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Statement on Nature-Related Financial Risks

In April 2021, the NGFS [established a joint NGFS-INSPIRE Study Group](#) on Biodiversity and Financial Stability to develop a research-based assessment of the implications of biodiversity loss for central banks and supervisory authorities in delivering against their mandates.

NGFS Members carefully examined the three NGFS Occasional Papers¹ produced by the joint study group, namely:

- A [Vision Paper](#) published in June 2021, which sets out the links between biodiversity loss and the macroeconomic and financial systems;
- An [Interim Report](#) published in October 2021, which delves deeper into the challenges related to the assessment of such links and provides potential ways forward for central banks and financial supervisors to incorporate these insights in the exercise of their missions;
- A [Final Report](#) published in March 2022, which analyses different approaches to the design of nature-related scenarios, considers gaps in knowledge, sets out a research agenda, identifies near-term policy options, and makes recommendations for action by central bankers and financial supervisors to address financial risks associated with biodiversity loss and to support investments that are positive for the preservation of nature.

In light of this work, NGFS Members would like to make the following points:

1. **The scope of the NGFS covers the broader context of environmental risk analysis and environmentally sustainable development, even as its focus to-date has been on climate change.** In 2019, the [First NGFS Comprehensive Report 'A Call for Action'](#) acknowledged *"compelling reasons why the NGFS should also look at environmental risks,"* which it defined as *"risks posed by the exposure of financial firms and/or the financial sector to activities that may potentially cause or be affected by environmental degradation"*. NGFS technical documents have clarified that climate change itself is a source of environmental degradation and therefore, climate-related risks can be seen as a subset of broader environmental risks that may also include those associated with the loss of biodiversity and ecosystem services.²

¹ The views and opinions expressed in NGFS Occasional Papers do not necessarily represent those of the NGFS.

² See e.g. [NGFS Guide for Supervisors](#) published in May 2020 and the [Progress Report](#) on this Guide published in October 2021.

2. **While governments bear primary responsibility for addressing environmental damages such as biodiversity loss, the financial sector has an important complementary role.** Governments should introduce policies and regulations to discourage activities that harm biodiversity and remove subsidies that incentivise nature loss and harm the environment. Meanwhile, nature-blind financial flows can potentially aggravate environmental degradation. Failure to account for environmental impacts not only leads to an underestimation of nature-related financial risks but also to their amplification.
3. **There is increasing policy and industry focus on the role of the financial system in helping to slow, arrest, and eventually reverse biodiversity loss.** The Kunming Declaration, at COP15 of the Convention on Biological Diversity (CBD) in October 2021, emphasised the need to *“transform economic and financial systems”* and *“align all financial flows in support of the conservation and sustainable use of biodiversity”* (CBD, 2021). The G20 Sustainable Finance Roadmap (G20 SFWG, 2021) highlighted several priorities, including the integration of nature and biodiversity in future work on sustainable finance. Important efforts to improve disclosure are also underway³. In a few jurisdictions⁴, disclosure of biodiversity-related financial information has already, or is about to, become mandatory. The private sector is also taking initiatives to address these issues. It is important that central banks and financial supervisors keep track of these developments, assess their potential implications for financial institutions and the financial systems in their jurisdictions, and engage with relevant multilateral initiatives.
4. **On the basis of available scientific evidence, as summarised by the IPBES⁵ (2019) and reviewed by the NGFS-INSPIRE Study Group, the NGFS is of the view that nature-related risks, including those associated with biodiversity loss, could have significant macroeconomic implications, and that failure to account for, mitigate, and adapt to these implications is a source of risks for individual financial institutions as well as for financial stability.** Recent work on the notion of nature-related financial risks⁶ confirms that there is ground for considering the impacts and dependencies on nature, including biodiversity and ecosystems,⁷ as a source of material risk from a macroeconomic and financial stability perspective. The NGFS is therefore of the view that nature-related risks are relevant for central banks and supervisors: given the macroeconomic, macroprudential and microprudential materiality of nature-related financial risks, such risks should be adequately considered for the fulfilment of their mandates.

³ In particular, the establishment of the Taskforce on Nature-related Financial Disclosures (TNFD) and the development of sustainability disclosure standards by the International Sustainability Standards Board (ISSB).

⁴ Under Article 29 of the 2019 Energy & Climate Act, France introduced mandatory reporting on financial risks related to biodiversity loss, as well as dependencies on and impacts to biodiversity (applicable since 2022). In the EU, the disclosure framework requires disclosing the alignment with all six environmental objectives of the EU Taxonomy, including the protection and restoration of biodiversity and ecosystems as of 2023, with further regulatory developments expected to strengthen this framework.

⁵ The Intergovernmental Science-Policy Platform for Biodiversity and Ecosystem Services (IPBES) is an independent intergovernmental body established in 2012 by 94 Governments.

⁶ See e.g. the [Dasgupta Review](#) (2021) and SIF [“Scoping Study: Nature-related Risks in the Global Insurance Sector”](#) (2021).

⁷ While various fora use various definitions, nature may be defined as encompassing all ecosystems, which the Convention on Biological Diversity (CBD) defines as *“dynamic complex[es] of plant, animal and microorganism communities and the non-living environment, interacting as functional unit[s].”* Biodiversity is a core feature of it, which the CBD defines as *“the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.”*

5. **Nature-related financial risks can be categorised as either physical or transition risks.** These risks can take the form of reduced valuation of financial assets and increased default probabilities, reflecting the deterioration in the financial performance of affected companies. Physical risks may be chronic (e.g. gradual decline of species diversity of pollinators resulting in reduced crop yields, deforestation, or water scarcity) or acute (e.g. increased probability of new pandemics). Transition risks could result from a misalignment between economic and financial entities' strategies and advances made in societies to reduce or reverse environmental damages. These advances could stem from government measures (e.g. expansion of protected areas for nature conservation), technological breakthroughs, litigation, and changing consumer preferences.
6. **The extent and severity of the physical and transition risks linked to biodiversity loss are more difficult to assess than for climate change.** Notably, biodiversity loss and other environmental degradation are driven by several factors while climate change is largely determined by greenhouse gas (GHG) emissions⁸. Assessment of the impacts of biodiversity loss is also more complicated due to the complexity of ecosystems and of the processes involved as well as to the non-linearity and irreversibility of some of these developments. Another challenge relates to the assessment of the economic value of ecosystem services⁹. However, these uncertainties should not obscure the scientific evidence that nature loss could present potentially significant risks with material economic and financial consequences. Neither this uncertainty nor the absence of perfect data should prevent central banks and supervisors from taking the necessary actions.
7. **Nature-related risks involve interactions between different environmental challenges, such as those between biodiversity loss and climate change, which present opportunities for synergistic responses** (IPBES & IPCC, 2021; IPCC, 2022). For instance, climate change is one of the main drivers of biodiversity loss, while the destruction of ecosystems is contributing to GHG emissions and reducing nature-based adaptation capabilities¹⁰. However, some trade-offs could exist between biodiversity protection and climate mitigation, in particular with regards to the use of certain negative or low emissions practices¹¹. This means that environmental challenges should not be addressed in isolation, as highlighted by the scientific community (IPBES & IPCC, 2021). For central banks and financial supervisors, this means that the complex interlinkages between these challenges and their potential economic and financial consequences need to be better understood in a holistic manner, including in the development of the analytical framework, the design of scenarios for financial stability assessments and, eventually, the establishment of sustainable finance standards.

⁸ Additionally, the measurement of GHG emissions are well established with globally agreed standardised frameworks and common measurement units via the GHG Protocol's Corporate Accounting and Reporting Standard.

⁹ As recognised e.g. by the Handbook on the "System of Environmental-Economic Accounting— Ecosystem Accounting" (SEEA-EA) adopted last year by the UN Statistical Commission: "[...] *monetary values will not fully reflect the importance of ecosystems for people and the economy. Assessing the importance of ecosystems will therefore require consideration of a wide range of information beyond data on the monetary value of ecosystems and their services. This will include data on the biophysical characteristics of ecosystems and data on the characteristics of the people, businesses and communities that are dependent on them*", see Committee of Experts on Environmental-Economic Accounting (2021), "System of Environmental-Economic Accounting— Ecosystem Accounting: Final Draft".

¹⁰ As an illustration, the destruction of mangroves compromises natural sinks of GHG whilst removing natural protection against storm surges and coastal flooding caused by tropical cyclones, and tsunamis.

¹¹ For example, afforestation and reforestation for carbon sequestration using monoculture or alien species and large hydropower dams may contribute to climate mitigation efforts but could erode biodiversity.

8. **The key tasks ahead for central banks, financial supervisors and financial institutions are as follows:**

- (i) **build a scientifically-grounded analytical framework** to assess the interactions between nature, the macroeconomy and the financial system, in a way that is both comprehensive and actionable;
- (ii) **bridge the likely data gaps** that will emerge from such a framework;
- (iii) **use this new framework and datasets to align policies** with environmental sustainability and inform the assessment of nature-related financial risks.

In the meantime, central banks and financial supervisors can take stock of the growing evidence base, run preliminary assessments of financial risks stemming from dependencies and impacts on nature and encourage the development of risk assessment and management practices by financial institutions.

9. **NGFS Members welcome the five policy recommendations made by the NGFS-INSPIRE Study Group, while emphasising that their implementation and prioritisation are subject to each Member's mandate, internal capacity, jurisdictional context, and the actions of other stakeholders such as governments.** The five recommendations are:

- (i) recognise biodiversity loss as a potential source of economic and financial risk and commit to developing a response strategy to maintain financial and price stability;
- (ii) build the skills and capacity among central bank and supervisory staff as well as market participants to analyse and address biodiversity-related financial risks;
- (iii) assess the degree to which financial systems are exposed to biodiversity loss, by, for example, conducting assessments of impact and dependency, developing biodiversity-related scenario analysis and stress-tests;
- (iv) explore options for supervisory expectations for financial institutions' governance, risk management, strategy, disclosure and financial conduct in relation to biodiversity-related financial risks and opportunities; and
- (v) help build the necessary financial architecture for mobilising investment for a biodiversity-positive economy, including by considering how central banks' monetary policy operations and non-monetary policy portfolio management should be conducted in the context of biodiversity loss.

Building on the work of the Study Group, the NGFS will create a task force to mainstream the consideration of nature-related financial risks across its activities. The task force will act as an incubator that explores, develops, and harmonises relevant nature-related considerations and efforts in collaboration with the NGFS workstreams, expert networks, and Members.