

Climate • Bonds • Connected

Webinar Programme

Climate Bonds INITIATIVE

Central Banks, Climate Change and Stress Testing

Thursday 23 July 16:30 Kuala Lumpur / 10:30 Paris / 09:30 London



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Climate Scenario Analysis

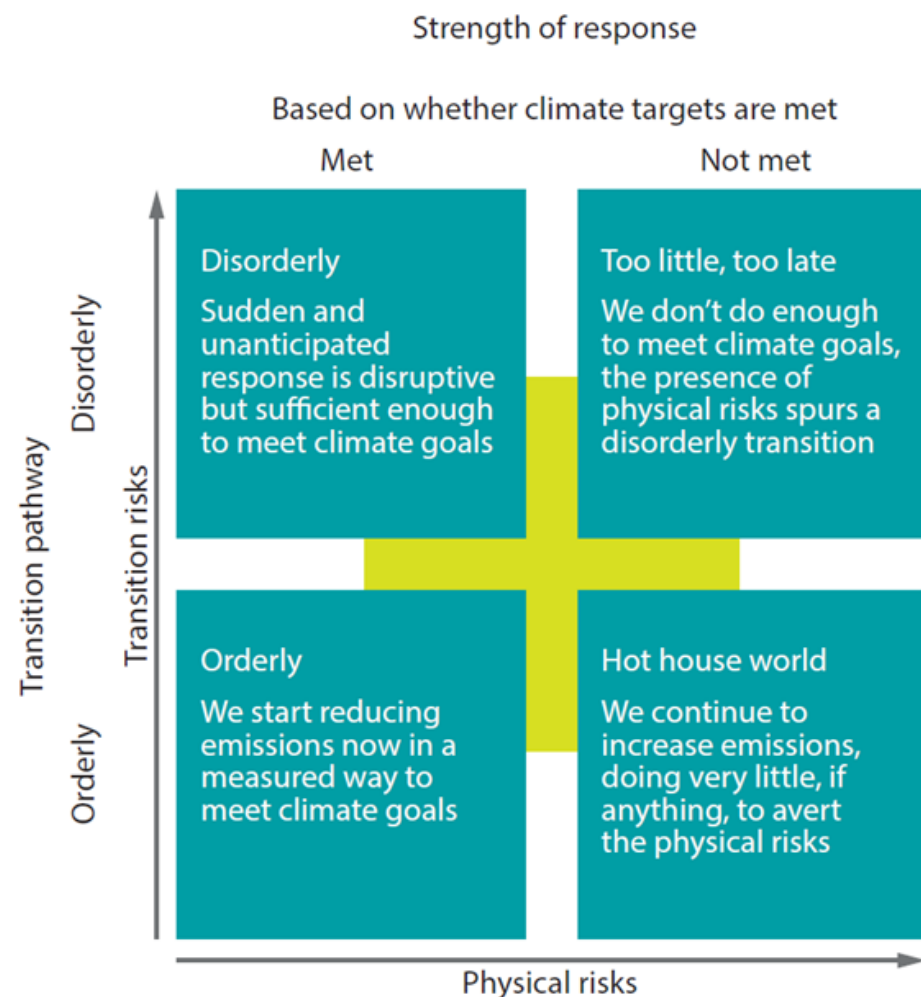
Sarah Breeden

**Exec. Director, UK Deposit Takers Supervision, Bank of England
Chair of the NGFS Workstream on macro-financial risk**

Why do scenario analysis?

- Distinct nature of climate risks poses challenge to standard risk assessment
 - High degree of certainty that some combination of climate risks will materialise
 - However, exact outcomes are uncertain, and dependent on short-term actions
- Scenario analysis helps us overcome these challenges
 - It provides a flexible ‘what-if’ framework for exploring risks
 - Allows for exploring economic outcomes and financial risks under a range of different future pathways

Last year: NGFS scenario framework

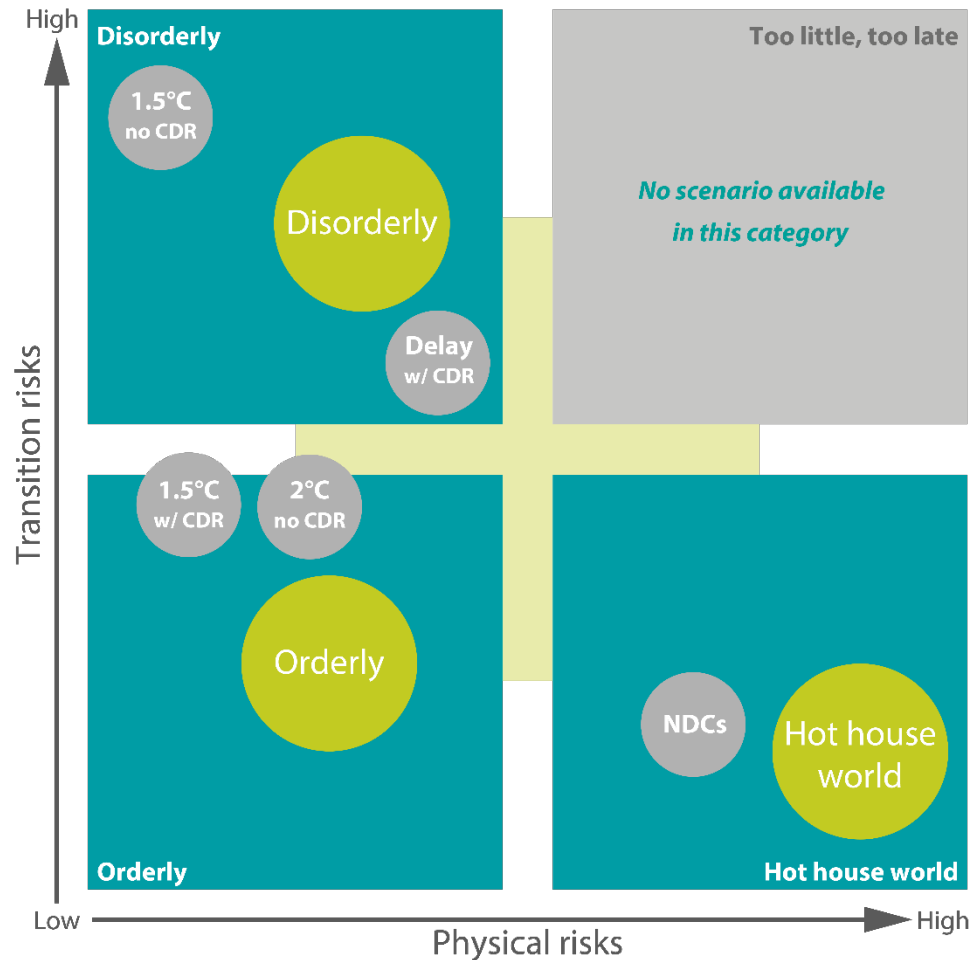


- In its first comprehensive report (April 2019) the NGFS outlined four high-level “states of the world” with respect to climate risk

The goal of the NGFS is to:
Share best practices and equip central banks and supervisors with the tools to identify, assess and mitigate climate risks in the financial system

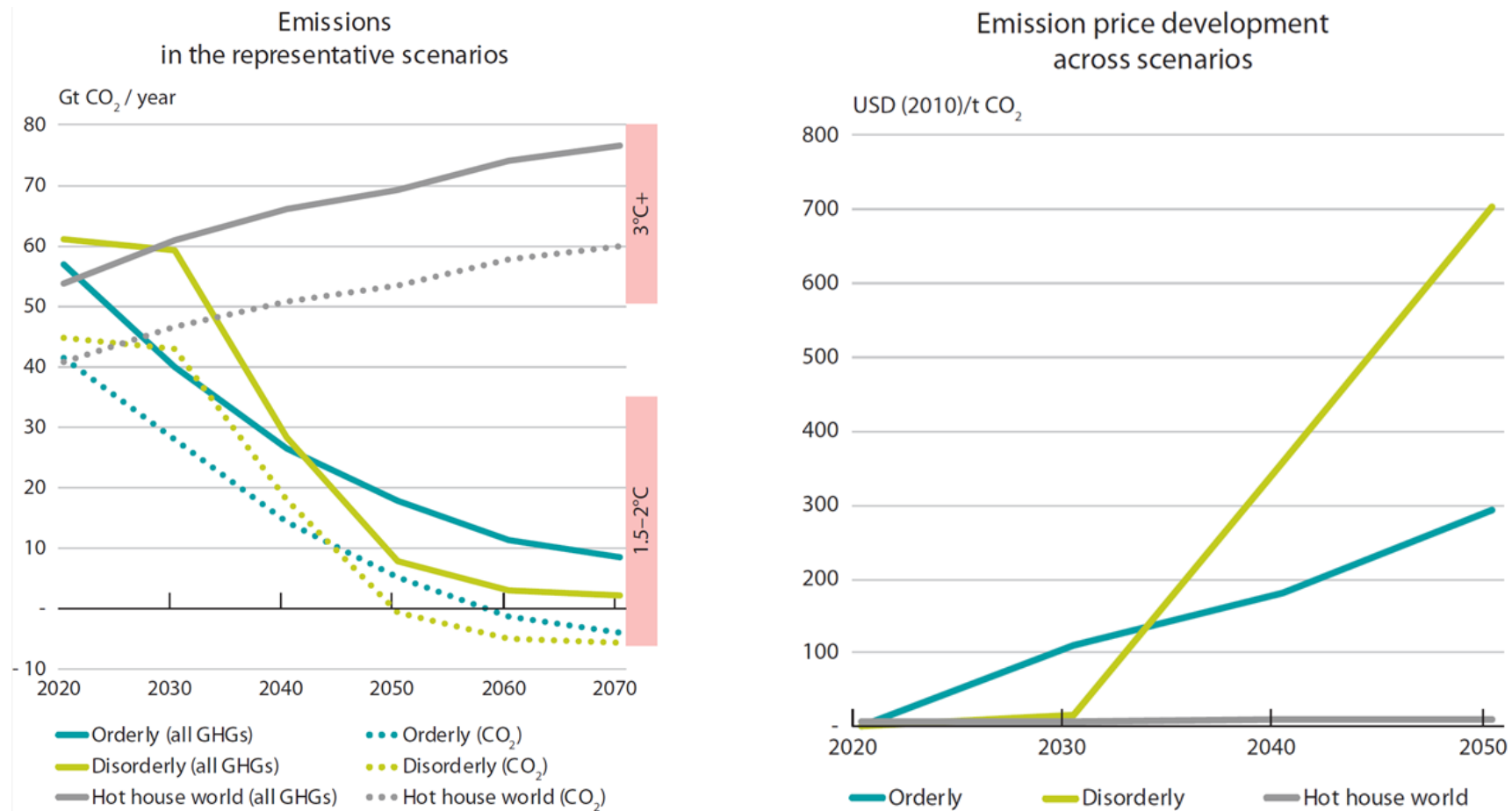
This year: NGFS climate scenarios

NGFS Scenarios Framework



- On June 24, the NGFS published a set of fully fledged scenarios for climate risk analysis, building on the NGFS scenario framework
- The set includes 3 representative scenarios (big bubbles) and 5 alternate scenarios (small bubbles)
- The scenarios were produced jointly with a consortium of leading research institutions

The representative scenarios in two charts



Source: NGFS scenario portal

The Bank's 2021 "Climate" Biennial Exploratory Scenario (BES)

- The Bank's 2021 BES will involve three climate scenarios based on the NGFS output
- Participation to include both banks and insurers
- Three objectives:
 1. Sizing the risks
 2. Understanding challenges to business models
 3. Improving firms' risk management

Input variables



Climate variables
eg frequency and severity of weather events, emissions and carbon price



Macroeconomic variables
eg real GDP, inflation and unemployment



Financial variables
eg government bond yields, equity prices and commodity prices



Modelling by firms

Output variables



Sizing the risks
• Change in value of bank assets
• Change in value of insurer assets and liabilities



Understanding challenges to business models
• Management actions
• Current expectations of climate outcomes
• Firms' own worst case scenario



Improving risk management
• Details on modelling approach and key assumptions
• Data gaps

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Responding to Climate Change Risk

Jessica Chew

Deputy Governor - Bank Negara Malaysia



Strengthening financial system's resilience to climate risk & supporting transition towards a low-carbon economy

CLIMATE RISK MANAGEMENT

- Engagement and capacity building
- Integrating climate risk in macroeconomic and financial stability assessments
- Strengthening regulatory and supervisory expectations for managing climate risk

Risk taxonomy

Supervisory expectations

Stress testing

Disclosures

POLICY ALIGNMENT

- Creating an enabling environment for green financing and investment
- Strengthening coordination & collaboration with industry, government and other key stakeholders

Joint Committee on Climate Change

Value-based intermediation

Sustainability-focused funds

BANK'S OPERATIONS

- Leading by example

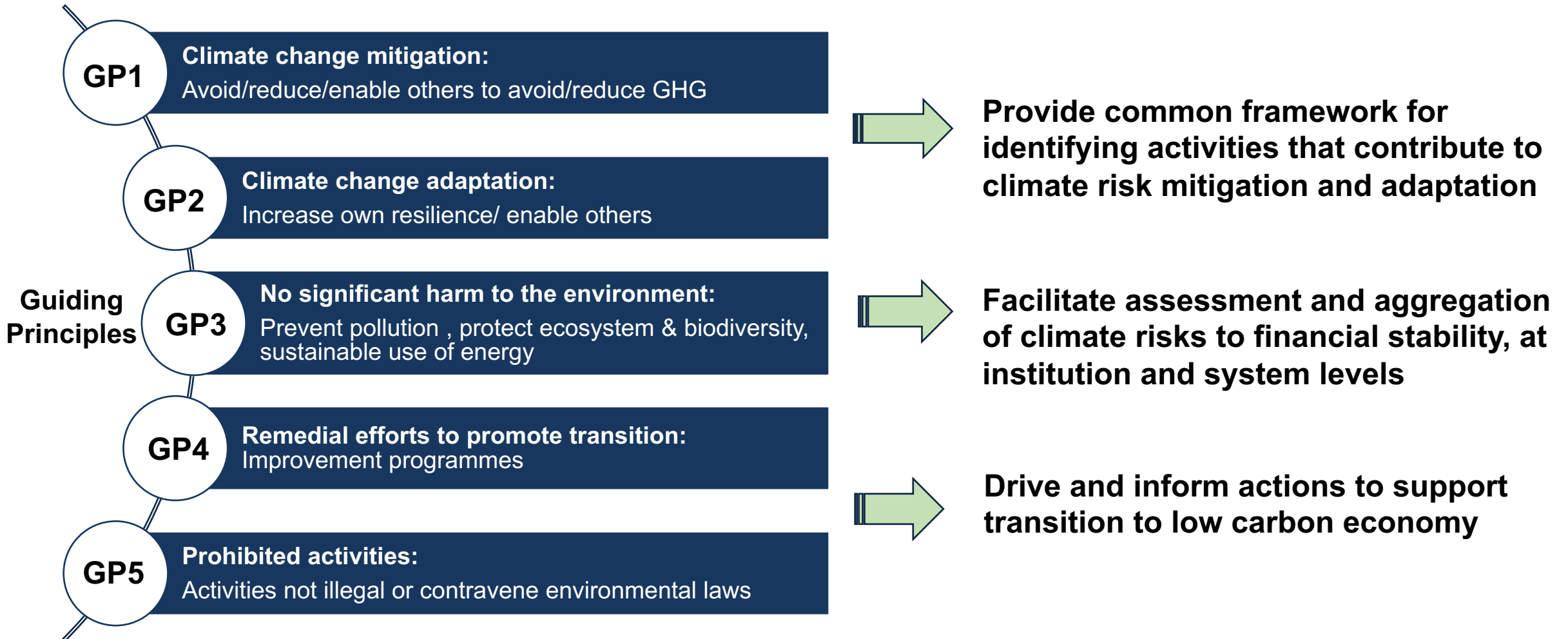
Socially responsible investments

Sustainable currency operations

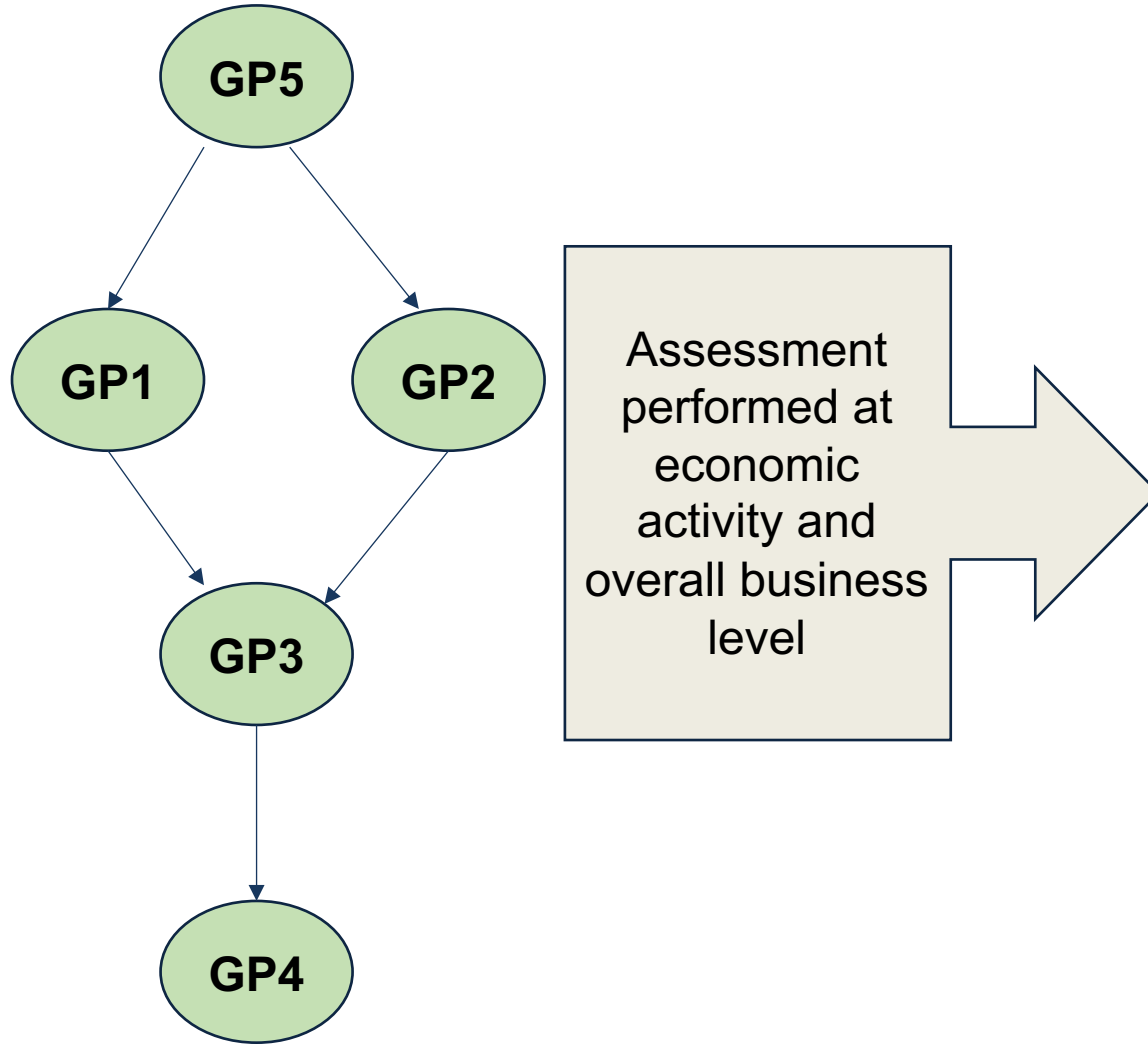
Reducing carbon footprint

ESG investments

Principles-based taxonomy aims to support management of climate risk

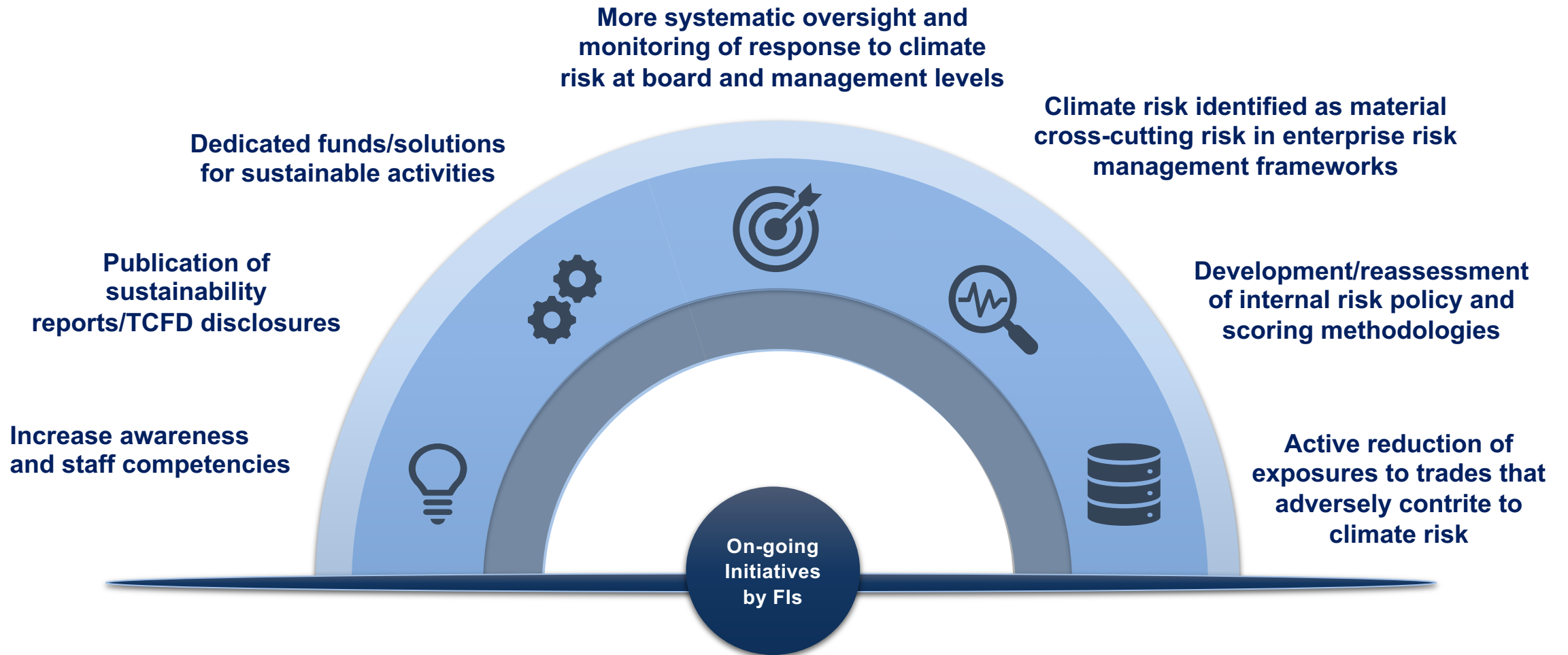


Classification based on assessments against guiding principles



Classification categories	
C1	<ul style="list-style-type: none"> • Economic activity supports GP1 or GP2; and • The overall business activities do not cause harm (GP3)
C2	<ul style="list-style-type: none"> • Economic activity supports GP1 or GP2; but • The overall business activities may cause harm to the broader environment. • However, the business has demonstrated commitment and willingness (GP4) to improve practices
C3	<ul style="list-style-type: none"> • Economic activity supports GP1 or GP2; and • The overall business activities may cause harm to the broader environment. • However, the business does not demonstrate commitment and willingness to improve practices
C4	<ul style="list-style-type: none"> • Economic activity does not support GP1 or GP2; but • The business demonstrates commitment and willingness (GP 4) improve practices
C5	<ul style="list-style-type: none"> • Economic activity does not supports GP1 or GP2; and • The business does not demonstrate commitment and willingness to improve practices
C6	<ul style="list-style-type: none"> • Involved in prohibited activities.

Positive response to increased focus of supervision on management of climate risk



Towards a sustainable recovery from the COVID-19 pandemic

- Financial system not in crisis and can play a pivotal role to ***shape recovery***
- More limited fiscal space with greater need to ***optimise impact*** of policy with longer term horizon
- ***Shift the conversation...sustainable new norms are crucial to mitigate systemic, physical shocks***
- Opportunity to ***re-set course*** to a low-carbon economy



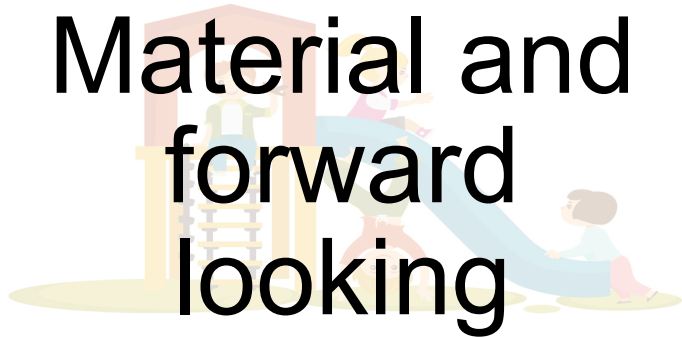
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The strength and limits of transparency

Prashant Vaze
Head of Policy & Government
Climate Bonds Initiative

Disclosure – What the NGFS has achieved in just three short years

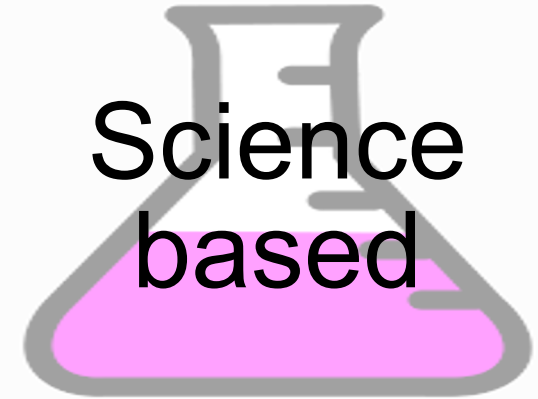
Material and forward looking



Comparability



Science based



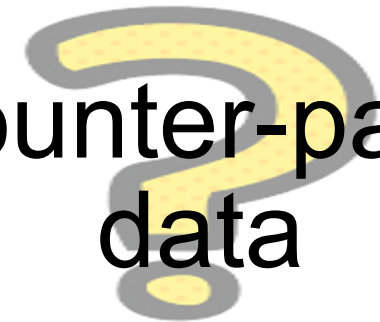
Ambitious



Transmission



Counter-party data



TCFD's intellectual framework

Governance

The organization's governance around climate-related risks and opportunities

Strategy

The actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning

Risk Management

The processes used by the organization to identify, assess, and manage climate-related risks

Metrics and Targets

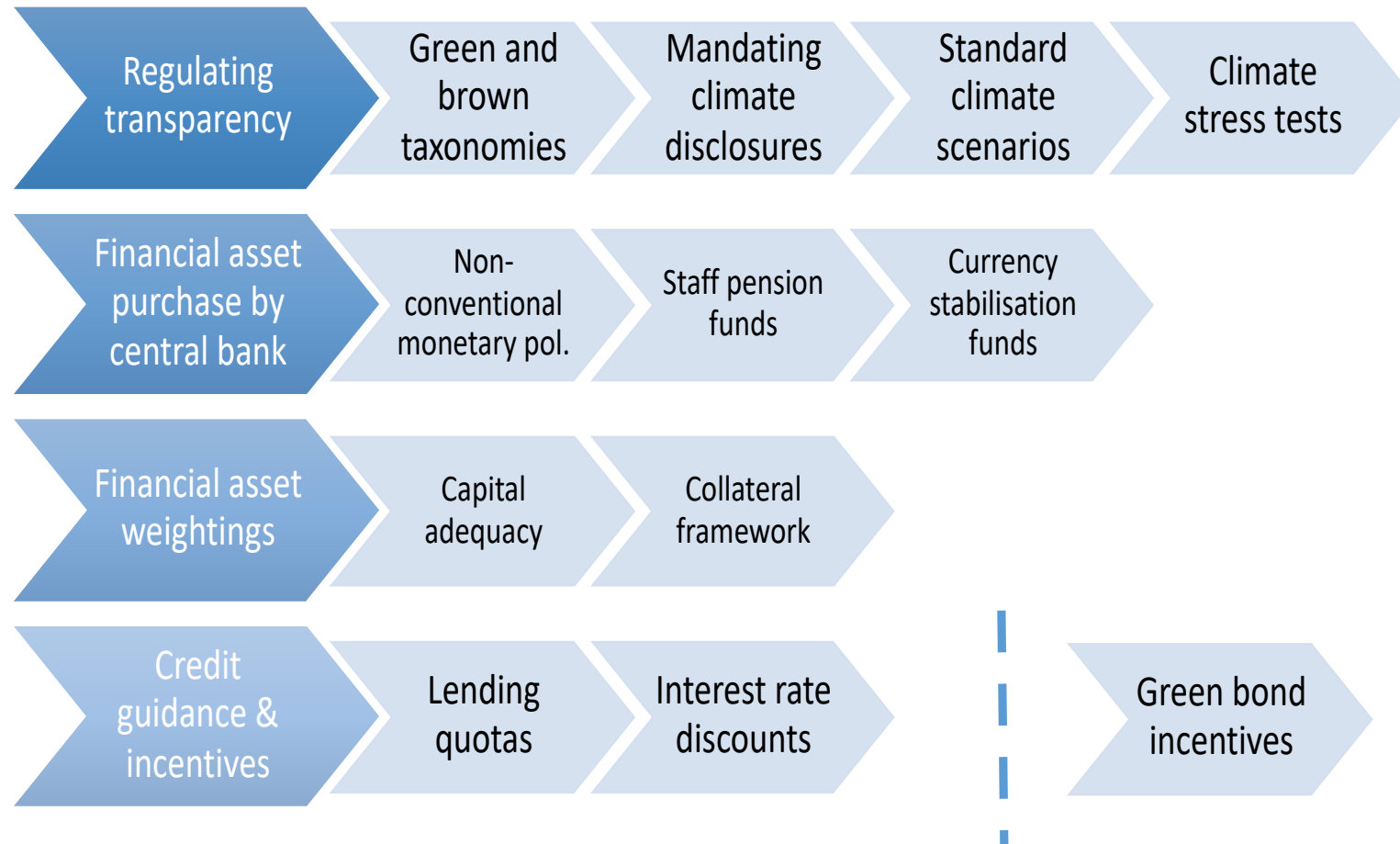
The metrics and targets used to assess and manage relevant climate-related risks and opportunities



The limits to transparency

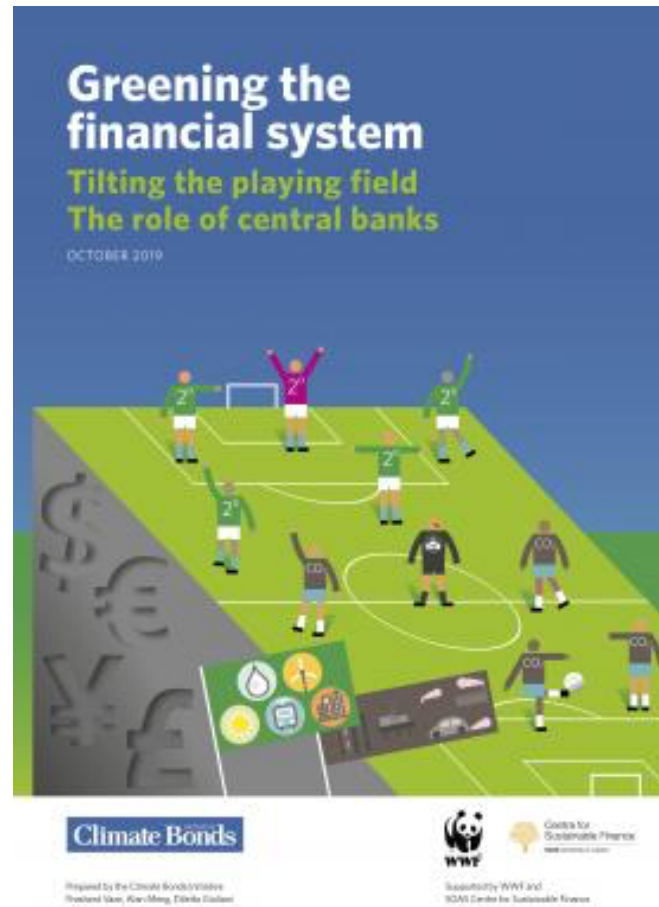
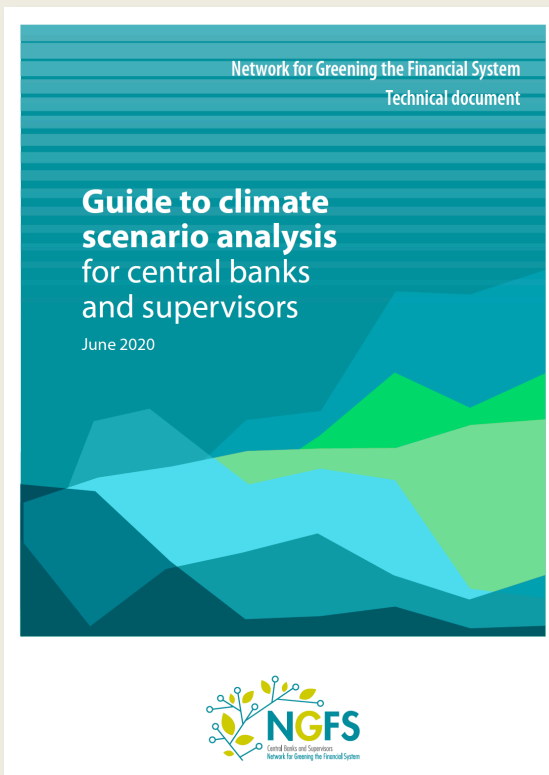


Toolkit of policies at central banks disposal



NGFS Scenarios and Scenario Analysis Resources

Guide for Supervisors



BANK NEGARA MALAYSIA
CENTRAL BANK OF MALAYSIA

Bank Negara Malaysia taxonomy

- https://www.bnm.gov.my/index.php?ch=en_announcement&pg=en_announcement&ac=767



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