



A girl participating in a mangrove restoration project in Kenya.

Photo: Jörg Böhling



# Shaping sustainable futures through international agreements

Biodiversity loss, climate change and land degradation are among today's most pressing environmental challenges. The three Rio Conventions – the UNFCCC, the CBD and the UNCCD – have sought to address these interlinked crises through international cooperation. Yet they have struggled to achieve their goals, partly due to the limited consideration of the important role land plays in these issues.

By Lisa Biber-Freudenberger, Mahmoud Nady Abdelsabour Mohamed and Sara Velander

Efforts to protect biodiversity by 2020 fell short of the Biodiversity Targets set by the Convention on Biological Diversity (CBD) in Aichi, Japan, in 2010, with species extinction rates rising and ecosystems under increasing threat from habitat loss, climate change, and pollution. Global greenhouse gas emissions continue to climb, despite numerous summits and international efforts like the Paris Agreement, criticised as insufficient to meet the 1.5-degree Celsius target (see Box). Meanwhile, land degradation affects millions globally, despite the focus of the United Nations Convention to Combat Desertification (UNCCD) on sustainable land management.

The underperformance of these conventions may be attributed to their limited consideration of the complex interrelationships of the environmental challenges they address, which require a holistic approach for effective solutions. As former CBD Executive Secretary Elizabeth Mrema noted: “We cannot solve climate change without also solving biodiversity loss and land degradation: the solution to one will contribute to implementing [all three] Rio Conventions.” This aligns with a remark by the Conference of the Parties (COP) 28 High-level Climate Champion Razan Al Mubarak: “We can't tackle the climate crisis without restoring Nature's structure and function.”

A key link between these challenges is the use and management of land, with conservation and restoration actions being essential for strategies that conserve biodiversity, mitigate climate change, facilitate adaptation, and combat land degradation. Protected areas, sustainable agriculture, reforestation, peatland and mangrove restoration, flood protection, solar parks, and bioenergy production all require significant amounts of land. The finite availability of land requires careful balancing of these needs.

This challenge is also reflected by the slow progress in achieving the Sustainable Development Goals (SDGs), particularly SDG 13 (Climate Action), SDG 15 (Life on Land), and SDG 2 (Zero Hunger) which depend on effective land use and environmental stewardship. In its current form, the SDGs fail to sufficiently acknowledge the interdependence of biodiversity, climate change, and sustainable land management as well as conflicts between goals. The SDG Future Summit held in September 2024 was an important opportunity to reinforce these connections and promote more systemic changes to support sustainability transformation. While issues like equitable land access and financing for environmental practices were discussed, attention to systemic land-related challenges was rather limited. Additionally, land is increasingly entangled in global geopolitics, adding complexity to advancing a sustainability transformation.



The limited availability of land requires careful balancing of competing demands. A solar park and windmills in Denmark.

Photo: Kenneth Bagge Jorgensen

## 2024 – the triple COP year

This year is not only highlighted by the SDG Future Summit but also by a “triple COP year”, with the COPs to the three Rio Conventions happening back-to-back from October to December 2024. This offers a critical opportunity to recognise the interconnectedness between the three different conventions and the limited availability of land to achieve their goals and the SDGs. In fact, recent discussions among civil society and governmental actors alike, including an opinion piece in the World Economic Forum co-authored by the Executive Secretaries of the United Nations Framework Convention on Climate Change (UNFCCC), the CBD and the UNCCD, emphasise the need for greater convergence of the Conventions to meet the 2030 goals. These goals include cutting greenhouse gas emissions by at least 43 per cent from 2019 levels (UNFCCC), conserving 30 per cent of land, waters and seas (CBD), and restoring 1.5 billion hectares of degraded land (UNCCD). Land serves as a common thread across the

## Key statistics on land for biodiversity, ecosystem restoration and climate resilience

- Forests harbour 80 per cent of the world's terrestrial biodiversity.
- Indigenous Peoples make up less than 5 per cent of the world's population, yet they steward at least 37 per cent of natural lands.
- 6.37 million hectares of forest were permanently lost around the world in 2023.
- Agriculture, forestry and other land uses accounted on average for 13–21 per cent of global total anthropogenic GHG emissions in the period 2010–2019.
- Roughly 44 trillion US dollars of economic output is moderately or highly reliant on natural capital.
- Up to 40 per cent of the planet's land is degraded, with projections of up to 90 per cent by 2050.
- Scarce land resources could displace up to 700 million people by 2050.
- Land degradation negatively affects the well-being of at least 3.2 billion people.



Civil society organisations are campaigning world-wide for the protection of land as a natural resource. A “Land is life” campaign sticker of the NGO Bismarck Ramu Group from Papua-New Guinea.

Photo: Jörg Böhling

three Conventions, acting both as a catalyst for the environmental polycrises and as a key part of their solutions.

The triple COP year began with CBD COP 16 in Cali, Colombia, in October. The focus of negotiations was on evaluating the progress of the Global Biodiversity Framework and aligning it with National Biodiversity Strategies and Action Plans. While some extremely important agreements on resource mobilisation for biodiversity were paused and deferred to a later time due to discord between parties, a major breakthrough was achieved with the creation of a subsidiary body for Indigenous Peoples. This recognises their critical role as stewards of over a quarter of terrestrial Earth.

Next in the series was UNFCCC COP 29 in Baku, Azerbaijan, dubbed the “Finance COP”. in November. The parties set a new climate finance target of 300 billion US dollars (USD) annually until 2035 mainly coming from industrialised countries to support mitigation, adaptation, and loss and damage efforts of low-income countries. As countries prepare their third round of Nationally Determined Contributions to the Paris Agreement’s 1.5 °C goal, there is a growing recognition of the vital role which land ecosystems assume as carbon sinks. However, reports caution against over-reliance on the carbon sequestration potential of land, given the risks posed by wildfires releasing carbon dioxide emissions and uncer-

tainties surrounding carbon capture and storage (CCS) technologies which threaten food security and biodiversity.

The year will culminate with UNCCD COP 16 in Riyadh, Saudi Arabia, in December, with the focus on land and its central role in addressing the intertwined crises of climate change, biodiversity loss and land degradation. The negotiations aim to advance commitments toward achieving land degradation neutrality (LDN) through national target setting programmes and will feature the first-ever Action Agenda. They will also support alignment of efforts across the Rio Conventions and build on decisions from CBD COP 16 and UNFCCC COP 29. The goal is to create a cohesive approach to ecosystem restoration and land resilience, ensuring that humans and nature can live in harmony and ensure planetary health.

### Conceptualisation of land in the Rio Conventions

The conceptualisation of land varies across Rio Conventions and has changed over time. Under the UNFCCC, land is viewed as a critical component for climate action, primarily through its role in carbon sequestration and emission reduction. Land-based climate actions, such as reforestation and soil carbon enhancement, are fundamental for achieving

carbon neutrality and enhancing resilience to climate change. In contrast, the CBD considers land as providing critical habitats harbouring biodiversity. Efforts focus on protecting and restoring natural ecosystems, as habitat destruction drives biodiversity loss. The UNCCD emphasises land in the context of desertification, land degradation and drought, promoting sustainable land management to mitigate the environmental and socio-economic impacts of land degradation, particularly on vulnerable communities.

Although land plays a crucial role for achieving goals under all three Conventions, actions on the ground often remain siloed and complex interactions largely ignored. For example, land restoration efforts under global initiatives tend to only be associated with the UNCCD, despite the fact that conservation, restoration and sustainable land use contribute to the goals of all Rio Conventions. There is significant overlap, especially in land restoration targets, raising key questions that need to be addressed. Is the 30 per cent of land to be restored under the CBD part of the 1.5 billion hectares required to avoid degradation under the UNCCD? How are these targets reflected in the different national climate, biodiversity and land plans? How are countries reporting progress without double counting, ensuring a unified and concrete delivery? A coherent response to these questions would lead to a better understanding of the expected delivery of all COPs and the potential to avoid conflicts and utilise synergies.

### Supporting a mutual action agenda

There is a significant opportunity to advance the land action agenda across the Rio Conventions. This year is pivotal, with the UNCCD COP16 hosting the first-ever Action Agenda to mobilise non-state actor actions and demonstrate on-the-ground delivery in halting land degradation. This moment offers a unique opportunity to align agendas with CBD and UNFCCC efforts. Additionally, building on the momentum from last year’s climate COP, the presidencies of UNFCCC COP 28 and COP 30, CBD COP 15 and COP 16, and UNCCD COP 15 emphasised in a COP 28 Joint Statement on Climate, Nature and People that climate change threatens biodiversity and ecosystems, impacting billions of livelihoods. Nature loss exacerbates climate vulnerability and obstructs sustainable development. Promoting sustainable land management can deliver shared benefits for climate, biodiversity and development. Here, we provide a set of

scientifically grounded suggestions to support a mutual action agenda, leaving room for further research and collaboration:

**Unifying private sector efforts in addressing interlinked crises.** The three Rio Conventions are increasingly emphasising the critical role of the private sector in tackling climate change, biodiversity loss and land degradation. Through their daily operations and supply chains, businesses have the potential to contribute to or hinder the achievement of mutual goals and targets. This year, all COPs have included business-related thematic days offering tools, guidelines and frameworks for businesses to adopt in their strategies. This presents a significant opportunity to promote the cross-cutting delivery of targets, such as the Science Based Targets initiative Forest, Land and Agriculture (SBTi FLAG) Project, the Science Based Targets Network (SBTN) containing targets and technical guidelines on land, and the Taskforce on Nature-related Financial Disclosures (TNFD). For land-related targets, the UNCCD Business for Land initiative is developing a set of land-use metrics as well. This alignment offers a golden opportunity to unify private sector efforts across the Conventions and to prevent businesses from being overwhelmed by numerous goals.

**Empowering Indigenous Peoples, local communities and women.** Indigenous Peoples and local communities (IPLCs) are essential actors in elevating restoration and land conservation efforts, serving as the stewards and direct managers of land. Despite their pivotal role, there is a lack of clear targets for IPLCs across the Rio Conventions. While some attention was given to IPLCs in the previous COPs, there is still a pressing need for a unified global message to empower IPLCs as key implementers of solutions. By strengthening tenure security and indigenous ownership of ancestral lands as well as drawing on Indigenous Peoples' knowledge of nature-based solutions, we can tackle the interconnected crises and foster a "nature-positive" future. This issue is especially relevant ahead of UNCCC COP 30 in Brazil next year, where IPLC roles are expected to be critical. Similarly, the role of women in land restoration cannot be overlooked, as studies have shown that women often outperform men in land restoration efforts.

Unified actions can be advanced by strengthening urban-rural linkages and implementing agroforestry, integrating synergistic urban and food-related initiatives across Conventions. This helps city leaders, planners and agricultur-

al actors align their strategies with the broader land agenda.

### Towards an integrated perspective – the role of land in achieving the SDGs

Land plays a pivotal role for the three UN Conventions as well as the SDGs. Acknowledging the interlinkages between different global policy goals has been overdue for a long time and requires policy-makers and decision-makers as well as other stakeholders to take a systemic approach to sustainability and to stop siloed thinking.

A collaborative, system-wide and evidence-based approach is essential for transforming the global land agenda to address climate change, land degradation and biodiversity loss. Supporting initiatives like the UN Decade on Ecosystem Restoration is crucial. This includes setting clear monitoring and tracking criteria, increasing transparency and strengthening governance to showcase successful flagship restoration projects. Innovative, grassroots actions on the ground will be further bolstered by a robust science-policy interface, where a two-way exchange and co-production of diverse knowledge between experts and policy-makers will offer actionable and coherent guidance across the Rio conventions, fostering support for interconnected, nature-based solutions to address the linked crises. Collective efforts of key actors will help drive impact across the board, and achieve goals on land within and beyond the 2030 agenda.

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**Lisa Biber-Freudenberger** is Junior Professor and head of the research group for Biodiversity Conservation and Sustainable Land Use at the Center for Development Research (ZEF) at the University of Bonn, Germany.

**Mahmoud Nady Abdelsabour Mohamed** is a natural scientist and doctoral student researching challenges and opportunities of nature-based solutions at ZEF.

**Sara Velander** is a political scientist and doctoral student exploring the consideration of complex interactions in the context of science-policy interfaces at ZEF and University of Münster, Germany.

**Contact:** [lfreuden@uni-bonn.de](mailto:lfreuden@uni-bonn.de)

**R** eferences: [www.rural21.com](http://www.rural21.com)

### Research projects on land use synergies and nature-based solutions

#### LANUSYNCON: considering complex interactions among global sustainability goals

In the project "LANd Use SYnergies and CONflicts within the framework of the 2030 Agenda", funded by the German Federal Ministry of Education and Research, scientists from different disciplines explore how different SDG conflicts can be avoided and synergies utilised in the context of land use. This includes agriculture, biodiversity conservation, health and infrastructure development. The project aims to enhance the understanding of the impacts which political decisions have beyond their specific sectors, thereby facilitating coherent land use policies and implementing an inter- and transdisciplinary approach. Its goal is to ensure that land use conflicts are more effectively considered to leverage synergies, ultimately enabling a societal transformation towards greater sustainability.

→ [www.zef.de/lanusyncon.html](http://www.zef.de/lanusyncon.html).

#### BIOCLIMSOCIAL: integrating stakeholders to utilise synergies

The project "The Social Dimension of Research and Implementation of Nature-based solutions: Utilizing Synergies for Biodiversity and Climate", funded by the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection, explores the social dimensions of nature-based solutions (NbS) for biodiversity and climate. It aims to enhance stakeholder engagement, including indigenous communities, in NbS research and implementation. The project includes case studies on four different continents and across various ecosystems, such as agroforestry, mountains, aquatic systems and urban areas, to develop guidelines for best practices for stakeholder participation. In each of these case studies, partners explore challenges as well as opportunities for stakeholder involvement in order to improve social outcomes of NbS.

→ <https://www.zef.de/bioclimsocial>