Professor Marcos Orellana
Special Rapporteur on Toxics and Human Rights
United Nations
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BY EMAIL: srtoxicshr@ohchr.org

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Dear Professor Orellana,

The American Association for the Advancement of Science (AAAS) Science and Human Rights Coalition is a network of scientific membership organizations, representing over 10 million individuals in the research community from around the world, that recognize a role for science and scientists in human rights. For over a decade AAAS, together with the Coalition, has brought the perspectives of the scientific community to the efforts of the United Nations (UN) to define the right to science. We welcome the opportunity to build on those efforts by providing our input into the report you are preparing for the UN Human Rights Council on the right to science as it relates to toxics.

In 2010, the AAAS Board of Directors adopted a statement recognizing that the right to enjoy the benefits of scientific progress and its applications lies at the heart of the mission of the organization. In that Statement, the Board committed to engaging the scientific community in defining the right and bringing our findings to a UN process of developing a definitive interpretation of the right. Those efforts were led by the AAAS Science and Human Rights Coalition and are reflected in the content of General Comment 25 on science and economic, social and cultural rights that was adopted by the UN Committee on Economic, Social and Cultural Rights in April 2020.

The efforts of AAAS and the Science and Human Rights Coalition to give meaning to the right to science have included: initiating a hearing of the Inter-American Commission on Human Rights focused on the right; engaging a dozen professional scientific societies, including more than 200 scientists, in focus groups to help clarify the meaning of the right and barriers to its implementation; fielding and analyzing a global questionnaire on the meaning of the right from a comparative international perspective; interviewing public health practitioners on the practical implications of the right in the field; and engaging almost 100 national academies of science and young academies around the world in a survey and follow-up interviews on the right to science and their work.

Drawing upon what we have learned through these activities and the expertise of the member organizations of the Coalition, we offer our responses to the associated questions you posed in the call for submissions.

Evidence-based decision-making

The General Comment No. 25 (2020) of the UN Committee on Economic, Social and Cultural Rights recognizes that core to the right to science is an obligation to "adopt mechanisms aimed at aligning government policies and programmes with the best available, generally accepted scientific evidence." There is a vast body of scientific literature concerned with toxics, from the particular susceptibility of children to toxic insults, to the degradation pathways of toxics in the environment. The best available science is vital to inform the policy and regulatory framework, in the design and implementation of risk assessments, in the creation of hazardous-site waste remediation processes, and the articulation of other measures that promote and protect human health and the environment.

The "best available science" is a body of specialized knowledge accumulated through an iterative, logical and empirically based process. It will be derived from trustworthy, unbiased and peer-reviewed sources. The science relied upon in decision-making should be made publicly available, whenever possible, and following necessary privacy and confidentiality protections. There exist multiple ways to recognize and enable input of scientific and technical information in government processes, among them reliance on scientific and technical advisory committees. Such committees can bring a diversity of technical expertise and opinions, and should be selected from recognized, credible experts in their field.

As science is increasingly relevant to and relied upon in government decision-making as well as legal judgments there is increased risk that the science will be invoked in controversies, that it will be misrepresented, that it will be manipulated, or distorted in some way to advance a political agenda. One form of distortion includes demands that all doubt about the rigor of the science be removed. For the robustness of decisions being made and maintenance of public trust, it is essential that the relevant science not be suppressed or manipulated in any way, and that politics not be used as a pretext to undermine scientific objectivity.

Access to Science

Dissemination of scientific information upon which government relies in its decision-making is essential for transparency and facilitating public participation in decision-making processes. To that end, it is good practice for scientific information collected and disseminated by governments on a related topic to be standardized, harmonized, accessible, and understandable to users. An example in the United States is the Toxics Release Inventory, established by law and maintained by the U.S. Environmental Protection Agency as an element of its Toxic Substances Control Act program to track the management of certain toxic chemicals that may pose a threat to human health and the environment, and to help support informed decision-making by companies, government agencies, civil society, and the public.

Scientific freedom

Scientific freedom is vital to the development of a robust and productive scientific community and is explicitly recognized in Article 15(3) of the International Covenant on Economic, Social and Cultural Rights. Scientists require freedom of thought, to hold positions based on scientific evidence without interference, and to seek, receive, and impart information and ideas of all kinds. Leading scientific experts who are conducting research relevant to toxics should not be prohibited from participating on governmental science advisory boards and committees if they have met the appropriate conflict of interest requirements.

Scientific responsibility

As recognized in the General Comment No. 25, scientific freedom is not absolute. Scientists are expected to conduct their research and communicate their results responsibly and following ethical standards. Such standards demand that the technical analyses provided by scientists and engineers be comprehensive, transparent, unbiased, and understandable.

The extent to which science can serve as a reliable foundation for government decision-making depends on the integrity of the science on which those decisions are based. It is good practice, therefore, for government agencies that conduct, fund, or rely on scientific research to establish and maintain scientific integrity policies. Such policies address the promotion of scientific and ethical standards, including standards about quality, communication with the public, and the use of peer review and advisory committees. Such policies can help ensure the objectivity, clarity, and reproducibility of the scientific information the agency produces, supports, and/or relies upon, adherence to which contributes to public trust. An example is the *Scientific Integrity Policy for Transparent and Objective Science*, first adopted by the U.S. Environmental Protection Agency in 2012.

We are pleased that the United Nations remains committed to determining practical measures for the implementation of the right to science and welcome this opportunity to bring the perspectives of scientists to your process. Please do not hesitate to contact me or Jessica Wyndham (jwyndham@aaas.org) with any questions.

Sincerely,

Sudip S. Parikh, PhD
Chief Executive Officer
Executive Publisher, Science Family of Journals
American Association for the Advancement of Science