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REPORT

Taking forward the G20 Sustainable Finance Roadmap

Improving climate-related Sustainable Finance decisions with relevant data on nature

Key Points and Next Steps

- On September 27th 2022, a workshop to support the **implementation of the G20 Sustainable Finance Roadmap** discussed how financial sector assessments of climate risks and impacts could be improved by the use of data relating to nature.

- **45 experts** took part in the workshop, with **14 speakers** providing insights into state-of-the-art discussions regarding: climate risk analyses, climate-nature analytics, nature data, financial stability applications, supply-chain data considerations and potential data system architectures that would enable future data accessibility.

- Participants attended from central banks, financial institutions, data and analytics providers and organisations working to advance sustainable finance. They found that **climate and nature are often assessed in silos**, that the **availability of data on nature has greatly increased**, and that **synergies could be found** to **improve climate-related analytics in some specific areas**, with benefits for the **further integration of nature into the financial system**.

- Those areas include:
    - Nature mediating impacts of climate-related financial risks;
    - Informing on the resilience of climate adaptation measures;
    - Net-zero climate impact strategies;
    - Evidence on the quality of carbon offsets.

- The workshop, supported by the **G20 Sustainable Finance Working Group Secretariat** and the **Nature-related Data Catalyst** of the TNFD, kicked-off a participatory process to identify and draft **recommendations to the G20 Sustainable Finance Working Group** Secretariat, for consideration by G20 Member States on integrating climate and nature into financial decision making.

- The **next steps** will be to convene sustainable finance experts to:
    1. Discuss selected use-cases with small groups of interested experts to explore which data points and analytical tools would make material improvements to the accuracy and value of climate-related financial decisions.
    2. Work with data providers to identify the currently available, or soon to be available metrics and data on nature which would aid decision making; and
    3. Based on a participatory review of future solutions for making data more accessible, draft and refine consensus recommendations to G20 policy makers, and other interested parties about ways to seize valuable synergies between future developments in the assessment of climate and nature in financial decisions.

- These steps will be prepared on behalf of the EU, funded by a support project for the EU's G7 and G20 Environmental Diplomacy, and implemented by GIZ and adelphi. The process will be finalised in February 2023.

- To assure quality, this process is designed to be **open and collaborative**. If you are interested in contributing or have any comments or questions concerning this process, please get in touch with **Christian Metzler**, **Project Manager** at adelphi: metzler@adelphi.de.

Contents

Disclaimer: All views and quotes expressed represent current personal views of participants and do not necessarily reflect the opinions of their host institutions. Further, the analyses and findings provided by the authors of the report do not represent the opinions of the European Union, GIZ and adelphi.

1 Sustainable finance increasingly recognises the relationship between climate and nature

> *"Nature and climate are inseparable. It's crucial to strengthen our understanding of the nature-climate nexus and take action on nature and climate-related risks."*
>
> **Dr. Jun Ma, co-chair, G20 Sustainable Finance Working Group**

'Climate and nature are inseparable.' Yet, in the world of sustainable finance, they are largely being dealt with separately.

The workshop brought members of the sustainable finance communities dealing with nature and climate together.

The initial takeaway was that building a crossover between financial analysis relating to climate and nature offers huge potentials, both in terms of risk assessment and investment opportunities. The opening remarks, provided by **Dr. Jun Ma**, co-chair of the G20 Sustainable Finance Working Group and **David Craig**, co-chair of the Taskforce on Nature-related Financial Disclosures, set the scene by highlighting the close interconnection of climate and nature.

> *"Whilst many of us have either the job titles of climate or […] nature, the planet doesn't see it that way. [It's] thinking about this in an integrated way and we need to start thinking about our scenarios, our risk approach and our solutions integrating both climate and nature together."*
>
> **David Craig, co-chair TNFD**

Having acknowledged the materiality of nature for the financial system, they pointed towards the siloing of climate and nature discussions in most activities in the field. They motivated participants to address the twin challenges of climate change and nature degradation jointly. This includes holistic thinking about scenario analyses, risk management and solutions for both fields.

> *"The science is clear that we can't get to net-zero with the current state or projected decline of nature"*
>
> **Thomas Viegas, Bank of England**

In the G20 and across finance, there is an increasing understanding of the significance of nature. On the subject of **climate targets**, one speaker pointed out the need for "policies to improve the state of nature if we want to reach the goals set out in Paris seven years ago". He said that "the science is clear that we can't get to net-zero with the current state or projected decline of nature".

Methodologies and practices to factor nature into financial decision making are advancing rapidly, particularly through the activities undertaken by the Task-Force on Nature-related Financial Disclosures (TNFD), which - where possible – mirrors the design of the Task-Force on Climate related Financial Disclosures (TCFD).

These advances increasingly open up **possibilities of finding synergies and integrating approaches** in the future.

2 Synergies in climate and nature analytics

The workshop identified that better inclusion of nature-related analytics could improve the accuracy of climate-related financial decision making. Some examples on how analytics on nature can support such decisions are provided in the box below:

> **Nature mediates the impacts of climate-related financial risks**
>
> - **Coastal wetlands such as mangroves, coral reefs and salt marshes** prevent damage to coastal infrastructure and assets from **storm surges**. During "Superstorm" Sandy, wetlands in north-eastern US reduced damages of **storms and flooding** by over USD 625 million in property damage, or by 20% on average (Colgan et al. 2017).
>
> - **Water catchment areas and riparian vegetation along rivers** can protect assets from flooding.
>
> - **Droughts** and **climate-induced stress on freshwater availability** will largely impact several economic sectors such as high-tech manufacturing, power plants and agriculture, yet **water stress is mitigated by forests, swamps** and further ecosystems.
>
> **Informing on the resilience of climate adaptation measures**
>
> - Climate adaptation efforts that employ nature-based solutions are often more resilient and cost-effective than engineered alternatives.
>
> **Net-zero climate impact strategies**
>
> - Climate net-zero goals are incompatible with deforestation of pristine forests and land degradation in general, however, relevant data is often lacking.
>
> **Evidence on the quality of carbon offsets**
>
> - High quality forests, such as pristine forest areas, are more resilient than plantations, offering higher protection against wildfires and are better suited as carbon offsets.

Applications of nature for climate-related purposes can be manifold, as indicated in following graphic:

Figure 1:   Nature mediates climates risks for several sectors through services such as water flow maintenance, flood and storm protection, and more
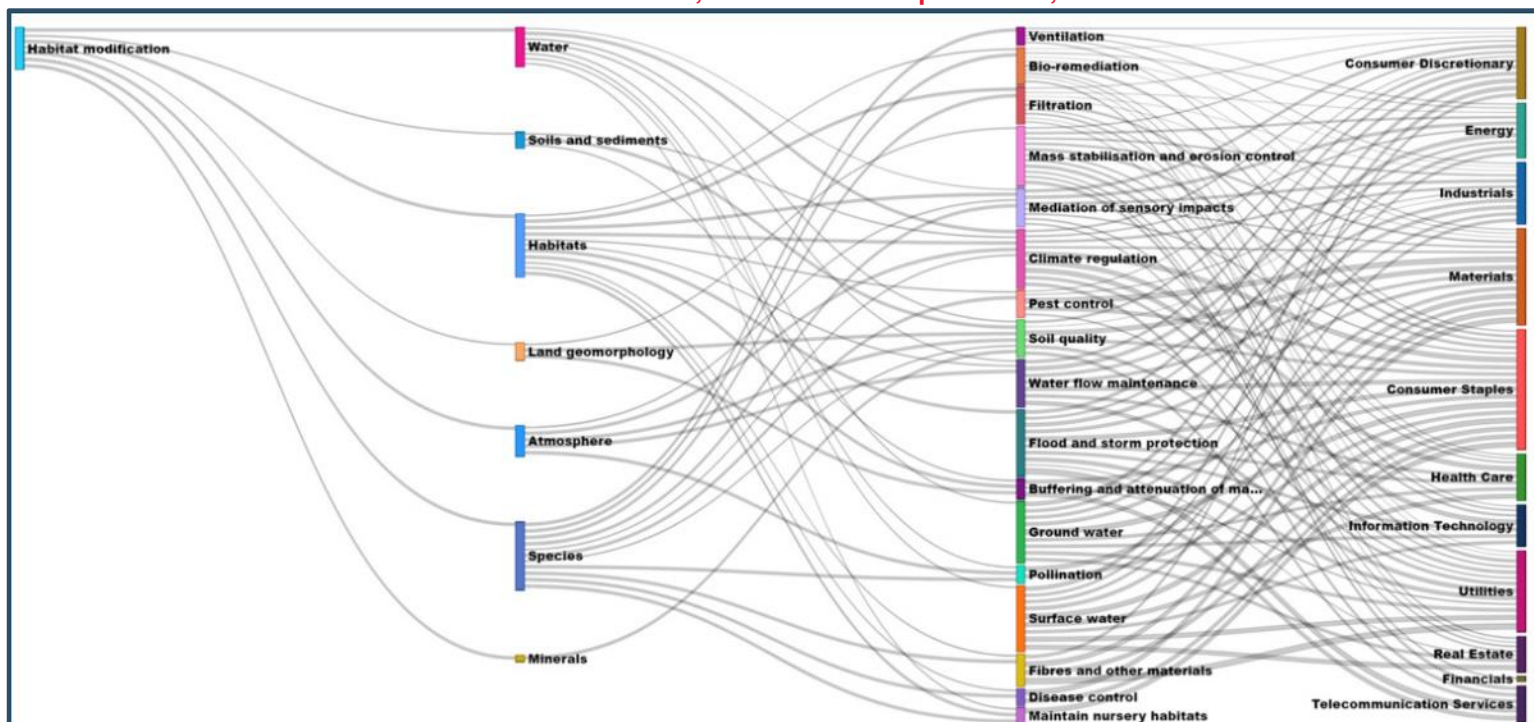
Source: NGFS-INSPIRE Occasional Paper "Central banking and supervision in the biosphere", p. 35.

The relationship between climate and nature is being increasingly researched

- The NGFS-Inspire Occasional Paper on "Central banking and supervision on the biosphere" explores links between climate and nature and hints towards their materiality for central banks' mandates.

- The Cambridge Institute for Sustainability Leadership published a report on the rationale of integrating climate and nature for financial institutions, also aiming to unlock synergies for financial institutions in jointly addressing climate and nature concerns.

Integrating nature-related analytics into climate-related use-cases can speed up both agendas

The above examples show that nature-related analytics can enhance decision-useful data for climate-related purposes. To do so, relevant nature-related data points need to be identified and introduced into climate-related tools. At the same time, a better understanding of the role of nature and nature analytics for climate purposes paves the way for an enhanced appreciation of nature-related risks and opportunities. This concerns capacities of financial decision makers as well as incentives for increasing the future flow of decision-useful nature data.

A focus on nature's ability to mediate climate risks for climate risk assessment

Taking one of these as a focus, the main linkage looked at during the workshop was **nature's ability to mediate climate risks.** The working hypothesis is that the financial impact of climate hazards can depend on the state of nature around physical assets.

Formalised, climate risks are a function of climate hazards, an asset's financial value (exposure) and the asset's sensibility to/protection against the hazard (vulnerability). The standard formula to assess physical climate risks – as used by insurers[1] and described in the ISO standard for climate risk assessments[2] is

$$\text{Physical Climate Risk} \ = \ \text{Hazard} \ \times \ \text{Exposure} \ \times \ \text{Vulnerability}$$

Figure 2:   **The three elements of the physical climate risk formula**
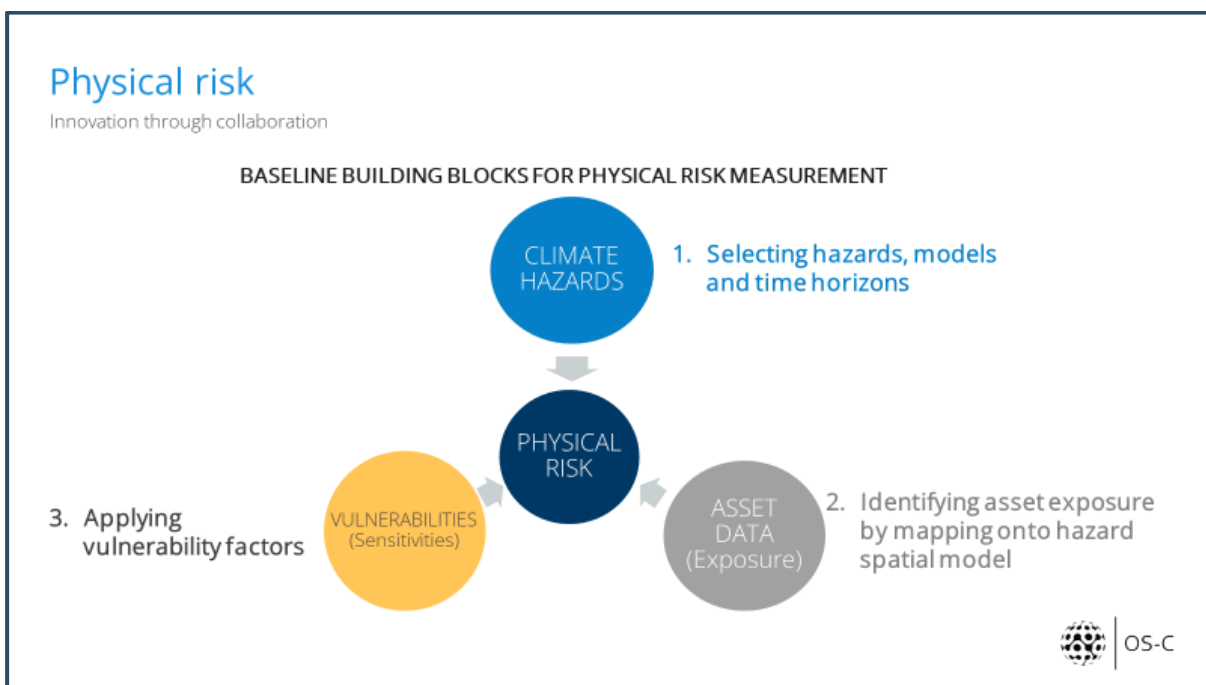
Source: OS-Climate

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[1] AXA defines climate risks as "a function of the physical hazard (the severity and frequency of events), exposure (the monetary value of insured asset(s)) and vulnerability (the susceptibility or damageability of the insured asset(s) to a given hazard intensity)" (AXA 2021 Climate Report, p. 55).

[2] ISO 14091:2021: Adaptation to climate change — Guidelines on vulnerability, impacts and risk assessment (ISO 2021).

The **hazard** is informed by climate models. Climate models have different use cases, can inform on different types of climate-related hazardous trends and events and can be simulated to inform different scenarios of earth's heating in contrast to pre-industrial levels.

The **exposure** is informed by geo-located financial information on physical assets. The value of assets can be determined through market prices. For the exposure, it is necessary to match geo-spatial data with data on ownership and financial value of assets.

Vulnerability describes the degree of damage incurred to an exposed asset due to a hazard. The example of hurricane Sandy showed how damage from storms and flood surges can be reduced by coastal wetlands. This mediating effect of nature can be expressed and monetised through the vulnerability variable. Simultaneously, the vulnerability score underlines how the degeneration of nature compounds climate risks.

Nature analytics can inform the vulnerability variable of climate risks

Recent improvements in tools to determine climate risks to assets have mostly improved on analyses outside the scope of vulnerability, such as mapping climate hazards on assets included in financial portfolios. Better integration of vulnerability, and the role of nature in it, has been less in focus. This point has also been acknowledged by the UN's Principles for Sustainable Insurance (PSI). In collaboration with over 20 insurers, a report on "Insuring the climate transition" skips a discussion of vulnerability due to "the lack of a common view of the potential vulnerability changes related to climate change" (UN PSI 2021, p.23).

Better assessment of the vulnerability of assets can yield better risk assessments for companies, financial institutions, insurers and financial authorities. Enhanced risk assessment **decreases the risk of mispricing climate risks**, which in turn can lead to better financial decision making.

Incorporating existing and future data for such analysis can decrease mispricing of climate risks by financial institutions, improve financial stability risk assessments by central banks and regulators and inform pricing of insurance policies.

Compatibility of climate and nature analytics – the potential for synergies

Although typically examined in thematic silos, one participant pointed out that future synergies in the assessments of risk were possible, as *'risk analysis of climate- and nature-risks share the same building blocks'*. This concerns several learnings of climate risk analysis, such as the existence of tipping points, non-linearities and uncertainty connected to those risks. It concerns also the design of disclosures (similar structures between TCFD and TNFD) and choice of analytical tools (e.g. scenario analysis, stress-tests).

> *'From the risk perspective, we cannot escape taking a holistic approach'*, as "nature loss just exacerbates some of the impacts we've seen from climate-specific events"
>
> **Thomas Viegas, Bank of England**

Improvements in both areas increasingly rely on **geo-located data** for assets and activities and the **data on economic relationships along supply chains**, which allow risks and impacts of investments and business activities to be assessed.

In addition to the real interactions between climate and nature, this points to the inefficiencies of separated climate and nature analyses, as both advance in future.

These realisations are attracting increasing interest in finding synergies. It also manifests in the ISSB's plans to look beyond climate, where nature and its links to climate are one potential topic to cover.

3 Challenges to seizing synergies

Workshop participants pointed to a range of challenges for the incorporation of information on climate and nature into financial decision making. These apply equally to the uptake of any valuable synergies between them. Challenges exist across several dimensions:

Decision-Relevance

- There are challenges in the mainstream uptake of climate and nature metrics and data, in their being seen and used as decision-relevant.

- Need for further development of decision-useful metrics: timely, high-quality and material

- Financial decision makers seek simple and integrated metrics, though climate and nature are complex.

Capacity Constraints

- There is often limited capacity for financial decision makers to understand the significance of nature for finance, and the complexity behind relevant metrics

- There is a need for greater understanding of climate-nature compound events, feedback loops, tipping points, non-linear relationships and others

Traceability

- There is a lack of access to economic data on investment and supply chain relationships that is needed to link available asset-level geo-spatial data with ownership data to provide upstream corporate, investment or supply chain risk (or impact) analysis

Data sharing

- Trust in giving access to relevant specific, granular, local data held by smallholders – e.g. on soil quality, inputs, land-use, ecosystem state

Nature-related data

- Low awareness of currently available data and its (potential) use cases

- Lack of access to, or appropriate formatting or curation of, available data

- Low granularity, outdatedness and unverifiability of accessible data bases

Tools

- Absence of commonly accepted quality standards for tools

- Absence of clarity on appropriate use and combination of data sets to provide high-quality and decision-useful metrics

As emphasised by multiple participants, these challenges do not imply that action cannot be taken now to better incorporate climate and nature into decision making. Huge progress has been made in these areas and the uptake of existing methodologies and tools would greatly increase alignment of financial decision making with sustainability.

4 New developments enable synergies

The workshop showed that organisations and initiatives in sustainable finance see room to advance the quality of analytical tools. Activities undertaken now will allow financial institutions and central banks to profit from enhanced climate and nature analytics in the future and enable synergies between climate and finance to be taken-up.

Recent developments have opened up a wealth of possibility for improved analytics. These developments can enable market progress that can drive progressive regulation and future mandates. There are three areas of particular progress:

1) Accelerated development of financial analytics on nature

In particular, the Nature-related Data Catalyst, recently launched by the TNFD, is currently working to **accelerate the development of nature-related data, analytics and tools** that can improve the ease, speed, and scale of adoption of the **TNFD framework**. The development of decision-useful nature metrics will be shaped by the availability, accessibility, timeliness, quality and other factors of underlying data points. A greater demand of a subsection of those data points for climate-related use-cases provides an incentive for their enhanced generation and provision. This, in turn, can inform initiatives that are working to increase financial flows to nature and biodiversity, such as the newly launched NatureFinance initiative, previously Finance for Biodiversity (F4B) initiative.

> *"[There's a] NGFS consensus that biodiversity loss is a source of financial risk and therefore it's part of central banks' and supervisors' mandates to take actions"*
>
> **Ma Jun, co-chair G20 Sustainable Finance Working Group**

The NGFS has started to look at nature's impacts on financial stability and transmission channels from the climate-nature interactions. The Occasional Paper on "Central Banking and Supervision in the Biosphere" raises a whole agenda of action points on integrating nature into central banking, ranging from research and policy signals to financial architecture such as metrics and standards, prudential policies, monetary policy, international coordination and more (full overview p. 66). Next to this nature-related agenda, the climate-nature nexus holds significant challenges, for example concerning the design of scenario analysis for forward-looking assessments, or the link of mutual deterioration of climate change and nature loss.

2) Evolution in data collection and new technologies

There has been a radical and ongoing evolution of nature-related data for use by business and finance. The emergence of new technologies allows stakeholders to use multiple data sources with a vast amount of new data points, e.g. from remote earth observation (see figure below).

The Spatial Finance Initiative showed how **geo-spatial earth observational data**, combined with asset-level data (e.g. on location, ownership) can provide valuable insights for investors concerning both climate transition and physical risks.

3) Making data accessible

To be decision-useful, the generation of vast amounts of raw data needs to be accessible and linked along global value chains, and formatted to inform sustainable finance tools. Several initiatives are working on the establishment of such data architecture or are prototyping solutions that overcome existing challenges to data access (e.g. confidentiality), offering the likelihood of direct access to global data. The workshop heard from some of these, including:

- **Icebreaker One**: Icebreaker One works on open standards for data discovery and sharing that could automate environmental reporting including supply chains, drawing upon a great variety of input data. Users could discover (search), access and use (licensed usage) open and shared data. Such a data sharing system is already in use for the UK banking sector and could be implemented to support net-zero goals and providing relevant data for risk models.

- **PACT**: The WBSCD-led Partnership for Carbon Transparency is supporting companies to create transparency on their supply chain carbon emissions. PACT develops a methodological and technological infrastructure that allows companies to account and share product-level scope 3 emission data.

- **OS-Climate**: To advance financial institutions' climate analytics, OS-C works with community collaboration and open source to give open-source access to decision-relevant climate data. It is building a global data commons, a 'federated library of libraries', and developing open-source analytical tools for portfolio alignment, physical risk assessments and transition scenario analysis.

Figure 3:   The evolution of nature data
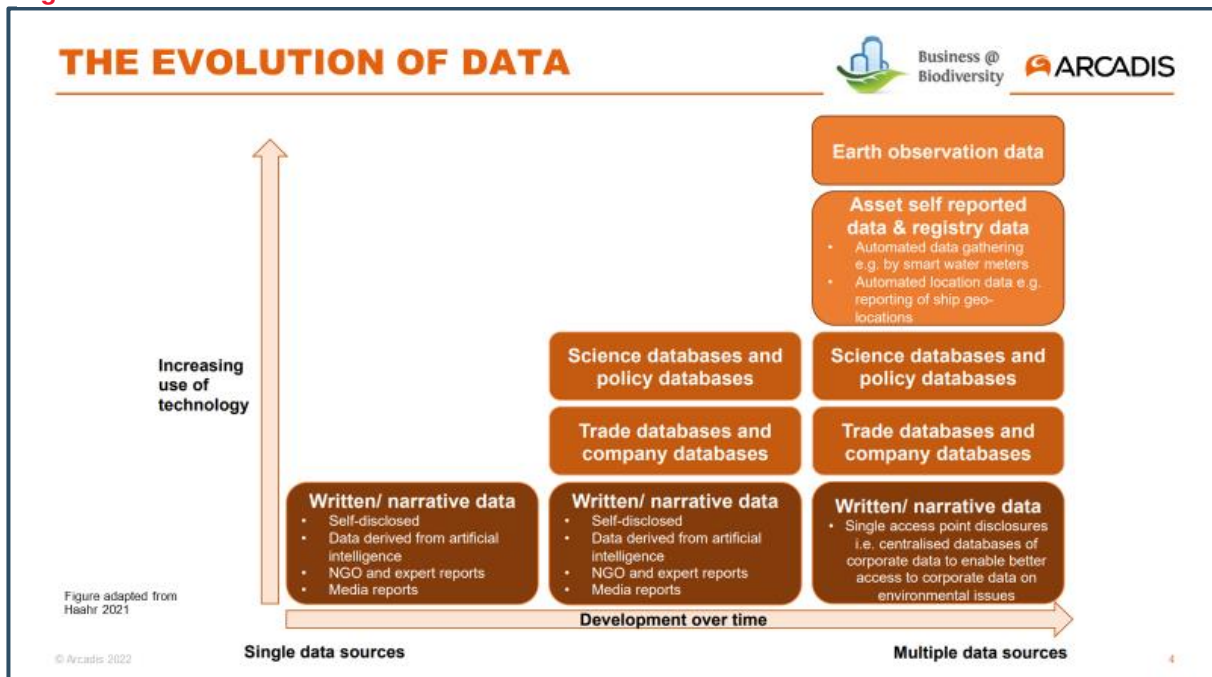
Source: EU Business@Biodiversity Platform, Arcadis

5 Opportunities for synergies

Developing the synergies between climate and nature analytics could improve financial decision making and organisational efficiency and build understanding of the role and possibilities of incorporating nature into financial decision making.

Success could enhance financial institutions' pricing of climate risks and protect from reputational damage through unsubstantiated sustainability claims. It could enhance decision making related to insurance and inform central banks' climate- and nature stress testing.

Presentations pointed towards the need for financial authorities to monitor climate and nature-related risks and deeply understand their interactions and feedback loops. Enabling stable market conditions will be at the heart of central banks' future challenges, in a world that will be increasingly affected by climate and nature-related hazards.

Many of the developments to allow this to happen are already underway. With significant lead-in times for capacity building and tools and infrastructure development for the generation of and access to higher quality data, a range of initiatives are needed to run in parallel to work on solutions.

For example, **joint determination of decision-useful data for vulnerability analysis could improve physical climate risk analysis.**

Where there are material influences of nature on physical risk, climate risk assessments could be improved by the inclusion of appropriate nature-related data points in the vulnerability module of climate risk assessments.

For this to happen, risk analysts would need knowledge of, and access to the appropriate metrics and data-points. These may already be available from organisations working on incorporating nature into finance. Or the metrics may be in development, and the relevant data points potentially available in an appropriate form and quality.

Discussion between climate risk analysts and organisations working on nature data and metrics should be able to identify decision-useful metrics and data, to guide and encourage future investments in the provision of those metrics for sustainable finance.

Where these become available, improved information on vulnerability can be integrated into the risk model. The figure below uses the example of the OS-Climate physical risk modelling framework to show how vulnerability assessments can be introduced into mainstream physical climate risk assessments. Data on nature could be used to inform the vulnerability model, indicated by the blue square.

To help harness the synergies between separate climate and nature initiatives, the workshop **proposed to work on a limited number of specific use-cases**, like the example above, to develop **recommendations which would enable synergies to be taken up**.

Figure 4:   Nature Data for use in the vulnerability model
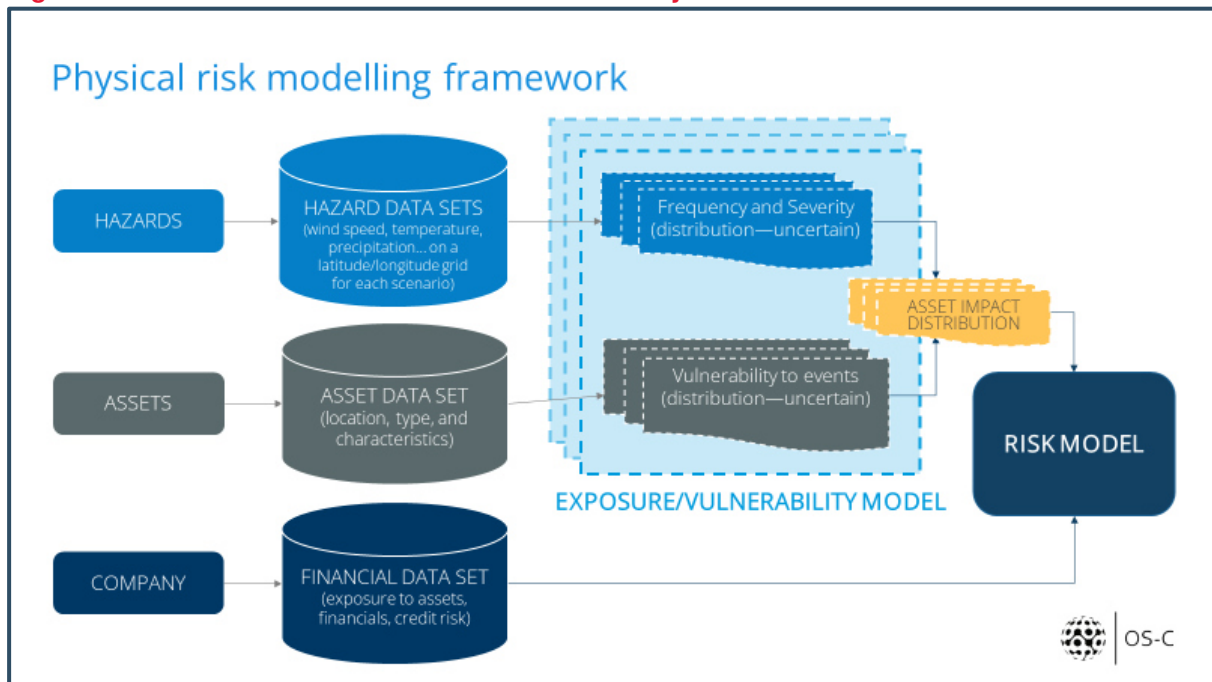
Source: OS-Climate

6 Actions and Next Steps: Use-cases

Building on the insights from contributions in the workshop, we will now collect expertise around two use-cases where synergies between climate and nature analytics are likely to be found. For each use-case, a 4-month process will exchange and discuss information to:

- Identify the relevant linkages between climate and nature that may be material to financial decision making;

- Identify the practical ways that knowledge of these linkages could improve financial analysis – including identification of priorities for desirable metrics and data;

- Identify which possibilities exist for future delivery of relevant data and its improvement in quality; and

- Draft and discuss recommendations to policy makers and others, on the collective actions which would facilitate future improvements in analysis.

The process aims to agree on recommendations for submission to the **G20 Sustainable Finance Working Group** Secretariat, for consideration by G20 Member States as part of implementation of the G20 Sustainable Finance Roadmap.

From a choice of the four potential use-cases below, based on feedback from workshop participants, we will convene discussions on the first two in the list:

1. Improving forward-looking analysis of corporate and investor **asset and supply-chain risks from limited fresh-water availability**, where catchment land-use is one mediating factor.
2. Improving assessment of **asset and supply-chain risks from flooding** for financial institutions' portfolios, where land-cover is a mediating factor in vulnerability, e.g. in the OS-Climate Risk Analysis tool.
3. Scenarios and forward-looking assessments of **financial stability risk from climate-nature feedback loops**, e.g. for land use change, deforestation and carbon sequestration.
4. Factoring in the coverage and value of coastal wetlands, such as **mangroves, in insurance risk analysis**, where they reduce property damage from storm surges.

The development of final recommendations can also consider the needs and lessons learned from wider use-cases. In convening the exchange, we look to **participants to share existing information and research on needs for improving analysis and possibilities for meeting those needs.** The consultancy adelphi will act as secretariat, summarising the information offered and shaping the agenda for comments and discussion. We therefore welcome broad participation and inclusion of wider participants with an interest in the outcomes (to define needs) and those developing relevant expertise. To participate, please contact **Christian Metzler** at adelphi: metzler@adelphi.de. The timeline for exchange and development of recommendations is:

Figure 5:   Process to develop recommendations
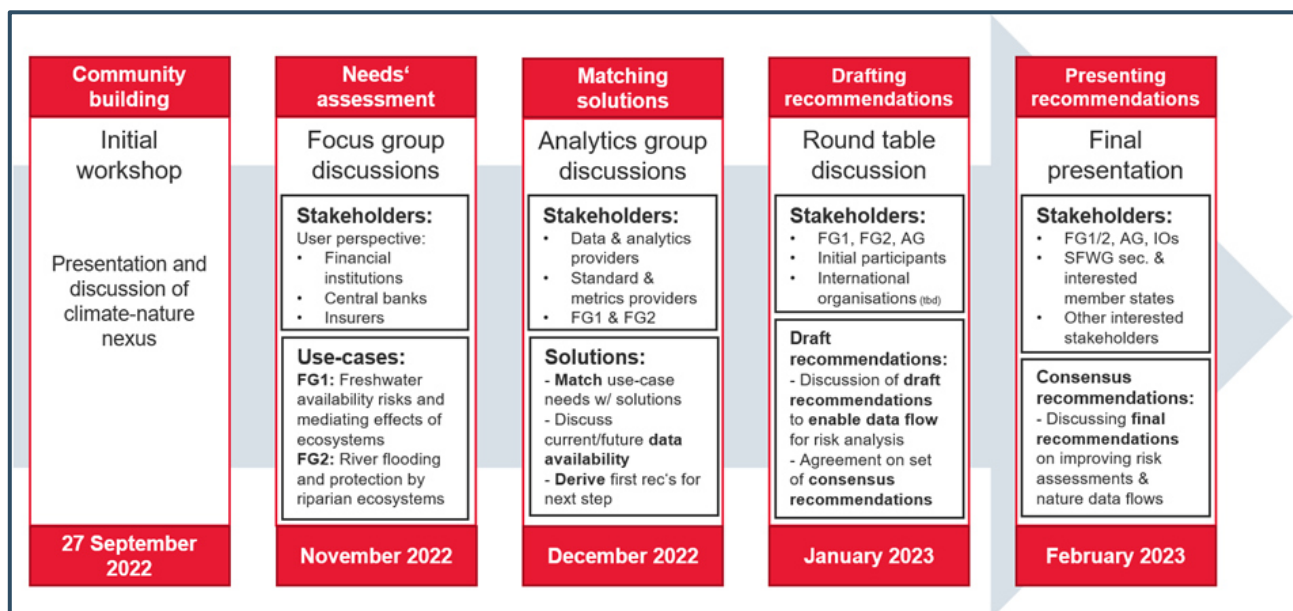
Annexes

Annex 1: List of Initial Workshop Participants

Name	Position	Organisation	Stakeholder group
Data users – Public Institutions			
Serafin Martinez Jaramillo	Environmental and Social Risks Analysis and Policy	Banco de México	Central Bank
Thomas Viegas	Manager, Market Intelligence and Analysis	Bank of England	Central Bank
Alain Naef	Research Economist	Banque de France	Central Bank
Gonzalo García-Trujillo	Senior Economist	Central Bank of Chile	Central Bank
Paolo Krischak	Green Finance Expert	Deutsche Bundesbank	Central Bank
Andrej Ceglar	Climate scientist	ECB Climate Change Centre	Central Bank
Abhishek Srivastav	Member of Secretariat	FSB	Central Bank
Michele Fornino	Economist	IMF	Public financial institution
Data Users – Private Institutions			
Kevin Haines	Head of Social Policy	Bedford Row Capital plc	Financial Institution
Matt Sandoe	Climate risk lead;	BNP Paribas, OS-Climate	Financial Institution
Christian Felx	Directeur et chef, Investissement responsable	Desjardins Gestion internationale d'actifs	Financial Institution
Chris Dodwell	Head of Policy and Advocacy	Impax Asset Management	Financial Institution
Ivo Dimov	Senior Consultant ESG and Responsible Investing	Intermediate Capital Group	Financial Institution
Hyewon Kong	Vice President, Head of Responsible Investing	Investment Management Corporation of Ontario	Financial Institution
Guillermo E. Franco	Managing Director, Global Head of Cat Risk Research	GuyCarpenter	Insurance
Data suppliers/aggregators			
Mårten Karlsson	Product Manager Biodiversity	Morningstar	Data/Analytics provider
Matt Jones	Head of Nature Economy	UNEP-WCMC	Data/Analytics provider
Vian Sharif	Founder	NatureAlpha	Data/Analytics provider
Christophe Christiaen	Lead, Innovation and Impact	Spatial Finance Initiative	Data/Analytics provider
José Ignacio Galindo	Co-founder	Waterplan	Data/Analytics provider
Julia Bingler	Research Fellow	CEP	Research

Enabler			
Ma Jun	Co-chair	G20 Sustainable Finance Working Group	
Geraldine Ang	Senior Policy Analyst - Green Finance and Investment	OECD	Convenor, Research
Jeremy Eppel	Ambassador	F4B	Convenor
Adams Koshy	Senior Specialist, Sustainability Reporting	UN PRI	Convenor
Sylvaine Rols	Senior Specialist, Environmental Issues	UN PRI	Convenor
Ivo Mulder	Head (a.i.), Climate Finance Unit (CFU)	UNEP	Convenor, Research
Jessica Smith	Nature Lead	UNEP FI	Convenor
David Carlin	TCFD and Climate Risk Program Lead	UNEP FI	Convenor
David Craig	Co-chair	TNFD	Standard setter
James d'Ath	Lead WG Data	TNFD	Standard setter
Mengwei Sha	Researcher	Institute of Finance and Sustainability	Research
Anne-Marie Bor	Coordinator	Finance for Biodiversity Pledge	Convenor
Riya Saxena	Senior Associate	RMI India	Convenor
Eve Gleeson	Research Director	ShareAction	Research
Philippe Diaz	Advisor	WWF	Research
Gavin Starks	Founder	Icebreaker One; FoSDA	Data solutions
Anna Stanley	Director, Climate Action	PACT, WBCSD	Data solutions
Advisory			
Johan Lammerant	Workstream Leader on Methods	EU B@B Platform, Arcadis	Consulting
Ingmar Jürgens	Co-founder and CEO	Climate & Company	Consulting
Annelisa Grigg	Director	Globalbalance	Consulting
Charlie Dixon	Senior Engagement Manager	Vivid Economics	Consulting

Annex 2: Agenda

Time	Contents	Speaker
14:00-14:15	**Welcome and Objectives** • Including, role and context of the G20 Sustainable Finance Roadmap and its actions	• Ma Jun, co-chair, G20 Sustainable Finance Working Group • David Craig, co-chair TNFD; founder Refinitiv
14:15-14:30	**The role of data on nature in climate risk analysis**, for: • Financial institutions' physical climate risk assessments • Generation of forward-looking data and enhanced scenario analyses • Conduct of monetary policy, management of 'green' inflation through supply chain disruptions • Q&A	Nature data relevance for Central Banks: • Thomas Viegas, Manager, Market Intelligence and Analysis, Bank of England Nature data relevance for FIs: • Matt Sandoe, Climate Risk Lead, BNP Paribas, OS-Climate
14:30-14:45	**Current and future sources of relevant data and their applications** • Increased availability of environmental data through higher connectivity and technological advances • Example: Geo-spatial data as use-case with joint application for climate and nature purposes • Q&A	Overview: • Johan Lammerant, EU B@B/Arcadis • Christophe Christiaen, Spatial Finance Initiative
14:45-15:10	**Identifying and prioritising nature-related data and metrics for joint and climate-focussed use-cases; discussion of potential synergies in climate and nature agendas** • Metrics and indicators (forward/backward looking) for climate physical risk assessments (incl. scenario analysis) • Draft prioritisation of metrics and data access on nature • Need for data on dependencies and risks in the supply chain • Future public policy data needs to conduct of monetary policy	Introductory statements by stakeholder groups, discussion with moderated Q&A • David Carlin, TCFD and Climate Risk Program Lead, UNEP-FI • Andrej Ceglar, ECB Climate Change Centre • Jose Ignacio Galindo, Co-founder, Waterplan • James d'Ath, Data lead, TNFD

15:10-16:10	Discussion of areas of overlap and synergy in metric prioritisation • Identification of possible areas of common goals and solution, based on a tabled suggestion	Workshop participants: Q&A with previous speaker panel and moderated discussion
	Break	
16:15-16:30	**Technological and governance potentials for greater data availability and accessibility** • Technical possibilities for increased access and availability to relevant data for discussed use cases • Digitization of sustainability data • Q&A	Impulses: • Gavin Starks, Founder Icebreaker One, co-chair Future of Sustainability Data Alliance • Anna Stanley, Partnership for Carbon Transparency (PACT), Director Climate Action, WBCSD • Truman Semans, Founder and CEO, OS-Climate
16:30-16:55	**Discussion of possible ways to take forward synergies and operationalise solutions:** • Introduction: Possible process to support implementation of the G20 Sustainable Finance Roadmap • Review of possibilities and suggestions for taking forward synergies (plenary discussion)	Intro: • Christian Hudson, EU G20 Diplomacy support Workshop participants: • Q&A with previous speaker panel and moderated discussion
16:55-17:00	Wrap-up & next steps	• Nature-related Data Catalyst by TNFD • EU G20 Diplomacy support

adelphi is a leading independent think-and-do tank in Europe for climate, environment and development. We are some 280 strategists, thought leaders and practitioners working at the local and global levels to find solutions to the most urgent political, economic and social challenges of our time. As a policy consultancy, we support a just transition towards carbon neutrality and sustainable, liveable societies. Our work is grounded in transdisciplinary research, evidence-based consulting and stakeholder dialogues. With these tools we shape policy agendas, facilitate political communication, inform policy processes and support decision-makers.

Since 2001, we have successfully completed more than 1,000 projects worldwide for numerous international clients and partner organisations in the fields of **energy, climate, resources, finance, diplomacy and business.**

Sustainability is the basis of our internal and external conduct. We are **committed to a future fit for grandchildren**, reduce our CO2 emissions where we can and offset those that are currently unavoidable. We purchase 100 per cent green electricity, consistently rely on environmentally friendly and socially responsible procurement and use ethical financial services. Through our project work, we contribute to increasing positive environmental performance. The responsibilities and processes of our corporate environmental protection are certified according to the EMAS seal of approval, the highest European certification for a systematic environmental management system.