

Bridging climate-related data gaps: Malaysia's experience and the way forward

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Workshop 1 | The Power of ESG Data | Capacity Building Workshop | 19 May 2022

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Overview of JC3 Sub-committee 5 on Bridging Data Gaps

Mandate

Identify crucial data and the relevant data sources, as well as explore potential solutions to bridge the data gaps, for purposes of managing climate and environment-related risks within the financial sector and structuring of green finance solutions.

Scope

1. Map the needs and availability of crucial data needed¹ to measure, assess and monitor, and price climate-related risks within the financial sector.
2. Identify issues in providing comparable and reliable metrics and target-setting for the financial sector.
3. Identify data sources and access constraints faced by users.
4. Identify methodologies to facilitate translation of relevant scientific and non-financial data into financial usable data.
5. Make recommendations on potential solutions to address the data gaps.

Membership

JC3 and non-JC3 members and other institutions/organisations (public and private sectors) with relevant expertise and experience.

Chair : BNM Assistant Governor Fraziali Ismail

Members : 28 Institutions (*42 members*):

- 9 Banking Institutions (12 members)
- 3 Ministries/Government Agencies (4 members)
- 3 Institutional Investors/Pension & Provident Funds (4 members)
- 3 Asset Management Companies (3 members)
- 6 Insurers/Takaful Operators (8 members)
- 4 Regulators and Others (11 members)

Secretariat : BNM Data Management and Statistics Department

Frequency of Meeting: At least 4 times annually.

¹ Including data to support implementation of Climate Change and Principle-based Taxonomy and Value-based Intermediation Financing and Investment Impact Assessment Framework and its sectoral guides.

Key Deliverables in 2022 and Beyond

Short term (2022)

Medium to long term (2023 and beyond)

Landscape

- NGFS will publish a data repository of data needs and sources (similar to our data catalogue).

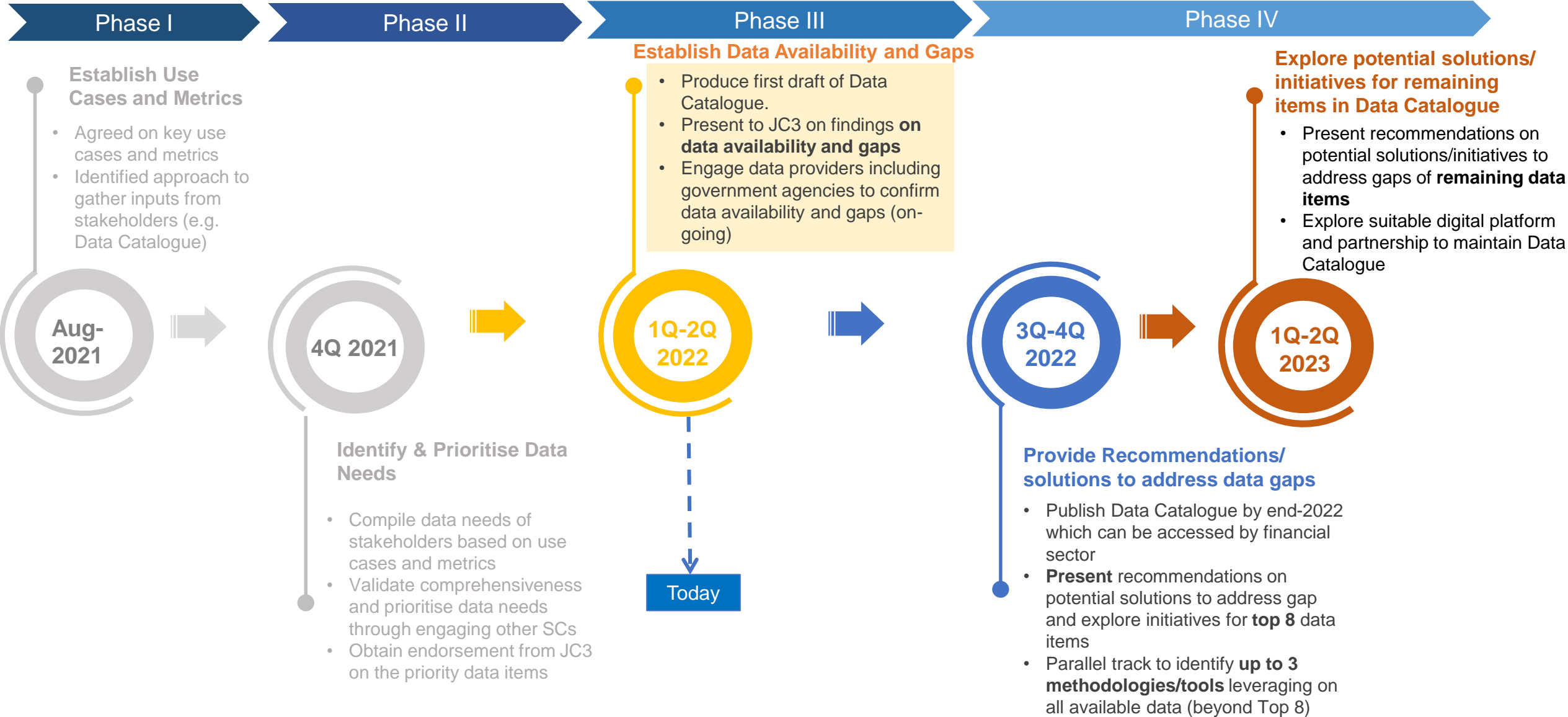
- Data Availability will be improved through mandatory disclosures which are aligned to TCFD (for e.g. climate targets by PLCs and FIs).
- Data Comparability will be improved with more widely adopted regional/global taxonomy and standards.

Outcomes

- **Ascertain data availability** and **identify gaps** of the required climate-related data
- **Establishment of data catalogue** as source of reference for financial sector
- **Produce recommendation** and **explore initiatives** to bridge data gap of **top 8** data items, such as:
 - Solutions to make data more available and accessible
 - Methodology/proxy to fill missing data and translate climate data into financial usable form.

- **Produce recommendation** and **explore initiatives** to bridge data gap of the **remaining data items**
- Explore partnership with public/private entities on the maintenance of the data catalogue
- Continuous engagement/collaboration with public/private entities to make data more **available, accessible and comparable**

Broad Action Plan with Timeline...now in Phase III (Establish Data Availability and Gaps)



Data Catalogue - Progress

Objectives

- Serves as reference on availability of climate related data required by financial sector for various use cases.
- Stocktake of data gaps/issues to facilitate sub-committee's effort to find solution to bridge data gaps.

Statistics



Data availability
50/73 (69%)

Desired Outcome

- Comprehensive
- Accurate
- Relevant for financial sector
- Aligned to local and international standards/practice
- User-friendly

Progress



Validation

- Data cleansing by secretariat
- Peer validation by SC5 members
- Explore external validation by World Bank, consultants, academia



Benchmarking

- Alignment with NGFS data items
 - Data items (23%)
 - Data sources (19%)
- Ongoing benchmarking with other countries' data catalogues



Engagement with:

- Ministries/govt agencies
- Regulators
- Experts/consultants
- ESG data providers



Publication

- Publication in PDF/Excel (by end-2022)
- Explore suitable digital platform and partnership to maintain Data Catalogue (2023)

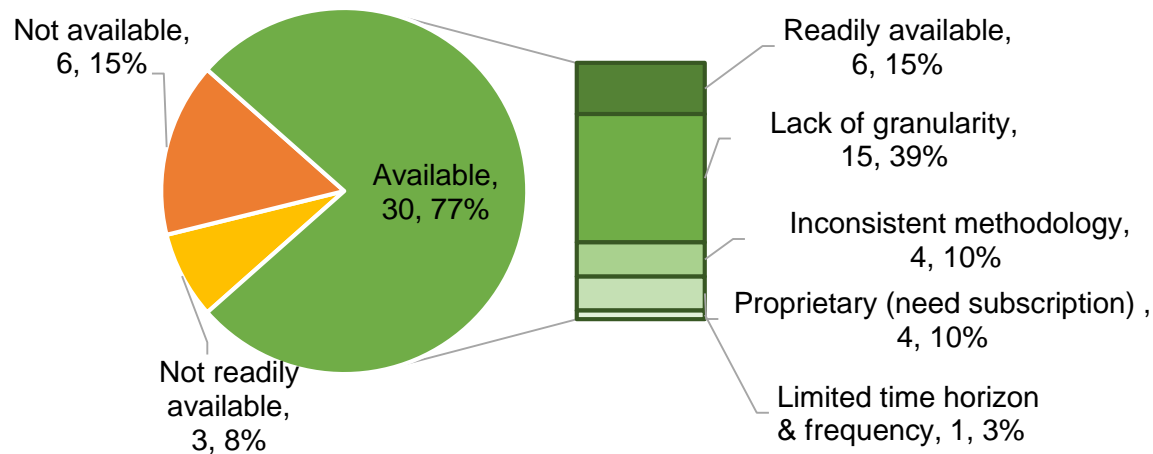
Data Catalogue – Overview of the Data Catalogue

No.	Data Items	Data Details				Availability						Use Cases						
		Category	Methodology/ Standard/ Classification/ Taxonomy/ Reference	Unit (e.g. CO ₂)	Dimension (e.g. Sector, Customer)	Time horizon	Data Provider	Link	Public/ Proprietary	Frequency	Time series	Climate-related disclosures	Exposure quantification	Financial stability monitoring	Investment and lending decisions	Macro-economic modelling	Product development	Scenario analysis
1	Green House Gas (GHG) inventory	Footprint (emission, environment, waste & water management)	2006 IPCC Guidelines for National GHG Inventories / Malaysia Biennial Update Report to UNFCCC	Gg CO ₂ e	By Sector	Historical	Ministry of Environment & Water	https://unfccc.int/documents/267685	Public	Biannual			√					
2	Forward looking GHG Emission targets	Footprint (emission, environment, waste & water management)	TCFD or other relevant reporting frameworks	Unknown	By Sector	Forward-looking (projection)	Private sector, KASA		Public/ Proprietary	Annual/XX		√	√				√	√
				Unknown	By Counterparty	Forward-looking (projection)	Private sector, government agencies											
3	Economic sectors' contribution to GDP and GHG emissions	Footprint (emission, environment, waste & water management)	International Standard Industrial Classification and GHG Protocol	RM Million/ CO ₂	By Sector	Historical	EPU, KASA	https://www.epu.gov.my/sites/default/files/2021-12/MEIP%202021.pdf , https://unfccc.int/docu	Public	Annual, Biennial	GHG: 1990-2016 Economic Sectors Contribution to GDP: 2005-2021			√				

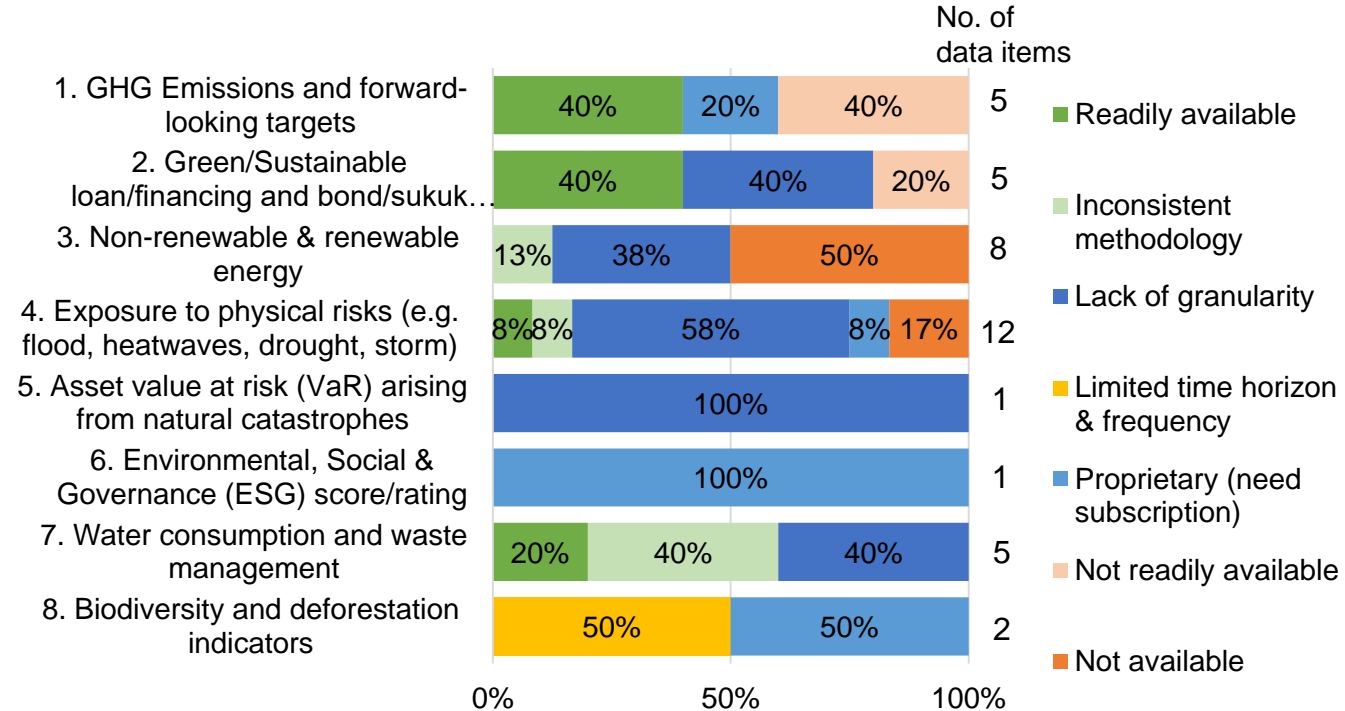
Data Catalogue - Key Findings on Data Availability of Top 8 Data Groups

- Top 8 data groups have **higher availability (77%)** but mostly **lack granularity** (mostly in physical risks, financing and renewable energy)
- **15%** is **not available** are mainly on energy and physical risks – require engagements with KeTSA, Jabatan Meterologi and NAHRIM to make the data more available and accessible
- **8%** is **not readily available** (i.e., Green/Sustainable loan/financing and GHG Emission Scope 1 & 2)

Data availability for top 8 data groups



Percentage of data availability for top 8 data groups



* Not readily available:

- Require effort to gather data from individual sources e.g. annual reports and not centralised.
- Proprietary - not disclosed nor available for subscription.

Identification of Top 8 Climate-related Data Items with use cases

For information

No.	Data Items	Climate-related disclosures	Exposure quantification	Financial stability monitoring	Investment and lending decisions	Macroeconomic modelling	Product development	Scenario analysis	Stress testing
1.	Green House Gases (GHG) Emission i.e. Scope 1, Scope 2, Scope 3 (Tonnes CO2e) and forward looking emission targets by entities	√	√	√	√			√	√
2.	Green/Sustainable lending/financing and bond/sukuk issuance by counterparty/sector	√	√	√	√		√	√	√
3.	Non-renewable energy consumption (fossil fuel/oil, coal, gas etc) & Renewable electricity (wind, solar and hydro) and other sources	√	√		√	√			
4.	Exposure to physical risks (e.g. flood, heatwaves, drought, storm) by sector, company and geo-locations including weather data (e.g. temperature, rainfall, elevation, sea level, humidity)	<u>√</u>	√	√	√	√		√	√
5.	Asset value at risk (VaR) arising from natural catastrophes by sector/investee	<u>√</u>		√			√		
6.	Environmental, Social & Governance (ESG) score/rating by company/customer etc.	√	√		√				
7.	Water consumption and waste management by customer/counterparty	√	√	√	√				
8.	Biodiversity and deforestation indicators#	<u>√</u>	√	√					

√ indicates the applicability of data items for use cases.

√ Proposed by IMF

recommended to be prioritized by survey respondents and Focus Group 3 arising from COP26

Key Data Gaps for Top 8 Data Groups

Gaps in translating data into usable information

Proprietary in nature/
limited disclosure

Examples:

- **Green/sustainable bonds/sukuk** are proprietary and not disclosed.
- **Renewable energy** require subscription to Green Electricity Tariff (GET) by TNB.
- **Asset-value-at-risk** require subscription.
- **Water consumption/waste management** are not publicly available and require engagement with SPAN to make data more available.

Lack granularity/
low frequency/
long reporting lags

Examples:

- **Flood/extreme weather data** lack location granularity (only available up to weather station level).
- **GHG Emissions Scope 1 & 2** data lack coverage for SMEs.
- **ESG scores** lack historical time series.
- **Biodiversity/deforestation** are mostly available with limited back series data.
- **Energy prices** data has limited time horizon (1990 – 2019).

Lack of forward-looking data

Examples:

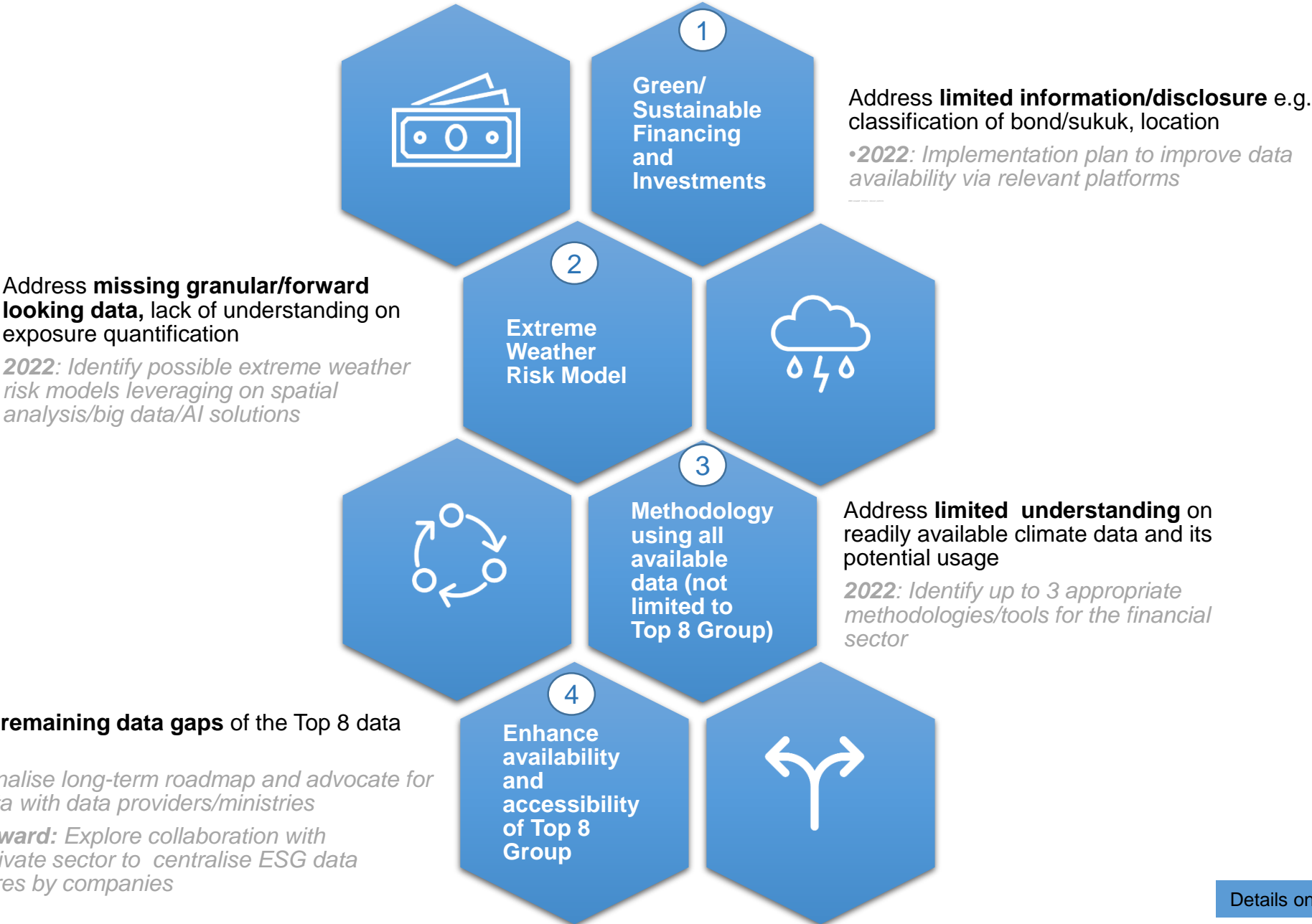
- **GHG Emissions Scope 1 & 2** forward projections are limited.
- **Amount of electricity consumed** forward data by TNB is only twice a year and limited at consumer level and not aggregated level (via Imbalance Cost Pass-Through (ICPT)).

Not available/
Unknown

Examples:

- **GHG Emissions Scope 3**
- **Oil, coal, gas energy consumption** by currency dimension.
- **Carbon credit price data**

Initiatives Being Explored to Address Data Gaps

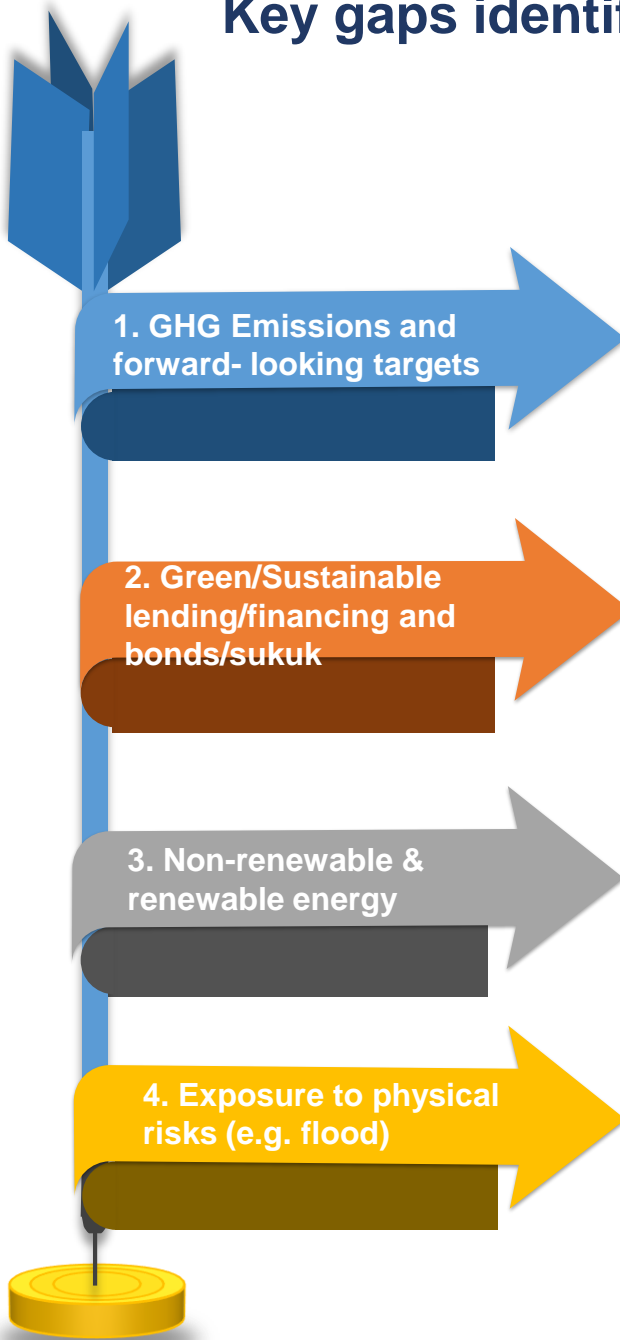


End of presentation

Thank you for your attention

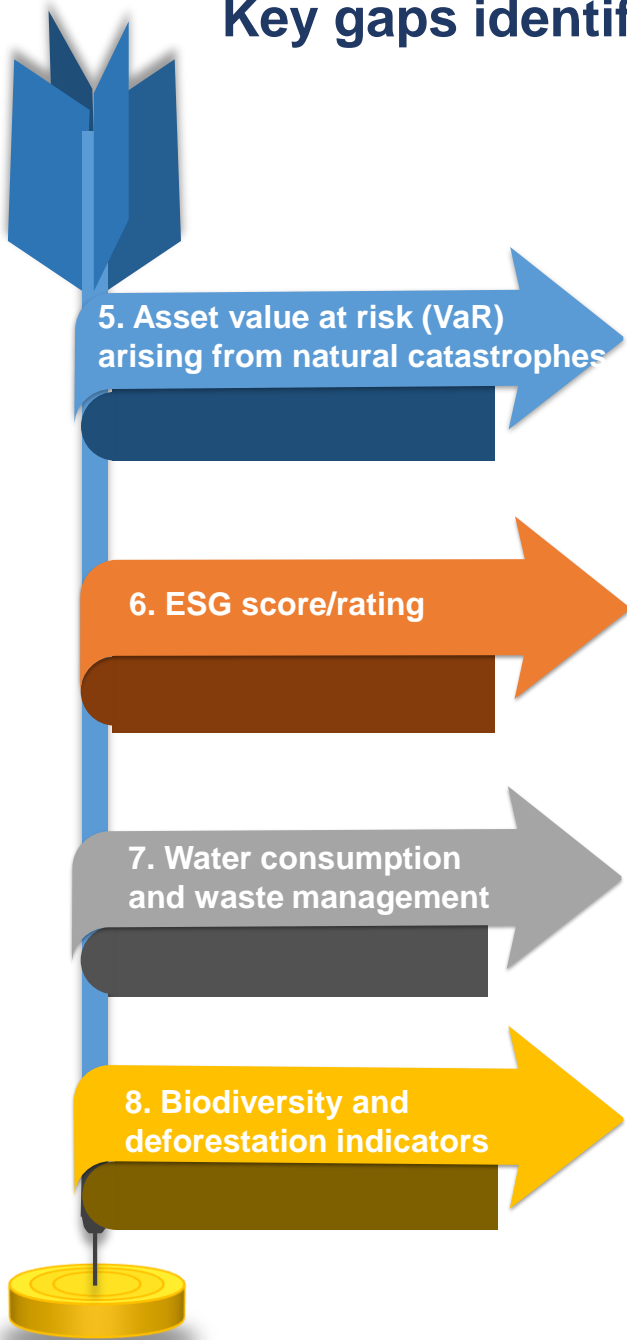
Any further feedback/question can be channeled to bdgcc@bnm.gov.my

Key gaps identified on Top 8 data items



Broad data items	Example sub-data items/ Dimensions	Data Needs/Usage	Current Availability/ Source	Gaps Identified
Scope 1	By entity, sector, location	Facilitate tracking of industry and PLC's progress in addressing climate change	Only listed entities, public data via annual/sustainability reports	<ul style="list-style-type: none"> Data not readily available, since require extraction from companies if included in reports Non-publicly listed companies especially SMEs lack coverage
Scope 2				
Scope 3			Mostly not available	Mostly not available
Green/Sustainable Lending/Financing	Loan outstanding, applied, approved, disbursed, repaid by sector, by location and by purpose	Green loan origination processing, monitor national growth against committed targets	Not available, proprietary data	Data not readily available given the current proprietary nature
Green/Sustainable Bonds/Sukuk	Amount issued, amount outstanding by counterparty, by location and by purpose	Monitor the capital market's growth in sustainable investment	Some extent of availability, public data via FAST/BIX/BIH/ACMF/S C	No mandatory classification field on these platform
Non- renewable	Oil, gas, coal by entity and by sector and by location	Measure contribution of lending portfolio to renewable energy	Available for west Malaysia Sabah & Sarawak (in aggregate), public data via Energy Commission	Energy Commission does not provide data in currency unit required
Renewable	Wind, solar, hydro by entity, by sector and by location	Monitors exposure to stranded assets		Not readily available as require subscription to Green Electricity Tariff (GET), not publicly available
Flood	Historical risk event, rainfall, elevation data, by location	Assess potential flood risk of existing risk portfolio	Available, public data via NAHRIM/Jabatan Meteorology, but proprietary for data from insurance companies	Lack granularity (e.g. rainfall data is availability is up to weather station level), lack of available methodology to link physical risk data with financial data

Key gaps identified on Top 8 data items



Broad data items	Example sub-data items/ Dimensions	Data Needs/Usage	Current Availability/ Source	Gaps Identified
Asset value at risk (VaR) arising from natural catastrophes	(VaR) arising from natural catastrophes by Sector and by counterparty	Monitor significant potential loss of value from the possible repricing of stocks and bonds in response to climate policies	- Detailed information is available by property, type of climate risk. Forward looking projection is also available. Requires subscription - Easy xdi: Helps to ascertain value at risk for building replacement cost.	Data not readily available since require subscription
ESG score/rating	ESG score/rating by Sector, by counterparty, by location, by fund and by securities	To identify the level of ESG risk exposure of funds	Sray.arabeque.com, MSCI, Bloomberg, FTSE Russel, Sustanalytics, credit rating agencies	Inconsistent methodologies and scales, would require internal evaluation
Water consumption	Water management indicators. total water consumption, treated wastewater, circular economy indicators by country, by counterparty and by Sector	Identifying potential issues in water resources, water treatment capacity and water use.	KASA, Kementerian Perumahan Dan Kerajaan Tempatan (KPKT) and companies	Not publicly available and require engagement with SPAN to make the data more available
Waste management	Waste management indicators, waste recycled by country, by counterparty and by Sector	Measure the amount of waste recycled/reduced/avoided		
Biodiversity	Biodiversity indicators by Geographical area	To identify areas sensitive to land & biodiversity that may be affected by client's activities & financing	National reports/database, World Bank Climate Change Knowledge portal, ENCORE tool, Global Forest Watch, DOE Malaysia, the World Bank, Rimba Disclosure Project, KeTSA	Mostly available with limited back series data
Deforestation	Deforestation indicators by Geographical area			