



High-Level Segment

2020 United Nations Biodiversity Conference, Kunming, People's Republic of China
“Ecological Civilization-Building a Shared Future for All Life on Earth”

Roundtable D: Knowledge, Innovation and Benefit Sharing

Ensuring that everyone benefits from biodiversity related knowledge, technologies and innovations, including through technology assessment governance and use.

Context

Scientific research, technology transfer, capacity-building, access and benefit-sharing are important foundations for the conservation and sustainable use of biodiversity. Continued scientific research and knowledge from all sources is critical in providing comprehensive information on biodiversity to better inform decision-making on its conservation, sustainable use and the fair and equitable sharing of benefits. Technology transfer, data-sharing and capacity-building are important components for the Post-2020 Global Biodiversity Framework. Cooperation between States is therefore necessary to share data and technology as well as to foster the scientific and technical capacity of developing countries.

Knowledge systems

- Mobilizing available knowledge, know-how and expertise is critical to ensure effective action on biodiversity. Whilst there remain gaps in knowledge and capacity to address biodiversity loss, the evidence base for urgent action is robust.
- The contribution of various knowledge systems, including traditional and indigenous knowledge as well as the diverse and unique knowledge held by women, needs to be recognized as important and as complementary and equal to conventional science. This also involves respecting the rights and interests of diverse knowledge holders.
- Considerable opportunities remain for recognizing the value of indigenous and local knowledge systems, and integrating them into the evidence base for action, and for multidisciplinary research and education to foster sustainable consumption and production and address the causes of biodiversity loss.

Application of knowledge, technology transfer and capacity building

- Many technologies are already available to help monitor, use, conserve and restore biodiversity, for example remote sensing tools for fishery vessel tracking, and gene sequencing and bioinformatics for targeted conservation.
- Considerable needs remain for capacity-building and capacity development for the application of knowledge and for the adaptation and transfer of technologies and their safe deployment.
- The imbalance in innovation means that data-sharing and transfer of technology need to take place on a global scale and include processes for both developed and developing countries to benefit

from scientific and technological knowledge, while taking into account the needs of indigenous people and local communities.

- Innovation can happen at many levels, such as the development of new ‘high-tech’, but also ‘low-tech’ advances in farming techniques, adapting to new climate events, or the restoration of a particular ecosystem by local communities, for example. There is currently an imbalance in the recognition between ‘high-tech’ and ‘low-tech’ innovation, while all should enter the knowledge-sharing ecosystem for the benefit of the greatest number.
- The role of stakeholders in planning the deployment and implementation of technology is crucial. It is necessary to ensure broad stakeholder engagement and capacity-building for innovation in order to foster a sense of co-ownership and ensure that innovations are not only technically and economically feasible, but also socially acceptable.

Technology and governance

- While advancements in science and technology have the potential to help address global challenges related to biodiversity, food, health, energy and the environment more generally, they also carry concerns related to potential negative impacts on the environment as well as to the fair and equitable sharing of benefits arising from their use.
- Governments will need to ensure that the benefits from technology are maximized while at the same time ensuring that the necessary safeguards are in place to reduce and manage associated risks. Participatory and inclusive decision-making could play an important role towards this end.
- Tools and mechanisms such as horizon scanning process, technology assessments and risk assessments and management are needed to ensure benefits from technology innovations are used in the safest possible manner.
- A future-proof and inclusive policy will require open and ongoing dialogues between various actors across science, industry, policy-makers, indigenous peoples and local communities, and all of society, taking into account the views and perspectives of women, youth and marginalized groups.

Access and benefit-sharing

- Access and benefit-sharing instruments have the potential to generate benefits for society and biodiversity. However, progress towards operationalizing the fair and equitable sharing of benefits resulting from the use of genetic resources and traditional knowledge associated with genetic resources has been limited.
- Ongoing advances in biotechnology and synthetic biology alongside the increased use of genetic sequence data currently pose challenges for benefit sharing. A multilaterally agreed solution to these challenges, which could ensure fair and equitable benefit-sharing while facilitating access to genetic resources and open access to digital sequence information, has the potential to unleash substantial benefits across many sectors, including health.

Guiding questions:

1. *What measures will your government take to recognize the traditional knowledge, innovations and practices of indigenous peoples and local communities and integrate them into decision-making?*

2. *How can your government ensure the safe use of technology, maximizing its potential while minimizing associated risks, particularly to those in vulnerable situations?*
3. *What measures will your government take to ensure fair and equitable benefit-sharing from the use of genetic resources, traditional knowledge associated with genetic resources and new technologies?*