Exploring biodiversity credits to boost financing for nature in Indonesia, Philippines, and Thailand

The Kunming-Montreal Global Biodiversity Framework (GBF) provides a roadmap for global efforts to protect and restore nature, guiding the Parties to the Convention on Biological Diversity toward the vision of a world living in harmony with nature by 2050. With 23 targets set for achievement by 2030 and four overarching goals for 2050, the framework aims to safeguard ecosystems, prevent human-driven species extinctions, promote the sustainable use of biodiversity, ensure fair distribution of its benefits, and secure the necessary funding—bridging an estimated $700 billion annual gap in biodiversity financing.

Governments worldwide recognize this challenge and have been addressing it for years. In fact, they have contributed the lion's share—83%—of global financing for nature-based solutions. However, they remain far from closing the gap due to fiscal constraints driven by conflict, debt, and poverty. This is where the private sector can come in and play a bigger role in financing nature-positive projects.

Scaling up private investments for nature positive outcomes

According to the United Nations Environment Program Finance Initiative or UNEP FI, most nature-related finance is coming from the public sector, and yet private finance is essential to bridge the annual financing gap for nature conservation. Tapping the abundant resources of the private sector for conservation financing requires collaborative and ambitious commitments, along with immediate action across the financial system.

The KM-GBF, under target 19, calls for mobilizing at least $200 billion finance for nature per year by 2030 from all possible sources – domestic, international, public, and private resources. This includes leveraging private finance, promoting blended finance, implementing strategies for raising new and additional resources, and encouraging the private sector to invest in biodiversity, including through impact funds, biodiversity credits, and other instruments, where appropriate.

The UNEP FI and the Finance for Biodiversity Foundation (FfB) predict that by 2030, $1.45 trillion could be directed toward biodiversity and nature finance, helping to close the gap. This includes alternative investments, traded debt, and private equity, all of which are increasingly incorporating nature-related Key Performance Indicators (KPIs). Additionally, emerging financial instruments, such as biodiversity credits, offer promising opportunities to support essential stewardship, conservation, and restoration efforts.

Biodiversity credits, an emerging financial mechanism

Biodiversity credits is a nascent but an emerging field gaining global interest as a means to scale up financing for nature. The Biodiversity Credit Alliance defines a biodiversity credit as “a certificate that represents a measured and evidence-based unit of positive biodiversity outcome that is durable and additional to what would have otherwise occurred.” A unit of positive biodiversity outcome that can be categorized into the following: Uplift, avoided loss, and maintenance.

An uplift can be attributed to the improvement in biodiversity from project interventions such as ecological restoration indicated by the changed structure, composition, and function of the target ecosystem or species populations, or reduction in threat measures.

Prevention of decline in biodiversity resulting from project interventions is another unit of positive outcomes categorized as avoided loss. These interventions can be preservation or land designation indicated by the prevention of changed structure, composition and function of the target ecosystem or species populations, or prevention of increase in threat measures.

Another unit of positive outcome is the maintenance of intact biodiversity through project interventions such as implementation of conservation management plans, effective recognition and protection of Indigenous rights and customary uses aligned with conservation objectives, conservation designations and sustainable financing of conservation. In maintenance projects, biodiversity will be threatened by medium- or long-term threats.

How do biodiversity credits work? Landowners, companies, nonprofits, and governments generate biodiversity credits—also known as certificates—by uplifting, avoiding loss, and maintaining biodiversity in a specific amount of land over a defined period. These credits are then purchased by private companies to fulfill their respective nature-based commitments.

To examine its feasibility, a three-day workshop was conducted in Jambi, Indonesia last February 17-19, 2025, for BIOFIN together with national government counterparts, non-government organizations, and academe partners to assess and demonstrate how biodiversity credits can be implemented in Indonesia, Thailand, and the Philippines. The workshop touched on the fundamental concepts, principles, and implementation protocols of biodiversity credits with guidance from various resource people (Figure 2). BIOFIN Indonesia's counterparts present in the workshop were representatives from the Ministries of National Development Planning (Bappenas), Finance, Environment, and Forestry together with partners from the Institut Pertanian Bogor (IPB), PT Restorasi Ekosistem Indonesia (REKI), Komunitas Konservasi Indonesia (KKI) WARSI, and UNDP Indonesia. BIOFIN Philippines was joined by representatives from the National Economic and Development Authority and the Departments of Environment and Finance together with UNDP Philippines, Forest Foundation Philippines, Foundation for the Philippine Environment, and Tubbataha Reefs Natural Park. Meanwhile, BIOFIN Thailand was joined by representatives from the Office of Natural Resources and Environmental Policy and Planning (ONEP) and Biodiversity-Based Economy Development Office (BEDO) under the Ministry of Natural Resources and Environment of Thailand (MoNRE).

Photo: Resource persons at the BIOFIN workshop on biodiversity credits (L-R from the top - Gaurav Gupta (Senior Nature Investments Advisor, UNDP), Dominik Martin Maczik (UNDP/Biodiversity Credit Alliance), Manesh Lacoul (Coordinator for Biodiversity Credit, UNDP/BCA), Korosi Erika Ann (Fellow and Senior Director, Nature Markets Conservation International), Prof. Dr. Ani Mardiastuti (Lecturer at IPB / Executive Board of Burung Indonesia, IPB University), Nicola Lansdell (Associate Director, Ricardo Plc), Mary Grace Barber (Tubbataha Reefs Natural Park), and Diego Olarte (BIOFIN Colombia).

The learning exchange was an avenue for the BIOFIN countries to learn about the experiences of other countries in implementing biodiversity credits using the Vera and Plan Vivo Nature methodologies. Among the good practices highlighted were that of Colombia's biodiversity credits through Habitat Banks, KKI WARSI's experience in its Bujang Raba PES Project using the Plan Vivo Standard, and Australia's Nature Repair Market. The countries were also given the opportunity to collaborate in designing the framework, implementation mechanisms, and calculation methods for biodiversity credits in their respective countries.

The Philippines, Thailand, and Indonesia have reported to have existing initiatives and/or regulations on carbon trading markets that can be the utilized as entry point to introduce and develop a biodiversity credits mechanism in the countries. All three countries are closely working with their respective environment and planning ministries in implementing carbon initiatives.

For example, the Carbon Accounting, Verification, and Certification System or CAVCS aims to establish a comprehensive system for accounting, verifying, and certifying forest carbon projects in the Philippines. It encourages and supports investments in activities that sequester carbon dioxide and avoid emissions from deforestation and forest degradation in the country. However, this policy is yet to be rolled out. Likewise, a national carbon registry is yet to be developed in the Philippines. Nevertheless, the Forest Foundation Philippines and Foundation for the Philippine Environment, two of the largest Philippine grant-making institutions for the environment and sustainable development outside of government, have expressed their support in developing a mechanism that applies to the Philippines and piloting this in the future. BIOFIN Philippines Project Manager Anabelle Plantilla sees biodiversity credits as an innovative opportunity for the Philippines and its neighbors to channel private sector investments into conservation efforts. “Through regional collaboration, we can ensure that these mechanisms deliver real benefits for both biodiversity and local communities,” she added.

Meanwhile, Thailand has commenced work on carbon credits as early as 2014, through the Thailand Voluntary Emission Reduction Program (TVER). To transition to a biodiversity credits scheme, the BEDO conducted a global study on biodiversity credits looking at how it can be applied in Thailand. Brainstorming sessions were held with national stakeholders particularly with the private and policy sectors as well as the communities. Pilot studies in selected areas will be conducted within the country while BEDO and the Office of Natural Resources and Environmental Policy and Planning (ONEP) together with BIOFIN and the academe partners have commenced the planning phase to develop a mechanism that combines carbon and biodiversity credits. On top of this, a draft Climate Change Act which provides for a mandatory carbon market is pending passage in the parliament. As a market-based instrument that aims to incentivize investments in biodiversity conservation and restoration, BIOFIN Thailand's Environmental Economist Dr. Kanittha Tambunlertchai said that "biodiversity credits can be harnessed to alleviate the financing gap that Thailand and other developing countries are facing." However, the novelty of the instrument means that there is little know-how on setting up the mechanism by stakeholders.

BIOFIN Indonesia has preparing a finance solution proposal that will provide a clearer pathway to assess institutional preparedness and supply/demand feasibility for biodiversity credits in the country. It aims to provide an early-stage assessment and demonstrate the design of an enabling environment for biodiversity credits implementation in Indonesia. A potential pilot for this is the restoration of the Harapan forest in collaboration with the Restorasi Ekosistem Indonesia (REKI). “We would be very grateful for follow-up actions from the workshop. We hope that biodiversity credits can become a sub-financing option for Harapan Forest”, Fauzan (REKI).

As with any emerging finance solution, challenges are an inherent part of its development. In the three-day workshop, a number of challenges were cited that the countries foresee in terms of developing a national biodiversity credits system. First is the lack of specific legislation on biodiversity credit – while there are policies in place and initiatives on carbon credits and offsets, regulations for biodiversity credits still need to be developed. Another challenge is the absence of a standard methodology that can be used by the countries given the varied national context. Lastly, the countries raised ethical concerns coming from accusations that biodiversity credit can be used as a strategy for companies to greenwash, which stems from the growing concerns around the integrity of carbon credits from nature-based solutions projects. Other challenges cited at the national level were weak enforcement of policies, inadequate stakeholder involvement (e.g., indigenous peoples, communities, etc.), lack of market, and bias towards economic growth.

A major challenge in establishing and implementing biodiversity credits is the substantial investment required, ranging from $30K to $1.5 million. The cost varies significantly based on several factors, including project scope and scale, site location and size, monitoring and verification requirements, regulatory and certification fees, stakeholder engagement, and the development of market and trading infrastructure.

Insights and next steps

By the end of the three-day workshop, the participants had gained valuable insights and knowledge on biodiversity credits.

Pattarin Tongsima, Director of Policy and Planning under the Office of Natural Resources and Environmental Policy, Ministry of Natural Resources and Environment of Thailand was impressed by the restoration efforts in Hutan Harapan and highlighted the innovative use of buffer zones as firebreaks to prevent forest fires—an approach Thailand could adopt from Indonesia. She acknowledged that initially, understanding biodiversity credits was challenging. However, the in-depth discussions on days 2 and 3 of the workshop clarified key concepts, deepening their understanding and giving them a clearer picture of how biodiversity credits is done step by step. The workshop allowed the Thailand team to identify potential sites and key factors needed to launch an initial biodiversity credit pilot. “We will certainly go on with the biodiversity credit and do it in the pilot site, possibly in Doi Tung, if [government counterparts will approve],” Tongsima said. She also noted that the team discussed other areas in Thailand that could serve as additional pilot sites in the future.

Jowell Angelo Banda of the Philippines' National Economic and Development Authority supposes that the concept of biodiversity credits can leverage private investments to bridge the biodiversity financing gap and support conservation initiatives across ecosystems. "By integrating biodiversity credits into conservation strategies, countries can create sustainable financing mechanisms that incentivize the protection of ecosystems, ultimately contributing to sustainable development and environmental resilience", Banda added. Moving forward, BIOFIN Philippines will develop a policy analysis on biodiversity credits. tto inform the design, implementation and regulation of biodiversity credits.to contribute to the achievement of the targets under the Philippine Biodiversity Strategy and Action Plan while attracting investment from the private sector.

Adi Misda Indarto from the Ministry of National Development Planning of Indonesia (Bappenas) shared that the workshop inspired him, deepening his perspective on forest restoration. With his experience in the forest sector, he is aware of the challenges and issues in restoration efforts. While many initiatives have been successful, evidence of empty forest patches where wildlife is absent remains a concern. To address this concern, he believes that biodiversity credits can be a powerful tool to “conserve and uplift our ecosystem so we can still be a mega biodiverse country the world.”

All three countries will develop a biodiversity credits proposal, integrating insights from the workshop and leveraging Verra, Plan Vivo, a combination of both methodologies, and development of an ASEAN standard. While the initiative remains in the exploratory stage—and biodiversity credits may or may not be implemented depending on the national requirements and limitations, this process will help identify alternative pathways for private sector participation and new investment opportunities in conservation to help increase the flow of private finance and narrow the financing gap for nature conservation.

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