Building Biodiversity into the Infrastructure Sector

Summary of the Webinar held December 4, 2025

Context

Mainstreaming biodiversity in infrastructure presents many benefits for nature and people. It ensures that projects are resilient, cost-effective, and aligned with global sustainability commitments. This webinar spotlighted how countries are integrating biodiversity into infrastructure planning and delivery. It featured examples and remarks from representatives of the governments of Mexico, Belgium, Germany, Peru, as well as the Convention on Biological Diversity (CBD) Secretariat, WWF, and The Nature Conservancy (TNC). The event also introduced the **Community of Practice on Nature and Infrastructure (CoPNI)**, a collaborative platform designed to support countries and stakeholders in aligning infrastructure development with global biodiversity goals. Please use **this link** to register your interest in the group.

This session was hosted by the **Biodiversity Mainstreaming Champions Group** along with the CBD, WWF, and TNC, and funded by the Global Environment Facility (GEF) and the German the Federal Ministry for Economic Cooperation and Development (BMZ) via the Germany Agency for International Cooperation (GIZ). The Biodiversity Mainstreaming Champions Group is led by Mexico and Colombia. Its 19 government members are dedicated to accelerating the integration of nature within and across sectors to achieve the Kunming-Montreal Global Biodiversity Framework (KMGBF).

Summary of the meeting

1. Opening Remarks

Andrea Cruz Angon, Director, Biodiversity Strategies and Policies Coordination, CONABIO, Government of Mexico opened by explaining that mainstreaming biodiversity means making nature part of everyday decisions that shape economies and well-being. To achieve the KMGBF, sectors like infrastructure, agriculture, and finance must actively deliver nature-positive outcomes. Andrea introduced the Biodiversity Mainstreaming Champions Group and the emerging Community of Practice on Nature and Infrastructure as platforms for sharing tools and solutions. Andrea stressed that with 75% of future infrastructure yet to be built, integrating biodiversity early can cut costs, build resilience, and avoid irreversible impacts.

Bianca Brasil. Senior Programme Manager, Mainstreaming, CBD – United Nations Environmental Programme (UNEP) emphasized that infrastructure is essential for development but a major driver of biodiversity loss. She highlighted multiple KMGBF targets that provide a roadmap for transformation, spanning Target 1: integrating biodiversity into planning and assessments, Target 14: mainstreaming biodiversity within and across sectors, Target 15: companies and financiers to disclose and manage risks, Target 11: promoting nature-based solutions, and others. If embraced, these measures can make infrastructure a catalyst for

biodiversity-friendly development and climate resilience.

Sarah John, Senior Policy Officer, BMZ (Germany) highlighted that while infrastructure can cause habitat destruction and pollution, it can also deliver benefits through nature-based solutions. Sarah emphasized that sometimes small, cost-effective adjustments in planning can make a big difference for biodiversity—underscoring the urgent need for comprehensive mainstreaming. She stressed that governments, businesses, and infrastructure actors must play their part. From Germany's perspective, Sarah shared that the country is committed to mainstreaming biodiversity nationally and internationally, including through development policy, rural development, climate portfolios, and global initiatives such as the EU Global Gateway. Germany also supports the Community of Practice on Nature and Infrastructure through its partnership with WWF.

2. Presentation and Remarks: Building Biodiversity into the infrastructure sector

Andrea Cruz Angon (Mexico) moderated this panel.

Paola Escobar Izquierdo, Coordinator, National Infrastructure Plan, Ministry of Economy and Finance, Peru discussed how Peru is integrating biodiversity considerations into its infrastructure planning to ensure sustainable development across its diverse regions. This effort is anchored in the National Infrastructure Plan 2025–2030, a strategic tool aligned with Peru's Vision 2050 and approved by the National Accord Forum.

The approach emphasizes territorial planning through four macro zones, decentralizing services beyond the capital, and addressing local needs. Key components include a prioritization methodology that considers cultural, social, and environmental factors, and a Public-Private Investment roadmap outlining short- and long-term initiatives. Supported by lessons learned from the Inter-American Development Bank, the plan incorporates monitoring systems, biodiversity indicators, and governance mechanisms to ensure efficient portfolio management and data-driven decision-making.

Peru's experience offers three main lessons: sustainability must be integrated early in infrastructure planning; territorial approaches help close development gaps and foster inclusive growth; and, collaboration across sectors—including academia, local authorities, and private actors—ensures that infrastructure projects in such sensitive areas are planned inclusively, balancing economic growth with conservation. The country's focus on the Amazon region underscores the need for strategic, responsible development that respects biodiversity while meeting infrastructure needs.

Goele Drijkoningen, Change Manager, BiodiversiScape, FPS Public Health, **Government of Belgium** discussed Belgium's BiodiversiScape program, which integrates biodiversity into federal landscapes and infrastructure, complementing regional efforts and demonstrating leadership at the national level. The program works with key federal partners—the Buildings Agency, Ministry of Defence, National Railway Company, and Infrabel—to green domains such as courthouses, prisons, military schools, and railway embankments. The goal is to transform heavily managed green spaces into biodiverse areas that support nature while reducing maintenance costs. This approach reflects Belgium's commitment to sustainability and public well-being, ensuring that biodiversity is not only a design feature, but a principle embedded in infrastructure planning.

Two flagship projects illustrate this approach. At the Federal Police station in Asse, the program introduced differentiated green management—replacing monthly mowing with seasonal maintenance—and planted trees,

hedges, and wildflowers. This shift enhanced biodiversity and lowered costs, though initial resistance and contractor issues highlighted the need for better communication and long-term agreements. At the Royal Military School in Brussels, large-scale removal of concrete and invasive species paved the way for new plantings, despite challenges such as security concerns and slow decision-making. Both cases show how pilot projects can influence organizational processes, embedding biodiversity into procurement and maintenance standards.

Key lessons include the importance of starting with a biological inventory, engaging stakeholders early to overcome resistance, and focusing on cost-effective interventions with high leverage. Beyond individual projects, Belgium is working to integrate biodiversity into procurement, licensing, and maintenance standards—creating structural change that will endure. The program aims to expand partnerships with real estate developers and other actors to create a nationwide green-blue network, proving that biodiversity and infrastructure can go hand in hand—even within tight budgets.

Dipankar Ghose, Senior Director – Biodiversity Conservation, WWF India discussed the need for smart, green infrastructure to allow movement of large mammals and ecological connectivity. India faces a dual challenge: conserving its extraordinary biodiversity—it is home to 75% of the world's wild tigers and significant populations of elephants and rhinos—while meeting ambitious infrastructure targets. With biodiversity declining globally at unprecedented rates, India recognizes that infrastructure must be "nature-smart" to deliver climate and development goals alongside net-zero and nature-positive outcomes. This vision is reflected in policy: About six years ago, the Ministry of Road Transport and Highways issued a gazette notification that requires road projects to avoid projects to avoid protected areas and requires projects to use nature safeguards in sensitive areas.

Implementation has moved from policy to practice through collaborative mitigation strategies. For example, railway projects in Assam introduced speed restrictions and driver sensitization to prevent elephant collisions, supported by real-time alerts and innovative seismic sensors that detect the presence of elephants near transport corridors. On highways, site-specific surveys informed the design of wildlife passages. Initial box culverts proved inadequate for elephant herds, prompting retrofitting and construction of larger underpasses. These measures, jointly developed by the National Highways Authority and the Assam Forest Department, are now in use—camera traps have recorded elephants, their calves, and leopards using the crossings.

Key lessons include recognizing the importance of early stakeholder engagement, adaptive design based on species needs, and embedding safeguards into official guidelines to ensure compliance. India's experience shows that mainstreaming biodiversity into infrastructure is possible when government agencies, NGOs, and technical experts collaborate. The country is scaling these solutions to meet its infrastructure expansion goals while safeguarding its natural heritage.

Following the presentations, the speakers engaged in a discussion. Speakers emphasized the importance of a global community of practice to foster collaboration among planners, engineers, policymakers, and conservationists, and highlighted practical examples and stakeholder engagement as key to translating biodiversity commitments into actionable infrastructure solutions aligned with global targets.

3. Establishing a Community of Practice on Nature and Infrastructure

Suzanne Ozment, TNC introduced the Community of Practice on Nature and Infrastructure (CoPNI), a new

initiative requested by the CBD to help countries implement infrastructure-related targets under the KMGBF. A preliminary analysis of KMGBF-aligned national targets recently submitted to the CBD reveals that more than 40 countries have set national targets related to infrastructure for delivery by 2030, creating an urgent need for practical support and collaboration.

She highlighted the complexity of shifting the infrastructure sector from a driver of biodiversity loss to an engine for nature's resurgence, which will require transitions within technical, social, policy, and financial domains. A stakeholder landscape assessment identified about a dozen pre-existing communities of practice on nature and infrastructure, each addressing pieces of the puzzle. With this landscape in mind, CoPNI is positioned to connect efforts, fill gaps, and provide dedicated focus to helping countries turn KMGBF targets into actionable road maps and investments.

Suzanne shared a draft vision for CoPNI based on initial consultations, and invited participants' feedback:

- *CoPNI is a network for governments and partners to help transform infrastructure into a force for protecting and restoring biodiversity, while ensuring resilience and prosperity.*

CoPNI may:

- Accelerate knowledge exchange and practical learning across countries and sectors.
- Connect existing sector-specific and regional initiatives, filling gaps and promoting cross-sector collaboration.
- Support member-driven agenda settings, problem-solving, and innovation, including linking funding and capacity to new solutions.

Through a live poll, participants contributed the following ideas to shape CoPNI's initial focus:

- Practical case studies and real-world examples.
- Engaging with the private sector and infrastructure developers and managers.
- Attracting finance and private sector engagement for nature-positive infrastructure development.
- Facilitating collaborative problem-solving and peer learning.
- Sharing good practices, influencing policy, and developing incentive frameworks for key sectors.
- Connecting with global initiatives and forums and aligning with circular economy approaches
- Making the business case for biodiversity integration and creating incentives for long-term private sector participation, such as biodiversity credits.
- Providing open access to data, engineering training, and options for citizen participation.
- Defining success metrics and providing cost-benefit analyses.
- Showcasing socio-economic benefits of natural vs. grey infrastructure.
- Promoting roads and rails as bio-corridors and incorporating upstream planning and pipeline screening.

During the discussion of CoPNI, participants emphasized the importance of engaging a wide range of stakeholders—governments, civil society, private sector, and technical experts—to ensure practical, actionable outcomes. Participants discussed organizing work streams around KMGBF targets, infrastructure sub-sectors, or cross-cutting issues like policy and finance. Participants stressed that a community of practice must go beyond conservation circles and actively engage private sector actors, financial institutions, and industry associations.

Stakeholders emphasized the need for a practical, peer-learning space—a community of practice focused on mainstreaming biodiversity in infrastructure. They highlighted interest in sharing real-world examples of what works and what doesn't, learning from successes and mistakes, and exchanging insights on implementation

challenges. Such a forum would fill a critical gap by connecting practitioners working on biodiversity integration in sectors like railways and other infrastructure, enabling hands-on knowledge exchange rather than purely conceptual discussions.

Participants shared examples of recurring challenges in policy and infrastructure planning around balancing development needs with biodiversity protection. Relying solely on environmental impact assessments is not enough—decision-makers need practical, technical examples of how biodiversity safeguards can be integrated into infrastructure projects in sensitive ecosystems.

Designing COPNI to meet the interests of multiple stakeholder groups is an opportunity to ensure sustained participation. This means structuring the platform to provide value for diverse members—through practical case studies, cross-sector dialogue, and solutions that align biodiversity integration with business and finance priorities.

Participants suggested a two-tiered approach for organizing this community. The first tier would cast a broad net, offering resources, guidelines, and general discussions for those seeking information. From this larger group, smaller, more interactive problem-solving groups could emerge, focused on recurring questions and technical challenges that participants may not have outlets to discuss within their institutions. This structure would allow for both passive engagement and deeper collaboration, ensuring members can access practical help where needed.

4. Next Steps

The participants were invited to register their interest for COPNI, continue to contribute feedback, and help shape its future direction. COPNI members interested in hosting events or suggesting activities are welcome to reach out to WWF, which is offering organizational support for the community. Seed funding from GEF and the German government (BMZ via GIZ) were announced to help launch the initiative.

Attendees

There were more than 180 people in attendance across the duration of the event. There were 582 registrants spanning government, finance, academia, engineering, and conservation fields across all global regions: Europe (24%), North America (23%), Asia (20%), Latin America and Caribbean (19%), Africa (11%), and Oceana (2%). Among the registrants, 110 were government representatives from 34 countries.

Speakers

Andrea Cruz-Angón

Director, Biodiversity Strategies and Policies Coordination, CONABIO, National Commission for the Knowledge and Use of Biodiversity, México

Since 2006, Andrea has coordinated the State Biodiversity Strategies Initiative, in which 28 states voluntarily participate from across the nation. She has coordinated the publication of 28 state studies and 18 state biodiversity strategies because of this process. She oversaw the revision of Mexico's National Biodiversity Strategy (ENBIOMEX) and Action Plan for 2030. She coordinated the preparation and publication of the fifth and sixth editions of Mexico's national reports to the Convention on Biological Diversity. She has participated in international biodiversity negotiations (the Convention on Biological Diversity and the Intergovernmental Platform on Biodiversity and Ecosystem Services). She is currently coordinating the revision and update of the

Mexican NBSAP in accordance with the Kunming-Montreal GBF and the 7th National Report. Andrea holds a PhD in Ecology and Management of Natural Resources.

Bianca Brasil

Program Manager – Mainstreaming, Convention on Biological Diversity, UNEP

Bianca Brasil holds a degree in Law and a specialization in Corporate and Public Communications Management. With more than a decade of experience working at the intersection of sustainability, biodiversity, and public policy, she has built a strong record in advancing biodiversity considerations across sectors.

She joined the Secretariat of the Convention on Biological Diversity in 2019 as Programme Manager for business engagement. Since early 2025, Bianca has served as Senior Programme Manager for mainstreaming biodiversity and acts as the Secretariat's focal point for subnational governments and local authorities.

Sarah John

Senior Policy Officer, Federal Ministry for Economic Cooperation and Development (BMZ), Germany

Sarah John joined the German Federal Ministry for Economic Cooperation and Development (BMZ) as Senior Policy Officer in 2024. In the Division of Environmental Policy, Biodiversity, Forests, Marine Conservation, her work focuses on environmental and biodiversity policy issues. Previously, she worked at the Deutsche Bundesbank, the International Monetary Fund, the Federal Ministry of Finance, and the Global Solutions Initiative.

Paola Escobar Izquierdo

Coordinator of the National Infrastructure Plan, General Directorate of Private Investment Promotion Policy, Ministry of Economy and Finance, Peru

Paola Escobar Izquierdo is a Peruvian architect specialized in Urban Project Planning at the Pontificia Universidad Católica de Chile (Pontifical Catholic University of Chile), with expertise in territorial planning and public infrastructure management. She is currently the Coordinator of the team who is develop the National Infrastructure Plan (PNI) at the Directorate for Private Investment Promotion Policy (DGPPIP) of the Ministry of Economy and Finance of Peru, where she leads the territorial approach and the strategic portfolio of priority infrastructure projects, incorporating sustainability criteria and biodiversity considerations into national investment planning.

Goele Drijkoningen

Change Manager, BiodiversiScape, Federal Public Service Public Health, Directorate Generale Environment, Belgium

After studying Classical Languages and Social and Cultural Anthropology, Goele started working as an educational officer at the international women's organization YWCA in Antwerp. This job shaped her into a fervent advocate of equal rights and opportunities for all.

In 2006, she moved with her family to Uganda to work for the NGO Broederlijk Delen, monitoring and evaluating their agricultural projects in the region. Two years later, they moved to Cambodia, where she coordinated sustainable agricultural projects in collaboration with the Ministry of Agriculture and the Ministry of Women's Rights. In 2015, they moved on to Senegal, where she continued this work and supported projects that combined agriculture, environment, healthy food and women's rights.

Due to the corona pandemic, they returned to Belgium in 2020, where Goele had to find her way back into the professional world. She first started working as a population manager at the vaccination centre in Mechelen and, after the corona phase, she coordinated the social support for Ukraine for the City of Mechelen.
She found working in other sectors fascinating, but at the same time she was also very happy to start working for the FPS Public Health, Food Chain Safety and Environment in December 2024 as a change manager in the BiodiversiScape programme. This allowed her to resume her commitment to the environment on a professional level.

Dipankar Ghose

Senior Director, Biodiversity Conservation, WWF-India

Dr Dipankar Ghose is a conservation manager currently leading biodiversity conservation portfolios at WWF-India. He holds a PhD in zoology from the University of Calcutta and conducted pioneering research on the ecology of tragopans in northeastern India over 25 years ago. He is a naturalist who, whenever possible, heads out into the wild with his binoculars.

Suzanne Ozment

Senior Policy Advisor, Biodiversity and Infrastructure, The Nature Conservancy (TNC)

Suzanne Ozment works with governments, development banks, and the private sector to align economic development and conservation goals. She specializes in sustainable infrastructure, nature finance, and sectoral transformation. She also helps coordinate global efforts with the Biodiversity Mainstreaming Champions Group. Prior to TNC, Suzanne held positions at the World Resources Institute where she led initiatives to scale investment in nature-based solutions in the United States, Latin America, and Sub-Saharan Africa and advised development finance institutions on their nature mainstreaming strategies. She holds a Master's degree in Environmental Management from Yale University.