

Openness required

Navigating Open Science Policies for Researchers

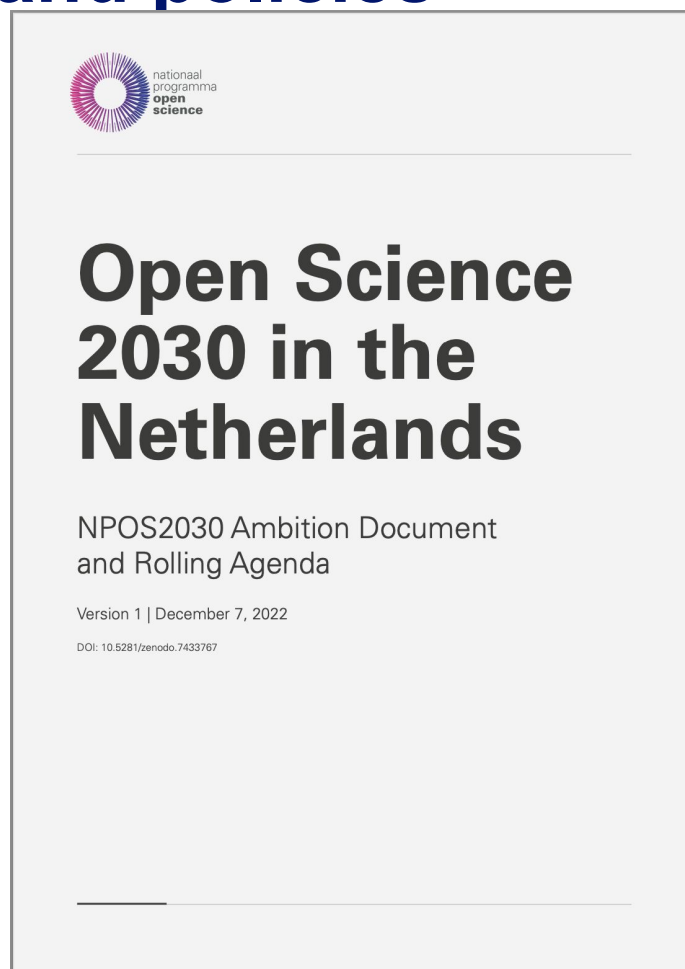
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PLOS

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The evolution of Open Science policies in Europe

- Over the past decade, Europe has seen a significant rise in Open Science (OS) policies.
- The latest OS policies extend beyond open access to publications, now including preprints, data, methods, and code sharing.
- Some policies advocate for integrating Open Science practices into research evaluation criteria.

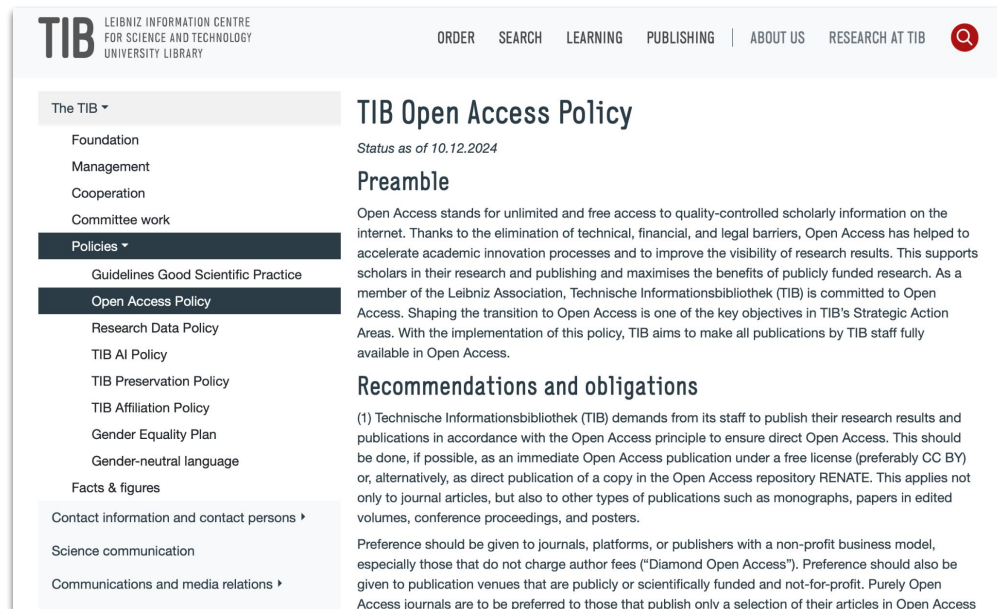
The vision of Open science in national plans and policies



X% of research output open by...

- National plans, strategies, and Open Science (OS) policies aim for widespread openness in publicly funded research.
- The goal is to ensure that all—or a significant portion—of research outputs become openly accessible in a foreseeable future.

Diversity in institutional OS policies



The screenshot shows the TIB (Leibniz Information Centre for Science and Technology) website. The header includes navigation links: ORDER, SEARCH, LEARNING, PUBLISHING, ABOUT US, and RESEARCH AT TIB. A search icon is also present. The left sidebar lists various categories under 'The TIB', with 'Policies' expanded to show 'Open Access Policy' as the selected item. The main content area is titled 'TIB Open Access Policy' with a subtitle 'Status as of 10.12.2024'. It features a 'Preamble' section explaining the commitment to Open Access and a 'Recommendations and obligations' section detailing the requirements for staff publications.

TIB LEIBNIZ INFORMATION CENTRE
FOR SCIENCE AND TECHNOLOGY
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ORDER SEARCH LEARNING PUBLISHING ABOUT US RESEARCH AT TIB

The TIB ▾

- Foundation
- Management
- Cooperation
- Committee work
- Policies ▾**
 - Guidelines Good Scientific Practice
 - Open Access Policy**
 - Research Data Policy
 - TIB AI Policy
 - TIB Preservation Policy
 - TIB Affiliation Policy
 - Gender Equality Plan
 - Gender-neutral language
- Facts & figures
- Contact information and contact persons ▸
- Science communication
- Communications and media relations ▸

TIB Open Access Policy

Status as of 10.12.2024

Preamble

Open Access stands for unlimited and free access to quality-controlled scholarly information on the internet. Thanks to the elimination of technical, financial, and legal barriers, Open Access has helped to accelerate academic innovation processes and to improve the visibility of research results. This supports scholars in their research and publishing and maximises the benefits of publicly funded research. As a member of the Leibniz Association, Technische Informationsbibliothek (TIB) is committed to Open Access. Shaping the transition to Open Access is one of the key objectives in TIB's Strategic Action Areas. With the implementation of this policy, TIB aims to make all publications by TIB staff fully available in Open Access.

Recommendations and obligations

(1) Technische Informationsbibliothek (TIB) demands from its staff to publish their research results and publications in accordance with the Open Access principle to ensure direct Open Access. This should be done, if possible, as an immediate Open Access publication under a free license (preferably CC BY) or, alternatively, as direct publication of a copy in the Open Access repository RENATE. This applies not only to journal articles, but also to other types of publications such as monographs, papers in edited volumes, conference proceedings, and posters.

Preference should be given to journals, platforms, or publishers with a non-profit business model, especially those that do not charge author fees ("Diamond Open Access"). Preference should also be given to publication venues that are publicly or scientifically funded and not-for-profit. Purely Open Access journals are to be preferred to those that publish only a selection of their articles in Open Access.



The image shows the cover of the 'Aalto University Open Science and Research Policy' document. It features the Aalto University logo at the top left. The title is prominently displayed in the center. Below the title, there is a small paragraph about the goals of open science. The bottom half of the cover has a yellow background with a black silhouette of a pen writing on a curved line.

A"

Aalto University
Open Science and Research Policy

Aalto University Open Science and Research Policy / Aalto University Version: 5.2.2022

The goals of open science are responsible research and societal impact. Open science means open access to scientific publications, research data, methods, software codes, and infrastructure. It is one of the key instruments for increasing the impact of the research conducted at Aalto University.

From recommendations to requirements

- Institutional policies differ widely in scope and enforcement.
- Some policies **encourage** researchers to consider Open Access for their publications.
- Others **mandate** specific licenses or prioritize certain publishing models.
- These variations reflect different institutional priorities and approaches to Open Science.

Funders' policies



FWF Austrian Science Fund

DISCOVER FUNDING ABOUT US NEWS

Open Access Policy for Peer-Reviewed Publications

According to the Berlin Declaration and Plan S of the cOAlition S, the FWF requires all funding recipients, project leaders and project participants to make their peer-reviewed publications openly accessible on the Internet if they have resulted in whole or in part from FWF-funded projects.

[Mehr entdecken](#)

Danish National Research Foundation
Danmarks Grundforskningsråd

Open Access Policy

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The DNRF Open Access policy applies to DNRF grant holders. The current policy was launched April 2019 and is also adopted by the Independent Research Fund Denmark and Innovation Fund Denmark (IFD).

Contact the [DNRF](#) for more information about our Open Access policy.

Open Access policy by Danish public sector foundations and councils

Download Open Access policy by Danish public sector foundations and councils (April 2019)

↓

Openness required

- Funders' Open Science (OS) policies are typically **mandatory**, not optional.
- Researchers must provide **Open Access** to publications from funded projects.
- Policies vary in specificity—some mandate specific licenses.
- Most funders also require **data sharing** and a **Data Management Plan (DMP)** to ensure research transparency.

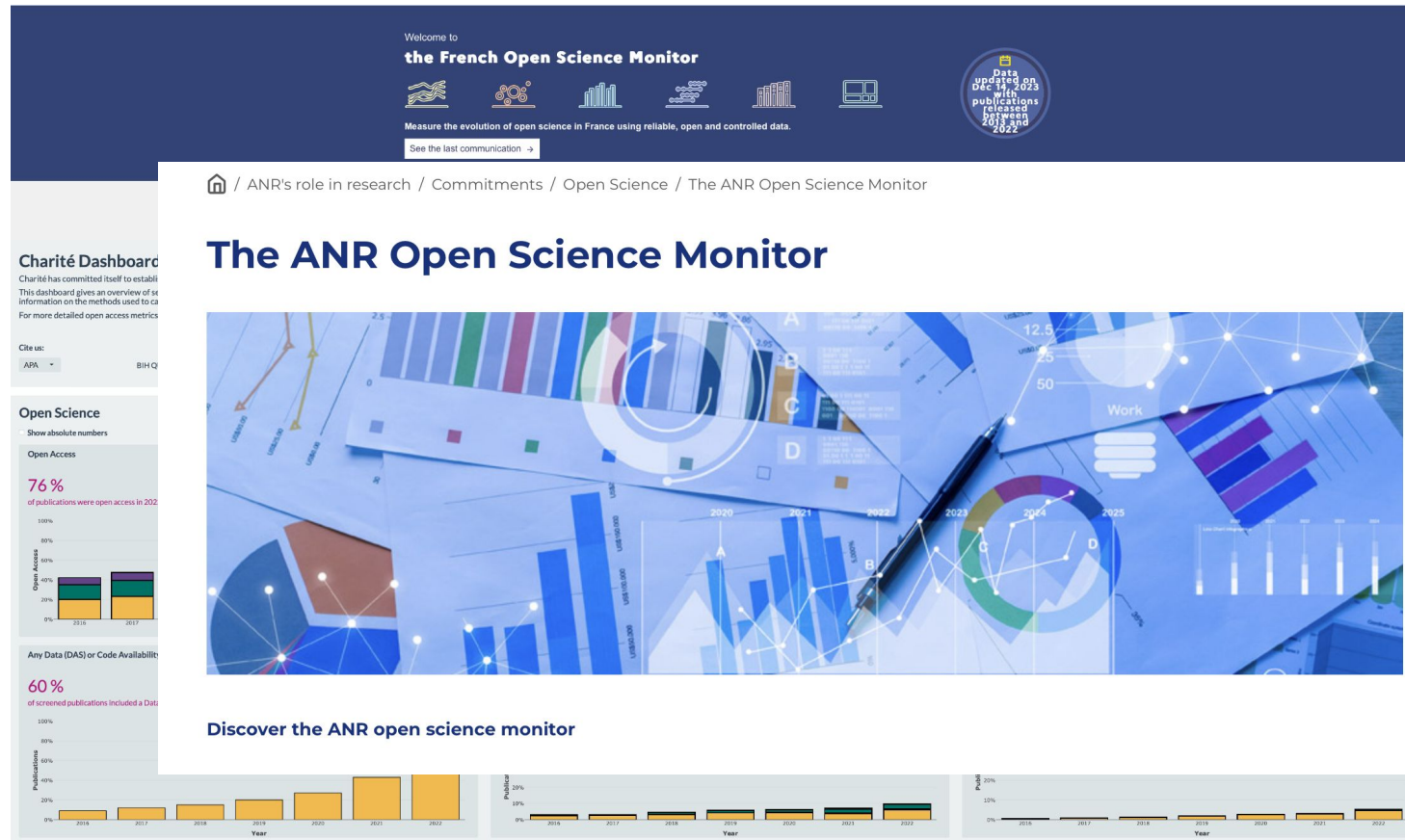
The challenge of measuring the impact of Open Science

- A **measurement gap** exists in assessing Open Science (OS) policies.
- Thousands of OS policies now exist at national, institutional, funder, and journal levels.
- However, their actual impact on Open Science practices remains largely unknown.
- Developing reliable assessment methods is crucial for evidence-based policy improvements.

Open Science Monitoring

How to monitor the effects of Open Science policies?

- The entire nations started monitoring Open Science ([The French Open Science Monitor](#)).
- So did institutions ([Charité](#)).
- And funders ([ANR](#)).
- And publishers like PLOS.



The Open Science Indicators project. Goals.



1

Improve ability to measure success of solutions.

2

Understand different communities and co-create new solutions.

3

Support Open Science initiatives outside PLOS with reliable data.

4

Increase adoption of Open Science practices globally.

short term

long term



[Read the Scholarly Kitchen blog post](#)

Open Science Indicators principles

1

Use established community definitions/ standards

4

Take an Open Science approach (open data, methods, etc).

2

Measure what is happening, not just what we want to happen.

5

Use Open Science Indicators responsibly.

3

Be interoperable and scalable.

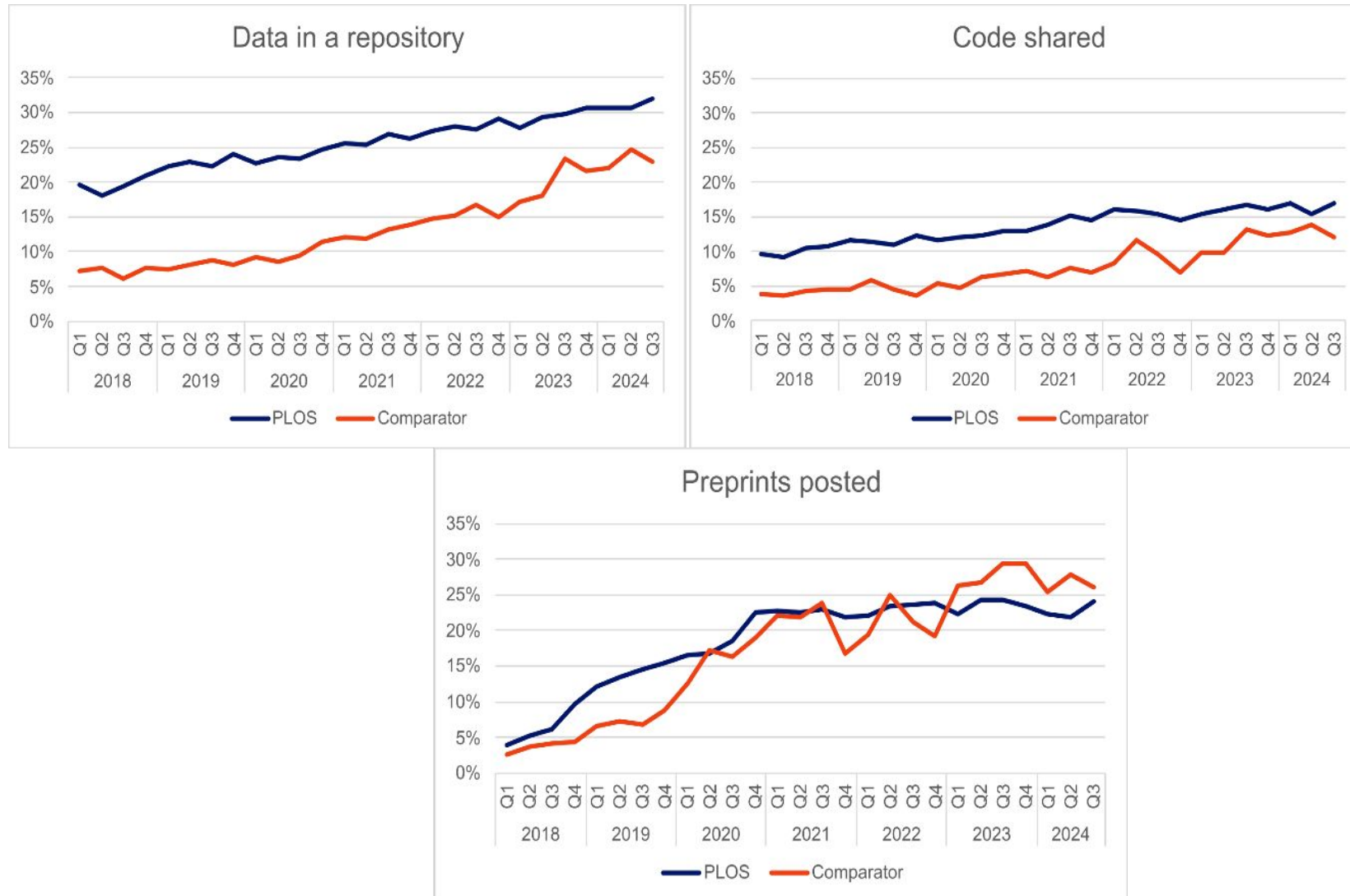
The OSI dataset so far (v 9)

- ~122,000 PLOS research articles from 1 Jan 2018 to 30 Sept 2024
- ~25,000 comparator articles from PubMed Central
- Extraction from article XML plus AI/NLP-generated fields
- Generation and sharing rates, sharing location, topics, country, repositories, persistent identifiers for outputs

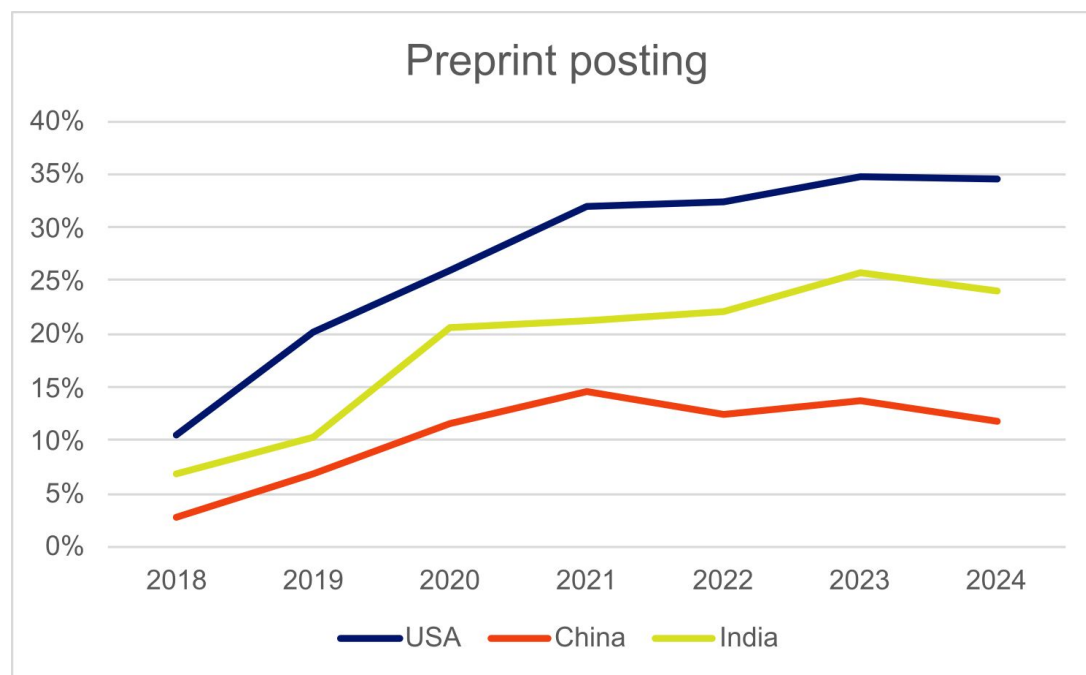
[Consult the latest PLOS OSI dataset, v.9](#)

[Read the PLOS blogpost on the latest OSI release](#)

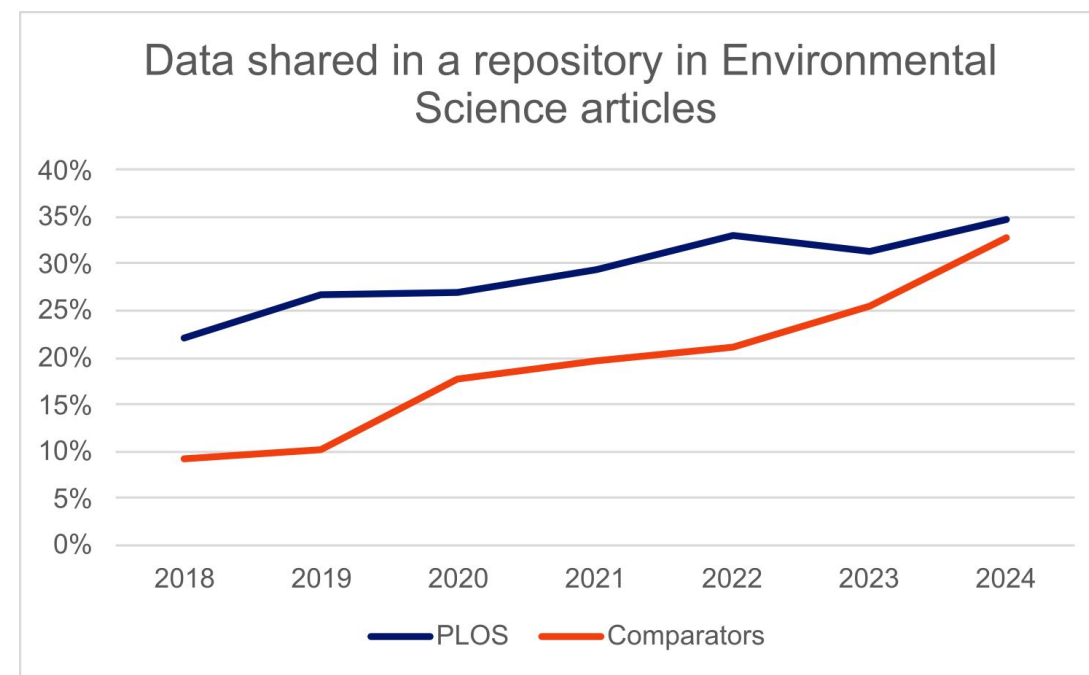
The results show increases in OS practices over time



A closer look at trends (country and discipline-specific)



Preprint posting rate for three countries based on publication date of the article. 2024 is for Q1-3 only.



Rates of data shared in a repository for articles published PLOS articles versus those in the Comparator dataset where Primary Topic Field is "Environmental Science" based on publication year. 2024 is for Q1-3 only.

[Read the PLOS blogpost on the latest OSI release](#)

Assessing the broader impact

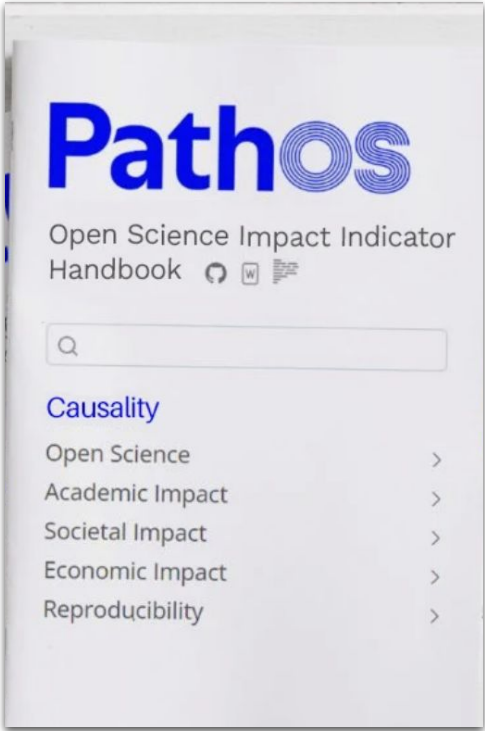
- What is the broader impact of practicing Open Science?
- Can we collect evidence of Open Science effects?
- How can we measure a societal, economic, and academic impact of Open Science?



A handful of examples



PathOS



Citation advantage study by PLOS



GRIOS

