



ENSURING GOOD GOVERNANCE OF SYNTHETIC BIOLOGY

CBDA Working Group on synthetic biology



CBDA Factsheet on Synbio

At the Conference of Parties (COP) 15 of the Convention of Biodiversity, Parties established, in Decision 15/31, a “broad and regular” process of multidisciplinary horizon scanning, assessment and monitoring of new developments in Synthetic Biology. The need for this process was already identified by Parties in Decision 14/19, and provides a means for governments to collaboratively track and provide timely responses to biodiversity threats and opportunities emerging from modern biotechnology developments.

In the past two years, the multidisciplinary Ad Hoc Technical Expert Group (mAHTEG) on Synthetic Biology undertook extensive work to design, review and test a working methodology for the broad and regular process. This was reported as Annex IV of CBD/ SBSTTA/26/4. It involves an expert-driven process with multiple steps of information gathering, synthesis, screening, selection, filtration, and analysis.

The mAHTEG identified 5 priority topics for assessment: self-spreading vaccines for wildlife, self-limiting insect systems, development of engineered gene drives to control vector-borne diseases and invasive species, integration of artificial Intelligence and machine learning, and inequity in the participation of developing countries in the context of synthetic biology.

The group undertook a first round of multidisciplinary horizon scanning, monitoring, and assessment for these 5 topics, reported their findings, and articulated proposals for further policy work.

They identified key areas of developments for policy attention, and issued a set of recommendations to the SBSTTA. [Read the CBDA Working_group_on_synthetic_biology_brief_on_this_topic_here- https://cbd-alliance.org/en/2024/factsheet-synthetic-biology](https://cbd-alliance.org/en/2024/factsheet-synthetic-biology)

Drawing on the work of the mAHTEG, we believe the Parties at SBSTTA 26 should:

- 1/ Agree the methodology of the broad and regular process, as outlined and road-tested by the mAHTEG, and confirm that the process should occur at least each biennium (ie; between every COP).
- 2/ Re-emphasize the importance of multidisciplinary and precaution to the functioning of the broad and regular process.
- 3/ Initiate timely policy formulation processes on priority topics identified by the mAHTEG, including 1. The Integration of Artificial Intelligence (AI) with synthetic biology and 2. Self-spreading vaccines for wildlife.
- 4/ Request that assessment guidelines on gene drives also incorporate socioeconomic, cultural, and ethical impacts.
- 5/ Address other topics raised by the mAHTEG: including issues of North-South equity, self-limiting insects, technology facilitation, and capacity-building for horizon scanning, assessment and monitoring activities.
- 6/ Ensure no release of high risk and unassessed synthetic biology organisms, components, or products takes place.

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CBD needs to urgently address gaps regarding Marine Issues

Nele Marien, FOEI

In a recently published factsheet, the CBD Alliance calls to the attention of three missing issues in the gap analysis regarding marine issues, and calls for the CBD to urgently address them:

1. **Marine Geoengineering:** Despite past moratoriums, new proposals for geoengineering, like ocean fertilization and solar techniques, pose significant risks to marine ecosystems and communities. The CBD should reaffirm previous decisions IX/16 C on ocean fertilization and X/33 (w) and (x) on geoengineering, and build upon the build upon the ongoing work of the London Convention / London Protocol to ensure the prevention of the deployment of marine geoengineering.
2. **Deep Sea Mining:** With increasing demand for minerals, particularly for clean energy technologies, deep sea mining poses severe, yet poorly understood, risks to marine ecosystems.

The CBD should establish a moratorium on deep sea mining to protect these fragile ecosystems.

3. **Blue Carbon Projects:** While touted as carbon sinks, these projects may worsen climate change and harm biodiversity by focusing on artificial carbon sequestration methods. The CBD should scrutinize carbon markets' impact on marine ecosystems and advocate for genuine emissions reduction measures.

Urgent collective action, guided by principles of justice and human rights, is required to address the intertwined crises of climate change and biodiversity loss, with a special emphasis on marine ecosystems, which are the basis of life on earth and the basis of a stable clim

Will we have a comprehensive, easily applicable and adequate monitoring framework?

Friedrich Wulf, Pro Natura



Factsheet on Monitoring

One of the main issues to be addressed by SBSTTA-26 is the monitoring framework that enables Parties to see how they are doing in their implementation of the Kunming-Montréal Biodiversity framework. While the meaning and content of the Framework's targets seemed clear enough to be adopted in Montréal, it seems much harder to get agreement on how progress towards these targets can be tracked.

Therefore, Decision 15/5 on the monitoring framework still had a substantial number of important gaps and it was decided to establish a 45-person ad hoc technical expert group (AHTEG) to fill them.

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This working group (as well as other specialized working groups) has now produced a number of proposals in different documents, which need to be merged with the SBSTTA 26/2 draft recommendation, and adopted at COP 16, in order to have a more comprehensive monitoring framework and get a better idea of how the implementation of the KMGBF is proceeding.

However, due to lack of time and agreement, substantial gaps and flaws will remain even after this has been done. The AHTEG itself, in Annex III to draft recommendation 26/2, has produced a list of remaining gaps.

But gaps and flaws go beyond this – such as binary indicators which only check if processes are in place rather than if the desired outcomes have been achieved, or targets for which key elements are not tracked. For example, target 3 headline indicator counts all areas so designated as protected areas without verifying if they deliver conservation outcomes or respect basic human rights.

Indicators for targets 10, 12, 15 and 16 are fundamentally inadequate or insufficient, as well as those on 6,7,8,9,22 and 23.

In order to give parties guidance on what changes will be necessary after SBSTTA 26 and COP 16, the CBD Alliance has produced a more detailed fact sheet which is available on our website:

<https://cbd-alliance.org/en/2024/fact-sheet-monitoring> which we highly recommend to read.

So, in addition to the adoption of the results where agreement has been reached, the remaining gaps and issues urgently need to be addressed. We urge SBSTTA delegates find a clear agreement on an iterative, fair, transparent and comprehensive process in order to fill the gaps and resolve these issues and have a full and adequate monitoring framework to be decided at COP 17.

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Robust risk assessment needed for LMOs containing engineered gene drives

Dr Eva Sirinathsinghji, Third World Network

The development of living-modified organisms containing engineered gene drives (EGD-LMOs) has raised significant controversy due to their explicit design intention of spread and persistence within wild populations.

The novelties of EGD-LMOs raise fundamental challenges to (i) the ability to assess risk; (ii) the capacity to mitigate or recall them; (iii) the ability to prevent transboundary movement; (iv) assessment of socio-economic impacts; (v) operationalizing mechanisms of obtaining free, prior and informed consent; and (vi) liability and redress.

In decision 14/19, Parties recognized that specific guidance may be useful for the risk assessment of EGD-LMOs and set out precautionary conditions that should be met before any consideration of environmental release. The AHTEG on Risk Assessment has now developed guidance materials, for discussion at SBSTTA-26.

The guidance identifies major risks and uncertainties of EGD-LMOs, including the potential for gene flow to non-target species, the likely inability to isolate or prevent transboundary movement for some EGD-LMOs, and potential serious risks to human health for public health applications.

However, while the guidance provides a starting point, it lacks methodological guidance on how to address the identified risks and uncertainties. There is an overemphasis on describing a new methodology, but not how it can be applied specifically to EGD-LMOs.

Moreover, concerns were raised over a potential conflict of interest involving a member of the AHTEG, and an associated failure by this individual to disclose the relevant situation in accordance with decision 14/33.

We therefore call on Parties to:

- Improve the draft guidance materials and define appropriate modalities to do so
- Ensure the proper application of the procedure for avoiding or managing conflicts of interest, including adopting the amendments set out in CBD/SBI/4/11
- Ensure a wider assessment of the socioeconomic, cultural, and ethical impacts of EGD-LMOs
- Reaffirm the precautionary approach and ensure no release of high-risk and unassessed EGD-LMOs.

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