

EMG Nexus Dialogue Series on Sustainable Bioeconomy

Dialogue 2: Inclusivity, sustainability and integration of the bioeconomy in the global environmental agenda

Date | Time | Platform: 05 June 2025 | 15:00 – 16:30 CEST | MS Teams

Summary

Background

The **bioeconomy** refers to the production, utilization, conservation, and regeneration of biological resources to provide sustainable solutions within and across economic sectors. The bioeconomy involves agriculture, technology, industry, and human rights, and therefore serves as a bridge between Sustainable Development Goals (SDGs) and a pathway towards global priorities, from tackling climate change and biodiversity loss to improving food security, development, and social inclusion. Sustainable bioeconomy is gaining growing recognition as a vital pathway to addressing interconnected global challenges and driving transformative change across sectors.

Several global bodies are dedicated to bioeconomy development, including UN organizations and international fora. Within the UN system, the [Food and Agriculture Organization of the United Nations](#) (FAO) was given an official mandate in 2015 to work on bioeconomic development and has since led the development of policies, knowledge, innovation, and coordination around a sustainable bioeconomy. The FAO has overseen the establishment of the International Sustainable Bioeconomy Working Group (ISBWG), a multi-stakeholder expert group dedicated to global knowledge sharing and supporting bioeconomy development at the country level. Outside of the UN system, there are a diversity of stakeholders and international fora working on bioeconomy, including the G20 Bioeconomy Initiative and the Global Bioeconomy Summit, which bring together government, research institutes, foundations, and private companies to promote relevant policy and innovation.

Against this backdrop, the [UN Environment Management Group](#) (EMG) in collaboration with FAO organized a Nexus Dialogue Series on **Sustainable Bioeconomy: Advancing Global Coordination and Inclusivity**. This summary covers the second dialogue in the series, held on Thursday 5 June 2025 and focused on inclusivity, sustainability, and integration of the bioeconomy in the global environmental agenda. It identified opportunities to integrate the bioeconomy into the global environmental agenda and promoted ways to strengthen engagement of marginalized groups in a sustainable bioeconomy transition.

The Dialogue convened representatives from FAO, the UN Convention to Combat Desertification (UNCCD), the Secretariat of the Convention on Biological Diversity (CBD), the 30th Convention of the Parties (COP30), and Rural Outreach Program Africa (ROP), who presented their experiences in bioeconomy. Following these presentations, the floor was opened for broader engagement, inviting all participating UN entities to voice questions and engage with one another.

Key messages noted on bioeconomy development for inclusive economic growth:

Representatives discussed progress made to support a sustainable bioeconomy through policies and bio-based innovation.

- The bioeconomy has gained rapid momentum globally, particularly since the G20 discussions last year. It is now widely recognized as a vital driver of green growth and systemic transformation and has reached the UN level—today's meeting being a clear manifestation of this development.
- In the context of biodiversity protection, the Cali Fund established under the multilateral mechanism on Digital Sequence Information (DSI) and launched at COP16 of the Convention on Biological Diversity (CBD), mandates that at least half of its resources be directed to IPLCs in both developing and developed countries, based on self-identified priorities outlined in national plans. Financed by private sector contributions the Fund is not positioned as charity but as restitution "paying back for nature" and seeks to center IPLCs in global biodiversity governance through collaborative engagement.
- Private sector engagement is also advancing through new frameworks. The World Business Council on Sustainable Development has developed the [Global Circularity Protocol for Business](#), a tool designed to support companies in setting targets, measuring, reporting, and disclosing progress on resource efficiency and circularity. This protocol provides common denominators and policy guidance to facilitate sustainable bioeconomic development.
- In parallel, practical solutions are gaining ground. Solar energy, as a biobased solution in the energy sector, has proven particularly effective in enabling sustainable transitions in high-emissions contexts such as China, while also offering much promise for scalable deployment across Africa and Latin America.

The need to protect and promote local communities and traditional knowledge around biological resources is a key lesson learned in bioeconomy work to date.

- While globalization was intended to bridge gaps between different parts of the world, but in practice, it has often created deeper divisions, advancing technological and scientific progress in the global sphere and leaving local realities marginalized and largely unchanged. A growing critique highlights the gap between global scientific research and local knowledge systems, where communities are frequently engaged for data extraction without adequate recognition, compensation, or long-

term involvement. As one observer noted: "We arrive, we ask them questions, we give them hope, we go—and we publish papers without even acknowledging them."

- In response, several conditions have been identified as essential to building a fair and inclusive bioeconomy. These include: *Equity in decision-making and benefit-sharing; Respect for traditional knowledge; Acknowledgment of community contributions; Compensation for the use of local resources; Provision of resources to strengthen livelihoods; And a commitment to improving the quality of life in these areas.*
- Ultimately, the responsibility to uphold these principles rests with all stakeholders—governments, donors, and policymakers alike. Collective action is needed to ensure that bioeconomy initiatives do not replicate extractive models, but instead promote empowerment, dignity, and sustainability at the grassroots level.

Existing environmental agreements provide opportunities to support a sustainable bioeconomy, though addressing inequality and exploitation will be a major challenge.

- The bioeconomy offers significant potential to drive innovation, reduce environmental footprints, and create rural livelihoods. It opens up new opportunities and jobs, particularly for farmers and local communities, while advancing global sustainability goals.
- For Africa, one of the richest continents in terms of natural resources, this potential was particularly underscored. Yet, it often appears to be in need of external assistance, despite having enough resources to sustain itself. This contradiction was attributed to persistent issues of poor governance, ineffective policy frameworks, and the systematic undervaluation of traditional knowledge.
- At the heart of the bioeconomy lies a dual reality:
 - On one hand, it offers an opportunity to empower IPLCs by recognizing and valuing traditional knowledge systems related to genetic resources. Enabling sustainable livelihoods through ethical bioprospecting and benefit-sharing.
 - On the other hand, there remains a risk of exploitation through top-down extractive implementation models that replicate colonial patterns such as using these traditional knowledge innovation practices without free, prior, and informed consent (FPIC), acknowledgement or fair compensation. In addition, Artificial Intelligence (AI) will create new forms of knowledge about genetic resource use that present both challenges to traditional knowledge systems and opportunities for new bioeconomy solutions. The long-term success of bioeconomy frameworks therefore depends on inclusive governance structures and adherence to core principles such as FPIC and fair benefit-sharing, as reflected in the CBD processes.

- On a larger scale, the bioeconomy also offers an opportunity to redefine development models, recognizing long-standing IPLC practices based on reciprocity, ecological balance, and cultural values. In contrast, dominant bioeconomy approaches often prioritize market-driven, high-tech solutions (e.g., synthetic biology or biophysics), which may cause land grabs, resource conflicts, and loss of sovereignty over biological resources. Returning to more traditional resources, biomass consumption—central to many IPLC livelihoods—is expected to increase by 30–50% by 2050. This growing demand, however, could place significant strain on productive capacity and intensify pressure on natural ecosystems. While shifts in human behavior, such as improving circularity and reducing waste will be essential, alternative development models that do not replicate the trajectory of North Atlantic industrialization may offer a more sustainable path. By embracing approaches that respect ecological limits and promote equity, societies have the opportunity to grow beyond current planetary boundaries. Thus, models led and supported by IPLCs have the potential to serve as transformative tools for climate resilience, conservation, and cultural revitalization.
- A sustainable bioeconomy must also consider the health of ecosystems, across land and sea. From the perspective of the UN Convention to Combat Desertification (UNCCD), land restoration is central. More than half of global natural capital depends on nature, yet land is being degraded at alarming rates. Every year, land equivalent in size to Egypt is lost. **To reach land degradation neutrality by 2030, an estimated 1.5 billion hectares must be restored**, including a quarter that consists of abandoned or degraded agricultural land. If efforts focus on restoring those landscapes for productive use through conservation, sustainable agriculture, and other approaches, this is where the opportunities lie.

Key messages noted on integrating the bioeconomy into global environmental agreements:

In conversation with participants, representatives from FAO, UNCCD, CBD, COP30, and ROP discussed the effort underway to integrate the bioeconomy into the broader environmental agenda.

- Since the adoption of the Rio Conventions in 1992, the global community has made progress in the areas of climate change, biodiversity, and desertification, most notably, by significantly limiting the trajectory of global warming. The persisting challenges, however, require a review and renewal of each of these key agreements.
- The FAO has provided important leadership in the effort to integrate the bioeconomy into global environmental agreements, providing strategic guidance on issues of equity, environmental integrity, and competitiveness and facilitating global cooperation, knowledge exchange, and investment in sustainable bioeconomy practices.

- The Convention on Biological Diversity (CBD) has paved the way for the protection and promotion of Indigenous Peoples and Local Communities (IPLCs). The Work Program on Article 8 develops tasks to support the conservation, sustainable use, and sharing of benefits of/from biological diversity, which is supported by the permanent Subsidiary Body on Article 8 that identifies and addresses issues arising from its implementation.
- The International Indigenous Forum on Biodiversity (IIFB) has been a key outcome of the CBD in terms of enabling coordination, advocacy, and influence for IPLCs over issues related to access, benefit-sharing, protected areas, and traditional knowledge.
- The Kunming-Montreal Global Biodiversity Framework (GBF) has furthered integration of IPLC rights into the environmental agenda by promoting Indigenous leadership and co-governance and facilitating free, prior and informed consent (FPIC).

As the transition to a sustainable bioeconomy gains traction, key lessons have emerged related to the role of the bioeconomy within the broader environmental agenda.

- Through integration into the global environment agenda, the bioeconomy can serve as a bridge linking various issues (i.e., land use, climate, biodiversity, waste) and facilitate a more coherent, effective response to present challenges. Diverse leadership across regions and institutions is key to such integration.
- Economic incentives are critical to realizing the potential economic uses of biomass; clarifying and addressing the role of subsidies in biomass production is necessary to enable sustainable production through biological resources.

Despite the challenges that persist in the areas of biodiversity, climate, and land degradation, ongoing efforts at the global and regional level and the upcoming environmental negotiations present clear opportunities for a sustainable bioeconomy future.

- The 30th Convention of the Parties (COP) in Belem, Brazil will serve as a platform to further integration of the bioeconomy into the climate agenda. Brazil's five-tiered strategy for advancing the bioeconomy offers a framework through which to consider and promote the transition to a sustainable bioeconomy:

1. **Conservation through tropical forest protection and governance**

Promoting co-governance, leadership, and agency of forest communities, such as through the Tropical Forever Facility (TFFF), which combines financial support with inclusive governance structures to limit deforestation and incentivize long-term forest protection.

2. **Agricultural transition**
Reducing the use of chemicals and pesticides, promoting bio-based inputs, and scaling sustainable agriculture solutions that work synergistically.
 3. **Social bioeconomy**
Actively engaging traditional communities in value creation from non-commoditized biological resources, including through increased cultivation of the wide range of underutilized plants to diversify the global food supply, improve nutrition, and expand markets.
 4. **Reforestation and land restoration**
Establishing effective mechanisms for large-scale reforestation and land restoration by building upon the targets set at the 16th COP to reverse desertification and revive degraded land for climate and biodiversity goals.
 5. **Biofuels for net-zero logistics**
Accelerating the replacement of non-renewable resources with bio-based technologies like green hydrogen and sustainable aviation fuel. Despite past discussions of fossil fuel subsidies, a clear roadmap with specific targets for a sustainable transition in the energy sector is still lacking.
- Scaling up investment in land protection to a level of USD 1 billion per day is crucial to achieving the UN Convention to Combat Desertification (UNCCD)'s goals for 2030. Redirecting ecologically-harmful financial flows, addressing land tenure, and embracing the land restoration potential in Africa in particular will help unlock opportunities for land restoration that supports climate, biodiversity, and bioeconomy goals.
 - The [World Intellectual Property Organization \(WIPO\) Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge](#) is a crucial platform to protect and promote traditional knowledge and access to benefit sharing in the transition to a sustainable bioeconomy. More work is needed to integrate and mainstream these efforts within global environmental agreements, especially considering synergies between issue areas and parties.

Annex

Agenda

15:00 - 15:15: Opening remarks and introductions

15:10 – 16:00: Panel Discussion: ROP/AJFAND, CBD, COP30, UNCCD

16:00 - 16:25: Open Discussion between UN Entities

16:25 - 16:30: Closing Remarks

List of Speakers

We would like to thank the following speakers for their valuable contributions to the Dialogue:

- **Mr. Lev Neretin**, Team Lead for the Environment, Food and Agriculture Organization (FAO)
- **Mr. Marcelo Behar**, COP30 Special Envoy for Bioeconomy
- **Mr. Taukondjo Shikongo**, Head of Access and Benefit Sharing Unit, Nagoya Protocol, Convention on Biological Diversity (CBD)
- **Ms. Xenya Scanlon**, Chief of Communications, External Relations and Partnerships, UN Convention to Combat Desertification (UNCCD)
- **Ms. Ruth Oniang'o**, Professor of Food Science and Nutrition, Founder of Rural Outreach Program (ROP), and Editor-in-Chief of African Journal of Food, Agriculture, Nutrition and Development (AJFAND)
- We would also like to thank the **UN entities** who contributed to the discussion.