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## The NGFS (Network for Greening the Financial System) Progress Report on Bridging Data Gaps and beyond<sup>1</sup>

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<sup>1</sup> This presentation was prepared for the conference. The views expressed are those of the author and do not necessarily reflect the views of the BIS, the IFC or the central banks and other institutions represented at the event.

# NGFS Progress report on bridging data gaps

## Executive Summary

NGFS (Network for Greening the Financial System)

### Key messages

Reliable and comparable climate-related data are crucial in order for financial sector stakeholders to assess financial stability risks, properly price and manage climate-related risks, and take advantage of the opportunities arising from the transition to a low-carbon economy.

Persistent gaps in climate-related data hinder the achievement of these objectives. Stakeholders report the need for more forward-looking data (for example targets or emissions pathways) and granular data (for example geographical data at entity and asset-levels). Stakeholders are also calling for some assurance about the quality of climate-related data through verification and audit mechanisms, as well as improvements in data accessibility.

A mix of policy interventions is needed to catalyse progress towards better data, based on the following three building blocks:

- i. rapid convergence towards a common and consistent set of global disclosure standards;
- ii. efforts towards a minimally accepted global taxonomy;
- iii. the development and transparent use of well-defined and decision-useful metrics, certification labels and methodological standards.

Global progress on the aforementioned building blocks that the NGFS is calling for should not prevent better leveraging of already available data sources and approaches (such as e.g. proxies and estimates, qualitative approaches and capacity building), as well as the promotion of new data tools.

The NGFS will continue its evidence-based identification of the most prevalent data gaps – including by further engaging with other stakeholders such as non-financial corporates, data providers and ratings agencies – and to issue recommendations on how to bridge them.

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## Climate change and the data challenge

**Reliable and comparable climate-related data are crucial for financial institutions (including central banks and supervisors), investors and policymakers to assess financial stability risks, properly price and manage climate-related risks, and take advantage of the opportunities arising from the transition to a low-carbon economy.** Such climate-related data are key for microprudential and macroprudential supervision. They also enable financial institutions and investors to gauge the financial repercussions of climate change and increase their resilience to climate-related risks. Moreover, they enable financial institutions to ensure that sufficient capital is made available for the investments needed to achieve the goals of the Paris Agreement.

**Persistent gaps in climate-related data hinder the achievement of these objectives. The need to find solutions for data gaps has garnered significant attention and led to a renewed sense of urgency, as pressure continues to grow to address climate change from investors, researchers, regulators and policymakers, as well as NGOs and the general public.** These data gaps have multiple causes, which include the time horizon for climate-related risks, the widespread nature of their impact and the high degree of uncertainty surrounding them, as well as the need to translate climate-related risks into financial impacts.

## Mandate and work programme of the Workstream on bridging the data gaps (WS BDG)

**The Network for Greening the Financial System (NGFS) set up the Workstream on bridging the data gaps (WS BDG) in July 2020 to identify climate-related data needs and data gaps and to propose policy recommendations to bridge such gaps.** The WS BDG represents the implementation of Recommendation n° 3 “Bridging the data gaps” issued in April 2019 in the First comprehensive report by the NGFS. More specifically, inline with its mandate, the work of the WS BDG is structured according to the following three-phase approach:

- i. Identify data items needed by the financial sector –including central banks and supervisors – for the purpose of climate-related risk analysis and the scaling up of green finance.
- ii. Determine whether the data items are available, and if so, identify their data sources and limitations for accessing them.
- iii. Provide guidance and recommendations on how to bridge the data gaps identified.

**This Progress report forms part of the first phase of the Workstream’s work programme and, in setting out the issues that need to be considered going forward, lays the groundwork for a comprehensive assessment of climate-related data needs and gaps.** The Workstream completed a systematic literature review, undertook outreach to a variety of international organizations and other relevant stakeholders, and conducted a survey and two closed-door workshops with banks and buy-side firms. Given the breadth and magnitude of climate-related risks, and the urgent need for action, this report is narrowly focused on climate-related

data issues, both at a granular level (such as firm-level data and asset-level exposures) and at an aggregate level (such as data on the incidence of natural disasters at the regional or country level). Broader environmental data issues, for example those related to biodiversity, may be addressed in the future. It should be noted that climate change research, methodologies and metrics for application in the financial sector are evolving quickly and further data needs will continue to emerge over time.

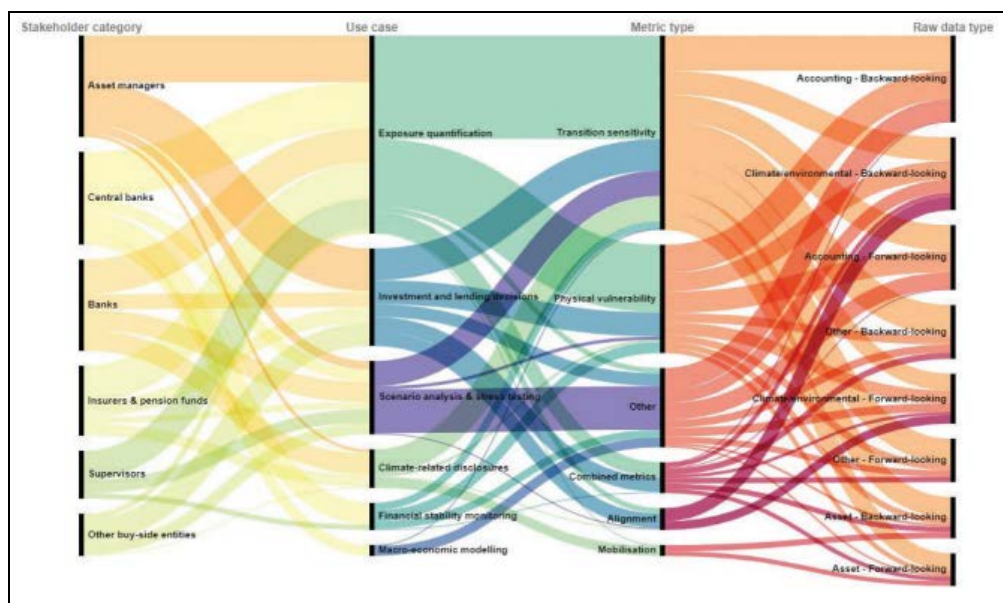
## A repository of data needs

**The NGFS has adopted a user-centric approach informed by interactions with a vast number of stakeholders<sup>1</sup> from a wide range of geographies and areas of expertise.** As data gaps are cross-cutting issues that affect a large number of public and private sector stakeholders, a user-centric approach represents a transparent and open-ended starting point to jointly determine what data are needed across stakeholders. This report proposes a classification of a number of use cases that define the application of climate-related data for key stakeholder groups in the financial sector. Identifying these use cases, understanding what metrics and methodologies support them, and relating them to the raw data items that feed those metrics are key for systematically mapping the data needs, and subsequently, the data gaps. To this end, the Workstream has set up a three-layered repository of data needs in which detailed results for use cases, metrics, and raw data items are recorded. The repository will play an important role in phases 2 and 3 of the work programme and will allow the NGFS to draw conclusions about which data gaps to prioritize. A schematic overview of the data repository is presented in Figure 1.<sup>2</sup>

Interconnectedness of use cases, metrics and raw data items by stakeholder category in the repository

<sup>1</sup> Note that, at this stage, the liability side of the insurance sector is not included in this assessment.

<sup>2</sup> This figure gives a schematic overview of the data repository: from left to right, it shows the six stakeholder categories, their use cases for climate-related data, the metrics required to support the use cases, and the raw data items that feed the metrics.



## Key issues related to data availability, reliability and comparability

**Meeting stakeholders' climate-related data needs for the identified use cases is a multifaceted challenge, which warrants comprehensive consideration across three dimensions: availability, reliability and comparability.**

With regard to **availability**, stakeholders need climate-related data across asset classes, sectors and geographies, and over different timeframes. In some instances, relevant data sources lack the appropriate granularity, and/or the geographical or sectoral coverage. In other instances, relevant data sources exist, but are not collected in a consistent manner, are not directly accessible, cannot be easily compared or may produce varying outcomes. As for **reliability**, numerous studies<sup>3</sup> have shown that the available data sources and metrics generally produce scattered and inconsistent outcomes. Reliability depends on the quality of the raw data, as well as the auditability and transparency of the providers. For example, more transparency about how ESG scores are determined would enable the sometimes large differences in the scores of different data providers to be better understood. Lastly, with regard to **comparability**, differences in the design and focus of the multiple frameworks for climate-related disclosures, as well as a lack of consistency, can make it challenging for end-users when they need to compare the information reported across different frameworks.

**The findings of the interaction with stakeholders suggest that the largest data gaps exist for forward-looking data, such as emissions pathways and companies' transition targets (including interim targets).** Given the importance of forward-looking assessments of both physical and transition risks, the current reliance on mostly backward-looking data is unsatisfactory. Stakeholders reported

<sup>3</sup> For more information, please see Box 3 on "Comparability and transparency issues in practice" in the NGFS Progress report on bridging data gaps

that they need to understand the point-in-time performance of an exposure against a transition pathway – hence the need for firms to disclose their transition plans – as well as the impact of adaptation and mitigation measures on the evolution of the risks.

**Stakeholders also highlighted the currently limited availability and granularity of “carbon” data (such as Scope 3 emissions, data on avoided emissions) and geographical data on asset locations, to assess both transition and physical risks.** Since there are large geospatial differences in the manifestation and evolution of physical risks, it is critical to make asset location data available to determine the variety and severity of the physical threats of climate change.

## Building blocks to bridge the data gaps

**To ensure the availability of reliable and comparable climate-related data, a mix of policy interventions is needed to catalyse progress. Three building blocks are paramount:**

- 1) rapid convergence towards a common and consistent set of global disclosure standards;**
- 2) efforts towards a minimally accepted global taxonomy; and**
- 3) the development and transparent use of well-defined and decision-useful metrics, certification labels and methodological standards.**

Many of the stakeholders with which the Workstream has interacted during the first phase of its work programme have made policy suggestions for bridging the data gaps: policymakers should take urgent steps to improve climate-related disclosures and strive to converge towards a set of consistent global standards and disclosure requirements. They should also aim to achieve a minimally accepted global taxonomy to enhance reliability, availability and comparability of reported data. Moreover, relevant and consistent metrics and methodological standards are important for the development of disclosure standards.

## Disclosure frameworks

**While some progress has been made in recent years, climate-related disclosures by financial and non-financial companies are still limited, fragmented and inconsistent across economic sectors.** Financial institutions stress the degree to which they rely on disclosures from the wide range of corporates that they invest in, lend to or insure. It is essential for them to have access to information regarding the climate risks and opportunities faced by the corporates they are exposed to. Meanwhile, corporates also face challenges in providing climate-related data to their stakeholders amid a fragmented landscape of still largely voluntary disclosure frameworks. The main issues identified relate to the voluntary nature of disclosure frameworks, the fragmentation in the landscape, the absence of technical guidance and independent verification, and the lack of a common approach to materiality. Moreover, different definitions and thresholds for materiality with respect to climate issues also affect the availability of climate-related data.

**Convergence towards a global disclosure framework, alongside progress towards a globally consistent set of minimal climate disclosure standards and requirements is likely to improve the availability and comparability of climate-related data.** A stronger push for consistency across sectors and regions, and an appropriate scope for disclosures is a prerequisite for an adequate disclosure framework for the financial sector. Notably, at the beginning of 2021 the IFRS Foundation announced a plan to establish a sustainability standards board with support from IOSCO and building on existing frameworks, such as the Task Force on Climate-related Financial Disclosures (TCFD) and the prototype developed by the “group of five”, namely the Carbon Disclosure Project (CDP), Climate Disclosure Standards Board (CDSB), Global Reporting Initiative (GRI), the International Integrated Reporting Council (IIRC) and the Sustainability Accounting Standards Board (SASB).<sup>4</sup> This will pave the way for greater consistency and the convergence of sustainability-related financial reporting standards, with climate standards being prioritised.

**Mechanisms for verifying and auditing climate-related financial disclosures are essential to make data reliable and comparable.** The development of sufficiently granular methodological standards that prescribe how data items are defined and how metrics are to be computed is a precondition for assuring the quality of disclosures. In turn, external assurance of such information facilitates the appropriate application of standards and definitions. Some stakeholders have called for an assurance framework similar to the one for financial statements and its integration in mainstream financial reporting.

## Taxonomies

**Taxonomies are another building block in improving data reliability and comparability, and therefore providing financial institutions and investors with relevant information.** Many stakeholders consider developing taxonomies as a prerequisite for consistent collection of data and comparable analysis based on these data. Currently, different jurisdictions are establishing different, separate taxonomies for green finance, including pathways and targets that are relevant in their regional context. Many stakeholders point to the need to recognize transition pathways in taxonomies, as a way of catering for differences in regional starting points and facilitating transition financing for companies and other economic players that aim to improve their environmental impact. Other stakeholders questioned the added complexity this would bring to the task of developing a minimally accepted harmonized taxonomy and suggested that disclosing the pathways and distance to targets would be an easier way forward. There is therefore a need for cross-regional discussion on taxonomies. Efforts towards developing a globally agreed upon taxonomy could help ensure worldwide comparability of raw data. The convergence of different taxonomies over time will be important in ensuring consistency in climate-related disclosures.

**There is a need to intensify and coordinate the development of taxonomies across the globe, and to examine the possibility of harmonizing them over time.** Such efforts need to be intensified and well-coordinated, especially in regions where taxonomies do not yet exist. These are important steps towards the development of

<sup>4</sup> For information on the prototype developed by the “group of five”, see Reporting on enterprise value, Illustrated with a prototype climate-related financial disclosure standard, December 2020.



a global taxonomy. Limiting the scope to that of a climate-related taxonomy first (as opposed to including issues such as biodiversity which could well be added as a next step) may be a pragmatic way forward. For example, the International Platform on Sustainable Finance has created a dedicated working group on taxonomies to comprehensively compare existing European and Chinese taxonomies for environmentally sustainable investments and identify commonalities and differences in their respective approaches, criteria and outcomes.

## Certification labels, methodological standards and consistent metrics

**Certification labels<sup>5</sup> and harmonized methodological standards are key to improving data reliability and comparability.** They can make it easier to identify climate-related data and construct datasets (for example, energy efficiency certificates). Certification labels should be harmonized across regions and the information they certify should be made comparable, homogeneous and easily available.

**Data comparability is also enhanced when financial market participants harmonize their approaches.** The methodologies and disclosure frameworks observed by the NGFS often rely on different computation methods, even for key metrics used across stakeholders and geographies. Such divergences can hinder the comparability of climaterelated data, with a profound effect on the outcomes of analyses, especially as transparency regarding the methods adopted is limited. For example, De Nederlandsche Bank has recently shown that inflation and exchange rate effects can have a substantial impact on the outcomes of relative carbon footprint metrics.<sup>6</sup> If inancial market participants adopt harmonized approaches, this supports the comparability of data. It is worth noting that a number of initiatives have led to open source methodologies and voluntary methodological standards being produced which are then widely used. For example, one such methodological standard is the attribution methodology for the computation of financed emissions by the Partnership for Carbon Accounting Financials (PCAF), which has been embraced by the Greenhouse Gas (GHG) Protocol.

## Leveraging existing data sources and approaches

**The NGFS notes that there is substantial scope for financial institutions to better leverage already available data sources and approaches.** Notwithstanding the need to make progress on the three aforementioned building blocks, financial institutions can also make better use of proxies and estimates, as well as qualitative approaches, while they build up capacity to enhance their ability to process climate-related data. Moreover, many existing approaches might be usefully applied in any of

<sup>5</sup> A certification label is a label or symbol indicating that compliance with standards has been verified. Use of the label is usually controlled by the standard-setting body. Where certification bodies certify against their own specific standards, the label can be owned by the certification body. Examples are Energy Performance Certificates or ISO standards.

<sup>6</sup> See Janssen, A., Dijk, J. and Duijm, P., "Misleading Footprints, Inflation and exchange rate effects in relative carbon disclosure metrics", DNB Occasional Paper, Vol. 19(1), 28 January 2021.

these building blocks. For instance, voluntary standards developed in the markets might provide to be valuable building blocks for harmonized disclosure frameworks.

**The promotion of new data tools and analytics, and more generally digitalization, as well as repositories to make data collection more transparent are also useful.** The development of new data tools can provide technical solutions for accessing data, and repositories could be helpful in pointing to existing climate-related data. Indeed, many stakeholders emphasized that they often face technical obstacles when working with climate-related data. Access to existing climate-related data is often difficult, because data are scattered across different sources and/or only available via private data providers. Publicly available repositories could be helpful as a way of pointing to existing climate-related data and informing users on how best to access relevant data sources. Solutions such as open source architecture for data collection and distribution and machine learning techniques may also play a role in making scattered information available in a more structured format. However, more work needs to be done to make existing data more broadly available to policymakers and investors. To date, several initiatives have been launched with a view to pooling climate-related raw data in a single point (see Box 10 in the Progress report on bridging data gaps for a case study in Mexico). It would be worth examining how these can improve data availability and comparability.

## Next steps

### *Identifying and prioritizing data needs: use cases, metrics that serve the use cases and the raw data items needed for those metrics*

The NGFS will further expand its engagement with stakeholders and, using the data repository, aims to draw evidence-based conclusions about which data needs should be prioritized. To this end, the NGFS will:

- engage with a broad set of stakeholders, including non-financial corporates (which constitute the first input in the data chain), central banks and international financial institutions (whose statistical functions are key to help bridge the gaps), data providers and rating agencies, in order to determine whether the data needs identified can be addressed and, if not, how the gaps can be bridged;
- further assess the types of metrics that are most suited to support the different use cases identified in the first phase. style, paragraph style, paragraph style.<sup>7</sup>

### *Meeting data needs across three main data dimensions: availability, reliability and comparability*

Going forward, the NGFS will:

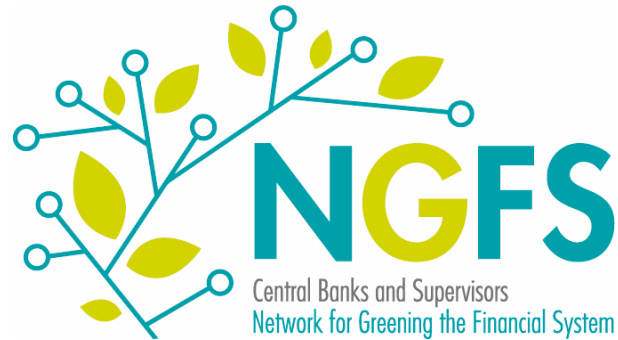
- examine possible recommendations for increasing data availability, including initiatives that make data available free of charge or at nominal cost to cover data processing;

- consider the types of verification scheme that could enhance the quality of raw data items, and issue recommendations for achieving greater transparency and comparability on methodologies.

*Developing policy recommendations to help bridge data gaps*

The NGFS will, in liaison with relevant stakeholders:

- identify how the progressive harmonization of metrics and methodological standards, certification labels and taxonomies can contribute to the reliability and comparability of data, together with a wider implementation of mandatory disclosures in financial statements. In doing so, the NGFS will engage with relevant stakeholders, including non-financial corporates and methodologies providers;
- examine how publicly accessible databases can improve data availability and comparability. In doing so, the NGFS will reach out to initiatives that pool climate-related raw data in a single point and to relevant stakeholders in the field of geospatial data, paying specific attention to the use of new technologies (such as artificial intelligence).

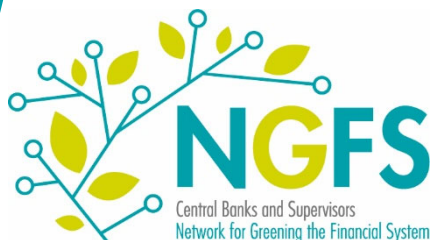


# **International Conference on “Statistics for Sustainable Finance” The NGFS Progress Report on Bridging Data Gaps and beyond**

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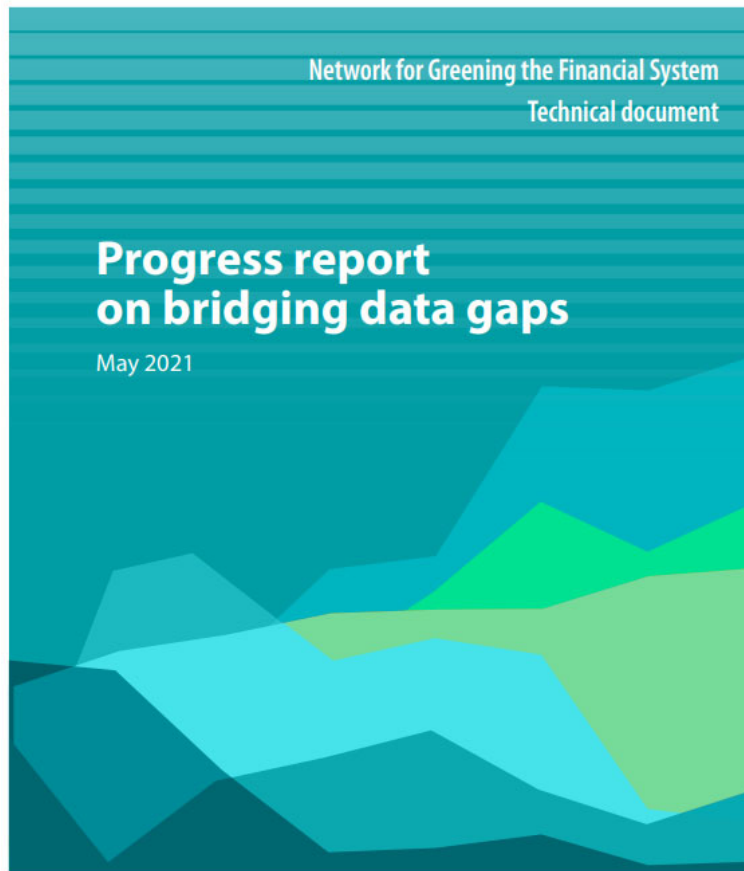
International Conference on « Statistics for Sustainable Finance » - Paris 14 & 15 September 2021

## THE NGFS AND THE WORKSTREAM ON BRIDGING THE DATA GAPS



- Established at the Paris “One Planet Summit” in December 2017.
  - **Coalition of the willing** comprised of **95 members** and **15 observers**, from all 5 continents.
  - **Defines and promotes best practices** and **conducts analytical work** on the management of climate-related risks and on green finance.
  - Main publications: First comprehensive report issuing 6 non-binding recommendations, practical guides, two vintages of ‘NGFS scenarios’...
- 
- In the recommendation #3 of its First comprehensive report (April 2019), **the NGFS stated “to see merit in setting up a joint working group with interested parties to bridge existing data gaps”**.
  - The **Workstream BDG** was set up in July 2020 to turn this recommendation into practice. It is aimed at **identifying and prioritizing climate-related data needs and gaps**, and at **proposing policy recommendations** to bridge these gaps. It is co-Chaired by **Fabio Natalucci** (IMF) and **Patrick Amis** (SSM/ECB).

## OVERVIEW OF THE PROGRESS REPORT ON BRIDGING THE DATA GAPS



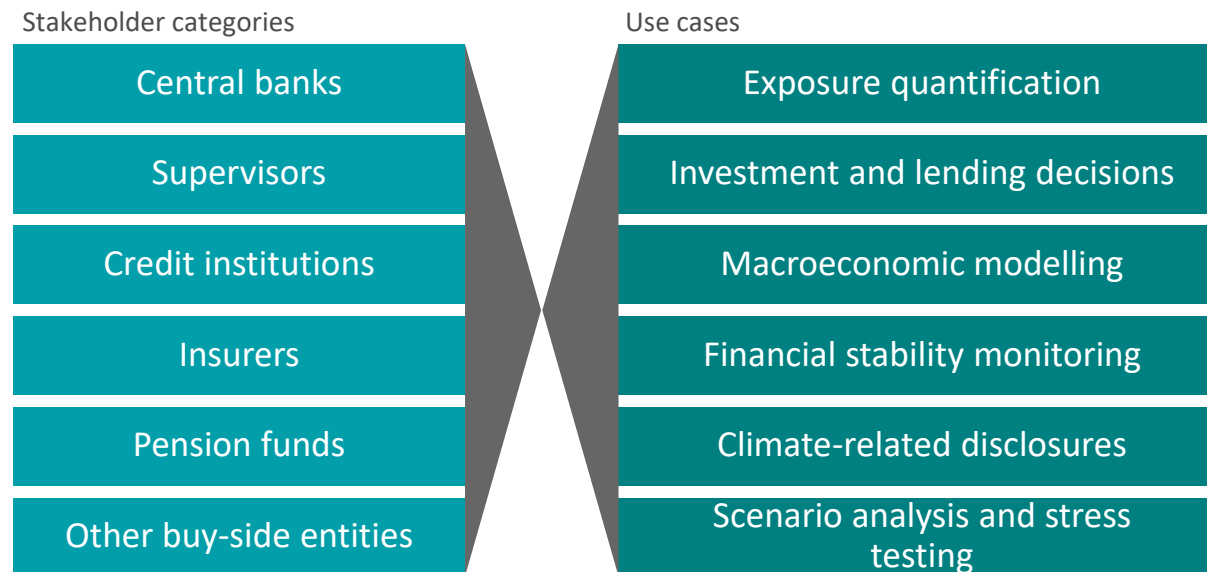
### The Progress Report:

- is based on a systematic **literature review**, an **outreach** to other NGFS workstreams, a variety of IOs and other relevant stakeholders;
- incorporates information gathered through a **survey** and **two closed-door workshops** with banks and buy-side firms;
- lays the groundwork for a **comprehensive assessment of climate-related data needs and gaps**.



## THE WORKSTREAM APPROACH (1/3)

- We adopted **a user-centric approach** – informed by the literature review’s findings and interactions with stakeholders – aimed at **identifying in a systematic way the needs of climate-data users** in the financial sector.
- The Progress Report proposes **a classification of six stakeholder categories and six main use cases** for which stakeholders have indicated climate-related data needs.



## THE WORKSTREAM APPROACH (2/3)

- The BDG has set up **a three-layered repository of data needs**, in which we recorded detailed results for use cases, metrics and raw data items across the six main stakeholder categories.

Schematic overview of the layered structure of the repository



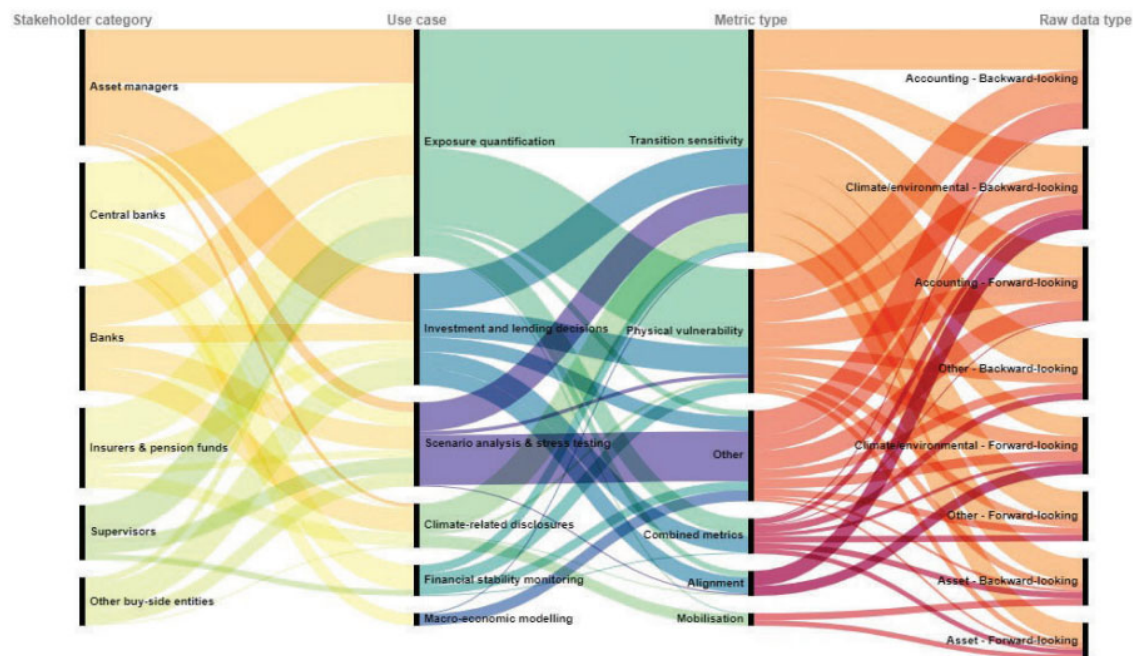
- Going forward, the repository is aimed at **providing an evidence-based overview of climate-related data items that need to be bridged with priority.**



## THE WORKSTREAM APPROACH (3/3)

- The figure below shows the **interconnectedness** of use cases, metrics, and raw data items by stakeholder category in the repository.
- While preliminary, **it gives a sense of commonalities in use cases and data needs among stakeholders**, and of how the repository can be used to **highlight priorities**.

### Schematic overview of the repository





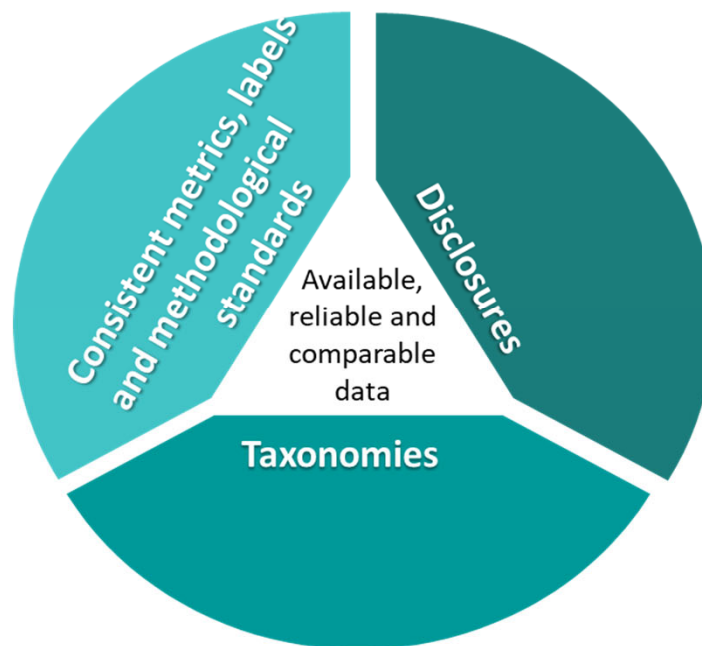
## WHAT WE HAVE LEARNED SO FAR

- Meeting data needs for the identified use cases is a **multifaceted challenge** that warrants comprehensive consideration across **3 dimensions**: **availability, reliability and comparability**.
- **Main data challenges** highlighted during interactions with stakeholders:
  - **largest data gaps exist for forward-looking data** (e.g. emissions pathways, targets);
  - **limited availability and granularity of “carbon” data** (e.g. Scope 3 emissions) and of **geographical data on asset locations** to assess both transition and physical risks;
  - stakeholders are also calling for some **assurance about the quality of climate-related data** through verification and audit mechanisms, as well as improvements in data accessibility.

## BUILDING BLOCKS TO BRIDGE THE DATA GAPS (1/2)

- To ensure the availability of reliable and comparable climate-related data, a mix of policy interventions is urgently needed to catalyse progress and foster global convergence.
- **Three building blocks** are paramount.

### Three main building blocks to bridge the data gaps



#### KEY POLICY MESSAGES

Rapid convergence towards a common and consistent set of global disclosure standards.

#### DISCLOSURES

Efforts towards a minimally accepted global taxonomy.

#### TAXONOMIES

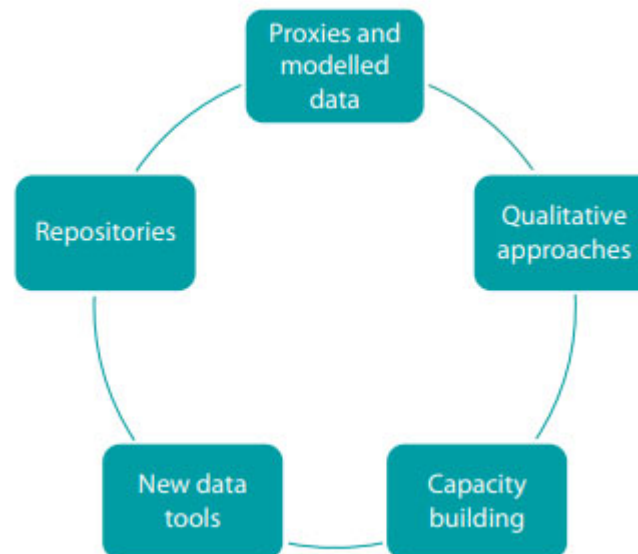
Development and transparent use of labels and methodological standards.  
Work towards a common set of well-defined and decision-useful metrics

#### CONSISTENT METRICS, LABELS AND METHODOLOGICAL STANDARDS

## BUILDING BLOCKS TO BRIDGE THE DATA GAPS (2/2)

- Building a proper architecture for climate data information around the three building blocks should not **prevent leveraging the existing data sources and approaches**.
- **Promoting new data tools and analytics (e.g. open source repositories, AI)** to make data collection more transparent is also useful.

Leveraging existing sources and approaches and promoting new tools





## NEXT STEPS

- The next stage of the WS BDG's work will be very much focused **on finalizing our repository**, with the aim to **making it a tool that maximizes the public availability of climate-related data for the financial sector**.
- To this end we will:
  - **expand** the repository to take further stock of data needs and establish the link to their (un)availability. To do so we have started to reach-out to rating agencies, methodology providers, and data providers (both public and private);
  - once gathered, **analyze the results of all input**;
  - use the finalized repository **to draw evidence-based conclusions about which data needs should be prioritized**;
  - **disclose** the repository in some way (still exploring options).