



## Towards a UNESCO Recommendation on Open Science Online Expert Meeting on Open Science and Intellectual Property Rights

23 April 2021

### Background and Objectives

This online meeting is part of a series of actions to build a global consensus on Open Science and develop the UNESCO Recommendation on Open Science. It was held on 23 April 2021 on the Zoom platform, and due to high demand, it was also web-streamed online, in English and French.

Considering the fragmented scientific and policy environment on Open Science, at its 40th session of UNESCO General Conference, 193 Members States tasked the Organization with developing an international standard-setting instrument on Open Science in the form of a UNESCO Recommendation. The Recommendation is expected to define shared values and principles for Open Science and identify concrete measures on open access and open data, with proposals to bring society closer to science and commitments to facilitate the production and dissemination of scientific knowledge worldwide.

Since December 2019, UNESCO, with the guidance of an International Advisory Committee, has led a regionally balanced, multistakeholder, inclusive and transparent consultation process to formulate the draft text of the Recommendation. The Open Science consultations led by UNESCO pointed to some critical issues that needed to be addressed while building the global consensus on Open Science. One of these issues is the need to clarify the relationships between Open Science and Intellectual Property Rights (IPR). A clear understating of these relationships is key for the advancement of science and its contribution to human progress and wellbeing, since both Open Science and IPRs are necessary, beneficial and not mutually exclusive.

The current draft of the UNESCO Open Science Recommendation acknowledges the need for Open Science practices to build upon existing intellectual property systems, and encourages open licensing and the use of the flexibilities in the intellectual property systems to amplify access to knowledge by everyone for the benefits of science and society.

Recognizing the ongoing policy challenge to establish an optimal balance between IPR protection and openness as critical for the operationalization of Open Science worldwide, UNESCO invited experts on the topic, representatives from the Member States and the broad UNESCO Open Science community to discuss the relationships between IPRs and Open Science; to present the different existing instruments and mechanisms that reconcile ownership and sharing/openness, and to exchange on balanced approaches between IPRs and Open Science.

### Report

Providing the opportunity for a frank and lively debate on the links between Open Science and IPRs, the online expert meeting on Open Science and Intellectual Property Rights brought

together over 500 participants and six experts, namely **Mr Marco Aleman**, Assistant Director-General, IP and Innovation Ecosystems Sector in WIPO; **Ms Brigitte Vezina**, Director of Policy in Creative Commons; **Ms Alessandra Baccigotti**, Knowledge Transfer Manager and Head of Intellectual Property Protection at the University of Bologna's Knowledge Transfer Office; **Ms Ruth L. Okediji**, Professor of Law at Harvard Law School and Co-Director of the Berkman Klein Centre; **Ms Margo A. Bagley**, Professor of Law at Emory University School of Law; **Ms Carolina Botero Cabrera**, Director of the Karisma Foundation.

The presentations of the experts and the subsequent discussion with the participants focused on the following:

- the complexity of the different Open Science elements and related IP tools and mechanisms;
- examples of innovative ways of reconciling ownership and sharing/openness;
- current international negotiations and agreements the topic and
- the impact of the COVID-19 crisis.

The key messages of the meeting can be summarized as follows:

- IPRs are not an obstacle to Open Science. On the contrary, the correct definition of the IP framework can be an essential tool for Open Science to stimulate collaboration and ensure, among others, that all contributors that share their scientific data, information and knowledge are adequately acknowledged and recognized.
- Different types of IPRs have different impacts on the Open Science ecosystem since they facilitate different levels of openness, regulatory exclusivities and protection against misuse of data and knowledge.
- Balanced policies and strategies are needed to reconcile possible tensions between Open Science and IPRs.
- Awareness of the applications, limitations, flexibilities and exceptions of IP systems are important considerations in the operationalization of Open Science.

This report provides a detailed overview of the views, comments and recommendations discussed in the meeting.

## Opening

In her welcoming remarks, **Ms Shamila Nair-Bedouelle**, Assistant Director-General for Natural Sciences, UNESCO, welcomed the participants and highlighted the need to better understand the relationships between Intellectual Property Rights (IPRs) and Open Science, particularly as the world is facing unprecedented global challenges. She noted that the transparent, inclusive, and consultative process of developing the UNESCO Recommendation on Open Science allowed the incorporation of the perspectives of different actors from different regions. As the relationship between IPRs and Open Science was highlighted by many, she invited the participants to take advantage of the event to advance the discussion on Open Science and IPRs in an effort to increase awareness of the different existing instruments that bring together IP and openness.

**Ms Peggy Oti-Boateng**, Director, Division of Science Policy and Capacity Building, Natural Sciences Sector, UNESCO, provided an overview of the process towards the UNESCO Recommendation on Open Science. This process has led to the development of a draft text, based on the inputs received from the UNESCO Open Science Partners as well as through the

UNESCO Online Global Consultation, the regional and the thematic consultations. She described the main parts of the draft text of the Recommendation and pointed out that the text stresses the need for striking the right balance between IPRs and Open Science.

### **Relationship between Open Science and Intellectual Property Rights: Views from the Experts**

The session was moderated by **Ms Fernanda Beigel**, Researcher at CONICET and Professor at the Faculty of Political and Social Sciences, National University of Cuyo, and the Chair of the UNESCO Open Science Advisory Committee introduced the invited experts.

Responding to the question about the perspective of the World Intellectual Property Organization (WIPO) on the relationship between Open Science and IPRs, **Mr Marco Aleman**, Assistant Director-General, IP and Innovation Ecosystems Sector, WIPO, presented different channels of knowledge transfer, namely, on the one hand, informal channels, such research and publications, dissemination of knowledge via seminars and conferences. On the other, formal channels, such as contract research, university-industry joint research, licensing of IP, spinoff and other forms of academic entrepreneurship. Regarding those formal channels, the role of IP is more prominent, Mr Aleman stressed the need for the distinction between the different IPRs and its relationship with open science; the most frequent relationship is made regarding copyright -on scientific papers- and to patents -on technology-related inventions. In both cases, the important role of the publication –the scientific paper or the patent application—on knowledge transfer is not negligible. The interest in open science promotion and the objectives of the IP categories mentioned before are very much aligned. Moreover, statistics show that fields where IP rights are intensively used coincide with sectors that publish actively too. All the above reinforced the idea that OS and IP, instead of been contradictory concepts, are just complementary ones. Mr Aleman ended with several examples where OS recommendations are part of the key drivers of WIPO’s work (advice to university on IP policies and ARDI program).

**Ms Brigitte Vezina**, Director of Policy, Creative Commons (CC), shared her views on the use of creative commons licenses and public domain as tools to promote Open Science and share scientific information. She described the diversity of globally standardized CC licenses and public domain tools building upon existing copyright legal systems for shared and sharable knowledge. Ms Vezina identified digital innovation, internet technologies, and the COVID-19 crisis as calls for exploring new ways of science communication that favors access, collaboration and fairness, in contrast to publishing models that my raise barriers for knowledge sharing, thus perpetuating unbalanced power relationships among researchers, institutions, publishers and the general public.

**Ms Alessandra Baccigotti**, Knowledge Transfer Manager and Head of Intellectual Property Protection at the University of Bologna’s Knowledge Transfer Office, presented the connections between Open Science, innovation, knowledge transfer and IPRs, particularly in the context of publicly funded research institutions. She highlighted the general lack of awareness among researchers and conflicting messaging on the links between open science and IPRs, She consequently argued for the need to build a culture of collaboration and training on IPRs and Open Science not only among researchers but also among research managers and technology transfer professionals.

**Ms Ruth L. Okediji**, Professor of Law at Harvard Law School and Co-Director of the Berkman Klein Centre, shared her experience using Open Science in a balanced way with IP to foster

national economic growth, particularly in developing countries. Ms Okediji noted that Open Science targets to reduce the friction among the existing legal regimes regarding the right to own and the right to share scientific knowledge, by focusing on the primary outputs of publicly funded research results and the extension of open principles to the entire research cycle. Ms Okediji also highlighted the need for recognizing the unavoidable role of markets, the complexity of the different research sectors, and the potential use of authorized federal agencies to scrutinize the type of licenses for various inventions as determined appropriate for the public interest. In conclusion, she pointed out the critical role of private funders in the Open Science movement by ensuring that the global south has access to technical data and encourage a transitional innovation system.

**Ms Margo A. Bagley**, Professor of Law at Emory University School of Law, argued that different intellectual property tools, namely copyrights, patents and trade secrets work differently to facilitate openness while protecting against misuse of data or knowledge. In the context of patents for example she noted that a tailored disclosure of origin requirement for tangible genetic resource and associated traditional knowledge (TK) could facilitate openness and minimize misuse, particularly in conjunction with positive legal protections for TK and robust access and benefit-sharing regimes for genetic resources. She also highlighted that open does not necessarily mean free as information disclosed in an issued, non-expired patent document is often open, but readers are not necessarily free to reproduce and use the inventions disclosed in the patent.

**Ms Carolina Botero Cabrera**, Director of the Karisma Foundation, focused on the ways in which Open Science and IPRs can benefit society as a whole and particularly the most vulnerable and marginalized. She presented an analysis of Open Science collaboration efforts that demonstrated that flexibilities and open licenses mechanisms are great tools for collective intelligence, innovation, creativity, fast problem solving, and adaptation of technical solutions to local realities. She also noted that for many marginalized communities suffering from diseases for which medicines are not in the markets' interest, Open Science could be the only solution. She concluded by recognizing the need for integrating the notion of the right to science and science as a public good in political discussions, especially in the context of the current COVID-19 crisis, and push the boundaries towards as open as possible and only as closes as necessary.

### **Open Discussion with the participants**

This session was moderated by Ms Ana Persic, Chief of section a.i. Science Policy and Partnership, UNESCO, who opened the floor to the participants to share their views regarding Open Science and IPRs and ask their questions to the invited experts.

Many participants highlighted the misconceived perspective of the role of IPRs within the Open Science movement and the need for aligning Open Science and IP policies. In response, the experts pointed to the urgency of raising awareness on the applications, limitations, flexibilities and exceptions of the existing IP systems, since, without reconciliation of normative and legal structures, Open Science will rely on voluntary practices only.

Another point raised by the participants was the need for sharing good institutional practices regarding IP and Open Science and aligning career evaluation and rewarding systems with the principles of Open Science. The experts noted that many universities with IP activities are in the process of harmonizing the IP policy environment with Open Science practices and stressed the importance of establishing close communication between all the relevant stakeholders in

this regard. Emphasizing the importance of establishing scientific collaborations based on technology transfer activities and licences, ensuring that the rights of scientists are protected over the risk of commercial interests, the experts agreed that scientists have the right to react to actions of data mining and information manipulation when these are related to their scientific products. They also touched upon the need for coordination between Open Science and public health science for deploying a coherent framework with long-term scientific planning and infrastructure creation, allowing readiness for health emergency crisis. They also provided examples of good practices developed by universities to consider their public service mandate, by establishing licenses agreements with conditions for accessibility to scientific outputs for low-income countries.

Following the interventions of speakers, Ms Ana Persic stressed the importance of continuing the dialogue on the different aspects of Open Science as part of the process leading to the UNESCO Recommendation on Open Science as well as in the context of its future implementation.

### **Closing Remarks**

Ms Peggy Oti-Boateng, Director, Division of Science Policy and Capacity Building, Natural Sciences Sector, UNESCO expressed her gratitude to all the experts and the participants for sharing their views and facilitating a fruitful discussion on such an important topic for the future of Open Science. She also acknowledged the valuable contribution of the experts on innovative ways of sharing research information and data with the vision to transform the ways of performing science to a more sustainable and impactful way.