**Mandate of the Special Rapporteur** **in the field of cultural rights**

**Call for submissions on**

**THE RIGHT TO ACCESS AND TAKE PART IN SCIENTIFIC PROGRESS**

 For her upcoming report to the Human Rights Council to be presented in March 2024, the United Nations Special Rapporteur in the field of cultural rights, Ms. Alexandra Xanthaki, will consider the right to access and take part in scientific progress.

 The forthcoming report builds on the previous work of the mandate (Report on the right to enjoy the benefits of scientific progress and its applications, [A/HRC/20/26](https://daccess-ods.un.org/tmp/7347178.45916748.html), 2012), and of the Committee on Economic, Social and Cultural Rights ([General Comment 25](https://www.ohchr.org/en/documents/general-comments-and-recommendations/general-comment-no-25-2020-article-15-science-and) on Science and Economic, Social and Cultural rights, 2020).

Today, many ongoing conversations focus on the important contribution of science to the realization of human rights and the sustainable development goals. The Special Rapporteur believes that this discussion must be placed in a human rights framework. It is important to reiterate the human rights dimension of science, and to understand access to and participation in science as crucial human rights issues.

The Special Rapporteur intends to take stock of setbacks and progress both under international human rights law and in practice regarding access to scientific knowledge and its applications. She plans to focus more on the rather unexplored issue of participation in scientific life, as part of cultural life. Central questions include what participation means, what are possible limits to it, and how to ensure it in ways that complements scientific expertise, in the context of societies that are challenged by misinformation and disinformation. She would also like to reflect more broadly on the definition of science, scientific expertise and exclusionary processes such definitions may entail; on the notion of scientific diversity; on challenges and obstacles to participation; on conditions and best ways to ensure it; as well as on the intrinsic relationship between access and participation.

Cultural rights protect the rights for each person, individually and in community with others as well as groups of people, to develop and express their humanity, their world view and the meanings they give to their existence and their development through, inter alia, values, beliefs, convictions, languages, knowledge and the arts, institutions and ways of life. They are also considered as protecting access to cultural heritage and resources that allow such identification and development processes to take place.

**Questions**

General definitions

* + 1. How is science defined in your country, taking into consideration the definition of science adopted at UNESCO?[[1]](#footnote-2) In this context, how is the notion of scientific diversity understood?

In German speaking countries, the German term for science “Wissenschaft” – has a broader scope than its English counterpart. The German Constitutional Court was tasked with defining science within the context of the scientific freedom enshrined in Art. 5 para. 3 of the Basic Law for the Federal Republic of Germany. In this regard, the Constitutional Court elaborated as follows:

“In order that research and teaching can be unhindered by the quest for truth as ‘something that has not yet been fully found and can never be fully discovered’ (Wilhelm von Humboldt), science has been declared to be an area of personal and autonomous responsibility of the individual scientist, free from external regulation by the state. This also means that Article 5 (3) of the Basic Law does not seek to protect a particular conception of science or a particular theory of science (emphasis added). Rather, its guarantee of freedom extends to all scientific activity, i.e. to everything that can be regarded as a serious, planned attempt to discover the truth in terms of its content and form. This follows directly from the principle of the incompleteness of all scientific knowledge.”

(Bundesverfassungsgericht (BVerfGE), Bundesverfassungsgericht (BVerfGE), Hochschul-Urteil, BVerfGE 35, 79-148, 29 May 1973, at 113, translated by the author).

The CESCR adopted in its General Comment the UNESCO definition on science and added falsifiability. However, “UNESCO’s definition refers broadly to the concept of validation, it does not mention falsifiability, which is a specific theory of scientific demarcation associated with a particular philosophical tradition and set of assumptions. Nevertheless, it bears pointing out that the Committee chose to import a specific and controversial theory of scientific demarcation without comment and with no obvious justification. Moreover, in mentioning falsification and verification within its elaborative fifth paragraph, the Committee puts side-by-side mutually incompatible theories of scientific demarcation relying on opposing epistemic assumptions. Whatever one may think of the merits of either verificationism or falsificationism as a matter of philosophy, their simultaneous invocation can only be interpreted as, at best, epistemic fence-sitting or, at worst, confused. It seems likely the Committee intended to provide a gloss on, or explanation of, the 2017 Recommendation’s definition in paragraph 5, rather than to provide an alternative definition.”

(Andrew Mazibrada, Monika Plozza, and Sebastian Porsdam Mann, *'Innovating in Uncharted Terrain: On Interpretation and Normative Legitimacy in the CESCR’s General Comment No. 25 on the Right to Science',* The International Journal of Human Rights (2023), <https://doi.org/10.1080/13642987.2023.2234298> at 11.)

* + 1. Is science considered as a public and/or as a common good, and what does this imply or should imply, particularly in terms of setting priorities for scientific research, access to scientific benefits, and protection of the scientific enterprise from harm and encroachments from political, religious and private interests?
		2. Does the right to benefit from scientific progress include the right to be protected against anticipated harm? How is harm anticipated and what kind of reparation is offered in case of harm?

Yes.

“States have under the right to science an obligation to prevent or mitigate harm of scientific progress and its applications. This obligation is derived from the right to be protected against the harmful effects of scientific progress and its applications, a dimension of the right to science. However, preventing the harmful effects of scientific progress and its applications can sometimes conflict with other human rights or with scientific freedom, which is also part of the right to science. In such cases, limitations on one right might be required to protect another, whereby the different interests need to be properly balanced. While the duty to prevent harm is well established in international human rights law, it is yet obscure if the anticipation of potential harms to come is possible under the existing framework of international law. While not a legal concept, entry points for anticipation are already covered under the current international law and can be drawn together by a cross-fertilisation of the obligation to prevent, the precautionary principle and due diligence. The precautionary principle and due diligence can provide guidance on when and under what circumstances situations for anticipation are triggered and conducted. Both concepts involve a necessity and proportionality test, which is also inherent to limitations under international human rights law.”

(Yvonne Donders and Monika Plozza, *'Look before You Leap: States’ Prevention and Anticipation Duties under the Right to Science'*, The International Journal of Human Rights (2023), <https://doi.org/10.1080/13642987.2023.2269096>, Abstract)

The Brocher Expert Workshop on the Human Right to Science with a Focus on Health, organised by GESDA (Geneva Science and Diplomacy Anticipator) in December 2022, also explored the question of anticipation under the right to science. The Workshop report summarises the key takeaways on anticipation as follows:

* “**States should anticipate the opportunities for benefits and risks of harm of scientific progress and its applications. Under the right to science, such anticipation is composed of prevention, precaution, and due diligence.**

Under the right to science, individuals have a right to benefit from scientific progress and its applications while also being protected against its adverse effects. A balancing of both rights is inherent to human rights law and can give rise to a State’s obligation to prevent and limit one human right in order to protect another. The obligation to prevent presupposes scientific certainty. Yet, States should also anticipate opportunities for benefit and risks of harm of scientific progress and its applications. Although not explicitly recognised legally, anticipation is encompassed within the current international legal framework, drawing upon the obligation to prevent harm under the right to science, the precautionary principle, and the concept of due diligence. The precautionary principle involves taking measures to avoid or minimise risks of serious and irreversible harm, and to promote the opportunities for benefit, in cases where the scientific evidence is uncertain. Yet, the precautionary principle evolves with scientific knowledge, moving from precaution to prevention as the risk or benefit becomes scientifically certain. Thus, the precautionary principle can be seen as a trigger for the anticipation of potential harms, but also for the opportunities for benefit of scientific progress and its applications. When taking preventive or precautionary measures, States should use their best efforts to prevent or mitigate harm in specific circumstances. This is where the standard of due diligence comes in. The assessment of the appropriate standard of conduct consists of a consideration of the likelihood of a risk, legally protected interests, and competing interests. Importantly, the opportunities for benefit of scientific progress and its applications must not be forgotten in the assessment. Prevention, precaution, and due diligence all involve an assessment of the necessity and proportionality of measures. Balancing competing interests and considering the long-term consequences of decisions are key to this process. Consequently, anticipatory measures must be necessary and proportionate to the seriousness of the risks, and ensure they do not result in disproportionate negative impacts on scientific freedom and progress, other human rights, or opportunities for future generations (see also Donders & Plozza, cited above).

* **Anticipation for effective solutions can be achieved by a systemic integration or cross-fertilisation between different areas of international law.**

Different areas of international law, such as environmental law, human rights law and intellectual property law, have different objectives, norms, and procedures when dealing with specific science and technology issues. This fragmentation can lead to challenges in effectively addressing these issues. By fostering a systemic integration or cross-fertilisation between the different domains of international law, effective solutions to address the complex challenges presented by science and technology along with tools for anticipation can be found.

* **State obligations to anticipate the benefits and harms of scientific progress must be adaptive and projective to include opportunities that benefit scientific progress and its applications.**

Anticipation under the right to science goes beyond the prevention or mitigation of risks. It can also facilitate a collaborative and inclusive approach that enables the responsible exploration of the opportunities for benefit of scientific progress and its applications. The current precautionary and risk assessment approaches are insufficient in dealing with adaptive anticipation, which considers unpredictable situations, and projective anticipation, which deals with radically new futures. There is a need for new types of questions, such as “what if” questions, that explore possibilities and probabilities. Therefore, to effectively deal with anticipation, a new risk and benefits governance approach is necessary. This should be adaptive and projective to include opportunities for benefit of scientific progress and its applications. Anticipation under the right to science can serve as a door-opener to, for example, cautiously lifting existing bans on heritable genome editing or other currently controversial issues that may be beneficial, relevant or necessary in the future.

* **Anticipation includes a long-term outlook that also considers future generations’ interests.**

Anticipation means taking a long-term view that considers the interests of future generations. Intergenerational equity in anticipation is essential in the development of new technologies and innovations that may have positive or negative effects. It is important to thoroughly assess the potential impact of our actions on posterity and to approach decision-making processes with a sense of due diligence and responsibility to avoid missing opportunities or causing harm. To illustrate, scientific progress, such as research into transgenic trees (which may not be relevant today but may become highly relevant in the future due to climate change) must be allowed to continue. However, scientific progress must be carried out in a socially responsible manner and with due diligence. It is therefore essential that scientific progress takes place in a socially responsible and intergenerational equitable way.”

(Monika Plozza, *The Science Lens: The Human Right to Science,* The GESDA 2023 Science Breakthrough Radar® (2023), <https://radar.gesda.global/>, 264 ff.)

Main obstacles to access and participation in scientific knowledge and its applications

* + 1. What are the main obstacles to ensuring the right of all persons to access scientific knowledge and its applications, within and between countries? Please provide an example.

Adoption of specific measures

* + 1. Please describe how scientific freedom is respected, protected and promoted in your country. In particular, what kind of protection from interferences and threats from political, religious or commercial entities is offered? What are the main challenges? Please provide examples.
		2. Please provide information on measures adopted to:
* Ensure and develop scientific education for all, including adult education;
* Develop and disseminate accurate scientific information in formats available to all;
* Protect and promote science journalists in sufficient number to ensure democratic and genuine debates on scientific issues.

Connecting science and policy-making

* + 1. As recommended by the Committee on Economic, Social and Cultural Rights, “States should endeavour to align their policies with the best scientific evidence available”, (General Comment 25, para. 54). How is this principle implemented, following which kind of procedure? How is this implemented in case of scientific dissensus?
		2. In particular, what kind of science policy interface platforms, understood as channels connecting science with policymaking, have been put in place, to ensure input of scientific information in decision-making processes? What are the challenges and the elements necessary for the efficiency of such interfaces? How is the agenda set and who participates in these institutions?

Participation in science

* + 1. How is the right of every person to participate in scientific progress and in decisions concerning its direction understood and implemented? What are the challenges? How are lack of representativeness of marginalized groups and inequalities in participation addressed?
		2. How is ‘citizen science’ (ordinary people doing science) understood in your country? Is it considered important, and what measures have been put in place to support it, particularly in terms of access to information and data, and participation in decision-making? What are the challenges? Please provide an example.
		3. To what extent are indigenous sciences and alternative sciences acknowledged, supported and included in policy decision-making? How is the conversation ensured between science and other kinds of knowledge?
		4. What are the limits to the right of every person to take part in scientific progress and in decisions concerning its direction and for which purposes? Please provide examples if any.
1. [Recommendation on Science and Scientific Researchers](https://en.unesco.org/themes/ethics-science-and-technology/recommendation_science), article I.1. [↑](#footnote-ref-2)