Curso “Pilares para el avance de la Ciencia Abierta”

Ciencia Abierta, impacto y evaluación científica
Políticas, medición y evaluación de la ciencia abierta
La agenda de Science Europe para un nuevo sistema de evaluación científica
‘Road to research assessment reform and equitable open Science’

Dr Lidia Borrell-Damián
Secretary General, Science Europe
Cuenca, 6 Septiembre 2023
Science Europe’s Mission & Strategy

Define long-term perspectives for European research and champion best-practice approaches, ensuring high quality science for the benefit of humanity and the planet.

https://scieur.org/strategy
Evolving priorities of Science Europe and its Member Organisations

Open access to research publications and data (2011 – present)

- Majority of members have defined and implemented pioneering policies on open access to research publications, based on [shared principles](#) (2015) and [closely monitored](#) (2021)
- Members organisations have spearheaded the promotion of FAIR research data, including [international RDM alignment](#) (2021) and [long-term data sustainability](#) (2021)
- EOSC Executive Committee (2019-2021) and EOSC Association

Research assessment reform (2019 – present)

- Recognising the need for systemic changes to the way research, researchers, and research institutes are assessed, from a Science Europe study (2019) to the establishment of CoARA (2022).

Positive research cultures and equitable open science (2021 – present)

- Embedding the values that are at the centre of our research systems in the policies and practices that research organisations implement, to better support quality research and a thriving research community.
- Addressing open science in a comprehensive way, including access to research infrastructures, assessment of researchers careers, and financial aspects
Why is research assessment important?

Research assessment represents a core activity of Research Funding and Research Performing Organisations. It shapes many aspects of the research landscape and exerts influence over how research is performed and disseminated.

Research Assessment has been a long-standing priority topic of Science Europe, explored through various topics including: Research Impact (2017), Peer Review (2015 and 2018), and Gender Equality (2017) among others.
The need for research assessment reform in Europe and Globally:

Broad agreement on the need for reform to further support the quality of research and the attractiveness of research environments.

Globally, reform can:

1. allow research assessment to support positive research cultures
2. ensure assessment practices stay relevant as research processes and the expectations of
3. live up to the increasing demands placed on research by the many societal, environmental, democratic, and economic challenges faced.

While the motivations may differ between organisations and community members, there is a common direction: reform is needed, primarily to further support the quality of research.
Science Europe’s study on Research Assessment (2019)

Objective - to study how Science Europe Member Organisations (and invited external organisations) select the best projects for funding and researchers for career progression through their assessment processes, and whether these processes are fair, transparent, effective, and efficient.

### Engagement

<table>
<thead>
<tr>
<th>Organisation type</th>
<th>Response rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Members</td>
<td>86% (32/37)</td>
</tr>
<tr>
<td>Non-members</td>
<td>86% (6/7) *</td>
</tr>
<tr>
<td>RFOs</td>
<td>97% (33/34)</td>
</tr>
<tr>
<td>RPOs</td>
<td>50% (5/10)</td>
</tr>
<tr>
<td>Total</td>
<td>86% (38/44)</td>
</tr>
</tbody>
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* Participating external organisations: European Research Council (EU), Weizmann Institute of Science (IL), Wellcome (UK), Czech Academy of Science (CZ), National Institute of Health (USA), and European Molecular Biology Organisation (DE)
Question – How do research organisations understand ‘quality’? (study 2019)

62% of organisations do not have a formal definition of research quality

- Novelty/ originality: Very important
- Methodological/theoretical rigour
- Academic significance or impact
- Productivity: Less important
- Non-academic significance or impact

N = 39

DOI: 10.5281/zenodo.4915998
Question – What challenges face research organisations in the implementation of research assessments? (Study 2019)

1. Research organisations describe the need for continued effort in combating all forms of bias, discrimination, and unfair treatment

2. Pressure exerted on assessment systems by limited funds and/or positions makes distinguishing and ranking proposals/applicants of similar quality (particularly around funding thresholds) more difficult.

3. The cost and efficiency of assessment systems is a major challenge (particularly for those that have moved towards more qualitative assessments).

4. Balancing the effort and time burden of both applicants and reviewers was also a common challenge described.
Question – What are the current trends in research assessment? (in terms of institutional commitments – Study 2019)

1. **Shift towards qualitative assessment of a broader range of research outputs**

2. **A more balanced use of quantitative metrics**

...Driven by community-level initiatives that research organisations have signed:

![Diagram showing the percentage of organisations in different phases of DORA compliance]

- **Signatory of DORA**: 54%
- **Signing in process**: 5%
- **Seeking compliance before signing**: 5%
- **Signed/Part of similar initiative**: 3%
- **Signing of similar initiative in progress**: 3%
- **Policy requires not to sign declarations**: 5%
- **Not considered signing DORA or similar**: 23%
SE Study 2019 outcomes and further dialogue with SE Member Organisations and other Stakeholders:

- **TRANSPARENCY**
  Assessment processes must be clear and transparent at all stages

- **EVALUATING ROBUSTNESS**
  Assessment processes should be monitored and evaluated, and best practices shared

- **BIAS, DISCRIMINATION & UNFAIR TREATMENT**
  Research organisations should publicly show how they address bias, discrimination and unfair treatment

- **COST, EFFICIENCY & APPLICANTS’ EFFORT**
  Assessment processes should be streamlined and standardised to improve efficiency for all involved

- **BROADENING THE POOL OF REVIEWERS**
  Research organisations should consider broader selection criteria for reviewers and suitably recognise their work

- **QUALITATIVE ASSESSMENTS**
  Assessment processes should enable evaluations to focus on content and consider a wide range of research outputs and activities

- **NOVEL APPROACHES**
  Research organisations should consider novel approaches to assessments in an evidence-based manner and share their experiences

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Science Europe Position Statement on Research Assessment Practices (2020)
DOI: 10.5281/zenodo.4916155
Science Europe, and other community members (including through a joint statement from Science Europe & the European University Association) are calling for a broader reform of the way research and researchers are assessed.
The Agreement on Reforming Research Assessment

Published on 20 July 2022

The Agreement sets a shared direction for changes in assessment practices for research, researchers, and research performing organisations, with the goal to maximise the quality and impact of research. It includes principles, commitments, and timeframes for reforms and lays out principles for a Coalition of organisations willing to work together in implementing the changes.

https://coara.eu/agreement/the-agreement-full-text/
The Coalition for Advancing Research Assessment (CoARA)
4 Core Commitments

1. **Recognise the diversity of contributions** to, and careers in, research, in accordance with the needs and the nature of the research.

2. **Base research assessment primarily on qualitative evaluation** for which peer-review is central, supported by responsible use of quantitative indicators.

3. Abandon the inappropriate uses in research assessment of journal- and publication-based metrics, in particular the inappropriate uses of journal impact factor (JIF) and $h$-index.

4. **Avoid the use of rankings of research organisations** in research assessment.

[https://coara.eu](https://coara.eu)
The Coalition for Advancing Research Assessment (CoARA)
6 Supporting Commitments

5. Commit resources to reforming research assessment as is needed to achieve the organisational changes committed to.

6. Review and develop research assessment criteria, tools and processes.

7. Raise awareness of research assessment reform and provide transparent communication, guidance, and training on assessment criteria and processes as well as their use.

8. Exchange practices and experiences to enable mutual learning within and beyond the Coalition.

9. Communicate progress made on adherence to the Principles and implementation of the Commitments.

10. Evaluate practices, criteria and tools based on solid evidence and the state-of-the-art in research on research, and make data openly available for evidence gathering and research.

https://coara.eu
The Coalition for Advancing Research Assessment (CoARA)

A global coalition of over 600 research organisations (July 2023) aimed at enacting research assessment reform via common commitments and according to a set timeframe.

https://coara.eu
Science Europe current data in terms of institutional commitments – 2023

In Science Europe Members
Shift towards qualitative assessment of a broader range of research outputs

As of March 2023, 36 out of 40 Science Europe Member Organisations have signed DORA, CoARA, or both initiatives:

• 24 MOs signed DORA (60% of SE Members Organisations)
• 32 MOs signed CoARA (80%)
• 20 MOs signed both DORA and CoARA (50%)
DORA (2012) & COARA (2022)

- Be explicit about hiring criteria;
- Responsible authorship practices;
- Responsible publisher practices;
- Responsible metrics vendor practices.

- Abandon poor use of journal metrics;
- Value broader range of contributions

- Qualitative over quantitative evaluation;
- Avoid use of rankings in research/er assessment;
- Commit to resource, review, update & report on RRA practice;
- Time-frame for change;
- Join a community.
The Reform of Research Assessment, Research Culture and Open Science are related

As CoARA develops, Science Europe continuously advocates for a values-based approach to developing policy and practice changes that can enable positive research culture shift. Open Science being an important part of this shift.
Science Europe’s focus on Research Culture & Values

A Values Framework for the Organisation of Research (2022)

Ensuring that the Values that are at the heart of our research systems are reflected in the policies and practices.

Research culture brings together research assessment reform and open science and mutually enables positive change...

https://scieur.org/values-frame
Equitable Science - Open Science

Key objectives

- *Open and seamless collaboration* within the research community
- *Meaningful involvement* of societal actors in the research process

Purposeful action to ensure...

- *all* research communities can take part in this transition
- *all* segments of society should be able to reap its benefits
Open science as a strategic priority for Science Europe

Research community

• Dialogue with SE members on for Open Access to Research Publications and to Research Data

• Science Europe spearheads efforts to bring together the research sector around a set of shared objectives. In March 2022, Science Europe was among the leading partners of the ‘Action Plan for Diamond Open Access’, which has now garnered endorsement from more than 310 organisations and individuals.

• Science Europe participated in the drafting of the Agreement for Reforming Research Assessment and the establishment of CoARA as a community-driven organisation, and continues to be involved at all levels.

Policy initiatives

• Science Europe engages in European and global policy initiatives aimed at promoting a scholarly communication ecosystem that is publicly owned and not-for-profit. Initiatives include the European Open Science Cloud (EOSC), the Coalition for Advancing Research Assessment (CoARA), Open Research Europe (ORE), and deliberations on open science taking place within the European Research Area (ERA).
An unprecedented political consensus in support of open research practices has formed between the European Union’s institutions and national governments.

- String of communications from the European Commission (2020) and conclusions by the Council of the European Union (Amsterdam-call-for-action-on-open-science; 2022, 2023) in relation to the new European Research Area illustrate the broad support for open science and research assessment reform.

- UNESCO Recommendation on Open Science – 2021

- OECD Open Science

- Overview of open science policies by Science Europe members and national strategies

Public research stakeholder sector becoming increasingly ambitious in its scope and long-term goals for positive research cultures and equitable open science.

- Recommendations by the EU Open Science Policy Platform (OSPP-2020):
  - An academic career structure that fosters outputs, practices and behaviours to maximise contributions to a shared research knowledge system
  - A research system that is reliable, transparent and trustworthy
  - A research system that enables innovation
  - A research culture that facilitates diversity and equity of opportunity
  - A research system that is built on evidence-based policy and practice
Science Europe’s interlinked priorities

Research culture shifts

Research Assessment Reform

Enabling open science

Define long-term perspectives for European research and champion best-practice approaches, ensuring high quality science for the benefit of humanity and the planet.
An open and inclusive dialogue

• Open science and research assessment reform are joint efforts and a shared responsibilities between the public research sector and policymakers.

• An open and inclusive dialogue is essential to ensure reforms will take into account the diverse needs of scholarly communities.

• Science Europe, et al. (May 2023) ‘Joint statement: Council conclusions on not-for-profit scholarly communication ecosystem’
Science Europe membership survey: research assessment criteria, policies, and evidence for open science

Science Europe is launching a **membership survey on** research assessment criteria for open science. Providing:

- a clear and comprehensive insight into the assessment criteria, policy articulation, and scientific evidence base for open science, and
- an invaluable tool for public research funding and performing organisations in Europe and beyond

Survey report forthcoming in October 2024

**Dialogue** with other Stakeholder Organisations continues, in Europe and worldwide

Thank you!

Presentation prepared by
Lidia.Borrell-Damian@scienceeurope.org
James.Morris@scienceeurope.org
Bregt.Saenen@scienceeurope.org