



Mobilizing Finance for Nature-based Solutions:

New Business Opportunities & Capital Flows

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01

SMBC Spotlights Innovative Approaches to Nature-Positive Investment



Image: Known for its enormous size and being the largest flower in the world, the Rafflesia has up to [42 species](#) listed in its genus, all of which are found throughout Southeast Asia.

At SMBC, we recognize that natural ecosystems underpin all global economic activity, and that nature plays an indispensable role in our collective and fulfilled growth across the Asia Pacific (APAC) region.

To safeguard our economies and communities, a significant and rapid transformation in resource management is essential across business, finance, and governmental spheres.

“

SMBC is committed to advancing understanding, fostering collaboration, and developing practical solutions to bridge the funding gap for nature.

Biodiversity loss worsens climate change impacts, as ecosystems like forests, wetlands, and oceans absorb 60% of human-caused greenhouse gases and protect against flooding and soil erosion. Human activities have harmed 75% of terrestrial ecosystems, threatening 25% of species with extinction².

Nature remains an underinvested yet critical sustainability imperative, especially in the Asia-Pacific region.”

Rajeev Kannan
Managing Executive Officer and
Co-Head of Asia Pacific Division, SMBC

Financing will play a key role¹ in enabling nature positivity, and SMBC is committed to playing our part in the global collective efforts to achieve this.

We recognize the pivotal role that financial institutions like SMBC play within the nature ecosystem; we are essential allies in channelling Nature-based Solutions (NbS) investments, structuring nature-positive financing, and helping businesses integrate environmental risks into financial decisions. Financial institutions' strategic role and collaboration with stakeholders will be crucial for the shift towards a stable and nature-positive Southeast Asia (SEA) economy.

- **Nature-positive business opportunities** in the APAC region could total up to USD 4.3 trillion in annual business value by 2030³.
- However, loss of biodiversity and nature could threaten up to 63% of Asia Pacific's GDP⁴.

In 2024, SMBC held two roundtable sessions, one in April as the headline sponsor of [Ecosperity Week](#) in Singapore and another in September.

Bringing together a curated group of diverse nature investment professionals, corporate clients, and non-governmental organizations, the participants explored strategies to bolster NbS in SEA through innovative financing that offers both ecological and financial gains. A key focus was exploring pathways to unlock solutions for banks like SMBC to materially close the nature finance investment gap.

This report has been prepared to summarize and share insights from the roundtable sessions, to foster continued collaboration and opportunities beyond the scope of the participants.

02

TNFD Transparency Directs Corporate Capital Towards Nature-Based Solutions



Image: Listed as a vulnerable species on the [IUCN Red List](#), the Asiatic black bear is threatened by deforestation and poaching for its body parts, which are used in traditional medicine.

The Taskforce on Nature-Related Financial Disclosures (TNFD) offers a framework for the move towards a nature-positive world by arming organizations with a common language and methodology for expressing nature-related financial information.

Technical Director for the TNFD, Emily McKenzie, kickstarted the roundtable by providing context to nature disclosure efforts, *“The demand and excitement around TNFD is driven by a number of things beyond us. One is the interest of governments, and we expect that to escalate policy drivers.*

Central banks and supervisors are also increasingly interested in TNFD in this region, with Malaysia being the first jurisdiction where the central bank is developing guidance on TNFD.

Additionally, standard setters and regulators in the same ecosystem help to drive demand, enabling our mission to significantly shift financial flows away from activities harming nature and towards those that help nature thrive. The pioneering work of people in the room today and that shifting finance will be our definition of success.”

SMBC has embarked on various initiatives to advance efforts in nature finance as well as the measurement, target setting and disclosure of nature and biodiversity risks.

TNFD enables businesses, financial institutions, and investors to integrate nature into their financial and business decisions more easily.

As of April 2024, 43% of global TNFD adopters are in Asia. Out of a total of 375 TNFD adopters, 93 are in Japan⁵.

SMBC was the first Japanese Bank to publish a TNFD report in April 2023⁶.

03

NGOs: Key Facilitators in a New Era of Environmental Stewardship

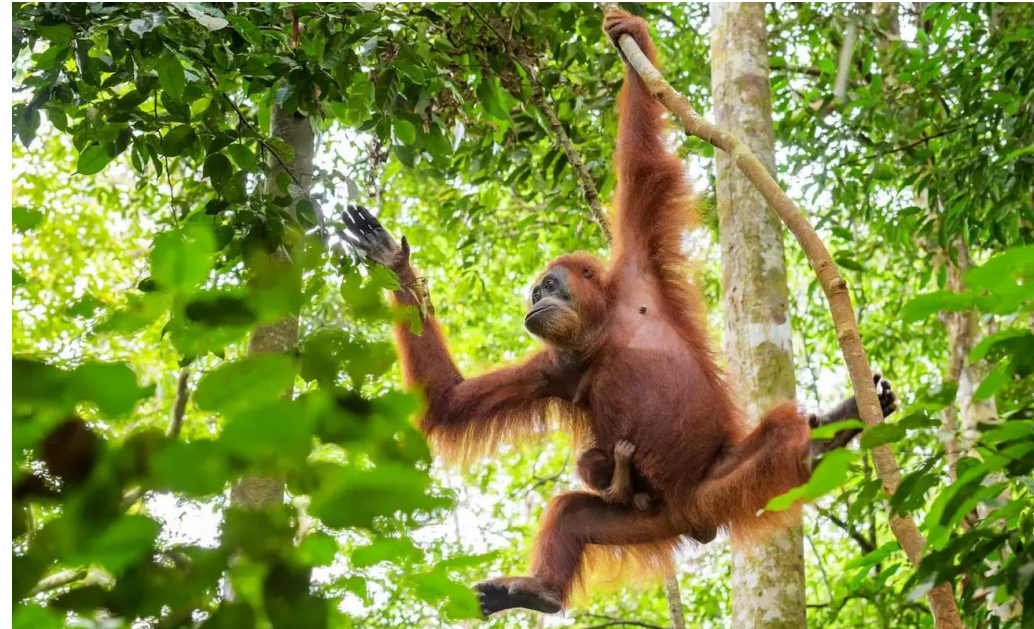


Image: Orangutans are great apes native to the rainforests of Indonesia and Malaysia, and one of the most [critically endangered](#) species in the world today.

Non-governmental organizations (NGOs) are crucial participants in the conservation of nature financing due to their pivotal role in championing conservation efforts and helping to shape the nature ecosystem.

In particular, Conservation International brings invaluable expertise and experience in biodiversity protection, sustainable development, and ecosystem restoration, providing a robust scientific and practical foundation for nature finance initiatives.

Their on-the-ground insights and extensive networks enable the identification of impactful projects and the fostering of collaborations across sectors.

As trusted voices in the conservation community, they help align financial flows with environmental goals, driving the creation of resilient and thriving natural ecosystems that benefit both nature and humanity.



NGOs often work at the intersection of government, community, and the private sector and can play an important role in convening these stakeholders to design and create mechanisms that channel capital toward shared climate, biodiversity, and development goals in a more effective manner. **Planning and decision-making on nature and development often occur in silos and there is a need and opportunity to better integrate and harmonize nature-related outcomes at multiple levels, including as part of broader national development plans and roadmaps.**

We should consider opportunities to build the absorptive capacity of institutions at all levels to access and deploy resources toward nature-positive investments. This includes governments, private actors and civil society organizations with 10 people to larger NGOs like ourselves that exist within these regions.

There aren't enough real conversations being had about how we bring these pieces together to ensure that we have the modalities, mechanisms, and people who can help shape where those flows of financing are going so that they have actual impact. That's what is exciting about today's dialogue – it's bringing together these two worlds.”

Janice-Renee Yoshioka
Vice President, Sustainable Finance
Conversation International (CI)

04

Biodiversity Hotspots: Base to Inspire Ideas for Financial Solutions and Opportunities



Image: Three vulture species in Asia were destined for extinction in less than a decade, a catastrophe unprecedented since the loss of billions of passenger pigeons in the last century and from the mid-1990s, vulture populations throughout South Asia crashed. It was discovered through forensic investigations that an inexpensive, readily-available drug called diclofenac sodium had been introduced in the region for treating sick cattle. Consuming even small traces of diclofenac in cattle carcasses could cause rapid kidney failure in vultures.

To gain a deeper appreciation for nature finance opportunities from existing projects, the April roundtable participants split into three breakout groups, each diving into uniquely rich biodiversity hotspots in the region:

- Mantalingahan, Philippines;
- Riau, Indonesia; and
- Tangalan, Philippines.

Each of the three NbS projects have ambitions to protect and/or restore the biodiversity hotspots, provide ecosystem services and have existing effective revenue-generating strategies. The groups explored these as a foundation for discussion to promote the expansion of nature-positive financing.

These hotspots were chosen to provide a balanced perspective on diverse habitats and ecosystem services, as well as the different financing strategies developed for each project.

1 Mantalingahan, Philippines

- The most vital biodiversity area in the Philippines is the 120,457-hectare Mount Mantalingahan Protected Landscape⁷ (MMPL) that is located near the southern tip of the island of Palawan.
- The MMPL is a vital habitat for more than 1,000 plant and animal species – 10% of which are threatened.

2 Riau, Indonesia

- The Restorasi Ekosistem Riau⁸ (RER) initiative is located on Sumatra's eastern coastline.
- The RER comprises 150,693 hectares of forest situated in two areas. 130,095 hectares are located at the heart of a 344,573-hectare forest block on the Kampar Peninsula, while another 20,599 hectares are located on the nearby Padang Island.

3 Tangalan, Philippines

- The “Coral Triangle”⁹ spans the Philippines, Indonesia, Malaysia, Papua New Guinea, Timor-Leste, and the Solomon Islands.
- It is home to three-quarters of the world's coral species.
- Integrated Approach for Coral Reef Conservation and Rehabilitation (InCORE™) is a coral restoration technology project that focuses on the coastal area of Tangalan in Aklan Province in the Philippines.

	MANTALINGAHAN, PHILIPPINES	RIAU, INDONESIA	TANGALAN, PHILIPPINES
Ecosystem Services	<ul style="list-style-type: none"> The MMPL is a critical watershed for 200,000 people¹⁰. It provides ecosystem services valued at USD 5.5 billion, of which USD 1.4 billion lies in eco-tourism. Home to over 100 threatened species. 70% of the area's forest cover is intact, protecting existing biodiversity. 	<ul style="list-style-type: none"> Riau is a crucial province for agricultural commodity production: approximately 2.5 million hectares of oil palm and 2 million hectares of pulp and paper¹¹. The RER islands are mostly composed of tropical peat swamp forest, which stores vast amounts of carbon. RER provides essential resources for local communities, from fish to medicinal plants. Biodiversity surveys reveal a total of 846 plant and animal species¹². Many of these are considered critically endangered. 	<ul style="list-style-type: none"> The Coral Triangle is home to 76% of global coral species and 37% of coral reef fish¹³. Over 100 million people rely on marine ecosystems within the Triangle for their livelihoods.
Threats	<p>Illegal logging, wildlife poaching, conversion to agricultural land, mangrove loss and unsustainable mining all threaten the MMPL's biodiversity.</p>	<p>Peatland degradation is a key threat for RER. This includes drainage and burning of peatlands, which contribute to fires, transboundary air pollution, and greenhouse gas emissions.</p>	<p>Coral reefs are in danger due to coastal developments, overfishing, and mass coral bleaching events caused by increased ocean temperatures linked to global warming.</p>
Nature-Based Project Details	<p>With the support of Conservation International, over 120,000 hectares of this mountain range became the largest terrestrial protected area in Palawan.</p> <p>Key benefits of the project:</p> <ul style="list-style-type: none"> Legal protection of watersheds. Increased patrolling and surveillance. Enabling indigenous communities to protect their natural resources through conservation agreements. A long-term sustainable financing mechanism in the form of a trust fund. 	<p>Established in 2013 by Asia Pacific Resources International Limited (APRIL), a member of the RGE group of companies, with support from Fauna & Flora International, the RER was expanded to 150,000 hectares in 2015.</p> <p>RER is one of the largest private-sector-funded peatland restoration programs in SEA. Key benefits:</p> <ul style="list-style-type: none"> Biodiversity surveys monitoring plant and animal life show an increase in species. Climate mitigation through peatland carbon sequestration at 10 times higher levels than soil. Hydrological restoration across the RER's 39 canal systems, with the goal of restoring hydrological balance within normal seasonal fluctuation. Farming and forest cover restoration through community awareness and assisted natural regeneration, as well as tree planting. The RER is protected by APRIL's fiber plantations, which form a barrier to potential threats such as illegal logging and fire hazards. They also subsidize the project's peatland conservation efforts, complemented by a USD 100 million, ten-year shareholder pledge. 	<p>The Kajima Corporation, in partnership with the Tokyo Institute of Technology and the University of the Philippines Visayas, has launched InCORE™.</p> <p>The InCORE pilot project in Tangalan, Aklan is part of Asian Development Bank's Technology Innovation Challenge financed by High-Level Technology Fund with support from the Government of Japan.</p> <p>It includes Kajima's Coral Net™ rehabilitation technology, which enables more stable rehabilitation than coral transplantation methods. The net will be installed based on environmental assessment in collaboration with local stakeholders.</p> <p>The project aims to identify the causes of coral reef degradation, select suitable locations for coral rehabilitation, and carry out monitoring surveys in collaboration with the local government. They will then propose suitable measures to improve environmental conditions to enhance coral rehabilitation.</p>

05

Nature-Positive Financing Challenges, Opportunities, and Solutions

- **Mantalingahan**, Philippines
- **Riau**, Indonesia
- **Tangalan**, Philippines



1 MANTALINGAHAN, PHILIPPINES

The MMPL discussion spotlights the possibility of leveraging carbon and biodiversity credits to stabilise nature conservation projects by paying landowners to maintain their ecosystems. This, in turn, ensures capital flows into local communities, bolsters livelihoods, and enables an equitable transition.

In addressing the intricacies of funding nature conservation initiatives, the group's experts underscored the necessity to fully understand the complexities of the relevant physical, political, and financial landscape, particularly regarding protected reserves.

Long-term commitments from project sponsors, over 20 years or more, are required to enable tangible change.

Disclosure plays a pivotal role as well. TNFD has created the structure for consistency and credibility in disclosure, and the International Finance Corporation (IFC) has helped to develop a Biodiversity Finance Reference Guide¹⁴.



Image: More than [1,300 species](#) of birds are found in Southeast Asia.

Key revenue-generating models discussed include:

■ Carbon Markets

Carbon credits provide forward revenue streams for NbS by monetizing activities like reforestation and sustainable land management, as well as incentivizing the preservation and restoration of natural ecosystems while addressing climate change.

■ Management of Ecosystem Services

Provide a revenue-generating model for NbS through practical examples like charging for water purification services provided by wetlands and introducing eco-tourism fees for maintaining biodiversity-rich areas. These practices monetize the benefits of sustainable land use, incentivizing the conservation and restoration of natural resources while generating financial returns. They also strongly benefit local communities who have relied on these ecosystems for centuries, supporting their livelihoods and promoting sustainable development.

Challenges include:

- Aligning projects with suitable investors and sponsors.
- Navigating scope, measurement, and accounting of biodiversity credits.
- Addressing opacity of price signals and capturing co-benefits in verified carbon credits.
- Local regulatory and municipal level challenges.
- Bankability challenge - despite the wide range of ecosystem services, individual projects often generate minimal revenues unless aggregated.
- Aggregating multiple ecosystem services to increase profitability for a discrete financing period.
- Coordination efforts are often challenging and must be managed carefully to avoid creating conflicts with local communities who have long benefited from these ecosystem services.

CI's Janice-Renee Yoshioka explains, *"The question we're grappling with is: how much value is gained out of bundling different benefits streams beyond carbon? Would it be more beneficial to disaggregate them and sell them as different benefit streams?"*

In this case, we need to realise that there are multiple ecosystem services that may currently not be priced into a carbon credit.

Off-takers care about the overall narrative but may not necessarily want to pay more for the water that's being provided, for example. This is where a more integrated or multifaceted approach might be interesting to explore with the local communities negotiating these bilateral credit agreements."

To add to this, the wide variety of nature-based agreements complicate the valuation of investments, emphasising the need for NbS initiatives, taking community and ecological conscientious scaling dynamics into account.

From a financing perspective, the market needs to develop a replicable process and structure, even when NbS projects differ, before nature financing can truly begin to scale.

Proposed solutions include:

- **Tokenizing the credits** generated by specific geographical areas.
- Establishing clear and **transparent regulatory frameworks** alongside international cooperation on carbon pricing mechanisms.
- Investing in **robust monitoring systems** and fostering stakeholder engagement.
- **Cooperating with NGOs** to establish robust project management frameworks that facilitate the identification of synergies across varied ecosystem services.
- **Innovative blended finance models** combining long-term environmental service investment with first-loss acceptance to guarantee carbon off-take for investors.
- **Localized financing**, such as municipal bonds with more attractive credit.

By tokenizing geographical areas to crystallize carbon credits, with biodiversity credits emerging later, an asset is formed, and the process of creating a market begins, which can lead to a secure long-term project, including continual capital flows to the community. Ultimately, through this mechanism, the economic value of the conservation land increases exponentially and becomes real.

An important element for the success of this mechanism is reputation. As one participant in the discussion stated, *"Ultimately, brand is important. Most larger players want to have pride in standing behind a project. In fact, that's their priority. Another crucial aspect is how these projects are reported – there is value professional and transparent reporting. While I believe what is achieved on the ground is critical, it is also important to recognize that accurate and credible reporting plays a significant role in building trust with investors and stakeholders."*

Blended finance was put forward as a solution. However, it was clear through the discussion the need to identify the risks and have a sponsor to bear the first loss for the project.

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By leveraging public and private investments, blended finance is imperative in bridging the funding gap for nature-based solutions and ecosystem services.

At SMBC, we understand the role blended finance continues to play in Southeast Asia's energy transition.

However, to tackle more complex nature-positive initiatives we need to further innovate finance structures to de-risk highly interconnected challenges”

Priya Bellino

Head of Sustainability Solutions Group APAC
SMBC

NGOs can also develop platforms enabling scalability by creating single investment instruments for investors and financial institutions which aggregate several projects by leveraging their local insights and relationships. Participants emphasized that, for long-term success in any NbS project, it is essential for developers to ensure a portion of the funds are attributed to local communities. NGOs can play a role, ensuring that the use of proceeds is transparent and that community interests are safeguarded.

Municipal bonds were also proposed as a channel for funding sustainable development, leveraging local municipalities' knowledge, government alignment and risk profile.

The role of carbon markets and financial institutions

Carbon markets play a pivotal role in fostering NbS by providing essential infrastructure, verification and risk management. Financial institutions can complement robust carbon markets through financing of carbon assets, advisory services, being a market maker and hedging risk through trading platforms. Importantly, financial institutions can support innovation by engaging with customers, advising businesses on reducing carbon footprints, ensuring alignment to industry best practices or regulatory standards and providing sustainable finance solutions. By acting as market makers, financiers build liquidity in primary and secondary markets, and their educational efforts help raise awareness and understanding of carbon markets, ultimately supporting the transition to a low-carbon economy.

The Mount Mantalingahan forests are valued at USD 5.5 billion¹⁵ in ecosystem services. Proper management and valuation of these services, along with leveraging synergies within the ecosystem, can create viable revenue streams. This strengthens the business case for larger financial institutions to provide capital for conservation initiatives, demonstrating the economic viability of investing in environmental preservation.

Financial institutions working together with NGOs and local governments can facilitate blended finance models, combining public and private investments to de-risk projects, and promote carbon credits and payments for ecosystem services to create revenue streams.

Notable international examples

In 2021, the European Investment Bank (EIB) committed to support the Great Green Wall initiative¹⁶, aiming to combat desertification and restore degraded land across the Sahel region in Africa.

This funding supports reforestation, agroforestry, and water management projects, enhancing biodiversity and improving the livelihoods of millions in the region.

2 RIAU, INDONESIA

The RER project's success in peatland forest regeneration highlights the potential for habitat restoration with little intervention beyond protection from urban or agricultural encroachment and illegal activity.

Lucita Jasmin, Group Director of Sustainability at Royal Golden Eagle (RGE), shared her insights of the RER, an area twice the size of Singapore. By protecting the forest, we are allowing it to rest and recover, while supporting it with assisted natural regeneration where needed.

However, it also takes proactive management to ensure that nature is left alone. It was emphasized that it is critical to secure the proper context-specific knowledge and local partnerships for NbS projects to succeed.

Participants concurred that it is essential to look at conservation and restoration efforts holistically, taking into consideration the entire landscape and interconnectedness of ecosystems, communities, and businesses. The need for local and international collaboration and alignment was also emphasized, with the final comment being, "It is a coalition of the willing – you need the right partners."

Key revenue-generating models discussed include:

Alternative Business Models which align economic incentives with environmental stewardship, benefiting both nature and local communities. Examples include:

- i. **Production-Protection**
Integrate production forestry and conservation on the landscape where the revenue generated from sustainably managed tree plantations finances the conservation activities. This can be complemented by carbon credits, eco-tourism, and sustainable use of non-timber forest products in the conservation areas.
- ii. **Regenerative Agriculture**
Uses practices like crop rotation and agroforestry to enhance soil health and biodiversity, allowing farmers to sell carbon credits and reduce costs.

Challenges include:

- Alternative business models like regenerative agriculture demands specialised expertise. Furthermore, regenerative agriculture may not immediately promise higher profitability compared with mainstream production methods. Hence, significant investments in both expertise and financial incentives are necessary to create scale.
- Complexities in measurement and certification, along with the need for better supply chain integration and consumer demand, further complicate widespread adoption.
- Community involvement is necessary to create solutions with the right economic incentives and training to support buy-in and development.

Lucita Jasmin of RGE shared "*In this RER model, there is long-term certainty of funding because it has been integrated into the business. We have introduced a self-tax for conservation where we allocate US\$1 to a conservation fund for every ton of wood that we bring to the mill. This gives us an average of US\$15 million per year to spend on conservation initiatives and partnerships. Most other conservation programs in the area are run on the traditional funding model, which has always been grants from donors. That does not come with long-term certainty and, of course, it comes with its own conditions.*"

"The challenge lies in identifying viable business models which enable conservation efforts to be self-generating."

Policy constraints pose further hurdles, with some markets requiring compliance with local standards that may not yet align with globally recognized frameworks. Participants felt these constraints stymied the financial mobilization needed for environmental projects.

Proposed solutions include:

In the case of Regenerative Agriculture:

- Investing in research and development (R&D) and comprehensive training programs. This is crucial to fostering the necessary skills for alternative business models.
- Exploring avenues including carbon credit generation offering an additional revenue stream.
- Initial investments may result in marginal losses or minimal revenues before business models achieve scalability and profitability.
- Integrating standard lending mechanisms with the implementation of such models could lead to substantial discounts and reduced funding costs, further incentivizing adoption.
- Coordinating efforts from multiple stakeholders to overcome measurement and certification.

In the case of Production-Protection model:

- Encourage the adoption of this proven business model across the forestry and agriculture sectors. This not only raises awareness but also provides a roadmap for implementation, helping mitigate concerns about potential risks or costs associated with adopting a production-protection approach.
- Introduction of financial mechanisms such as a conservation tax to ensure consistent funding for conservation effort and maintaining long-term investment.

Establish production-linked funding mechanisms

APRIL declared a commitment of USD 100 million¹⁷ for RER's first 10 years. By the end of 2020, they had increased their commitment by investing USD 1 for every ton of harvested fiber annually for landscape conservation and restoration¹⁸. This production-linked funding mechanism bolsters conservation efforts, advances NGO partnerships, and supports local communities. At the same time, APRIL adopts the Production-Protection model of plantation, committing a one-for-one goal of conserving one hectare of forest for every hectare of plantation, where the revenues from the plantation support funding of the conservation initiatives.

Link to carbon credit schemes compliant with local standards

RER has also developed a carbon project based on Verra standards. The verified project could potentially generate carbon revenue with proceeds being funneled back into conservation, suggesting a path for NGOs to create similar enduring, self-sufficient models.

Also, despite localized restrictions on carbon trading in Indonesia and controversy around offsetting, participants feel confident in the market's trajectory.



2026 and 2027 will be a confluence of a lot of things. One of them is international aviation and requirements for Sustainable Aviation Fuel (SAF). The problem is that it's going to be decades before there is enough SAF to satisfy, for example, the 320 billion liters of fuel a year for Southeast Asia alone. At the same time, you have the combination of listed and unlisted companies that have to report in 2026 for CSRD, which is going to mandate Scope 3. When businesses report on Scope 3, they will have to look at the carbon market. These and other factors are going to come together to produce an unprecedented demand for carbon credits.”

Thomas McMahon

Co-founder
Air Exchange

Scalability of regenerative agriculture practices

Alongside the RER case study, this group's conversation covered opportunities for regenerative agriculture as a source of carbon and biodiversity credits aided by innovative financing models. **Patti Chu, Head of Impact Investments at Silverstrand Capital**, explained how their organization has been an anchor investor in a dedicated fund focused on transitioning farmers to regenerative agricultural practices. These solutions include offering flexible loans, technical assistance, capacity building, and support in obtaining regenerative organic certification to enable access to premium markets.

The initiative is complemented by philanthropic capital, which funds the baseline measurements and monitoring for results that farmers usually cannot afford. The project is already seeing returns from farmers, indicating early signs of success and bankability for the model.

Funding for regenerative agriculture could potentially be even more straightforward than the RER and other NbS financing models. It was noted that unlike complex and detailed habitat restoration initiatives, regenerative agriculture has global application; models can be replicated and scaled, and funds can be aggregated to enable streamlined investment.

“

The investment is not simply providing finance, but also offers farmers technical assistance, paired with linkages to corporate market offtakers to understand how to transition.

We designed this vehicle in a holistic way to address the main challenges faced by farmers from end to end. ”

Patti Chu
Head of Impact Investments
Silverstrand Capital



Image: Critically Endangered – The remaining population of Sumatran tigers uniquely found in Indonesia are estimated to be fewer than hundreds.

The role of Financial Institutions

Financial institutions have the capacity to offer funding options like sustainability-linked loans, incorporating Key Performance Indicators (KPIs) that incentivize Production-Protection models. While these funds can be utilized for general corporate purposes by agriculture companies, without direct allocation to biodiversity initiatives, they still benefit from reduced borrowing costs. As companies enhance their Production-Protection models to meet these KPIs, they gain financial advantages, illustrating how aligning sustainability goals with financial incentives can drive positive change.

Alternatively, financial institutions can enter the market indirectly through equity and debt financing to investment vehicles such as Silverstrand Capital, who have access and visibility of specific technologies and opportunities.

Notable international examples

Triodos Bank, in partnership with the Duchy Originals Future Farming Programme¹⁹, supports sustainable and organic farming in the UK by providing financial support, including grants and loans, and advisory services to farmers. The program funds pilot projects and collaborates with research institutions to advance sustainable agriculture practices.

For example, it financed the conversion of a traditional dairy farm to organic, enhancing environmental practices and accessing premium markets, and supported an agroforestry initiative that integrated trees into farming systems, boosting biodiversity and providing additional revenue streams.

3 TANGALAN, PHILIPPINES

InCORE™ illustrates the opportunity for businesses to leverage learnings from nature-positive R&D to develop consultancy capabilities, offering a new service avenue for the originator and/or investor.

Coral reefs, covering less than 0.1% of the ocean floor, are crucial for marine biodiversity, hosting around 25% of all marine species²⁰. Since the 1970s, about 50% of the world's coral reefs have been lost²¹, and up to 90% could be severely degraded by 2050 if current trends continue²². The natural recovery of coral reefs is too slow to counteract these rapid losses, necessitating new restoration technologies like coral nurseries, micro fragmentation, Biorock and 3D printing of reef structures.

These technologies are essential to boost coral resilience, speed up recovery, and maintain the biodiversity and ecosystem services that coral reefs provide.



Image: Diver with coral reefs, some of the most diverse ecosystems on the planet.

Key revenue-generating models discussed include:

- **Financing Technology and Innovation** as technological innovation is essential for revenue-generating NbS by enhancing efficiency and scalability. For example, coral reef restoration technologies like micro fragmentation²³ and 3D printing²⁴ accelerate coral growth and create structures for coral attachment. These innovations boost eco-tourism and local fisheries, generating revenue while promoting environmental sustainability.

Challenges include:

- Technical challenges and impact monitoring and assessment.
- Assessing and measuring the impact of these technologies.

The group identified several obstacles in the initiative, primarily due to its ambitious scope and the short operation timeframe of just 18 months. One of the main hurdles is the need for continuous monitoring and evaluation of the marine environment after the installation of restoration devices. This is crucial for assessing the project's impact on coral growth and marine biodiversity. Additionally, establishing a clear problem statement is essential for attracting future investment. Also, like other biodiversity initiatives, the project lacks a precise index to measure and monetize its impact effectively.

One participant expressed urgent need to address this common problem, saying, *“As many people pointed out, not only for marine projects but all biodiversity, we need a new clear index we can share. That is one of the issues for monetization. To clearly establish impact, you need a baseline. To show how the project metrics were measured, and where your intervention helped achieve impact. That quantification of impact evidence is important in order to reliably fund any project.”*

Proposed solutions include:

- Engaging with local stakeholders, especially fishing communities, to gather unique, previously undocumented insights for a robust coral restoration plan using InCORE™ technology.
- Developing a strategic problem statement addressing and quantifying coral degradation. This is essential to illustrate the magnitude of impact, consider diverse views, and nurture potential partnerships.
- Scaling the project and attracting larger investment with reference on success cases. This could also lead to third-party verification of the positive impact that the project is generating from a biodiversity restoration perspective.
- Accessing blue finance as an investable asset class which includes technology solutions, and leveraging prevailing standards such as the IFC's Guidelines for Blue Finance or UNEPFI's Sustainable Blue Economy Finance Principles.

Developing a strategic problem statement addressing and quantifying coral degradation is essential to illustrate the magnitude of impact, consider diverse views, and nurture potential partnerships. Utilizing established frameworks and aligning with governmental and private entities in Japan, the Philippines, and Australia are also recommended by the group.

The role of Financial Institutions

Financial institutions can significantly promote the development of key man-made technologies that increase the success rate of NbS considerably by providing targeted funding through green loans and blue finance. This includes projects such as the expansion of coral reef restoration.

They can create sustainable investment funds to channel private capital into R&D projects and develop insurance products to mitigate risks, making investments more secure and appealing. Additionally, financial institutions can offer technical assistance and advisory services, support public-private partnerships, and utilize blended finance models to combine public, private, and philanthropic funds, reducing investment risks and enabling larger-scale projects.

Notable international examples

Credit Suisse pioneered a sovereign Blue Bond aimed at supporting marine conservation efforts globally. The Seychelles Blue Bond²⁷, issued in 2018 by the Seychelles government raised USD 15 million, with proceeds earmarked for financing marine conservation and climate adaptation projects in the Seychelles. The bond's key uses of proceeds are to promote sustainable fisheries, protect marine biodiversity, and enhance the resilience of coastal communities.

06

Key Discussion Outcomes



Image: Butterfly – In an international research effort led by scientists, almost [half of butterfly species](#) in Singapore have disappeared, also suggesting that tropical insects may be suffering more than other groups from human activity.

Following the breakout sessions, all participants reconvened at the main roundtable, and it was clear that the revenue-generating models can be classified into four major categories. The following pages summarize the challenges and proposed solutions discussed for each category, along with SMBC's perspective on how financial institutions can contribute to promoting these models. The categories discussed are:

1 Carbon Markets

Provide a revenue-generating model for NbS by monetizing activities including:

- Reforestation and sustainable land management.
- Incentivizing the preservation and restoration of natural ecosystems while addressing climate change.

2 Management of Ecosystem Services

Provides a revenue-generating model for NbS through practical examples like charging for water purification services provided by wetlands and eco-tourism fees for maintaining biodiversity-rich areas.

- These practices **monetize the benefits** of sustainable land use, incentivizing the conservation and restoration of natural resources while generating financial returns.
- They also strongly **benefit local communities** who have relied on these ecosystems for centuries, supporting their livelihoods and promoting sustainable development.

3 Alternative Business Models

These models **align economic incentives with environmental stewardship**, benefiting both nature and local communities. Examples include:

- **Production-Protection:** Integrate production forestry and conservation on the landscape where the revenue generated from sustainably managed tree plantations finances the conservation activities. This can be complemented by carbon credits, eco-tourism, and sustainable use of non-timber forest products in the conservation areas.
- **Regenerative Agriculture:** Uses practices like crop rotation and agroforestry to enhance soil health and biodiversity, allowing farmers to sell carbon credits and reduce costs.

4 Technology and Innovation

Essential for revenue-generating NbS by enhancing efficiency and scalability.

- **Technological advancements:** Improve biodiversity outcomes through implementation of proven technologies resulting in greater project efficiency and faster realization of ecosystem benefits. Improved ecosystems resilience utilising less intrusive solutions supporting long-term ecological balance.
- **Supporting R&D:** Investing in early design, management and optimization of NbS to strengthen the effectiveness and precision of project delivery, impact and outcomes. Early involvement supports effective decision making helping to drive economic viability and environmental stability.

1 Carbon Markets



According to BloombergNEF, although 2023 set a new annual demand record, the increase was only 2% from 2021. The market is currently oversupplied by nearly 50%, and many companies have stopped using offsets due to criticism and rising prices. If elastic demand persists with rising prices, companies might purchase 1 billion offsets annually by 2030 and 2.5 billion by 2050²⁸.

Financial institutions such as banks, brokers, and investment firms are crucial, acting as facilitators, intermediaries, and liquidity providers, reducing market opacity, creating transparent pricing, and managing risks.

While demand for offsetting is projected to grow, carbon credits also offer investment opportunities due to rising carbon costs and potential for portfolio diversification.

With significant regional variations in carbon prices, there is considerable potential for high-quality carbon credits to increase in value. Voluntary carbon credits could become a distinct asset class, allowing financial institutions to offer range of investment solutions.

Furthermore, new funds might invest in real assets that generate carbon credits, and banks may expand financing for such projects. As voluntary carbon markets mature, financial services should explore opportunities in Asia's expanding Voluntary Carbon Markets beyond offsetting.

2 Management of Ecosystem Services



Proper management of ecosystem services can generate significant revenues through various means.

- Healthy watersheds improve water quality, monetized through usage fees and payments for ecosystem services schemes.
- Sustainable agriculture and sustainable forestry practices produce high-value products.
- Biodiversity offsets, recreational services, and the protective benefits of ecosystems like mangroves and coral reefs also create financial returns. Carbon sequestration projects allow the sale of carbon credits, while natural areas attract tourists, creating income from park fees and hospitality services.
- Additionally, ecosystems provide genetic materials for pharmaceuticals, further contributing to economic opportunities.

Financial institutions can support these initiatives by increasing visibility and dissemination of NbS and offering green, blue and sustainability linked financing solutions with performance linked to implementation of best-in-class practices.

Financial institutions can also support forming crucial strategic partnerships with NGOs and governmental authorities.

3 Alternative business models



Existing essential businesses for the economy can adopt more efficient and environmentally beneficial "alternative" methods, which do not require technological innovation. Examples include:

- The "Production-Protection Model" established by RGE aims to integrate sustainable practices that protect forests, peatlands, and human rights while promoting responsible production in its operations.
- "Regenerative agriculture" refers to farming and grazing practices that focus on restoring and enhancing soil health, biodiversity, and ecosystem services, aiming to improve the overall resilience and productivity of agricultural systems.

Financial institutions can support the adoption of alternative business models through sustainability-linked instruments tied to metrics to promote expansion of protected areas or production areas with regenerative models deployed.

Additionally, they can engage in equity investments in funds dedicated to promoting regenerative agriculture practices.

4 Technology and Innovation



Technology and Innovation play pivotal roles in enhancing the effectiveness and scalability of nature-based solutions (NbS). Coral reef restoration represents a key example.

These innovations help in improving biodiversity outcomes and increasing ecosystems resilience.

Financial institutions can support these technological advancements in several ways.

- Firstly, they can provide funding and investment for research and development of these technologies, enabling scientists and innovators to refine and scale their solutions.
- Secondly, financial institutions can establish investment vehicles such as venture capital, impact investments, and grants specifically targeted at technology driven NbS projects like coral reef restoration.
- Thirdly, they can facilitate partnerships between technology providers, conservation organizations, and local communities to ensure the effective deployment and adoption of these innovations on the ground.
- Lastly, financial institutions can incorporate these technological advancements into their risk assessments and valuation models, thereby incentivizing more investments in sustainable and technology enabled NbS initiatives.

07

Banking on Nature: Financial Institutions as Catalysts for Growth in Nature-based Solutions



Image: Roundtable participants at SMBC's Nature Finance Pre-launch Roundtable Discussion (Sep 2024)

In continuation of our efforts to explore innovative, revenue generating models for scaling NbS, SMBC hosted a follow-up roundtable in September 2024, reconvening the same group of participants to further build on the initial discussions.

The objective of this session was to delve deeper into the critical role financial institutions can play in supporting and advancing these models. Specifically, the discussion focused on identifying actionable steps for the finance sector to mobilise the necessary resources to help overcome current barriers and scale NbS across the Asia-Pacific region.

1 Technology and Innovation in Monitoring

Identified as a cornerstone for scaling NbS, technologies like flux towers and satellite monitoring are revolutionizing how carbon and other ecosystem benefits are measured. Financial institutions have an opportunity to fund the deployment of these technologies through targeted investments and by creating financial products that support long-term monitoring efforts.

“

The absence of a streamlined, technology-agnostic financing framework hinders fundraising for NbS projects. This fragmentation often results in long and arduous fundraising processes, which act as a barrier to entry.”

Saurav J Bansal
CEO
GAIT Global



2 Financial Institutions as Enablers

Financial institutions are uniquely positioned to mobilize capital to support NbS at scale. To do so effectively, they must design financial products that bridge the gap between conservation goals and market-driven returns.

Financial institutions should lead the development of a blueprint for NbS financing, linked to traditional debt and equity financing structures, that helps investors better understand risk and deployment timelines. Financial institutions could:

- Create regional working groups with experienced Project Developers and ecosystem service providers that actively promote market interest for the region's NbS potential.
- Connect ecosystem service providers with corporate clients interested in exploring and developing NbS and offer financing solutions for the corporates to trial/pilot NbS during a transition period.

3 Catalysing Investments in regions with Ecologically Rich, High Potential Regions

Some biodiversity critical regions with high potential for NbS, in ASEAN such as Kalimantan, the Mekong Delta, and the South Pacific Islands, have faced headwinds from traditional investment given prevailing financial risk considerations. This can be compounded by higher-risk investments like NbS. Addressing this challenge requires innovation in effective de-risking strategies to support the long-term ecological potential and the socio-economic gains.

4 Redefining risk for Nature-based Solutions

A key emerging barrier for NbS is the misalignment between traditional financial models and the nascent risk-return profiles of NbS projects. This stems from a lack of historical performance data that creates ambiguity in accurately assessing and pricing NbS project risks. Financial institutions can utilise a plethora of emerging nature data including TNFD disclosures to adjust credit risk methodologies to account for long-term ecological risks and gains, which may be qualitative or absent in traditional capital market frameworks.

5 Standardization and Fungibility in Carbon Markets

The lack of benchmark pricing for nature-based credits is a barrier to adoption due to risk of fragmentation and lack of trust among investors. Financial institutions must play a central role in advocating for and supporting the development of harmonized global standards that would allow carbon credits from nature-based projects to be recognised as credible, tradable assets.



6 Promote Sustainable Practices through Alternative Business Models

Alternative business models such as a production-protection model offer commercial value while funding conservation. Financial institutions can support scaling these models through specific financing mechanisms such as provision of necessary capital and facilitating partnerships between conservation projects and private investors. For example, linked facilities with KPIs tied to conservation initiatives measured as a percentage of production capacity, could positively align financial performance and conservation goals.

7 Capacity Building and Knowledge Sharing

Education and capacity-building efforts need to match the speed of market demand. Financial institutions can help address existing knowledge gaps through supporting academic institutions with their curricula and training programs.



8 Embedding Region Specific Considerations

The Pacific Islands pose a unique challenge where global emissions contribution is only 0.03%²⁹ and in stark contrast to the region's vulnerability to climate change. Unlike larger markets such as Asia, where project scale and financial returns are more evident, the Pacific's smaller scale and geographical diversification makes it harder to attract traditional finance.

Saurav Bansal of GAIT Global recommends *“Pooling efforts by creating regional funds could help aggregate smaller projects, enabling economies of scale and facilitating more significant financial flows into climate-resilient projects. Furthermore, leveraging existing intergovernmental relationships, such as Japan's longstanding ties with Tonga, can foster increased private sector engagement and ensure that financial institutions support both environmental sustainability and the socio-economic resilience of Pacific Island nations.”*

The September 2024 roundtable emphasized the critical role of financial institutions in advancing Nature-based Solutions as both a sustainability imperative and a means to achieve long-term economic resilience.

To effectively promote Nature-based Solutions, it is essential to recognize that these initiatives cannot thrive through bilateral efforts alone. Instead, they require the active involvement of a diverse range of stakeholders, including conservationists, investment funds, technology providers, local and international regulators and corporations.

Financial institutions play a critical role not only in capital allocation but also in coordinating collaborative efforts among these groups.

By fostering collaboration, capital allocation and effectively advancing synergies between alternative business models and technological development, we can work towards a sustainable future with shared accountability and resilience.



08

SMBC Explores Innovative Nature-Financing Products and Investments



Image: Bees play a key role in maintaining biodiversity through pollination, which is critical for our survival. The Asian giant honey bee, *Apis dorsata*, which has the [unique ability](#) to forage during both the day and the night, is essential for the pollination of crops and trees which bloom at night, such as the dragon fruit.

Financial institutions are set to play a vital role in biodiversity restoration in SEA and globally. Through strategic partnerships and informed investments, we are developing financing solutions for our customers that bolster economic and environmental resilience.

“

By fostering collaborations with both public and private sectors to co-develop innovative financing solutions, SMBC endeavors to establish itself as a pioneer in driving innovation and fostering impactful nature restoration efforts.”

Masayuki Takanashi
Chief Sustainability Officer
SMBC Group



SMBC recognizes that mobilizing finance for nature-positive outcomes can offer new business opportunities and enable new capital flows.

Consequently, as a next strategic move, SMBC aims to broaden its array of nature-related financing initiatives by introducing nature-financing products specifically designated for projects aimed at valuing and conserving natural capital.

Furthermore, SMBC intends to explore potential investments in sustainable funds and consider allocating funds for R&D grants to support innovative technologies and solutions for nature conservation.

SMBC's latest NbS initiatives

On December 22, 2022, SMBC announced its **first forestry-related investment with The Reforestation Fund (TRF) in South America**³⁰. Managed by BTG Pactual Timberland Investment Group, TRF will plant trees for timber production and forest restoration, guided by Conservation International and certified by the Forest Stewardship Council. Reforestation efforts will generate carbon-removal credits to support decarbonisation. SMBC will provide financial support and carbon credits to clients, contributing to a decarbonised society through the “SMBC Group GREEN Innovator” initiative.

SMBC Group has established the “Finance Alliance for Nature-Positive Solutions (FANPS)”³¹ in collaboration with MS&AD Insurance Group Holdings, Inc., the Development Bank of Japan, and the Norinchukin Bank, with the aim of strengthening support for nature-positive efforts by businesses. FANPS will strengthen collaboration among four financial institutions to halt the loss of natural capital, including biodiversity, and lead it to the path of recovery through business activities. We also signed a joint research agreement with the National Institute for Environmental Studies and, with their scientific advice, have released a catalogue of technologies that contribute to a nature-positive impact, as well as a diagnostic tool to support corporate TNFD disclosures.

SMBC announced an investment agreement with the Eastwood Climate Smart Forestry Fund I³², managed by Eastwood Forests LLC, a subsidiary of Sumitomo Forestry in the United States. The Fund aims to purchase existing natural forests, primarily in North America, to enhance carbon sequestration, create carbon credits, and promote sustainable forest practices. SMBC also signed a Memorandum of Understanding with Sumitomo Forestry to develop new business in sustainability, focusing on forestry carbon credits and impact evaluation. As part of its commitment to “Fulfilled Growth”, SMBC Group prioritizes environmental initiatives alongside other social issues. They aim to expand the carbon credit market while conserving and restoring natural capital through investments like the Fund.

SMBC launched the “Natural Capital Management Promotion & Analysis Loan” in April 2024³³. SMBC and the Japan Research Institute (JRI) diagnose and analyze our customers' initiatives and information disclosure related to natural capital management, offering a loan product that provides feedback on future challenges, proposed measures, and case studies of initiatives. Through this loan, we support our clients' initial steps towards natural capital management and TNFD disclosure and contribute to the realization of a nature-positive future.

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List of Acronyms

ACX	AirCarbon Exchange
ADB	Asia Development Bank
APAC	Asia Pacific
APRIL	Asia Pacific Resources International Limited Group
CI	Conservation International
CSRD	Corporate Sustainability Reporting Directive
CSuO	Chief Sustainability Officer
EIB	European Investment Bank
FANPS	Finance Alliance for Nature-Positive Solutions
IFC	International Finance Corporation
InCORE™	Integrated Approach for Coral Reef Conservation and Rehabilitation
JRI	Japan Research Institute
KPI	Key Performance Indicator
MMPL	Mount Mantalingahan Protected Landscape
MPO	Managed Phase-Out of Coal-Fired Power
NbS	Nature-based Solutions
NGO	Non-governmental Organization
R&D	Research and development
RER	Restorasi Ekosistem Riau
RGE	Royal Golden Eagle
ROC	Regenerative Organic Certified
SAF	Sustainable Aviation Fuel
SEA	Southeast Asia
SMBC	Sumitomo Mitsui Banking Corporation
TNFD	Taskforce on Nature-Related Financial Disclosures
TRF	The Reforestation Fund

Contact Us

As we move forward, we invite all stakeholders and interested parties to connect with our team at SMBC to ideate, collaborate, and tackle these critical challenges together.

If you are keen to explore collaboration opportunities or provide feedback, please do not hesitate to reach out to us at SustainabilitySolutions-APAC@sg.smbc.co.jp.

For additional insights from SMBC, please [visit us here](#).



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