

PROTECTING A LEGACY OF PRECAUTION

Bringing **Horizon Scanning, Technology Assessment and Monitoring** into the future work of the CBD

BRIEFING FOR DELEGATES

15th Conference of the Parties and Open-Ended Working Group
3rd-19th December 2022, Montreal, Canada.

- Post 2020 Global Biodiversity Framework – Doc CBD/WG2020/4/4
- Synthetic Biology Programme of Work – Doc CBD/SBSTTA/REC/24/4

BACKGROUND __ Since its earliest days, the Convention on Biological Diversity has prioritized the precautionary approach to foresee, assess and monitor the impacts of new technologies. This has been core to the work of the Convention and realised through the work of SBSTTA, Ad Hoc Technical Expert Groups, and other bodies such as the Cartagena Protocol.

In particular, landmark work and decisions by the CBD have addressed modern biotechnologies including Living Modified Organisms (LMO's) and synthetic biology. For all of its existence, the CBD has been on the cutting edge of governing biotechnological developments. Parties to the CBD have established ground-breaking guidelines, rules, and sometimes moratoria, to govern GMO's, GURTS (Terminator technology), GE trees, synthetic biology, gene drives and more.

AT STAKE AT COP15 __ In order to continue the CBD's long and world-leading commitment to precaution and to equip parties to act in a responsible and precautionary manner, decisions must now be made to move ahead critical work on horizon scanning, technology assessment and monitoring of new and emerging technologies - especially modern biotechnologies. If parties fail to green light this next step in the Convention's work, they risk undoing and undermining over a quarter century of commitments to precaution, opening the door to gambling on risky technologies without the safeguarding tools to assess or govern them.

Urgent Decisions to equip the CBD with horizon scanning, technology assessment and monitoring tools must now be simultaneously agreed upon in both the negotiations for the final text of the Global Biodiversity Framework and in the text for the item on synthetic biology.

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GROUP

monitoring power
tracking technology
strengthening diversity

What is meant by Horizon Scanning, Technology Assessment and Monitoring?

In the 21st century, getting technology policy right is an essential part of enabling conservation, sustainable use and equitable sharing of benefits from biodiversity into the future. On the one hand, powerful technological developments (such as synthetic chemicals, gene drives and some genetic technologies) may threaten biodiversity and rights. On the other hand, communities and grassroots innovators can share and unlock technical options to address the drivers of biodiversity loss.

Furthermore, many parties insist on the importance of supporting technology transfer, a fair demand, particularly for the Global South. However, in transferring technologies, it is first essential to discriminate between risky technologies that will undermine biodiversity and rights, and socially and environmentally positive and benign technologies. Also, in many cases the practice of “technology transfer” is hijacked by industries who wish to dump or trial outdated or risky technologies in the Global South. For these reasons, decision-makers require tools and capacity to undertake horizon scanning, technology assessment and monitoring, to ensure that the right technological options are chosen, evaluated, and governed to minimize or eliminate risks.



HORIZON SCANNING

Refers to practices that review and identify new technological developments - both those directly intended to help conservation and biodiversity goals, and others that may inadvertently harm or otherwise impact rights, conservation and equitable sharing and use of biodiversity. Examples of horizon scanning tools include expert bodies, market analysis, questionnaires and scenario-building.



TECHNOLOGY ASSESSMENT

Refers to processes that evaluate new technological developments against a set of chosen criteria. This facilitates understanding of possible positive and negative impacts in order to make deliberate choices over which technologies to support, and how to safely govern them. Technology assessment practices can range from expert-driven processes to more open and participative forms that engage multidisciplinary views and a range of types of knowledge and perspectives.



MONITORING

Refers to keeping policy decisions about technology under review to respond to emerging knowledge over time. Because it may not be possible to accurately anticipate the real impacts of a technology ahead of time, building in monitoring and review of the technology allows for learning, adaptation and better governance based on new evidence.

Horizon Scanning, Technology Assessment and Monitoring in the Post 2020 Global Biodiversity Framework

Proposals regarding **CBD Document CBD/WG2020/4/4**
Available at <https://www.cbd.int/meetings/WG2020-04>

NAMING HORIZON SCANNING, ASSESSMENT AND TECHNOLOGY

The importance of coupling science and technology policy with precaution in the implementation of the Global Biodiversity Framework is reflected throughout the current text, which highlights “the role of science, technology and innovation and that of other knowledge and innovation systems... in line with and full respect of the precautionary approach and the ecosystem approach.” (WG2020-04, B bis Para 17). However, while there are several references to “technology transfer” in the draft preamble and operational text (paras Alt 1, 15 Alt 3 and para 16), the text is unbalanced in these places because this notion of technology transfer is not currently linked in a responsible way to also implementing horizon scanning, technology assessment and subsequent monitoring as a safeguard.

It will be important throughout the text of decisions on technology to expand passing references to technology transfer to visibilize the full technology cycle of “Technology Horizon-Scanning, Assessment, Transfer and Monitoring”.

It would be irresponsible of parties to simply enable transfer of technologies without first horizon scanning and assessing the implications of doing so and without ensuring monitoring afterwards - nor would it be consistent with the precautionary approach.

One key section of the Global Biodiversity Framework is Target 17, which addresses biotechnology. This target asks all countries to establish, strengthen capacity for and implement measures to manage or control the potential adverse impact of biotechnologies.

Target 17 has language currently in square brackets recognizing the importance of “horizon scanning, monitoring and assessment“. These and other square brackets should be removed.

Target 17 exists in part to operationalize Commitment 9 of the high-level Kunming Declaration, in which leaders committed to: “Strengthen measures, and their implementation, for the development, assessment, regulation, management, and transfer, as appropriate, of relevant biotechnologies, with a view to promote the benefits and to reduce the potential risks, including those associated with the use and release of living modified organisms which are likely to have adverse environmental impacts;”

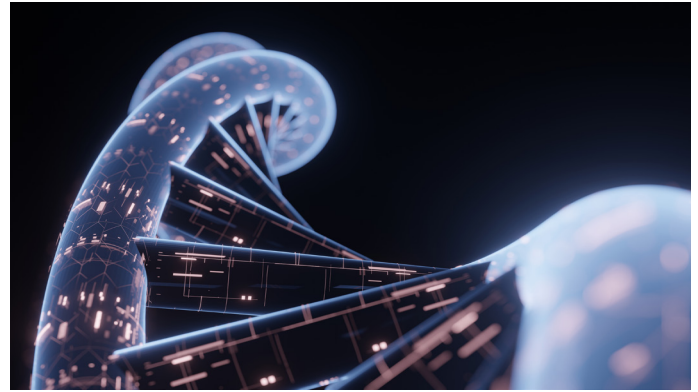
As clearly formulated in the Kunming Declaration (CBD/COP/15/5/ADD1), the intention was to firmly include (technology) “Assessment” which is a prerequisite of understanding the benefits, risks and likely adverse impacts. The Kunming Declaration

specifically recommends to only support transfer of these biotechnologies “as appropriate,” (i.e. to only carry out transfer in appropriate circumstances such as in the context of proper assessment, regulation, management etc). Target 17 also has to reflect this responsible approach by including reference to the full toolkit of horizon scanning, assessment and monitoring.

INCLUDING SYNTHETIC BIOLOGY

Importantly, Target 17 is also functionally connected to an upcoming decision of the COP regarding synthetic biology (see below) which is intended to establish specific means for horizon scanning, technology assessment and monitoring of new developments in the field of synthetic biology. It is important therefore that the wording of Target 17 properly synchronizes and reflects that decision and the standard wording of decision-making on Synthetic Biology under the convention. At the moment, there is unfortunate language in brackets for Target 17 that would restrict the target only to addressing “Living Modified Organisms”. This has to be changed to be coherent with the work programme on synthetic biology under the CBD that has long encompassed “organisms, components and products” of synthetic biology which is itself defined as further development in ‘modern biotechnology’.

To harmonize between the synthetic biology work programme and the language of the GBF, Target 17 should address “impacts of biotechnology including synthetic biology and other new genetic techniques and their organisms, products and components.”



RECOGNIZING INDIGENOUS AND OTHER KNOWLEDGE SYSTEMS AND TECHNOLOGIES

Technologies are linked to science, knowledge and customary traditional practice and emerge all the time from knowledge systems other than formal science. The GBF draft text recognizes the importance of other knowledge and innovation systems but further work can be taken across the text by parties to properly recognize traditional and indigenous knowledge and indigenous technologies. Target 6, for example, addresses innovation and practices for tackling invasive species but fails to explicitly name the importance of such innovation coming from traditional knowledge practices and the innovations of indigenous peoples and local communities (IPLCs). The proposed focus on ‘innovation and new tools’ (which is currently in square brackets) can unhelpfully obscure the established effective approaches and tried and true practices that have been developed by IPLCs for many generations.

In Target 6, the unbalanced language on “new tools” should be rewritten to recognise the importance of other effective approaches.

Horizon Scanning, Technology Assessment and Monitoring in the CBD work programme on Synthetic Biology

Proposals regarding **CBD Document CBD/SBSTTA/REC/24/4**

Available at <https://www.cbd.int/meetings/WG2020-04>

The topic of synthetic biology has been on the agenda of the Convention on Biological Diversity since May 2010 (SBSTTA 14 in Nairobi) and has been the subject of thousands of hours of negotiation, expert group meetings, CBD expert papers and several high-profile decisions. While a small group of countries allied with the biotechnology industry have continually sought to block further work on synthetic biology, the Convention and its protocols have been widely hailed for their foresight in seeing this technological area arise (through horizon-scanning), carrying out well informed deliberations towards decision-making (through technology assessment) and keeping the area under constant review (through monitoring).

Following advice from the Ad hoc Technical Expert Group (AHTEG) on Synthetic Biology, parties to SBSTTA have drafted an extensive decision for approval at COP15, which pilots a more structured process of technology horizon scanning, assessment and monitoring of developments in the field of synthetic biology. (CBD/SBSTTA/REC/24/4) At COP15, parties will be asked to agree on a decision to move ahead with this process. To be effective and meaningful, the following aspects will need to be agreed on:

SYNTHETIC BIOLOGY AS “NEW AND EMERGING ISSUE”

As noted above, the issue of synthetic biology has now been on the CBD agenda for 12 years (almost half of the lifetime of the Convention).

However, there have been continual attempts by the biotech industry to remove this stream of work by claiming it does not meet criteria as a “new and emerging issue”.

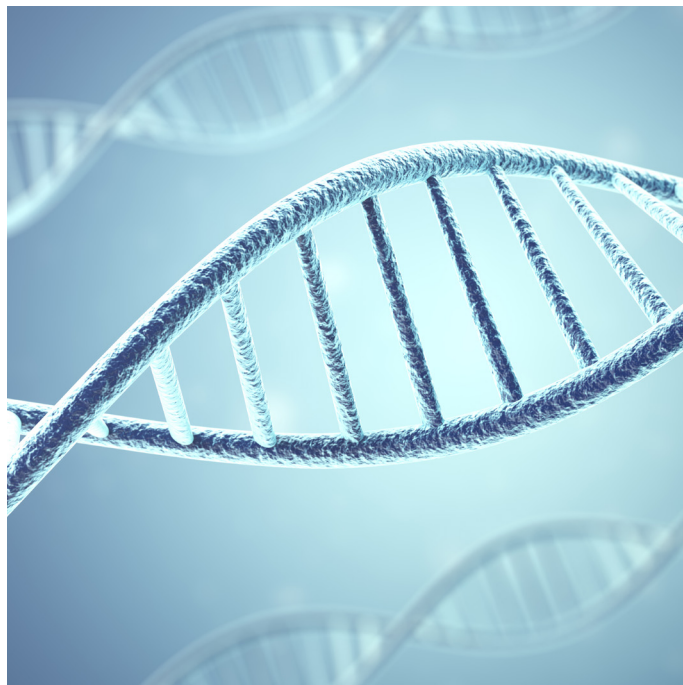
In order to end what has become a paralysing and time consuming-loop of repetitive debate on this topic parties will need to "accept synthetic biology as a new and emerging issue and decide not to require further analysis". (para A2 of CBD/SBSTTA/REC/24/4)

MULTIDISCIPLINARY AD HOC TECHNICAL EXPERT GROUP (MAHTEG)

The lynchpin of the process proposed by SBSTTA is to put in place a Multidisciplinary Ad hoc Technical Expert Group (MAHTEG) to undertake horizon scanning, technology assessment and monitoring. This improves on the existing Ad hoc Technical Expert Group (AHTEG) by emphasizing the multidisciplinary approach. Like the AHTEG, having such a body tasked with horizon scanning, assessment and monitoring provides an important intermediate step before involving SBSTTA so as not to overburden the already busy work of the SBSTTA.

> It will be important that the MAHTEG is established on a timescale that gives that group time to establish and develop good practice (two consecutive intersessional periods) and that the group can begin to function as soon as possible and not be unnecessarily delayed.

> The MAHTEG should include participation of civil society and Indigenous Peoples and Local Communities and draw not only on best scientific evidence but also other forms of knowledge including knowledge gained through participative processes.



MAINTAINING PROPER SCOPE OF SYNTHETIC BIOLOGY

Until now, decisions and work on synthetic biology under the Convention and its protocols have addressed the organisms, components and products of synthetic biology. This is different from work of the Cartagena protocol on biosafety that focuses more narrowly on ‘Living Modified Organisms’.

Decisions under the Convention concerning synthetic biology need to remain consistent in maintaining the wider scope beyond just organisms to also encompass components and products (e.g. in paragraph 8 of CBD/SBSTTA/REC/24/4).

LINKING TECHNOLOGY ‘TRANSFER’ TO ‘HORIZON SCANNING, TECHNOLOGY ASSESSMENT AND MONITORING’

As with the Global Biodiversity Framework, all decisions that refer to technology transfer also need to make visible the full ‘technology cycle,’ including technology horizon scanning, assessment and monitoring alongside transfer, for example in Paragraph 8 of CBD/SBSTTA/REC/24/4.

RESOURCES & CONTACT

For further information on Technology Horizon Scanning, Assessment and Monitoring and Synthetic Biology under the CBD visit:

<http://Assess.Technology>

<http://www.SynBioGovernance.org>

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