

PRESENTATION OF THE NGFS CONCEPTUAL FRAMEWORK



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Presentation of Conceptual Framework

Made possible by...



The **drafting team**: 19 members representing 13 institutions



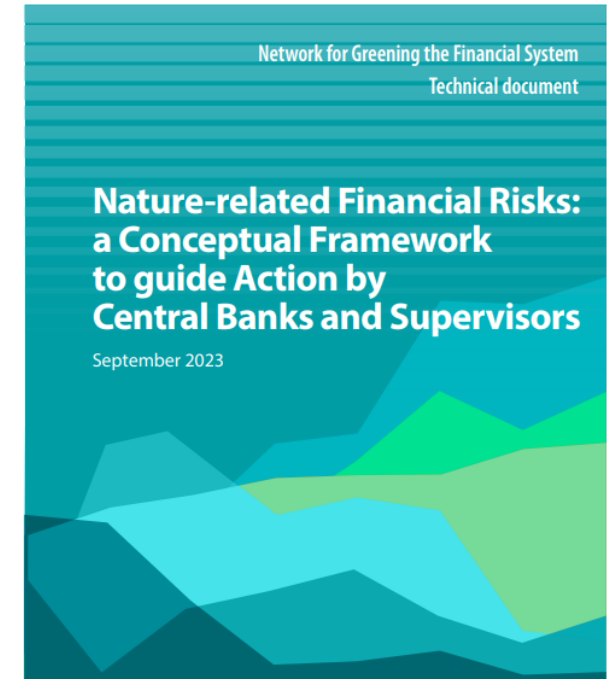
The broader **conceptual framework team**: 42 members representing 30 institutions



Input from **external experts**



All **members and observers of the NGFS** and the NGFS Secretariat





Chapter 1: Introduction

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Relevance

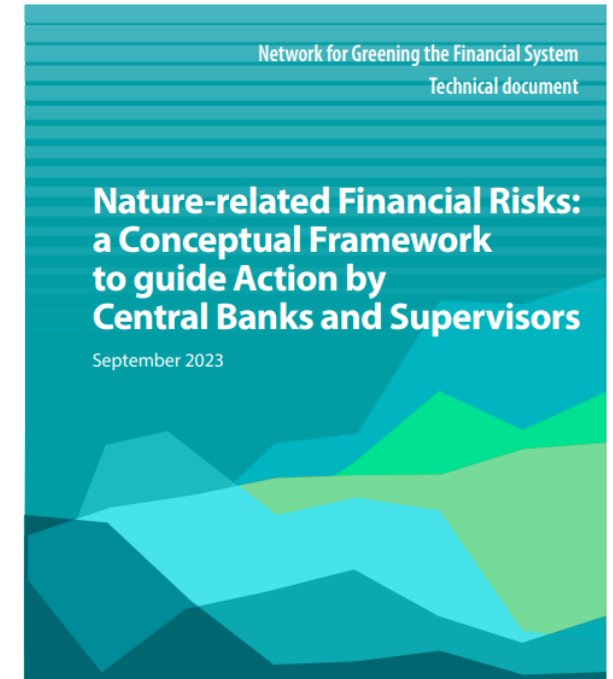


Why develop a conceptual framework?

*“...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.”*

*“...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.**”*

NGFS Statement on Nature-Related Financial Risks (2022)



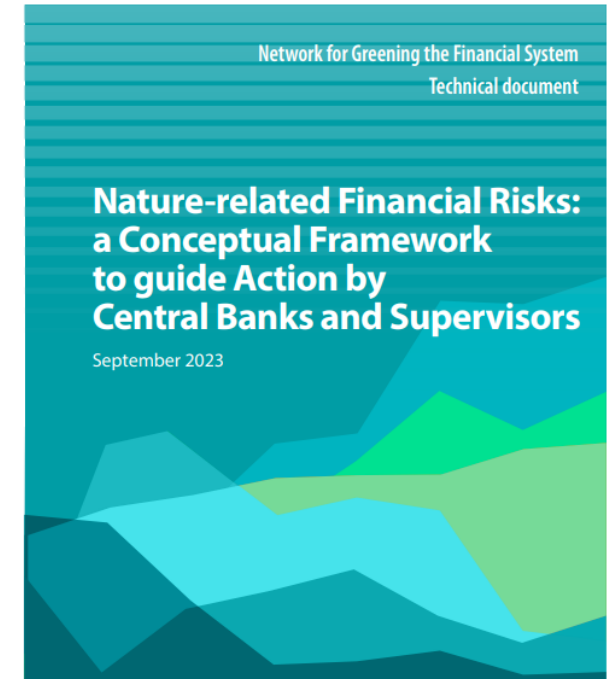
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Introducing the Framework



What is the Conceptual Framework?

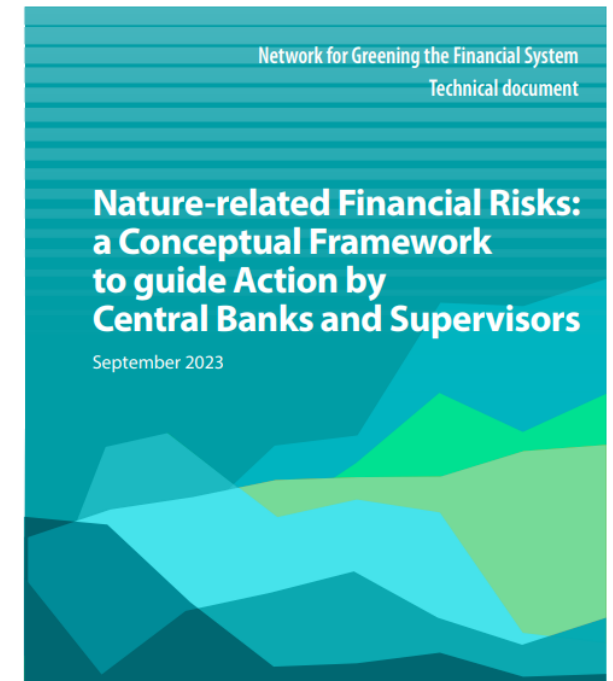
- A common science-based understanding of, and language for, nature-related financial risks
- Adopts an integrated approach, meaning that climate-related financial risks are within scope
- Includes a principle-based risk assessment framework
- Focus is on material considerations from a microprudential, macroprudential or macroeconomic perspective
- Released as beta version to be refined and supplemented over time

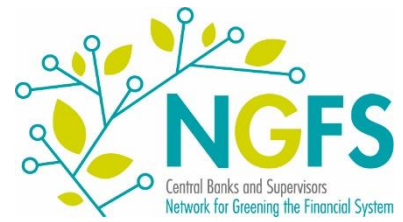


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Design choices

- 1) Scope of framework:** The focus is on economic and financial risks, while recognising that other facets such as implications for wellbeing or opportunities also have a role outside the scope of the framework
- 2) Positioning of nature vis-à-vis biodiversity and climate:**
 - In this framework, climate is part of nature-related financial risks (without prejudice to the relevance of the NGFS' work on climate)
 - The framework extends beyond biodiversity (but importance is stressed)
- 3) Alignment with NGFS climate approach:** where possible, the NGFS approach to climate was adopted (e.g., by not creating separate risk categories for litigation or systemic risks)
- 4) Practical application:** Demand for detailed guidance but also a need to account for emerging practices and jurisdictional differences





Chapter 2: Understanding nature-related financial risks

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Understanding nature



Nature itself is challenging to define, its meaning depends on context. In the framework, nature covers the biotic (living) and abiotic (non-living) elements on our planet, including biodiversity but also climate

The living and non-living elements of nature combine in **ecosystems**, which yield a flow of benefits described as **ecosystem services**

The ability of nature to provide these ecosystem services depends on **biodiversity**. Biodiversity refers to variability among living organisms, which includes the diversity within species, between species and of ecosystems

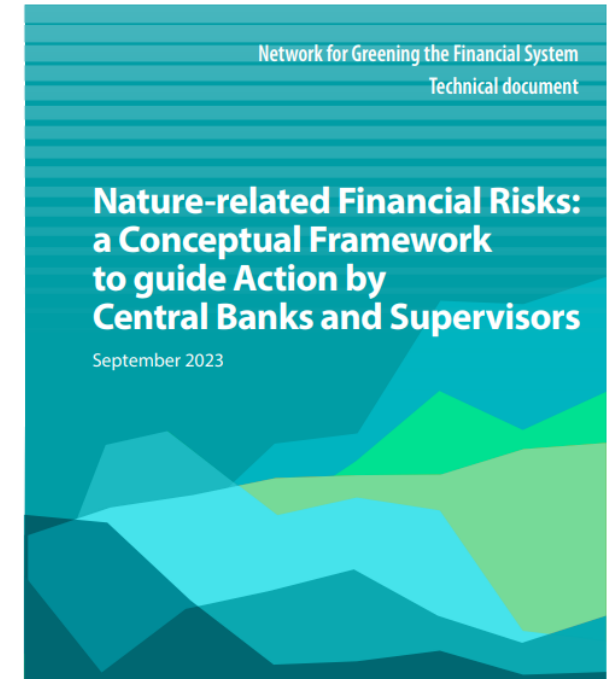
Connecting to existing definitions (annex 1):

Nature: Reference to definition used in IPBES Conceptual Framework (also used by TNFD)

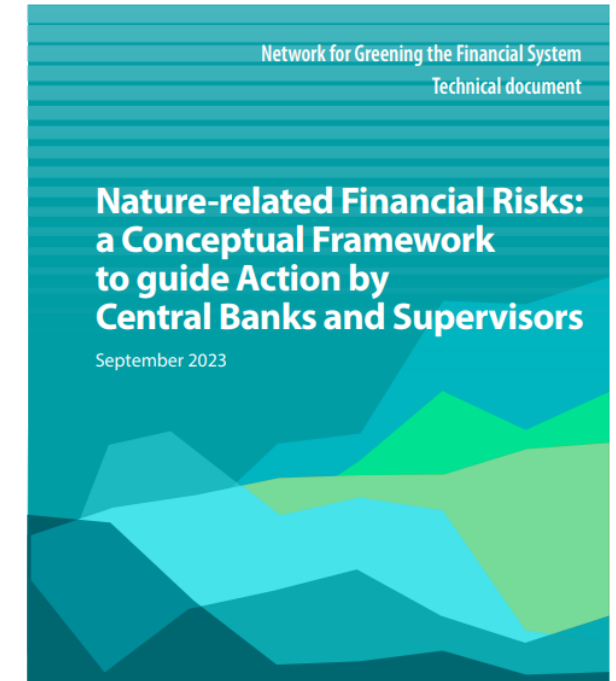
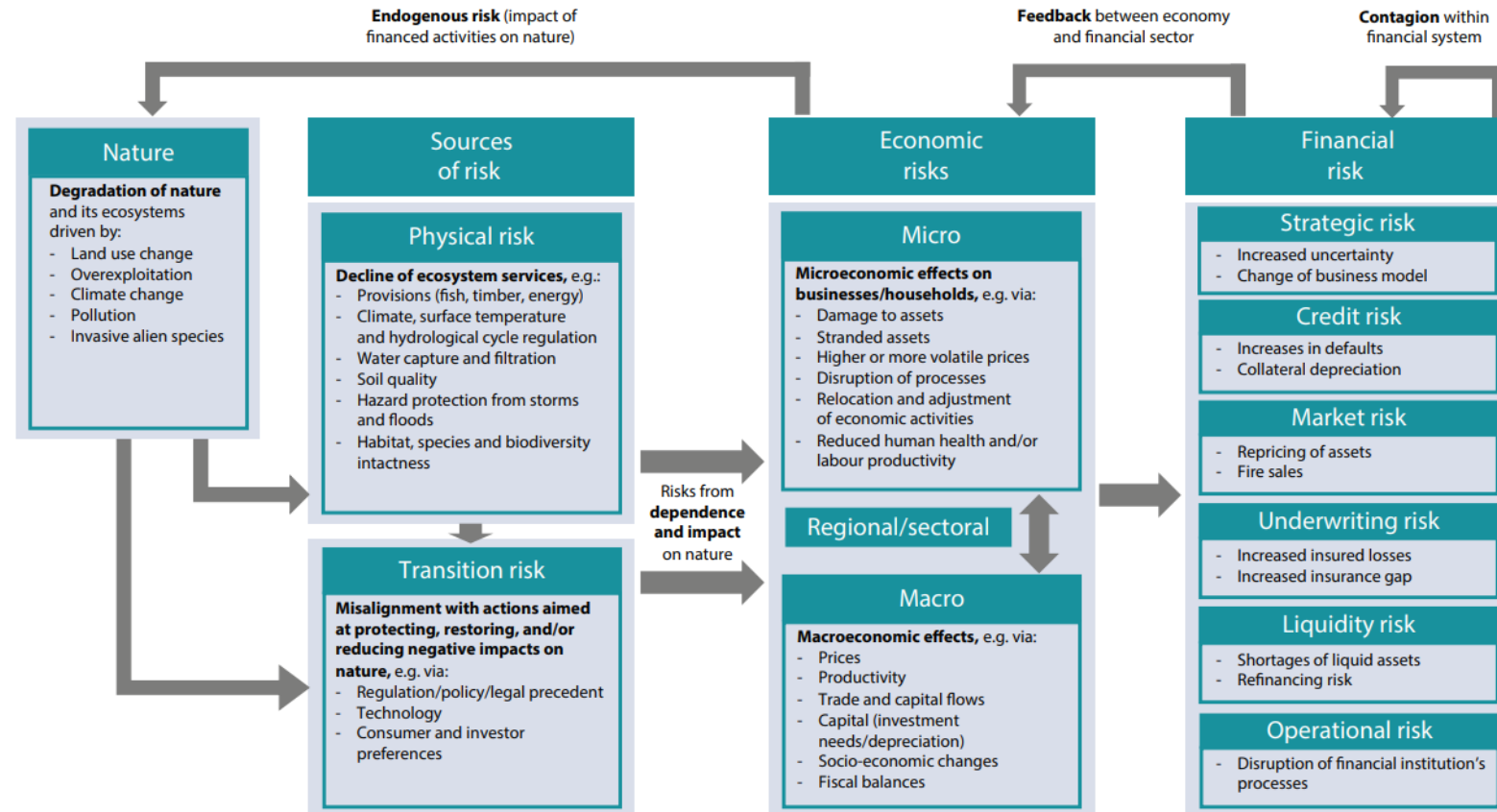
Ecosystems: Definition from Convention on Biological Diversity

Ecosystem services: Definition from final NGFS-INSPIRE report, based on Millennium Ecosystem Assessment

Biodiversity: Definition from Convention on Biological Diversity



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Source: Adapted from Svartzman, R. et al. (2021) A "Silent Spring" for the Financial System? Exploring Biodiversity-Related Financial Risks in France.

Transmission channels (figure 2, p. 8)

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Defining nature-related financial risks

Nature-related financial risks refer to the risks of negative effects on economies, individual financial institutions and financial systems that result from:

- (i) the degradation of nature, including its biodiversity, and the loss of ecosystem services that flow from it (i.e., physical risks); or
- (ii) the misalignment of economic actors with actions aimed at protecting, restoring, and/or reducing negative impacts on nature (i.e., transition risks)



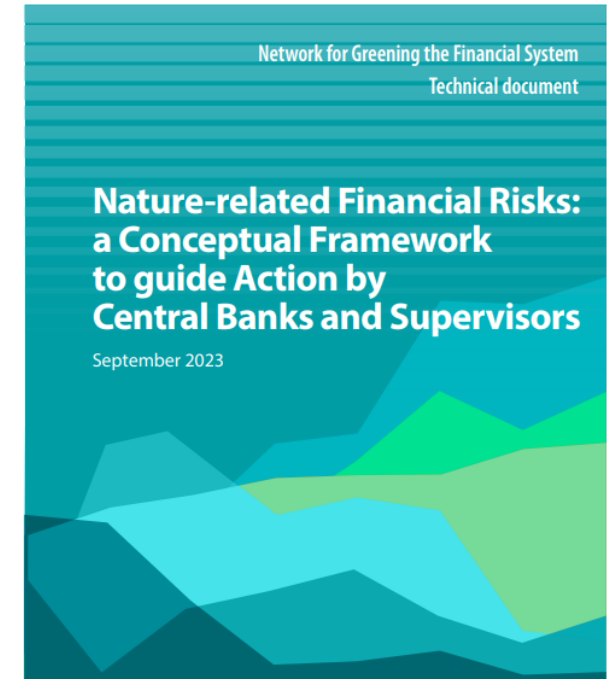
Like climate, the framework is based on transition and physical risk

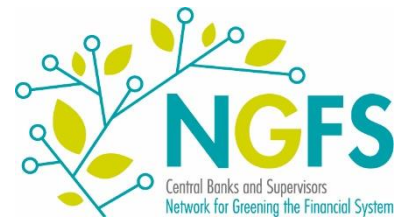


Litigation risk is a subcategory of both transition and physical risk



Nature-related financial risks cover both climate and environmental risks



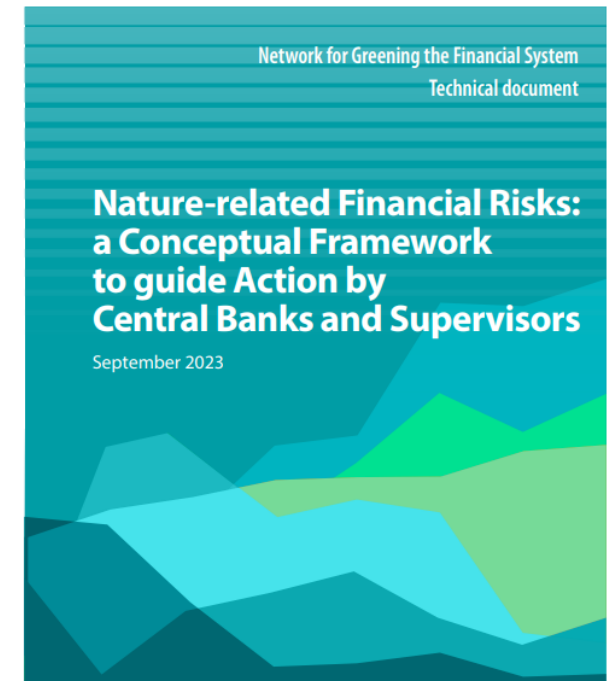
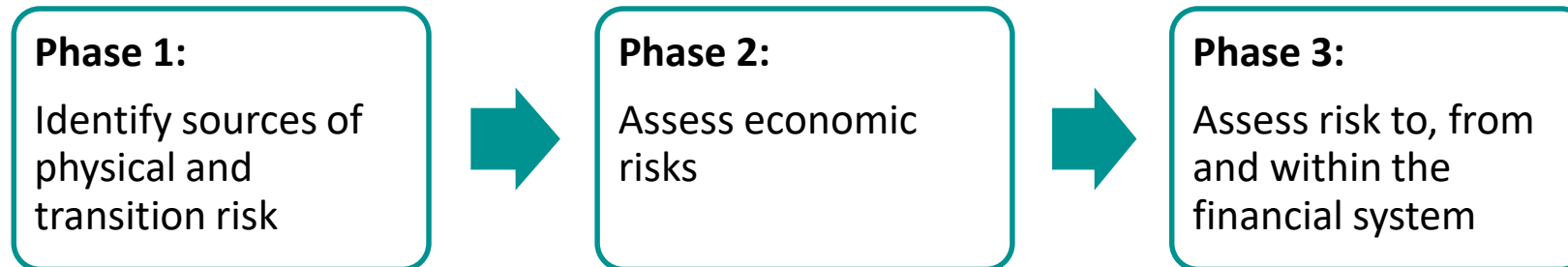


Chapter 3: Assessing nature-related financial risks

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A principle-based risk assessment framework

- The Framework includes a **principle-based risk management framework** to operationalise the understanding of nature-related financial risk
- The risk management framework provides **flexibility** for:
 - emerging analytical methodologies and risk management practises
 - differences between jurisdictions
- It contains **guiding questions** to capture key elements that central banks and supervisors could consider



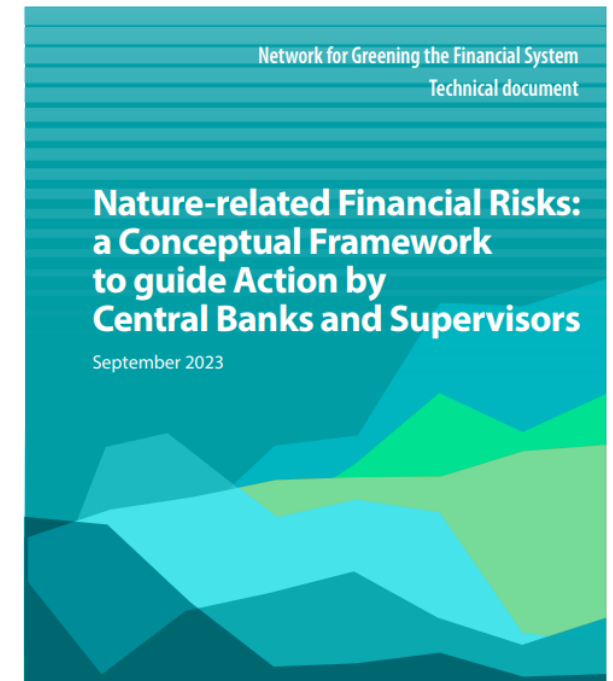
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Phase 1: Identify sources of physical and transition risk

Aim: identification and prioritisation of sources of physical and transition risk based on exposures

Attention is drawn to:

- i. Use of **initial exposure analyses** to identify sectors and/or ecosystems services more likely to be sources of material risk
- ii. The relevance of **forward-looking tools** such as scenarios
- iii. The relevance of **local and systemic dimensions** (compounding effects, cascading effects and contagion)
- iv. The **climate-nature nexus**, highlighting four key interlinkages:
 - Climate change as a driver of nature risk
 - Nature degradation as a driver of climate risk
 - Climate change mitigation and adaptation as a potential driver of nature risk
 - Nature as a solution to decrease climate risk (i.e., nature-based solutions)



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Guiding questions phase 1

- 1) **Current exposures:** Which dependencies does the economy and the financial sector (incl. via financed activities) have on ecosystem services? Which negative impacts does the economy and the financial sector have on nature? Which of those dependencies and negative impacts could be material sources of physical and transition risk from a microprudential, macroprudential or macroeconomic risk perspective?
- 2) **Priorities:** What are the key sectors with the highest impacts and dependencies (both direct and indirect) on nature? What are the critical global, regional and/or local ecosystems these key sectors, or the economy/financial sector as a whole, interact with, and where are they located? What is the current or estimated state of these critical ecosystems?
- 3) **Forward-looking view:** Are there any future developments that should be considered when assessing sources of physical and transition risks such as emerging policy frameworks or the sudden collapse of one or more ecosystem services? Over what time horizon are these forward-looking developments expected to materialise?
- 4) **Climate-nature nexus:** How does the consideration of climate change (and related mitigation/adaptation strategies) affect the identification of potential nature-related financial risk? Could sectors with large dependencies or impacts on nature be contributing to climate change, or be affected by it? Which strategies for climate change mitigation have the potential to cause inadvertent negative effects on ecosystems, thereby amplifying nature-related financial risks?

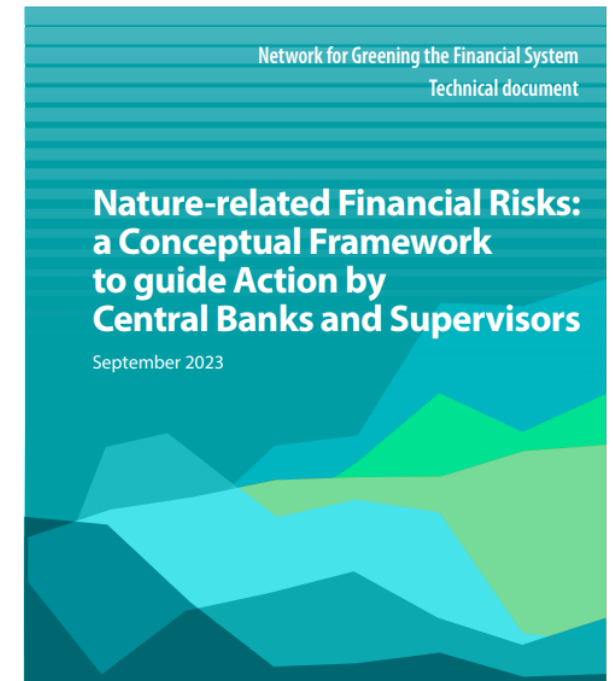
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Phase 2: Assess economic risks

Aim: Assess the potential economic effects and risks that can stem from exposures

Attention is drawn to:

- i. The need to consider **direct and indirect economic effects** (relevance of value chains)
- ii. Potential **micro level and macro level effects**, including interactions between them (e.g., via the sectoral/regional level)
- iii. The relevance of **substitutability**
 - Geographical substitution (i.e., between ecosystem services)
 - Technological substitution (i.e., between natural and manufactured/human capital)



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Guiding questions phase 2

- 1) **Value chains**: Are direct economic risks located domestically or abroad? Can direct effects transfer across borders and/or amplify (including domestically) through value chains, thereby resulting in indirect economic effects?
- 2) **Micro-macro interaction**: To what extent do economic effects on households and businesses as a result of nature-related financial risks lead to macroeconomic deterioration, including lower productivity or inflationary pressures? Are there any risks that directly create effects at the macro level? Could macroeconomic deterioration affect or create a feedback loop to the micro level?
- 3) **Vulnerability and substitution**: How vulnerable are economic actors given their ability to adapt (e.g., via substitution)? For the identified economic transmission channels, what technological or geographical substitution possibilities are available that could mitigate the effects of shocks and hazards? How would these possibilities change as the size of the shock or hazard increases?

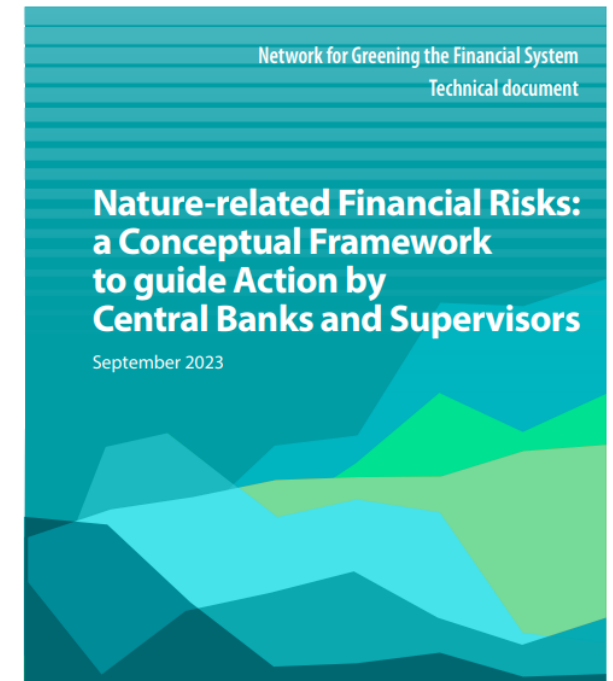
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Phase 3: Assess risk to, from and within the financial system

Aim: Assess the financial risks that stem from the exposures to sources of physical and transition risks (directly, or more likely, via financed activities)

Attention is drawn to:

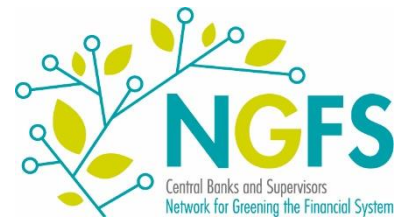
- i. The implications for **traditional financial risk categories** (strategic, credit, market, underwriting, operational, liquidity)
- ii. The potential for risk to spread throughout financial systems and/or to create feedback loops to the real economy (**contagion**)
- iii. Potential effects that financial institutions have on the risk they need to manage via financed activities (**endogenous risk**)



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Guiding questions phase 3

- 1) **Transmission**: How can economic risks transmit to traditional financial risk categories?
- 2) **Systemic dimension**: How can nature-related financial risks amplify via feedback loops within the financial sector, or between the financial sector and the real economy?
- 3) **Endogenous risk**: Is the financial sector materially contributing to the physical risks to which it is exposed to?



Chapter 4: Next steps

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What's next?

1) Refine framework, with focus on:

- data, metrics, tools and examples
- critical ecosystems and ecosystem services
- climate-nature nexus
- value chains

2) Bridge modelling and data gaps

3) Align policies, including via recommendations to NGFS workstreams

4) Encourage use of framework

