



Open Science Monitoring Initiative

*Measuring the openness of science: how?
The Principles of Open Science Monitoring*

Forum for Open Research in MENA - webinar

8 July 2026

Disclaimer

The data presented during this meeting reflect preliminary findings from the first reporting cycle of the 2021 UNESCO Recommendation on Open Science and were shared for illustrative purposes only. They do not constitute official UNESCO statistics at this stage.

Final, validated data will be published in the UNESCO Open Science Outlook 2, scheduled for release in 2026. Until that publication, all figures and trends discussed should be treated as indicative only and are subject to revision.

Underlying source data are accessible via the UNESCO Open Science Dashboard: <https://open-science.unesco.org/dashboards/global>

Speakers



Laetitia Bracco

Deputy Head of the Library Research Support Services, Université de Lorraine, Chair of the OSMI Coordination Committee



Lamis Yahia Mohamed Elkheir

Director of Training & Resource Development, African Reproducibility Network (AREN) / Lecturer, Faculty of Pharmacy, University of Khartoum, OSMI WG2 Co-chair



Rania Sabo

Associate Programme Specialist, UNESCO, OSMI Coordination Committee

Why do we need an Open Science Monitoring framework?



In May 2023, a strong statement by the G7

« G7 cooperation on open science is set to continue, in particular to encourage a framework for monitoring the progress and obstacles of open science. »



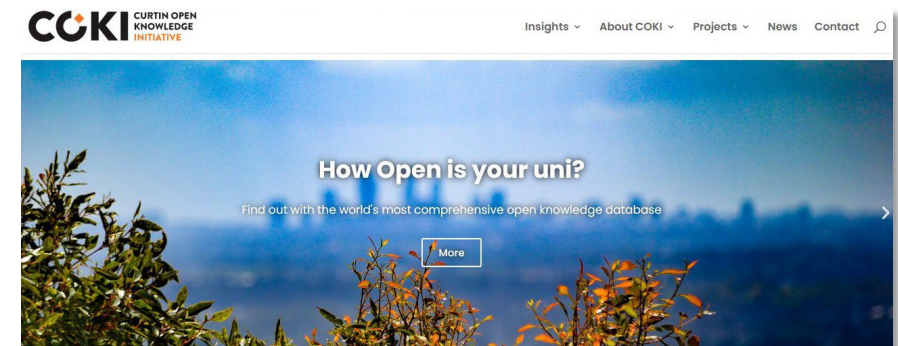
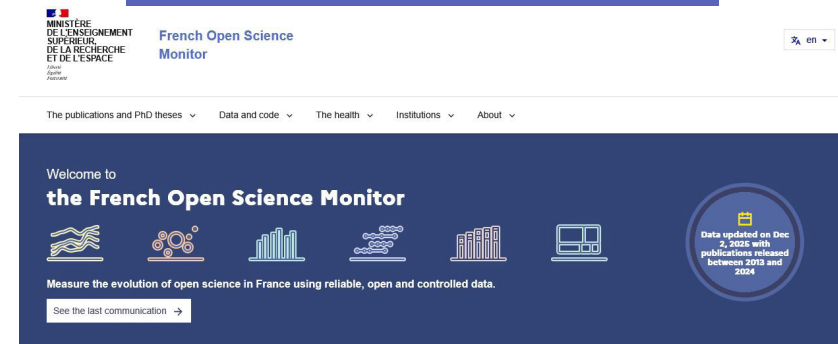
Many existing monitoring initiatives

- **Some national or institutional monitors:**

- French Open Science Monitor
<https://frenchopensciencemonitor.esr.gouv.fr/>
- Charité Universitaetsmedizin Berlin Dashboard on Responsible Research
<https://quest-dashboard.charite.de/>
- Open Access Monitor Korea
<https://www.kesli.or.kr/oamk/>

- **International initiatives:**

- UNESCO Open Science Monitoring Working Group
- Curtin University's Open Knowledge Initiative (COKI)
<https://openknowledge.community/>
- And many, many more...



Many guidelines and frameworks but none addressing global recommendations on OS monitoring

- 2020: Principles of Open Scholarly Infrastructure
<https://doi.org/10.24343/C34W2H>
- 2021: UNESCO Recommendation on Open Science
<https://www.unesco.org/en/open-science/about>
- 2023: UNESCO Open Science Outlook
<https://unesdoc.unesco.org/ark:/48223/pf0000387324>
- 2024: PathOS Open Science Indicator Handbook
<https://handbook.pathos-project.eu/C>
- 2024: Declaration on Open Research Information
<https://barcelona-declaration.org/>



Creating the spark for international collaboration on OS monitoring

- Workshop organised by the partners of the French Open Science Monitor at the Unesco headquarters on December 19th, 2023
- Objective: gathering international open science monitoring stakeholders/experts and impulsing the creation of an international community on the topic
- Fifty international experts from various institutions: CERN, NASA, CWTS, OurResearch, Crossref, DataCite, SPARC Europe, Redalyc, the OECD, COKI, the Max Plank Digital Library, PLOS, the Technical University of Denmark, OpenAIRE...
- **First draft of the Principles of Open Science Monitoring** presented
- A **starting point for the Open Science Monitoring Initiative, OSMI**



[Slides available online](#)



OSMI's high-level goals

1. To promote the worldwide adoption of the Principles of Open Science Monitoring;
2. To provide recommendations for technical specifications for their implementation;
3. To support stakeholders on various levels in monitoring Open Science practices.

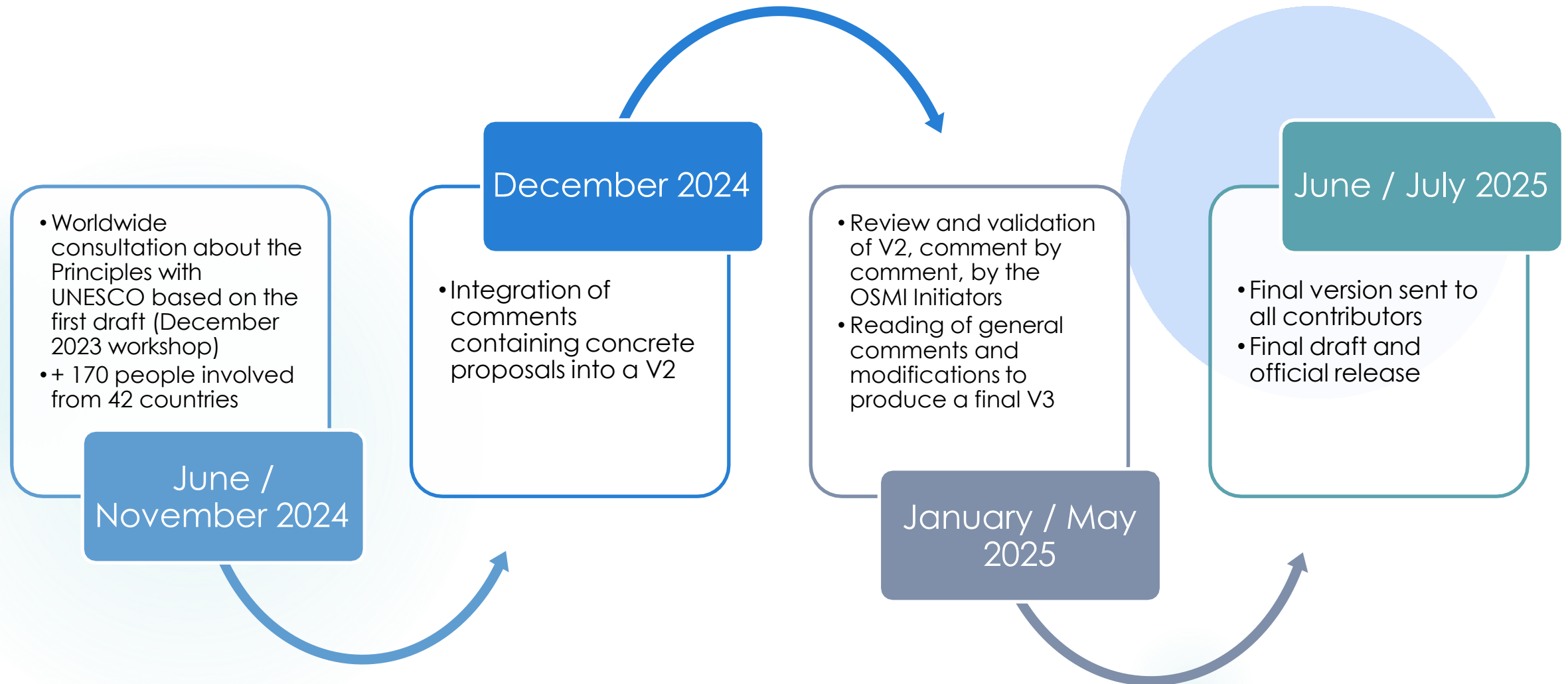
→ OSMI does not aim to create monitoring dashboards itself



The Principles of Open Science Monitoring

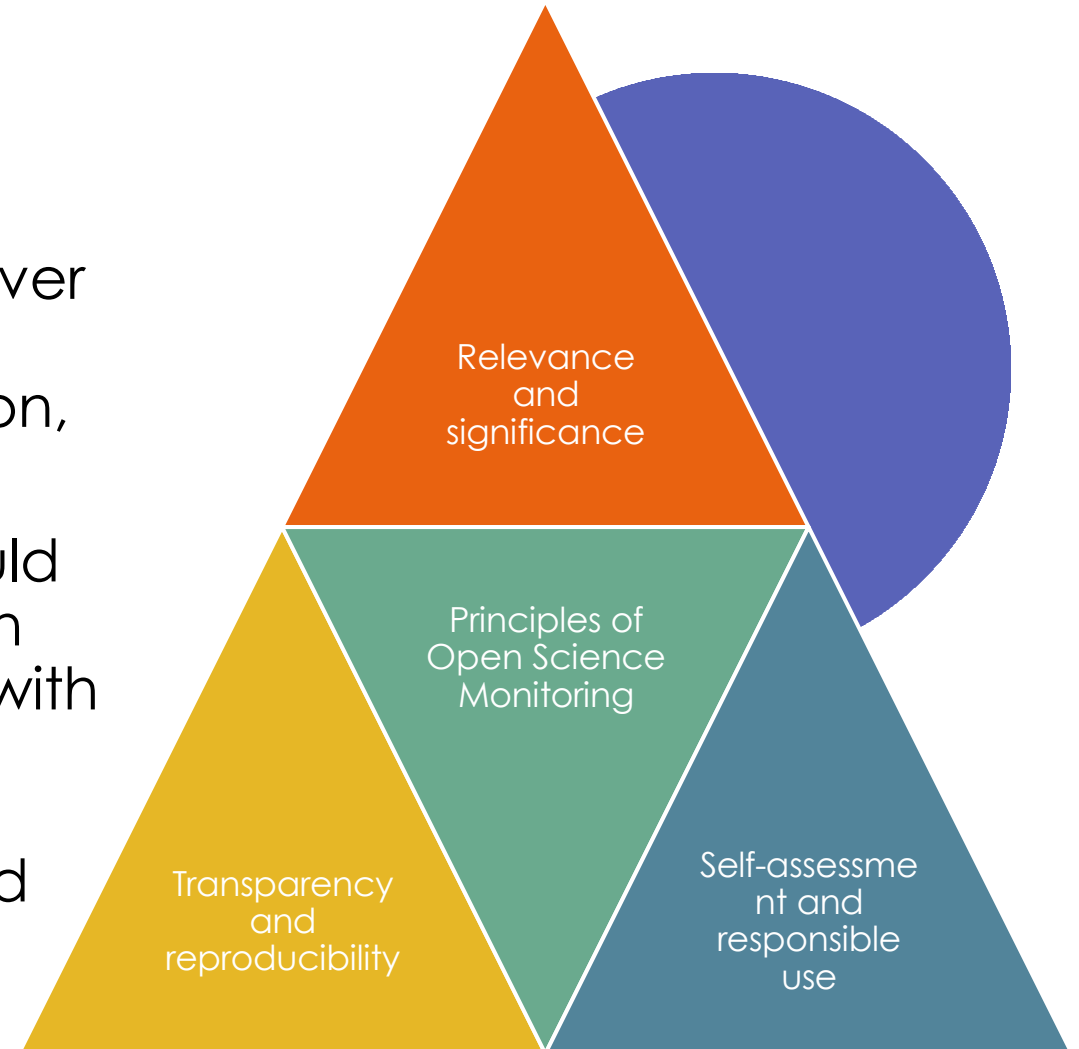


Building international Principles: a journey



High-level principles

- ▶ All open science monitoring initiatives should be well-defined, relevant, and adaptable to diverse research contexts
- ▶ Open science monitoring should, wherever possible, prioritize the use of open, transparent, and reproducible information, including metadata
- ▶ Open science monitoring initiatives should aim for continuous improvement through regular self-assessments and alignment with these Principles of Open Science Monitoring. Importantly, open science monitoring should be used to understand and incentivise open science practices

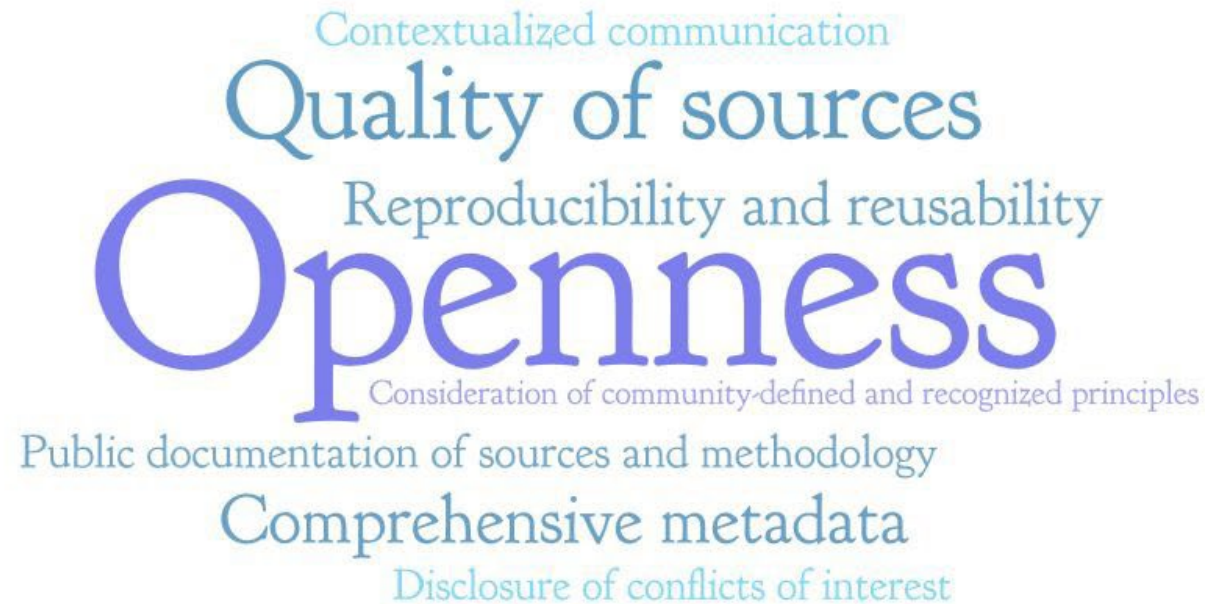


Relevance and significance

Modular
Co-created Reliable
Applicable and clear in scope
Meaningful for planning and policy
Inclusive
Consistent

→ Focus on 1.5. **Modular:** Indicator frameworks should be modular, enabling different communities to assemble indicator sets that best suit their specific needs. To support diversity and inclusion while ensuring both global comparability and local adaptability, these frameworks should incorporate a mix of quantitative and qualitative approaches, including case studies.

Transparency and reproducibility



→ Focus on 2.1. **Openness:** Monitoring initiatives should rely on open scholarly infrastructures with open input and output data as defined in the 2021 UNESCO Recommendation on Open Science. All software used throughout the monitoring process should be open source, versioned, and published openly with clear, comprehensive documentation on platforms that facilitate collaboration, contribution, and reuse. Output data, when not protected for copyright, privacy, contractual terms, or other legal or ethical reasons, should be open by default and distributed under an open licence.

Self-assessment and responsible use

Long-term sustainability
Environmental responsibility
Self-evaluation against the Principles of Open Science Monitoring
Constructive comparison
Regular revision

→ Focus on 3.1. **Self-evaluation against the Principles of Open Science Monitoring:** Monitoring initiatives should ideally regularly assess and publicly disclose their compliance with these Principles. Where full compliance has not yet been achieved, initiatives should clearly outline a path towards future compliance, demonstrating a commitment to continuous improvement.

Why use these Principles?

- ▶ For existing open science monitoring initiatives, to improve their quality
- ▶ To ensure a solid foundation for future initiatives
- ▶ To encourage initiatives to self-assess in order to improve over time
- ▶ To increase the visibility of open science practices
- ▶ To address the needs set out in UNESCO's recommendations on open science

Read the Principles of Open Science Monitoring in multiple languages now!

Open Science Monitoring Initiative,
Principles of Open Science
Monitoring, Paris, 2025. DOI:
10.52949/4



Already available in
English, Arabic,
Finnish, French,
German, Indonesian,
Italian, Portuguese,
Slovenian and
Spanish

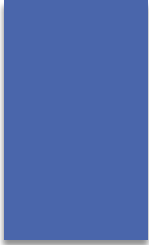
<https://open-science-monitoring.org/principles/>

→ The dedicated infographic, also in multiple languages, emphasises key aspects such as relevance, transparency, reproducibility, and responsible use of open science monitoring systems.

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Bringing the Principles to the Arab States region



An emerging landscape with a distinctive shape

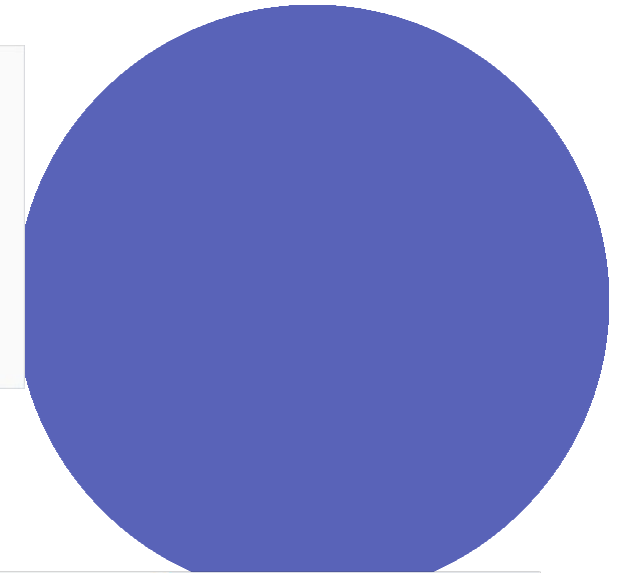
A glance from the UNESCO 2025 monitoring in the Arab States Region

78%

of responding States report partial policy coverage of open science, the highest in any region.

Only region

where pillars other than open access record the highest reported share.



Reported pillar coverage among responding Member States



From regional challenges to OSMI's response

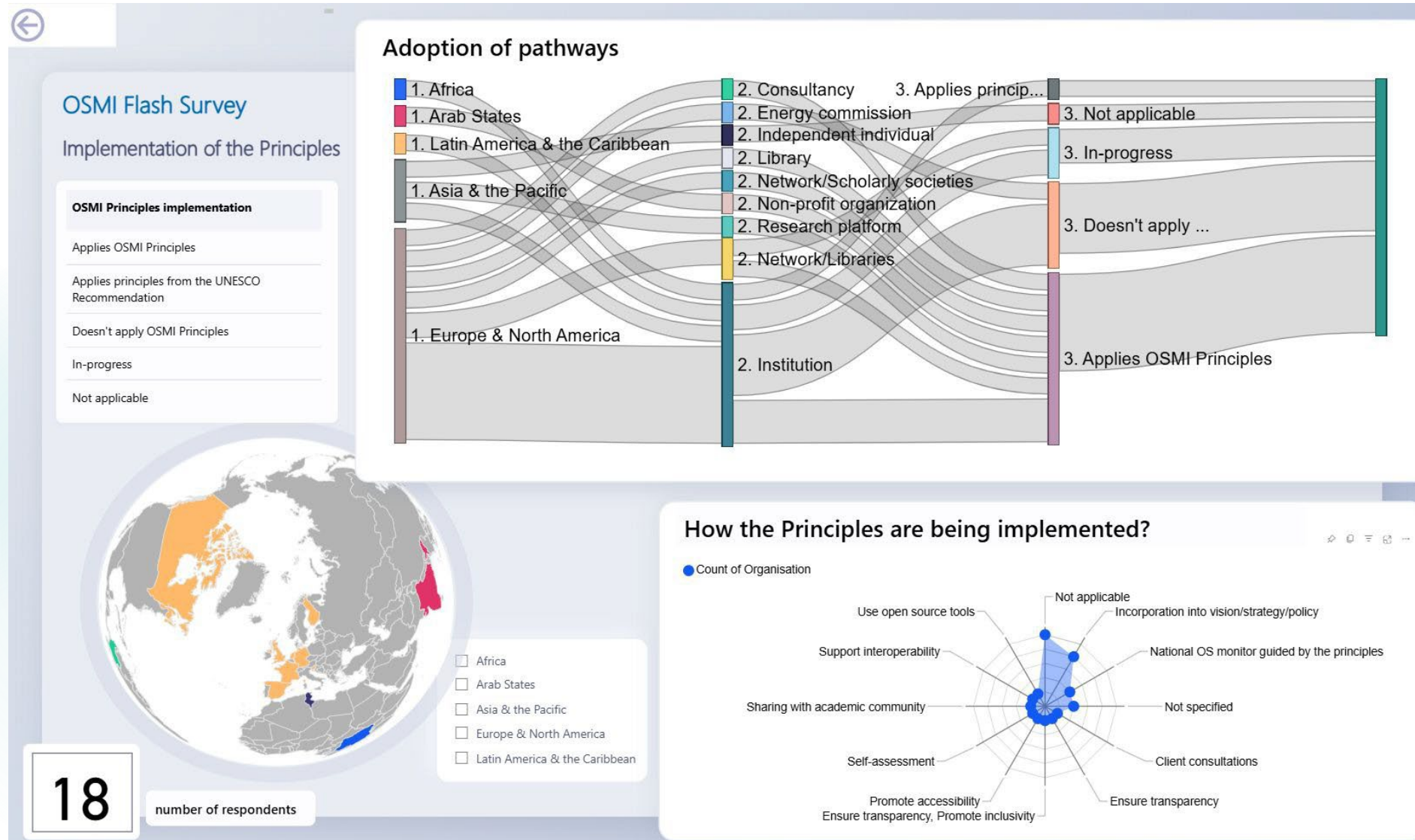
01 Monitoring frameworks are the missing instrument

Across the responding Arab States, a national monitoring and evaluation framework is the single most frequently absent open science instrument, even where State-level commitment is high. And 74 percent of researchers report no institutional open repository to draw from.

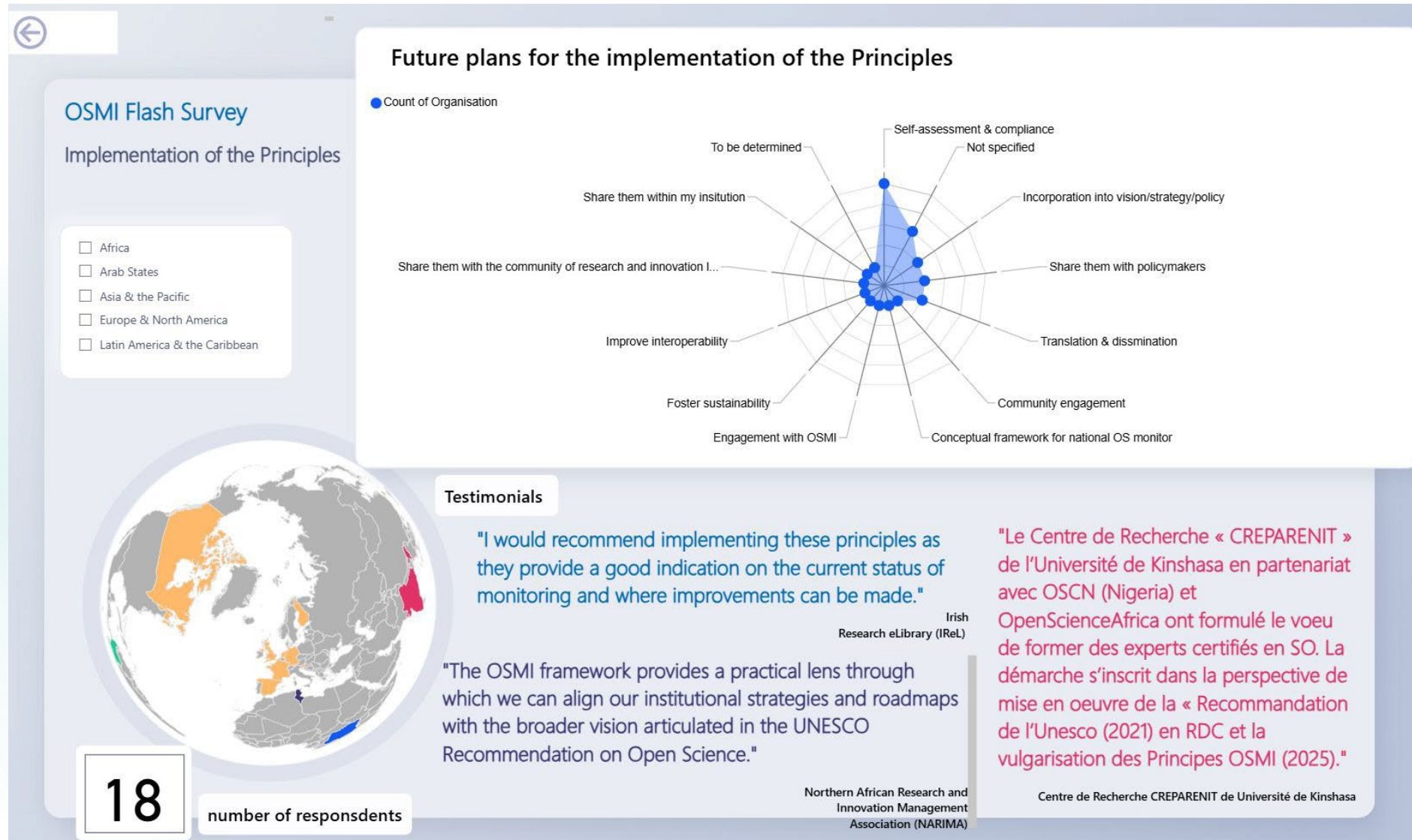
02 Practice beyond publications is invisible to bibliometrics

Engagement and dialogue with other knowledge systems appear frequently in responses, many report no structured societal-engagement project at their institution. Publication-based monitors cannot see this.

Results of OSMI flash survey



Results of OSMI flash survey



Towards endorsement of the Principles



01 Endorsement of the Principles

To endorse the Principles of Open Science Monitoring as a complementary reference to support open science monitoring efforts, in alignment with the objectives and values of the Recommendation on Open Science (2021).

02 Invite Member States to take them up

To invite Member States and relevant stakeholders, as appropriate, to take these Principles into consideration when developing or refining their open science monitoring approaches.

OSMI Organisation



OSMI Initiators



MINISTÈRE
DE L'ENSEIGNEMENT
SUPÉRIEUR
ET DE LA RECHERCHE

*Liberté
Égalité
Fraternité*

SPARC*
Europe



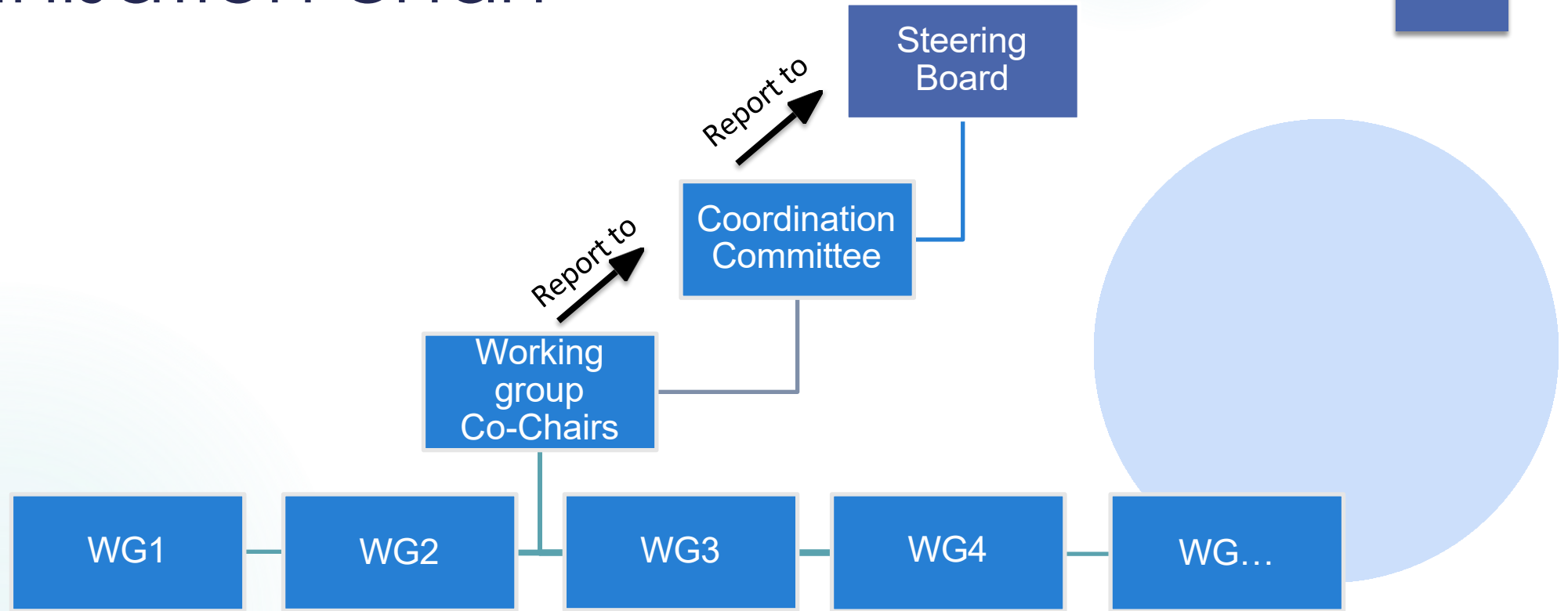
UNIVERSITÉ
DE LORRAINE

Inria



BIH Berlin Institute
of Health
at Charité

Organisation chart



An international Steering Board

The **Steering Board** sets the main guidelines and strategy for the initiative, oversees the work of the Coordination Committee, and decides on the creation or closure of working groups. All **working group co-chairs** are also Board members.

Chair : Nicolas Fressengeas



Bobrov, Evgeny – Project Leader Open Data and Research Data Management – QUEST Center for Responsible Research, Berlin Institute of Health (BIH) at Charité, Germany
OSMI Initiator



Bracco, Laetitia – Deputy Head of the Library Research Support Services – Université de Lorraine, France
OSMI Initiator, Chair of the Coordination Committee



Chaube, Pragya – Assistant Professor, UPES, Co-founder, Open Science South Asia Network (OSSAN), Co-chair of CODATA Connect, India
OSMI WG4 Co-chair



Coulibaly, Cécile – Teacher-Researcher at the Virtual University of Côte d'Ivoire (UVCI), Research Deputy Manager at UFR-ISN, Open Science National Focal Point for the Ministry of Higher Education and Scientific Research, Côte d'Ivoire
Expert



Elkheir, Lamis Yahia Mohamed – Director of Training & Resource Development, African Reproducibility Network (AREN) Lecturer, Faculty of Pharmacy, University of Khartoum, Sudan
OSMI W2 Co-chair



Fressengeas, Nicolas – Open science officer for the French Ministry of Higher Education and Research & Vice-President in charge of open science for Université de Lorraine – Université de Lorraine, France
OSMI Initiator, Chair of the Steering Board



Haustein, Stefanie – Associate Professor, School of Information Studies, University of Ottawa and Co-director ScholCommLab, Canada
Expert



Hrynaskiewicz, Iain – Director, Open Research Solutions – PLOS, United Kingdom
OSMI Initiator



Huidiu, Cristina – Product Owner Digital Library Services – Wageningen University and Research, The Netherlands
OSMI WG4 Co-chair



Koley, Moumita – Senior Research Analyst, DST-Centre for Policy Research, Indian Institute of Science, Bangalore, India / Research Fellow, Research on Research Institute (RoRI), United Kingdom
Expert



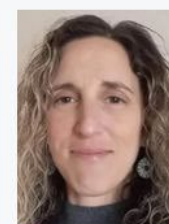
Nykyri, Susanna – Chief Specialist (Open Science), Tampere University, Finland
Expert



Persic, Ana – Programme Specialist for Science Technology and Innovation Policies and Open Science – UNESCO, France
OSMI Initiator



Proudman, Vanessa – Director – SPARC Europe, The Netherlands
OSMI Initiator



Puebla, Iratxe – Director, Make Data Count – DataCite, United Kingdom
OSMI WG3 Co-chair



Romary, Laurent – Director of Culture and Scientific Information – Inria, France
OSMI Initiator



Salisu, Nabila – Community Lead Global Partnership Coordinator – Open Science Community Nigeria, Nigeria
OSMI WG1 Co-chair



Sondervan, Jeroen – Programme Leader Open Scholarly Communication at Open Science NL/Dutch Research Council (NWO), The Netherlands
Expert



Szybisty, Tereza – Research Project Manager & OS/RDM Training Specialist – OpenAIRE, Czechia
OSMI WG2 Co-chair



Kristina Vrouwenvelder – Assistant Director, Publishing – American Geophysical Union, United States
OSMI WG3 Co-chair

Coordination Committee

The OSMI Coordination Committee

- ▶ Oversees the overall day-to-day OSMI operations, including communicating with OSMI Board, partners and members
- ▶ Raises issues to the OSMI Board and proposes the Board Meeting agendas to the Board Chair
- ▶ Follows the progress of the working groups
- ▶ Is the public interface of OSMI and provides core information on the initiative
- ▶ Provides updates on developments to the broader OS community through email, social networks and the OSMI website



Laetitia Bracco, Chair



Martina Dvořáková



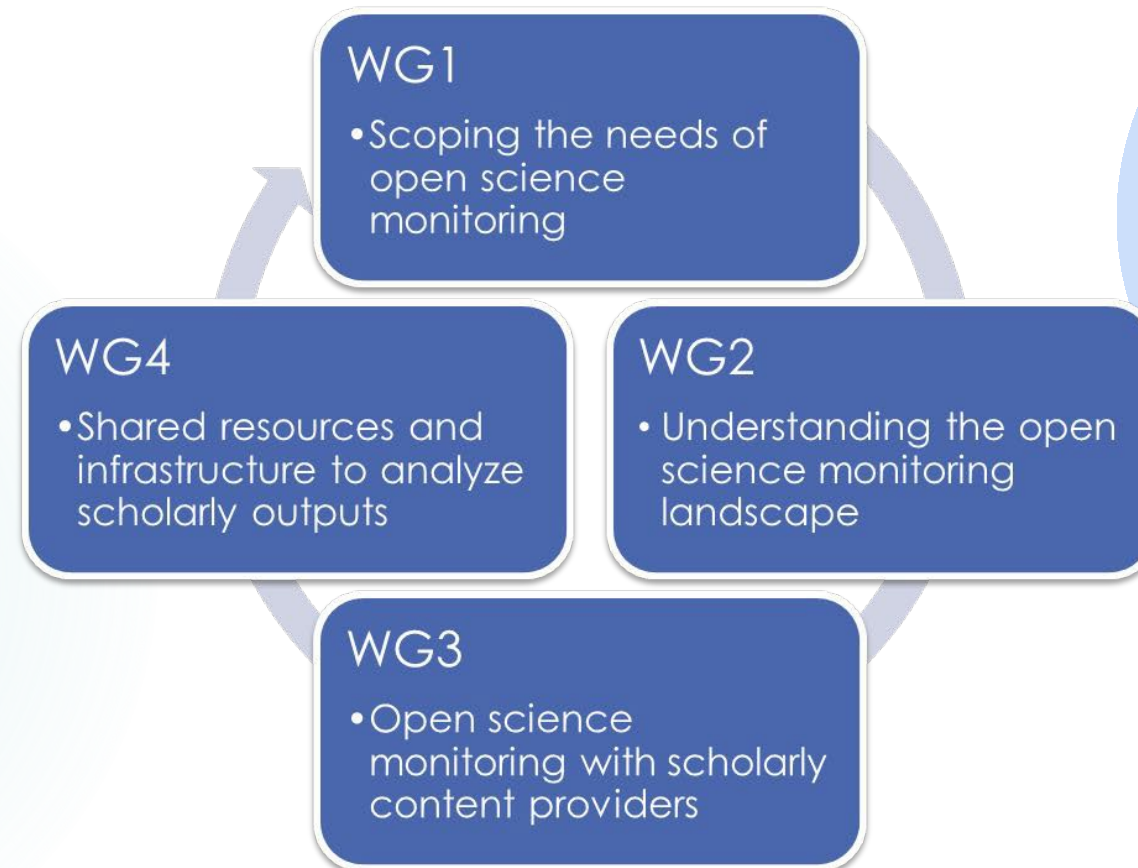
Vanessa Proudman



Rania Sabo

Working groups

The OSMI working groups are turning OSMI goals into action:



Working group outputs:
<https://open-science-monitoring.org/working-groups/>

OSMI publications:
<https://zenodo.org/communities/osmi/records>

Follow OSMI's work!

- ▶ Join the mailing list

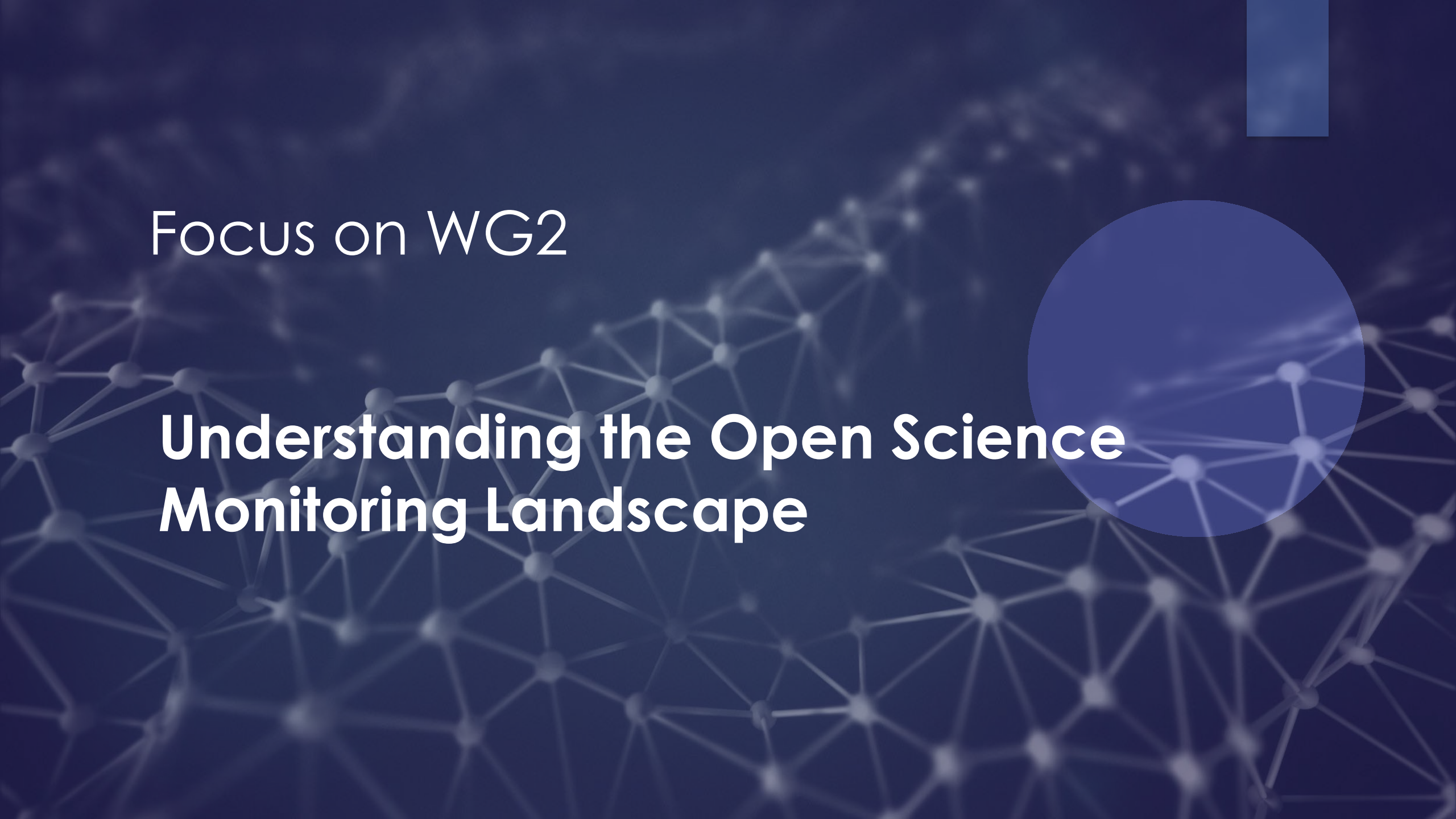
<https://groupes.renater.fr/sympa/subscribe/osmi-newsletter>



- ▶ Follow us on social media

 LinkedIn <https://www.linkedin.com/company/open-science-monitoring-initiative>

 Mastodon <https://mastodon.social/@osmi>

The background features a dark blue gradient with a faint, glowing network of white nodes and lines, resembling a molecular or data structure. A solid blue vertical bar is positioned in the top right corner, and a semi-transparent blue circle is located on the right side, partially overlapping the network pattern.

Focus on WG2

Understanding the Open Science Monitoring Landscape

WG's Mission

To **identify**, **document** and **analyse** existing Open Science monitoring initiatives worldwide

Why?

There are now **many** Open Science monitoring initiatives worldwide.....but they differ in:

- Scope
- Objectives
- Indicators
- Data sources
- Methodologies
- Target users

Without understanding this landscape it is difficult to:

- Compare initiatives
- Identify gaps
- Avoid duplication
- Share good practices
- Develop common recommendations

What do we mean by an "Open Science Monitoring Initiative"?

An **Open Science monitoring initiative** is an initiative that:

- ✓ **Publicly and regularly** monitors and evaluates Open Science policies, practices, mechanisms, interventions, and/or incentives.
- ✓ Uses **quantitative, qualitative, or mixed methods** to assess progress.
- ✓ Measures the **openness of research processes and outputs**, such as:
 - Publications
 - Research data
 - Software
 - (Ideally) other Open Science practices, including citizen science, open peer review, societal and economic impact, and more.

Building the Dataset

WG2 built a **structured inventory** of Open Science monitoring initiatives worldwide.

We document each initiative through a **common metadata framework**

We captured...	Examples
General information	Initiative name, URL, description
Geographic coverage	Country, region, operational scope
Governance	Lead organisation, organisation type
Monitoring focus	Open Access, Open Data, policies, etc.
Methodology	Indicators, data sources, monitoring approach
Impact	Intended use, compliance, enforcement



**90 OSM
Initiatives
worldwide**

WG2 Output: Open Science Monitoring Initiatives Dataset



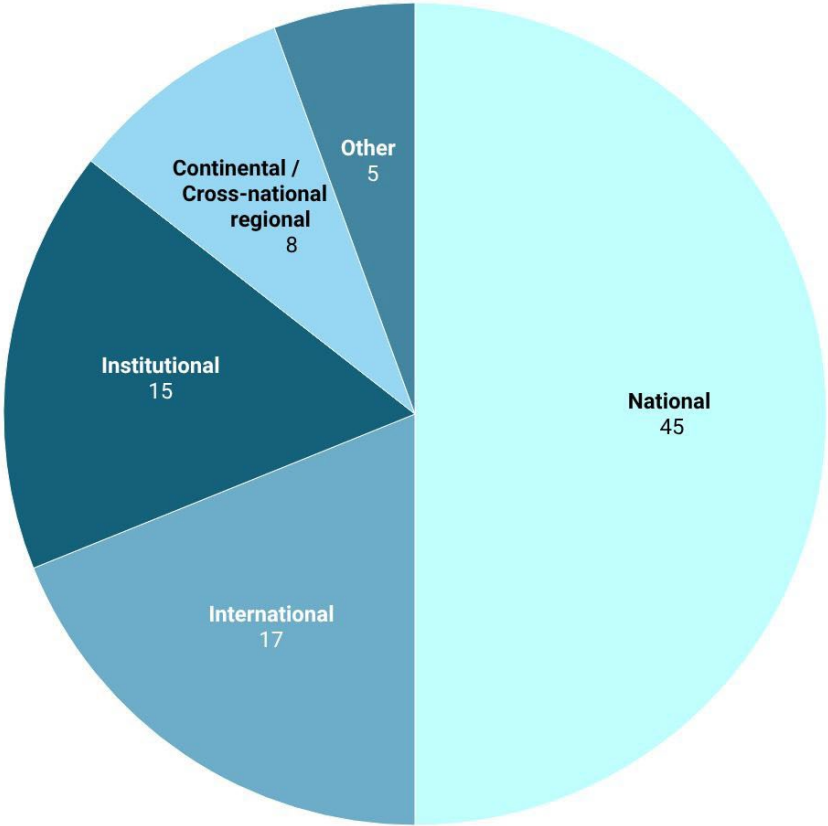
Our [Dataset](https://zenodo.org/records/20918596) is openly available to the public via Zenodo

<https://zenodo.org/records/20918596>

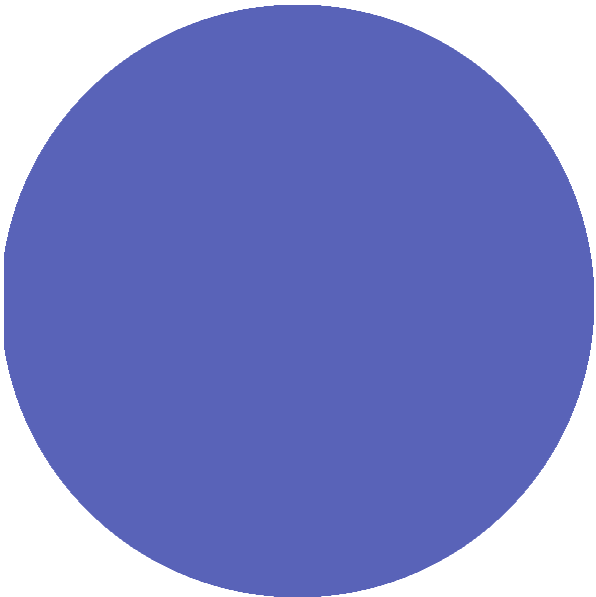
Preliminary Results

Operational Scope of Monitoring Coverage

National International Institutional Continental / Cross-national regional Other



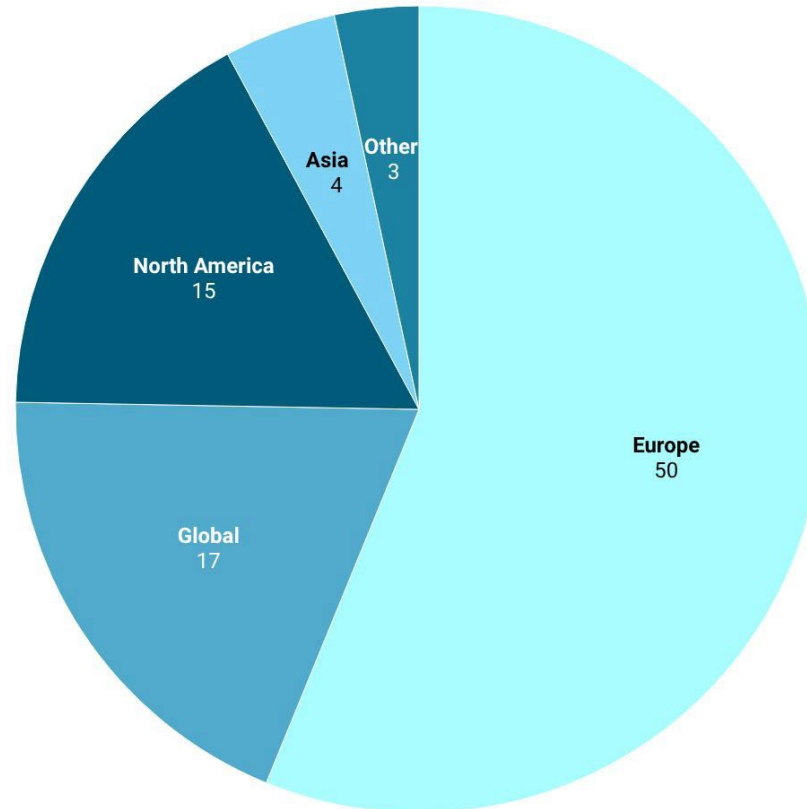
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Preliminary Results

Geographical Region of Monitoring Coverage

Europe Global North America Asia Other

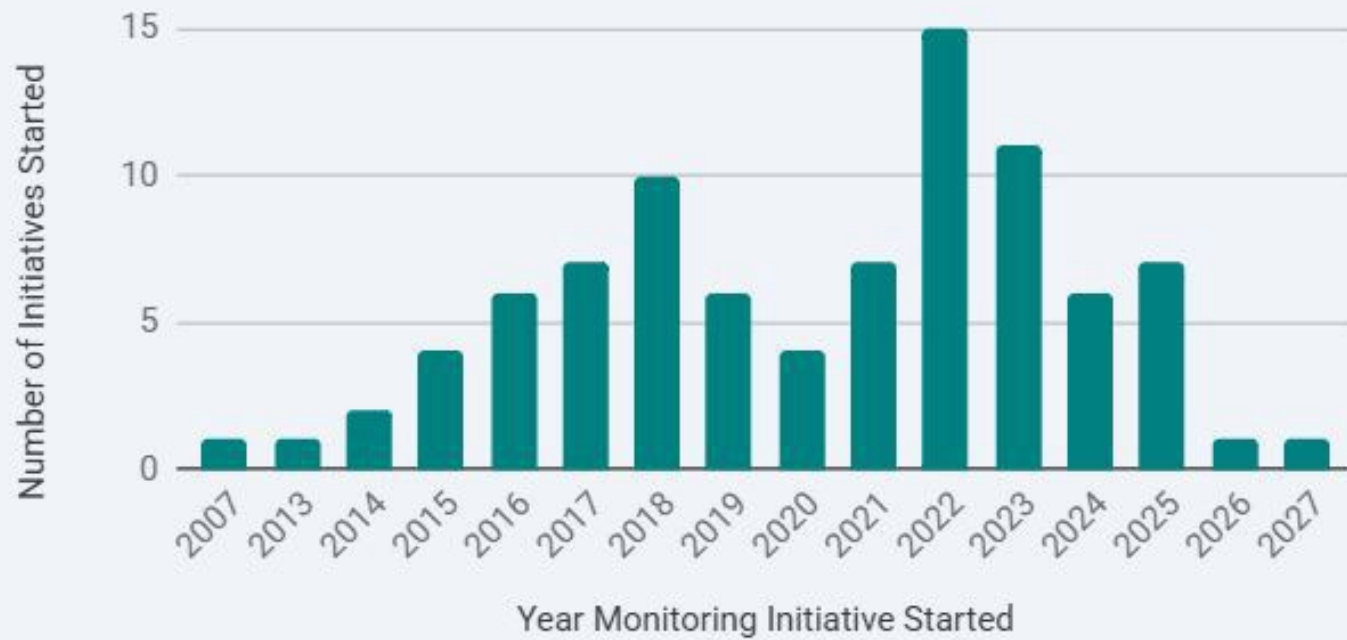


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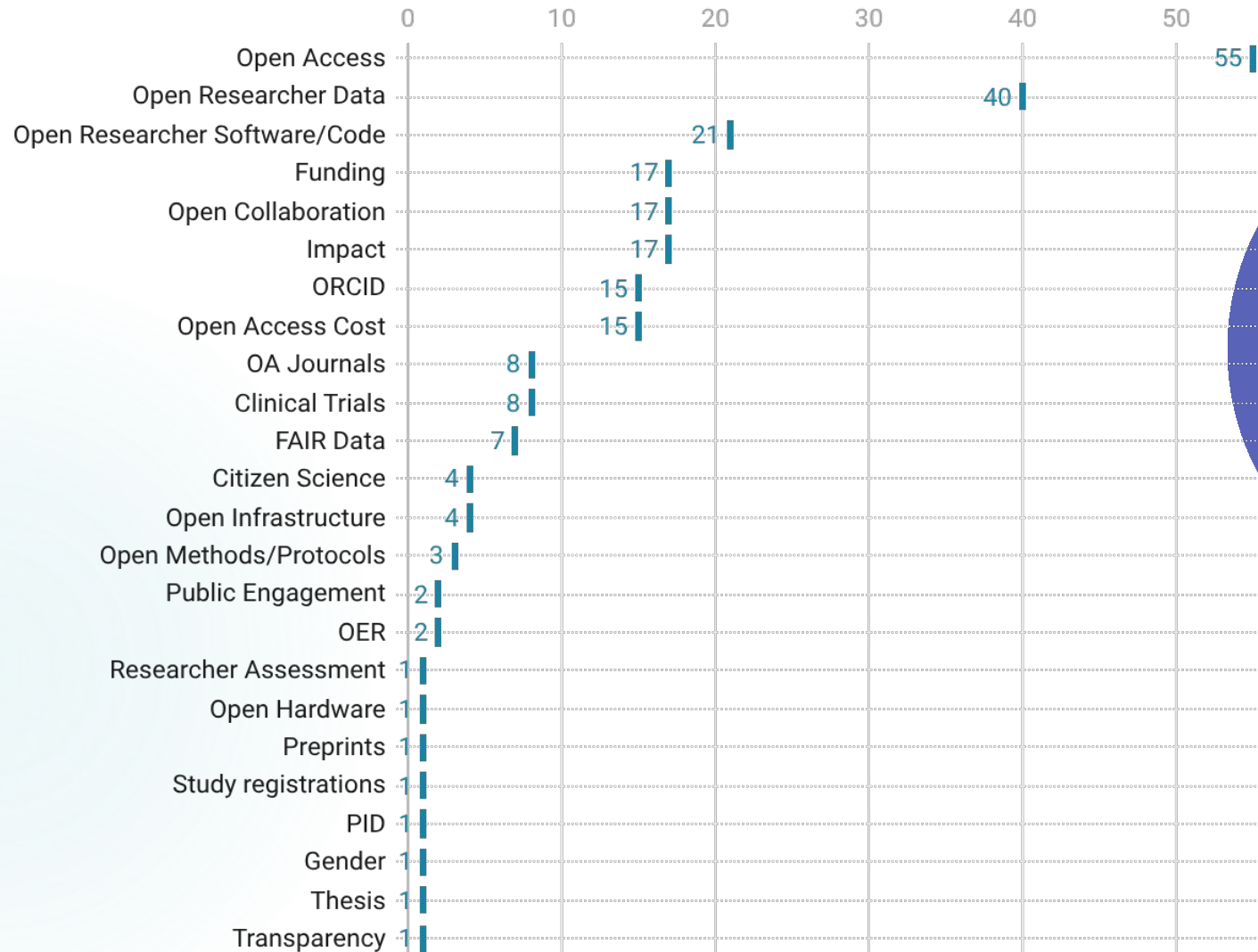
We have not yet identified monitoring initiatives from the MENA region

Preliminary Results

Growth of Open Science Monitoring Initiatives Over Time



Preliminary Results



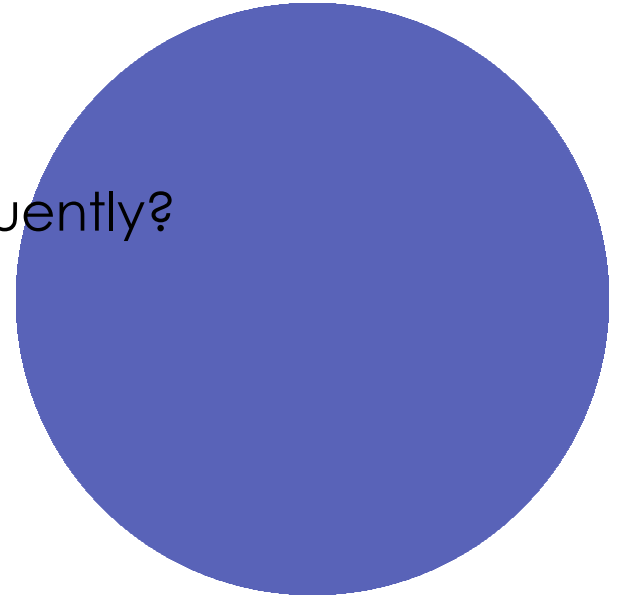
Merging Note:

- ▶ Clinical Trials + Results reporting for clinical trials = Clinical Trials
- ▶ Societal Impact + Impact = Impact
- ▶ Transformative agreement + Open Access Cost = Open Access Cost

What questions can this dataset answer?

The dataset allows us to explore questions such as:

- Which Open Science practices are monitored most frequently?
- Which regions have established monitoring initiatives?
- Who develops monitoring systems?
- What data sources are commonly used?
- Which monitoring approaches are most common?
- How are monitoring results intended to be used?
- Where are important gaps or underrepresented areas?



Help Us Expand the Global Monitoring Landscape

Our inventory is a living resource and will continue to evolve with contributions from the community.

If you know of an Open Science monitoring initiative that is not currently included in our dataset, we would love to hear from you.

✉ Lamis Elkheir

lamis.elkheir@africanrn.org

✉ Tereza Szybisty

tereza.szybisty@openaire.eu

Together, we can build a more comprehensive and globally representative picture of Open Science monitoring.

Read the Principles of Open Science Monitoring in multiple languages now!

Open Science Monitoring Initiative,
Principles of Open Science
Monitoring, Paris, 2025. DOI:
10.52949/4



Already available in
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<https://open-science-monitoring.org/principles/>

Your questions



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Thank you for your attention!

<https://open-science-monitoring.org/>