Finance for Biodiversity Foundation

Executive Summary

Integrating Nature Into Sovereign Debt Markets

Towards a New Sovereign Debt Nature Assessment Model

November 2025

Executive Summary

Context and Purpose

Nature loss represents one of the greatest systemic risks to the global economy, with over half of global GDP dependent on healthy ecosystems. From agricultural productivity and freshwater provision to coastal protection and pollination, ecosystem services underpin the very foundations of national economies. Yet sovereign debt markets, estimated at nearly USD 100 trillion, continue to overlook the importance of integrating nature-related risks. While climate considerations have started to influence sovereign ratings and investor decisions, biodiversity and ecosystem degradation — equally critical to economic stability — are rarely incorporated into debt assessments.

This omission creates a significant blind spot for investors, credit rating agencies, and policymakers. The erosion of biodiversity and ecosystem services undermines key macroeconomic fundamentals such as growth, exports, fiscal balances, and debt sustainability. For biodiversity-rich developing countries, which depend disproportionately on natural capital and ecosystem services, the implications are particularly acute. These countries face rising risks while also needing to attract private finance to deliver on the Kunming–Montreal Global Biodiversity Framework (GBF), which sets the global ambition to halt and reverse biodiversity loss by 2030.

In response to this gap and to start tackling this issue, in early 2025, the Finance for Biodiversity (FfB) Foundation convened a Sovereign Debt Working Group composed of various pioneering financial institutions and which was led by French asset management company, Amundi.

This effort produced a new Sovereign Debt Nature Assessment Model (contained herewith in this report) that provides systematic guidance for integrating nature-related risks and opportunities into sovereign debt analysis. This Model is the first step towards a broader Nature and Sovereign Debt Framework, which will feed into the Foundation's upcoming flagship Finance for Nature Positive (FfNP) programme.

Why Nature Matters for Sovereign Debt

The relationship between sovereign debt and nature is both material and systemic. Many economies and sectors, such as agriculture, forestry, fisheries, and tourism, depend directly on natural capital and ecosystem services to generate GDP, create employment, and secure exports. When ecosystems become degraded, governments are forced to spend more on disaster recovery, infrastructure protection, and ensuring food and water security, which reduces fiscal space. Emerging markets, often less economically diversified, are especially exposed, as they cannot easily absorb shocks linked to nature loss.

At the same time, investor perceptions are shifting. As nature-related risks become clearer, sovereigns that are perceived as vulnerable may face higher risk premiums, higher borrowing costs, and reduced market access. For example, overexploitation of fisheries or soil pollution that reduces agricultural productivity can directly threaten export revenues and foreign currency earnings, creating fiscal strain and raising default risk. Ignoring these drivers not only undermines debt sustainability but also weakens the ability of global finance to mobilise toward biodiversity goals.

Our Sovereign Debt Nature Assessment Model

Our new Sovereign Debt Nature Assessment Model puts forward an approach which captures both the financial materiality of nature loss — its impacts on macroeconomic stability and debt sustainability — and the impact materiality of countries' pressures on and contributions to biodiversity. It is not designed as a rating or index but as a practical tool for sovereign risk analysis, policy engagement, and capital allocation aligned to nature-related financial products and, potentially, more broadly aiming for nature-positive outcomes.

The Model incorporates 42 characteristics supported by publicly available indicators and datasets, enabling a robust yet practical approach. It is inspired by the OECD's State–Pressure–Response Framework and is structured around three pillars. The first pillar, State of Natural Capital, presents the extent, significance, and condition of ecosystems and species, and explores opportunities for protection and restoration. The second pillar, Socio-economic Activities, examines exposure to nature-related risks through the identification of economic sectors with high impacts and dependencies on nature, as well as the environmental pressures from human activities. The third pillar, on Governance, evaluates international commitments, regulations addressing drivers of nature loss, and committed resources for implementation capacity.

Application and Use

The Model is designed to serve multiple stakeholders. For financial institutions, it enhances risk screening by identifying sovereign exposure to nature loss, informing portfolio allocation, strengthening engagement strategies with issuers, and supporting the development of investment products such as nature-linked bonds. It will provide the basis for the development of a nature-positive criteria applicable to the sovereign debt asset class.

It also provides a means of compliance with emerging disclosure standards, such as the Taskforce on Nature-related Financial Disclosures (TNFD).

For sovereign issuers and policymakers, the Model offers clarity on what investors value and why. It enables national biodiversity strategies to be translated into financially operable terms, integrated into debt management strategies, and used to mobilise additional private capital. For NGOs and multilateral institutions, the Model strengthens advocacy by linking biodiversity directly to sovereign debt sustainability and highlights the need for enabling policy and market frameworks. It also aligns with multilateral development banks' commitments, such as their 2021 statement "Nature, People, and Planet".

> *"The Sovereign Debt Nature Assessment Model offers clarity on what investors value and why."*

Benefits and Impacts

Applying the Sovereign Debt Nature Assessment Model will deliver multiple benefits. It strengthens sovereign risk assessments by incorporating nature as a material driver of fiscal and macroeconomic stability. It helps channel resources towards countries that demonstrate effective stewardship of natural capital, while creating incentives for governments to adopt stronger biodiversity policies. It also catalyses funding towards nature-related investment opportunities and fosters richer dialogue between sovereign issuers, investors, and policymakers.

Furthermore, the Model promotes a whole-of-government approach to the nature-positive transition by encouraging better coordination among finance ministries, debt management offices, and environmental agencies. This would then help to align debt management with broader economic and sustainability goals.

What to Expect Next

Over the coming two years, the FfB Foundation will take the Model from concept to practice. This will include developing technical guidance, updating indicators and datasets, and producing case studies that demonstrate its application. The Foundation will use this content to support its policy engagements to ensure sovereign debt markets align with GBF targets. It will also leverage the Model to develop nature-positive criteria as part of its upcoming Finance for Nature Positive Programme, which will notably support financial institutions to identify, assess, and prioritise nature-related opportunities that contribute towards nature-positive outcomes.

By bridging finance and biodiversity, the Sovereign Nature Assessment Model lays the groundwork for systemic change in sovereign debt markets. It provides investors, issuers, and policymakers with a structured approach to account for nature in sovereign analysis, thereby improving financial stability while steering capital flows toward countries advancing a nature-positive economy. In doing so, it supports the global mission of halting and reversing biodiversity loss by 2030, ensuring that sovereign debt markets contribute to safeguarding both economic resilience and the ecosystems on which all economies depend.

Investor Testimonials

“While existing nature assessment models and framework focus primarily on corporate assets, there remains a critical gap in assessing sovereign assets on nature. Sovereign issuers also lack clear guidance on integrating national nature strategies into debt instruments. This focus group will bridge that gap and drive progress at the intersection of nature and sovereign debt.”

Gaëlle Blanchard, ESG Analyst – Sovereigns & Supra nationals at Amundi and Chair of the Sovereign Debt focus group

“As long-term investors, identifying and understanding nature-related investment risks and opportunities is critical. The output of this working group provides sovereign investors with essential tools to navigate this complex landscape.”

Paul Ruijs, Country Sustainability Specialist at Robeco

“Sovereign debt is a key asset class in our portfolio, and this framework helps deepen our understanding of nature-related impacts, dependencies, and risks. We look forward to exploring its potential to improve oversight and seeing practical examples and test cases.”

Kaboo Leung, Senior Responsible Investment Strategist at NN Group

"The connection between sovereign debt and nature remains underexplored. This Finance for Biodiversity initiative helps navigate the data jungle, offering reliable insights and a pathway to expand the share of portfolio assessed against biodiversity.”

Linda Seghezzi, VBV-Vorsorgekasse AG

Acknowledgements

The development of this Sovereign Debt Nature Assessment Model guidance is based on discussions and work undertaken by the members of the Sovereign Debt Working Group of the Finance for Biodiversity (FfB) Foundation during 2025. This Working Group has been coordinated by the FfB Foundation Secretariat along with the group's co-chair, Gaëlle Blanchard from Amundi.

Lead Authors

The lead authors and coordinators of this paper are:

- Nathalie Borgeaud - Sovereign Debt Consultant
- Natacha Boric – The FfB Foundation
- Chloe Hill – The FfB Foundation

Contributing Authors

The contributing authors of this paper are:

- Diane Roissard - The FfB Foundation
- Joana Colaço - The FfB Foundation

Working Group Members

We are grateful for the valuable discussions and contributions from the members of the FfB Sovereign Debt Working Group as mentioned, listed below, who have helped shape the content and outcome of this document:

- Clinton Adas – HSBC AM
- Gaëlle Blanchard – Amundi
- Jean-Francois Coppenolle – Aéma Groupe
- Marguerite Culot – Caisse des Dépôts Group
- Thomas Dillon – Aviva Investors
- Fanny Dieval – La Banque Postale
- Chris Hart – The Phoenix Group
- Philipp Kloucek – USS Pension
- Kaboo Leung – NN Group
- Gulnaz Magazova – SCOR
- Anne Sophie Musset – Macif
- Rebecca Ogg – Fidelity International
- Paul Ruijs – Robeco
- Linda Seghezzi – VBV-Vorsorgekasse
- Philippa Thornton – USS Pension
- Philippine Tissot – BPCE Assurances
- Arthur van Mansvelt – Achmea IM

Reviewers and Contributors

The following people have also contributed to the evolution of this report through conversations with the FfB team and through providing feedback during our internal consultation review process (June-August 2025):

- Elizabeth Aceituno – WWF US
- Marco Arlaud – UNDP BIOFIN
- Joshua Berger – BioInt
- Wijnand Broer – PBAF
- Julien Calas – AFD
- Arthur Campredon – CDC Biodiversite
- Geoffroy Dufay – Axa-Climate
- Florian Gallo – Axa-Climate
- Romie Goedicke – UNEP FI
- Chetan Hebbale – TNC
- Onno van den Heuvel – UNDP BIOFIN
- Lin Li – WWF International
- Ian Luby – TNC
- Sylvan Lutz – ASCOR, London School of Economics
- Julien Moussavi – LSEG
- Nicolas Poolen – WWF Finance Team
- Violette Pradere – CDC Biodiversite
- Jessica Smith - UNEP FI
- Elisabeth Vishnevskaja – UN PRI
- Thomas White – Oxford University
- Charlie Young – Green Bank Investments

If you would like to learn more about how to get involved (e.g. if your institution is keen to join the piloting phase), then please reach out to the FfB Foundation: info@financeforbiodiversity.org – we look forward to hearing from you!

Disclaimer

Finance for Biodiversity Foundation

info@financeforbiodiversity.org

Bluesky: @financeforbiodiversity.org

LinkedIn: Finance for Biodiversity

www.financeforbiodiversity.org