

Research and innovation are at the center of the new agenda for biodiversity conservation

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CBD COP15 adoption of the Global Biodiversity Framework could be a turning point in the fight against biodiversity loss worldwide. The protracted four-year negotiations resulted in a “5 pillar” deal, which includes key targets for progress, mobilization of increased financial resources, a capacity building plan, and a monitoring framework to assess progress by the stated end goal of 2050. The fifth element, an agreement to build a multilateral mechanism to share the benefits stemming from the use of digital sequence information (DSI), completes the package.

Adoption of the Kunming-Montreal Global Biodiversity Framework (GBF) should be seen as a success. But this will depend on the capacity to implement the many commitments made in Montreal this week, many of which hinge on access and use of science, technology, and innovation.

The GBF texts recognize the importance of science in innovation – Targets 20 and 21, as well as Sections C and K made increasing scientific cooperation, access to scientific information, and access to innovation and technology objectives of the GBF. But the fraught debates about biotechnology under Target 17 and invasive alien species under Target 6 show that the use of innovations, in particular in the field of synthetic biology and biotechnology, remains a complex topic.

These debates mirrored discussion under the “normal” agenda items of the Convention and its Protocols, under which more work is now mandated for the next two years to develop guidance to support responsible research and use of gene drive organisms, and to support countries in getting a broad view of the upcoming innovations in synthetic biology that could help support advancement of their national priorities.

Highlights from the new GBF and other COP decisions

- **Global Biodiversity Framework:**
 - **Section C:** The inclusion of science and innovation in this section, which lays out key considerations when implementing the GBF, is a positive outcome.
 - **Target 6:** Invasive Alien Species are a key driver of biodiversity loss around the world. The adoption of a Target focused on this topic is very welcome, including the specific mention of islands as priority sites for IAS management and eradication. Unfortunately, there is no recognition of the need for novel tools to manage IAS, a missed opportunity to recognize the challenges facing the conservation community in this area.
 - **Target 17:** Target 17 is the only Target focused on biotechnology, despite biotechnology being a high-profile topic for the Convention on Biological Diversity and the focus of the Cartagena Protocol. The balanced language between risks and benefits is a positive outcome, although given recent progress in this field and the important role that biotechnology played in the development of COVID-vaccines and other technologies in recent years, a more forward-looking Target could have been hoped for.
 - **Target 20:** The most science and innovation oriented of the Targets, it calls for increased availability of scientific information, scientific cooperation, promoting development and access to innovation.
 - **Target 21:** Focused on the importance of data and evidence to guide policy making, Target 21 also places science at the heart of the GBF, alongside other important sources of knowledge.
 - **Section K:** The final section of the GBF, section K also highlights the importance of science and innovation by calling for increased awareness of the role science and innovation play in protecting and restoring biodiversity, and in ensuring its sustainable use.

OUTREACH NETWORK FOR GENE DRIVE RESEARCH

- **Global Biodiversity Framework’s implementation plan:** The text acknowledges the need to support the development of biodiversity-related technologies and innovations, including biotechnology, as part of the efforts to implement the new framework.
- **CBD and Cartagena Protocol decisions:**
 - **Horizon scanning for innovations in synthetic biology:** Under the CBD, countries agreed to set up a process to undertake “horizon scanning” of the innovations coming up in the field of synthetic biology. This could help inform countries as they consider which innovations may be relevant to their context and priorities. The challenge of horizon scanning is however timeliness as innovations move quickly, so the ability to produce a thorough and compelling report in a time-efficient manner will be the test of this new process, which is due to be completed in 2026.
 - **Guidance for risk assessment of gene drive organisms:** The process to develop voluntary and additional guidance to support the risk assessment of gene drive organisms was agreed. This guidance will come in addition to current guidance and regulatory frameworks that already exist at national and regional levels, as well as that produced by the World Health Organization. This will hopefully provide a useful resource for countries as they consider how they may consider permits to carry out research or releases of gene drive organisms in their territories in the future.
 - **Capacity-building plan for the Cartagena Protocol:** a new capacity-building plan for the Cartagena Protocol was also adopted in Montreal. With only 55% of countries who are signatories to the Protocol having implemented adequate regulatory frameworks nationally, building capacity to close this gap is an important priority. Lack of regulatory frameworks or a lack of capacity to make them function is a significant disincentive for research, both domestically and for international collaborations. Given the prominence of science, innovation, and access to technologies in the GBF, ensuring countries have effective regulatory bodies in place will be key to the success of the GBF, making this decision a positive one.