

UNESCO  
Natural Science Sector  
Division of Science Policy and Capacity Building  
Section for Science Policy and Partnership

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Dear Ladies and Gentlemen:

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## **STM comments to the UNESCO Draft Recommendation on Open Science**

STM welcomes UNESCO's initiative to prepare a draft Recommendation on Open Science ("the 1<sup>st</sup> draft ROS"). We appreciate the collaborative and consultative approach UNESCO is taking toward this work and having been able to participate in several of the stakeholder meetings. We recognize that UNESCO has been working through the complexity of scholarly communication ecosystem, the variety of key stakeholders involved, and the need for diverse approaches to advance Open Science.

In concert with other stakeholders, publishers are working towards an Open Science and Open Access environment that is multi-faceted and multi-dimensional. Industry-wide, publishers provide diverse options to promote Open Science and Open Access, including gold journals, hybrid options, self-archiving, and transformative agreements. These routes also provide a flexible selection of mechanisms for authors to make their works as widely available as possible, whilst maintaining the highest standards of quality and integrity, discoverability and usability. Publishers are also working to advance Open Scholarship, for example, as evidenced the "STM Research Data Year" initiative that draws on evidence-led, community driven outputs, including those from groups such as the Research Data Alliance.

Publishers look forward to working with UNESCO, member countries, and various stakeholders on advancing open scholarship. STM agrees that openness is a key goal in maximizing the benefits that research advances can bring to human health and economic prosperity. However, without trust in the quality and integrity of the research that is being made open, those benefits may never be realized. There is an opportunity to strengthen the 1<sup>st</sup> draft ROS in this respect by placing a greater emphasis on the need for checks and balances in the scholarly communication ecosystem to avoid pollution of the scientific record by false or low grade information and data – or data or information of an uncertain or obscure provenance.

Quality and control of provenance remain at least as important, if not more so, for Open Science, and its importance could be better emphasized in the draft ROS. This is true for human readers, but even more for tools and processes that use Artificial Intelligence (AI) to mine and synthesise research outputs. These tools need trusted, quality research outputs to be effective. Efforts to ensure this quality need to be supported by ongoing funding. This funding may take several forms depending on the type of institution, its mission, the scope of its operations, and the region of the world in which it based. STM recommends that the 1<sup>st</sup> draft ROS neither require nor exclude methods by which supporters of Open Science fund their operations, but rather promote a framework of best practice guidelines that encourage key stakeholders to take into account regional or national differences.

STM members help put key principles of Open Science into practice. The draft ROS could do more to note the crucial role publishers play, and the ongoing investments they make, to create and maintain the infrastructure that enables these values to flourish in the scholarly communication ecosystem. This is particularly important given that certain organizations in the community have chosen to exploit researchers' desire to openly publish their scientific journal articles in well-regarded journals and benefit from the rigorous peer review and community attention that these outlets have to offer. These so-called "predatory publishers" seek to deceive, mislead or confuse scholars into thinking they are submitting manuscripts to established or recognised journals when in reality these publications offered are set up primarily to capture APCs, with little regard for adding and maintaining a bona fide scientific record. We recommend additionally that the 1<sup>st</sup> draft ROS condemn the practice of predatory publishing and call for a coordinated international effort to combat this phenomenon.

STM and its members are keen to work with UNESCO, its regional institutions, and with researchers and their institutions on a route forward for achieving the vision of Open Science. We believe we can do so through collaborative approaches, flexibility, and innovation.

Kind Regards



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