

The International Science Council's interpretation of The right to participate in and benefit from science

The International Science Council believes that there is a universal human right to participate in and enjoy the benefits of science, and that it is a responsibility of governments to create and sustain the opportunities of citizens to use this right.

A right to participate in science – this right presumes a right to basic scientific literacy, and a right to scientific education, training and mentoring.

1. A right to participate in generating diverse forms of knowledge through the study of natural and social phenomena using theoretical, observational, experimental, and analytical approaches to introduce and test existing and new models, conjectures, hypotheses and ideas unconstrained by political agendas or belief systems.
2. A right to challenge established knowledge about natural and social phenomena when generating and communicating new models, conjectures, hypotheses and ideas, and the uses to which this knowledge has been or may be put.
3. A right to collaborate and engage in scientific dialogue and research across national, political, regional and other boundaries.
4. A right to communicate both positive and negative findings.
5. A right to form professional societies and associations.
6. A right to advocate for the responsible use of science.

A right to enjoy the benefits of science

1. A right not to be excluded from the benefits of science on the basis of unjust discrimination based on race, nationality, ethnic origin, language, sex, gender identity, reproductive ability, sexual orientation, age, disability, political opinion, or religious belief.
2. A right to equitably access information, data, and other resources necessary to enhance scientific knowledge, teaching and research.
3. A right to apply scientific knowledge for technological developments for the good of humanity and the planet.

“The International Science Council believes that there is a universal human right to participate in and enjoy the benefits of science and that it is a responsibility of governments to create and sustain the opportunities of citizens to use this right.”

This reaffirms the human rights associated with ‘science’, as expressed in the [UDHR](#) and the [ICESCR](#). But why should participating in and benefiting from science be a human right? Science is an expression of human culture and is protected under the broad umbrella of cultural rights together with other fundamental aspects of human culture, such as art, literature, and religion. Science is unique, however, in its ability both to generate knowledge and to drive transformative human advancement through the (responsible) use of this knowledge. This is why the ISC emphasizes the dual aspects of this right to do science and to benefit from science – and that these rights apply to everyone, not only to ‘scientists’.

As with all human rights, it is the ultimate responsibility of governments to protect the right to participate in and benefit from science. This is because state governments form the sovereign entities which sign and ratify declarations and treaties. They must ensure that their citizens are afforded equitable opportunities to exercise these rights.

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This reflects the ISC’s broad and inclusive understanding of ‘science’ (as expressed in the ISC’s paper ‘[Science as a Global Public Good](#)’), referring to all knowledge that can be ‘rationally explained, made openly available to be tested against reality and logic through the scrutiny of peers, and reliably applied’. Exercise of the right to participate in science thus encompasses the natural and social sciences, the medical, health, computer and engineering sciences, and the humanities. It also extends to the development and use of various technologies and the generation and communication of diverse forms of knowledge (including traditional and Indigenous knowledge systems).

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This speaks to the self-correcting role of the scientific community. It must ensure increased accuracy and beneficial use, and it must include mechanisms which allow and protect the right to challenge science with evidence-based, scientific knowledge. This right also extends to using scientific knowledge to challenge established social norms that may be harmful or not supported by scientific evidence.

“A right to collaborate and engage in scientific dialogue and research across national, political, regional and other boundaries.”

This asserts a right to engage internationally without undue travel and visa restrictions or limitations on partnerships, and reaffirms article 15-4 of the [ICESCR](#) in recognizing “the benefits to be derived from the encouragement and development of international contacts and co-operation in the scientific and cultural fields” (see [General Comment No. 25](#) section VI for a detailed discussion).

An important consideration is the role of strategic boycotts, enacted by and against the scientific organizations of specific countries. The ISC recognizes a possible role of this tool as a human rights abuse – see the [ISC Position on Academic Boycotts](#). It is important to acknowledge that individuals retain the right to refuse to collaborate with collectives or other individuals based on personal conscience. However, individual objections must not constitute discriminatory behavior, as expressed in this interpretation and in the ISC’s [Principles of Freedom and Responsibility in Science](#).

“A right to communicate both positive and negative findings.”

This asserts a right of scientists to communicate scientific findings with the public. Harassment and silencing by the public or by institutions within or outside the scientific community undermines the exercise of this right by individual scientists and science communicators.

Scientists must be free to communicate all their findings, whether these confirm or challenge established knowledge, without pressure to limit this to positive findings. While this implies a general responsibility on the part of publishers to accommodate negative results, the act of formal publication is not in itself a right and depends on norms around a work’s suitability and quality, as judged by the community of peers within a given field.

This right includes the responsibility of scientists and scientific publishers to make available when publishing, data providing the evidence for scientific claims.

“A right to form professional societies and associations.”

This reaffirms Article 22-1 of the [International Covenant on Civil and Political Rights](#), which states that “Everyone shall have the right to freedom of association with others, including the right to form and join trade unions for the protection of his interests.” Governments which limit, prevent, and/or interfere in such processes, or forcibly close scientific societies and associations are in violation of this right.

“A right to advocate for the responsible use of science.”

Scientists have a right to engage in responsible advocacy relating to the use of scientific knowledge, information, and advancements by other scientists, by governments through policy decisions, and by society in general. This relates to the role of scientists as the “critic and conscience of society”. Within the science system, this also asserts a right to critique scientific practices and to speak out on misconduct, which should be free from fear of reprisal. Retaliation against whistleblowers of misconduct by governments or scientific institutions, for example, can represent a violation of this right.

“A right not to be excluded from the benefits of science on the basis of unjust discrimination based on race, nationality, ethnic origin, language, sex, gender identity, reproductive ability, sexual orientation, age, disability, political opinion, or religious belief.”

This denounces all forms of discrimination in the exercise of the right to benefit from science and implies that the practice of science and the use of scientific knowledge must promote equity and inclusion in access to science and its benefits. This right extends beyond the right not to be excluded by actively discriminatory practices and includes the right not to be excluded because of systemic barriers against specific groups of people.

This right can be violated by actions at any level of the science system, including by individuals, institutions and organizations, and by national governments. One of the most serious violations of this right, for example, is the restriction of access to science and its benefits based on gender, which, in its most extreme form, limits the scientific capacity of a country by half and has severe consequences for economic and social stability.

“A right to equitably access information, data, and other resources necessary to enhance scientific knowledge, teaching and research.”

This asserts that individuals should not be prevented from accessing scientific information, data, and resources. States must ensure that all citizens have equitable opportunities to engage with science, avoiding significant biases and advantages/disadvantages within the population. Further, states must not prevent access to certain information based on political, religious, or ideological pressures.

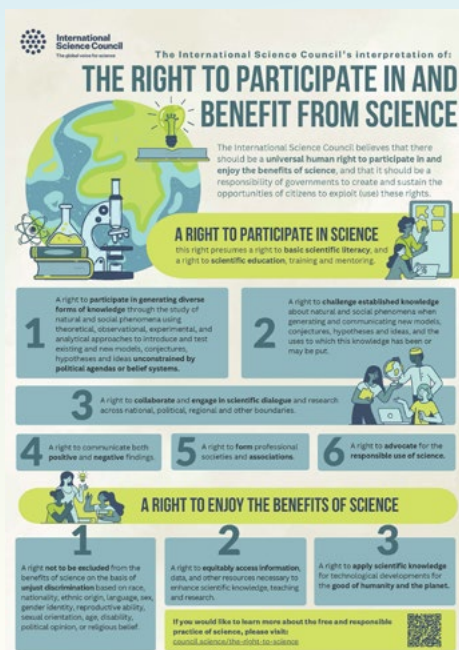
This right intersects with current discussions on open access to research and the need to balance intellectual property rights with the universal right to knowledge. See the page [‘The impact of intellectual property regimes on the enjoyment of right to science and culture’](#) by the UN Human Rights Office of the High Commissioner.

“A right to apply scientific knowledge for technological developments for the good of humanity and the planet.”

Scientists have the responsibility to recognize and consider both the potential benefits and potential harms in the conduct of science and to minimize potential harms towards human and nonhuman animals, and the environment. This responsibility refers to the limitations to all human rights expressed in Article 29 of the [UDHR](#).

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