



Members of International Science Council commit to work for change in scientific publishing, and endorse eight principles for reform

The international scientific community, as represented by the membership of the International Science Council (ISC), has overwhelmingly supported a resolution recognizing the urgent need for reform of the current system of scientific publishing, and has committed itself to work towards that aim. The international disciplinary unions and associations, national academies and regional scientific bodies that make up the ISC's membership voted to endorse eight fundamental principles for efficient and effective scientific publishing systems. The principles endorsed include universal open access to the record of science and its preservation for future generations, better exploitation of the tools of the digital revolution, reform of peer review systems, and accountability of publishing systems to the scientific community and its institutions.

Contemporary systems of scientific publishing are foundering under pressure from an explosion in demand and technological change, with much vital scientific knowledge being locked behind costly paywalls, inaccessible to researchers working in poorly funded settings, and out of the reach of many who could benefit from research findings.

Scientific publishing is fundamental to the maintenance of scientific rigour and progress, and to the international collaboration needed to solve global problems, as exemplified in the response to the COVID-19 pandemic. Efficient, accessible systems of publication are critical in ensuring that the latest scientific knowledge is quickly and freely available in the public domain as a basis for enhancing human understanding and addressing the challenges facing individuals and societies, from tackling chronic disease to establishing pathways to sustainability.

The resolution passed by ISC Members and their commitment to work towards change is a significant step towards strengthening the voice of science in the evolution of its publishing systems, and in establishing common principles on which scientific publishers should be held to account. The eight principles are intended to be resilient in the face of changes in technologies and ways of working, adaptable to the needs of different geographies and disciplines, and applicable across the whole spectrum of the scientific endeavour.

Geoffrey Boulton, Member of the ISC Governing Board and Chair of the ISC's project on the [Future of Scientific Publishing](#), said:

"The endorsement of these fundamental principles demonstrates that the diverse calls for reform of scholarly publishing are reaching critical mass and intensity. The science community is the principal consumer and audience for scientific publishing. The Council looks forward to working for change with representatives of its membership through a coalition of common purpose."

The principles were developed in discussion with the membership of the ISC over the past 18 months and are set out in the 2021 publication [Opening the Record of Science: Making Scholarly Publishing Work for Science in the Digital Era](#).

The project on the Future of Scientific Publishing is overseen by a steering group representing different stakeholders from across the world, who will guide the Council's work towards sustainable change in the coming years. Steps towards reform include normalization of tools such as preprints and overlay publications; innovative approaches to peer review and long-term curation of the scientific record; and the development of sustainable business models for learned society publishing. ISC Members also expressed overwhelming support for the scientific community to take a leadership role in the governance of open science, building on existing community-controlled infrastructures for scientific publishing. The resolution was passed at the International Science Council General Assembly that took place between 12 and 15 October 2021.

Further quotes:

Dominique Babini, Open Science Advisor at the Latin American Council of Social Sciences (CLACSO), and a member of the project steering group, said:

“The Latin American Council of Social Sciences (CLACSO), endorses these principles for reform of scientific publishing governed by the scientific community to allow universal open access, both for authors and readers, with no barriers to participation, in particular those based on ability to pay, institutional privilege, language or geography, and respecting bibliodiversity of different disciplines and regions.”

Ahmed Bawa, Chief Executive Officer of Universities South Africa and a member of the project steering group, said:

“The COVID-19 pandemic places enormous stresses and strains on the global science system and we have learned much about its relationship to society as it navigates the nexus between itself, power, policy and profit. But we have also seen how the pandemic deepened the fragmentation and inequalities that characterise the science system. At the heart of this is the opening of access to all forms of the record of science and this ISC project is addressing this. It has the potential to contribute to the reshaping of the relationship between science and society.”

Amy Brand, Director and Publisher of the MIT Press and a member of the project steering group, said “I endorse these principles for reform and firmly believe that the time has come for university based publishing entities around the world to play a much larger role in research dissemination and open knowledge infrastructures.”

The eight principles endorsed by the ISC's Membership are:

I: There should be universal open access to the record of science, both for authors and readers, with no barriers to participation, in particular those based on ability to pay, institutional privilege, language or geography.

II: Scientific publications should carry open licences that permit reuse and text and data mining.

III: Rigorous and ongoing peer review must continue to play a key role in creating and maintaining the public record of science.

IV: The data and observations on which a published truth claim is based should be concurrently accessible to scrutiny and supported by necessary metadata.

V: The record of science should be maintained in such a way as to ensure open access by future generations.



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VI: Publication traditions of different disciplines should be respected, while at the same time recognizing the importance of inter-relating their contributions in the shared enterprise of knowledge.

VII: Publication systems should be designed so that they continually adapt to new opportunities for beneficial change rather than embedding inflexible systems that inhibit change.

VIII: Governance of the processes of dissemination of scientific knowledge should be accountable to the scientific community.

About the International Science Council

The International Science Council (ISC) is committed to a vision of science as a global public good. It works at the global level to catalyse and convene scientific expertise, advice and influence on issues of major concern to both science and society. The ISC is a non-governmental organization with a unique global membership that brings together over 200 international scientific Unions and Associations, as well as regional and national scientific organizations including Academies and Research Councils. The ISC was created in 2018 as the result of a merger between the International Council for Science (ICSU) and the International Social Science Council (ISSC). It is the only international non-governmental organization bringing together the natural and social sciences and the largest global science organization of its kind.

For more information about ISC see <https://council.science/> and follow ISC on Twitter, [LinkedIn](#), [Facebook](#), [Instagram](#) and [YouTube](#).

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The International Science Council (ISC) is a non-governmental organization with a unique global membership that brings together 40 international scientific Unions and Associations and over 140 national and regional scientific organizations including Academies and Research Councils