lies with FCT beneficiaries – the individual researchers, research teams, and institutions receiving FCT funding. The 2025 publications policy applies to researchers whose funding application periods ended after February 7, 2025.

Infrastructure implementation is primarily the responsibility of FCCN (FCT's digital services unit) working in coordination with partner institutions. FCCN operates RCAAP and its component services: the Serviço de Alojamento de Repositórios Institucionais (the institutional repository hosting service); SARC (Serviço de Alojamento de Revistas Científicas, the scientific journal hosting service); and Blimunda, a service documenting the self-archiving policies of Portuguese publishers and scientific journals, with scientific and technical participation from the University of Minho. FCCN also manages POLEN (research data infrastructure), PTCRIS (research information system), and b-on (the national digital library consortium providing access to subscription content and coordinating transformative agreements).

23.3.2. Monitoring of individual policy elements

Monitoring responsibilities for Portugal's open access policies are less clearly documented than implementation responsibilities.

FCT's 2025 publications policy does not detail a specific monitoring office or compliance verification process. The UNESCO Open Science Implementation Report indicates that FCT is 'actively developing' dashboards that will provide 'detailed insights into trends in Open Science, including compliance with Open Access policies, transformative agreements, and publication costs (APCs)' with data 'accessible via intuitive dashboards, supporting evidence-based decision-making.' The report also refers to the development of a "trackerFCT" system to support monitoring of open science indicators across FCT's portfolio.

RCAAP's role as a 'support tool for open access monitoring' suggests it provides technical capability to track deposit rates and compliance, although this does not seem to be publicly available.

For research data, the FCT 2014 policy recommended that 'beneficiaries apply the specified procedures during and after project execution and that FCT be informed of any changes to the data management plan', indicating that FCT expected to receive updates but without specifying a dedicated process. The UNESCO report implies that PNCADAI-related services (including POLEN and the competence centres) will support future monitoring of FAIR and open data practices, although concrete procedures are still being developed.

23.3.3. Overall policy monitoring

The UNESCO Open Science Report notes that 'FCT oversees basic coordination activities' and is 'exploring a multi-stakeholder approach, that includes a national consortium of stakeholders, research and funding institutions, service and e-infrastructure providers, competence centres, and other national and international stakeholders.

23.3.4. Reporting arrangements

Reporting relationships for open access policy implementation are not systematically documented in publicly available sources.

The RCM 21/2016 structure anticipated that the inter-ministerial working group would report to the Minister of Science, Technology and Higher Education. Beyond this initial planning phase, ongoing reporting relationships are less clear. FCT, as an agency under the Ministry of Science, Technology and Higher Education, presumably reports to the ministry on policy implementation as part of its regular accountability framework, although it is not clear whether this includes open access indicators.

The reporting mechanism is currently being revised to ensure that the required information on research outputs is collected, allowing for a thorough assessment of compliance with the FCT Open Access policy.⁸⁰⁴

The anticipated dashboards on open science compliance mentioned in the UNESCO report would presumably serve as data sources for FCT's internal and external reporting.

23.3.5. Results of impact evaluations

Desk research did not identify an official national impact evaluation quantifying broader socio-economic gains or system-wide research impacts attributable to OA policy. Eventually, this might be achieved through the proposed dashboard and/or tracker.

At infrastructure level, RCAAP reporting highlights large-scale growth in aggregated national repository content exceeding one million aggregated documents.⁸⁰⁵

The Portuguese UNESCO report recognises notable strengths such as RCAAP, POLEN, PTCRIS, research data management forums, MOOCs on the national NAU platform, and competence centres within PNCADAI, it also notes that institutions vary in their advancement regarding open access, data management, and broader open science initiatives. Importantly, PNCADAI has addressed the creation of a comprehensive catalogue of training programmes and their integration into educational curricula. The upcoming activities led by the National Citizen Science Network, the Portuguese Reproducibility Network, and CoARA, are specifically designed to support more systematic skills development and the convergence of practices.⁸⁰⁶

24. Romania

24.1. General characteristics

24.1.1. Policies formulated as strategies, funder mandates and/or legislation

Romania's open access framework is primarily strategy-based rather than legislative. The National Strategy for Research, Innovation and Smart Specialisation 2022-2027 (SNCISI), adopted by Government Decision no. 933 of 20 July 2022, contains Objective 1.2 specifically dedicated to "ensuring the transition to open science and facilitating the consolidation of excellence in scientific research."⁸⁰⁷

⁸⁰⁴ Information provided by NPR.

⁸⁰⁵ Foundation for Science and Technology (FCT), 'RCAAP — Repositórios Científicos de Acesso Aberto de Portugal Alcança um Milhão de Documentos Agregados' [RCAAP Reaches One Million Aggregated Documents], FCT News, available at: <https://www.fct.pt/en/rcaap-repositorios-cientificos-de-acesso-aberto-de-portugal-alcanca-um-milhao-de-documentos-agregados/> [accessed April 2026].

⁸⁰⁶ Phrasing provided by NPR.

⁸⁰⁷ Government of Romania, Strategia Națională pentru Cercetare, Inovare și Specializare Inteligentă 2022–2027 [National Strategy for Research, Innovation and Smart Specialisation 2022–2027 (SNCISI)], adopted by Government Decision No. 933 of 20 July 2022, Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI), Bucharest. English version available at: <https://uefiscdi.gov.ro/resource-867892-SNCISInenglish-version.pdf> [accessed April 2026].

This objective is elaborated in the White Book on the Transition to Open Science 2023-2030, published in December 2022 and developed by the Open Science Knowledge Hub Romania (OSKH) within the Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI) through the SIPOCA 592 project.⁸⁰⁸ The White Book is strongly aligned with international frameworks, including the UNESCO 2021 Recommendation on Open Science and OECD principles on access to research data, and provides a structured, implementation-oriented framework supporting the transition to open access and open science in Romania.⁸⁰⁹ The strategic framework goes beyond general policy orientation by linking open access requirements with funding conditions. SNCISI Objective 1.2 introduces a combination of obligations (e.g. publishing in open access and preparing data management plans) and enabling measures, including the eligibility of publication and data management costs, as well as dedicated funding instruments supporting open access publishing and data sharing.⁸¹⁰

These strategic provisions are intended to be implemented through the National Plan for Research, Development and Innovation (PNCDI IV⁸¹¹), where UEFISCDI, as the main public research funding agency, acts as the operational funder. While not prescribing an open access mandate, the document does include explicit references to open access. In the 'IDEAS' programme (part of PNCDI IV) outcome indicators explicitly include not only the number of scientific papers in Web of Science/Scopus-indexed journals but also the number of such papers with open access. This embeds open access into the assessment of scientific excellence and impact. Similarly, the Organisations of Research Performance programme (also part of PNCDI IV) lists "adoption of open science specific practices" as an objective for institutional development. PNCDI IV also creates targeted instruments that directly finance and incentivise open access.

UEFISCDI, through the Open Science Knowledge Hub Romania (OSKH), has also produced an Action Plan⁸¹² for the Implementation of the Strategic Objectives and Actions of the White Book on the Transition to Open Science 2023–2030, developed as a deliverable of the SIPOCA 592 project. The Action Plan translates the White Book's eight strategic objectives into concrete measures, timelines, responsible actors and indicators, and serves as an implementation-support and capacity-building instrument rather than a formally adopted government policy. It should be understood as part of Romania's project-driven open science support infrastructure, informing future policy development rather than constituting a binding mandate in its own right.⁸¹³

For research data at legislation level, Romania's Law no. 179/2022 on open data and reuse of public sector information provides binding rules relevant to "data from research" in the open data/PSI context.⁸¹⁴ It covers research data that has already been made publicly available by researchers or institutions via repositories and addresses re-use of such data.

⁸⁰⁸ UEFISCDI / Open Science Knowledge Hub Romania (OSKH), Cartea Albă a Tranziției către Știința Deschisă 2023–2030 [White Book of the Transition to Open Science 2023–2030], Bucharest, December 2022, developed through the SIPOCA 592 project. English version available at: <https://www.open-science.ro/resurse/the-white-book-of-the-transition-to-open-science> [accessed April 2026]; PDF available at: https://uefiscdi.gov.ro/resource-863421-brosura-open-science-en_v1-smallest-text.pdf [accessed April 2026]

⁸⁰⁹ Input provided by NPR.

⁸¹⁰ Assessment provided by NPR.

⁸¹¹ UEFISCDI, Planul Național pentru Cercetare, Dezvoltare și Inovare IV [National Plan for Research, Development and Innovation IV (PNCDI IV)], Bucharest. English version available at: <https://uefiscdi.gov.ro/resource-867810-PNCDIenglish-version.pdf> [accessed April 2026].

⁸¹² Open Science Knowledge Hub România (OSKHR), UEFISCDI, Plan de acțiune pentru implementarea obiectivelor strategice și a acțiunilor propuse prin Cartea Albă a Tranziției către Știința Deschisă (2023–2030) [Action Plan for the Implementation of the Strategic Objectives and Actions Proposed by the White Book on the Transition to Open Science (2023–2030) 2025]. Available at: <https://www.mcid.gov.ro/wp-content/uploads/2025/02/III.7.-A4.1-Plan-de-actiune-pentru-implementarea-obiectivelor-si-actiunilor-propuse-prin-Cartea-Alba.pdf> [accessed April 2026]

⁸¹³ Paragraph rephrased based on NPR input.

⁸¹⁴ Republic of Romania, Legea nr. 179/2022 privind datele deschise și reutilizarea informațiilor din sectorul public [Law No. 179/2022 on Open Data and Re-use of Public Sector Information], Monitorul Oficial, No. 624, 24 June 2022, implementing Directive (EU) 2019/1024 of the European Parliament and of the Council. Full text available at: <https://legislatie.just.ro/Public/DetaliiDocument/256414> [accessed April 2026; translated via browser translation function].

UEFISCDI piloted the integration of FAIR - Findable, Accessible, Interoperable, and Reusable data principles into funding instruments, focusing on data management plans and Open Science requirements through a pilot in the EU funded OPUS project. Activities included developing a tailored data management plan template and establishing a task force to explore Open Science integration in funding instruments.⁸¹⁵

24.1.2. Bindingness in terms of implementation

SNCISI itself is a government-approved strategy and sets policy directions and targets for the RDI system, but its open science provisions become binding for researchers and institutions only when reflected in specific calls, contracts and regulations under PNCDI IV or other programmes managed by UEFISCDI. Similarly, the White Book sets ambitious targets, e.g. calling for ensuring open access to all scientific publications resulting from publicly funded research as soon as possible and at maximum within 6-12 months, and for research data under the principle “as open as possible, as closed as necessary”. This has not yet been translated into firm Open Access mandates in funder grants at national level. As of the 2026 PNCDI IV calls (e.g. the Exploratory Research Projects — PCE 2026 competition), open access publication costs remain eligible expenditures, but open access is not a condition of grant.⁸¹⁶

The strategic framework (SNCISI Objective 1.2) explicitly introduces the obligation to prepare and implement data management plans in publicly funded research projects, in line with FAIR principles and open data requirements, supported by the eligibility of related costs and dedicated funding instruments. The White Book proposes introducing an “obligation” to prepare and update data management plans and to monitor compliance “starting with the new funding cycle,” indicating intended bindingness via future funding. Implementation of the SNCISI obligation to prepare DMPs in publicly funded research projects proposed obligation is ongoing and already embedded in certain funding instruments administrated by UEFISCDI, with further expansion expected.⁸¹⁷

The Open Government Partnership's Independent Reporting Mechanism Assessment of Romania's Commitment RO0062 (Open Access to Research) rated progress as limited, noting that the commitment's milestones were not fully implemented during the 2018-2020 action plan period.⁸¹⁸ However, this assessment refers to a previous policy cycle.

24.1.3. Scope of the policy

The SNCISI strategy, the White Book and the Action Plan all address both open access to publications and research data.

Furthermore, the documents also cover additional open science dimensions, such as citizen science, research infrastructure integration with EOSC, skills development for open science, and reform of research assessment systems.

The transition to open access is also explicitly linked to Romania's integration into the European Research Area (ERA), supporting international collaboration, increased visibility, and participation in European research infrastructures and initiatives.⁸¹⁹

24.1.4. Embargoes or immediate open access

Romania has not yet codified a single national rule on embargoes for open access to scientific publications or research data in binding legislation or in a standalone OA policy.

⁸¹⁵ OPUS Project (Open and Universal Science, Horizon Europe Grant Agreement No. 101058527), UEFISCDI in Romania: OPUS Pilot Implementation, available at: <https://opusproject.eu/pilots-achievements/uefiscdi-in-romania-opus-pilot-implementation/> [accessed April 2026].

⁸¹⁶ UEFISCDI/ANC, Pachet de informații — Proiecte de Cercetare Exploratorie (PCE) 2026 [Information Package, Exploratory Research Projects 2026 competition], <https://uefiscdi.gov.ro/resource-832222-Pachet-informatii-PCE-2026.pdf>, [in Romanian, summarised] by AI]

⁸¹⁷ Information provided by NPR.

⁸¹⁸ Open Government Partnership (OGP), Open Access to Research — Commitment RO0062, Romania OGP 2018–2020 National Action Plan, implementation period 2019–2020, available at: <https://www.opengovpartnership.org/members/romania/commitments/RO0062/> [accessed April 2026].

⁸¹⁹ Input from NPR.

However, Romania's strategic documents articulate a preference for immediate OA while recognising embargoed self-archiving as an option. The White Book specifies that, for green OA (self-archiving), deposition in a repository may occur before/simultaneously/after publication, but any embargo to providing open access to the deposited publication should be end no later than six months after publication and twelve months for social sciences and humanities. Hybrid OA should be accepted only during a defined transition within transformative agreements.

24.1.5. Copyright, rights retention and secondary publication rights

Romania does not currently have a specific statutory rights-retention model or a general secondary publication right.

The White Book licensing provisions are formulated in mandatory language, although the document itself is non-binding. Action 1.3 states that, "regardless of the publication route chosen, application of the open Creative Commons Attribution International Public Licence, preferably CC BY, or a licence with equivalent rights is necessary"; Action 1.4 requires publication metadata to be openly accessible under a CC0 licence; and Action 1.5 states that deposit of publications in a trusted open access repository "is firmly encouraged" regardless of route.

While no statutory rights-retention mechanism is currently in place, the strategic framework promotes open licensing and repository-based dissemination as the main instruments to enable access, reuse, and broader dissemination of publicly funded research outputs.

24.2. Context of open access policies

24.2.1. Training or guidance for researchers

The White Book specifically addresses the Open Science literacy and capacity building in Objective 6. Developing the skills needed to implement open science, defining key actions for implementation.

UEFISCDI, through the Open Science Knowledge Hub Romania (OSKH), provides structured training and guidance for researchers, supporting the development of open science skills and practices. This includes workshops, training sessions, consultations, and mentoring activities, as well as practical resources made available via the national open science portal⁸²⁰ (www.open-science.ro), which hosts guidelines, templates, and other support materials for implementation. These activities contribute to building national capacity for the adoption of open access and open science practices, including research data management, FAIR principles, and alignment with European initiatives such as EOSC.⁸²¹

The White Book sets a target that by 2030, 80% of researchers and staff in academic and research institutions should have the necessary skills to implement specific open science practices, and by 2026, the national curriculum should be expected to align to the European data stewards training framework.

In this context, capacity-building initiatives are already underway, e.g. recommendations for training programmes and competency development for different categories of stakeholders are currently being developed within a national project (e.g. ongoing European Social Fund-funded project "Adapting the educational offer to labour market demands through evidence-based policy making", implemented by UEFISCDI, 2024–2027), focusing on emerging skills and professional profiles required for open science, with particular emphasis on open access, FAIR and open data, and AI as a transversal dimension.⁸²²

⁸²⁰ Open Science Knowledge Hub România (OSKHR) / UEFISCDI, Romanian Open Science Portal (national open science information and resources platform), available at: [https://www.open-science.ro/](http://www.open-science.ro) [accessed April 2026].

⁸²¹ Input provided by NPR.

⁸²² Input provided by NPR.

24.2.2. Funding for open access

SNCISI explicitly states that investments will support the transition to open science and open access, including by ensuring that publication costs in open access journals and platforms are eligible under national RDI funding instruments. In line with this, the White Book's Action 1.8 calls for maintaining the eligibility of APCs

in accordance with Government Decision No. 134 of February 16, 2011, which approves the methodological norms for establishing expense categories for research and development activities and innovation stimulus financed from the state budget (Art. 7).

PNCIDI IV creates targeted instruments that directly finance and incentivise open access. Within the "Support subprogramme" under the 'Human Resources' or support area, there is a specific action "Rewarding the Romanian Journals for Open Access Publishing", which aims to reward Romanian journals practising open access, especially those achieving inclusion in DOAJ with the DOAJ Seal in the Diamond OA category, thereby recognising and financially supporting local journals that adopt high-quality open access models.

Another targeted action within PNCIDI IV, "Open Access Publishing", provides funding to support and encourage the publication of scientific papers in open access journals indexed in Journal Citation Reports (JCR, Clarivate) with above-average impact factor or Article influence score, and explicitly includes the preparation of the underlying scientific data for open access publication or repository deposit.

A major additional funding channel for open access to publications is provided by national transformative and read-and-publish agreements negotiated by the ANELIS PLUS consortium with key publishers (Springer Nature, Elsevier, Wiley), which enable corresponding authors from participating Romanian institutions to publish a quota of articles open access without paying APCs individually, with costs covered centrally at consortium level.

24.2.3. Repository requirements (incl. FAIR principles)

Repository requirements are specified mainly as policy expectations, complemented by practical guidance and capacity-building support at national level. The White Book recommends deposit of publications "at the time of publication" in a repository and refers to repositories validated in international registries (OpenDOAR/ROAR) and/or certified by OpenAIRE, which frames "trust" operationally through recognised registries and interoperability. In addition, practical guidance on repository development and alignment with European good practice is provided through national support structures, notably the Open Science Knowledge Hub Romania (UEFISCDI). These contribute to building capacity for trusted repositories and supporting their gradual alignment with EOSC requirements, particularly in terms of interoperability, long-term preservation, and reuse.

The strategic framework also highlights the need to consolidate and integrate existing national repositories and data infrastructures, currently described as fragmented, into the European Open Science Cloud (EOSC) and relevant disciplinary infrastructures, in order to ensure interoperability and European-level integration of research outputs.⁸²³

However, there do not currently seem to be specific requirements for trusted repositories or certifications such as CoreTrustSeal. The strategic target in the action plan (Strategic Objective 4, KPI) is that by 2030, "specific infrastructures, services, and digital repositories are adapted to open science and, where possible, integrated into the European Open Science Cloud."

⁸²³ Input provided by NPR.

24.2.4. Metadata and persistent identifier requirements

Romania's policy texts do include explicit metadata/PID expectations, especially in the White Book's prescriptions for repository-based dissemination and machine-actionable openness. The White Book recommends use of persistent identifiers for research outputs and contributors (explicitly mentioning DOI and ORCID) and states that metadata describing publications must be openly accessible with a CC0 licence.

24.2.5. Peer review approaches

Peer review approaches including open peer review or community-led peer review are not explicitly addressed in Romania's policy documents, . The only related acknowledgement identified is the reference to publishing in "platforms with free access (e.g., Open Research Europe)" in the SNCISI**, which** implicitly acknowledges alternative publishing models that may include open peer review.

24.2.6. Links to researcher assessment

Research assessment reform is linked to open science in the SNCISI and the White Book. The SNCISI mentions "the adoption of new evaluation metrics of research and researchers' careers (New Generation Metrics)" as part of the transition to open science. The White Book sets a target that by 2026, "a more diverse range of open science-specific research activities and outputs are recognized and rewarded in research assessment."

UEFISCDI has joined the Coalition for Advancing Research Assessment (CoARA) and has adopted an Action Plan for 2025–2028⁸²⁴ that foresees changes in evaluation practices to recognise a broader range of research outputs and open science practices, including a narrative CV. The agency is implementing "trials and pilots of new indicators for research assessment in the context of open science" through its participation in the OPUS (Open and Universal Science) project.⁸²⁵

However, a 2025 UEFISCDI survey of 1 342 researchers⁸²⁶ conducted within the Horizon Europe SECURE project on sustainable research careers, shows that traditional academic metrics, such as publications, citations, and journal impact factors, are currently perceived to be the most frequently encountered indicators in research assessment. These metrics are highly valued but also seen as limiting, as they fail to fully capture the diverse contributions researchers make. The survey further finds that, although these emerging practices are increasingly recognised, they still rank below traditional measures in terms of frequency and perceived importance within the current system.

24.2.7. Public funding thresholds

No public funding thresholds (i.e., percentage of public funding required for research output to fall under open access requirements) were identified in Romania's policy documents. Instead, the framework applies open access requirements broadly to publicly funded research, without introducing a specific threshold.

⁸²⁴ UEFISCDI, CoARA Action Plan 2024–2026 available at: <https://uefiscdi.gov.ro/resource-865880-Action-Plan-UEFISCDI-CoARA.pdf> [accessed April 2026].

⁸²⁵ OPUS Project (Open and Universal Science, Horizon Europe Grant Agreement No. 101058527), 'Transforming Research Assessment: The OPUS Project and Open Science in Europe', OPUS News, 3 October 2024, available at: <https://opusproject.eu/opus-news/transforming-research-assessment-the-opus-project-and-open-science-in-europe/> [accessed April 2026].

⁸²⁶ UEFISCDI / Open Science Knowledge Hub Romania, Perspectives on the Strengths and Weaknesses of the Research Assessment System in Romania — Survey Report (v2), Open Science Hub Romania Community, Zenodo, 31 March 2025, <https://zenodo.org/records/15195471>

24.2.8. Provisions for small and medium publishers

While there is no “SME publisher” regime set out as a dedicated legal category in the reviewed texts, Romania’s policy mix does include support that is relevant to smaller, often non-commercial journal publishers. PNCDI IV provides a funding instrument: for Romanian journals to adopt best practices for OA publishing, including DOAJ Seal accreditation and positioning within diamond OA, which is typically more compatible with smaller or community-run publishing models than APC-reliant frameworks.

These measures are also aligned with the UNESCO Recommendation on Open Science, which emphasises equity, inclusiveness, and support for non-commercial and community-led publishing models, such as diamond open access.

24.2.9. Identified costs of, or gains from, applying open access policies

Romania’s strategic documents (the SNCISI and the White Book) underline expected gains from open access and open science—such as increased visibility of research, improved international collaboration, enhanced innovation and more efficient use of public funds but do not yet offer a detailed, national-level cost–benefit analysis of open access policies for either publications or research data.

However, the strategic documents emphasise qualitative benefits such as increased visibility, reuse, research quality, collaboration, and efficiency of public funding, in line with international open science frameworks, such as the UNESCO framing of open science benefits.

Open access is also framed as a mechanism for increasing transparency in the use of public funding for research, enabling better traceability and accountability of publicly funded research outputs.⁸²⁷

SNCISI emphasises that investment in RDI should be oriented towards added value and impact, including openness and responsibility towards the socio-economic environment. The White Book discusses advantages such as better reuse of data, reduced duplication and increased innovation potential, again in qualitative terms, while acknowledging that policy changes and infrastructures require sustained investments.

On the cost side, Romania’s OA agreements with large publishers imply significant national expenditure for open access publishing and reading, but public documentation does not provide an overview of total APC spending or costs of agreements.

For research data, investment needs for repositories, data stewardship and FAIR implementation are recognised within SNCISI’s broader research infrastructure and digitalisation priorities, yet detailed costing and economic evaluation of data openness are not publicly documented; overall, evidence on costs and gains remains qualitative.

The White Book also emphasises the role of open access in facilitating knowledge reuse, reducing duplication of research efforts, and supporting reproducibility, which are core principles of both the national strategy and international open science frameworks.⁸²⁸

24.2.10. Security considerations

The SNCISI and White Book adopt the principle “as open as possible, as closed as necessary” for research data, implicitly acknowledging that some data may require restricted access for security or other legitimate reasons.

Beyond this, the Research Security Concept Note⁸²⁹ notes that Horizon Europe 2028-2032 should “maintain academic freedom, open science, and knowledge integration as foundational principles” and argues for risk-based, project-level assessment rather than blanket restrictions.

⁸²⁷ Input by NPR.

⁸²⁸ Input by NPR.

⁸²⁹ UEFISCDI, Policy Recommendation on Research Security in Romania – Concept Note, Bucharest, 2025, https://uefiscdi.gov.ro/resource-865271-Research-Security-Concept-Note_aprilie-2025.pdf reference provided by NPR.

24.2.11. References to simplification regarding open access

No specific provisions addressing regulatory or administrative simplification for open access compliance were identified although the White Book provides detailed implementation-oriented guidance under Strategic Objectives 1, 2 and 3 on how open access and open science practices should be operationalised.⁸³⁰

24.2.12. Role of artificial intelligence in open access policies

While no explicit provisions linking artificial intelligence to open access policies were identified, Romania's National Strategy on Artificial Intelligence (2024–2027) highlights the growing importance of data availability, interoperability, and research infrastructures. These elements are closely aligned with open science principles.⁸³¹

24.3. Implementation and monitoring of open access policies

24.3.1. Responsibility for implementation

Implementation responsibilities are distributed across multiple actors within a coordinated governance framework. At the strategic level, the Ministry of Education and Research (MEC) and the National Authority for Research (ANC) hold overall responsibility for RDI policy coordination and implementation of the SNCISI. This allocation reflects the 2025 governmental reorganisation, in which the former Ministry of Research, Innovation and Digitalisation (MCID) was dissolved and its research portfolio transferred to MEC, exercised through the ANC.

At the operational level, UEFISCDI plays a central role in RDI policy advice and implementing open science and open access provisions through funding instruments and programmes, as well as in coordinating national support structures such as the Open Science Knowledge Hub Romania (OSKH). OSKH provides guidance, capacity building, and facilitates alignment with European and international initiatives (e.g. EOSC, OpenAIRE, RDA, CoNOSC).

Research-performing organisations (RPOs) are responsible for institutional implementation, including the development of repositories, adoption of internal policies, and provision of support services. Individual researchers are responsible for complying with open access and open data requirements, such as publication practices and data management obligations.

At the same time, the current framework proposed a transition towards a more formalised governance model. While coordination and support are currently ensured to a significant extent through OSKH and related support structures,⁸³² the strategic framework envisages the establishment of a formal governance system, including an Open Science Council and a dedicated national support mechanism (Specific Objective no. 5 from the White Book). This mechanism is expected to play a coordinating role in supporting policy implementation, monitoring progress, developing institutional capacities, and facilitating alignment with European and international open science initiatives.⁸³³

24.3.2. Monitoring of individual policy elements

There are some SNCISI monitoring indicators (see also below) and the White Book mentions "the creation of a mechanism to monitor and support the transition to Open Science".⁸³⁴

⁸³⁰ Reference to implementation objectives provided by NPR.

⁸³¹ Input provided by NPR.

⁸³² Notably the national open science cloud initiative RO-NOSCI (coordinated by UEFISCDI, ICI Bucharest and IFIN-HH) and the OSKH-coordinated network of open science contact persons in research organisations

⁸³³ Text for this section largely provided by NPR.

⁸³⁴ Input provided by NPR.

24.3.3. Overall policy monitoring

The SNCISI includes monitoring indicators such as "Share WoS⁸³⁵ articles published in open access regime" and "Scientific articles with openly published research datasets" tracked through Web of Science and the National Research System (SRN).

The ministry, through its monitoring and evaluation functions for the SNCISI, holds overall responsibility for tracking progress. Dedicated open access monitoring mechanisms or compliance checking procedures, or enforcement bodies are not yet in place however, monitoring functions are embedded within existing RDI governance and UEFISCDI programme management structures and the envisaged national support and monitoring mechanism associated with the transition to open science.⁸³⁶

Overall monitoring of the national strategy framework is assigned to MEC through SNCISI's governance and evaluation arrangements, which include monitoring and evaluation reports and the use of advisory councils, with explicit reference to the Open Science Council as a new body supporting development of transition policies towards open science. The action plan reinforces "overall monitoring" through a KPI framework at national level.

24.3.4. Reporting arrangements

Formal reporting lines for open access implementation are embedded within broader RDI governance structures. UEFISCDI reports to MEC on programme implementation. The SNCISI monitoring framework tracks a set of indicators and the action plan provides a structured matrix of actions, responsible actors and indicators, which implies reporting from implementing actors (RPOs, UEFISCDI, other agencies) into a national coordination/monitoring function under MEC; however, the reviewed sources do not specify a formalised reporting protocol (e.g., annual reporting templates, mandated publication schedule, or a public repository for compliance reports) for OA-specific progress reporting.

24.3.5. Results of impact evaluations

Romania's key national documents position impact evaluation mainly as planned rather than already evidenced. While the strategic framework (SNCISI monitoring framework and the Action Plan's national KPI) includes a set of indicators associated with open access and open science (e.g. share of publications in open access, number of datasets made openly available), systematic evaluation results are not yet available, this is justified with implementation being still ongoing.⁸³⁷

At the same time, the current framework reflects a transition phase, where monitoring structures and evaluation mechanisms are being progressively developed and operationalised. As such, available evidence on impact remains largely indicative and based on planned targets and intermediate outputs, rather than on fully established evaluation results.

The Open Government Partnership's Independent Reporting Mechanism Assessment of Commitment RO0062 represents the most detailed external evaluation, concluding that progress was limited during the 2018-2020 period and that "if this commitment is completed as written, it will likely have a minor impact on the quantity of open access research."

The assessment noted that mapping of institutional OA practices and policies was incomplete, and the commitment to transpose OA rules into future funding programmes was not fully achieved at the time. However, as noted above, this assessment refers to the 2018–2020 action-plan cycle and predates the current strategic framework.

⁸³⁵ Web of Science

⁸³⁶ Input provided by NPR.

⁸³⁷ Input provided by NPR.

A European Commission Policy Support Facility Country Review (2022) addressed open science only in passing,⁸³⁸ noting that actions are further needed to improve the legislative and institutional framework, to increase the attractiveness of the research career or to support the implementation of 'open science' principles.⁸³⁹

25. Slovenia

25.1. General characteristics

25.1.1. Policies formulated as strategies, funder mandates and/or legislation

Slovenia's open access policy framework encompasses a national strategy, binding legislation, implementing decrees, an action plan and funder mandates.

The foundational policy instrument was the National Strategy of Open Access to Scientific Publications and Research Data in Slovenia 2015–2020,⁸⁴⁰ adopted by the government in September 2015, which established the conceptual basis and vision for open access. The National Strategy set mandatory open access for all peer-reviewed publications resulting from nationally funded research in 2015–2020 and piloted open access to research data. The strategy functioned as a non-binding strategic document.

This strategy has been superseded by its formal incorporation into binding legislation. The primary legislative instrument is the Scientific Research and Innovation Activities Act (ZZrID), which entered into force in January 2022.⁸⁴¹ Open science is referenced throughout multiple sections of the ZZrID, including Articles 2(6), 12(2), 16, 20, and 31, with Articles 40–42 dedicated entirely to open science provisions.

Following a 2024–2025 amendment to ZZrID, Slovenia introduced an explicit secondary publishing right (SPR) by adding paragraphs 6 and 7 to Article 41, granting researchers or their institutions a non-waivable right to make research results from publicly co-financed projects available in a public open access repository immediately upon acceptance for publication, even where copyright has otherwise been transferred.⁸⁴²

The Resolution on the Slovenian Scientific Research and Innovation Strategy 2030 (ReZrIS30), adopted by the National Assembly on 23 March 2022, provides the overarching strategic framework, with Goal 6.2 specifically dedicated to "Open Science for Improving the Quality, Efficiency and Responsiveness of Research."⁸⁴³

⁸³⁸ The report does address open access in a different sense, namely open access to infrastructures.

⁸³⁹ European Commission, Directorate-General for Research and Innovation, Country Review of the Romanian Research and Innovation System, Horizon Europe Policy Support Facility (PSF), final report, manuscript completed February 2022, Publications Office of the European Union, Luxembourg, 2022, ISBN 978-92-76-49110-1, <https://doi.org/10.2777/28266>. Available at: https://projects.research-and-innovation.ec.europa.eu/sites/default/files/rio/report/PSF-RO-Final-Report_03.06.2022.pdf

⁸⁴⁰ Ministry of Higher Education, Science and Innovation of the Republic of Slovenia (MVZI), National Strategy of Open Access to Scientific Publications and Research Data in Slovenia 2015–2020, adopted by the Government of the Republic of Slovenia, September 2015, available at: <https://www.gov.si/assets/ministrstva/MVZI/Znanost/do-2020-Strategije-predpisi-in-drugi-dokumenti/National-strategy-of-open-access-to-scientific-publications-and-research-data-in-Slovenia-2015-2020.pdf> [accessed April 2026].

⁸⁴¹ Republic of Slovenia, Zakon o znanstvenoraziskovalni in inovacijski dejavnosti [Scientific Research and Innovation Activities Act (ZZrID)], No. 186/2021, entered into force January 2022, Uradni list RS (Official Gazette of the Republic of Slovenia). Unofficial English translation provided by the Legal Information System of the Republic of Slovenia (PISRS), available at: <https://pisrs.si/api/datoteke/Download?path=/Prevodi/EN-2021-01-3695.doc> [accessed April 2026].

⁸⁴² Knowledge Rights 21, 'Slovenia Adopts Secondary Publishing Right', Knowledge Rights 21 News, 2025, available at: <https://www.knowledgerights21.org/news-story/slovenia-adopts-spr/> [accessed April 2026].

⁸⁴³ National Assembly of the Republic of Slovenia, Resolucija o Slovenskem znanstvenoraziskovalnem in inovacijskem sistemu 2030 [Resolution on the Slovenian Scientific Research and Innovation Strategy 2030 (ReZrIS30)], adopted 23 March 2022, Uradni list RS, No. 41/2022. English version available at: <https://www.gov.si/assets/ministrstva/MVZI/Znanost/Nacionalne-strategije-in-dokumenti/Resolution-on-the-Slovenian-Scientific-Research-and-Innovation-Strategy-2030.pdf> [accessed April 2026].

The Decree on the Implementation of Scientific Research in Accordance with the Principles of Open Science was adopted by the government on 25 May 2023, providing detailed operational requirements.⁸⁴⁴ An accompanying Action Plan for Open Science, also adopted in May 2023, specifies measures, indicators, responsible entities, timelines, and funding sources for implementing the above-mentioned Goal 6.2⁸⁴⁵ of the 2030 strategy.

At the funder level, the Slovenian Research and Innovation Agency (ARIS, formerly ARRS) explicitly states that it follows open science, scientific integrity, and gender diversity policies in line with the national strategy.⁸⁴⁶ The ARIS Recommendations for the Implementation of Open Science document serves as a technical guide to align Slovenian national research funding with Horizon Europe standards. Key recommendations include mandatory open access for publications via repositories using CC BY licenses, research data management according to FAIR principles with a mandatory DMP, rights retention for authors, and encouragement of assessment based on quality and impact rather than traditional metrics.⁸⁴⁷

For research data, the policy framework operates in parallel, with Articles 40–42 of the ZZrID establishing FAIR principles for research data management, reinforced by the Decree's specific provisions on data management plans and repository deposit requirements.

25.1.2. Bindingness in terms of implementation

Slovenia's open access requirements are binding through legislation. Article 41 of the ZZrID establishes a mandatory obligation: research activities receiving at least 50% public co-financing must provide open access to all peer-reviewed scientific publications, research data and other research results.

The Decree on the Implementation of Scientific Research specifies in detail the requirements for implementation, including which versions of publications must be deposited, repository specifications, and timelines. Non-compliance would constitute a breach of funding conditions, with potential consequences for future funding eligibility.

25.1.3. Scope of the policy

Slovenia's open access framework has a comprehensive scope covering publications, research data, and other research outputs. Article 41 of the ZZrID explicitly addresses peer-reviewed scientific publications, research data, and "other research results." The Decree further specifies that the provisions apply to the Version of Record (VoR) or Author Accepted Manuscript (AAM) for publications, and to research data requiring FAIR-compliant deposit in trusted repositories. Beyond journal articles, the scope extends to scientific monographs and book chapters (covered under Article 41 and 42 provisions) software and other digital research objects (addressed in the Action Plan's infrastructure provisions).

The Action Plan for Open Science explicitly addresses infrastructure development for diverse output types, including provisions for storing and archiving software, workflows, containers,⁸⁴⁸ educational and multimedia materials, and streaming content.

⁸⁴⁴ Government of the Republic of Slovenia, Uredba o izvajanju znanstvenoraziskovalne dejavnosti v skladu z načeli odprte znanosti [Decree on the Implementation of Scientific Research in Accordance with the Principles of Open Science], adopted 25 May 2023, Uradni list RS, No. 59/2023. English version available at: <https://www.gov.si/assets/ministrstva/MVZI/Znanost/Obzorje-Evropa/Novice/2023-Open-Science/Decree-on-the-implementation-of-scientific-research-work-open-science.pdf> [accessed April 2026].

⁸⁴⁵ Ministry of Higher Education, Science and Innovation (MVZI), Akcijski načrt za odprto znanost [Action Plan for Open Science], adopted May 2023 English version available at: <https://www.gov.si/assets/ministrstva/MVZI/Znanost/Nacionalne-strategije-in-dokumenti/2023-Action-Plan-Open-Science-Slovenia.pdf> [accessed April 2026].

⁸⁴⁶ Slovenian Research and Innovation Agency (ARIS), Mission, Policies and Strategy, available at: <https://www.aris-rs.si/en/agencija/mission.asp> [accessed April 2026].

⁸⁴⁷ Slovenian Research and Innovation Agency (ARIS), Priporočila za izvajanje odprte znanosti za prijavitelje na razpise in pozive ARIS [Recommendations for the Implementation of Open Science for Applicants to ARIS Calls], 2024, available at: <http://www.aris-rs.si/si/obvestila/24/inc/3/Priporocila%20AGA.pdf> [accessed April 2026; in Slovenian; AI-assisted summary used for the purposes of this study].

⁸⁴⁸ Packaged software environments that bundle code together with its dependencies so that computational analyses can be re-executed and reproduced.

For research data specifically, Slovenia's OA framework distinguishes between data underlying publications (which should be deposited to enable verification and reproducibility) and other research data generated through publicly funded research, which must comply with FAIR principles and the "as open as possible, as closed as necessary" paradigm established in European policy.

The implementing decree also mentions responsible metrics and citizen science.

25.1.4. Embargoes or immediate open access

Slovenia's legislation requires immediate open access without embargoes for research meeting the 50% public co-funding threshold. Article 41 of the ZZrID, combined with the implementing decree, establishes that open access must be provided without delay upon publication or acceptance. This zero-embargo requirement aligns Slovenia with cOAlition S/Plan S principles.

The decree specifies implementation mechanisms: for publications, the machine-readable digital format of the published version (VoR) or reviewed manuscript (AAM) accepted for publication must be saved in a trustworthy repository immediately. During a transitional period, as determined by cOAlition S, costs of open access publications in hybrid journals remain eligible. In May 2025 the implementing decree was amended by extending this transitional period until the end of June 2029.⁸⁴⁹ At the same time a national research project entitled "Development of a transition strategy to sustainable scientific publishing models aligned with ERA good practices" was started with the aim to outline future policies of Slovenia in this area.

However, the framework recognises that certain circumstances may prevent immediate openness. Exceptions are permitted where intellectual property rights, personal data protection, or security concerns for individuals or the state justify restricted access.

These exceptions must be explicitly justified and documented. For research data, the "as open as possible, as closed as necessary" principle governs the application of restrictions.

The May 2025 adoption of Secondary Publishing Rights (SPR) strengthened the immediate access framework by providing a legal basis for researchers or institutions to make outputs openly accessible immediately upon acceptance for publication, regardless of publisher restrictions. Paragraphs 6 and 7 of the amended Article 41 establish that contractual provisions contrary to SPR are null and void, effectively invalidating embargo clauses in publishing contracts for publicly funded research (with the 50% threshold).

25.1.5. Copyright, rights retention and secondary publication rights

Slovenia's legislative framework addresses copyright through both rights retention obligations and secondary publishing rights. The ZZrID initially introduced a Rights Retention (RR) obligation in 2021, requiring recipients of research funding with 50% or more public co-financing to manage their copyrights in ways that enable deposit in open access repositories (article 41.1). This placed an obligation on researchers and institutions to retain sufficient rights when negotiating with publishers.⁸⁵⁰

The May 2025 amendment to the ZZrID introduced Secondary Publishing Rights (SPR), establishing an additional legal mechanism. The new paragraphs 6 and 7 of Article 41 are as follows:

(6) If the provider of scientific research activities or the researchers do not individually manage the rights in accordance with the first paragraph of this Article, the researcher or the provider of scientific research activities may publish or make available to the public the results of the scientific research activity in a public open access repository as soon as the result of the research has been accepted for publication, with due acknowledgement of the researcher and the source of the first publication.

⁸⁴⁹ Government of the Republic of Slovenia, Amendment to the Decree on the Implementation of Scientific Research in Accordance with the Principles of Open Science (Uredba o spremembi Uredbe o izvajanju znanstvenoraziskovalne dejavnosti v skladu z načeli odprte znanosti), May 2025 available at: <https://pisrs.si/pregledPredpisa?id=URED9331> [accessed April 2026; in Slovenian]. Reference provided by NPR.

⁸⁵⁰ See discussion at Klawitter, E., 'Rights Retention and Secondary Publishing Right in Slovenia', Wolters Kluwer Copyright Blog, available at: <https://legalblogs.wolterskluwer.com/copyright-blog/rights-retention-and-secondary-publishing-right-in-slovenia/> [accessed April 2026].

(7) Contractual provisions contrary to the preceding paragraph shall be null and void.”⁸⁵¹

The framework specifies general mandatory licensing, described as open license that allows anyone to freely use, modify and share the scientific publication in accordance with the principles of scientific research ethics (such as CC BY, CC BY-SA or equivalent) for all publications. According to ARIS Recommendations for the Implementation of Open Science, the use of a Creative Commons Attribution (CC BY) license is mandatory for peer-reviewed journal articles. More restrictive licenses like CC BY-NC or CC BY-ND are permitted for monographs and long-form works to protect design⁸⁵² or commercial value.

25.2. Context of open access policies

25.2.1. Training or guidance for researchers

The Centre for Quality Assurance in Scientific Communication encourages and supports the use of open science practices in research and public involvement in scientific research processes. It was created within the framework of Action 6.2.1/4 (Knowledge and skills for open science) of the Open Science Action Plan. The implementers of the action are the Library of the University of Maribor, the Library of the University of Primorska, the Library of the University of Nova Gorica and the Central Technical Library of the University of Ljubljana.⁸⁵³

The Open Academy (Odporna akademija) programme, operated by the Central Technical Library of the University of Ljubljana (Centralna tehniška knjižnica Univerze v Ljubljani, CTK) in collaboration with external experts, delivers training for researchers, higher education teachers, students, and other stakeholders. Training sessions cover research data management, FAIR principles, copyright and ethical issues, citizen science, and repository use. Sessions are conducted in various formats, primarily via videoconferencing, with recordings made available online under Creative Commons CC-BY licenses.⁸⁵⁴

As part of the project "Support for the Implementation of Open Science Principles in Slovenia" (SPOZNAJ),⁸⁵⁵ which has been selected for funding in a public tender of the Recovery and Resilience Plan, the Central Technical Library at the University of Ljubljana and twenty public research organisations are aligning their operations with ReZrIS30, (the Resolution on the Slovenian Scientific Research and Innovation Strategy 2030, introduced above), ZZrID, and the Decree on the Implementation of Scientific Research in Accordance with the Principles of Open Science. This alignment will ensure that their operations comply with the provisions regarding open science in the European Research Area. The project partners are conducting training sessions for various open science stakeholders, provide specialised training on handling FAIR and open-access research data, prepare a handbook on open science, and establish support mechanisms for open science within their respective organisations.

⁸⁵¹ Republic of Slovenia, ZZrID as amended May 2025, available at: <https://pisrs.si/pregledPredpisa?id=ZAKO7733> [accessed April 2026 translated into English in browser. English translation of paragraph 41 amendments also available at <https://www.odipi.si/en/spr-amendment-zzrid-c-published-in-the-official-gazette-of-the-republic-of-slovenia>].

⁸⁵² While a short journal article relies almost entirely on text and basic data charts, a monograph is a comprehensive, long-form book that often involves significant creative and structural design work.

⁸⁵³ Odporna knjižnica (Open Library) / Centre for Quality Assurance in Scientific Communication, About the Centre (consortium of University Library Maribor, University Library Primorska, University Library Nova Gorica, and Central Technical Library of the University of Ljubljana), available at: <https://odprta-knjiznica.si/en/> [accessed April 2026].

⁸⁵⁴ Odporna knjižnica (Open Library), Open Academy (Odporna akademija), available at: <https://odprta-knjiznica.si/en/services/open-academy/> [accessed April 2026]

⁸⁵⁵ See SPOZNAJ Project (Supporting Implementation of Open Science Principles in Slovenia), Project Presentation, available at: <https://projekt-spoznaj.si/en/project-presentation/> [accessed April 2026]. European Commission project page: https://commission.europa.eu/projects/spoznaj-supporting-implementation-open-science-principles-slovenia-digitalisation-education-science_en [accessed April 2026].

Besides the SPOZNAJ project's research data management handbook⁸⁵⁶ the DiRROS Data portal also provides researchers with information on research data management, repository deposits, and FAIR compliance, including annotated DMP templates.⁸⁵⁷ Many publicly funded research organisations are providing additional information and support to their researchers and doctoral students.⁸⁵⁸

ARIS's 2024 Recommendations for the Implementation of Open Science translate Horizon Europe Annex 5 obligations (i.e. open science research data management dissemination) into user-oriented guidance for Slovenian grantees.

In addition to SPOZNAJ project the Action Plan for Open Science allocates substantial funding for training activities: €3.8 million for the information support network (A6.2.1/4.1), €1.4 million for copyright and ethics support (A6.2.1/4.2), and €420 000 for online FAIR data training (A6.2.1/4.3).

25.2.2. Funding for open access

Following a 2025 amendment to ZZrID and to the decree on the implementation of scientific research work in accordance with the principles of open science, ARIS may finance the costs of open access publishing within the framework of contracts with publishers that include reading and open access publishing (APC vouchers). If this is for any reason not possible, ARIS may finance the costs of publishing in open access within the framework of contracts on the implementation of scientific research activity (for example, contracts on stable financing of scientific research activity, contracts on co-financing of research projects or contracts on other forms of co-financing).⁸⁵⁹

Authors must provide immediate open access to the machine-readable digital version in a trusted repository. Articles must be published under an open license, typically CC BY or an equivalent that allows free use and sharing.⁸⁶⁰

Agreements with publishers that include reading and open access publishing⁸⁶¹ have been negotiated with major publishers through the CONNECTK consortium, coordinated by CTK, and the COSEC consortium (Consortium of Slovenian Electronic Collections), coordinated by the National and University Library (Narodna in univerzitetna knjižnica, NUK).^{862,863}

The Action Plan for Open Science allocates specific budgets for publishing infrastructure: activity A6.2.3/2.1 addresses renovation of the system for co-financing international scientific journals to enable transformative agreements, while A6.2.3/2.2 ensures funds for APC financing where transformative coverage is unavailable. Under measure 6.2.6, dealing with open access national scientific publishing, several activities and pertaining budget are introduced as well.

For infrastructure funding, the Recovery and Resilience Plan provided substantial resources: €4 million for the SPOZNAJ project supporting institutional adaptation to open science principles, and €21.56 million for establishing two data centres for long-term storage of research data and for optical backbone connections network with at least 100 Gb/s transmission speed, both managed by ARNES (Akademska in raziskovalna mreža Slovenije, i.e. the Academic and Research Network of Slovenia).

⁸⁵⁶ SPOZNAJ Project / MVZI, Research Data Management Handbook available at: <https://nrrp.odprtaznanost.si> [accessed April 2026].

⁸⁵⁷ DiRROS Data Portal (Central Technical Library, University of Ljubljana), Research Data Management available at: <https://dirrosdata.ctlk.uni-lj.si/en/>

⁸⁵⁸ University of Ljubljana, Research Data Management for Doctoral Students, available at: <https://www.uni-lj.si/en/study/doctoral-study/research-data-management> [accessed April 2026].

⁸⁵⁹ Information provided by NPR.

⁸⁶⁰ Slovenian Research and Innovation Agency (ARIS), Merila za ugotavljanje zaupanja vrednosti repozitorijev [Criteria for Identifying Trusted Repositories], December 2024, available at: <https://www.aris-rs.si/sl/akti/24/merila-repozitoriji-dec24.asp> [accessed April 2026; in Slovenian; translated via browser translation function].

⁸⁶¹ While the term „transformative agreement“ has been discontinued by cOAlition S it is still widely accepted which is why the term is used in other parts of this report.

⁸⁶² See CONNECTK Consortium (Consortium of Slovenian Academic and Research Institutions, coordinated by the Central Technical Library of the University of Ljubljana), CONNECTK — Prihodnost je odprta [The Future is Open], available at: <https://connectk.si/> [accessed April 2026]. COSEC (Consortium of Slovenian Electronic Collections / Konzorcij elektronskih virov za slovensko akademsko in raziskovalno skupnost), Ljubljana, available at: <https://cosec.nuk.uni-lj.si/en/> [accessed April 2026].

⁸⁶³ COSEC (Consortium of Slovenian Electronic Collections), National and University Library (Narodna in univerzitetna knjižnica, NUK), available at: <https://cosec.nuk.uni-lj.si/en/>, accessed 27 July 2026.

The Action Plan national funding totals €16.79 million for open science implementation through 2030.

25.2.3. Repository requirements (incl. FAIR principles)

The Decree on the Implementation of Scientific Research specifies that open access is implemented through deposit of machine-readable digital formats in trustworthy repositories for scientific publications. ARIS set up criteria for identifying trusted repositories⁸⁶⁴ and the Centre for Quality Assurance in Scholarly Communication publishes a list of recommended repositories.⁸⁶⁵

FAIR principles are mandatorily required under Articles 40–42 of the ZZrID. Article 41 specifically requires that research data must be published or made accessible in a manner, ensuring findability, accessibility, interoperability, and reusability (i.e. FAIR). The decree and action plan further specify that projects must develop DMPs and deposit data in repositories that provide long-term preservation and interoperability.

The action plan includes measures for upgrading bibliographic records in the COBISS system with FAIR-compliant metadata (A6.2.1/3.5), establishing a Slovenian Open Science Monitor aligned with EOSC (A6.2.1/3.6), and creating systems for long-term digital preservation (A6.2.1/3.7).

25.2.4. Metadata and persistent identifier requirements

The Action Plan for Open Science establishes activity A6.2.1/3.8 for establishment of a national service for assigning persistent digital unique identifiers (DOIs) to digital objects and other digital entities, to be operational by 2024. Activity A6.2.1/3.5 requires upgrading bibliographic records in the COBISS system with metadata elements enabling FAIR-compliant description of digital objects, with expansion of the COMARC metadata schema planned through 2026.

Data management plans, mandatory for publicly funded research, must include specifications for metadata standards and persistent identifiers to be applied to research data.

Persistent identifiers for publications and datasets (DOIs) and for researchers (ORCID) are actively promoted in national guidance.

25.2.5. Peer review approaches

The Action Plan includes activity A6.2.3/2.8 establishing a system of open peer reviews in the repositories of the national open access infrastructure, with processes to support open peer review to be established by 2025.

Diamond open access publishing is explicitly supported under measure M6.2.6/3 of the action plan.

25.2.6. Links to researcher assessment

Article 40 of the ZZrID establishes that evaluation and assessment of researchers, research organisations, research programmes, and projects must advance the principles of open science, with specific reference to international principles summarised in the DORA Declaration, Leiden Manifesto, and Hong Kong Principles.

⁸⁶⁴ Slovenian Research and Innovation Agency (ARIS), Merila za opredelitev zaupanja vrednih repozitorijev za znanstvene publikacije, znanstvene podatke in druge rezultate raziskav ter večnamenske repozitorije [Criteria for Identifying Trusted Repositories for Scientific Publications, Research Data and Other Research Results and Multi-Purpose Repositories], Version 1.0, adopted by the ARIS Scientific Council at its 104th session, 18 December 2024, ARIS, Ljubljana. Policy page available at: <https://www.aris-rs.si/sl/akti/24/merila-repozitoriji-dec24.asp> [accessed April 2026; in Slovenian; translated via browser translation function]. Reference provided by NPR

⁸⁶⁵ Odprta knjižnica (Open Library) / Centre for Quality Assurance in Scientific Communication, Open Science Infrastructure — Recommended Repositories, available at: <https://odprta-knjiznica.si/en/services/open-science-infrastructure/> [accessed April 2026].

The action plan dedicates measure M6.2.2 to "Evaluation of scientific research activities in accordance with the principles of Open Science," with specific activities for amending regulations of ARIS (M6.2.2/1), NAKVIS (the national quality assurance agency for higher education, M6.2.2/2), and individual research-performing organisations (M6.2.2/3). Activity A6.2.2/5.1 encourages institutions to join the Coalition for Advancing Research Assessment (CoARA) and establishes a national consortium to support implementation of assessment reform.

Many Slovenian public research organisations have joined CoARA⁸⁶⁶ and a Slovenian CoARA National Chapter is active. The University of Ljubljana has incorporated open science requirements into its statutes and its strategy for 2022–2027, including requirements for PhD students to prepare FAIR-compliant data management plans.⁸⁶⁷

The incentive structure created by activity A6.2.2/4.1 requires amendment of internal regulations at research-performing organisations to promote open science implementation in recruitment, career advancement, and performance assessment processes. Early-career researcher support (A6.2.2/4.2) includes promoting open science practice through doctoral education and recognition schemes for notable achievements in open science. In 2025 the Slovenian Open Science Community has established an "Open Science Awards", with the first award ceremony to take place in 2026.⁸⁶⁸

25.2.7. Public funding thresholds

Slovenia applies a 50% public co-financing threshold for open access requirements (Article 41 of the ZZrID). The threshold applies equivalently to both publications and research data.

25.2.8. Provisions for small and medium publishers

In Slovenia small and medium publishers are prevailing. Due to this fact ARIS is traditionally publishing calls for co-financing the publication of domestic periodical scientific publications⁸⁶⁹ and scientific monographs.⁸⁷⁰ Open access to digital versions is a mandatory requirement for co-financing.

Due to already established good practices Slovenian open access policy does not contain dedicated legal provisions exclusively targeting small and medium publishers, but its focus on publicly financed national journals and monographs implies that many smaller publishers are subject to open access obligations and benefit from generic support. Article 42 ZZrID requires that scientific journals published by entities based in Slovenia and fully financed from public funds provide open access to their content.

The action plan's measure on "open access national scientific publishing" (M6.2.6) aims to strengthen Slovenian scholarly publishing in line with open science principles, but it does not distinguish between small and large publishers.

Activity A6.2.6/2.1 establishes the Slovenian network of scholarly publishers advocating for open science, creating collaborative infrastructure for smaller publishers to share resources and expertise. The planned joint portal for scientific books and journals (I6.2.6/2.1.2) will enhance the visibility and discoverability of content from national publishers.⁸⁷¹

⁸⁶⁶ CoARA (Coalition for Advancing Research Assessment), Signatories — Slovenia, available at:

<https://www.coara.org/signatoriescategories/slovenia/>

⁸⁶⁷ Reported at EIFL (Electronic Information for Libraries), 'Slovenia: Open Science Driving Change and Innovation', EIFL Blog, available at: <https://www.eifl.net/blogs/slovenia-open-science-driving-change-and-innovation> [accessed April 2026].

⁸⁶⁸ Information provided by NPR.

⁸⁶⁹ Slovenian Research and Innovation Agency (ARIS), Public Call for Co-Financing Domestic Periodical Scientific Publications 2025–2026, available at: <https://www.aris-rs.si/sl/infra/tisk/razpisi/24/razp-zpp-25-26.asp> [accessed April 2026; in Slovenian; translated via browser translation function]. Information provided by NPR.

⁸⁷⁰ Slovenian Research and Innovation Agency (ARIS), Public Call for Co-Financing Scientific Monographs 2025, available at: <https://www.aris-rs.si/sl/infra/tisk/razpisi/25/razp-monogr-25.asp> [accessed April 2026; in Slovenian; translated via browser translation function]. Information provided by NPR.

⁸⁷¹ Slovenian Open Science Publishing Portal (revije.openscience.si), joint portal for scientific books and journals of Slovenian publishers, available at: <https://revije.openscience.si> [accessed April 2026]. Information provided by NPR.

Support for diamond open access under measure M6.2.6/3 could be potentially relevant for small and medium publishers. Diamond open access journals charge no fees to either authors or readers, so publishers operating this model do not need to generate income from article processing charges (APCs), which is a revenue model that tends to favour large publishers with high publication volumes.

25.2.9. Identified costs of, or gains from, applying open access policies

The Action Plan for Open Science provides detailed cost projections for implementation. The total budget of the action plan's activities through 2030 is €16.79 million of national funds, distributed across open science infrastructure, training, publishing support, citizen science and assessment reform activities. Annual expenditure ranges from approximately €1.3 million in 2023 to €2.5 million in 2026–2030.

Additional resources from the Recovery and Resilience Plan contribute approximately €25.58 million: €4 million for the SPOZNAJ project and €21.56 million for data storage (two research data centres) and optical backbone connections network infrastructure.

Specific cost lines in the action plan include: €4 million for human resource development supporting data stewards, data librarians, archivists, and infrastructure technicians (A6.2.1/2.2); €1.8 million for operation and development of national open science infrastructure (A6.2.1/3.2); €3.8 million for the information support network providing researcher training (A6.2.1/4.1); and €2 million for citizen science projects (A6.2.5/2.2).

The policy documents do not provide comprehensive quantification of expected economic gains, though the strategic rationale emphasises benefits including: preventing duplication in research through better access to existing findings; increasing efficiency of research processes; improving cost-effectiveness of public R&D expenditure; enhancing visibility and impact of Slovenian research internationally; and facilitating knowledge transfer to society and industry.

25.2.10. Security considerations

ZZrID Article 41(2) states that research results co-financed by public sources and subject to open access obligations must remain “open as possible, closed as necessary”. Broader concerns such as cyber-security, economic competition and geopolitical risks are not explicitly mentioned in open access legislation or strategy texts.

25.2.11. References to simplification regarding open access

There are no direct references to regulatory or administrative simplification specifically regarding open access in the Slovenian OA framework documents.

25.2.12. Role of artificial intelligence in open access policies

Slovenia's action plan explicitly addresses artificial intelligence in open science through activity A6.2.1/3.12: establishment of the AI4SI ecosystem of cloud services to support open science, linked with AI support ecosystems at EU and broader levels. This €360 000 initiative, led by the Jožef Stefan Institute with participation from UM FERl,⁸⁷² aims to deploy AI capabilities in service of open science goals.

The action plan also references establishing collaboration with the National Observatory for Artificial Intelligence (A6.2.4/2.5: Open Science Observatory).

⁸⁷² Faculty of Electrical Engineering and Computer Science at the University of Maribor.

25.3. Implementation and monitoring of open access policies

25.3.1. Responsibility for implementation

The Ministry of Higher Education, Science and Innovation (MVZI) holds overall policy coordination responsibility, prepares and proposes legislation and decrees, allocates implementation funding, and represents Slovenia in EU-level forums including ERA governance structures. The ministry led preparation of the decree on Open Science and the action plan.

As the national research funding agency, ARIS implements open access requirements through funding regulations, manages the public call for APC reimbursement, updates funding instruments to align with open science requirements, maintains the list of trusted repositories, and coordinates transformative agreements. ARIS bears primary responsibility for measures related to funding conditions and assessment criteria reform (M6.2.2/1, M6.2.3).

Universities and research institutes are responsible for implementing open science at the institutional level, including: establishing support structures (data stewards, open science officers); amending internal regulations for habilitation⁸⁷³ and career assessment; ensuring researcher compliance with deposit requirements; and operating institutional repositories. Activities A6.2.2/3.1 and A6.2.2./4.1 explicitly assign regulatory amendment responsibility to public research organisations. s. The publicly funded research organisations are organised and supported in implementing open science by the SSOZ (Slovenian Open Science Society).⁸⁷⁴

Central Technical Library (CTK) and university libraries: CTK coordinates the national information support network (Open :Library), operates DiRROS, delivers training through the Open Academy, and manages the SPOZNAJ project.

The Institute of Information Sciences (IZUM) maintains bibliographic infrastructure and implements metadata and identifier standards. Activities A6.2.1/3.3, A6.2.1/3.4 and A6.2.1/3.5 assign specific infrastructure responsibilities to IZUM.

Individual researchers bear responsibility for managing copyright according to rights retention requirements, depositing publications and data in compliant repositories, preparing data management plans, and complying with FAIR principles for outputs from publicly funded research.

25.3.2. Monitoring of individual policy elements

MVZI holds overall monitoring responsibility for the action plan's implementation, including tracking progress against indicators and timelines specified in table 2 of the action plan. By doing this, MVZI is supported by a working group for coordinating the management and financing of the development of the national open science ecosystem (Minister's decision, 7.6.2024, MVZI). Its task is to monitor and to coordinate the activities related to the ReZrIS30, related legislation, Action plan for Open Science and ERA policy agenda for the introduction of Open Science principles into the operation of publicly funded research organisations in Slovenia. The members are MVZI (leading member), ARIS, NAKVIS and SSOZ (Slovenian Open Science Society). Infrastructural public institutes ARNES and IZUM are members through the SSOZ.⁸⁷⁵

⁸⁷³ In some countries (such as Austria or Slovenia) habilitation is the highest academic qualification process required to become a full professor or independent senior lecturer, representing the official recognition of a researcher's ability to independently conduct research and teach at the university level.

⁸⁷⁴ Slovenska skupnost odprte znanosti (SSOZ — Slovenian Open Science Society / Slovenian Open Science Community), available at: <https://odprtaznanost.si> [accessed April 2026]. and M6.2.4 of the Action Plan for Open Science. Information provided by NPR.

⁸⁷⁵ Information provided by NPR.

ARIS monitors compliance with open access requirements as a condition of research funding. Through the SICRIS system and COBISS integration, ARIS can track researcher bibliographies and verify deposit of publications in compliant repositories. ARIS also monitors progress on assessment reform measures (M6.2.2). Further adaptations of these systems as well as specific functions of the Slovenian Open Science Monitor are envisaged to support ARIS in performing these tasks.⁸⁷⁶

Activity A6.2.4/2.5 establishes an Open Science Observatory within the Slovenian Open Science Community (SSOZ) responsible for regular monitoring of open science developments. Activity A6.2.1/3.1 established a National Open Science Infrastructure Council to monitor infrastructure development and coherence. Both activities are functioning.⁸⁷⁷

NAKVIS monitors compliance with open science requirements in higher education quality assurance processes following amendment of NAKVIS regulations under activity A6.2.2/2.1.

The action plan specifies that the Slovenian Open Science Monitor (A6.2.1/3.6) will quantitatively demonstrate Slovenia's performance in open access to research publications, data, software, and other digital objects, see also below.

25.3.3. Overall policy monitoring

MVZI bears primary governmental responsibility for monitoring aggregate implementation of the ZZrID, decree, and action plan. The independent Evaluation of the implementation of ReZrIS30 was carried out for the MVZI internal use and action in November 2025. It includes performance of Open Science implementation as well.⁸⁷⁸

The Slovenian Open Science Monitor contains digital objects, of which at least one author is studying or working in Slovenia. The progress of open science in Slovenia is measured with indicators of the openness of scientific publications, research data, software, doctoral dissertations, and other digital objects. The basis for the monitor is metadata from the national bibliographic system COBISS, Slovenian open access infrastructure and the national open data portal.⁸⁷⁹

25.3.4. Reporting arrangements

MVZI is reporting on a two-year basis the achievements in implementing ReZrIS30 to the Government of the Republic of Slovenia. Report includes Open Science KPIs (as of 2026 it will include Open Science Monitor data as well).

ARIS reports on the implementation of Open Science to the ministry as part of its regular reporting.

All the actors involved in implementation of Action Plan for Open Science (ARIS, NAKVIS, IZUM, ARNES and publicly funded research organisations) are reporting as part of activities of MVZI working group for coordinating the management and financing of the development of the national open science ecosystem.

All publicly funded research organisations (universities and research institutes, RPOs) are planning their Open Science implementation in the dedicated part of their yearly work plan and are reporting their results back to the ministry in their yearly reports. The planning and reporting are directly related to national Action Plan for Open Science.

Besides, RPOs need to assess their performance in Open Science also as part of their institutional evaluations and self-evaluations. These activities are governed by ARIS.

Besides reporting at the national scale, the ministry is providing information on open science and open access in international fora (EU, UNESCO).

⁸⁷⁶ Information provided by NPR.

⁸⁷⁷ Information provided by NPR.

⁸⁷⁸ Information provided by NPR.

⁸⁷⁹ Slovenian Open Science Monitor (monitor.openscience.si/), available at: <https://monitor.openscience.si/> [accessed April 2026].

The dedicated open access-specific reports are not yet systematically published, except for the information, contained in the monitor.⁸⁸⁰

25.3.5. Results of impact evaluations

Formal evaluation of Slovenia's open access policy implementation has not been published given that the main legislative framework (ZZrID) entered force in 2022 and the implementing decree and action plan in 2023.

Systematic impact evaluation is planned through the Slovenian Open Science Monitor once operational, which will provide quantitative assessment of open access levels aligned with European benchmarks. The SPOZNAJ project will produce evaluation outputs on institutional implementation by project conclusion in 2026.

A first version of the Slovenian Open Science Monitor show that the share of openly accessible peer reviewed publications has increased in recent years, from 27,94% in 2010 to 60.51% in 2025.⁸⁸¹ In the monitor only publications that are assigned with true open access licence (e.g. CC BY) are considered as openly accessible.

26. Slovakia

26.1. General characteristics

26.1.1. Policies formulated as strategies, funder mandates and/or legislation

Slovakia's open access policy framework is primarily anchored in a government-level strategy.⁸⁸²

The National Strategy for Open Science 2021-2028 (further as national strategy) was adopted by the Slovak Government in June 2021. This document constitutes the principal national policy instrument addressing open access to both scientific publications and research data. The national strategy was developed under the auspices of the Office of the Plenipotentiary of the Government of the Slovak Republic for the Development of Civil Society, as part of the Open Government Partnership Initiative 2020-2021.

In February 2024 the Slovak Government approved a 2024 Action Plan for Open Science.⁸⁸³ It serves as the second phase of implementing the national strategy. The plan focuses on integrating open science principles into Slovak research and development to align with the National Strategy for Research, Development, and Innovation 2030. The new action plan for Open Science for years 2026-2028 its under preparation.⁸⁸⁴ In March 2026 the Slovak Government approved the follow-on Action Plan for Open Science for 2026–2028, which carries over four uncompleted 2024 tasks and additionally mandates the preparation of a successor National Strategy for Open Science for 2029–2035 by the end of 2028.⁸⁸⁵

⁸⁸⁰ Information in this section provided by NPR.

⁸⁸¹ Figures updated by NPR.

⁸⁸² Slovak Centre of Scientific and Technical Information (CVTI SR) / Office of the Plenipotentiary of the Government of the Slovak Republic for the Development of Civil Society, National Strategy for Open Science 2021–2028, adopted by the Slovak Government, June 2021. English version available at: <https://otvorenaveda.cvtisr.sk/wp-content/uploads/2021/09/National-Strategy-for-Open-Science-2021-2028.pdf> [accessed April 2026].

⁸⁸³ Slovak Centre of Scientific and Technical Information (CVTI SR) / Ministry of Education, Research, Development and Youth of the Slovak Republic, Akčný plán pre otvorenú vedu na rok 2024 [Action Plan for Open Science for 2024], approved by the Slovak Government, February 2024, available at: https://otvorenaveda.cvtisr.sk/wp-content/uploads/2024/03/Akcny_plan_2024.pdf [accessed April 2026; in Slovak; AI-assisted summary used for the purposes of this study].

⁸⁸⁴ Information provided by NPR.

⁸⁸⁵ Slovak Government / CVTI SR, Akčný plán pre otvorenú vedu na roky 2026 – 2028 [Action Plan for Open Science for 2026–2028], full text available at: https://otvorenaveda.cvtisr.sk/wp-content/uploads/2026/04/Akcny_plan_2026-2028.pdf [accessed 28 July 2026; in Slovak; AI summary].

At the legislative level, Slovakia has not enacted dedicated open access legislation. The national strategy itself acknowledges that implementing open science principles affects at least ten laws constituting the legislative framework for R&D regulation in Slovakia but notes that no systemic legislative changes had been enacted as of its adoption.

At the level of research funders, the Slovak Research and Development Agency (APVV), established in 2005 as the only national grant agency distributing public funds for R&D on a competitive basis, has not adopted a binding open access mandate. Since 2012, the APVV has considered costs of open access publication (Article Processing Charges up to EUR 5 000) as eligible project costs, but this represents an enabling provision rather than a requirement. However, the 2024 Action Plan for Open Science explicitly tasks the APVV and other grant agencies with introducing data management plan (DMP) requirements for all publicly funded projects, to be implemented by the end of 2026.

At the institutional level, the Slovak Academy of Sciences (SAS) adopted its Open Science Policy in December 2024, effective from January 2025, which covers publications, research data, and related infrastructure.⁸⁸⁶ Other institutions with Open Science policies are Matej Bel University in Banská Bystrica (2022), Pavol Jozef Šafárik University in Košice (2023) and University of Ss. Cyril and Methodius In Trnava (2024).⁸⁸⁷

26.1.2. Bindingness in terms of implementation

Slovakia's open access policy landscape is predominantly voluntary.

The national strategy employs recommendatory language throughout, using formulations such as "recommend" and "foster" rather than mandatory requirements. The national strategy's tasks include recommendations for research institutions to develop institutional policies, recommendations for grant agencies to develop policies requiring open access publication, and recommendations for changing the R&D evaluation system to consider open science elements. None of these provisions carry binding legal force.

The national research funders APVV, the Scientific Grant Agency of the Ministry of Education, Research, Development and Youth of the Slovak Republic and the Slovak Academy of Sciences (Vedecká grantová agentúra, VEGA), and the Cultural and Educational Grant Agency of the same ministry (Kultúrna a edukačná grantová agentúra, KEGA) have not established binding open access mandates; their policies merely permit the use of project funds for open access publishing without requiring it. This stands in contrast to the Horizon Europe framework, where immediate open access to peer-reviewed publications is mandatory for funded projects.

However, the SAS Open Science Policy, effective from January 2025, includes specific mandatory elements: all SAS researchers are required to establish and maintain an ORCID identifier; periodical publications owned or published by SAS public research institutions must become fully open access by 31 December 2029; and Data Management Plans become mandatory from 1 January 2027 for projects receiving institutional funding.

26.1.3. Scope of the policy

Slovakia's national strategy encompasses both scientific publications and research data, treating them as distinct but interconnected policy domains. The national strategy identifies nine strategic areas, with the first two directly addressing open access: Strategic Area 1 concerns fostering open access to publications funded from public resources, while Strategic Area 2 addresses open access to scientific data and supplementary materials. Additional strategic areas extend the scope to technical infrastructure, funding mechanisms, intellectual property rights, open IT tools, education, R&D evaluation, and citizen science.

⁸⁸⁶ Slovak Academy of Sciences (SAS), Open Science Policy at the Slovak Academy of Sciences, available at: <https://hrs4r.sav.sk/wp-content/uploads/Open-Science-policy-SAS-eng.pdf> [accessed April 2026].

⁸⁸⁷ Information provided by NPR.

The Action Plan for Open Science 2026–2028 additionally widens the addressee scope of the national framework beyond the academic sector: unless a task specifies otherwise, it applies to all types of organisations performing research and development — private, state, public and semi-public — explicitly including industrial research and technology centres, and it extends publication-cost monitoring from article processing charges to book processing charges

The SAS Open Science Policy covers both publications and research data, establishing distinct provisions for each domain. For publications, the policy addresses periodical publications, non-periodical publications (books), and employee works deposited in the SAS institutional repository.

For research data, the policy requires deposit of data necessary for validation of published results into open repositories, with metadata to be made available under CC BY or CC0 licenses. The scope also extends to open-source software, recommending that researchers maximise availability of software and source code, and to citizen science initiatives.

26.1.4. Embargoes or immediate open access

Slovakia's national policy framework permits embargo periods for open access to publications. The national strategy references alignment with the 2012 and 2018 EU Recommendations on access to and preservation of scientific information, which permit embargo periods of six months for STEM disciplines and twelve months for social sciences and humanities.

The SAS Open Science policy expresses preference for immediate open access while still permitting embargoes in specified circumstances. For journal articles, publishers of SAS periodicals are required to enable authors to deposit the publisher's version in the institutional repository immediately after publication and to publicly disseminate the article without an embargo. For non-periodical publications (books) in the social sciences and humanities, a maximum embargo of 12 months is permissible.

26.1.5. Copyright, rights retention and secondary publication rights

The Slovak open access policy framework does not yet establish a statutory secondary publication right at national level.

The national strategy dedicates a strategic area to the protection of intellectual property rights in the context of open science and emphasises the importance of public licences (such as Creative Commons) to allow access and reuse of research outputs without infringing copyright; however, it does not itself modify the general Copyright Act or introduce explicit rights-retention mechanisms for authors.

The SAS Open Science Policy recommends that SAS employees prefer non-exclusive publishing licences, retain sufficient copyright to enable green open access, and use author addenda to publishing contracts where necessary; it further requires SAS-owned journals and book publishers to disseminate works under public licences (recommending CC BY 4.0 for journal articles and CC BY-NC-ND 4.0 for books) and to allow self-archiving of the publisher's or post-peer-review version without embargo, thereby introducing rights-retention and open licensing practices at institutional level.

26.2. Context of open access policies

26.2.1. Training or guidance for researchers

The national strategy includes a dedicated strategic area (strategic area 7) on education in open science, identifying researchers, research institutions and support staff as key target groups and calling for systematic training on open access, research data management, intellectual property, and related topics; it highlights the role of libraries and information specialists in delivering such training. Strategic Area 7 of the national strategy also recommends incorporation of open science topics into introductory subjects of higher education programmes.

The 2024 Action Plan for Open Science further operationalises the education strand of the national strategy by mandating the preparation of a project for a national online platform offering open science courses, the organisation of at least one international event on open science, as well as the localisation of a Creative Commons training programme, which refers to the translation into Slovak and adaptation to the Slovak legal and institutional environment of the international Creative Commons certificate training programme, together with accompanying information materials on the individual Creative Commons licences. Building of a national online platform for open science courses is connected with the new project “National Ecosystem of Open Science” and will be built until 2029.⁸⁸⁸

The Slovak Centre of Scientific and Technical Information (CVTI SR) serves as the primary provider of systematic education on open science in Slovakia.⁸⁸⁹ Beyond formal accredited training, CVTI SR provides webinars, consultations, and conferences on open science topics, operating the dedicated website otvorenaveda.cvtisr.sk.

In 2021, CVTI SR launched the Open Science Publishing House to support the Slovak academic and scientific community in publishing under the CC BY 4.0 license.⁸⁹⁰

At institutional level, the SAS Open Science Policy recognises that introducing open science elements is a gradual process and commits SAS to supporting researchers in acquiring the necessary skills for open publishing, responsible data management and understanding of legal aspects and public licences.

26.2.2. Funding for open access

The national strategy identifies long-term underfunding of science and research in Slovakia as a key weakness affecting open science implementation. The national strategy recognises that article processing charges (APCs) and other open access costs constitute a barrier and identifies the need to secure sustainable funding mechanisms, including through national and EU programmes. This is concretised in the 2024 Action Plan for Open Science, which foresees the definition of a central financial fund for gold open access publishing and the design of a system for continuous monitoring of APCs, to be financed from EU structural and investment funds under the ‘Programme Slovakia’ with a planned allocation of 9.61 million EUR in 2024.⁸⁹¹ The fund had not been established by the end of 2024: the evaluation of the 2024 Action Plan records this task as uncompleted, and it is carried over into the Action Plan for Open Science 2026–2028 (as the definition of a central financial mechanism for gold open access publishing, deadline 31 December 2028), now financed within the Programme Slovakia project “National Ecosystem of Open Science – open publishing without barriers”.

Funding for open access publishing is available through project-based mechanisms, with APCs treated as eligible costs within research grants rather than through centralised institutional or national funds. The Slovak Research and Development Agency (APVV) has considered APC costs (up to EUR 5 000) as eligible project costs since 2012.⁸⁹²

The Operational Programme Integrated Infrastructure (OPII), drawing on EU structural funds, has accepted open access publishing costs as eligible since 2018, with the same EUR 5 000 APC ceiling as APVV.⁸⁹³

⁸⁸⁸ Information provided by NPR.

⁸⁸⁹ Slovak Centre of Scientific and Technical Information (CVTI SR), *Otvorená veda — Vzdelávanie a školenia* [Open Science — Education and Training Courses], available at: <https://otvorenaveda.cvtisr.sk/en-gb/education-and-training-courses/> [accessed April 2026].

⁸⁹⁰ As reported in Open Government Partnership, *National Open Science Strategy — Commitment SK0131*, Slovak Republic OGP Action Plan 2019–2021, available at: <https://www.opengovpartnership.org/members/slovak-republic/commitments/SK0131/> [accessed April 2026].

⁸⁹¹ Centre for Scientific and Technical Information of the Slovak Republic (CVTI SR), *Akčný plán pre otvorenú vedu 2024* [Action Plan for Open Science 2024] op cit Section 3.2, p. 11. The allocation of 9,610,000 EUR under Programme Slovakia covers both Task 5 (central gold OA fund and APC monitoring) and Task 9 (online open science training platform).

⁸⁹² National Strategy Op cit p.25.

⁸⁹³ National Strategy Op cit p.27.

Slovakia participates in consortium-level transformative agreements that provide APC-free open access publishing for affiliated researchers. The CVTI Consortium has negotiated agreements with multiple major publishers.⁸⁹⁴

26.2.3. Repository requirements (incl. FAIR principles)

The national strategy includes a strategic area on technical infrastructure, calling for the development and interconnection of institutional repositories for publications and data, participation in the European Open Science Cloud (EOSC), and implementation of FAIR (findable, accessible, interoperable, reusable) principles in data management; it highlights the CVTI SR-led KOMIS project to build a comprehensive national information system that includes a digital repository for scientific data, an open access publication platform and modules for research evaluation.⁸⁹⁵

Additionally, the 2024 action plan mandates preparation of a national manual for establishing and operating institutional repositories,⁸⁹⁶ which was completed by the end of 2024, thereby providing common guidance for 'trusted' institutional repositories across Slovak RPOs.

The SAS Open Science Policy introduces concrete, binding repository obligations within the SAS system: it requires deposit of employee works in the SAS institutional repository in accordance with a dedicated directive, obliges SAS-owned periodical and non-periodical publications to support immediate self-archiving of the publisher's or post-peer-review version, and mandates that research data necessary for validation of publication results, as well as other relevant data, be deposited in an open data repository (with Zenodo cited as an example) and, once available, preferentially in the SAS institutional repository; it also requires that datasets be managed according to FAIR principles and assigned persistent identifiers.

26.2.4. Metadata and persistent identifier requirements

The national strategy does not establish specific national requirements for metadata standards or persistent identifier usage, though it references FAIR principles which inherently encompass findability through appropriate metadata and identification. The national strategy's tasks include developing a methodology for building institutional repositories compatible with FAIR principles, which implies metadata requirements, but does not specify standards.

The Action Plan for Open Science 2026–2028 requires the preparation of a national roadmap for the implementation of persistent identifiers (ORCID, DOI and ROR) by 31 December 2028, whose content is to be incorporated into the successor National Strategy for Open Science from 2029, and a practical handbook on persistent identifiers for researchers by 31 December 2026.

The SAS Open Science Policy mandates that all SAS researchers establish and regularly update a permanent and unique ORCID identifier with a publicly visible profile and imposes an obligation to use this identifier. For publications, the policy requires publishers of SAS periodicals and non-periodical publications to use persistent identifiers: Digital Object Identifiers (DOIs) for articles, books, and chapters, and ORCID for author identification. For research data, the policy requires that datasets be marked with persistent identifiers and that metadata about scientific data be made openly accessible under CC BY or CC0 licenses.

⁸⁹⁴ Slovak Centre of Scientific and Technical Information (CVTI SR), Open Access Publikovanie — Elektronické informačné zdroje [Open Access Publishing — Electronic Information Resources], CVTI Consortium page, available at: <https://eiz.cvtisr.sk/open-access-publikovanie/> [accessed April 2026; translated via browser translation function].

⁸⁹⁵ See also: EOSC-Synergy Project, Slovakia — National Open Science Initiatives, available at: <https://www.eosc-synergy.eu/europe/slovakia/> [accessed April 2026].

⁸⁹⁶ CVTI SR / Ministry of Education, Research, Development and Youth of the Slovak Republic, Manuál pre inštitucionálne repozitáre [Manual for Institutional Repositories] (national manual for establishing and operating institutional repositories, Action Plan 2024 deliverable), Zenodo, 2025, available at: [https://zenodo.org/records/15075476\[in_Slovak\]_provided_by_NPR](https://zenodo.org/records/15075476[in_Slovak]_provided_by_NPR).

26.2.5. Peer review approaches

Slovakia's open access policy documents do not establish specific requirements or preferences regarding peer review models.

The SAS Open Science Policy includes a provision encouraging consideration of transparent practices in peer review processes for SAS periodical publications, though this is framed as a recommendation rather than a requirement. The policy states that publishers should "consider, according to editorial needs, the introduction of transparent practices in the peer-review process" with reference to COPE (Committee on Publication Ethics) guidelines. However, no specific requirements for open peer review, post-publication review, or community-led review models are established.

26.2.6. Links to researcher assessment

The national strategy explicitly identifies the lack of open science criteria in evaluation as a weakness and includes Strategic Area 8 dedicated to "Evaluation of R&D according to Open Science Principles". The national strategy recommends changing the R&D evaluation system to consider open science elements, including open science in policies for researcher recognition and career development, and establishing a methodological coordination body for open science implementation. The national strategy also references the European Commission's Open Science Career Assessment Matrix (OS-CAM)⁸⁹⁷ as a potential model for reform.

The 2024 Action Plan for Open Science explicitly notes that work has started on changing the national research and development evaluation system to take open science elements into account; however, comprehensive integration of specific open access and open data indicators into all national evaluation and funding formulae has not yet been fully documented in publicly available sources.

The SAS Open Science Policy states that SAS will "gradually introduce evaluation principles that will also encompass the application of good practices in all elements of open science".

26.2.7. Public funding thresholds

No public funding percentage thresholds triggering open access requirements have been identified in Slovakia's national policy framework. The national strategy addresses publications "funded from public resources and/or in the public interest"

26.2.8. Provisions for small and medium publishers

Slovakia's open access policy documents do not include specific provisions addressing the position of small and medium publishers or measures to support their transition to open access models.

The national strategy identifies Slovak scientific journals published by research institutions and learned societies but does not differentiate policy approaches based on publisher size or resources. The national strategy notes that most of the Slovak open access journals operate without APCs (diamond open access model).

26.2.9. Identified costs of, or gains from, applying open access policies

Slovakia's policy documents acknowledge both potential benefits and cost barriers associated with open access implementation.

⁸⁹⁷ European Commission, Directorate-General for Research and Innovation, Working Group on Rewards under Open Science, Evaluation of Research Careers fully acknowledging Open Science Practices: Rewards, incentives and/or recognition for researchers practising Open Science, Publications Office of the European Union, Luxembourg, July 2017, doi:10.2777/75255, available at: <https://op.europa.eu/en/publication-detail/-/publication/47a3a330-c9cb-11e7-8e69-01aa75ed71a1> [accessed 28 July 2026].

The national strategy identifies potential gains including: increased visibility of Slovak research, higher citation rates for open access publications, reduced duplication of research efforts, enhanced research integrity through reproducibility, and accelerated knowledge transfer to innovation. The national strategy's SWOT analysis lists opportunities such as more efficient use of research investments, increased transparency in R&D evaluation and funding, and participation in building European open science infrastructure.

Regarding costs, the primary concern is APC costs: the national strategy notes that lack of funding is the main factor limiting open access publishing, and that Slovak researchers from underfunded institutions often cannot afford publication in prestigious journals with high APCs. Annex 1 of the national strategy provides data on APC amounts for journals where Slovak scientists publish most frequently, with costs ranging from zero (diamond open access journals) to substantial amounts for major international publishers.

The comprehensive 2023 spending review of research, development and innovation further quantifies related spending streams, estimating APC expenditures for Slovak open access publications indexed in Web of Science at 3.1–3.7 million EUR in 2021, while concluding that systematic monitoring of these costs and of transformative agreements is still at an early stage.⁸⁹⁸

26.2.10. Security considerations

The national strategy does not establish specific security-related restrictions or procedures for open access to publications or research data. However, the Action Plan for Open Science 2026–2028 introduces the first explicit security-related provisions in the national open science framework: it mandates a ministerial directive on the publication and archiving of research data to be developed by 31 December 2028 that is to contain special provisions for sensitive health-research data, for defence-related and dual-use research and development projects, and for projects in strategic and critical technologies, where disclosure of results or data could endanger the security interests of the Slovak Republic, the European Union or EU candidate countries.

26.2.11. References to simplification regarding open access

Slovakia's policy documents refer to simplification in the broader context of digitalisation. The National Strategy for Research, Development and Innovation 2030 includes a specific sub-measure on 'open data and open science' under process simplification.

26.2.12. Role of artificial intelligence in open access policies

Slovakia's current open access policy documents do not address the role of artificial intelligence, either as an opportunity for enhancing open science practices or as a potential threat requiring governance consideration. The national strategy, adopted in June 2021, predates the significant acceleration of AI capabilities and policy attention that has occurred since 2022, and accordingly does not include AI-related provisions.

The SAS Open Science Policy, although adopted in December 2024, similarly does not address AI.

26.3. Implementation and monitoring of open access policies

26.3.1. Responsibility for implementation

At the national level, the Ministry of Education, Research, Development and Youth of the Slovak Republic is formally responsible for implementation of the national strategy.

⁸⁹⁸ Ministry of Finance of the Slovak Republic, Review of Spending, Competencies and Personnel in Research, Development and Innovation — Final Report, Value for Money Unit, Bratislava, 2023, available at: https://www.mfsr.sk/files/en/finance/value-money/spending-reviews/review-spending-competencies-personnel-research-development-innovation_final-report_2023.pdf [accessed April 2026].

The Slovak Centre of Scientific and Technical Information (CVTI SR), which operates under the ministry, serves as the designated coordinator for open science nationally. CVTI SR has held the role of National Point of Reference (NPR) for open access to scientific information since 2013, following designation by the Minister in response to the European Commission's call for Member States to establish such reference points. CVTI SR also serves as Slovakia's National Open Access Desk (NOAD) within the OpenAIRE network since 2015, EOSC National Secretariat, and central contact point for EOSC activities.

For the Slovak Academy of Sciences, the SAS Open Science Policy designates the Central Library of SAS as operator and administrator of the SAS institutional repository, with responsibility for professional activities supporting open science implementation. The SAS Center of Common Activities also supports implementation activities. At the individual level, researchers are responsible for making decisions about open access publication routes, depositing works in repositories, and, under the SAS policy, maintaining ORCID identifiers and preparing Data Management Plans.

26.3.2. Monitoring of individual policy elements

The national strategy designates CVTI SR as the supervisor responsible for monitoring implementation of the Strategy. CVTI SR's supervisory role includes monitoring risks, depending on the situation developing Action Plans for Open Science, and preparing evaluation reports.

The Working Group for Open Science, established at the Ministry of Education, Research, Development and Youth of the Slovak Republic,⁸⁹⁹ works with CVTI SR on continuous assessment of task fulfilment and preparation of evaluation reports to be submitted to the Slovak Government Council for Science, Technology and Innovation.

The Action Plan for Open Science for 2024, approved by government as the second stage of strategy implementation, assigns specific activities to responsible bodies, including the ministry, CVTI SR, research institutions and other actors, thereby operationalising selected measures in the areas of open access, open data, infrastructure and education.

26.3.3. Overall policy monitoring

Overall monitoring of national open science policy implementation rests primarily with CVTI SR in its capacity as designated supervisor for the national strategy. CVTI SR reports to the Ministry of Education, Research, Development and Youth of the Slovak Republic, which bears ultimate governmental responsibility for the national strategy's implementation. Slovakia's Open Government Partnership (OGP) Action Plans have included open science commitments, and the Independent Reporting Mechanism (IRM) provides external assessment of progress on these specific commitments.⁹⁰⁰

26.3.4. Reporting arrangements

The national strategy establishes a reporting hierarchy with CVTI SR preparing evaluation reports that are submitted to the Slovak Government Council for Science, Technology and Innovation via the Ministry of Education, Research, Development and Youth of the Slovak Republic. The national strategy specifies that an evaluation report will be published after each implementation phase, with the final evaluation report to be prepared by CVTI SR upon completion of Phase 3 (2027-2028) and submitted to the ministry and the government council. This final report is intended to analyse and map the state of research and development in Slovakia regarding openness of various aspects of the research cycle and application of qualitative tools in R&D evaluation.

⁸⁹⁹ NPR input as concerns ministry names.

⁹⁰⁰ Open Government Partnership, Independent Reporting Mechanism (IRM), Slovak Republic Action Plan Review 2022–2024, published October 2023, available at: <https://www.opengovpartnership.org/documents/slovak-republic-action-plan-review-2022-2024/> [accessed April 2026].

26.3.5. Results of impact evaluations

Impact evaluation of open access and open science policies in Slovakia has largely taken the form of situational analyses, SWOT assessments and descriptive indicator tracking, rather than comprehensive, formal ex post evaluations of specific policy instruments.

The national strategy includes a qualitative and quantitative SWOT analysis of the initial state of open science in Slovakia. Strengths identified include an established national coordinating organisation (CVTI SR), participation in European initiatives (OpenAIRE, EOSC) and existing subject or institutional repositories, while weaknesses comprise low and unstable R&D funding, fragmented governance, limited institutional mandates, and insufficient technical and human capacity for research data management. Opportunities highlighted in the SWOT include EU-level policy alignment, access to structural funds for infrastructure, and increasing international pressure for open science, whereas threats include dependence on commercial publishers, the risk of increasing inequalities due to APC costs, and the possibility that limited national resources slow implementation. The strategy documents that the share of open access publications by Slovak researchers increased over the 2010s but remained below leading EU countries, that repository coverage and dedicated infrastructures were fragmented, and that awareness and skills in open science were uneven across institutions.

Subsequent reporting within the Open Government Partnership and the adoption of the Action Plan for Open Science for 2024 show that several planned outputs have been delivered, such as the formal approval of the national strategy, establishment or consolidation of coordination structures at CVTI SR, and preparation of an implementation plan aligned with the National Strategy for Research, Development and Innovation 2030.

The 2024 Action Plan for Open Science includes a retrospective assessment of the 2021–2022 Action Plan, stating that 11 out of 18 tasks were completed and 7 carried forward (mainly due to financial or timing constraints). The evaluation of the 2024 plan itself was subsequently prepared and taken note of by the Slovak Government on 26 March 2025: it records 9 of the plan's 13 tasks as completed, with 4 tasks — including the central gold open access fund and the national online training platform — carried over into the Action Plan for Open Science 2026–2028, in three cases because financing from EU funds could not be secured in time.

At the level of quantitative monitoring, no national open access monitor is operational in Slovakia as of the cut-off date of this study. The Action Plan for Open Science 2026–2028 mandates the design of a system for continuous monitoring and evaluation of open publishing trends, including an analysis of the total costs of the national research system, aligned with international activities such as the UNESCO Recommendation on Open Science by 31 December 2028.

Finally, the action plan includes a dedicated risk-management- section that is linked to implementation and evaluation. It lists typical risks for each task (for example, insufficient engagement of stakeholders in the national survey, unforeseen problems at grant agencies when introducing DMP conditions, lack of financial resources for certain educational activities, or failure to reach agreement on a central APC fund) and proposes mitigation measures such as crisis management, revising ambitions, prioritising tasks, adjusting timelines, and developing contingency plans. Responsibility for risk monitoring is assigned to CVTI SR together with the Working Group for Open Science.

27. Finland

27.1. General characteristics

27.1.1. Policies formulated as strategies, funder mandates and/or legislation

Finland's open access (OA) framework is primarily driven by national research-community strategies/policies and research funder grant conditions. At national level, the Declaration for Open Science and Research⁹⁰¹ (initially covering 2020-2025 and recently updated⁹⁰² for 2025-2030) provides an overarching framework. The declaration is a community-driven policy instrument coordinated by the Federation of Finnish Learned Societies (TSV) and approved by the National Steering Group for Open Science. The declaration defines the overarching vision that open science should be integrated into researchers' everyday work and positions Finland as an international frontrunner in open science.

Complementing the declaration, the National Policy for Open Access to Scholarly Publications⁹⁰³ (2019/2024/2025⁹⁰⁴) specifies principles, objectives, and actions for achieving immediate open access to publications by 2022. Most recently, Finland published the Roadmap for Funding Open Science and Research (October 2025), which provides six recommendations for sustainable funding of open science activities.⁹⁰⁵

For publications, Finland's national policy component on open access to scholarly publications sets objectives and actions for immediate OA and cost transparency.

For research data and methods, the main community policy instrument is the Policy for Open Access to Research Data and Methods (2021–2025), coordinated by the National Coordination for Open Science and Research (Federation of Finnish Learned Societies), which consists of two policy components:

- policy component 1 on open access to research data⁹⁰⁶ (initially approved in March 2021 and updated by the Open Science and Research Steering Group on 27 May 2025), which frames data/methods openness across the research lifecycle ("as open as possible" with justified limitations),
- and policy component 2 on open access to research methods and infrastructures, approved on 30 January 2023 and published as part of the consolidated policy in June 2023.

⁹⁰¹ Open Science Coordination in Finland, Federation of Finnish Learned Societies (TSV), Declaration for Open Science and Research 2020–2025 adopted by the National Steering Group for Open Science, 2020, available at: <https://avointiede.fi/en/policies/declaration-open-science-and-research-2020-2025> [accessed April 2026].

⁹⁰² See Open Science Coordination in Finland, TSV, Declaration for Open Science and Research 2025–2030 (Responsible Research Series 6:2025), <https://doi.org/10.23847/tsv.1358> and analysis in Mustajoki, H. and Karlsson, J., 'Finland has a New National Declaration for Open Science and Research — and the Keyword is Community', Nordic Perspectives on Open Science, 10 (2025), <https://doi.org/10.7557/11.8215>.

⁹⁰³ Open Science Coordination in Finland, Federation of Finnish Learned Societies (TSV), National Policy for Open Access to Scholarly Publications (comprising policy component for journal articles and conference publications, 2019/2024; policy component for anthologies and monographs, 2025; policy component for theses, 2024), available at: <https://avointiede.fi/en/policies-materials/policies-open-science-and-research-finland/policy-open-access-scholarly>

⁹⁰⁴ The policy component for open access to journal articles and conference publications was completed in 2019, and the policy components for anthologies and monographs in 2025. The policy component for open access to professional publications (2025) is in process. The policy also includes a component for open access to theses, which was prepared in cooperation with the expert panel on open education and completed in 2024. [Footnote updated by NPR]

⁹⁰⁵ Open Science Coordination in Finland, Federation of Finnish Learned Societies (TSV), 'Finland Now Has a National Roadmap for Open Science and Research Funding', avointiede.fi News, October 2025, available at: <https://avointiede.fi/en/news/finland-now-has-national-roadmap-open-science-and-research-funding> [accessed April 2026].

⁹⁰⁶ Open Science Coordination in Finland, Federation of Finnish Learned Societies (TSV), Policy for Open Access to Research Data and Methods: Policy Component 1 — Open Access to Research Data available at: <https://avointiede.fi/sites/default/files/2021-05/Open%20research%20data%20and%20methods%2C%20policy%20component%201.pdf> [accessed April 2026]. for 2025 update see <https://tenk.fi/en/policies-materials/policies-open-science-and-research-finland/policy-open-research-data-and-methods>

In Finland, the funding model for higher education institutions is based on legislation, including the Universities Act (558/2009) and the Universities of Applied Sciences Act (932/2014), as well as government decrees issued by the Ministry of Education and Culture that define the criteria for core funding. This funding model includes components that reward higher education institutions for the openness of their publications, meaning that peer reviewed OA publications contribute positively to their funding.⁹⁰⁷ Journals are rated in the JUFO portal.⁹⁰⁸

Research funder mandates constitute an important binding mechanism for open access in Finland. The Research Council of Finland (RCF, formerly Academy of Finland), as the principal public research funder, has implemented mandatory open access requirements since 2021.

The RCF is a member of cOAlition S and requires compliance with Plan S principles for all calls opened after 1 January 2021.⁹⁰⁹ This mandate requires immediate open access to peer-reviewed articles through three compliant routes: publishing in Plan S-compliant open access journals, immediate self-archiving with CC BY licence, or publication via transformative agreements negotiated by the FinELib consortium, or, in rare cases, the organisations themselves. Business Finland, the national innovation funding agency, similarly requires open access for publications produced by public research organisations it funds.⁹¹⁰

For research data, the RCF requires that data management plans be submitted at two stages: an initial plan with the application and a full plan after the funding decision. Principal investigators are obliged to ensure responsible data management and to make research data "freely available as soon as possible after the research results have been published".

27.1.2. Bindingness in terms of implementation

The Declarations for Open Science and Research 2020-2025 and 2025-2030 are aspirational commitments rather than binding legal instruments. Research organisations and individuals sign the declaration voluntarily, committing to promote openness but without enforceable sanctions for non-compliance. The National Policy for Open Access to Scholarly Publications similarly articulates objectives (e.g., "all new scientific articles and conference publications will be immediately openly accessible by 2022") as goals to be achieved through coordinated action rather than legal mandate.

Binding requirements apply to researchers funded by the Research Council of Finland and Business Finland. For RCF-funded projects from calls opened after 1 January 2021, compliance with Plan S principles is mandatory and contractually binding. The RCF's Standard Terms for Funding explicitly state that "all results produced with RCF funding must be made public" and that funded projects must "commit to open access publishing".⁹¹¹ Non-compliance can affect funding approval and reporting requirements, with the RCF monitoring implementation through research reports and requiring persistent identifiers to confirm open access status. For research data, principal investigators are obligated to ensure responsible data management and to make research data "freely available as soon as possible after the research results have been published".

⁹⁰⁷ Ministry of Education and Culture, Finland, Steering, Financing and Agreements — Higher Education Institutions, available at: <https://okm.fi/en/steering-financing-and-agreements> [accessed April 2026]; Universities Act (Yliopistolaki) 558/2009, Finlex, available at: <https://www.finlex.fi/en/laki/kaannokset/2009/en20090558> Universities of Applied Sciences Act (Ammattikorkeakoululaki) 932/2014, Finlex, available at: <https://www.finlex.fi/en/laki/kaannokset/2014/en20140932> . Information provided by NPR.

⁹⁰⁸ JUFO — Publication Forum (*Julkaisufoorumi*), CSC – IT Center for Science / Federation of Finnish Learned Societies (TSV), available at: <https://jfp.csc.fi/jufportal> Information provided by NPR.

⁹⁰⁹ Research Council of Finland (RCF), *Open Access to Peer-Reviewed Scientific Articles — RCF Policy*, available at: <https://www.aka.fi/en/from-research-to-society/responsible-science/open-science/academy-policies-on-open-science/open-access-to-scientific-publications/open-access-to-peer-reviewed-scientific-articles/> [accessed April 2026].

⁹¹⁰ Business Finland, Business Finland Requires Open Access Scientific Publishing available at: <https://www.businessfinland.fi/globalassets/finnish-customers/01-funding/04-research-organization/doku-1987509-v3-business-finland-requires-open-access-scientific-publishing.docx> [accessed April 2026].

⁹¹¹ Research Council of Finland (RCF), Research Council of Finland's Standard Terms for Funding, version of 22 September 2025, available at: <https://www.aka.fi/globalassets/10rahoitus/2025-liitteet/talvihaku-2026/rcf-standard-terms-for-funding-22-sep-2025.pdf>, accessed 28 July 2026

27.1.3. Scope of the policy

The Declaration for Open Science and Research 2020-2025 identified four distinct policy areas; each developed as separate policy components:⁹¹²

- Culture for open scholarship – addressing assessment practices, incentives, societal interaction/impact and community norms.
- Open access to scholarly publications – covering peer-reviewed articles, conference proceedings, and monographs as well as theses.
- Open access to research data and methods – encompassing datasets, research materials, software, code, and infrastructure.
- Open education and educational resources – addressing teaching materials and open educational practices.

The updated declaration for 2025-2030 continues this multi-dimensional approach while adding emphasis on "responsible openness" and research security considerations.

The National Policy for Open Access to Scholarly Publications (2019) primarily targets peer-reviewed scientific articles and conference publications, with objectives for immediate open access by 2022. The RCF mandate explicitly requires immediate open access for peer-reviewed articles and "urges" researchers to publish conference articles and monographs with open access, though these are not yet subject to the same strict requirements. A separate policy component for open access to theses requires that those approved from 2025 onwards to be openly accessible, covering bachelor's, master's, licentiate, and doctoral theses at higher education institutions.

Finland has developed a comprehensive Policy for Open Research Data and Methods as part of the declaration framework. This policy articulates the principle "as open as possible, as closed as necessary" and emphasises FAIR principles (Findable, Accessible, Interoperable, Reusable). The RCF requires data management plans for all funded projects and mandates that research data be made "freely available as soon as possible after the research results have been published". The policy covers not only datasets but also research methods, software, code, algorithms, and access to research infrastructures. Metadata must be made openly accessible even when underlying data cannot be shared.

Finnish policies explicitly address the infrastructure ecosystem supporting open science. The national Fairdata services (IDA for storage, Qvain for metadata, Etsin for discovery, and Digital Preservation Service) are integrated into the policy framework as the recommended infrastructure for managing research data according to FAIR principles. The policies require that research organisations provide adequate services, guidance, and infrastructure to enable researchers to comply with open access requirements.

Although less developed than publications and data policies, Finland has a policy component for open education and educational resources, aiming to make creating and using open educational resources part of higher education and enable continuous learning for citizens.

27.1.4. Embargoes or immediate open access

The National Policy for Open Access to Scholarly Publications (2019) sets the objective that "all new scientific articles and conference publications will be immediately openly accessible by 2022". Accordingly, the RCF requires immediate open access in accordance with Plan S principles. However, if a researcher publishes in a journal that is not Plan S-compliant and the publisher refuses immediate self-archiving despite the author's request, the RCF permits embargoes as a fallback option:

- Up to 6 months for natural sciences, technical sciences, medical and health sciences.
- Up to 12 months for social sciences and humanities.

⁹¹² Open Science Coordination in Finland, Federation of Finnish Learned Societies (TSV), Policies for Open Science and Research in Finland available at: <https://avointiede.fi/en/policies-materials/policies-open-science-and-research-finland> [accessed April 2026].

This exception was clarified in June 2022 when the RCF announced it would not adopt the cOAlition S Rights Retention Strategy, which would have supported immediate self-archiving regardless of publisher agreements.⁹¹³ In practice, this means that embargoes are tolerated. Business Finland applies the same embargo framework as the RCF.

The policy component for open access to theses requires immediate open access without embargoes for all theses approved from 2025 onwards. Exceptions may be granted by the National Defence University and Police University College on security grounds.

For research data, the RCF requires that data be made "freely available as soon as possible after the research results have been published". There is no specified maximum embargo period for data.

27.1.5. Copyright, rights retention and secondary publication rights

Finland does not have a statutory secondary publication right. This absence was critically discussed in a 2025 study by the Finnish Center for Cultural Policy Research (Cupore), which found that 45% of Finnish researchers consider the rights they transfer to publishers to be too broad, and 35% found publisher contract terms unclear.⁹¹⁴

OA-specific "rights retention" is thus primarily operationalised through licensing and funder requirements. For publications, the RCF requires primarily CC BY 4.0 licensing for peer-reviewed articles, allowing limited alternatives (e.g., CC BY-SA 4.0, CC0, CC BY-ND).⁹¹⁵

The FinELib consortium, which negotiates on behalf of Finnish universities and research institutions, has transformative agreements with major publishers (Springer Nature, Elsevier, Wiley, Taylor & Francis, Cambridge, Oxford, SAGE, and others). These agreements typically include provisions allowing Finnish corresponding authors to publish with CC BY licences at no additional cost to the individual author.⁹¹⁶

Furthermore, individual universities are moving to implement binding institutional equivalents through their own governance channels. During 2026, Finnish universities are adopting a so called "prior licence model" for peer-reviewed articles as the Finnish implementation of the Rights Retention Strategy under the leadership of the Finnish University Libraries' Network (FUN). By April 2026, twelve universities had announced adoption, including the University of Helsinki, Aalto University, Tampere University, and the University of Turku, among others.⁹¹⁷

For data, the RCF requires that "when making data openly available, the parties involved must also consider licensing issues".⁹¹⁸

Creative Commons CC BY 4.0 is recommended as the typical license for research data. CC0 (public domain dedication) is also acceptable and is "widely recommended" especially for metadata of research datasets, where free transferability between databases and systems makes CC0 practically essential.

⁹¹³ Research Council of Finland (RCF), 'Academy of Finland Further Specifies its Principles on Open Access Scientific Publishing', RCF Press Release, June 2022, available at: <https://www.aka.fi/en/about-the-rcf/whats-new/press-releases/2022/academy-of-finland-further-specifies-its-principles-on-open-access-scientific-publishing/> [accessed April 2026].

⁹¹⁴ Knowledge Rights 21, 'Barriers to Knowledge: Researchers' Views on Open Access in Finland' (reporting findings from Cupore 2025 study), Knowledge Rights 21 News, 2025, available at: <https://www.knowledgerights21.org/news-story/fi-barriers-to-knowledge/> [accessed April 2026].

⁹¹⁵ Research Council of Finland (RCF), *Open Access to Scientific Publications — Licensing Requirements*, available at: <https://www.aka.fi/en/from-research-to-society/responsible-science/open-science/academy-policies-on-open-science/open-access-to-scientific-publications/> [accessed April 2026].

⁹¹⁶ FinELib Consortium (National Library of Finland), *Towards Open Access with Transformative Agreements*, available at: <https://finelib.fi/towards-open-access-with-transformative-agreements/> [accessed April 2026].

⁹¹⁷ Finnish University Libraries' Network (FUN), 'Prior Licence Model Introduced in Finnish Universities in 2026', FUN News, published 13 February 2026, updated 23 April 2026, available at: <https://yliopistokirjastot.fi/en/prior-licence-model-introduced-in-finnish-universities-in-2026/> [accessed April 2026].

⁹¹⁸ Research Council of Finland (RCF), *Open Science — A-Z Index of Application Guidelines*, available at: <https://www.aka.fi/en/research-funding/apply-for-funding/how-to-apply-for-funding/az-index-of-application-guidelines/open-science/> [accessed April 2026]. Information provided by NPR.

For software/code the MIT license or other suitable open-source licenses are recommended. The RCF's data management plan guidance states: "It is recommended to make all research data, code and software created within a research project available for reuse, for example, under Creative Commons, GNU, MIT or another relevant licence".⁹¹⁹ The RCF has a specific requirement that even when data cannot be shared openly, metadata must be stored in a Finnish or international data finder".

The policy sets a specific objective that by 2025 "the rights and terms related to research methods and infrastructures are clearly agreed on between all participants in research work," and mandates the Secretariat for Open Science and Research,⁹²⁰ together with research organisations, to prepare recommendations and guidelines for documenting rights, terms and licences that support openness.

27.2. Context of open access policies

27.2.1. Training or guidance for researchers

The National Policy for Open Access to Scholarly Publications (2019) specifies that research organisations must provide comprehensive support to enable compliance with open access requirements (Action 5 under Objective 1). The Policy for Open Research Data and Methods similarly requires that "by 2022, research organisations provide guidelines, practices and training in data management planning for students, researchers and staff". The Research Council of Finland requires that the site of research (i.e., the employing institution) is "obliged to ensure that the project meets the open access requirements set out in the funding terms and conditions and to finance open access to publications accordingly".

The Open Science Coordination at the Federation of Finnish Learned Societies (TSV) has developed guidance materials, policy documents, and recommendations available through the national open science portal (openscience.fi).

Individual universities and research organisations are responsible for implementing training programs tailored to their disciplinary contexts and researcher needs.

The policy component for open access to theses requires that "higher education institutions must ensure that thesis supervisors and authors have sufficient support and guidance to meet accessibility requirements for all theses".

The policy component for open access to anthologies and monographs published after 27.5.2025 are made immediately openly available and the cost structures are transparent.⁹²¹

However, despite this training and guidance the Cupore 2025 study⁹²² found that researchers cite "lack of technical knowledge," "uncertainty about legal aspects," and "absence of clear institutional policies" as barriers to sharing publications and data. This suggests that while training infrastructure exists, it may not fully reach or adequately prepare all researchers.

27.2.2. Funding for open access

For article processing charges (APCs) and open access publication fees, the RCF's current policy states that these costs "can be included in the overheads of the site of research". Finnish universities receive overhead funding (indirect costs) calculated as a percentage of direct research costs. The RCF funding terms specify that "the site of research is obliged to ensure that the project meets the open access requirements set out in the funding terms and conditions and to finance open access to publications accordingly". This model shifts the burden of APC payment from individual researchers or project budgets to research institutions, funded indirectly through overhead allocations.

⁹¹⁹ Research Council of Finland (RCF), Data Management Plan — A-Z Index of Application Guidelines, available at: <https://www.aka.fi/en/research-funding/apply-for-funding/how-to-apply-for-funding/az-index-of-application-guidelines/data-management-plan/data-management-plan/> [accessed April 2026].

⁹²⁰ <https://avointiede.fi/en/coordination/national-open-science-secretariat>

⁹²¹ Input from NPR.

⁹²² <https://www.cupore.fi/en/research/the-arts-and-culture-barometer/>

An important component is the FinELib consortium,⁹²³ which negotiates transformative and other open access agreements on behalf of participating institutions. Each consortium member independently decides which agreements they wish to sign up to and pay for them.⁹²⁴ The FinELib model is funded through consortium membership fees paid by participating universities, research institutes, and public libraries. The National Library of Finland hosts the FinELib consortium office.

Furthermore, the Federation of Finnish Learned Societies (TSV) hosts a platform with more than 150 learned society journals and distributes public funds specifically to cover operating costs of under-financed Diamond journals (Objective 4, action 1 of the national OA policy). Grantees are required not to make profit beyond the governmental funds they receive through the TSV. This model supports sustainable non-commercial scholarly publishing aligned with Finland's community-driven open science approach.⁹²⁵

TSV delegates state subsidies to learned societies for publication activities approximately €1.2m p.a. The open publishing activity supported by the government grant must be compatible with the funding conditions of RCF, meaning that the publications need to be compliant with Plan S.⁹²⁶

27.2.3. Repository requirements (incl. FAIR principles)

The updated policy for Open Access to Research Data and Methods explicitly states that existing frameworks such as the FAIR principles are to be used to regulate the level and modalities of openness for different data types and methods, and that good management of research resources, access to appropriate services, and responsible evaluation are general preconditions for repository-based openness.

For self-archiving peer-reviewed articles the Research Council of Finland requires deposit in repositories that meet specific technical and trustworthiness criteria. The RCF states: "The RCF considers that all repositories operating in Finland with the support of Finnish universities and government research institutes fulfil these conditions". Additionally, RCF-funded researchers may use "international, reliable repositories for self-archiving purposes".

The RCF requires that "research data shall be managed and made available following the FAIR principles". While Finland does not mandate formal repository certification (e.g., CoreTrustSeal, Nestor Seal), the policy framework emphasises trustworthiness indicators including long-term institutional commitment, governance structures, and technical robustness.

The integration of institutional repositories with national discovery services (Research.fi, Etsin.fi, Finna.fi) ensures that openly accessible research outputs are findable and preserved, supporting both national policy objectives and international interoperability through EOSC participation.

27.2.4. Metadata and persistent identifier requirements

Finland mandates comprehensive metadata and persistent identifiers for both publications and research data, with technical infrastructure (e.g. Fairdata⁹²⁷) designed to implement these requirements systematically. The integration of national services with international identifier infrastructures (DOI, ORCID, DataCite) ensures Finnish research is discoverable globally and interoperable with European and international open science ecosystems. For research data, Finland's policy framework mandates metadata creation even when data cannot be shared.

⁹²³ See FinELib Consortium, Negotiations — Current Agreements, National Library of Finland, available at: <https://finelib.fi/negotiations/> [accessed April 2026].

⁹²⁴ Information provided by NPR.

⁹²⁵ See DIAMAS Project, National Overviews on Sustaining Institutional Publishing in Europe — Finland, available at: <https://diamasproject.eu/national-overviews-on-sustaining-institutional-publishing-in-europe/> [information provided by NPR].

⁹²⁶ <https://www.tsv.fi/en/grants/publishing-and-international-activities-scientific-societies>

⁹²⁷ CSC – IT Center for Science, Fairdata Services available at: <https://www.fairdata.fi/en/> [accessed April 2026].

27.2.5. Peer review approaches

Neither the Declaration for Open Science and Research 2020-2025, the Declaration 2025-2030, the National Policy for Open Access to Scholarly Publications, nor the Research Council of Finland funding terms contain specific provisions regarding peer review processes, models, or standards.

27.2.6. Links to researcher assessment

Finland has explicit national-level linkage between open science and assessment culture. For publications, the national OA policy states that openness and quality should be considered independently in publication assessment and acknowledges emerging publication forms linked to open science. More broadly, Finland has national recommendations on responsible researcher evaluation, articulating principles (transparency, integrity, equity, competence, diversity) that create an enabling incentive environment for open science behaviours.⁹²⁸

For research data, the national data/methods policy frames openness as part of research quality and impact and treats data/methods as independent outputs, supporting their recognition in assessment even where quantitative indicators are still developing (Open Research Data and Methods – policy component). Finnish universities and research organisations have adopted guidelines aligning with these national principles.⁹²⁹

The RCF is a signatory to both DORA (San Francisco Declaration on Research Assessment) and CoARA (Agreement on Reforming Research Assessment). In its funding decisions, the RCF applies responsible assessment principles. The RCF explicitly states: "In decision-making, we also take into account the many different career paths of researchers, the impact of research and the promotion of open access". Activities such as publishing openly, sharing data according to FAIR principles, developing open infrastructure, and promoting open science practices are recognised as valuable contributions.

27.2.7. Public funding thresholds

Finnish open access policies do not establish a percentage-based threshold of public funding that triggers open access obligations. Instead, requirements apply to research outputs produced wholly or partially with funding from specific public funders regardless of the proportion of total project funding those funders provide.

27.2.8. Provisions for small and medium publishers

Finland's national publications policy contains a provision potentially relevant to smaller/domestic publishing ecosystems, namely the national funding mechanism for Diamond open access journals, particularly those published by learned societies. The Federation of Finnish Learned Societies (TSV) operates centralised platforms (Journal.fi, Edition.fi) hosting more than 150 learned society journals, providing both technical infrastructure and financial support. This infrastructure welcomes also publishers other than learned societies. The infrastructure enables small, non-profit journals to maintain peer review and editorial quality while providing free open access without author fees.

Finland participates in the Knowledge Exchange consortium (alongside Denmark, France, Germany, the Netherlands and the UK), which commissioned a study in 2025 to "identify and analyse the challenges small publishers face when transitioning to open access publishing and to explore the pathways that these publishers consider and adopt". The resulting report, *Small European Publishers and the Transition to Open Access Publishing: a 2025 Snapshot*, was published on 18 February 2026.

⁹²⁸ Open Science Coordination in Finland, Federation of Finnish Learned Societies (TSV), Responsible Research Evaluation — National Recommendations, 2020, available at: <https://avointiede.fi/sites/default/files/2020-03/responsible-evaluation.pdf>

⁹²⁹ E.g. Abo Akademi University, Guidelines for Openness in Academic Merits and Assessment of Researchers and Research, available at: <https://www.abo.fi/en/research-at-aau/open-science-and-ethics/open-science-and-research-at-aau/guidelines-for-openness-in-academic-merits-and-assessment-of-researchers-and-research/> [accessed April 2026].

It finds that the small publishers interviewed see considerable benefits in, and a strong ethical alignment with, open access, but face systemic inequities in funding systems, administrative requirements, and library negotiations that favour larger publishers, and it concludes that these can only be overcome with coordinated support from funders, libraries, consortia, policymakers and universities.⁹³⁰ Identified costs of, or gains from, applying open access policies

The Finnish Open Science and Research Initiative collected comprehensive data on academic publisher costs paid by Finnish research organisations to publishers and suppliers during 2010-2017.⁹³¹ A detailed study by Laitinen, Saarti, and Ilva (2016), "The Costs of Open and Closed Access: Using the Finnish Research Output as an Example" analysed potential costs of transitioning from subscription-based to open access publishing. The study concluded that while costs savings are possible, these depend heavily on the business model adopted (Gold APC-based, Diamond non-commercial, or hybrid transformative agreements) and on the further monitoring of expenditure.⁹³²

More recently the total costs of open access and publication to Finnish institutions are systematically tracked as part of the national open science monitoring framework, with results published as open datasets via the Research Information Hub (Research.fi) and updated as part of each monitoring cycle.⁹³³

The cost monitoring covers ten distinct expenditure categories: subscriptions, transformative agreements, article and book processing charges (APCs and BPCs), printed materials, membership fees and voluntary contributions paid to open science infrastructures, institutions' own scholarly open access publishing, costs of green OA (self-archiving and institutional repositories), costs related to the implementation and management of open access, open access management tools, and fees paid to Finnish scholarly journals.⁹³⁴

The most recent monitoring data (based on 2023 figures, published February 2025) show that Finnish institutions paid publishers over €25.1 million for transformative Read and Publish agreements in 2023, up from €21.5 million in 2021, while separate APC payments amounted to an additional €4.6 million. These figures confirm that transformative agreements have become the dominant cost mechanism for open access publishing in Finland. Subscription costs, while still substantial, have declined as a proportion of total publication expenditure as transformative agreements have expanded. The monitoring data also confirm that Green OA costs — including self-archiving and repository maintenance remain modest relative to APC and agreement expenditure, consistent with the finding that the green route has not been the primary mechanism for open access compliance under the Finnish framework.

The 2025 Cupore study found that 82% of Finnish researchers support the principle that research publications should always be openly and freely available, indicating researcher buy-in to open access values.

27.2.9. Security considerations

The updated Declaration for Open Science and Research 2025-2030 introduces the concept of "responsible openness", potentially a response to evolving security concerns. However, the Declaration does not provide detailed operational guidance on how to implement "responsible openness" or define specific security thresholds or risk assessment frameworks.

⁹³⁰ Information Power (for Knowledge Exchange), Small European Publishers and the Transition to Open Access Publishing: a 2025 Snapshot, published 18 February 2026, available at: <https://zenodo.org/records/17950438>, accessed 28 July 2026.

⁹³¹ Open Science Coordination in Finland, Federation of Finnish Learned Societies (TSV), Publisher Costs — Total Costs of Open Access and Publication to Finnish Institutions, available at: <https://avointiede.fi/en/policies/publisher-costs> [accessed April 2026].

⁹³² Antero Laitinen, M., Saarti, J., & Ilva, J. (2016). The Costs of Open and Closed Access: Using the Finnish Research Output as an Example. *LIBER Quarterly: The Journal of the Association of European Research Libraries*, 26(1), 13-27. <https://doi.org/10.18352/lq.10137>

⁹³³ Open Science Coordination in Finland / TSV, CSC – IT Center for Science, Total Costs of Open Access and Publication to Finnish Institutions (open dataset, updated as part of each monitoring cycle, latest results published February 2025 based on 2023 data), available at: <https://research.fi/en/results/dataset/e4b15469-5755-46e7-982c-c0ad97c27f3e>

⁹³⁴ CSC / Research.fi, *Monitoring of Open Science and Research — Costs* (interactive breakdown of total publication and OA costs by expenditure category and institution), available at: https://research.fi/en/science-innovation-policy/open-science-and-research-indicators/indicators_content_4

Both the Declaration and the Policy for Open Research Data and Methods articulate the principle "as open as possible, as closed as necessary", including security considerations. The ongoing revision of the Policy for Culture of Open Scholarship during 2026 has implemented plans to include security concerns at a more operational level to the policy update.⁹³⁵ The working group on responsible international cooperation set up by the Ministry of Education and Culture has published recommendations that emphasise openness, reciprocity and risk management in international cooperation in higher education and research.⁹³⁶

27.2.10. References to simplification regarding open access

As in other countries, this is at best addressed implicitly. It could be argued that Finnish open access policies achieve de facto administrative simplification through national infrastructure (VIRTA, Fairdata), centralised consortium agreements (FinELib), and overhead funding models (RCF). However, simplification is not prominently articulated as a policy objective.

27.2.11. Role of artificial intelligence in open access policies

Finnish open access policies do not address artificial intelligence in relation to open science or scholarly communication. However, the ongoing revision of the Policy for Culture of Open Scholarship during 2026 has implemented plans to address artificial intelligence in relation to open science to the updated policy.⁹³⁷ Finland has a national AI strategy separate from its open science policy framework.

27.3. Implementation and monitoring of open access policies

27.3.1. Responsibility for implementation

The Federation of Finnish Learned Societies (TSV) serves as the national coordinator for open science and research. Specific responsibilities include, hosting the Open Science Coordination secretariat, facilitating the development and updating of national policies (Declaration, policy components), publishing policy documents and guidance materials, coordinating the National Steering Group for Open Science, which approves major policy decisions, operating the national Open Science portal (avointiede.fi) and administering funding for diamond open access journals. The Ministry of Education and Culture holds overall policy responsibility but delegates operational coordination to TSV and infrastructure provision to specialised agencies.

For research data and methods, the policy specifies that implementation is the responsibility of the entire Finnish research community.

The Research Council of Finland (RCF) and Business Finland as funders are responsible for setting and enforcing open access requirements in its funding terms and conditions, monitoring compliance and providing guidance.

Research performing organisations' institutional responsibilities (explicitly stated in policies) encompass ensuring researchers have infrastructure and services to comply with open access (repositories, data storage, support staff), providing training and guidance on open access, developing institutional open science policies and financing open access publication costs (through overheads).

Researchers' responsibilities include choosing Plan S-compliant publication venues or negotiating immediate open access with publishers, depositing articles in repositories with appropriate licensing (CC BY), creating and maintaining data management plans for RCF-funded projects, managing research data according to FAIR principles and making data available as soon as possible after publication and ensuring metadata for publications and datasets is accurate and includes persistent identifiers.

⁹³⁵ Information provided by NPR.

⁹³⁶ Information provided by NPR, <https://open.overheid.nl/documenten/ronl-5379d1b4f8b9784bf518251032507a965be9c92d/pdf>

⁹³⁷ Information provided by NPR.

The CSC – IT Center for Science⁹³⁸ operates the VIRTa Publication Information Service, collecting publication metadata from institutions and provides Fairdata services as well as maintaining Research.fi portal aggregating national research information.

27.3.2. Monitoring of individual policy elements

Finland employs multi-layered monitoring: funder-level (RCF verification in research reports), national aggregate level (VIRTa for publications, biennial Open Science Monitoring surveys for broader practices), consortium-level (FinELib for transformative and other agreements with an open access element), and European integration (OpenAIRE).

Publication monitoring is highly developed; research data monitoring is emerging. Responsibility is distributed across RCF, CSC (VIRTa operator), TSV (Open Science Coordination), and institutions, with high transparency through public data portals.

27.3.3. Overall policy monitoring

Overall policy implementation monitoring in Finland is the responsibility of the National Steering Group for Open Science and Research, supported operationally by the Open Science Coordination hosted at the Federation of Finnish Learned Societies (TSV). The Ministry of Education and Culture is responsible for funding within its administrative branch, for steering through information, and for preparing and overseeing legislation.

Finland has developed a comprehensive national monitoring framework for open science implementation, documented in the "Monitoring model for open science and research",⁹³⁹ published by the Federation of Finnish Learned Societies⁹⁴⁰ This framework establishes a systematic biennial survey-based monitoring system coordinated by the Open Science Coordination at TSV, designed to assess progress toward objectives articulated in the Declaration for Open Science and Research and its associated policy components.

The monitoring methodology employs an online questionnaire distributed to all Finnish universities, universities of applied sciences and state research institutes.⁹⁴¹ The survey assesses multiple dimensions of open science practice across four thematic areas aligned with the declaration's policy components: open access to scholarly publications, open access to research data and methods, culture for open scholarship (including researcher assessment), and open education and educational resources. Organisations are evaluated using both quantitative indicators (such as open access rates and policy adoption) and qualitative assessments (describing services, infrastructure, and support mechanisms).

A distinctive feature of the Finnish approach is the calculation of an overall "openness level" for each organisation, scored on a five-point scale. This scoring system combines base points representing core practices considered essential for all organisations with additional points awarded for innovative or developing practices that create added value beyond baseline expectations. To achieve higher overall levels, organisations must meet minimum thresholds across all four thematic dimensions, ensuring that advancement requires balanced progress rather than excellence in one area compensating for deficiencies in another.

The monitoring framework was further elaborated through a collaborative community-led process conducted in 2023, refining the initial 2022 indicators based on stakeholder feedback and alignment with European monitoring requirements. Results are published openly on the Research.fi portal and discussed in the section on impact assessment below.

⁹³⁸ <https://csc.fi/en/>

⁹³⁹ Open Science Coordination in Finland, Federation of Finnish Learned Societies (TSV), Monitoring Model for Open Science and Research (methodology document), TSV, Helsinki, 2022, available at: <https://edition.fi/tsv/catalog/download/238/182/865> [accessed April 2026].

⁹⁴⁰ Pros and cons of the model are discussed in Saarinen, T. and Ilva, J., 'Towards a Sustainable and Responsible Model for Monitoring Open Science and Research — Analysis of the Finnish Model for Monitoring Open Science and Research', Research Evaluation, rvae008 (2024), <https://doi.org/10.1093/reseval/rvae008>.

⁹⁴¹ University hospitals are not included in the current open science monitoring but have been in the past (information provided by NPR).

27.3.4. Reporting arrangements

The National Steering Group serves as a coordination hub. Public reporting through Research.fi, VIRT/Juuli, and monitoring visualisations enables broad stakeholder access to implementation data. VIRT is also integrated into OpenAIRE.

27.3.5. Results of impact evaluations

While not an impact evaluation per se, the biennial survey-based monitoring system yields interesting results relevant to impact.

The first comprehensive monitoring round conducted in autumn 2022 established a national baseline for open science implementation.⁹⁴² Response rates were exceptionally high, ranging from 83% to 100% across different organisation types, demonstrating strong institutional engagement with the monitoring process. A second round of monitoring was conducted in 2024.⁹⁴³

The Finnish monitoring statistics indicate a high degree of organisational embedding of open science and open access, with further improvement between the 2022 and 2024 monitoring rounds.⁹⁴⁴ The strongest results concern the existence of policy and guidance documents. In both 2022 and 2024, 98% of organisations reported having one or more documents guiding open science and research across the organisation. Similarly, the Declaration for Open Science and Research had been taken into account by 96% of organisations in 2022 and 98% in 2024. Guidance on open access publishing was universal in both years, with 100% of organisations reporting relevant policy or guidance documents.

The monitoring also shows strong uptake of national open access policy documents. In both 2022 and 2024, 96% of organisations reported considering the principles of the national policy on open access to scholarly publications. The share taking into account recommendations on open access to scholarly publications for research organisations declined from 96% to 89%, while the share taking into account the objectives of the policy component for open access to journal and conference articles remained high, at 87% in 2022 and 85% in 2024.

Research data policy and guidance also appear relatively mature. The share of organisations with documents guiding openness of research data increased from 91% in 2022 to 98% in 2024. National policy principles for open research data and methods were considered by 85% of organisations in 2022 and 94% in 2024, while the policy component for open access to research data remained stable at 89% in both years.

The statistics show particularly visible progress in responsible research assessment. The share of organisations with policy documents defining how work promoting openness can be considered in recruitment, career development or other professional assessments increased from 47% in 2022 to 72% in 2024. Similarly, the share of organisations taking into account the national recommendation for the responsible evaluation of a researcher rose from 45% to 77%.

The monitoring also points to growing practical support services. Open science and research services for undergraduate students were reported by 92% of organisations in 2022 and 94% in 2024. Most organisations also provide a broad range of open science services.

Advice on ORCID increased from 81% in 2022 to 91% in 2024, indicating that ORCID support is now common across Finnish organisations.

⁹⁴² See Open Science Coordination in Finland, Federation of Finnish Learned Societies (TSV), Monitoring Results 2022, available at: <https://avointiede.fi/en/policies-materials/monitoring/monitoring-results-2022>

⁹⁴³ Open Science Coordination in Finland, Federation of Finnish Learned Societies (TSV), *Monitoring 2024 — Results*, available at: <https://avointiede.fi/en/policies-materials/monitoring/monitoring-2024-results>

⁹⁴⁴ CSC – IT Center for Science / Research.fi, *Monitoring of Open Science and Research — Survey Results* (interactive dashboard presenting organisation-level and aggregate survey responses from the 2022 and 2024 monitoring rounds, with filtering by question, topic, area of openness, ways of promoting openness, organisation type, organisation, and work years), available at: https://research.fi/en/science-innovation-policy/open-science-and-research-indicators/indicators_content_3 [accessed April 2026]

The data management indicators show substantial strengthening between 2022 and 2024. Training in the basics of data management increased from 81% to 89%, while in-depth, multi-professional training rose from 30% to 47%. Support and advice for preparing data management plans was already very high and increased further from 96% to 98%. The share of organisations requiring research or RDI projects to prepare a data management plan increased markedly from 66% to 87%, while the provision of a data management planning tool rose slightly from 81% to 83%. Support for students and dissertation researchers also improved.

The Finnish monitoring data also indicate that open access to scholarly peer-reviewed publications is relatively well embedded across the research system. In the Research.fi indicator for immediately openly accessible peer-reviewed articles (2022), most organisations fall in the high-performing ranges: around half report immediate OA shares of 81–90%, and almost a quarter report 91–100%. However, for 2024 the Research.fi indicator shows that most organisations were clustered in the 71–90% range. Around half of organisations fell in the 71–80% band, while a further 21% reached 81–90% and 9% reached 91–100%. A second indicator on open access for professional and popular publications was already relatively strong in 2022 and remained strong in 2024. In both years, the largest single category is the 91–100% band.

The Research Council of Finland's State of Scientific Research in Finland provides bibliometric evidence that open access publishing has expanded substantially across Finnish research fields over the last two decades. Based on Web of Science data and bibliometric calculations by CSC – IT Center for Science, the share of open access publications increased across all main disciplines between 2004–2007 and 2018–2021. The increase is particularly pronounced for publications in general scientific journals, where the open access share reached close to full coverage by the end of the period, but strong upward trends are also visible in biological and environmental sciences, medical and health sciences, natural sciences, agricultural and forest sciences, engineering and technology, social sciences, and the humanities. The same evidence also indicates that open access publications are associated with higher citation impact than non-open-access publications. Using the Top 10 index, where a value above 1.0 indicates that publications are cited more often than the global average in the relevant discipline, Finnish open access publications remain consistently above non-open-access publications throughout the period shown. In the most recent period, open access publications continue to perform above the global average, whereas non-open-access publications fall below it.⁹⁴⁵

The monitoring does not assess whether open practices have improved research quality, accelerated scientific discovery, increased interdisciplinary collaboration, or enhanced research efficiency. It does not measure whether openness increased research uptake by policymakers using evidence for decisions, by practitioners applying findings in professional contexts, or by citizens engaging with science. Economic effects including return on investment for public expenditure on infrastructure, cost-effectiveness of different funding models, or impacts on innovation and competitiveness remain unquantified.

The Finnish monitoring approach emphasises transparency and public accountability through open publication of institution-specific results. Unlike monitoring systems that report only aggregate national statistics, Finland's model makes individual organisation scores visible on the Research.fi portal, creating peer comparison opportunities and accountability pressure. Organisations can benchmark their performance against peers of similar type and mission, identify leading practices to emulate, and explain to their communities where they stand nationally.

⁹⁴⁵ Research Council of Finland, *State of Scientific Research in Finland 2024: Statistics on Research Funding, Research Personnel and Scientific Publishing* (Helsinki: Research Council of Finland, 13 November 2024), available at: <https://www.aka.fi/globalassets/2-suomen-akatemia-toiminta/2-tietoaaineistot/state-of-scientific-research-2024.pdf>. Initial reference to document via NPR.

The complete research data underlying the monitoring results are released as open datasets under Creative Commons licensing.⁹⁴⁶ A notable feature of the Finnish model is that assessment criteria are fixed and published well in advance of each round: the indicators for the 2026 monitoring exercise were reviewed and approved by the National Open Science and Research Steering Group on 2 December 2024,⁹⁴⁷ that is around one and a half years before the survey ran with the decision complemented in May 2025, so that organisations knew in advance the criteria against which they would be assessed. The revision added indicators derived from recent policy components (theses; research methods and infrastructures; citizen science; CoARA-related developments) and removed indicators that had been fully or nearly fully achieved in 2022 and 2024. The third monitoring round was carried out with the survey open from 4 May to 15 June 2026, and results are scheduled for publication on the Research.fi portal in October 2026.

28. Sweden

28.1. General characteristics

28.1.1. Policies formulated as strategies, funder mandates and/or legislation

In Sweden, the overall direction for open access to publications and research data is set in research and innovation bills adopted by the Parliament, which define political objectives but do not themselves impose directly mandatory open access obligations on individual researchers.

The 2016 Research Bill (Proposition 2016/17:50 "Kunskap i samverkan—för samhällets utmaningar och stärkt konkurrenskraft") established the national goal that scientific publications resulting from publicly funded research should be made immediately open access on publication; however with a gradual transition.⁹⁴⁸ The 2020 Research Bill (Proposition 2020/21:60 "Forskning, frihet, framtid – kunskap och innovation för Sverige") concretised this goal, setting out that scientific publications resulting from publicly funded research should be immediately openly accessible with effect from 2021, and that the transition to open access to research data should be fully implemented by 2026 at the latest.⁹⁴⁹ The most recent 2024 Research Bill (Proposition 2024/25:60 "Forskning och innovation för framtiden—nyfikenhet och nytta") reaffirmed this vision (section 5.5.5).⁹⁵⁰

Sweden enacted the Act (2022:818) on the public sector's access to data⁹⁵¹ (Lag om den offentliga sektorns tillgängliggörande av data). The act includes research data. It does not grant a new "right of access" to data. Instead, it regulates how data is made available for reuse (e.g., formats and condition).

⁹⁴⁶ CSC / Research.fi, Open Science and Research Indicators available at: <https://research.fi/en/science-innovation-policy/open-science-and-research-indicators> [accessed April 2026].

⁹⁴⁷ Open Science Coordination in Finland, Federation of Finnish Learned Societies (TSV), Development of Monitoring 2026 — Approved Indicators, available at: <https://avointiede.fi/en/policies-materials/monitoring/development-monitoring-2026>

⁹⁴⁸ Swedish Government (Riksdag), Proposition 2016/17:50: Kunskap i samverkan — för samhällets utmaningar och stärkt konkurrenskraft [Research Bill 2016/17:50: Knowledge in Collaboration — for Society's Challenges and Strengthened Competitiveness], adopted by the Riksdag 2017, available at: https://www.riksdagen.se/sv/dokument-och-lagar/dokument/proposition/kunskap-i-samverkan-for-samhallets-utmaningar_h40350/html/ [accessed April 2026; in Swedish; translated via browser translation function].

⁹⁴⁹ Swedish Government (Riksdag), Proposition 2020/21:60: Forskning, frihet, framtid – kunskap och innovation för Sverige [Research Bill 2020/21:60: Research, Freedom, Future – Knowledge and Innovation for Sweden], available at: https://www.riksdagen.se/sv/dokument-och-lagar/dokument/proposition/forskning-frihet-framtid-kunskap-och_h80360/html/ [accessed July 2026; in Swedish; translated via browser translation function].

⁹⁵⁰ Swedish Government (Riksdag), Proposition 2024/25:60: Forskning och innovation för framtiden — nyfikenhet och nytta [Research Bill 2024/25:60: Research and Innovation for the Future — Curiosity and Benefit], section 5.5.5, adopted by the Riksdag 2025, available at: https://www.riksdagen.se/sv/dokument-och-lagar/dokument/proposition/forskning-och-innovation-for-framtid-nyfikenhet_hc0360/html/ [accessed April 2026; in Swedish; translated via browser translation function].

⁹⁵¹ Republic of Sweden, Lag (2022:818) om den offentliga sektorns tillgängliggörande av data [Act (2022:818) on the Public Sector's Accessibility of Data], Svensk Författningssamling (SFS) 2022:818, available at: <https://www.riksdagen.se/sv/dokument-och-lagar/dokument/svensk-forfattningssamling/lag-2022818-om-den-offentliga->

These legislative-level- texts are complemented by government instructions to agencies.

In January 2024, Sweden adopted national guidelines for open science, developed by the National Library of Sweden (Kungliga biblioteket, KB) on government mandate. These guidelines, based on the UNESCO Recommendation for Open Science, identify six priority areas including open access to publications and research data, clarify roles and responsibilities among actors, and establish monitoring frameworks. The guidelines are non-binding but provide strategic direction and coordination.⁹⁵² The guidelines also emphasise that costs for open access to research data and publications should be handled in a coordinated way and that non-profit-infrastructures for open science should be prioritised.

Since 2017, KB has been promoting and coordinating open access to scholarly publications. The aim is for publications to be freely available online under an open license, so that anyone can read, reuse and disseminate research results.⁹⁵³

Similarly, the Swedish Research Council was mandated since 2017 to coordinate efforts on open access to research data.⁹⁵⁴ In its 2024 follow-up- on open access to research data, the council confirmed that the national transition should be completed by 2026 and identified three main needs: mapping costs and additional resources, integrating open access into information management-routines, and including open access to research data in merit and incentive systems.⁹⁵⁵ For 2025 the report concludes that strategic focuses and implementation of research data management for FAIR and open access are being developed, but not at the rate required to address the rapid changes that are occurring in the world, or to achieve the goals for open access to research data.⁹⁵⁶

Universities and higher education institutions have an assignment to continue to develop efforts for open science with the aim of contributing to the national direction for an open science system, and to providing input to the Swedish Research Council's and the National Library's tasks on open access to research data respectively scientific publications.⁹⁵⁷ The Association of Swedish Higher Education Institutions (SUHF) serves as a platform for collaboration, coordination, and strategic dialogue on issues of common interest. SUHF has developed a Roadmap for Open Science with proposals for implementation. The roadmap sets out overarching recommendations that clarify the responsibilities of higher education institutions in the transition to open science. It also outlines time-bound actions and institutional capabilities that need to be established.⁹⁵⁸

[sektorns_sfs-2022-818/](#) [accessed April 2026; in Swedish; translated via browser translation function]. Implements Directive (EU) 2019/1024 of the European Parliament and of the Council (Open Data Directive).

⁹⁵² National Library of Sweden (KB), 'National Guidelines for Promoting Open Science in Sweden — Adopted in January 2024', KB News, 15 January 2024, available at: <https://www.kb.se/for-bibliotekssektorn/eng/news-from-the-national-library/news/2024-01-15-national-guidelines-for-promoting-open-science-in-sweden.html> [accessed April 2026].

⁹⁵³ National Library of Sweden (KB), Open Access — Coordination Mandate for Scholarly Publications, available at: <https://www.kb.se/for-bibliotekssektorn/eng/open-science/open-access.html> [accessed April 2026]

⁹⁵⁴ Swedish Research Council (Vetenskapsrådet, VR), About Our Work on Open Access to Research Data (coordination mandate page), available at: <https://www.vr.se/english/mandates/open-science/open-access-to-research-data/about-our-work-on-open-access-to-research-data.html> [accessed April 2026].

⁹⁵⁵ Swedish Research Council (VR), Öppen tillgång till forskningsdata — kartläggning, analys och bedömning 2024 [Open Access to Research Data — Mapping, Analysis and Assessment 2024], VR, Stockholm, 2024. Available (in Swedish, with English summary) at: <https://www.vr.se/download/18.1b96f42f1900fd8751519d1e/1719403078367/%C3%96ppen%20tillq%C3%A5ng%20till%20forskingsdata%20VR%202024.pdf> [accessed April 2026; in Swedish; AI-assisted summary used for the purposes of this study].

⁹⁵⁶ Swedish Research Council (Vetenskapsrådet, VR), Öppen tillgång till forskningsdata — en kartläggning, analys och bedömning 2025 [Open Access to Research Data — A Mapping, Analysis and Assessment 2025], VR, Stockholm, 20 August 2025, available at: <https://www.vr.se/analys/rapporter/vara-rapporter/2025-08-20-oppen-tillgang-till-forskingsdata---en-kartlaggning-analys-och-bedomning-2025.html> [accessed April 2026] reference provided by NPR.

⁹⁵⁷ Swedish Government Offices, Ändringsbeslut 2026-02-05: Regleringsbrev för universitet och högskolor — öppen vetenskap [Amendment Decision 2026-02-05: Appropriation Directions for Universities and Higher Education Institutions — Open Science], available via Statskontoret (The Swedish Agency for Government Management): <https://www.statskontoret.se/om-statskontoret/statskontorets-uppdrag/regleringsbrev-och-andringsbeslut/> [accessed April 2026; in Swedish; translated via browser translation function].

⁹⁵⁸ Association of Swedish Higher Education Institutions (SUHF), Roadmap for Open Science with Proposals for Implementation (revised version, November 2025), SUHF Recommendation REC 2021:1, Stockholm, November 2025, available at: <https://suhf.se/app/uploads/2026/02/REC-2021-1-Open-Science-Roadmap-November-2025-1.pdf> [accessed April 2026].

Sweden's four major public research funders—the Swedish Research Council⁹⁵⁹ (Vetenskapsrådet, VR), the Swedish Research Council for Health, Working Life and Welfare⁹⁶⁰ (Forte), the Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning⁹⁶¹ (Formas), and the Swedish Governmental Agency for Innovation Systems⁹⁶² (Vinnova)—have all implemented explicit open access mandates for publications. VR introduced an open access mandate in 2010, subsequently strengthened in 2017 and 2022. Forte, Formas, and Vinnova implemented immediate open access requirements from 2020-2021, aligning with Plan S principles. Since spring 2019, there is a requirement on data management plans that applies to all those who are awarded grants from the Swedish Research Council. From 2026 there are also requirements concerning research data generated within activities that have been granted funding from the Swedish Research Council on data management according to FAIR principles and on making the research data available according to the principle of “as open as possible, as restricted as necessary”.⁹⁶³

Formas has a requirement on data management plans for funded projects, and a recommendation on making research data and metadata accessible according to the principle of “as open as possible, as restricted as necessary”.⁹⁶⁴

Forte has a requirement since October 2025 for all funded projects that generate research data to establish a data management plan in accordance with the recommendations of the administrating organisation and the recommendations for FAIR and open research data.⁹⁶⁵ Before October 2025 it was a recommendation.

28.1.2. Bindingness in terms of implementation

Sweden's open access framework creates binding obligations through research funder requirements rather than through direct legislation applicable to researchers or institutions. The national vision articulated in government bills represents policy goals and expectations but does not constitute legally enforceable requirements on individual researchers. The national guidelines for open science (2024) state that they are non-binding guidance documents intended to support coordination and strategic direction rather than impose legal obligations.

Researchers receiving grants from VR, Forte, Formas, or Vinnova face binding obligations to comply with each funder's specific open access requirements as conditions of grant acceptance. VR requires immediate open access for all publications (articles, monographs, books, chapters) from grants awarded from October 2022 onward. Forte requires immediate open access for all peer-reviewed publications from projects granted from 2021, monitoring compliance through final scientific reporting. Formas and Vinnova impose similar binding requirements from 2021.

The 2022 legislation on public sector data accessibility (Lag 2022:818) is binding on public bodies, including government higher education institutions, but applies only when research data are “made directly accessible” via data platforms—it does not mandate that all research data must be made accessible, recognising constraints of security, personal data protection, and practical feasibility.

⁹⁵⁹ Swedish Research Council (VR), ‘New Guidelines for Publishing with Open Access’, VR News, 24 October 2022, available at: <https://www.vr.se/english/just-now/news/news-archive/2022-10-24-new-guidelines-for-publishing-with-open-access.html> [accessed April 2026].

⁹⁶⁰ Forte (Swedish Research Council for Health, Working Life and Welfare), Guidelines for Publication with Open Access, available at: <https://forte.se/en/funding/assessment-and-final-decision/guidelines-for-publication-with-open-access>

⁹⁶¹ Formas (Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning), Open Science, available at: <https://formas.se/en/start-page/about-formas/what-we-do/open-science.html>

⁹⁶² Vinnova (Swedish Governmental Agency for Innovation Systems), ‘Make Scientific Articles Freely Available’, Vinnova News, 13 May 2019, available at: <https://www.vinnova.se/en/news/2019/05/make-scientific-articles-freely-available/> [accessed April 2026].

⁹⁶³ Swedish Research Council (VR), Plan, Manage and Make Research Data Available available at: <https://www.vr.se/english/applying-for-funding/requirements-terms-and-conditions/plan-manage-and-make-research-data-available.html>

⁹⁶⁴ Formas, Terms and Conditions for Grants — Research Data Management Plan and Open Access to Research Data, available at: <https://formas.se/en/start-page/applying-for-funding/how-it-works/terms-and-conditions-for-grants.html>

⁹⁶⁵ Forte, Open Access to Research Data — Requirements for Funded Projects (requirement effective from October 2025 for all funded projects generating research data), available at: <https://forte.se/en/funding/open-science/open-access-to-research-data>

28.1.3. Scope of the policy

Broadly speaking Sweden's open access policies address both scientific publications and research data. Beyond publications and data, the 2024 national guidelines for open science identify six priority areas that extend the scope: open access to scholarly publications, open access to research data, open research methods, open educational resources, public engagement in science, and infrastructures supporting open science.

However, formal funder mandates and government directives currently focus primarily on publications and research data.

28.1.4. Embargoes or immediate open access

Sweden's current policy framework at funder level (grant conditions) but also in the 2024 Research Bill has moved to immediate open access without embargo periods in recent years, representing a significant strengthening from earlier policies that permitted embargoes.

For publications funded from 2021 onward (Forte) or October 2022 onward (VR, Formas, Vinnova), immediate open access is required. "Immediate open access" is defined as publication with open access occurring at the same time as research results are published in another format, such as in a subscription-based journal. If publishing in a channel that is not openly accessible, the final published version of the article—or a peer-reviewed and author-approved version—must be deposited in an openly accessible repository without delay.⁹⁶⁶

VR's policy evolution illustrates this transition: grants awarded January 2020 through September 2022 required open access within six months for natural sciences, technology, and medicine, or twelve months for humanities and social sciences. From October 2022, all embargo periods were eliminated for VR grants. Similarly, Forte permitted six-month embargoes for grants through 2020 but requires immediate access from 2021.

These immediate open access requirements can be satisfied through three main routes: (1) publication in fully open access journals or platforms; (2) publication in hybrid journals covered by transformative agreements negotiated by the Bibsam Consortium, which provide immediate open access; or (3) self-archiving in a freely accessible archive (parallel publication) through simultaneous deposit of the accepted manuscript or version of record in an institutional repository with immediate access, even when the journal or publisher, version remains behind a paywall.

The Bibsam Consortium's 2023 strategic direction, based on the SUHF report "Charting Sweden's path beyond transformative agreements," recommends that from 2026 the consortium should cease negotiating read-and-publish agreements for hybrid journals and focus exclusively on fully open access journals.⁹⁶⁷ The Bibsam Consortium Steering Committee has since adopted this.⁹⁶⁸

28.1.5. Copyright, rights retention and secondary publication rights

Swedish policy does not override or modify publisher copyright through secondary publication rights legislation. Swedish open access policies emphasise rights retention by researchers and specify licensing requirements, though they engage with copyright issues primarily through licensing frameworks rather than through legal rights retention mechanisms.

All four major public funders require publication under Creative Commons CC BY licenses. For images and materials covered by third-party copyright, VR accepts CC BY NC ND licenses (non-commercial, no-derivatives), providing flexibility. Forte similarly allows CC BY-ND in exceptional cases with justification.

⁹⁶⁶ Information provided by NPR.

⁹⁶⁷ Association of Swedish Higher Education Institutions (SUHF) / Bibsam Consortium, Charting Sweden's Path beyond Transformative Agreements — Analysis and Proposals for Strategic Direction (SUHF Expert Group for Open Science, October 2023), available at: <https://suhf.se/app/uploads/2023/10/Charting-Swedens-path-beyond-transformative-agreements-%E2%80%93-analysis-and-proposals-for-strategic-direction-October-2023.pdf> [accessed April 2026].

⁹⁶⁸ National Library of Sweden (KB), Bibsam Consortium — Bibsam Consortium's Action Plan, available at: <https://www.kb.se/for-bibliotekssektorn/eng/bibsam-consortium/bibsam-consortium.html> [accessed July 2026].

Sweden has not adopted a specific rights retention *strategy* comparable to Plan S's rights retention principle or the Netherlands' rights retention approach. Swedish researchers generally rely on publishing agreements.

In practice, the large majority of compliant publishing occurs in fully open access venues, in hybrid journals covered by Bibsam read-and-publish agreements, or under the funders' joint agreements with fully open access publishers, channels in which open licensing (CC BY) is secured contractually at the point of publication rather than through researcher-side rights retention.⁹⁶⁹ Where a researcher publishes in a subscription venue outside these agreements, the funder conditions require immediate deposit of the version of record or a peer-reviewed author-accepted version.

28.2. Context of open access policies

28.2.1. Training or guidance for researchers

Training and guidance on open access and open science are widely promoted in Sweden and identified as a shared responsibility of RPOs, RFOs and expert agencies.

KB's coordination role includes developing guidance materials accessible through the national openscience.se platform and LinkedIn channel,⁹⁷⁰ launched collaboratively with the Association of Higher Education Institutions (SUHF), Swedish National Data Service (SND), the Swedish Research Council (VR), and other stakeholders to provide comprehensive information on open science practices. The platform offers resources on open access publishing routes, licensing, repository use, and FAIR data principles.

VR notes that "most Swedish higher education institutions have databases (regarding open access to scientific publications) even databases and personnel who can provide both practical help and advice."⁹⁷¹

Regarding research data management, VR has developed a vision, guiding principles, and recommendations,⁹⁷² as well as criteria and implementation guide for all 15 FAIR principles, designed for use by researchers, research funding bodies, and support functions at higher education institutions.⁹⁷³ VR also provides an overview of support and tools,⁹⁷⁴ including DMP template and guidance.⁹⁷⁵

Researchdata.se is a web portal created by the research infrastructure Swedish National Data Service (SND). Focus is on searchability, management and accessibility of research data.

⁹⁶⁹ Swedish Research Council (VR), Publishing Your Research Open Access (approved publication routes and Bibsam/joint-funder agreements), available at: <https://www.vr.se/english/applying-for-funding/requirements-terms-and-conditions/publishing-open-access.html> [accessed July 2026].

⁹⁷⁰ <https://openscience.se/en>

⁹⁷¹ Swedish Research Council (VR), Publishing Open Access — Guidance for Researchers, available at: <https://www.vr.se/english/applying-for-funding/requirements-terms-and-conditions/publishing-open-access.html> [accessed April 2026]; and VR, Making Research Data Accessible and FAIR, available at: <https://www.vr.se/english/mandates/open-science/open-access-to-research-data/support-and-tools/-making-research-data-accessible-and-fair.html> [accessed April 2026].

⁹⁷² Swedish Research Council (VR), The Swedish Research Council's Recommendations for Research Data: FAIR and Open Access (2025 edition), VR, Stockholm, March 2025, available at: <https://www.vr.se/download/18.944b5a9195b23e04562fa3/1742553270276/SRC-recommendations-for-research-data-FAIR-and-open-access-2025.pdf> [accessed April 2026].

⁹⁷³ Swedish Research Council (VR), *Making Research Data Accessible and FAIR — Criteria and Implementation Guide for the 15 FAIR Principles*, available at: <https://www.vr.se/english/mandates/open-science/open-access-to-research-data/support-and-tools/-making-research-data-accessible-and-fair.html> [accessed April 2026]. See also: openscience.se, The National Library of Sweden (actor profile), available at: <https://openscience.se/en/actors-and-coordination/the-national-library-of-sweden> [accessed April 2026].

⁹⁷⁴ Swedish Research Council (VR), Support and Tools for Open Access to Research Data (overview page), available at: <https://www.vr.se/english/mandates/open-science/open-access-to-research-data/support-and-tools-.html> [accessed April 2026].

⁹⁷⁵ Swedish Research Council (VR), Good Data Management — DMP Template and Guidance, available at: <https://www.vr.se/english/mandates/open-science/open-access-to-research-data/support-and-tools-/good-data-management.html> [accessed April 2026].

The web page also provides practical information on research data management, along with training resources and information about services.⁹⁷⁶

Dataguiden is a website developed by the Swedish Research Council as part of its efforts to improve the conditions for conducting research using registry and health data in Sweden. The website is structured around the different stages of the research data cycle and provides guidance on how to identify, apply for and use data for research. The website also provides information on how to make research data accessible and on long-term preservation.

The guidance is relevant across many disciplines, including epidemiology, social sciences, and clinical research.⁹⁷⁷

28.2.2. Funding for open access

The Bibsam Consortium, operated by KB, negotiates transformative agreements where subscription and open access publishing costs are combined, with participating institutions paying based on negotiated formulas.⁹⁷⁸ In 2024, the consortium's total turnover was approximately EUR 60 million (SEK 636 million), with the ten largest universities accounting for 70% of this expenditure.⁹⁷⁹ In 2025, turnover was approximately EUR 61 million, with the ten largest universities accounting for around 75% of the amount

These costs are borne by institutions through library budgets, representing a redistribution of funds previously spent on subscriptions. KB also coordinates Swedish participation in SCOAP3 for open access publishing in high energy physics since the beginning of the project in 2014.

The 2019 KB study "Financing the transition from a subscription-based to an open access publishing system" recommended that research funders and HEIs should share financial responsibility for research publications.⁹⁸⁰ In a significant development, in 2023 the four major public funders (VR, Forte, Formas, Vinnova) decided to jointly fund publishing costs with publishers that exclusively publish fully open access journals, covering 2024-2025.⁹⁸¹ Recent updates from January 2026 confirm that this joint funding model has been extended through 2026 and now includes eight major publishers that only produce fully open-access journals.⁹⁸²

Individual funders also provide mechanisms for researchers to include APC costs in grant applications. VR states that "if you are applying for a grant from the Swedish Research Council, your application may include any additional cost for publication in a journal that publishes with open access, or a hybrid journal." However, Forte explicitly states that it does not cover publication costs within research grants, expecting researchers to use institutional transformative agreements or funder-level pure OA publisher agreements.

⁹⁷⁶ Swedish National Data Service (SND), Researchdata.se — Your Portal to Research Data (web portal providing guidance on research data management, searchability, accessibility, and training resources), available at: <https://researchdata.se/> [

⁹⁷⁷ Swedish Research Council (VR), Dataguiden — Guide to Register and Health Data (website for guidance on identifying, applying for, and using registry and health data for research), available at: <https://dataguiden.se/en>

⁹⁷⁸ National Library of Sweden (KB) / Bibsam Consortium, About the Bibsam Consortium, available at: <https://www.kb.se/for-bibliotekssektorn/eng/bibsam-consortium/bibsam-consortium.html> [accessed April 2026].

⁹⁷⁹ openscience.se, The National Library of Sweden Actor Profile available at: <https://openscience.se/en/actors-and-coordination/the-national-library-of-sweden> [

⁹⁸⁰ Lundén, A. (National Library of Sweden / Bibsam Consortium), 'Beyond Transformative Agreements', EUA Expert Voices (blog series of the European University Association), 2 April 2020, available at: <https://www.eua.eu/our-work/expert-voices/beyond-transformative-agreements.html> [accessed April 2026].

⁹⁸¹ Swedish Research Council (VR), 'Funders in Joint Open Access Initiative', VR News, 25 October 2023, available at: <https://www.vr.se/english/just-now/news/news-archive/2023-10-25-funders-in-joint-open-access-initiative.html> [accessed April 2026].

⁹⁸² Mid Sweden University Library, Financial Support for Open Access Publishing — Joint Funder OA Publisher Agreements 2024–2026, available at: <https://www.miun.se/en/UniversityLibrary/publish/strategic-publishing/financial-support-for-open-access-publishing/> [accessed April 2026].

28.2.3. Repository requirements (incl. FAIR principles)

Recommendations from the Swedish Research Council explicitly state that data and their metadata should be made openly accessible in ways that comply with the FAIR principles, using infrastructures that provide persistent identifiers, rich metadata, appropriate access controls and long-term-preservation.⁹⁸³

For publications, KB encourages deposit into institutional or disciplinary repositories compliant with international best practices, and many universities participate in shared infrastructures such as the DiVA (Digitala Vetenskapliga Arkivet) system.⁹⁸⁴

28.2.4. Metadata and persistent identifier requirements

Sweden employs metadata and identifier requirements primarily through institutional repository infrastructure and national coordination systems rather than through explicit policy mandates on individual researchers.

All publications in DiVA or other local publication databases are provided with permanent identifiers (URN:NBN) supplied by KB, ensuring stable links accessible via the national reference service.⁹⁸⁵ KB maintains Swepub a national metadata infrastructure giving access to all participating organisations' publication databases through a common interface.⁹⁸⁶ Through the national guidelines of Swepub a common data structure for metadata and identifiers are maintained.

The 2022 data accessibility legislation requires public bodies making research data accessible to provide "special requirements in relation to format and conditions for further use."

The national guidelines for open science acknowledge the importance of identifiers and metadata for findability but do not establish binding requirements.

28.2.5. Peer review approaches

Sweden does not appear to have adopted distinctive or innovative peer review models as formal policy elements within its open access framework.

However, VR, Forte and Formas, participate in Open Research Europe (ORE), a publishing platform that employs open peer review where reviewer identities and reports are published alongside articles.

28.2.6. Links to researcher assessment

National and institutional documents explicitly link open science practices especially open access to publications and data to researcher assessment and merit systems: the National Guidelines state that open science must become visible and valued in research evaluation and refer to international initiatives such as the Declaration on Research Assessment (DORA) and the Coalition for Advancing Research Assessment (CoARA). The guidelines note that HEIs and funders should develop policies that support and incentivise open practices.

Formas and Vinnova are members of the Coalition for Advancing Research Assessment (CoARA). In autumn 2024, a Swedish National Chapter of CoARA was inaugurated.

Formas developed a new CV format called "Academic Profile" tested in 2023-2024 grant calls, allowing applicants to describe experiences and competences narratively rather than through traditional metrics, explicitly implementing CoARA principles.⁹⁸⁷

⁹⁸³ Swedish Research Council (VR), Recommendations for Research Data: FAIR and Open Access (2025 edition), op. cit.

⁹⁸⁴ DiVA Portal (Digitala Vetenskapliga Arkivet — Digital Scientific Archive) available at: <https://www.diva-portal.org/>

⁹⁸⁵ Umeå University Library, About DiVA Registration — Persistent Identifiers (URN:NBN), available at: <https://www.umu.se/en/researcher/publish-and-present/register-your-publications-in-diva/about-diva-registration/>

⁹⁸⁶ National Library of Sweden (KB), Swepub — National Metadata Infrastructure for Scientific Publications, available at: <https://www.kb.se/for-bibliotekssektorn/eng/services/swepub-data-access.html>

⁹⁸⁷ Described at Formas, Open Science — Academic Profile and CoARA, available at: <https://formas.se/en/start-page/about-formas/what-we-do/open-science.html> [accessed April 2026].

The Swedish Research Council included a new contextualising part in the application process (since 2024) as a complement to the part that deal with the applicant's merits. If it is relevant for the project in question - research data, research software and open access can be described in the contextualising part of application or included in the CV section.

The national guidelines for open science identify assessment and reward systems as important factors in open science transitions and note that HEIs and funders should develop policies that support and incentivise open practices. However, the guidelines do not mandate specific assessment criteria or enforcement mechanisms.

28.2.7. Public funding thresholds

Swedish open access policies do not employ explicit percentage-of-public-funding thresholds to determine when research outputs must be made openly accessible. Instead, policies use simpler triggers based on whether research received any public funding from specific funders. VR, Forte, Formas, and Vinnova policies apply to research “wholly or partly” funded by the respective organisation.

28.2.8. Provisions for small and medium publishers

Swedish policy does not contain explicit provisions specifically designed to accommodate or support small and medium publishers.

Publicera, the national platform for Swedish scholarly open access journals, provides technical infrastructure that may particularly benefit smaller Swedish journals lacking resources to maintain independent publishing platforms.⁹⁸⁸

28.2.9. Identified costs of, or gains from, applying open access policies

The National Library of Sweden has systematically monitored the total cost of scholarly publishing for Swedish higher education institutions since 2017, providing crucial transparency during the transition to open access. According to KB's data,⁹⁸⁹ the total cost of publishing for Swedish HEIs in 2024 was approximately SEK 806 million (approximately EUR 67 million). KB's 2025 compilation, published in June 2026, shows a continuation of this pattern: total publishing costs for Swedish HEIs of approximately SEK 819 million, of which read-and-publish agreements accounted for SEK 501 million (around 61%), local subscriptions SEK 186 million, open access publishing payments SEK 60 million in total acquisitions SEK 37 million, support for open infrastructures SEK 15 million and Bibsam-negotiated subscriptions SEK 20 million.⁹⁹⁰ The share of total costs absorbed by read-and-publish agreements thus increased further in 2025, even as the consortium's action plan forbids new hybrid agreements from 2026.

The expenditure breakdown reveals that transformative agreements negotiated by the Bibsam Consortium represent the largest single cost category at SEK 449 million, accounting for 56% of total publishing expenditure. This demonstrates that transformative agreements have become the dominant mechanism for managing the transition from subscription-based to open access publishing in Sweden.

Local subscriptions remain substantial, at SEK 174 million (22% of total costs), indicating that traditional subscription models continue alongside transformative agreements.

⁹⁸⁸ National Library of Sweden (KB), Publicera — National Platform for Swedish Scholarly Open Access Journals, available at: <https://publicera.kb.se/>

⁹⁸⁹ See National Library of Sweden (KB), Costs of Scholarly Publishing available at: <https://www.kb.se/for-bibliotekssektorn/eng/open-science/open-access/costs-of-scholarly-publishing.html> [accessed April 2026].

⁹⁹⁰ Op cit – website updated for 2025.

Open access publishing costs are distributed across three categories: research funder payments (SEK 55 million), Bibsam-negotiated pure OA publisher agreements (SEK 30 million), and local institutional payments (SEK 28 million). Combined, these open access publishing costs total SEK 113 million, representing 14% of overall publishing expenditure. Additional expenditure categories include acquisitions (SEK 38 million), support for open infrastructures (SEK 12 million), and Bibsam-negotiated subscriptions (SEK 19 million).

As for gains, VR notes that “research published with open access spreads faster, and the articles are cited more often”. The national guidelines for open science emphasise broader benefits including transparency, reproducibility, public trust, and knowledge dissemination.

28.2.10. Security considerations

The 2022 Act on public sector data accessibility explicitly states that its purpose is to promote data accessibility “on condition that requirements for information security and protection of personal data can be maintained, and that Sweden’s security is not compromised.” The legislation specifies that research data shall be made accessible only “to the extent that requirements for data security and protection of personal data can be maintained, and on condition that they do not entail a risk to Sweden’s security.”

The national guidelines for open science note that certain research data must not be published with open access due to legal, ethical, or security aspects, including data covered by secrecy legislation or data that could pose security risks if openly accessible.

28.2.11. References to simplification regarding open access

Swedish policy documents do not explicitly frame open access implementation in the context of regulatory simplification.

28.2.12. Role of artificial intelligence in open access policies

The background report⁹⁹¹ to the Swedish national guidelines report addresses artificial intelligence (AI) as an emerging development area. The report recognises a reciprocal relationship between open science and AI: open access to research results makes it possible to train increasingly advanced and sophisticated AI solutions, while AI simultaneously expands capabilities for research data generation and analysis. However, the report also identifies challenges. AI in some cases challenges established definitions of authorship and intellectual property rights. The report recommends that AI be given greater focus in the near future and explicitly considered when the guidelines undergo their planned updates in 2027 and 2030.

KB’s 2025 coordination report on open access further highlights concerns about large publishers signing licences that allow their content to be used as training data for generative AI without explicit consent from authors, raising questions about transparency, remuneration and academic control over reuse of scholarly works.⁹⁹²

⁹⁹¹ National Library of Sweden (KB), Bakgrundsrapport till nationella riktlinjer för öppen vetenskap [Background Report to the National Guidelines for Open Science], KB, Stockholm, 2024, URN: urn:nbn:se:kb:publ-721, available at: <https://urn.kb.se/resolve?urn=urn:nbn:se:kb:publ-721> [accessed April 2026; in Swedish only; AI-assisted summary used for the purposes of this study].

⁹⁹² National Library of Sweden (KB), Öppen tillgång till vetenskapliga publikationer — samordningsrapport 2025 [Coordination Report on Open Access to Scientific Publications 2025], KB, Stockholm, 2025, URN: urn:nbn:se:kb:publ-760, available at: <https://urn.kb.se/resolve?urn=urn:nbn:se:kb:publ-760> [accessed April 2026; in Swedish; AI-assisted summary used for the purposes of this study].

28.3. Implementation and monitoring of open access policies

28.3.1. Responsibility for implementation

For publications the National Library of Sweden (KB) holds the overarching coordination mandate from the government, responsible for coordinating, monitoring, and promoting collaboration in open access work and publishing annual reports. KB operates the Bibsam Consortium, negotiating transformative agreements and managing collective purchasing power on behalf of 97 participating institutions.

Research funding organisations (VR, Forte, Formas, Vinnova) are responsible for implementing their own open access mandates within their grant conditions, specifying requirements for grant recipients and monitoring compliance through reporting mechanisms. The four funders jointly implement the 2024-2025 agreement with pure OA publishers.

Applicants and administrating organisations are responsible for complying with applicable funder mandates when they accept grants, including selecting appropriate publication venues, applying required licenses (CC BY), and depositing publications in repositories or arranging open access publication.

The Swedish Research Council (VR) holds the coordination mandate for open access to research data, parallel to KB's role for publications. VR has developed FAIR criteria, guidance, maintains the reference group for open access to research data and a working group on data management topics. VR reports annually on national progress.

The Swedish Research Council's terms and conditions for funding awarded to research and research supporting activities includes that research data generated within the activity shall be made accessible according to the principle 'as open as possible, as closed as necessary', and that data management should, as far as possible, follow the FAIR principles. The administrating organisation is responsible for ensuring that a data management plan is drawn up before the research starts, and that the plan is maintained and adhered to.⁹⁹³

28.3.2. Monitoring of individual policy elements

KB compiles annual statistics on open access articles published by Swedish research organisations, showing total numbers and distribution by subject area and institution, and publishes annual reports assessing national progress⁹⁹⁴ and costs.

As concerns research data, VR publishes annual reports on open access to research data, assessing national progress.⁹⁹⁵

Individual funders have a possibility to monitor compliance with their mandates through reporting requirements.

The Open APC Sweden initiative, established by KB in 2016, provides evidence-based monitoring of APC expenditure by collecting data from participating HEI finance systems for publications not covered by national publishing agreements.⁹⁹⁶

Since 2023, the SUHF has conducted an annual survey to monitor how open science practices are developing at Swedish higher education institutions in relation to the recommendations of SUHF:s Roadmap on Open Science.

⁹⁹³ Swedish Research Council (VR), Plan, Manage and Make Research Data Available, op. cit.

⁹⁹⁴ National Library of Sweden (KB), Annual Report on Open Access in Sweden 2024 (published June 2025), available at: <https://www.kb.se/for-bibliotekssektorn/eng/news-from-the-national-library/news/2025-06-18-annual-report-on-open-access-in-sweden.html> [accessed April 2026]; and KB, Costs of Scholarly Publishing 2024 (published June 2025), available at: <https://www.kb.se/for-bibliotekssektorn/eng/news-from-the-national-library/news/2025-06-02-costs-of-scholarly-publishing-2024.html> [accessed April 2026].

⁹⁹⁵ Swedish Research Council (VR), Annual Reports on Open Access to Research Data (series), available via openscience.se: <https://openscience.se/en/resources/reports-and-other-documents> [accessed April 2026].

⁹⁹⁶ National Library of Sweden (KB), Open APC Sweden — Data Repository, GitHub, available at: <https://github.com/Kungbib/openapc-se> [accessed April 2026]. Data are aggregated into the international OpenAPC treemap at: <https://treemaps.openapc.net/apcdata/openapc/> [accessed April 2026].

Individual funders require data management plans (DMPs) for grants.

28.3.3. Overall policy monitoring

Overall “open science” direction and follow-up is framed through the National Guidelines for Open Science. In practice, monitoring remains functionally segmented: KB is the principal national monitor for OA to scientific publications, while VR is the principal national coordinator and monitor for open access to research data.

SUHF monitor the HEI’s progress towards the goals set forth in the Open Science Roadmap decided on by SUHF in 2021 (revised in November 2025).⁹⁹⁷

28.3.4. Reporting arrangements

Reporting relationships in Sweden’s open access framework follow the institutional hierarchy of government agencies and research performers.

KB reports annually to the Swedish government (Ministry of Education and Research) on the coordination assignment for open access to scholarly publications.

VR similarly reports to the government on the research data coordination mandate.

Individual grant recipients report to their respective funders.

The 2024 national guidelines emphasise that “follow-up also has to be coordinated between researchers and research organizations, research funders, and expert authorities”.

28.3.5. Results of impact evaluations

The most robust quantitative indicator is the open access publication rate. KB reported that open access articles increased from around 24% in 2014 to 77% in 2023, 76% in 2024 and to 81% in 2025, demonstrating substantial progress over a decade. KB regularly compiles statistics showing total OA articles and distribution by subject area and institution and publishes them as “Open access in numbers”.⁹⁹⁸ Starting in 2025 KB also compiles statistics on open access to books and other long text formats.

As of 2024, Sweden achieved approximately 76% immediate open access among peer-reviewed- articles by researchers at Swedish HEIs, with a further 4% available only via green open access, bringing total OA to about 80%.

This represented a clear shift compared with 2014 but no substantial increase over the last three years, suggesting that additional measures beyond transformative agreements are needed to reach the 100% target. The 2025 compilation shows a rise to 81% immediate open access but subject to methodological caveats.

The number and type of agreements provide another output indicator. By 2023, the Bibsam Consortium had concluded 27 transformative read-and-publish agreements and a total of 43 publisher agreements, covering about 15 500 OA articles per year; by 2024 Bibsam handled 62 agreements and financed roughly 16 500 OA articles. Through SCOAP3 close to 500 articles in high-energy physics were published open access in both 2023 and 2024. These figures show that transformative and OA-focused-agreements have become the dominant route for Swedish OA publishing.

For research data, VR’s annual reports assess progress but have noted that the transition to open access to research data remains incomplete. In its 2024 report VR states:

⁹⁹⁷ Association of Swedish Higher Education Institutions (SUHF), Roadmap for Open Science with Proposals for Implementation (revised November 2025), op. cit. (footnote 10 above). Available at:

<https://suhf.se/app/uploads/2026/02/REC-2021-1-Open-Science-Roadmap-November-2025-1.pdf>

⁹⁹⁸ National Library of Sweden (KB), Open Access in Numbers — Annual Statistics on OA Articles by Swedish Researchers, available at: <https://www.kb.se/for-bibliotekssektorn/eng/open-science/open-access/open-access-in-numbers.html> [accessed April 2026].

This year's mapping shows that strategic focuses and implementation of open access are being established in processes and working practices. Researchers still need various types of support, however, for example when assessing whether research data should be made openly accessible, and in the form of technical solutions and knowledge-enhancing initiatives. It is still not possible to estimate the scope of open access to research data in Sweden. Open access is increasingly being introduced in the incentive system.⁹⁹⁹ For 2025 the report concludes that strategic orientations and implementation of FAIR and open research data management are developing, but not at the pace required either to meet the 2026 target or to respond to rapid external changes.¹⁰⁰⁰

Annex B Benchmarking with non-EU countries

1. Brazil

1.1. Policy instrument

Brazil has adopted a mixed approach combining open government strategy and funder-led agreements. Open science first entered the national policy agenda through the 4th Open Government National Action Plan (2018–2021)¹⁰⁰¹ adopted under the Open Government Partnership (OGP), whose Commitment 3 focused on establishing scientific data governance mechanisms. The current 6th Action Plan (2023–2027), led by the Ministry of Science, Technology, and Innovation (MCTI), includes commitments to draft a national Open Science policy by December 2026.¹⁰⁰²

CAPES (Coordenação de Aperfeiçoamento de Pessoal de Nível Superior), an agency of the Ministry of Education, has signed transformative agreements (TAs) with multiple major publishers. Starting in 2024, CAPES intensified this policy through its Scientific and Technological Information Dissemination Programme (Padict), established by Ordinance 275/2023 and operationalised through Ordinance 120/2024,¹⁰⁰³ which sets the rules for APC payment.¹⁰⁰⁴ The total investment is estimated at over US\$43 million annually.¹⁰⁰⁵

1.2. Binding vs voluntary

The TAs make OA publishing the default (at no cost to the author) for corresponding authors at CAPES-affiliated institutions when publishing in eligible hybrid journals (which are the focus of the TAs). Fully open access (gold) journals are usually outside the publishing component of these contracts. However, researchers are not obliged to publish in TA-covered journals.

⁹⁹⁹ Swedish Research Council (VR), Öppen tillgång till forskningsdata 2024, op. cit.

¹⁰⁰⁰ Swedish Research Council (VR), Öppen tillgång till forskningsdata 2025, op. cit.

¹⁰⁰¹ Open Government Partnership (OGP), Brazil Transitional Results Report 2018–2021, Independent Reporting Mechanism (IRM), available at: <https://www.opengovpartnership.org/documents/brazil-transitional-results-report-2018-2021/> [accessed April 2026]. Full PDF: https://www.opengovpartnership.org/wp-content/uploads/2024/10/Brazil_Transitional-Results-Report_2018%E2%80%932021_EN.pdf [accessed April 2026].

¹⁰⁰² Open Government Partnership (OGP), Brazil — Commitment BR0125: National Open Science Policy, 6th OGP Action Plan 2023–2027, Ministry of Science, Technology, and Innovation (MCTI), available at: <https://www.opengovpartnership.org/members/brazil/commitments/BR0125/> [accessed April 2026].

¹⁰⁰³ Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES), Portaria n.º 120, de 30 de abril de 2024: Operacionalização do Programa de Disseminação da Informação Científica e Tecnológica (Padict) [CAPES Ordinance No. 120 of 30 April 2024], established by CAPES Ordinance No. 275/2023, available at: <https://cad.capes.gov.br/ato-administrativo-detallar?idAtoAdmElastic=14902#anchor> [accessed April 2026; translated via browser translation function].

¹⁰⁰⁴ CAPES (Córdãos de Aperfeiçoamento de Pessoal de Nível Superior), Acordos Transformativos [Transformative Agreements], Periódicos CAPES platform, available at: <https://www.periodicos.capes.gov.br/index.php/acessoaberto/acordos-transformativos.html> [accessed April 2026; translated via browser translation function].

¹⁰⁰⁵ See the discussion at SciELO Blog, 'Transformative Agreements in Brazil: Necessary Progress or Increased Dependence?', 28 January 2026, available at: <https://blog.scielo.org/en/2026/01/28/transformative-agreements-in-brazil-necessary-progress-or-increased-dependence/> [

CAPES Ordinance 120/2024 sets binding conditions for APC coverage, including CC BY licensing and ORCID registration.

1.3. Scope of outputs

Coverage includes publications.

Research data governance is being addressed through the OGP framework, with the 6th Action Plan including milestones for infrastructure studies (Milestone 10), monitoring tools (Milestone 6), and a national Open Science policy (Milestone 7).

The RDP Brasil project, initiated in 2018, has mapped data management practices and services in Brazilian institutions.¹⁰⁰⁶

1.4. Embargo and openness

For publications covered by the TAs, Brazil is implementing immediate open access from 2026. CAPES Ordinance 120/2024 requires immediate OA for APC-covered articles under a CC-BY licence.

Outside the agreements, there are no rules on embargoes at national level: Brazil has neither a statutory open access obligation nor national embargo regulation for publications. Embargo periods are consequently determined by publisher policy and, where applicable, by funder rules: the São Paulo state funder FAPESP requires deposit of the accepted manuscript (AAM) in an institutional repository, with a publisher-imposed embargo tolerated up to a funder-set maximum of 12 months from publication (CTA Ordinance No. 37 of 27 October 2021).¹⁰⁰⁷

1.5. Licensing and rights

CAPES Ordinance 120/2024 mandates CC BY licensing exclusively for all APC-covered publications. Other Creative Commons variants (CC BY-ND, CC BY-NC, CC BY-NC-SA) are explicitly excluded. No statutory secondary publication right or national rights retention policy was identified. For publications not covered by APC funding, no national licensing requirement applies: licensing is governed by journal and repository policies, with the SciELO collection “predominantly” applying CC B.¹⁰⁰⁸

1.6. Infrastructure

Brazil is a member of LA Referencia, a network currently comprising 12 countries.¹⁰⁰⁹¹⁰¹⁰

The national infrastructure includes SciELO (Scientific Electronic Library Online), founded in 1997 by FAPESP and BIREME, which hosts over 1 600 journals across 16 countries under a predominantly diamond OA model with CC BY 4.0 licensing.¹⁰¹¹

¹⁰⁰⁶ Universidade Estadual Paulista (UNESP), RDP Brasil: Mapeamento de práticas e serviços de gestão de dados de pesquisa em instituições brasileiras [RDP Brasil: Mapping of Research Data Management Practices and Services in Brazilian Institutions], available at: <https://repositorio.unesp.br/entities/publication/84e91ecc-70ea-4233-b7da-cbe3d662d4c7> [accessed April 2026].

¹⁰⁰⁷ Agência FAPESP, “FAPESP reformula sua política de acesso aberto a publicações” [FAPESP reformulates its open access policy for publications], November 2021, available at: <https://agencia.fapesp.br/fapesp-reformula-sua-politica-de-acesso-aberto-a-publicacoes/37271> [accessed July 2026; translated in browser via google translate].

¹⁰⁰⁸ SciELO, “Program, Publication Model, and SciELO Network”, available at: <https://www.scielo.org/en/about-scielo/program-publication-model-and-scielo-network/> [accessed July 2026].

¹⁰⁰⁹ Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Mexico, Panama, Peru, Uruguay, and Spain.

¹⁰¹⁰ LA Referencia (Red Federada de Repositorios Institucionales de Publicaciones Científicas), Nodes, available at: <https://www.lareferencia.info/en/nodes> [accessed July 2026].

¹⁰¹¹ Packer, A.L. et al., ‘The SciELO Program Embraces a Data Publication Policy’, PubMed Central / Anais da Academia Brasileira de Ciências, November 2024, PMC record available at: <https://pmc.ncbi.nlm.nih.gov/articles/PMC11587495/>

1.7. Funding and incentives

APCs are covered centrally through CAPES TAs for the period 2024–2028/2029. SciELO supports the diamond OA model with publication costs averaging US\$300–400 per article, funded through public agencies (notably FAPESP) and institutional support.

Brazilian OA policy is characterised by a dual landscape where commercial TAs now coexist with a deeply rooted, historical non-commercial diamond OA infrastructure."

Until the 2021–2024 evaluation cycle, whose results were released in January 2026, Brazil's Qualis journal ranking system stratified journals into ranked tiers used in CAPES' evaluation of graduate programmes; because programme scores and the standing of researchers depended on publication in highly ranked (typically high-impact, subscription- or APC-based) journals, the system created systemic pressure to publish in high-impact journals. For the 2025–2028 cycle, CAPES has replaced Qualis Periódicos with an article-level classification (strata A1–A8 combined with qualitative assessment), approved by its Technical-Scientific Council for Higher Education (CTC-ES) on 31 October 2024.¹⁰¹²

While no national funder has formally signed the DORA declaration two Brazilian organisations, the Brazilian Institute of Information in Science and Technology (IBICT) and the Brazilian Reproducibility Network have signed.

1.8. Governance and monitoring

The responsible bodies include CAPES (Ministry of Education) for TAs and journal access, CNPq (Ministry of Science, Technology, and Innovation) for research funding, and MCTI for coordinating the open science commitment under the 6th OGP Action Plan.

CAPES maintains an APC Panel tracking expenditures under the TAs.¹⁰¹³

A critical study claims that while Brazilian authors publish more OA articles, particularly in “Global South” journals “the present open access policy has been ineffective to improve the impact of Brazilian science”.¹⁰¹⁴

2. Canada

2.1. Policy instrument

Canada's open access framework combines a strategic roadmap with a funder mandate. The Roadmap for Open Science, published in February 2020 by the Office of the Chief Science Advisor, sets out principles and recommendations to guide open science activities in federally funded science and research.¹⁰¹⁵

¹⁰¹² CAPES, Conselho Técnico-Científico da Educação Superior (CTC-ES), Nova Sistemática de Avaliação da Produção Intelectual na Pós-Graduação [New System for Evaluating Intellectual Production in Graduate Education], presentation deposited on Zenodo, available at: <https://zenodo.org/records/15096572> [accessed July 2026, translated with AI].

¹⁰¹³ CAPES, Paineis de APCs [APC Panel — tracking expenditures under transformative agreements], Power BI dashboard, available at:

<https://app.powerbi.com/view?r=eyJrIjoiaMTY1YTA3N2EtZmYwZC00ZjBiLWFMmYjUtNzIxMTBkOThlY2FkIiwidCI6IjJmNGRIYmI4LTU0M2EtNGRiZS05MjdIITlTYyZWY3MDBiOStj9> [

¹⁰¹⁴ Grácio, M.C.C. and Oliveira, E.F.T., ‘Is the Open Access Policy Improving the Impact of Brazilian Science? An Analysis Based on Web of Science Data’, *Anais da Academia Brasileira de Ciências*, 2023, available at:

<https://www.scielo.br/j/aabc/a/HnFxTbcvP47SLYGbNkWMv7F/?format=html&lang=en>

¹⁰¹⁵ Office of the Chief Science Advisor of Canada, Roadmap for Open Science (prepared by Mona Nemer, Chief Science Advisor), Government of Canada, February 2020, available at: <https://science.gc.ca/site/science/en/office-chief-science-advisor/open-science/roadmap-open-science>

The Tri-Agency Open Access Policy on Publications (2015), issued jointly by the Canadian Institutes of Health Research (CIHR), the Natural Sciences and Engineering Research Council of Canada (NSERC), and the Social Sciences and Humanities Research Council of Canada (SSHRC), constitutes the binding funder mandate for extramural research¹⁰¹⁶ (for intramural see below).

A draft revised policy was published for public consultation in early 2025, with feedback accepted until 31 March 2025.¹⁰¹⁷

The agencies originally planned to release the final revised policy by the end of 2025; however, in a subsequent update, they announced that the release was delayed to 2026 to allow time to finalise implementation planning, with an adequate transition period before new requirements come into effect.¹⁰¹⁸

At the provincial level, the Fonds de recherche du Québec (FRQ) maintains a separate open access policy (in force since April 2019) that has been aligned with Plan S principles since joining cOAlition S in 2021, and which moved to immediate open access for grants awarded after July 2022.¹⁰¹⁹

2.2. Binding vs voluntary

The 2015 Tri-Agency policy is mandatory for grant recipients. Non-compliance may trigger processes under the Tri-Agency Framework on Responsible Conduct of Research. While the strategic roadmap sets strategic expectations (action plans, timelines), it does not carry the same regulatory force as the Tri-Agency grant conditions.

2.3. Scope of outputs

The 2015 Tri-Agency policy covers peer-reviewed journal publications only, supplemented by a specific obligation from CIHR to deposit certain publication-related research data (bioinformatics, atomic and molecular coordinate data) in public databases upon publication.

The draft revised policy similarly limits its scope to peer-reviewed research articles, explicitly noting that other forms of scholarly communication (monographs, book chapters, etc.) would require distinct considerations and are excluded. The strategic roadmap defines a broader scope for federal science (intramural science), encompassing scholarly articles, scientific reports, monographs, books, conference proceedings, plain language summaries, and scientific and research data (including observational, monitoring, operational, modelling, simulation, and R&D data).

2.4. Embargo and openness

Under the 2015 Tri-Agency policy, publications must be freely accessible within 12 months of publication, either through an open access journal or through deposit in an institutional or disciplinary repository. The draft revised policy would eliminate this embargo, requiring deposit of the version of record or author-accepted manuscript in a Canadian institutional repository at the time of publication under an open licence.

¹⁰¹⁶ Canadian Institutes of Health Research (CIHR), Natural Sciences and Engineering Research Council of Canada (NSERC), and Social Sciences and Humanities Research Council of Canada (SSHRC), Tri-Agency Open Access Policy on Publications (2015, updated 2016), Government of Canada, available at: <https://science.gc.ca/site/science/en/interagency-research-funding/policies-and-guidelines/open-access/tri-agency-open-access-policy-publications-2015>

¹⁰¹⁷ CIHR / NSERC / SSHRC, Draft Revised Tri-Agency Open Access Policy on Publications (consultation version, open for feedback until 31 March 2025), Government of Canada, available at: <https://science.gc.ca/site/science/en/interagency-research-funding/policies-and-guidelines/open-access/draft-revised-tri-agency-open-access-policy-publications> [accessed April 2026]. Summary of feedback: <https://science.gc.ca/site/science/en/interagency-research-funding/policies-and-guidelines/open-access/summary-feedback-draft-revised-tri-agency-open-access-policy-publications-2025> [accessed April 2026]. Survey results: <https://science.gc.ca/site/science/en/interagency-research-funding/policies-and-guidelines/open-access/tri-agency-open-access-policy-publications-policy-review-survey-results>

¹⁰¹⁸ CIHR / NSERC / SSHRC, Open Access Policy Review — Update on Timeline, Government of Canada, available at: <https://science.gc.ca/site/science/en/interagency-research-funding/policies-and-guidelines/open-access>

¹⁰¹⁹ Fonds de recherche du Québec (FRQ), Open Access Policy, FRQ, Québec, available at: <https://frq.gouv.qc.ca/en/open-access-policy/> [accessed April 2026]. FRQ's cOAlition S membership announcement: <https://frq.gouv.qc.ca/en/les-fonds-de-recherche-du-quebec-appuient-la-science-ouverte-en-joignant-la-coalition-s/>

Where publishers prohibit timely repository deposit, compliant preprints under an open licence would be accepted as an alternative. The strategic roadmap articulates the principle of “Open by Design and by Default”.

2.5. Licensing and rights

The 2015 policy does not specify licence requirements. The draft revised policy requires that deposited manuscripts carry an open licence (Creative Commons or equivalent), though it does not mandate a specific CC licence variant.

The draft introduces a rights retention strategy: by accepting grant terms and conditions, grantees must retain sufficient rights over dissemination of their peer-reviewed research articles to enable repository deposit. Researchers are asked to inform publishers of their retention obligations at submission. A template letter is to be provided once the updated policy is adopted.

2.6. Infrastructure

The draft revised policy requires deposit in a Canadian institutional repository. The strategic roadmap recommends that the federal science community develop a common approach and shared tools and infrastructure (Roadmap Recommendation 4).

2.7. Funding and incentives

Under the 2015 policy, article processing charges are allowable grant expenses, but there is no dedicated OA publication fund. The draft revised policy does not introduce new APC funding mechanisms. The Canadian Research Knowledge Network has criticised the mandatory deposit requirement, because deposit in a Canadian institutional repository is required for every funded article regardless of the journal's open access status. An article published in a diamond open access journal (fully open access, with neither reader nor author fees) does not by itself satisfy the policy unless it is additionally deposited. CRKN recommends that publication in diamond open access journals be recognised as compliant without a separate deposit requirement.¹⁰²⁰

2.8. Governance and monitoring

The strategic roadmap established a governance structure comprising an Open Science Steering Committee, to be co-chaired by the Chief Science Advisor and the Chief Information Officer of Canada (and/or the President of Shared Services Canada). Federal departments and agencies were to develop action plans for open science by June 2021, incorporating performance measurement elements. However, it is not clear whether this has been accomplished.

The Tri-Agency policy is administered by the three granting agencies individually (CIHR, NSERC, SSHRC), with coordination on the OA policy review conducted jointly.

3. China

3.1. Policy instrument

China's open access framework rests on a combination of funder mandates and national legislation.

¹⁰²⁰ See Canadian Research Knowledge Network (CRKN), CRKN's Response to the Tri-Agency Draft Open Access Policy, CRKN, 2025, available at: <https://www.crkn-rcdr.ca/en/crkns-response-tri-agency-draft-open-access-policy> [accessed April 2026].

In May 2014, both the National Natural Science Foundation of China (NSFC) and the Chinese Academy of Sciences (CAS) issued open access policies requiring deposit of peer-reviewed manuscripts resulting from publicly funded research into designated repositories.¹⁰²¹ At the legislative level, the revised Law on Scientific and Technological Progress (2021), which entered into force on 1 January 2022, includes Article 95 which says that the state promotes open science¹⁰²² and the exchange and dissemination of science and technology. However, this provision is framed in promotional rather than mandatory terms and does not constitute an enforceable OA mandate. An additional coordination mechanism exists through the Open Science Promotion Consortium (OSPC), established in 2022 by the China Association for Science and Technology (CAST),¹⁰²³ in direct reference to the UNESCO Recommendation. As per its website¹⁰²⁴ its mandate spans five task areas:

- (1) cross-sectoral exchange: building platforms and long-term mechanisms for cooperation among member institutions and internationally;
- (2) practical implementation: promoting the open science concept, infrastructure investment, open access to journals, open data sharing, and dissemination of S&T achievements;
- (3) consultation and mediation: facilitating dialogue among stakeholders, bridging differences, and coordinating with government agencies;
- (4) standards development: researching, publishing and promoting open science standards, and building an incentive-mechanism system; and (5) other work in furtherance of these objectives.

As of July 2026, it issued two analytical reports in 2025: one on data sharing and the other one on open access agreements between Chinese and foreign journals in China. However, these are not available for download in open access.

3.2. Binding vs voluntary

The CAS policy requires its researchers and graduate students to deposit manuscripts into institutional repositories.¹⁰²⁵ In the Chinese administrative-regulatory context, this language conveys an obligation for grantees. However, it has been observed that, in practice, China's OA policies function as largely advisory, with no documented enforcement mechanisms or sanctions for non-compliance.¹⁰²⁶

The legislative provision in the S&T Progress Law is explicitly promotional rather than binding, in that it imposes no enforceable obligation on funders, institutions or researchers, and it is not accompanied by implementing rules, compliance monitoring or sanctions.

¹⁰²¹ EIFL (Electronic Information for Libraries), Research Funders in China Issue Open Access Policies, EIFL News, 2014, available at: <https://www.eifl.net/news/research-funders-china-issue-open-access-policies>. Note that the NSFC policy is not available on the internet at the time of writing.

¹⁰²² National People's Congress of China, Law of the People's Republic of China on Scientific and Technological Progress (revised 2021, in force 1 January 2022), Article 95, English translation available at: http://en.npc.gov.cn.cdurl.cn/2021-12/24/c_924633_2.htm

¹⁰²³ Springer Nature, 'Why China Is Critical to the Growth of Open Access', Springer Nature Advancing Discovery Blog, available at: <https://www.springernature.com/gp/advancing-discovery/springboard/blog/blogposts-open-research/why-china-is-critical-to-the-growth-of-open-access/25293782> [accessed April 2026]. The establishment of the Open Science Promotion Consortium (OSPC) in 2022 is documented at: <https://news.qq.com/rain/a/20220507A065WM00> [accessed April 2026; translated via browser translation function].

¹⁰²⁴ Open Science Promotion Consortium (开放科学促进联合体), official website, available at: <https://www.ospc.org.cn/> [accessed July 2026; in Chinese, translation in browser via google translate].

¹⁰²⁵ Chinese Academy of Sciences (CAS), CAS Open Access Policy (English translation, 2021), available at: https://scholar.google.com/mandates/cas_cn-2021-02-13-en.pdf [accessed April 2026]. Note: this is not the original document, which is not publicly accessible in English;

¹⁰²⁶ See discussion in Max Planck Institute for the History of Science, 'Open Science in China', MPIWG Observations, available at: <https://www.mpiwg-berlin.mpg.de/observations/open-science-china> [accessed April 2026]; and Huang, C.K. et al., 'Open Access in China: Status, Challenges and Prospects', *Scientometrics*, 127 (2022), pp. 4893–4919, <https://doi.org/10.1007/s11192-022-04407-5>

3.3. Scope of outputs

The CAS open access policies cover publications, specifically peer-reviewed journal articles (accepted manuscripts). Research data is addressed separately: the Measures for the Management of Scientific Data (MMSD, 2018), a State Council regulation, requires that government-funded research data be shared under principles of openness, though with provisions for hierarchical management and security controls.¹⁰²⁷ China also operates the ChinaXiv preprint repository, established by CAS in 2016. Software, educational resources and other research outputs are not explicitly addressed by current policies.

3.4. Embargo and openness

CAS policy permits a maximum 12-month embargo from the date of official journal publication.¹⁰²⁸ The NSFC policy statement likewise requires deposit of the peer-reviewed accepted manuscript in the NSFC repository with an embargo of no more than 12 months, encourages earlier release where the publisher allows, and requires immediate open access where the article is published in an open access journal or the publisher permits deposit of the version of record.¹⁰²⁹

3.5. Licensing and rights

CAS policy does not specify licensing requirements such as Creative Commons licences, according to publicly available sources. No rights-retention or secondary publication right provisions have been identified in the current policy framework. An International Science Council interview with a former director of the CAS' National Science Library confirms that funders allow APCs from grants but does not mention licensing mandates.¹⁰³⁰

3.6. Infrastructure

The NSFC launched its Open Repository (or.nsfc.gov.cn) in May 2015 to host manuscripts from NSFC-funded projects. However, the repository was not accessible when attempted for this report (tried in April 2026 and July 2026).

China launched the Public Academic Scholar Platform (PubScholar) as an online platform which integrates massive numbers of high-quality academic resources from CAS, globally important open access resources and licensed commercial academic resources.

By mid-2024, PubScholar integrated 180 million digital resources and 84 million full-text resources for free access, including journal articles, conference papers, dissertations, patent documents, information products, news, scientific data and books.¹⁰³¹ This service integrates the CAS Preprint Platform (ChinaXiv), Science Data Bank (ScienceDB), Chinese Academy of Sciences Institutional Repositories Grid (CAS IR), Global OA Journals & papers communication centre (GoOA), personal academic homepages, open academic community, CSCD academic evaluation and other open academic service modules.¹⁰³²

¹⁰²⁷ See the discussion of this and other data related policy documents at Zhang, L., Downs, R.R., Li, J., Wen, L. and Li, C., 'A Review of Open Research Data Policies and Practices in China', *Data Science Journal*, 20(1) (2021), article 3, <https://doi.org/10.5334/dsj-2021-003>. See also: Li, C. et al., 'Tracing the Footsteps of Open Research Data in China', *Learned Publishing*, 35(1) (2022), pp. 46–55, available at: <https://onlinelibrary.wiley.com/doi/epdf/10.1002/leap.1439> [accessed July 2026; the latter read-only].

¹⁰²⁸ Van Noorden, R., 'Chinese Agencies Announce Open-Access Policies', *Nature news*, 2014, <https://doi.org/10.1038/nature.2014.15255>, available at: <https://www.nature.com/articles/nature.2014.15255>

¹⁰²⁹ National Natural Science Foundation of China (NSFC), Policy Statement on Open Access (OA) to the Research Publications of Its Funded Projects (2014), available at: <http://or.nsfc.gov.cn/statement> [accessed July 2026].

¹⁰³⁰ International Science Council (ISC), 'Open Access in China: Interview with Xiaolin Zhang of the National Science Library', ISC Blog, available at: <https://council.science/blog/open-access-in-china-interview-with-xiaolin-zhang-of-the-national-science-library/>

¹⁰³¹ UNESCO, 'China Invests in Integrated Infrastructure for Open Scholarly Communication', UNESCO Open Science News, available at: <https://www.unesco.org/en/open-science/inclusive-science/china-invests-integrated-infrastructure-open-scholarly-communication> [accessed April 2026]

¹⁰³² It is accessible at <https://pubscholar.cn/>

3.7. Funding and incentives

OA publication funding provisions are not specified. However, researchers may use grant funds to pay Article Processing Charges (APCs) for gold OA publication. Transformative agreements between Chinese institutions and international publishers are emerging but remain limited.¹⁰³³

In the course of 2026, it was confirmed that CAS will no longer pay overly high APC (e.g. for Nature Communication). While this was reported in several media¹⁰³⁴ an official website source could not be traced. Journals affected include Nature Communications, Cell Reports, and Science Advances; based on the list of affected titles, an information scientist from the University of Ottawa estimates the policy implies a de facto APC cap of approximately USD 5,000.¹⁰³⁵

3.8. Governance and monitoring

No single entity holds overarching responsibility for OA policy in China. The NSFC is responsible for its funder mandate and repository; the CAS oversees its institutional policy and repository infrastructure; the Ministry of Science and Technology (MoST) has a role in broader science policy including data sharing. The Open Science Promotion Consortium (OSPC) serves as a multi-stakeholder coordination body with approximately 50 member organisations.

No public monitoring reports, compliance assessments, or systematic reporting cycles for OA implementation have been identified.

At the same time, China has prominently hosted the Launch and Call for Partnership for UNESCO's "Open for Science10" (OS10) Initiative, which aims to build a globally connected, open, and interoperable scientific infrastructure network, promoting the free flow and equitable use of scientific knowledge and data, with particular emphasis on enhancing research capacity and data accessibility in the "Global South".¹⁰³⁶ In the same vein, China's Ministry of Science and Technology (MOST) launched the Action Plan for International Cooperation in Open Science,¹⁰³⁷ implementing the Open Science International Initiative of 2024 that was set with Brazil, South Africa and the African Union.¹⁰³⁸ The Action Plan, which is explicitly non-binding, sets out six objectives covering global open science governance, the sharing of scientific data, the development and sharing of research infrastructures, public engagement, and capacity-building in developing countries; Its fourth objective, "promoting open circulation of world-class scientific journals", commits the participants to the global open sharing of research papers and preprints and to building openly accessible publication infrastructures.

¹⁰³³ Springer Nature, 'Why China Is Critical to the Growth of Open Access', op. cit.

¹⁰³⁴ Brainard, J., 'Major Chinese Funder to Stop Paying Fees for 30 Pricey Open-Access Journals', Science, 24 February 2026, available at: <https://www.science.org/content/article/major-china-funder-plans-curtail-spending-pricey-open-access-fees> [accessed May 2026].

¹⁰³⁵ As quoted in: "Chinese Academy of Sciences proposes capping open access publishing fees at \$5000," *Chemistry World* (Royal Society of Chemistry), original publication date February 2026; amended 2 March 2026: <https://www.chemistryworld.com/news/chinese-academy-of-sciences-proposes-capping-pay-to-publish-fees-for-high-profile-journals/4023025.article>

¹⁰³⁶ Chinese Academy of Sciences (CAS), 'Launch and Call for Partnership for UNESCO Open for Science 10 (OS10) Initiative', CAS International, 10 June 2025, available at: https://english.las.cas.cn/news/news/202506/t20250610_1045321.html

¹⁰³⁷ Ministry of Science and Technology of the People's Republic of China (MOST), Action Plan for International Cooperation in Open Science (2024), MOST Press Release, 19 December 2025, available at: https://en.most.gov.cn/pressroom/202512/t20251219_195559.html

¹⁰³⁸ Science and Technology Daily (Keji Ribao), 'Open Science International Initiative — Launch with Brazil, South Africa and the African Union', 23 November 2024, available at: https://digitalpaper.stdaily.com/http_www.kjrb.com/ywtk/html/2024-11/23/content_581081.htm?div=-1 [accessed April 2026; translated via browser translation function].

In furtherance of the Action Plan, China announced at the 2026 Zhongguancun Forum in March 2026 that ten major research infrastructures would be opened to international users in the course of 2026.¹⁰³⁹ In June 2026, the CAS National Science Library and the SciELO network held their first joint technical workshop under the OS10 framework, oriented towards open science cooperation across the "Global South".¹⁰⁴⁰

4. Colombia

4.1. Policy instrument

The primary policy instrument is Resolution 0777 of 3 August 2022, a ministerial resolution by which the Ministry of Science, Technology and Innovation (Minciencias) adopted the Política Nacional de Ciencia Abierta 2022–2031.¹⁰⁴¹ This was reinforced by Article 171 of Law 2294 of 2023 (National Development Plan 2022–2026), which elevated the open access requirement to the level of national legislation, stipulating that anyone executing publicly funded R&D projects must make results, products, publications and data available through standardised, interoperable scientific information infrastructure.¹⁰⁴²

The policy also aligns with CONPES 4069, the National Science, Technology and Innovation Policy 2022–2031, approved on 20 December 2021.¹⁰⁴³ The document states that the current development of open science is low and proposes the following actions:

- The Ministry of Science, Technology and Innovation, with the support of the Ministry of National Education and the National Department of Planning, will design and implement the open science policy for the country. This policy will include promoting access to knowledge and open publications; strengthening national capacities; opening methodologies and tools; piloting open peer review; defining alternative productivity metrics, among others."
- "Likewise, it will contemplate financing mechanisms and incentives to promote open science; open evaluation; citizen participation; and the diversity of publications and knowledge."
- "The policy will be articulated with the country's intellectual property regime and with the principles and components of open science. The implementation period of this action will be between 2022 and 2030."

4.2. Binding vs voluntary

The Colombian OA framework combines elements with binding legal provisions. Resolution 0777/2022 establishes a national framework aimed at all actors within the National Science, Technology and Innovation System (SNCTI), with progressive implementation through 2031.

¹⁰³⁹ State Council of the People's Republic of China (english.www.gov.cn), 'China to Open 10 Major Scientific Facilities to International Academia in 2026', 25 March 2026, available at:

https://english.www.gov.cn/news/202603/25/content_WS69c3e7f2c6d00ca5f9a0a199.html [accessed July 2026].

¹⁰⁴⁰ AS National Science Library, 'NSLC and SciELO Collaborate to Advance Open Science Cooperation across the Global South', 18 June 2026, available at: https://english.las.cas.cn/news/news/202606/t20260618_1174328.html [accessed July 2026].

¹⁰⁴¹ Ministry of Science, Technology and Innovation of Colombia (Minciencias), Resolución 0777 del 3 de agosto de 2022: Política Nacional de Ciencia Abierta 2022–2031 [Resolution 0777 of 3 August 2022: National Open Science Policy 2022–2031], Minciencias, Bogotá, available at: <https://minciencias.gov.co/normatividad/resolucion-0777-2022>

¹⁰⁴² Republic of Colombia, Ley 2294 de 2023: Plan Nacional de Desarrollo 2022–2026, Colombia Potencia Mundial de la Vida' [Law 2294 of 2023: National Development Plan 2022–2026], Article 171, available at: https://minciencias.gov.co/sala_de_prensa/comunicado-la-opinion-publica-0 [accessed April 2026; translated via browser translation function].

¹⁰⁴³ National Council for Economic and Social Policy of Colombia (CONPES), Documento CONPES 4069: Política Nacional de Ciencia, Tecnología e Innovación 2022–2031 [National Science, Technology and Innovation Policy 2022–2031], approved 20 December 2021, Departamento Nacional de Planeación, Bogotá, available at: <https://colaboracion.dnp.gov.co/CDT/Conpes/Econ%C3%B3micos/4069.pdf> [accessed April 2026; in Spanish; AI-assisted summary used for the purposes of this study].

Article 3 of Resolution 0361 of March 19, 2020,¹⁰⁴⁴ adopted by Minciencias, introduces a “Ciencia abierta” clause for inclusion (as applicable) in calls/terms of reference and related instruments. For projects executed with public resources it states an obligation to make available (via the means designated by Minciencias) data and research procedures and specifically mentions items such as lab notebooks/field notebooks, experimental protocols, videos of experiments and other intermediate communicable elements potentially useful to other researchers. It also requires open access to preprints or versions prior to peer review.

Finally, Article 171 of Law 2294/2023 obliges anyone carrying out publicly funded R&D to make results available through open and interoperable infrastructure. This provision includes explicit exceptions where publication is not possible due to intellectual property considerations, personal data protections, or statistical confidentiality, in which case justification must be provided to the funding entity. However, neither Article 171 nor Resolution 0777/2022 specifies sanctions for non-compliance.

4.3. Scope of outputs

Article 171 of Law 2294/2023 explicitly refers to “results, products, publications and data derived from research.” The scope is comprehensive, covering publications (scientific articles, doctoral and master’s theses), research data, and other outputs including software, educational resources and innovation products.

Specific guidelines for open research data were published by Minciencias/CENDOC,¹⁰⁴⁵ including metadata standards aligned with RDA norms and OAI-PMH interoperability protocols.

4.4. Embargo and openness

The policy promotes openness as a foundational principle. However, no specific maximum embargo period is stipulated in either the policy or the legislation. The policy does not specify whether “open by default” entails immediate open access or permits transitional embargo periods.

4.5. Licensing and rights

The open science policy addresses intellectual property as one of its enabling components, alongside metrics, evaluation, and training. Resolution 0361/2020 adopted an IP clause for Minciencias public calls, contracts and agreements. It allows the state to reserve a non-exclusive, free licence for public-interest reasons.

Guidelines for institutional research repositories of the Ministry of Science, Technology and Innovation from the Colombian Network of Scientific Information (REDCOL) include fields for licensing information and note that repositories should contain outputs under open access licences or susceptible of being made openly accessible.¹⁰⁴⁶ However, no specific Creative Commons licence type is mandated at the national level.

¹⁰⁴⁴ Ministry of Science, Technology and Innovation of Colombia (Minciencias), Resolución 0361 del 19 de marzo de 2020 [Resolution 0361 of 19 March 2020], Minciencias, Bogotá, available at: https://minciencias.gov.co/sites/default/files/upload/reglamentacion/resolucion_0361-2020.pdf [accessed April 2026; in Spanish; AI-assisted summary used for the purposes of this study].

¹⁰⁴⁵ Minciencias / CENDOC (Centro Nacional de Documentación Científica), Repositorios de Datos de Investigación — Guías y Estándares de Metadatos [Research Data Repositories — Metadata Guides and Standards], available at: <https://cendoc.minciencias.gov.co/dir01/index.html> [accessed April 2026; translated via browser translation function].

¹⁰⁴⁶ REDCOL (Red Colombiana de Información Científica), Directrices para repositorios institucionales de investigación [Guidelines for Institutional Research Repositories], documentation available at: <https://redcol.readthedocs.io/es/latest/> [accessed April 2026; translated via browser translation function].

4.6. Infrastructure

Colombia's national infrastructure centres on the Red Colombiana de Información Científica (REDCOL), formally established through Resolution 0166 of 20 February 2019¹⁰⁴⁷ (then by Colciencias). REDCOL aggregates metadata from institutional repositories, digital libraries and research information systems. Colombia is also a founding partner country of LA Referencia, the federated network of Latin American open access repositories.

4.7. Funding and incentives

The National Open Science Policy includes components for infrastructure expansion and training, aiming to expand formation, appropriation, institutionalisation and open science infrastructure. At consortium level, the Consorcio Colombia, a national negotiating structure bringing together universities and research institutes with Minciencias, the Colombian Association of Universities (ASCUN) and the consortium operator Consortia, has concluded agreements that include reading and open access publishing (designated "acuerdos transformativos" by the consortium)¹⁰⁴⁸ that include quotas for covered articles per organisation.

4.8. Governance and monitoring

Minciencias (Ministry of Science, Technology and Innovation), established as a ministry through Law 2162 of 2021, is the responsible body for the R&I sector and for the open science policy. Coordination is managed through REDCOL. The Primeros Diálogos Nacionales de Ciencia Abierta (held in 2023¹⁰⁴⁹) provided a participatory mechanism for policy review. Implementation is tracked through Minciencias and through Colombia's participation in the LA Referencia network. The long-term implementation horizon extends through 2031 though specific monitoring indicators, compliance rates, and formal reporting cycles were not evidenced.

5. Japan

5.1. Policy instrument

The primary instrument is the National Policy on Promoting Open Access to Publicly Funded Scholarly Publications and Scientific Data, decided by the Integrated Innovation Strategy Promotion Council (Cabinet Office) on 16 February 2024.¹⁰⁵⁰ It is operationalised by an inter-ministerial implementation agreement, the "Measures for the Implementation" of the National Policy, adopted on 21 February 2024 and revised on 8 October 2024, which designates the competitive research funding systems in scope and prescribes deposit routes, reporting items, and monitoring arrangements.¹⁰⁵¹

¹⁰⁴⁷ Biblioteca de la Universidad de la Costa (CUC), REDCOL — Presentation and Founding Resolution, available at: <https://biblioteca.cuc.edu.co/bases-de-datos/redcol/> [accessed April 2026]. REDCOL was formally established through Resolution 166 of 20 February 2019 by Colciencias (now Minciencias).

¹⁰⁴⁸ Consorcio Colombia, 'Acuerdos Transformativos', <https://www.consorcio colombia.co/acuerdos-transformativos/>, [accessed July 2026].

¹⁰⁴⁹ Botero Bernal, A., 'Primeros Diálogos Nacionales de Ciencia Abierta' [First National Open Science Dialogues, 2023], blog post, available at: <https://www.andresboterobernal.com/2023/04/primeros-dialogos-nacionales-de-ciencia.html> [accessed April 2026; translated via browser translation function].

¹⁰⁵⁰ Integrated Innovation Strategy Promotion Council (Cabinet Office), National Policy on Promoting Open Access to Publicly Funded Scholarly Publications and Scientific Data, Government of Japan, 16 February 2024, English version available at: https://www8.cao.go.jp/cstp/oa_240216_en.pdf [accessed April 2026].

¹⁰⁵¹ Agreement of the relevant ministries and agencies, Measures for the Implementation of „National Policy on Promoting Open Access to Publicly Funded Scholarly Publications and Scientific Data“, 21 February 2024, revised 8 October 2024, provisional English translation, https://www8.cao.go.jp/cstp/hosaku_en.pdf (2022) and https://www.jst.go.jp/EN/about/openscience/guideline_openscience_en_r7.pdf (2025) [accessed July 2026].

Implementation operates through the open access and open science policies of the three major public research funding agencies: the Japan Society for the Promotion of Science (JSPS), the Japan Science and Technology Agency (JST), and the Japan Agency for Medical Research and Development (AMED).¹⁰⁵² JST had previously adopted its own Open Science Policy, and revised it on 1 April 2022, to introduce embargo-based green OA requirements and data management plan obligations and on 1 April 2025 to incorporate the "Immediate OA Compliance" obligations flowing from the national policy for designated programmes, while retaining its pre-existing requirements for all other JST-funded projects.¹⁰⁵³

The national policy framework rests on Cabinet-level council decisions and inter-ministerial agreements rather than legislation.

5.2. Binding vs voluntary

The national policy uses mandatory language: recipients of designated competitive research funds "shall be required to publish scholarly publications and scientific data...in information infrastructures such as institutional repositories immediately after publication in academic journals." However, no formal penalties are specified for non-compliance. Where immediate OA is not feasible, researchers must declare reasons (from a fixed list) in their annual results report to the funding agency; if the obstacle is subsequently resolved, prompt OA is required.¹⁰⁵⁴

5.3. Scope of outputs

The policy covers both publications and research data. Peer-reviewed scholarly publications are defined as those published in electronic journals, including the author's accepted manuscript. Under the earlier JST 2022 policy, covered publications included peer-reviewed research articles, review papers, and conference papers accepted for publication in conference proceedings, a formulation retained in the April 2025 revision. Scientific data subject to the immediate OA requirement are those "required to be published from the viewpoint of ensuring transparency and reproducibility in the writing guidelines and publication regulations of electronic journals." The implementation measures clarify that this covers only data whose publication is premised by the journal, such as supplemental data, and expressly excludes previously undisclosed underlying data.¹⁰⁵⁵

The JST 2022 policy additionally expected the release of research data beyond underlying data, with appropriate exceptions.

5.4. Embargo and openness

The policy framework has evolved from embargo-based to immediate OA. Under the JST 2022 policy, accepted manuscripts were required to be made publicly accessible within 12 months of publication. The 2024 national policy supersedes this for specific new grants from FY2025 by requiring immediate open access, defined explicitly as having no embargo period.

¹⁰⁵² CHORUS (Clearinghouse for the Open Research of the United States), 'Improving Open Access Opportunities in Japan with JST/CHORUS: Preparing for the National Open Science Policy from April 2025', CHORUS Blog, available at: <https://www.chorusaccess.org/improving-open-access-opportunities-in-japan-with-jst-chorus-preparing-for-the-national-open-science-policy-from-april-2025/>

¹⁰⁵³ Japan Science and Technology Agency (JST), JST Open Science Policy JST, Tokyo, English version available at: https://www.jst.go.jp/EN/about/openscience/guideline_openscience_en_r4.pdf [accessed April 2026]. OECD toolkit description: https://www.oecd.org/en/publications/access-to-public-research-data-toolkit_a12e8998-en/japan-science-and-technology-agency-jst-policy-on-open-access-to-research-publications-and-research-data-management_4e6b3a14-en.html

¹⁰⁵⁴ See Kobe University Library, Mandatory Open Access — National Policy on Promoting Open Access to Scholarly Publications (guidance note for researchers), available at: <https://lib.kobe-u.ac.jp/en/oa/mandatory/>

¹⁰⁵⁵ For this and a critical discussion of Japan's OA policy see Funamori, 'How Japan Lost the Plot on Open Access', March 2026, <https://katinamagazine.org/content/article/open-knowledge/2026/how-japan-lost-the-plot-on-open-access>, [accessed July 2026],

In terms of funding-stream coverage, the immediate OA obligation applies to four designated competitive systems for new calls from FY2025: JSPS Grants-in-Aid for Scientific Research (KAKENHI); JST's Strategic Basic Research Programs (excluding the ALCA-Next and CRONOS programmes); AMED's Strategic Basic Research Programs (AMED-CREST, PRIME, FORCE and LEAP); and JST's Fusion Oriented Research for Disruptive Science and Technology (FOREST) programme. Researchers are expected to make outputs freely accessible to anyone immediately upon publication in an academic journal, using either Green OA (deposit in an institutional repository) or Gold OA (open access publication by the publisher). Grants before FY2025 and JST-funded projects outside the designated programmes are not subject to the immediate OA obligation.

5.5. Licensing and rights

Neither the 2024 national policy nor the JST 2022/2025 policy mandates specific open licences such as Creative Commons.

The JST 2022/2025 Implementation Guidelines state that “it is preferable to specify terms of the copyright and the usage rules clearly when the reuse of the research results is allowed, in line with journal policies and the researcher's intention.” This approach is notably softer than the CC BY requirements found in many European funder mandates. There is no rights-retention mandate or statutory secondary publication right in Japan's open access framework.

5.6. Infrastructure

The national policy designates institutional repositories as the standard mechanism for open access, with scholarly publications and scientific data required to be searchable on the NII Research Data Cloud (including CiNii Research).¹⁰⁵⁶ Key national platforms include: J-STAGE (electronic journal platform hosting Japanese scholarly journals), Jxiv (preprint server), J-STAGE Data (research data repository), all operated by JST. The government committed approximately ¥10 billion to standardise and enhance institutional repositories across universities.¹⁰⁵⁷ In March 2026, the National Institute of Informatics (NII) released new NII Research Data Cloud features supporting the registration and publication of papers and their supporting evidence data through institutional repositories, explicitly framed as workflow support for the immediate OA obligation.¹⁰⁵⁸ FAIR principles are explicitly referenced in the policy as guiding principles for international cooperation on open science.

5.7. Funding and incentives

The 2024 national policy does not establish a dedicated OA publication fund. However, it states that the government will “take care not to put pressure on existing research funds and the number of applications accepted.” Under the JST 2022/2025 policy, article processing charges (APCs) are reimbursable as research result publishing expenses within the direct expenses of JST-funded projects. J-STAGE supports OA journals as an infrastructure platform rather than a direct APC-funding mechanism.

Collective negotiation with publishers operates at two levels. The Japan Alliance of University Library Consortia for E-Resources (JUSTICE), formed on 1 April 2011 from an alliance of the national and the public/private university library consortia, negotiates national-scale agreements that include reading and open access publishing.¹⁰⁵⁹

¹⁰⁵⁶ Akaike, Y. (National Institute of Informatics, NII), Japan's Policy Overview: NII Research Data Cloud and CiNii Research, presentation at COAR Annual Meeting 2025, May 2025, available at: <https://coar-repositories.org/wp-content/uploads/2025/05/5.-Japans-Policy-Overview-Akaike.pdf>

¹⁰⁵⁷ Chawla, D. S., ‘Japan's push to make all research open access is taking shape’, Nature, news article, 30 May 2024, available at: <https://www.nature.com/articles/d41586-024-01493-8>

¹⁰⁵⁸ National Institute of Informatics (NII), ‘NII RDC Launches New Features to Accelerate Immediate Open Access’, press release, 19 March 2026, <https://www.nii.ac.jp/en/news/release/2026/0319-2.html> [accessed July 2026].

¹⁰⁵⁹ National Institute of Informatics (NII) JUSTICE Overview <https://contents.nii.ac.jp/justice/overview> [accessed July 2026, translated via google translate in browser].

A significant development is the additional establishment in 2024 of OASE (Open Access for Scholarly Empowerment), a cabinet office supported collective negotiation body created at the government's request for transformative agreements with global academic publishers.¹⁰⁶⁰

On the incentives side, the national policy's preamble states the need to reconsider excessive dependence on quantitative indicators in research evaluation and to transition to assessment systems that provide incentives for open science. However, this remains a policy-level commitment without an identified implementing mechanism in funder or institutional assessment practice.

5.8. Governance and monitoring

Policy direction is set by the Integrated Innovation Strategy Promotion Council under the Cabinet Office. The Ministry of Education, Culture, Sports, Science and Technology (MEXT) serves as the primary coordinating ministry for implementation. The three major funding agencies (JSPS, JST, and AMED) are each responsible for implementing OA requirements within their respective grant programmes.

Monitoring operates at multiple levels. JST has partnered with CHORUS since 2017, using the CHORUS Japan Dashboard to monitor the publication and OA status of JST-funded articles.¹⁰⁶¹ The NII Research Data Cloud (CiNii Research¹⁰⁶²) provides an overarching discovery layer through which compliance with the repository-deposit requirement can be tracked. A trial version of the Japan Open Science Monitor, designed to track nationwide open access trends, was released in beta on 3 March 2026, providing an initial framework for systematic monitoring of OA status at the national level.¹⁰⁶³ Separately, the implementation measures assign the Cabinet Office responsibility for surveying the implementation status of immediate OA on the basis of annual research-report data, with the first survey expected around the end of 2027.

The national policy further mandates that relevant ministries “will examine the intersystem federation for monitoring the status of implementation of immediate open access.” Researchers are required to report the status of open access to each scholarly publication and scientific data when submitting annual results reports to the funding agency.

6. Switzerland

6.1. Policy instrument

Switzerland does not have a dedicated national law mandating open access to publicly funded research. The principal binding instrument is the Swiss National Science Foundation's (SNSF) Open Access Policy, embedded in the Funding Regulations (Article 47) and the Regulations on the Funding of Open Access Publications (current version of May 2025 applying to projects submitted from 1 January 2023).¹⁰⁶⁴

¹⁰⁶⁰ Open Access for Scholarly Empowerment (OASE), About OASE available at: <https://oase.jp/en/> [

¹⁰⁶¹ CHORUS, ‘JST Signing Ceremony — CHORUS Japan Dashboard Partnership’, CHORUS News, available at: <https://www.chorusaccess.org/jst-signing-ceremony/>

¹⁰⁶² National Institute of Informatics (NII), CiNii Research — Open Access Dashboard (trial phase), available at: <https://labs.ci.nii.ac.jp/en/detail-dashboard.html>

¹⁰⁶³ NII RDC Launches New Features to Accelerate Immediate Open Access Promoting Research Dissemination and Streamlining Library Support Operations,” National Institute of Informatics (NII), press release, 19 March 2026: <https://www.nii.ac.jp/en/news/release/2026/0319-2.html> — accessed 4 May 2026.

¹⁰⁶⁴ See Swiss National Science Foundation (SNSF), SNSF Open Access Policy — Regulations on Funding of Open Access Publications (in force 1 January 2023), SNSF, Berne, available at: https://www.snf.ch/media/en/zYkqFXO6l1wpUNlq/OA-Policy-Regulations_EN.pdf

This mandate is complemented by the Swiss National Open Access Strategy (revised 2024, horizon 2032), jointly developed by swissuniversities and SNSF,¹⁰⁶⁵ and implemented through the support programme swissuniversities/SNSF Programme Open Science II (2025–2026).¹⁰⁶⁶ SNSF is a member of cOAlition S.

A statutory secondary publication right (SPR) does not exist in Swiss law. However, swissuniversities advocates an unwaivable SPR and has commissioned a legal opinion (2023) as well as a regulatory impact assessment (2025).¹⁰⁶⁷

6.2. Binding vs voluntary

The SNSF OA Policy is mandatory for SNSF grantees and all researchers conducting research within the scope of an SNSF grant. The OA commitment is a contractual condition of grant acceptance. The National OA Strategy, as a joint swissuniversities–SNSF strategy document, is not itself a legal instrument but sets binding targets for Swiss higher education institutions, which are required to adopt institutional OA policies.

6.3. Scope of outputs

The SNSF OA mandate covers scientific publications defined as works published in journals and books (monographs, anthologies, book chapters) fully or partially financed by SNSF grants.

DMPs are required for most SNSF funding instruments as a condition for the release of funds.

6.4. Embargo and openness

Journal articles: Immediate open access without any embargo period is required for all journal articles arising from projects submitted to the SNSF on or after 1 January 2023. Projects submitted before that date may use a transitional maximum embargo of six months.¹⁰⁶⁸

Books and book chapters: Via the green road (repository deposit), a maximum embargo of 12 months is permitted.¹⁰⁶⁹

6.5. Licensing and rights

A CC BY licence is mandatory for all journal articles arising from SNSF-funded research. A CC BY-ND licence (which prohibits alterations) is permissible only upon justified request and with explicit SNSF approval. No specific licence is currently mandated for books or book chapters under the general OA mandate; however, books and anthologies funded by an SNSF book processing charge must carry at least a CC BY-NC-ND licence, with CC BY recommended

SNSF has adopted the cOAlition S Rights Retention Strategy. Authors retain the right to make their author accepted manuscript (AAM) freely available under a CC BY licence immediately upon submission to a journal, regardless of the publisher's policies, by inserting a prescribed acknowledgement statement¹⁰⁷⁰.

¹⁰⁶⁵ swissuniversities / SNSF, Swiss National Open Access Strategy (revised 2024, horizon 2032), swissuniversities, Berne, available at: https://www.swissuniversities.ch/fileadmin/swissuniversities/Dokumente/Hochschulpolitik/Open_Access/Swiss-National-Open-Access-Strategy-2024-en.pdf

¹⁰⁶⁶ swissuniversities, P-5 Open Science II Programme 2025–2026, available at: <https://www.swissuniversities.ch/en/topics/open-science/open-science-programme>

¹⁰⁶⁷ swissuniversities, „Zweitveröffentlichungsrecht“ (in German), available at: <https://www.swissuniversities.ch/themen/open-science/open-access/zweitveroeffentlichungsrecht> [accessed July 2026].

¹⁰⁶⁸ SNSF, 'Immediate Open Access without Restrictions: Changes as of 1 January 2023', SNSF News, available at: <https://www.snf.ch/en/33WC4FGNdPfXrqPV/news/immediate-open-access-without-restrictions-changes-as-of-1-january-2023>

¹⁰⁶⁹ OAPEN Library, Funder Requirements — SNSF (books and book chapters: maximum 12-month embargo via green OA route), available at: <https://www.oapen.org/article/11811372-funder-requirements-snsf>

¹⁰⁷⁰ SNSF, Open Access — Information for Researchers (Rights Retention Strategy, CC BY licence requirements, AAM deposit guidance), available at: <https://www.snf.ch/en/MDecEyLJgpSTk0cU/page/open-access-information-for-researchers>

6.6. Infrastructure

Authors may deposit publications in institutional or disciplinary repositories (including generalist repositories such as Zenodo, arXiv, or Europe PMC), subject to embargo limits and CC BY licensing.

For BPC-funded books, the author or editor deposits the publication in an institutional or disciplinary repository, and the SNSF itself forwards the OA version with its metadata to the OAPEN Library and the Swiss National Library.¹⁰⁷¹

From autumn 2026, the SNSF is participating in Open Research Europe (ORE), an existing publication platform previously funded only by the European Commission, now being restructured and opened to researchers funded by a broader group of European research funders.¹⁰⁷² The ORE platform was officially launched on 16–17 March 2026 at the headquarters of CERN in Geneva, which will serve as its operational host.

6.7. Funding and Incentives

SNSF covers APCs for publications in fully open access journals (gold road). As a cOAlition S member, Hybrid journal APCs are not funded by SNSF (although institutional Read & Publish agreements may cover these costs).¹⁰⁷³ Since February 2024, articles in journal special issues are excluded from APC funding. Since 1 January 2025, SNSF pays APC invoices directly to publishers via ChronosHub. From 1 January 2027, the maximum APC contribution is capped at CHF 3 500.

SNSF funds open access book publications up to CHF 15 000 per book (Book Processing Charges, BPCs), covering quality assurance, production, and distribution. This funding is currently available independently of SNSF project funding, but from 1 January 2027 will be restricted to SNSF-funded projects (with the exception for theses/habilitations).

6.8. Governance and Monitoring

The SNSF is responsible for implementation of its OA mandate. Strategic coordination is shared between SNSF and swissuniversities through the National OA Strategy (revised 2024) and Programme Open Science II, which was designed as a four-year programme (2025–2028) but for which federal project contributions have been committed only for 2025–2026 following the Federal Council's cost-saving decisions of September 2024; all project calls under the programme are now closed.

The Swiss Open Access Monitor (OAM-CH) tracks OA progress. As of 2025 data (2023 publications), the overall OA share stands at approximately 70%, with approximately 80% of SNSF-funded publications available open access.¹⁰⁷⁴ A more in-depth analysis for 2023 concludes:

It is clear that the share of OA publications rose sharply between 2013 and 2020. Since 2021, it has stabilised at a consistently high level, with minor fluctuations of a few percentage points, which are normal and to be expected.¹⁰⁷⁵

The original 2017 National OA Strategy set a target of 100% OA for all publicly funded research by 2024, a deadline not achieved. The 2024 revised strategy continues the 100% ambition with an extended horizon to 2032.¹⁰⁷⁶

¹⁰⁷¹ SNSF, Open Access Book Publications (BPC funding up to CHF 15,000; deposit in OAPEN Library and Swiss National Library required), available at: <https://www.snf.ch/en/uFmFFmMJGrnt1t49/funding/science-communication/open-access-book-publications>

¹⁰⁷² SNSF, 'SNSF to Adapt Its Open Access Funding — Participation in Open Research Europe from Autumn 2026', SNSF News, available at: <https://www.snf.ch/en/G2XgbkM4DKK9wHCQ/news/snsf-to-adapt-its-open-access-funding>

¹⁰⁷³ SNSF, Open Access Article Publications — Eligible Costs and APCs available at: <https://www.snf.ch/en/ozKDc97zu0ZBwCfJ/funding/science-communication/open-access-article-publications>

¹⁰⁷⁴ SNSF, 'SNSF to Adapt Its Open Access Funding', op. cit. The monitor itself is available at <https://oamonitor.ch/> and shows 69% for the years 2021–2025.

¹⁰⁷⁵ SNSF Data Portal, Open Access Publications Monitoring 2023 available at: <https://data.snf.ch/stories/open-access-publications-monitoring-2023-en.html>

¹⁰⁷⁶ open-access.network, 'Switzerland Sets Itself a New Open Access Target — 100% by 2032', available at: <https://open-access.network/en/oablog/switzerland-sets-itself-a-new-open-access-target>

7. United Kingdom

7.1. Policy instrument

UK open access policy has developed incrementally over more than two decades, driven primarily by research funders rather than legislation.

A pivotal moment in the UK's policy trajectory was the 2012 Finch Report (Accessibility, Sustainability, Excellence: How to Expand Access to Research Publications), produced by the Working Group on Expanding Access to Published Research Findings.¹⁰⁷⁷ The report recommended a mixed model combining gold and green open access, with a stated preference for gold OA. The UK Government accepted the report's findings in July 2012 and provided £10 million in initial funding to support article processing charges.¹⁰⁷⁸

In response, Research Councils UK (RCUK) — the predecessor body to UKRI — introduced a revised open access policy effective from 1 April 2013.¹⁰⁷⁹ The RCUK policy required all peer-reviewed articles acknowledging Research Council funding to be made open access, either through gold OA (immediate, with CC BY licence, supported by an APC block grant) or green OA (with maximum embargo periods of six months for STEM disciplines and twelve months for arts, humanities and social sciences). The policy was accompanied by block grants to institutions to cover APCs.

RCUK was reorganised into UK Research and Innovation (UKRI) under the Higher Education and Research Act 2017, taking effect in April 2018. UKRI subsequently undertook a comprehensive review of open access policy from 2018 to 2021, consulting extensively with the research sector. UKRI is a member of cOAlition S; this membership has shaped UKRI's convergence towards zero embargo and CC BY requirements. The unified UKRI Open Access Policy was published in August 2021 and came into force for research articles from 1 April 2022, replacing the earlier RCUK policy.¹⁰⁸⁰ A light-touch review of the policy for research articles was conducted in 2025. From 1 January 2025 (i.e. after 31 December 2024), UKRI block grant funds may no longer be used to cover open access publishing costs in transformative journals, in line with the cOAlition S timetable.

All in-scope UKRI research articles must include a Data Access Statement, even where no underlying data exist or data are inaccessible. This requirement constitutes the primary formal link between the UKRI OA publications policy and research data: it requires every article to indicate where underlying data are available and how they may be accessed.

Beyond UKRI, the Wellcome Trust requires immediate open access under a CC BY licence for all outputs acknowledging its funding, with mandatory deposit in Europe PubMed Central on the publication date. This policy applies to monographs and book chapters as well as articles and predates the UKRI policy. As of 2025 Wellcome only funds the cost of article processing charges for research articles published in fully open access journals or platforms indexed in the Directory of Open Access Journals.¹⁰⁸¹

¹⁰⁷⁷ Working Group on Expanding Access to Published Research Findings (Chair: Dame Janet Finch), Accessibility, Sustainability, Excellence: How to Expand Access to Research Publications (Finch Report), Research Information Network, June 2012, <http://www.researchinfonet.org/publish/finch/> [site under maintenance] available through https://upload.wikimedia.org/wikipedia/commons/1/14/Finch_Group_report.pdf

¹⁰⁷⁸ Department for Business, Innovation and Skills, 'Government to Open Up Publicly Funded Research', GOV.UK press release, July 2012, available at: <https://www.gov.uk/government/news/government-to-open-up-publicly-funded-research>
¹⁰⁷⁹ Research Councils UK (RCUK), RCUK Policy on Open Access (effective 1 April 2013, revised 2014 and 2015), RCUK, Swindon, 2013. Archived version available at: <https://www.ukri.org/wp-content/uploads/2020/10/UKRI-020920-OpenAccessPolicy.pdf>

¹⁰⁸⁰ UK Research and Innovation (UKRI), UKRI Open Access Policy (published August 2021, in force for research articles from 1 April 2022; Version 1.8, November 2023), available at: <https://www.ukri.org/publications/ukri-open-access-policy/> [accessed April 2026]. Version 1.8 PDF: <https://www.ukri.org/wp-content/uploads/2023/11/UKRI-14112023-Nov-2023-UKRI-Open-Access-Policy-Version-1.8.pdf>

¹⁰⁸¹ Wellcome Trust, Open Access Guidance: Open Access Policy (2025 version, covering APC funding for fully OA journals only), available at: <https://wellcome.org/research-funding/guidance/ending-a-grant/open-access-guidance/open-access-policy>

The Research Excellence Framework (REF) open access policy¹⁰⁸² derives its authority from the conditions attached to quality-related (QR) funding distributed by the four UK higher education funding bodies (Research England, the Scottish Funding Council, Medr — the Commission for Tertiary Education and Research, Wales, and the Department for the Economy Northern Ireland). Journal articles and conference proceedings (with an ISSN) submitted to REF 2021 and REF 2029 must be open access to be eligible for submission; ineligible outputs reduce an institution's submittable portfolio, with direct financial implications through the QR funding allocation.

Jisc negotiates national read-and-publish and repository-access agreements that support the overall infrastructure. Jisc concluded new read-and-publish agreements with Elsevier (2026–2028), Springer Nature, Wiley, Taylor & Francis, and Sage in December 2025, effective from 1 January 2026.¹⁰⁸³ However, a number of universities have confirmed that they were not renewing the Elsevier read-and-publish agreement for 2026, citing local financial analysis and a stated preference for directing released funds toward alternative open access approaches.¹⁰⁸⁴

For research data the foundational instrument is the Concordat on Open Research Data, published in 2016 by RCUK, HEFCE, Universities UK and the Wellcome Trust, and endorsed by UKRI. The Concordat sets out ten principles covering researcher responsibilities, data management, curation, preservation and skills and notably states that data supporting publications should be accessible by the publication date and in a citable form.¹⁰⁸⁵ In practice, data requirements are delivered through research council-level policies¹⁰⁸⁶ requiring Data Management Plans (DMPs) from most UKRI-funded applicants.

In April 2025 UKRI published a draft unified research data policy for public consultation (April–July 2025), with the intention of harmonising and replacing the existing patchwork of nine council-level data policies with a single framework. The draft policy extends scope to software and code; aligns with FAIR data principles (Findable, Accessible, Interoperable, Reusable); retains the "as open as possible, as restricted as necessary" principle; and addresses DMP requirements, FAIR implementation, data licensing and costs.¹⁰⁸⁷ As of July 2026, the final policy has not been published. UKRI's April 2026 update states that the final policy, an implementation plan and initial supporting guidance are planned for publication in summer 2026, with the policy starting to apply in 2027.

Wellcome expects researchers to maximise the availability of research data, software and materials with as few restrictions as possible. The data underpinning original research publications must be made available to other researchers at the time of publication, as well as any original software required to view datasets or replicate analyses. Where research data relates to public health emergencies, researchers must share quality-assured interim and final data as rapidly and widely as possible, and in advance of publication.¹⁰⁸⁸

7.2. Binding vs voluntary

The policy is mandatory for all UKRI-funded researchers and host research organisations. It covers two categories. For peer-reviewed research articles (including reviews and conference papers), the policy applies to submissions made on or after 1 April 2022.

¹⁰⁸² See Research England / REF 2029, REF 2029 Open Access Policy, available at: <https://2029.ref.ac.uk/guidance/ref-2029-open-access-policy/>

¹⁰⁸³ Landmark publishing agreements for UK universities, "Jisc, December 2025: <https://www.jisc.ac.uk/news/all/landmark-publishing-agreements-for-uk-universities> — accessed 4 May 2026.

¹⁰⁸⁴ "Three major research universities opt out of new Elsevier deal," *Times Higher Education*, 22 January 2026: <https://www.timeshighereducation.com/news/three-major-research-universities-opt-out-new-elsevier-deal> — accessed 4 May 2026.

¹⁰⁸⁵ RCUK / HEFCE / Universities UK / Wellcome Trust, Concordat on Open Research Data, 2016, available at: <https://www.ukri.org/wp-content/uploads/2020/10/UKRI-020920-ConcordatOnOpenResearchData.pdf>

¹⁰⁸⁶ That is, the research data policies adopted individually by UKRI's seven disciplinary research councils: AHRC, BBSRC, EPSRC, ESRC, MRC, NERC and STFC, together with Innovate UK and Research England.

¹⁰⁸⁷ UKRI, Developing UKRI's Research Data Policy: Public Consultation (April–July 2025), UK Research and Innovation engagement hub, available at: <https://engagementhub.ukri.org/ukri-openresearch/developing-ukris-research-data-policy/>

¹⁰⁸⁸ Wellcome Trust, Data, Software and Materials Management and Sharing Policy, available at: <https://wellcome.org/research-funding/guidance/policies-grant-conditions/data-software-materials-management-and-sharing-policy>

For monographs, book chapters and edited collections, it applies to works published on or after 1 January 2024, with an exception where a publishing contract signed before that date prevents compliance.

The Wellcome Trust's open access policy is also mandatory for all Wellcome-funded researchers, operating as a condition of grant award.

The REF open access policy functions as a de facto institutional mandate. While individual researchers face no legal sanction, institutional pressure to ensure compliance is effectively binding.

7.3. Scope of outputs

The UKRI policy covers two categories. For peer-reviewed research articles (including reviews and conference papers), it applies to submissions made on or after 1 April 2022. For monographs, book chapters and edited collections, it applies to works published on or after 1 January 2024, with an exception where a publishing contract was signed before that date that prevents compliance. Out-of-scope outputs include preprints, trade books (unless the sole output of UKRI-funded research), scholarly editions, exhibition catalogues, textbooks and all fictional works.

The REF open access policy has a narrower scope than the UKRI policy. For both REF 2021 and REF 2029, the open access requirement applies exclusively to journal articles and conference proceedings carrying an ISSN and does not extend to monographs, book chapters, edited collections or any other output types.

As discussed above, there is a separate framework for data access based on the Concordat on Open Research Data and the draft UKRI policy.

The Wellcome Trust's policy additionally covers monographs and book chapters.

7.4. Embargo and openness

The UKRI policy distinguishes between:

- Research articles: Immediate open access is required at the time of publication, with no embargo period permitted. Two compliant routes are available. Under Route One (Gold/Diamond OA), authors publish the Version of Record (VoR) in an open access journal or platform that makes it immediately freely available. Under Route Two (Green OA), authors publish in a subscription journal and deposit the Author's Accepted Manuscript (AAM) in an institutional or subject repository at the time of final publication, again without embargo. UKRI has confirmed that in the 2028–29 financial year its open access funds will cease to be usable for open access costs in hybrid journals.¹⁰⁸⁹
- Monographs, book chapters and edited collections: The Version of Record or the AAM must be made freely available within a maximum of 12 months of publication via an online platform, publisher's website, or repository.

Embargo provisions for the REF differ structurally from the UKRI mandate and represent a more permissive standard. For outputs published between 1 January 2021 and 31 December 2025 (REF 2021/early REF 2029 period), the REF policy permits publisher embargoes of up to 12 months for Main Panels A and B (broadly, STEM and medicine) and up to 24 months for Main Panels C and D (social sciences, arts and humanities). For outputs published from 1 January 2026 (under the updated REF 2029 requirements), maximum permitted embargoes reduce to 6 months for Panels A and B and 12 months for Panels C and D.¹⁰⁹⁰

The Wellcome Trust requires immediate open access (zero embargo) for all funded outputs, including monographs.

¹⁰⁸⁹ UK Research and Innovation (UKRI), UKRI open access policy: frequently asked questions, <https://www.ukri.org/publications/ukri-open-access-policy/ukri-open-access-policy-frequently-asked-questions/>, [accessed July 2026].

¹⁰⁹⁰ University of Bath Library, Open Access and the REF — Embargo Periods under REF 2021 and REF 2029, available at: <https://library.bath.ac.uk/open-access/openaccessandtheref>

The structural asymmetry between UKRI (zero embargo, all articles) and the REF (embargoes permitted for non-UKRI-funded outputs) means that the UK system as a whole does not yet achieve universal immediate open access for articles, even for the portion of the research base covered by the REF.

7.5. Licensing and rights

For research articles (both routes), UKRI requires a Creative Commons Attribution (CC BY) licence on the open access version. Two narrow exceptions apply: an Open Government Licence where the article is subject to Crown Copyright; and a CC BY-ND licence, permitted only on a case-by-case basis following explicit UKRI approval via a formal exception form.¹⁰⁹¹ For long-form publications, a Creative Commons licence is required, with CC BY preferred; other Creative Commons variants (e.g. CC BY-NC, CC BY-ND) are permitted, affording greater flexibility than for articles. UKRI does not mandate statutory rights retention, but the CC BY requirement for articles effectively preserves broad reuse rights.

The REF 2029 licensing requirements differ from the UKRI standard. For outputs published before 1 January 2026, the REF policy requires a minimum of CC BY-NC-ND (or equivalent); CC BY is not mandated. For outputs published from 1 January 2026, the updated REF requirements set the same minimum of CC BY-NC-ND for green OA deposits, with CC BY or the equivalent strongly preferred. Outputs published gold OA (immediately open access on the publisher site) must carry a Creative Commons licence meeting at least CC BY-NC-ND to satisfy REF requirements; again, CC BY is preferred.

The Wellcome Trust mandates CC BY for all funded outputs with a CC BY-ND licence permitted by exception.

Wellcome expects data will be preserved and shared through a research data archive or repository unless there is a compelling reason not to do so. Where no discipline-specific repository exists, it recommends Dryad and Figshare; institutional repositories are also acceptable.

7.6. Infrastructure

For Green OA, deposit in an institutional or subject repository meeting UKRI's minimum technical standards (as defined in Annex 2 of the policy) is required by UKRI. Standards include persistent identifiers (DOIs, URNs or Handle), article-level metadata on a defined application profile, ORCID researcher identifier support, and registration in the Directory of Open Access Repositories (OpenDOAR) and SHERPA RoMEO. Biomedical articles acknowledging MRC or BBSRC funding must additionally be archived in Europe PubMed Central. Researchers at NERC-affiliated institutions (British Antarctic Survey, British Geological Survey, UK Centre for Ecology and Hydrology, National Oceanography Centre) must deposit in the NERC Open Research Archive (NORA).

Adoption of metadata standards and persistent identifiers for long-form outputs is encouraged but not currently mandated.

A network of discipline-specific trusted repositories is designated for priority data types: the UK Data Service (ESRC) for social and economic data, the Environmental Data Service (NERC) for environmental data, and Europe PubMed Central for biomedical data.

In April 2026, UKRI additionally signalled a targeted investment commitment to strengthen Green OA and repository infrastructure in the 2026–30 period, with a stated intention to collaborate with institutions and other partners to assess the UK's research repository landscape, identify opportunities for greater coordination and shared approaches, and support more resilient and sustainable UK-wide infrastructure.¹⁰⁹²

¹⁰⁹¹ See UKRI, Open Access Policy — FAQs (Version 1.9, October 2023), covering CC BY exceptions (Crown Copyright and CC BY-ND by exception only), available at: <https://www.ukri.org/wp-content/uploads/2023/10/UKRI-121023-OpenAccessPolicy-FAQ-v1-9.pdf>

¹⁰⁹² UK Research and Innovation (UKRI), „Full and immediate Open Access. Since 2022, that has been the UKRI Open Access policy goal for research articles — and together, we've made real progress,“ official corporate LinkedIn post, published 27 April 2026 (edited): <https://www.linkedin.com/feed/update/urn:li:ugcPost:7454463002151391232/> — accessed 4 May 2026.

7.7. Funding and incentives

UKRI provides up to £46.7 million per year to support overall policy implementation.¹⁰⁹³ The majority is distributed to eligible research organisations through the Open Access Block Grant (OABG). The 2024–25 block grant terms describe the article-specific portion as approximately £40 million per year.¹⁰⁹⁴ A separate dedicated fund of £3.5 million supports open access costs for monographs, book chapters and edited collections within scope of the policy. This fund is centrally held; research organisations apply to UKRI in two stages to access it. In April 2026, UKRI confirmed it is maintaining this investment in open access for the 2026–30 period, including dedicated block grant funding to research organisations, which they can use flexibly to support publication and implementation costs, alongside direct support for shared infrastructure and services, including Europe PMC.¹⁰⁹⁵

Costs associated with research data management and sharing — including DMP preparation, repository deposit and curation — are eligible as direct costs in UKRI grant applications and should be budgeted explicitly. UKRI supports these costs in principle across all research councils, though the level of specific funding varies by council and by project.¹⁰⁹⁶

There is no equivalent of the UKRI Open Access Block Grant for REF compliance costs.

7.8. Governance and monitoring

UKRI is the responsible body for the policy, coordinating implementation across its nine research councils. A light-touch review of the policy for research articles was conducted in 2025. However, as of July 2026, there is no evidence that a final report for the light-touch review has been published as a standalone document. UKRI stated its intention to publish a monitoring and evaluation (M&E) framework in summer 2025. A separate report on improving the research information landscape¹⁰⁹⁷ was published in July 2025. It outlined five recommendations on (i) Grant IDs, (ii) communication programmes, (iii) Direct publishers, publishing technology vendors, and repository communities to existing technical resources, (iv) conduct research into compliance barriers and (v) support the technical development of specific plugins to assist repositories. As of July 2026, no separately published final M&E framework document has been confirmed.

UKRI has, however, set out its monitoring intentions for the 2026–30 implementation period in official guidance: more systematic tracking of open access progress and levels, exploration of an "Open Access Monitor", independent economic analysis of costs and trends, and the reintroduction of block grant reporting in 2026–27 through a co-developed, lightweight, standardised template to address evidence gaps around costs.

An earlier baseline study found that in 2022, the year the policy started, 63% of articles acknowledging UKRI funding were fully policy compliant.¹⁰⁹⁸ As of April 2026, UKRI reports that OA levels for UKRI-funded articles have reached approximately 88%, with steady growth in immediate OA. UKRI has characterised this as "real progress" while acknowledging that inequities persist as the transition to full OA is slow.¹⁰⁹⁹

¹⁰⁹³ UKRI, Implementing Our Open Access Policy — Total Annual Funding available at: <https://www.ukri.org/what-we-do/supporting-healthy-research-and-innovation-culture/open-research/open-access-policies-review/implementing-our-open-access-policy/>

¹⁰⁹⁴ UKRI, Open Access Block Grant — Terms and Conditions 2024—available at: <https://www.ukri.org/wp-content/uploads/2022/07/UKRI-050424-UKRI-open-access-block-grant-terms-and-conditions-2024-to-2025.pdf>

¹⁰⁹⁵ UK Research and Innovation (UKRI), „Full and immediate Open Access. Since 2022, that has been the UKRI Open Access policy goal for research articles — and together, we've made real progress," op cit

¹⁰⁹⁶ UKRI, Making Your Research Data Open — Eligible Costs in UKRI Grant Applications, available at: <https://www.ukri.org/manage-your-award/publishing-your-research-findings/making-your-research-data-open/>

¹⁰⁹⁷ UKRI, Improving the Open Access Research Information Landscape (report, July 2025), available at: <https://www.ukri.org/wp-content/uploads/2025/07/UKRI-300625-ImprovingOpenAccessResearchInformationLandscape-report.pdf>

¹⁰⁹⁸ UKRI, 'Update on UKRI's Journey to Open Access' (noting 63% UKRI-funded articles fully policy compliant in 2022, the first year of the policy), UKRI News, available at: <https://www.ukri.org/news/update-on-ukris-journey-to-open-access/>

¹⁰⁹⁹ Op cit UK Research and Innovation (UKRI), „Full and immediate Open Access. Since 2022, that has been the UKRI Open Access policy goal for research articles — and together, we've made real progress,

In April 2026 UKRI announced the next phase of open access policy implementation, covering the period 2026–2030. UKRI was explicit that the policy itself is not changing but that the approach to supporting delivery is being reconfigured. In a Linked In post, it was announced that “from 2028/29 UKRI funding will focus on fully OA publishing and will no longer be available for hybrid OA.”¹¹⁰⁰ Further detail on the 2026–30 implementation arrangements was described by UKRI as forthcoming.

REF open access compliance is monitored by the four UK higher education funding bodies, coordinated by Research England. Compliance is checked through the REF submission process itself: outputs not meeting the policy requirements are ineligible for submission unless an approved exception applies. Research England has confirmed it will undertake auditing of open access compliance as part of REF 2029. There is no continuous reporting obligation on institutions equivalent to the (reintroduced) UKRI block grant reporting. The governance of open research data is addressed through two mechanisms that are currently in transition. The 2016 Concordat on Open Research Data provides a multi-stakeholder normative framework, endorsed by UKRI, Universities UK and Wellcome but not formally enforced. More substantively, in April 2025 UKRI published a draft unified research data policy for public consultation (April–July 2025), with the intention of harmonising and replacing the existing patchwork of nine council-level data policies with a single framework. The draft policy extends scope to software and code; aligns with FAIR data principles (Findable, Accessible, Interoperable, Reusable); retains the “as open as possible, as restricted as necessary” principle; and addresses DMP requirements, FAIR implementation, data licensing and costs. The Open Research Data Task Force (2018) previously recommended that UKRI take a coordinating role in this area; the draft 2025 policy represents the institutional response to that recommendation. As of July 2026, the final policy has not been published.

8. United States

8.1. Policy instrument

The United States has a federal policy mandate through the OSTP Memorandum titled “Ensuring Free, Immediate, and Equitable Access to Federally Funded Research,” issued on August 25, 2022.¹¹⁰¹ It directs all federal agencies to develop or update public access plans, with final policies to be published by December 31, 2024, and to take effect no later than December 31, 2025. The 2022 memorandum expanded the scope of an earlier 2013 memo, which applied only to agencies with more than \$100 million in annual R&D expenditures, to all federal agencies with R&D expenditures regardless of size.

The memo is not itself legislation but constitutes binding policy guidance from the Executive Office of the President to federal departments and agencies. Several legislative proposals, including the FASTR Act (Fair Access to Science and Technology Research), have sought to codify the OSTP memo’s requirements in statute, but none had been enacted as of February 2026.

The memorandum’s status has become contested during 2026. It has not been formally rescinded as of 29 July 2026, and major agency policies have proceeded.

SPARC¹¹⁰² lists the following agencies:

- Agencies with Updated Policies in Effect: ACF | ACL | AHRQ | ASPR | CDC | Census | CMS | CPSC | Ed | DOE | EPA | FDA | IMLS | NASA SMD | NEH | NIH | NSF | Smithsonian | USDA | USGS

¹¹⁰⁰ Later confirmed in UKSG eNews 608, “UKRI ceases funding hybrid OA,” 30 April 2026, <https://www.uksg.org/newsletter/uksg-eneews-608/ukri-ceases-funding-hybrid-oa/>, [accessed July 2026].

¹¹⁰¹ Office of Science and Technology Policy (OSTP), Executive Office of the President, Memorandum: Ensuring Free, Immediate, and Equitable Access to Federally Funded Research (the ‘Nelson Memo’), 25 August 2022, available at: <https://bidenwhitehouse.archives.gov/wp-content/uploads/2022/08/08-2022-OSTP-Public-Access-Memo.pdf>

¹¹⁰² “U.S. Federal Public Access Policies,” SPARC (Scholarly Publishing and Academic Resources Coalition), last updated 10 April 2026: <https://sparcopen.org/our-work/2022-updated-ostp-policy-guidance/>, accessed 4 May 2026. Compared with the February 2026 position, USDA and ASPR have been added to the compliant list; USAID has been removed (reflecting a change in agency status under the Trump Administration).

- Agencies Without Updated Policies Published: DOD | DOT | DHS | FWS | NIJ | NIST | NOAA | SSA | VA

However, the report accompanying the House Appropriations Committee's FY2027 Commerce–Justice–Science bill (May 2026) states that the committee "recognizes that OSTP is in the process of repealing" the memorandum and requests a briefing on this action.¹¹⁰³ No formal rescission document had been published by OSTP at the time of writing. CASRAI, the Consortia Advancing Standards in Research Administration Information, concludes:

the practical takeaway is not "the mandate is being rolled back" or "the mandate is expanding" as a settled fact — it's that the individual agency policies already in effect (NIH's July 2025 date, NSF's January 2026 date, and others) remain the operative compliance requirements today, while the memo that originated them is under active political and budgetary pressure at the OSTP level. Institutions should track their specific funders' grants-policy notices directly rather than assuming the government-wide baseline is either fixed or disappearing.¹¹⁰⁴

The most recent agency policy, USDA Departmental Regulation DR 1020-006 (effective 7 April 2026), removes the previously optional 12-month embargo for publications, data, and metadata, but also introduces a restriction without precedent among federal public access policies: USDA-supported scholarly publications may not be published in journals whose publisher has editorial offices located in, or operated out of, a "foreign country of concern" (defined by reference to 42 U.S.C. § 19221 as China, North Korea, Russia, and Iran), and data repositories used for compliance may not be hosted, funded, or controlled by such a country.¹¹⁰⁵

Separately, the Trump Administration's Executive Order 14303,¹¹⁰⁶ "Restoring Gold Standard Science" (May 23, 2025), promotes data transparency and public availability of "influential scientific information" used in agency decision-making, though its primary purpose is to impose new scientific integrity standards rather than to advance open access per se.

In addition to the federal mandate, major private research funders maintain independent open access policies that predate and, in some respects, exceed the federal requirements.¹¹⁰⁷

8.2. Binding vs voluntary

The policy is mandatory for all federally funded research. For NIH, the 2024 Public Access Policy¹¹⁰⁸ (effective July 1, 2025¹¹⁰⁹) applies to all manuscripts accepted for publication on or after that date, including those resulting from awards made before that date.

Non-compliance may result in delayed processing of non-competing continuation awards and may be considered by NIH in future funding decisions.

Major US private funders impose mandatory open access requirements that, in several respects, exceed the federal mandate.

¹¹⁰³ As reported in McKenzie, L., "Scholarly Publishing Costs Under Scrutiny by Trump Administration", FYI: Science Policy News (American Institute of Physics), 20 May 2026, available at: <https://www.aip.org/fyi/scholarly-publishing-costs-under-scrutiny-by-trump-administration> [accessed July 2026].

¹¹⁰⁴ CASRAI, "Federal Public-Access Mandates Beyond NIH: 2026 Status," <https://casrai.org/news/federal-public-access-mandate-beyond-nih-2026> [accessed July 29, 2026]

¹¹⁰⁵ US Department of Agriculture, Departmental Regulation DR 1020-006, Public Access to Scholarly Publications and Digital Scientific Research Data, 7 April 2026 (Office of the Chief Scientist), sections 3, 5b and 5d(4)(d), available at: <https://www.usda.gov/sites/default/files/documents/dr-1020-006.pdf>, [accessed July 2026].

¹¹⁰⁶ The White House, Executive Order 14303: Restoring Gold Standard Science (signed 23 May 2025), available at: <https://www.whitehouse.gov/presidential-actions/2025/05/restoring-gold-standard-science/>

¹¹⁰⁷ Howard Hughes Medical Institute (HHMI), Immediate Access to Research Policy (effective 1 January 2026), available at: <https://hhmicdn.blob.core.windows.net/policies/Immediate-Access-to-Research.pdf> [accessed April 2026]; Bill & Melinda Gates Foundation, 2025 Open Access Policy (effective 1 January 2025), available at: <https://openaccess.gatesfoundation.org/open-access-policy/2025-open-access-policy/>

¹¹⁰⁸ National Institutes of Health (NIH), Notice of Updated NIH Public Access Policy (NOT-OD-25-047, effective July 1, 2025), available at: <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-25-047.html>

¹¹⁰⁹ National Institutes of Health (NIH), Clarification of NIH Public Access Policy Effective Date (NOT-OD-25-101), available at: <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-25-101.html>

The Howard Hughes Medical Institute (HHMI)'s "Immediate Access to Research" policy (effective January 1, 2026) requires HHMI laboratory heads to post research articles as preprints under a CC BY 4.0 licence before journal submission. The Gates Foundation's 2025 Open Access Policy (effective January 1, 2025) mandates immediate open access under CC BY 4.0 for all funded manuscripts, requires a preprint posting, and has discontinued payment of article processing charges (APCs); compliance is a condition of funding. Both HHMI and the Gates Foundation are members of cOAlition S and their policies are aligned with Plan S principles.

8.3. Scope of outputs

Coverage includes publications and scientific data. Scholarly publications always include peer-reviewed research articles or final manuscripts published in scholarly journals, and may include peer-reviewed book chapters, editorials, and peer-reviewed conference proceedings. Scientific data are defined as recorded factual material commonly accepted in the scientific community as of sufficient quality to validate and replicate research findings, subject to legal, privacy, ethical, technical, intellectual property, or security limitations.

The OSTP memo requires that scientific data underlying peer-reviewed scholarly publications be made freely available at the time of publication, and that each agency's public access plan specify how scientific data will be managed, preserved, and made publicly accessible. Independent of the OSTP memo, NIH introduced its Data Management and Sharing (DMS) Policy,¹¹¹⁰ effective January 25, 2023, which requires all NIH-funded research generating scientific data to submit a Data Management and Sharing Plan as a condition of award, regardless of funding level. Under the DMS Policy, data must be shared no later than the time of an associated publication or the end of the award period, whichever comes first.

Private funders similarly require data availability. The Gates Foundation mandates that underlying data be made accessible as soon as possible upon availability of funded manuscripts, accompanied by a Data Availability Statement. The HHMI's 2026 policy requires that data supporting scientific claims be shared consistent with FAIR principles.

8.4. Embargo and openness

Immediate open access is required with no embargo. This is the central departure from the 2013 memo, which had permitted a 12-month embargo period.¹¹¹¹ Publications must be made freely and publicly accessible by default in agency-designated repositories without any embargo or delay after publication. Data underlying peer-reviewed scholarly publications must similarly be made immediately available upon publication. NIH's implementation of this requirement became effective on July 1, 2025, accelerated from the original December 31, 2025 deadline.

Major private funders likewise require immediate availability. HHMI's 2026 policy mandates that initial preprints be posted prior to first journal submission, with revised preprints following peer review. The Gates Foundation requires that preprints be posted immediately and that accepted articles be deposited in PubMed Central or another openly accessible repository upon publication, with no embargo.

8.5. Licensing and rights

The 2022 OSTP Memorandum does not mandate specific open licences (e.g. Creative Commons CC BY). Instead, it instructs agencies to describe in their plans "the circumstances or prerequisites needed to make the publications freely and publicly available by default, including any use and re-use rights, and which restrictions, including attribution, may apply." Licensing requirements are thus left to individual agency discretion. Neither NIH nor most other federal agencies have mandated CC BY as of early 2026.

¹¹¹⁰ National Institutes of Health (NIH), NIH Data Management and Sharing Policy — Policy Overview (effective 25 January 2023), available at: <https://grants.nih.gov/policy-and-compliance/policy-topics/sharing-policies/dms/policy-overview>

¹¹¹¹ Creative Commons, 'A Big Win for Open Access: OSTP Issues New Guidance Ending Embargo on Federally Funded Research Publications', Creative Commons News, 26 August 2022, available at: <https://creativecommons.org/2022/08/26/a-big-win-for-open-access/>

Machine-readability is required for publications, defined as a format that can be easily processed by a computer without human intervention while ensuring no semantic meaning is lost. By accepting NIH funding, recipients grant the government a royalty-free, non-exclusive, and irrevocable right to reproduce, publish, or otherwise use the work for federal purposes.¹¹¹²

By contrast, leading private funders require specific open licences. Both the Gates Foundation and HHMI mandate CC BY 4.0 for all funded manuscripts, including preprints and accepted manuscripts. Under the Gates model, a CC BY 4.0 licence is assigned to the Author Accepted Manuscript as a condition of the grant; grantees retain copyright. HHMI requires that preprints be posted under CC BY 4.0 and that authors retain sufficient rights to comply.

8.6. Infrastructure

Federal agencies must use agency-designated repositories that align with the “Desirable Characteristics of Data Repositories for Federally Funded Research,” a document setting FAIR-aligned standards for repositories. Digital persistent identifiers (PIDs) are required for publications, scientific data, and awards, consistent with the National Security Presidential Memorandum 33 (NSPM-33) Implementation Guidance. NIH uses PubMed Central (PMC) as its designated repository for biomedical and life science journal literature.¹¹¹³ Other agencies maintain their own repositories (e.g. DOE’s OSTI, NASA’s PubSpace). Agencies are required to publish updated plans for metadata collection and PID assignment by December 31, 2026, with implementation by December 31, 2027.

For research data, NIH encourages deposit in domain-specific repositories where available and provides a list of recommended repositories organised by discipline. There is no single national data repository; instead, a distributed ecosystem of discipline-specific (e.g. GenBank for genomic data, ClinicalTrials.gov for clinical trial data) and general-purpose (e.g. Zenodo, Dryad, Figshare) repositories is used.

The Gates Foundation requires deposit in PMC or an equivalent openly accessible repository and has launched VeriXiv (in partnership with F1000), a verified preprint server with pre-publication quality checks for authorship, publishing ethics, and research integrity.¹¹¹⁴ HHMI has supported ASAPbio’s preprint infrastructure and invested in bioRxiv and medRxiv as primary channels for preprint dissemination.

8.7. Funding and incentives

Federal agencies are directed to allow researchers to include reasonable publication costs and data management costs as allowable expenses in research budgets. The White House FAQ accompanying the memo explicitly states that “adherence to and implementation of the [memo] does not require expense on the part of the researcher,” as compliance can be achieved through use of agency-designated repositories with the accepted manuscript, at no cost to the author.

The federal policy does not address diamond OA or transformative agreements; the memo is route-neutral, requiring only that outputs be made available through repositories. However, NIH guidance specifies that if an author is asked to pay a fee for submission of the Author Accepted Manuscript to PubMed Central, such costs are not allowable charges to NIH grants.

On 8 July 2025, NIH Director Jay Bhattacharya announced that NIH would implement a cap on allowable publication costs starting in FY2026, stating that “the growing prevalence of unreasonably high article processing charges has placed undue financial pressure on researchers and funders”.¹¹¹⁵

¹¹¹² For details see: National Institutes of Health, Supplemental Guidance to the 2024 NIH Public Access Policy: Government Use License and Rights (NOT-OD-25-049), available at: <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-25-049.html> [accessed July 2026].

¹¹¹³ National Institutes of Health (NIH), NIH Public Access Policy Overview (PubMed Central as designated repository), available at: <https://grants.nih.gov/policy-and-compliance/policy-topics/public-access/nih-public-access-policy-overview>

¹¹¹⁴ VeriXiv, About VeriXiv (verified preprint server, launched by Gates Foundation in partnership with F1000), available at: <https://verixiv.org/>

¹¹¹⁵ NIH Director Jay Bhattacharya, „NIH to Establish New Policies for Allowable Publication Costs,” statement, 8 July 2025: <https://www.nih.gov/about-nih/nih-director/statements/nih-establish-new-policies-allowable-publication-costs> — accessed 4 May 2026.

As of July 2026 the APC cap policy remains in the consideration phase and limits have not yet been officially established. The NIH has not yet published a policy decision on this matter.¹¹¹⁶

A further, substantially more radical measure was proposed in April 2026 as part of the President's FY2027 Budget Request.¹¹¹⁷ The budget proposes a government-wide prohibition on the use of federal funds for what it terms "expensive subscriptions to academic journals and prohibitively high publishing costs," unless required by federal statute or approved in advance by a federal agency. If enacted, this provision would prohibit federal agencies from funding journal subscriptions and would also prohibit the use of federal grant funds to pay APCs — extending the logic of the NIH APC cap proposal (RFI NOT-OD-25-138, July 2025, still pending) to the entire federal government and adding subscription costs to its scope. It is essential to note that this is a budget *request* and has no legal force unless enacted in appropriations legislation. Congressional reaction has been critical: at a House Science Committee hearing convened on 15 April 2026, the Investigations and Oversight Subcommittee Ranking Member characterised the proposal as a "sledgehammer" applied to an issue "in need of a scalpel".¹¹¹⁸

The Gates Foundation explicitly ceased paying APCs effective January 1, 2025, instead directing grantees to comply via preprint posting and repository deposit at no direct publishing cost. HHMI will no longer pay APCs for hybrid journals under its 2026 policy but continues to cover publication fees in fully OA journals.

At the institutional level, a growing number of US universities and consortia have negotiated transformative or "read-and-publish" agreements with major publishers.¹¹¹⁹

8.8. Governance and monitoring

The Office of Science and Technology Policy (OSTP) is responsible for the overarching policy framework. The National Science and Technology Council (NSTC) Subcommittee on Open Science (SOS), chartered on August 22, 2022¹¹²⁰ under the NSTC Committee on Science, coordinates among federal agencies to enhance efficiency and reduce redundancy in public access plans and policies.

Federal agencies are required to report to OSTP, when requested, on the number of scholarly publications funded by the agency and other relevant statistics.

Agency public access plans were due by specific deadlines depending on agency size, with all policies required to be in effect by December 31, 2025. As of early 2026, SPARC's tracking indicates that the majority of covered agencies have published their updated public access policies (see above).

The Trump Administration has not formally rescinded the Nelson Memo. However, the broader governance landscape for open science has shifted. Executive Order 14303, "Restoring Gold Standard Science" (May 23, 2025), directs each federal agency to appoint a senior political appointee to oversee scientific integrity, with authority to evaluate compliance with nine "gold standard" criteria including reproducibility, transparency, and peer review.

¹¹¹⁶ See detailed analysis in All the Seats at the Table: A Summary and Status Review of the NIH APC Caps Proposal, "The Scholarly Kitchen, 20 March 2026: <https://scholarlykitchen.sspnet.org/2026/03/20/guest-post-all-the-seats-at-the-table-a-summary-and-status-review-of-the-nih-apc-caps-proposal/> — accessed 4 May 2026.

¹¹¹⁷ Office of Management and Budget (OMB), Budget of the U.S. Government, Fiscal Year 2027, April 2026, p. [section: Government-Wide Prohibition on Publishing and Subscription Fees]: https://www.whitehouse.gov/wp-content/uploads/2026/04/budget_fy2027.pdf accessed 4 May 2026

¹¹¹⁸ McKenzie, L., „Hearing Highlights Opposition to Trump Publishing Fee Plans," *FYI: Science Policy News* (American Institute of Physics), 17 April 2026: <https://www.aip.org/fyi/hearing-highlights-opposition-to-trump-publishing-fee-plans> — accessed 4 May 2026.

¹¹¹⁹ E.g. University of California / California Digital Library, 'New UC Transformative Open Access Agreements with Three Not-For-Profit Publishers Announced', CDL News, 11 March 2021, available at: <https://cdlib.org/cdlinfo/2021/03/11/new-uc-transformative-open-access-agreements-with-three-not-for-profit-publishers-announced/> [accessed April 2026]; Big Ten Academic Alliance (BTAA), IOP Publishing Read and Publish Agreement, available at: <https://btaa.org/library/open-scholarship/agreements/IOP-Read-and-Publish-Agreement>

¹¹²⁰ National Science and Technology Council (NSTC), Charter of the NSTC Subcommittee on Open Science (SOS), chartered 22 August 2022), available at: <https://bidenwhitehouse.archives.gov/wp-content/uploads/2022/08/08-2022-SOS-NSTC-CHARTER.pdf> [

The accompanying fact sheet¹¹²¹ frames the order as ensuring that “science is no longer manipulated or misused to justify political ends.” The order also requires agencies to make “influential scientific information” publicly available, which in principle aligns with open data objectives. Agency implementation plans, published by nine departments by September 2025, have largely reinforced existing open data practices.¹¹²²

However, the Center for Open Science has raised concerns about the order, criticising *inter alia* that the order’s provisions could be used to suppress scientific evidence that conflicts with political priorities, since the appointed overseer has authority to determine whether findings constitute “scientific misconduct”.¹¹²³ The Harvard Open Access Project maintains a tracker documenting the Trump Administration’s actions affecting open access, data transparency, and scientific publishing, noting that while some actions (data transparency requirements) nominally support openness, others (removal of datasets from public-facing agency websites, political interference in CDC scientific publications) undermine it.¹¹²⁴

The US has no single, government-operated national dashboard for tracking open access rates, compliance, or trends. Monitoring is fragmented across agencies, advocacy organisations, and third-party bibliometric tools.

Annex C Comparative summary tables

The topic-based summary tables are provided in a separate excel spreadsheet: [Annex C Comparative summary tables - EC Expert Report "Open Access policies in EU Member States and beyond" | Zenodo](#)

Annex D EC Checklist for Open Access Policies

General characteristics of open access policies

Policies formulated as strategies, funder mandates and/or legislation;

Bindingness in terms of implementation

Scope of the policy

Embargoes or immediate open access

Copyright, rights retention and secondary publication rights

Context of open access policies

Training or guidance for researchers

Funding for open access;

Repository requirements (incl. FAIR principles)

Metadata and persistent identifier requirements

¹¹²¹ The White House, Fact Sheet: President Donald J. Trump Is Restoring Gold Standard Science in America (accompanying Executive Order 14303), available at: <https://www.whitehouse.gov/fact-sheets/2025/05/fact-sheet-president-donald-j-trump-is-restoring-gold-standard-science-in-america/>

¹¹²² Washington University in St Louis Libraries, „Federal Agencies Respond to „Gold Standard Science“ Executive Order“, WashU Libraries News, available at: <https://library.washu.edu/news/federal-agencies-respond-to-gold-standard-science-executive-order/>

¹¹²³ Center for Open Science (COS), COS Statement on „Restoring Gold Standard Science“ Executive Order (concerns regarding suppression of evidence and political oversight of scientific misconduct determinations), available at: <https://www.cos.io/about/news/cos-statement-on-restoring-gold-standard-science-executive-order>

¹¹²⁴ Harvard Open Access Project (HOAP), The Trump Administration’s Actions Affecting Open Access to Research (ongoing tracker), Berkman Klein Center for Internet and Society, Harvard University, available at: <https://cyber.harvard.edu/hoap/The-Trump-administrations-on-open-access-to-research>

Peer review approaches

Links to researcher assessment

Public funding thresholds

Provisions for small and medium publishers;

Identified costs of, or gains from, applying open access policies

Security considerations

References to simplification regarding open access

Role of artificial intelligence in open access policies

Implementation and monitoring of open access policies

Responsibility for implementation

Monitoring of individual policy elements

Overall policy monitoring

Reporting arrangements;

Results of impact evaluations

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The objective of the publication is to provide an up-to-date account of open access policies in all EU Member States and select third countries (e.g. UK, USA, China, Japan). The added value is that the up-to-date account will provide the Commission and external readers with current and accurate knowledge of an important component of open science, that is open access to scientific publications. In addition, the intelligence from the report is fed into the work carried out in view of the European Research Area Act proposal. The publication addresses an aspect of research in Europe.

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