HUMAN RIGHTS

A Human Right to Science

The scientific community must inform UN efforts to promote universal access to the scientific enterprise and to benefits that ensue.

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Although recognized in international law for decades, the right to enjoy the benefits of scientific progress and its applications has received little attention from the human rights and scientific communities (*1*–*5*). In 2012, Farida Shaheed, a Special Rapporteur (SR) for the United Nations (UN), presented a report to the UN Human Rights Council (HRC) on the meaning and application of the right (*6*). The next step is for the UN Committee on Economic, Social and Cultural Rights (CESCR) to adopt an official statement on the meaning and application of the right that provides clear guidance on the steps governments must take for implementation. The CESCR has been reluctant because of the complexity of issues and the need to know more about government practice. To address such knowledge gaps, the scientific and human rights communities need to provide input.

First internationally recognized in the Universal Declaration of Human Rights (1948), the right to enjoy the benefits of scientific progress is enshrined in Article 15 of the International Covenant on Economic, Social and Cultural Rights (1966) (ICESCR) (*7*). Addressing science through a human rights lens is both novel and potentially significant. Science policy guided by human rights principles may set priorities and allocate resources differently from policies driven by commercial interests, the interests of scientists, or national scientific competitiveness. Furthermore, addressing science through a human rights lens offers the potential to identify universal standards and norms that can facilitate "harmonizing global science" (*8*).

The SR report identifies four core components of the right: (i) access by everyone, without discrimination, to the benefits of science and its applications, including scientific knowledge; (ii) opportunities for all to contribute to the scientific enterprise and the freedom indispensable for scientific research; (iii) participation of individuals and communities in decision-making about science and the related right to information; and (iv) development of an enabling environment fostering the conservation, development, and diffusion of science and technology (S&T).

For Article 15 to offer a unified and coherent vision for science as a human right, certain conceptual questions must be answered: What kind of infrastructure and policies are required to implement the right? What means of outreach and education would best enable public engagement in decision-making about S&T?

The SR emphasized that innovations essential to living with dignity should be accessible to all. This translates, according to the human rights community, into the need for budgets and products that address priority needs of marginalized and poor populations, e.g., medicines for neglected tropical diseases, electricity for remote rural populations, potable water, and adequate sanitation. In conjunction with other obligations in the ICESCR, particularly Article 2, an obligation is presumed on the part of more-developed countries to furnish technical assistance in S&T and to enable access across borders to essential knowledge and technologies. The scope of assistance and technology transfer requires elaboration.

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Article 15 is the nexus between the right to benefit from science and the right of creators to benefit, "morally and materially," from their creations. In that context, the CESCR has emphasized the need for intellectual property regimes to be consistent with human rights commitments (*9*). How can this balance be achieved?

In addition, Article 15 directs states to recognize the benefits of international contacts and cooperation in scientific and cultural fields. It is disturbing that many governments are increasingly blocking or filtering Internet content and restricting academic freedom (*10*). It is also a concern that national security justifications are given for sometimes overzealous and unnecessary restrictions on the freedom of scientists to collaborate internationally (*11*). How can the international scientific community counter these challenges?

Lack of policy protections and oversight of S&T developments can pose challenges to human rights. For example, the U.S. Presidential Commission for the Study of Bioethical Issues recently recognized that a U.S. study in Guatemala in the 1940s violated human rights by exposing vulnerable populations to sexually transmitted diseases (*12*). Often, one group benefits from technologies while others bear the brunt of risks and indirect costs (*13*). How can both equity and scientific progress be maximized?

The SR report recommended that interested groups contribute to defining the right. The American Association for the Advancement of Science (AAAS, which publishes *Science*) Science and Human Rights Coalition (http://shr.aaas.org/coalition) has been leading a process to elicit perspectives of scientists and engineers on the meaning of the right, barriers to its implementation, and steps governments can take to ensure realization of the right in practice. Findings are to be presented to the UN at the end of 2013.

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