

Nature-Related Risks for Financial Institutions

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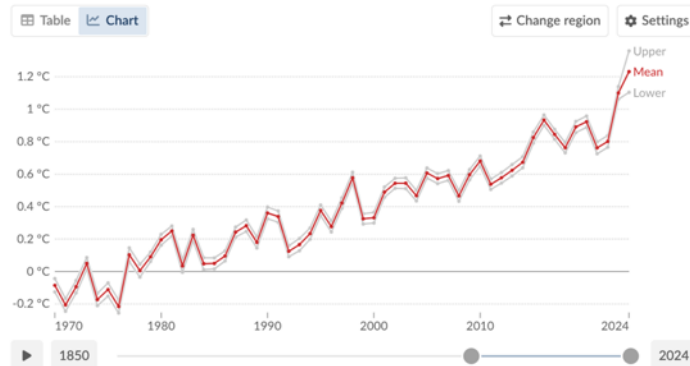


Stranded fishing vessel, Eastern Iceland (personal picture)

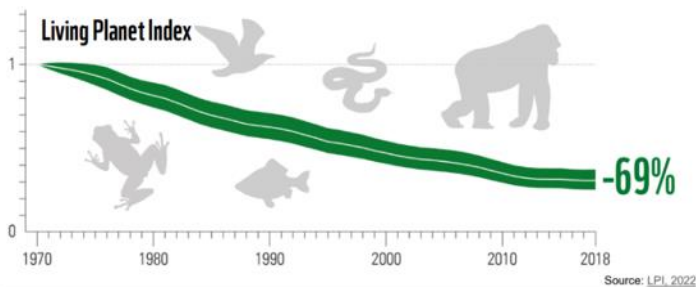
The Twin Crises of Climate & Nature

Average temperature anomaly, Global

Global average land-sea temperature anomaly relative to the 1961-1990 average temperature baseline.

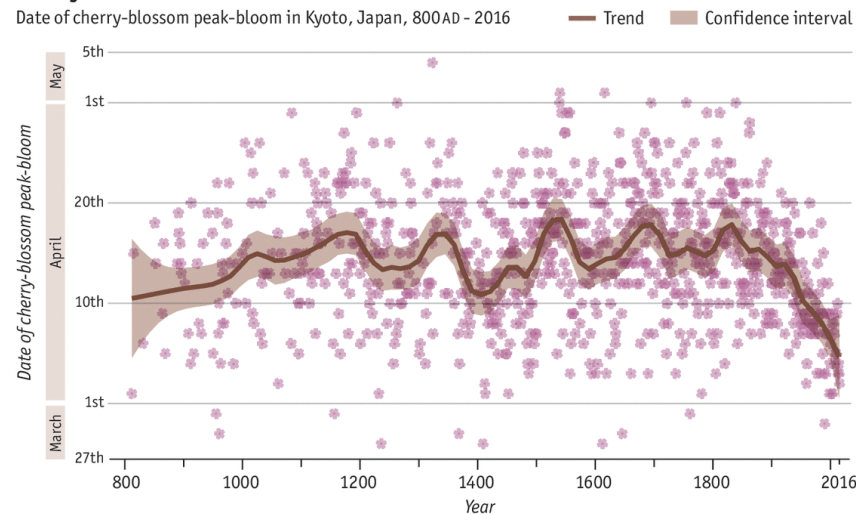


Data source: Met Office Hadley Centre (2024) - [Learn more about this data](#)



Cherry bomb

Date of cherry-blossom peak-bloom in Kyoto, Japan, 800AD - 2016



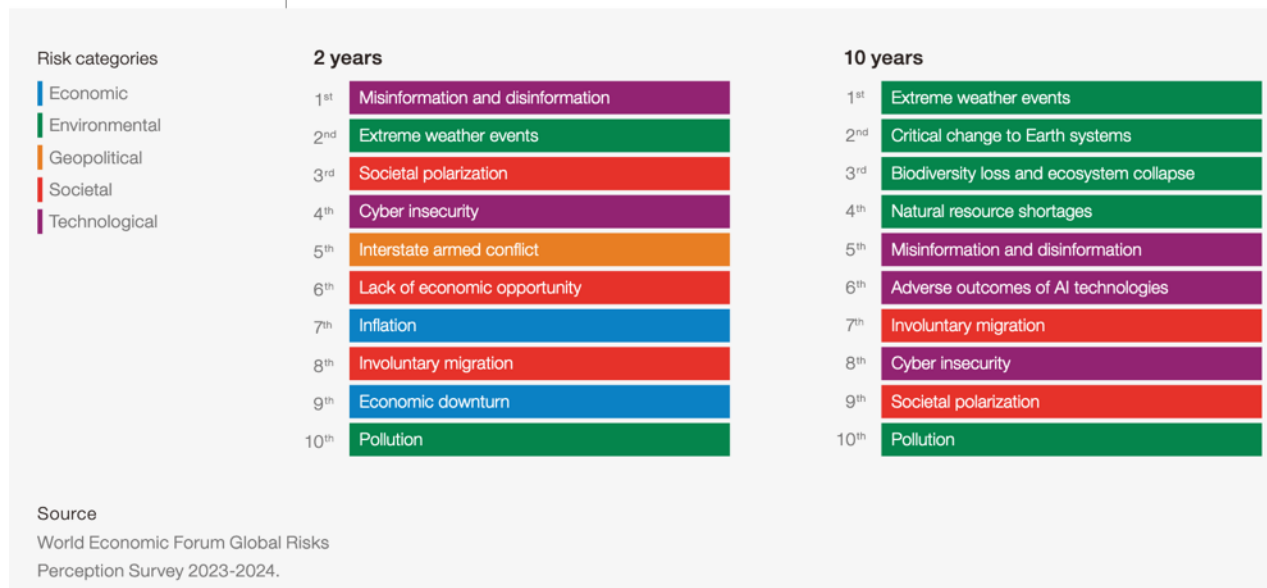
Source: Yasuyuki Aono, Osaka Prefecture University
Economist.com

Rising Risks and Concerns

FIGURE C

Global risks ranked by severity over the short and long term

"Please estimate the likely impact (severity) of the following risks over a 2-year and 10-year period."



- WEF survey of 1,500 global experts from academia, business, government, and civil society
- All **top 10-year risks** are linked to **nature and climate**

Nature-Related Terminology

Biodiversity: variability among living organisms (within species, between species, and ecosystems)

Ecosystem services: contributions of ecosystems to economic and other human activities

Dependencies ↔

Which ecosystem services does a business rely on for its operations and value creation?

Impacts →

What are the effect of business activities on nature and ecosystems?

Risks ←

What are the potential threats to a business from its dependencies and impacts on nature?

Opportunities ←

What are the potential business benefits that can arise from positive interactions with nature?

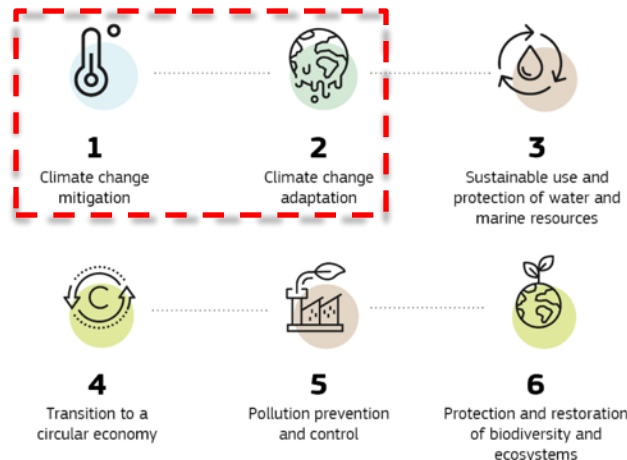
Nature is a Collection of Topics

- If climate is a book, then nature is the whole library!
- **Focus on specific nature topics** to operationalize and make tangible progress

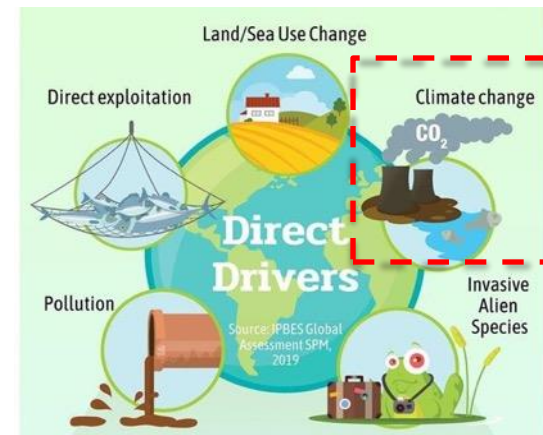
Nature-related UN Sustainable Development Goals



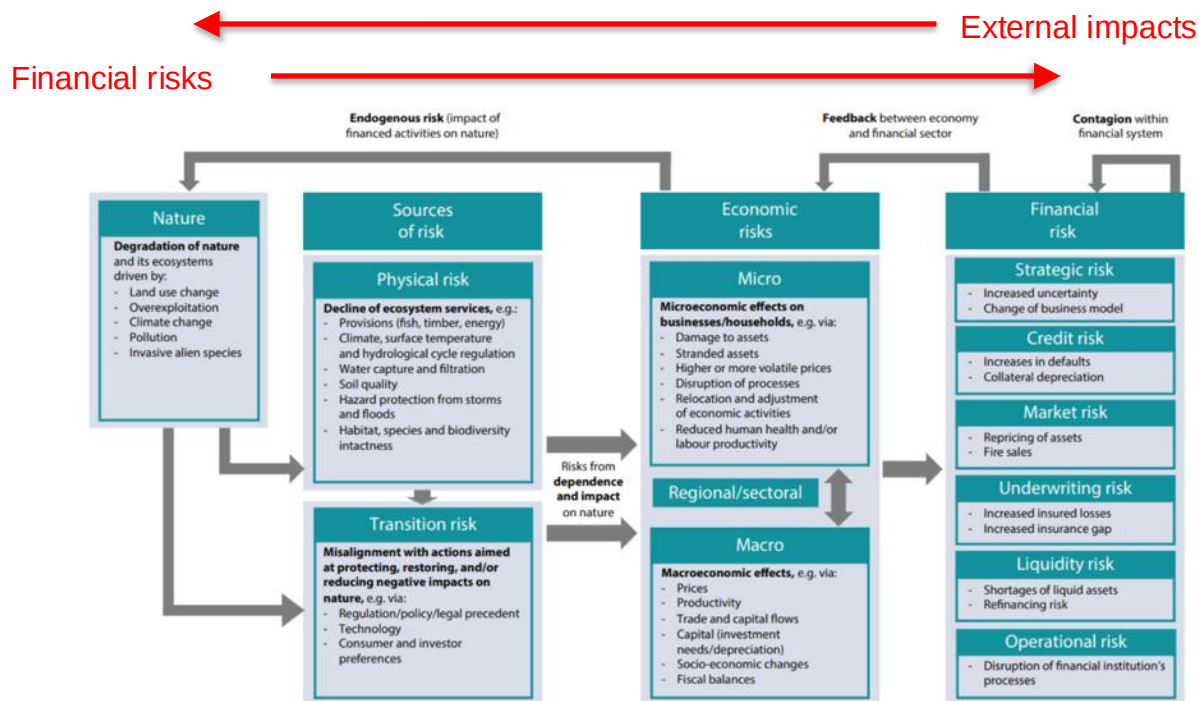
EU Taxonomy Objectives



Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services



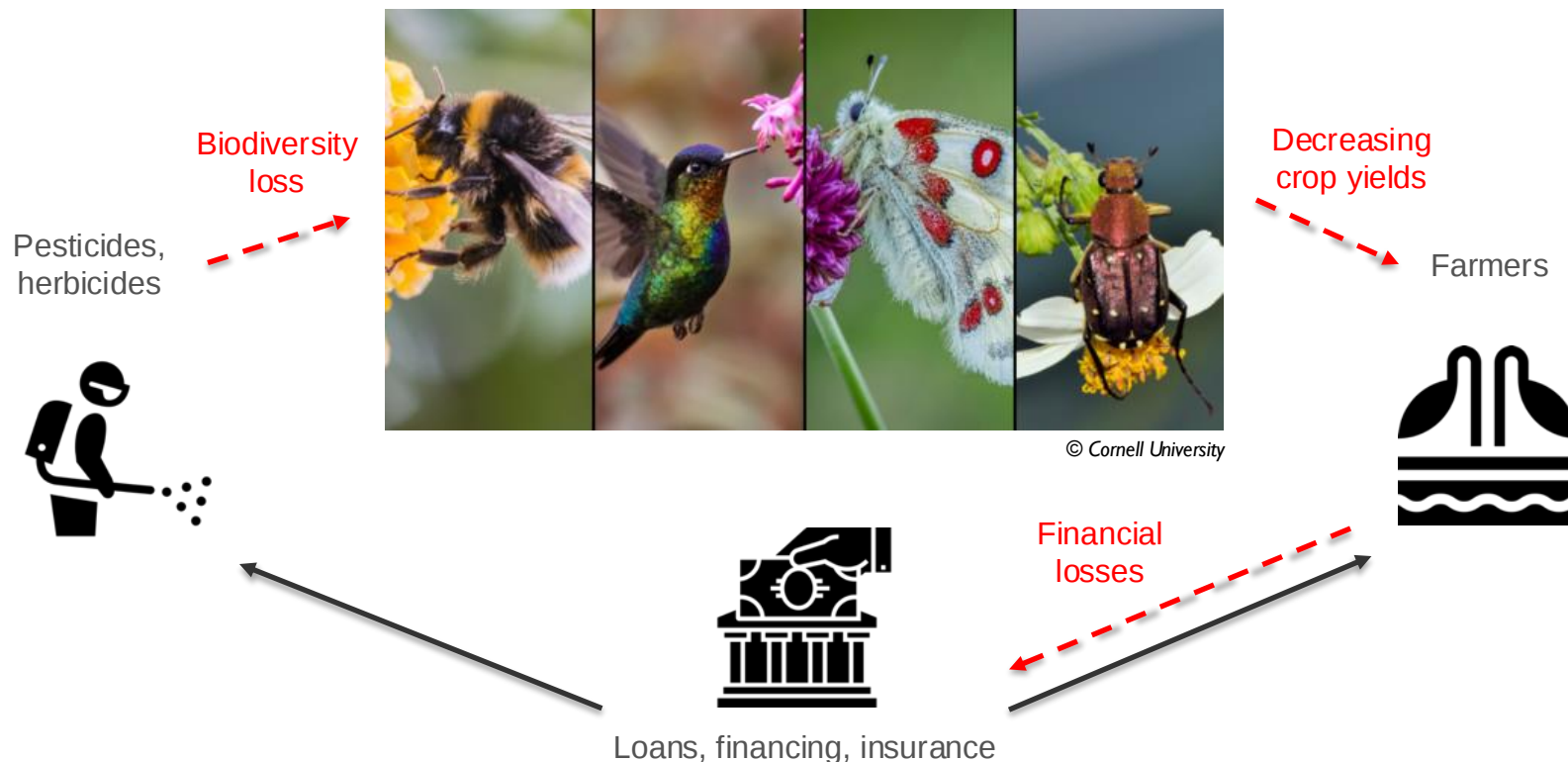
Nature-Related Risk Transmission Channels



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

Source: NGFS (2023), Nature-related financial risks: A Conceptual Framework to guide action by central banks and supervisors

Illustration: Pollinators



High-Impact Sectors

- Obtaining granular data directly linking financial activities and nature is challenging



- However, the first step is extremely easy: identify **dependencies on high-impact sectors**



Agriculture (animal product)



Agriculture (plant product)



Fishing & aquaculture



Paper & forest product production



Metals & mining



Oil, gas & consumable fuels



Land development & construction



Transportation services



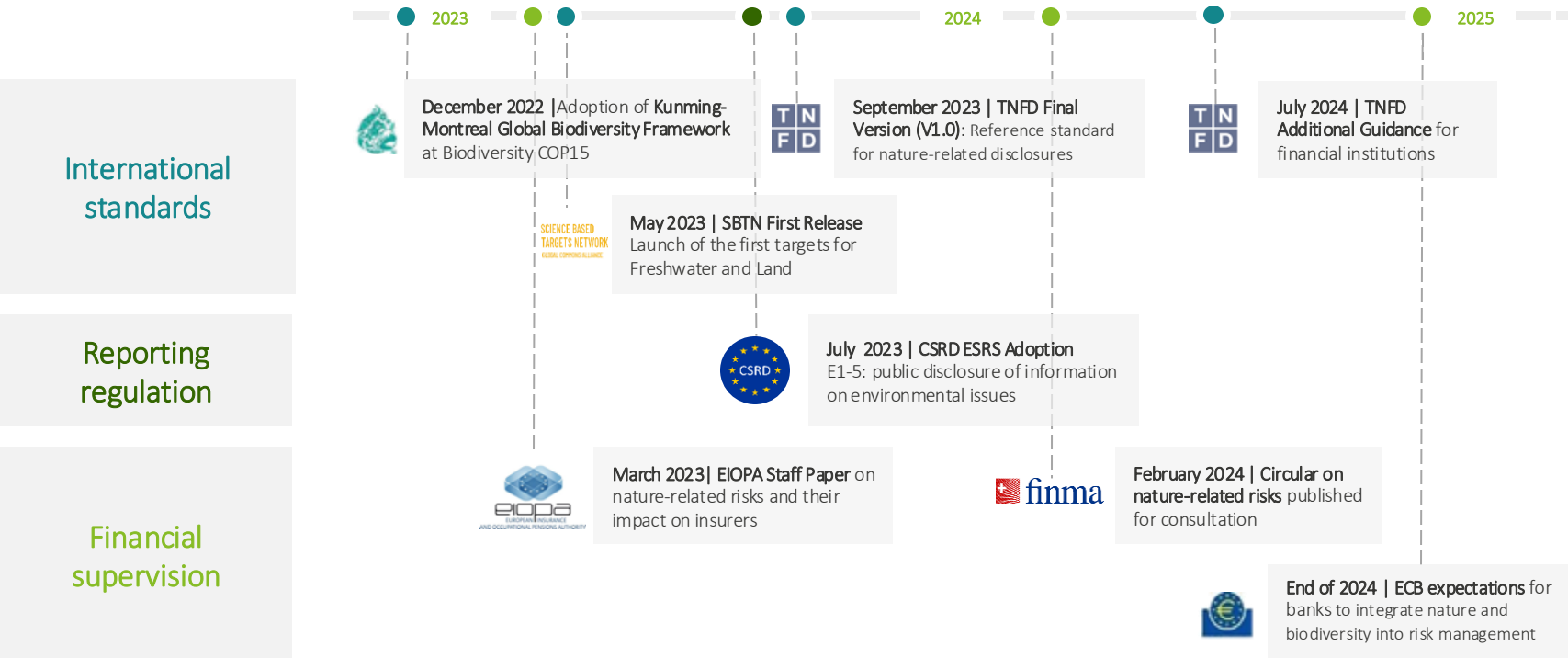
Electric energy production- hydropower



Electric energy production - combustion

Source: Underwriting Our Planet (WWF Switzerland / Deloitte Switzerland)

Key Regulations and Standards



FINMA Circular on nature-related financial risks

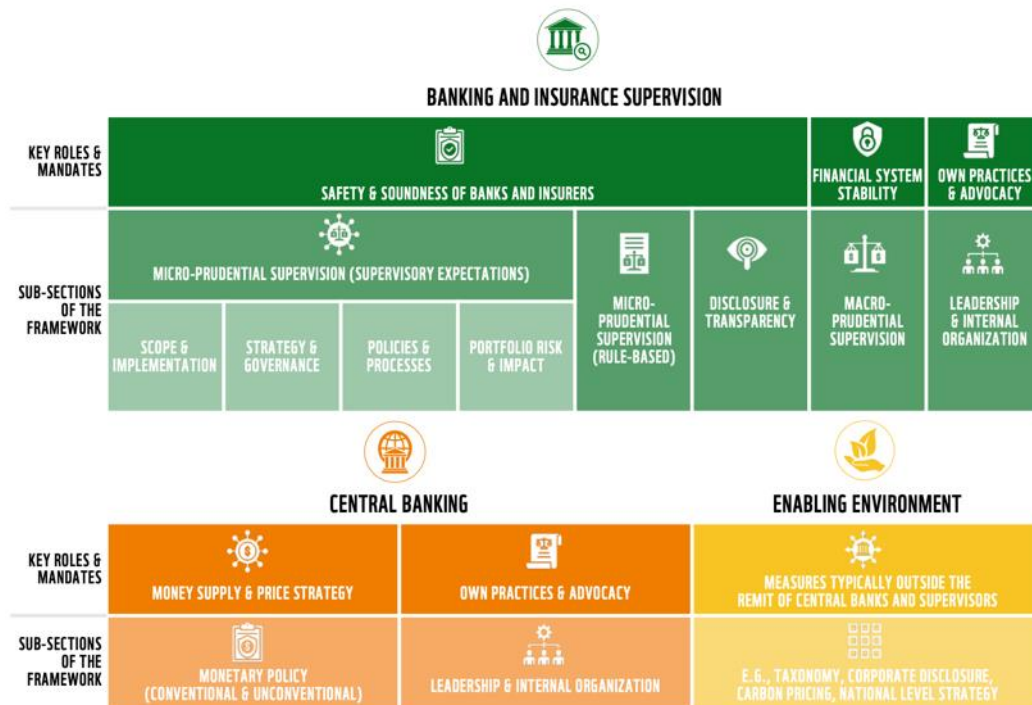
(published for consultation February 2024)

- Based on the recommendations of international standard-setters



- Addressed to banks and insurance companies
- Climate risks are a sub-category of nature-related risks
- Short-, medium- and long-term nature-related risks
- Focus on risk governance and risk management (including appointed actuary)
- Scenario analysis and stress-testing (including ORSA)
- The explanatory report mentions risk feedback loop from external business impacts (double materiality)
- Ambitious implementation timeline from January 2025

- Assessment of **SUStainable finance REGulations** and central bank activities
- Launched in 2021 for banking, insurance added from 2022
- Covering ≈50 jurisdictions across all continents
- ≈80 indicators across **Climate, Nature and Social**
- [Annual report](#) and [online regulatory database](#)
- Recommendations to central banks and financial supervisors



Examples of good practices around the world



The Code Monétaire et Financier of **France** requires credit institutions and investment firms to publish a strategy for alignment with long-term **biodiversity objectives**



The Sustainable Finance Platform chaired by the **Dutch** Central Bank (DNB) published a 'Guideline on the use of **Deforestation** Risk Mitigation Solutions for Financial Institutions'



The Financial Service Authority of **Indonesia** (OJK) issued a Guideline for Sustainable **Palm Oil** Financing to increase banks' awareness and reduce credit risks arising from nature-related risks



The People Bank of **China** (PBOC) set up in their Guidelines for Establishing the Green Financial System a compulsory **environmental pollution liability** insurance system



The Monetary Authority of **Singapore** (MAS) mandates insurers to apply risk criteria to identify sectors with higher environmental risk and to develop **sector-specific policies**



Task-force for Nature-related Financial Disclosures

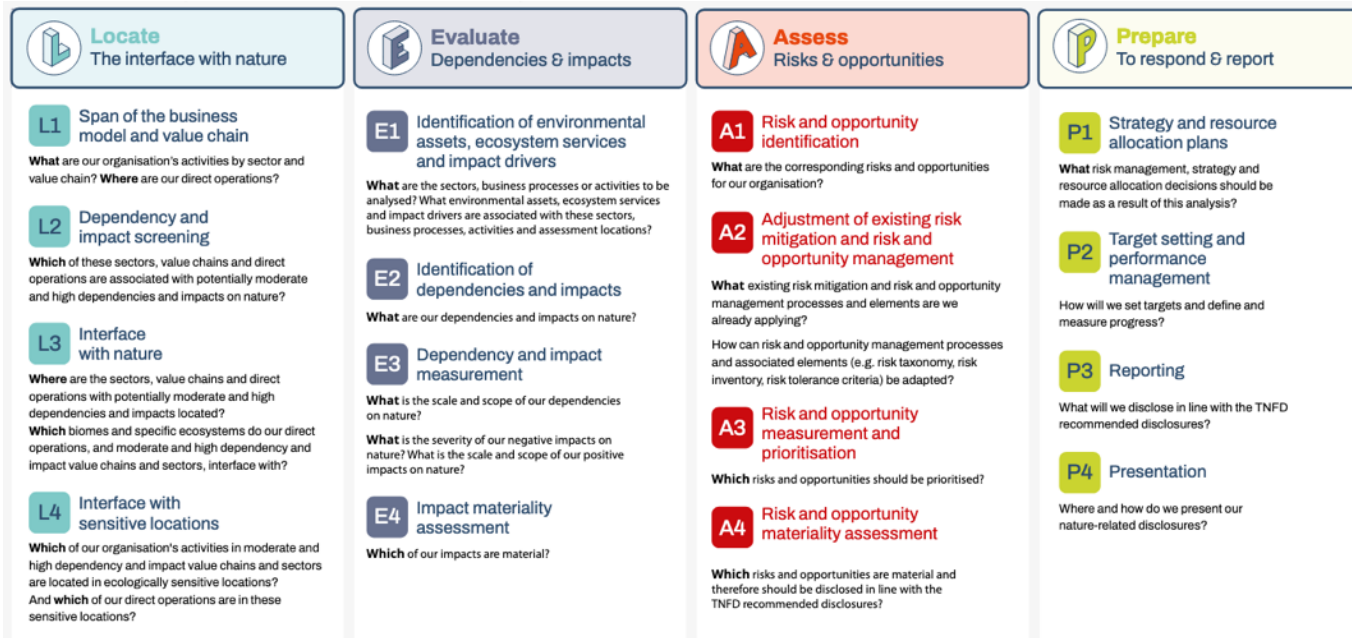


Points of note:

- ✓ TNFD incorporates double materiality including **impacts and dependencies** on nature
- ✓ TNFD is **not (yet)** part of **mandatory** reporting regulation
- ✓ Most nature and biodiversity issues are **local** → **LEAP** approach

- Market-led initiative aiming to create economic resilience by directing financial flows towards nature-positive activities.
- Provides guidance to investors, banks, insurance companies, analysts, corporates, regulators, stock exchanges, accounting firms
- TNFD is built on the same four core pillars as TCFD for climate

The TNFD LEAP Approach



Examples:

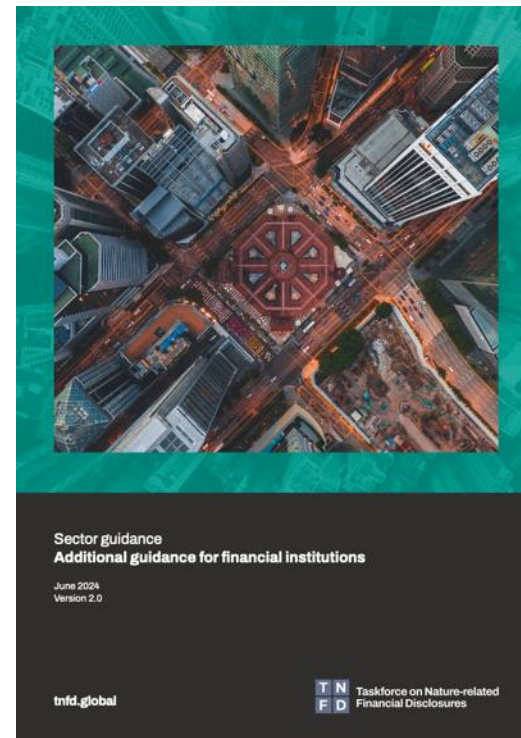
- Agricultural operations in a protected area
- Impact of tourism activities on coral reefs
- Coastal flooding risk due to loss of mangrove forests

Engagement with Indigenous Peoples, Local Communities and affected stakeholders

Scenario analysis

TNFD Guidance for the Financial Sector

- **Engage with investees, counterparties and clients** on outreach to local communities and affected stakeholders
- Describe **sector-specific standards and policies**
- Conduct **scenario analysis** and integrate into risk management processes
- Focus primarily on **downstream value chains** (financial, investment and insurance portfolios) as opposed to own operations
- Describe how the risk, underwriting, lending and investment teams **monitor nature-related dependencies, impacts, risks and opportunities**
- Core metrics for the financial sector: exposure of financial portfolios to **high-impact sectors** and to **sensitive locations**

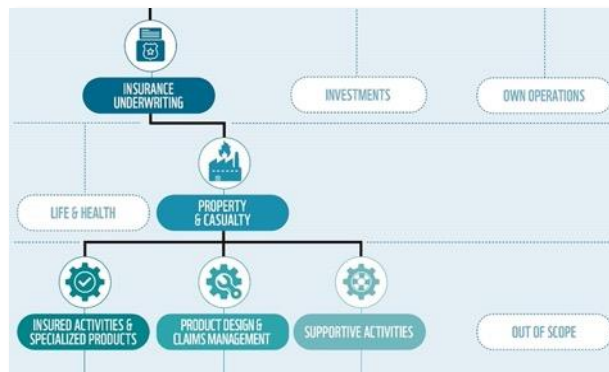


The Role of Insurance for Nature



[Report link](#)

- Objective of the report: go beyond own operations and investments to create awareness of **how insurance underwriting and claims management are linked to nature**



What is
insured?

How is it
insured?

What
else?



Explore the many links between insurance, climate and biodiversity



Highlight the potential of insurance with real-life examples of products and practices



Provide concrete recommendations for re/insurers to improve their impacts on nature

Recommandations to Insurance Companies



Source: Underwriting Our Planet, WWF/Deloitte, 2023

Product examples

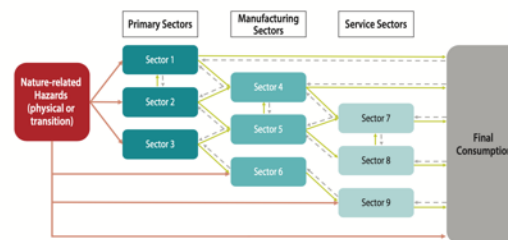
- Insurance for **circular economy** (e.g. recycling) and **renewable energy** (e.g. solar panels)
- Covering **liabilities during decommissioning** of carbon-intensive assets
- **Exclusions and phase-out policies** for harmful activities (new fossil fuel developments, deforestation/fishing/farming in protected areas)
- Include incentives for **regenerative agriculture** in crop insurance
- Claims management: favor **repair-over-replace** and recycling, **build-back-better** to highest environmental standards to increase resilience
- **Advise clients** on risk management and prevention
- Engage in **multi-stakeholder initiatives** and public advocacy

Exploring Nature Scenarios



- Nature-related scenario analysis is needed for strategic and risk management purposes
- Models used for climate scenarios are probably not well-suited to nature
- Capture nature-related risks requires using **multiple metrics**
- Need for more **geographical and sector granularity**
- Exploring the **cascading impacts throughout value chains**

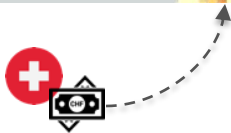
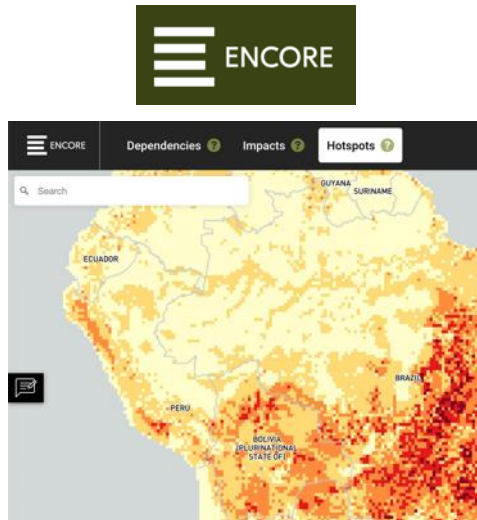
Figure 4.1 Propagation of nature-related hazards throughout value chains until final consumption



Source: NGFS, 2023

Nature Tools are Increasingly Available

- Growing number of open-source tools for assessing nature-related risks and impacts



In conclusion

- This presentation is indebted to colleagues and clients at WWF, Deloitte, the EU Commission, actuarial associations, and the many organizations I have had the privilege to work with over the years
- All the opinions voiced in this presentation are mine only
- Any mistake is also mine, and should not cast doubt on nature and climate risk and the key role of the financial system
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- I am happy to take any follow-up question or remark, feel free to contact me on [LinkedIn](#)