

SPARC Europe Feedback on First Draft of the UNESCO Recommendations on Open Science

21 Dec 2020

1. Introduction

SPARC Europe is a foundation that was established in 2003.¹ It is a long-standing voice advocating for unfettered access to research and education for the academic and education and for the whole of society. We are striving to make open research and education the default in the Higher Education community in Europe. SPARC Europe has members from over 23 countries.

SPARC Europe applauds UNESCO for its First Draft of the UNESCO Recommendations on Open Science since it makes a solid case for Open Science (OS), provides a strong and comprehensive definition of OS, lists key stakeholders to show the broad range of beneficiaries of OS. It also provides Member States and other stakeholders with guidance on concrete measures that will help enable an equitable Open Science ecosystem worldwide.

SPARC Europe has a few small suggestions for amendments described below which helps underline the importance of collaboration and policy alignment, OA to publications, open licensing, open standards and facilitating open content through open APIs, for example. These proposed amendments are in bold.

2. Suggestions for amendments

AIMS AND OBJECTIVES OF THE RECOMMENDATION, I, 3, p 3

“3. As Open Science turns into a global movement, robust institutional and national Open Science policies and legal frameworks need to be developed by all nations to ensure that scientific knowledge, data and expertise are universally and openly accessible and their benefits universally and equitably shared.”

We suggest that you make an addition to encourage collaboration between institutions, Member States and international organisations who are already progressing OS. This will help accelerate the access and reuse of publicly funded research.

Amendment: “3. As Open Science turns into a global movement, robust institutional and national Open Science policies and legal frameworks need to be developed by all nations to ensure that scientific knowledge, data and expertise are universally and openly accessible and their benefits universally and equitably shared. **Widespread collaboration amongst institutions, Member States and international organisations is necessary to help accelerate OS.**”

DEFINITION OF OPEN SCIENCE 9, iii, p 5

“Open Science platforms and repositories are among the critical Open infrastructures, which provide essential services to manage and provide access to data, scientific literature, thematic science priorities or community engagement.”

¹ SPARC Europe: <https://www.sparceurope.org>

We propose that this paragraph is adjusted to ensure that OS infrastructures follow open standards to increase interoperability. Making content portable and more openly accessible will also ensure that healthy diversity in OS services prevails and that lock-in is circumvented:

Amendment: “Open Science platforms and repositories are among the critical Open infrastructures, which provide essential **open standardised** services to manage and provide access **and portability and federation** to data, scientific literature, thematic science priorities or community engagement.”

DEFINITION OF OPEN SCIENCE 9, iv, p 5

“Open Science infrastructures should be non-profit and they should guarantee permanent and unrestricted access to all public.”

We suggest that UNESCO amends this sentence to emphasise the importance of the non-profit nature of infrastructure and to make access to its content free since improved access stimulates innovation, provides more visibility to research and increases return on investment. Access should be guaranteed to all.

Amendment: “Open Science infrastructures should be non-profit and they should guarantee permanent, **free** and unrestricted access to all **public**.”

DEFINITION OF OPEN SCIENCE 10, vi, p 6

Since the definition of Open Science addresses Open Educational Resources, this needs to include a reference to the UNESCO Recommendation on OER.²

DEFINITION OF OPEN SCIENCE 10, p 6-7

Scientific outputs should be as open as possible, and only as closed as necessary. Open Science affords necessary protection for sensitive data, information, sources, and subjects of study. ...

When referring to scientific outputs, we suggest that UNESCO includes providing open access to publications in the description of scientific outputs and thereby underlining the importance of sharing it openly by default. Currently, The “as open as possible as closed necessary” ruling is a standard international term used in the context of research data, and thus not appropriate for research publications. It is essential that UNESCO requires access to research publications in this paragraph also to support many Member States that have targets to make 100% of their research publications open in the coming years. It is also important that UNESCO aligns with international OS policies that specify these more specifically in the Budapest Open Access Initiative, the Berlin Declaration, the European Commission Open Science Policy or Plan S.^{3 4 5 6} We therefore suggest that UNESCO calls for immediate open access to peer-reviewed publications in its definition:

Amendment: “**Scholarly publications should be made immediately openly accessible on publication. Research data and other research outputs** should be as open as possible, and only as closed as necessary. Open Science affords necessary protection for sensitive data, information, sources, and subjects of study. ...”

² UNESCO Recommendation on OER, 2019: <https://en.unesco.org/themes/building-knowledge-societies/oer/recommendation>

³ Budapest Open Access Initiative: <https://www.budapestopenaccessinitiative.org/boai-10-recommendations>

⁴ Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities; <https://openaccess.mpg.de/Berlin-Declaration>

⁵ Plan S: <https://www.coalition-s.org/>

⁶ The European Union’s OS policy: https://ec.europa.eu/info/research-and-innovation/strategy/goals-research-and-innovation-policy/open-science_en#the-eus-open-science-policy, H2020 Programme, Guidelines to the Rules on Open Access to Scientific Publications and Open Access to Research Data in Horizon 2020:

https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf and European Commission, Guidelines for open access to publications, data and other research outputs:

https://ec.europa.eu/research/participants/data/ref/h2020/other/hi/oa_pilot/h2020-guidelines-oa-covid-19_en.pdf

DEFINITION OF OPEN SCIENCE 12, p 7

We suggest that you add two additional stakeholder groups: Practitioners and SMEs since they are also clear beneficiaries of OS:

Practitioners from professional fields such as nurses, social workers, planners, surveyors and others who benefit from open access to research to inform their work.

SMEs (Small and Medium-sized Enterprises) can accelerate paths to innovation by having access to immediate knowledge and information through Open Science.

AREAS OF ACTION, ii, Developing an enabling policy environment for Open Science, 19, h, p 11

Supporting the development of national/international legal instruments to allow for sharing across repositories without regard to national or regional boundaries

We believe that retaining copyright and the right to publish and openly licensing research should be promoted to enable the maximum outreach of publicly funded research. This is not for just sharing across repositories, but for sharing online in a range of venues such as on specific web pages, research platforms, through social media and in new venues of the future. This is also aligned with the 2020 Plan S Rights Retention Strategy, the new EC Horizon Europe policy and supports recommendations of the 2020 report: Open Access: An Analysis of Publisher Copyright and Licensing Policies in Europe, 2020.^{7 8}

Amendment: “Supporting the development of national/international legal instruments **that support the retention of copyright and publishing rights, and open licensing** to allow for **sharing publicly funded research as widely as possible** ~~sharing across repositories without regard to national or regional boundaries.~~”

AREAS OF ACTION, ii, Developing an enabling policy environment for Open Science, 19, i, p 11

“Fostering equitable public-private partnerships for Open Science and engaging the private sector in Open Science, provided that there is appropriate certification and regulation to prevent vendor lock-in, predatory behavior and extraction of profit from publicly funded activities.”

We suggest that the words relating to generating profit from publicly funded research are omitted to fit in with knowledge transfer activities at universities for example which promote innovation and the generation of profitable outcomes. It is essential to prevent it that no one player can monopolise research outcomes drawn from content delivered via an Open Science infrastructure. It is also furthermore important to emphasise the importance of adhering to open standards for interoperability between systems and for open innovation between tools, platforms and repositories.

Amendment: “Fostering equitable public-private partnerships for Open Science and engaging the private sector in Open Science, provided that there is **adherence to open standards**, appropriate certification and regulation to prevent vendor lock-in, predatory behavior and **monopolization of outcomes** from publicly-funded activities.”

AREAS OF ACTION, iii, Investing in Open Science infrastructures and services, 20

We suggest that you include an additional point that specifies the need for open content provision through (1) open APIs to enable effective information discovery and reuse and 2) that terms of use at born digital and publicly-funded research services use the most liberal and open license possible for

⁷ Plan S Rights Retention Strategy: <https://www.coalition-s.org/rights-retention-strategy/>

⁸ Open Access: An Analysis of Publisher Copyright and Licensing Policies in Europe, 2020: <https://zenodo.org/record/4046624>

Open Science since third parties will often be bound to these terms of use. This will help avoid perpetually limiting content licenses in future.

Amendment: **“Infrastructures and services that support open APIs and that openly license their content, preferably CCO or CC BY, to enable the re-use, mining and discovery of research by a wide audience.**

AREAS OF ACTION, iii, Investing in Open Science infrastructures and services, 20, g, p 12

“Joint strategies for shared, multinational, regional Open Science platforms. Such initiatives are a mechanism to provide coordinated support for Open Science covering: access to Open Science services and research infrastructures (including storage, stewardship, data Commons)..”

We welcome it that UNESCO emphasises the importance of UNESCO Member States strategically collaborating on large vital areas that underpin the OS infrastructure. We propose that you include publication, preservation, persistent identifier services and discovery when clarifying examples of coordinated support. These additional examples are cited as essential in the OS ecosystem stemming from European survey results on OS infrastructure published by SPARC Europe: Scoping the Open Science Infrastructure landscape in Europe.⁹

Amendment: **“Joint strategies for shared, multinational, regional Open Science platforms. Such initiatives are a mechanism to provide coordinated support for Open Science covering: access to Open Science services and research infrastructures (including OS registries, storage, preservation, discovery, persistent identifiers, stewardship or data Commons)..”**

AREAS OF ACTION, iv, Investing capacity building for Open Science, 21, a, p 13

“Providing systematic and continuous capacity building on Open Science concepts, principles and practice, including data science and stewardship, curation and archiving, information and data literacy, web safety, content ownership and sharing, as well as software engineering and computer science;”

Enabling immediate OA and attributed re-use is tightly linked to a legal framework that addresses copyright, rights retention practices and open licensing. Authors, publishers and institutions are still frequently unaware of the opportunities of open licensing and how to apply them effectively. Unnecessarily transferring all publishing rights to publishers also negatively impacts and prevents open access to research. For this reason, it is essential that capacity is built in this area, and thus added as a topic to the following:

Amendment: **“Providing systematic and continuous capacity building on Open Science concepts, principles and practice, including data science and stewardship, curation and archiving, information and data literacy, copyright and open licensing, web safety, content ownership and sharing, as well as software engineering and computer science;”**

AREAS OF ACTION, v, Transforming scientific culture and aligning incentives for Open Science, 22, a, p 13

“Attention should also be given to preventing and mitigating the unintended negative consequences of the transition to Open Science, such as increased costs for scientists, migration, exploitation and privatization of data from the global South by the global North, loss of intellectual propriety and knowledge, and premature sharing of research results.”

⁹ Scoping the Open Science Infrastructure landscape in Europe, p5, <https://zenodo.org/record/4159838>

We propose omitting references to sharing research results too early since guidance should not prevent any author from sharing results at any point in the research process for the benefit of his/her research, e.g. for peer review via a preprint server with due attribution.

Amendment: “Attention should also be given to preventing and mitigating the unintended negative consequences of the transition to Open Science, such as increased costs for scientists, migration, exploitation and privatization of data from the global South by the global North, loss of intellectual propriety and knowledge, ~~and premature sharing of research results.~~”

AREAS OF ACTION, v, Transforming scientific culture and aligning incentives for Open Science, 22, e, p 14

“Ensuring diversity in scholarly communications with adherence to the principles of open, transparent and equitable access and supporting collaborative publishing models with no article processing charges (APCs) or book processing charges (BPCs), as many low- and middle- income countries would find it difficult to fund APCs or BPCs so that, though their researchers would be able to read freely, they would be largely unable to publish;”

We welcome the essence of this point in that this guidance promotes a wide range of business models. However, this needs to be stipulated more succinctly. Furthermore, it is unclear as to what is meant by “collaborative” publishing models. This term might be redundant were you to word the sentence as follows:

Amendment: “Ensuring diversity in scholarly communications with adherence to the principles of open, transparent and equitable access and supporting a range of ~~collaborative~~ publishing **and sustainable financial or business** models. **This will better enable all those who wish to publish OA to do so regardless of their economic status and will thereby lessen the risk that** article processing charges (APCs) or book processing charges (BPCs) exclude ~~many~~ low- and middle- income countries **or those without the means to pay such OA costs from contributing to Open Science.”**