

# SE Comments on the first draft of UNESCO Recommendation on Open Science

December 10<sup>th</sup>, 2020

Thank you for this opportunity to contribute with comments from Sweden on the first draft of UNESCO recommendation on open science.

## **General comment**

UNESCO has a key role in safeguarding academic freedom and open science globally. Academic freedom is fundamental to the accuracy of scientific processes and trust in scientific results. UNESCO must continue to develop capacity-building for research systems and enhance knowledge development through interdisciplinary knowledge and research of high quality with relevance for sustainable development.

In developing new normative instruments, it is essential that the work of the Organization is based on expertise and builds on existing normative instruments, such as the 2017 Recommendation on Science and Scientific Researchers, so as to avoid duplication.

The Swedish Government strongly supports the transition to responsible and secure open science as it at its heart is a matter of democracy, enabling the whole of society to access, use and participate in research resulting from public funding. A benchmark for the transition should be to improve the quality, impact and innovativeness of the research by ensuring that more elements of the research process is made open in a secure and responsible way, for collaboration with wider society at as early a stage as possible. To do this, research integrity and quality must be on the front line in combination with enhanced scientific literacy and science education.

## **1. Definition**

The recommendation should be in line with other international and global instruments, protocols and efforts, eg. EU and OECD, in order to create a sustainable common understanding of open science.

Contrary to what is stated in several places in the text, the term “open science” is not defined. Rather, some necessary elements are listed. Thus, heading II may be changed to “Elements of open science”. These should also be placed at the beginning of the text. At the same time, it is important that work towards common definition of open science is pursued. In this regard, UNESCO may play an important role as a convening power in organizing, for instance,

regional expert dialogues with the objective of reaching a common international definition of open science.

## **2. Human rights, gender and non-discrimination**

In the preamble, gender equality needs to be addressed in para 2, and a gender-transformative approach in para 3.

The text needs a clearer humans rights-based approach, with explicit reference to access to science as a human right. For instance, in para 15 “human-rights based,” should be included right before “ethical”. Open Science as instrumental in for instance higher global economic equity should be emphasized, but not serve as the basis for the text as is now the case. Universal access to and enjoyment of science should also be linked to sustainable development through the 2030 Agenda as a comprehensive cross-cutting theme.

The interlinkages to the enjoyment of other human rights need to be highlighted. For example, accessibility to scientific results and processes needs to be met up with policy to ensure that scientists are protected from harassment due to their research. Threats and harassment may, apart from causing great personal harm, lead to self-censorship which goes against the core objectives of open science.

In para 15 an interlinkage could be made to Annex II, Preamble c in UNESCO Recommendation on Science and Scientific Researchers (2017) “recognizing that open communication of the results, hypotheses and opinions – as suggested by the phrase “academic freedom” –lies at the very heart of the scientific process, and provides the strongest guarantee of accuracy and objectivity of scientific results”.

Sexual orientation should be included under para 9 (viii) bullet 2. Age should also be listed as a ground for discrimination.

We question whether “marginalized groups” is the right choice of words on page 3 in the para beginning with “Considering [...]”. For example, women and non-anglophone scholars can hardly be seen as marginalized in all contexts where scholarly knowledge is generated. The recommendation should also make it clear that individuals can belong to multiple (or all) of the listed groups. Young scholars need to be included in the list. In para 12 (i), age should be included in the list. The factors listed in (i) are true for all actors mentioned in para 12 and should thus be listed before the list of actors.

## **3. Quality control**

The issue of quality control of all elements of open science is not sufficiently addressed in the document. High quality research seems to be secondary to other priorities in the recommendation (for instance in the list of core values in para 15, where quality is listed in third place). The issue of how to maintain quality control in all principles of openness needs

to be further addressed. This especially at a time when “alternative facts” and disinformation abound.

The basis for upholding research of a high quality lies in the peer review system and is the responsibility of the research community. Any other modes of review have to function as a supplement and not a replacement to peer review principles. While a wider circulation of preprints would increase accessibility to data, it is important that peer reviewed publications are distinguished from preprints.

Increased transparency and broader participation in a, fundamentally robust, expert review process can be of value. However, an implementation of open evaluation should be done carefully and responsibly.

Para 16 (c) seems a bit underdeveloped. What does responsibility mean in this context? Accountability towards who? And how? Perhaps a broader discussion on ethics and responsibility in Open Science might fit in here, following the UNESCO Recommendation on Science and Scientific Researchers (2017).

#### **4. Education**

In para 2, the wording should be “access to quality education for all”.

Science literacy promoted through formal and informal lifelong learning systems should be emphasized as a prerequisite for universal access to scientific knowledge, for instance in para 12 (iii), as well as in the areas of action. This is not only a condition for active participation but also for drawing the correct conclusions from shared data and results.

It is surprising that students, doctoral candidates and early-stage researchers are not mentioned as key actors in the text.

In para 12 (iii), the specific mentioning of innovators in the private sector is a little odd. We suggest that the public sector also should be included: “and innovators in the *public* and private sector”

In para 21 c, the wording “at least the undergraduate level” should be concretized, as it is not clear what a level below undergraduate would constitute in tertiary education.

#### **5. Arts and Humanities**

Knowledge and understanding generated by the arts and humanities is not sufficiently included. Although the text talks of “science”, in line with UNESCO custom this is presumably meant to include all academic fields. But much of the content is not sufficiently inclusive of the arts and humanities, which do not necessarily engage in “the objective study of observed phenomena and its validation...” but may just as well provide critical perspectives and creative approaches to observed phenomena and social strategies of

engagement with the world. These too are valid and important outcomes, and they ought to be acknowledged in para 7.

## **6. Open and closed science**

Generally, we would like to emphasise that striving for openness in science is valuable and important. The transition to Open Science must be in line with laws, regulations, recommendations and policies that apply on the national level. The principle “as open as possible, as closed as necessary” should be explored as a guiding principle throughout the recommendations.

Para 10 has a distinction between open and closed science, but at the same time says that open science “affords necessary protection”. This is unclear.

Open Science should be balanced with IPR and patents. How the recommendation relates to for example patents and intellectual rights needs to be elaborated on in the text, for instance in para 14: “Open Science critiques and transforms the boundaries of intellectual property to increase access to knowledge by everyone.”

Also, personal integrity and security aspects should be addressed and balanced with Open Science principles.

## **7. Incentives and rewards**

The problem with the existing system of incentives and rewards is mentioned in para 21 (b), but this must be discussed more in depth early on in the recommendation and solutions to the problem have to be suggested.