Asia Pacific Policy Briefings:
#2

UN environment programme

finance initiative

Climate-related risks in financial regulation and supervision in APAC

A policy landscape analysis

June 2025

Disclaimer

Suggested citation: United Nations Environment Programme Finance Initiative. Climate-related risks in financial regulation and supervision in APAC: A policy landscape analysis, 2025. Geneva.

Cover image: shahaaim/Unsplash

Acknowledgements

Authors

Will Martindale
Feng Hu (UNEP FI)
Laura Canas da Costa (UNEP FI)
Emily Dahl (UNEP FI)

Reviewers

The following reviewers have contributed by providing valuable written feedback (in alphabetical order):

UNEP FI reviewers

- Maheen Arshad
- Beata Bienkowska
- Daniel Bouzas
- Rocio Falcones
- Elodie Feller
- Sem Houben
- Dae Woong Lim
- Kaori Nomura
- Jina Park
- Nirnita Talukdar
- Carlota Gómez Tapia
- Satrya Wibawa
- Shouqing Zhu

External reviewers

- Maud Abdelli (WWF)
- Aziz Durrani (ASEAN+3 Macroeconomic Research Office)
- Ayanti Ghosh (Asia Securities Industry & Financial Markets Association (ASIFMA))
- Jessica Chew Cheng Lian (Bank Negara Malaysia)[1]
- Adam Ng (WWF)
- Diana Parusheva-Lowery (ASIFMA)
- Siti Kholifatul Rizkiah (WWF)

1 Jessica Chew Cheng Lian was formerly Deputy Governor of the Bank Negara Malaysia (BNM) and is now a Technical Adviser to BNM on financial stability matters following her retirement.

Abbreviations and acronyms

The table below lists abbreviations used in this policy brief for common terms, organization names and country-level policy documents:

ABA	Australian Banking Association
APAC	Asia-Pacific
APRA	Australian Prudential Regulation Authority
BCBS	Basel Committee on Banking Supervision
BI	Bank Indonesia
BIS	Bank for International Settlements
BNM	Bank Negara Malaysia
BOJ	Bank of Japan
BOK	Bank of Korea
BOT	Bank of Thailand
BSP	Bangko Sentral ng Pilipinas
CAR	Capital adequacy ratio
CET1	Common Equity Tier 1
CRMS	Climate Risk Management and Scenario Analysis (Indonesia)
CRMSA	Climate Risk Management and Scenario Analysis (Malaysia)
CRST	Climate Risk Stress Testing
CVA	Climate Vulnerability Assessment
ERM	Environmental Risk Management (Singapore)
ESCAP	Economic and Social Commission for Asia and the Pacific
FIs	Financial institutions
FMA	Financial Markets Authority (New Zealand)
FSA	Financial Services Agency (Japan)
FSS	Financial Supervisory Service (South Korea)
GDP	Gross domestic product
GHG	Greenhouse gas
HKMA	Hong Kong Monetary Authority
ILO	International Labor Organisation
IMF	International Monetary Fund
ISSB	International Sustainability Standards Board
MAS	Monetary Authority of Singapore
NFRA	National Financial Regulatory Administration
NGFS	Network for Greening the Financial System
OJK	Otoritas Jasa Keuangan (Indonesia's Financial Services Authority)
PBoC	People's Bank of China
RBA	Reserve Bank of Australia

RBI	Reserve Bank of India
RBNZ	Reserve Bank of New Zealand
SPM	Supervisory Policy Manual
TCFD	Task Force on Climate-related Financial Disclosures
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNEP FI	United Nations Environment Programme Finance Initiative

Contents

Executive summary

The Asia-Pacific (APAC) region has a critical role to play in mitigating global climate change while adapting and building resilience to its impacts. While APAC countries combined account for roughly 60% of global greenhouse gas (GHG) emissions,[2] they are also home to approximately 70% of the global population susceptible to sea-level rise.[3]

This policy brief explores how central banks and banking supervisors in key APAC jurisdictions have been integrating climate-related risks into their banking regulatory frameworks.

The analysis considers five main areas:

1. Central bank mandates, including approaches to supervisory guidance on climate risk management and prioritization of criteria such as monetary and financial stability, broader economic mandates, and sustainability.
2. Macroprudential regulation, including levels of integration of climate risk into financial system stress testing.
3. Adjustments to capital and liquidity requirements based on climate considerations (Pillar 1).
4. Microprudential climate stress testing, supervisory risk management guidance on climate, and other supervisory review (Pillar 2).
5. Prudential climate-related disclosures (Pillar 3).

The main findings are:

- Traditional central bank mandates are prevalent, and some countries have more flexible mandates supporting or integrating sustainability goals.
- Macroprudential tools largely focus on system-wide climate stress tests, with some jurisdictions planning scenario analyses.
- Microprudential developments vary widely across the three pillars:
  - **Pillar 1:** There is no evidence of integration among the jurisdictions considered.
  - **Pillar 2:** The most developed area where climate risk has been most consistently integrated by central banks in Australia, China (Hong Kong SAR), Indonesia, Malaysia, the Philippines, and Singapore, among others.
  - **Pillar 3:** This is another area where various central banks have begun to integrate climate risk into prudential disclosures, with China (Hong Kong SAR), Malaysia, New Zealand, and Singapore all adopting formal requirements, and other countries developing mandatory requirements or implementing voluntary ones.

2 UN Economic and Social Commission for Asia and the Pacific (ESCAP) *et al*, 2024 Review of Climate Ambition in Asia and the Pacific, November 2024.

3 UN Development Programme (UNDP), For Asia-Pacific, climate change poses an 'existential threat' of extreme weather, worsening poverty and risks to public health, says UNDP report, 7 December 2023.

One example of prudential regulation is the mandating of climate risk management for financial institutions (FIs), which is a key focus area of this policy brief. Climate risk management guidance from prudential regulators typically covers four main areas: governance, strategy, risk management, and disclosure.[4] In addition, climate scenario analysis is a key component of risk management. Such guidance aims to ensure that banks identify, assess, and manage climate-related risks effectively, and that they disclose relevant information to stakeholders. The Basel Committee on Banking Supervision (BCBS) has also developed principles for the effective management and supervision of climate-related financial risks.[5]

As summarized in Table 1 below, most of the examined jurisdictions in APAC have issued supervisory guidance on climate risk management, though with varying degrees of prescription.

4 Dikau, Simon and Ulrich Volz, Central bank mandates, sustainability objectives and the promotion of green finance, Ecological Economics, Volume 184, 2021.

5 Basel Committee on Banking Supervision (BCBS), Principles for the effective management and supervision of climate-related financial risks, June 2022.

Table 1: Integration of climate-related risks into prudential regulation across APAC

Country	Net-zero target year[6]	Sustainability mandate focus[7]	Macroprudential climate stress test conducted	Scenario selection based on international frameworks	Links to climate stress test results (if available)	Capital requirement adjustments (Pillar 1)	Risk management guidance (Pillar 2)	Climate risk disclosure (Pillar 3)
Page number within this report	/	Page 4	Page 6			Page 10	Page 11	Page 16
Australia	2050	No	Yes	Yes (NGFS)	2021 analysis; 2022 analysis	No	Yes (CPG 229)	Yes (recommended)
China	2060	Implicit	Yes	Yes (NGFS)	2021 pilot; 2022 result	No	Yes	Yes
China (Hong Kong SAR),	Before 2050	No	Yes	Yes (NGFS)	2021 pilot; 2023-2024 testing	No	Yes (GS-1 module)	Yes
India	2070	No	Yes[8]	In progress	2022 initial test	No	In progress (draft in 2024)	In progress (2024 draft)
Indonesia	Before 2050[9]	Implicit	In progress	In progress	N/A	No	Yes (CRMS 2024 Guidelines)	Yes

6 Energy and Climate Intelligence Unit, Data-Driven EnviroLab, NewClimate Institute, Oxford Net Zero—Net Zero Tracker, accessed 12 May 2025.

7 For the purpose of this policy brief, the following classifications are used: "yes" refers to explicit mention of "sustainability" or a similar objective in a central bank's legal mandate, "implicit" refers to cases where integration of sustainability can be evidenced from a central bank's stated objectives, strategies, and/or targeted policy documents, and "no" refers to the other focuses. The authors acknowledge that such classifications are not clear-cut in some cases and are not necessarily a reflection of policy progress.

8 Reserve Bank of India (RBI) conducted initial climate stress test in 2022 with limited scope (only covering transition risk and the impact to stock prices). [RBI, Report on Currency and Finance 2022–23, May 2023.]

9 In November 2024, Indonesia announced the update of its net zero year to be before 2050. [Reuters, Indonesia can reach net zero emissions before 2050, president says, 21 November 2024.]

Country	Net-zero target year[6]	Sustainability mandate focus[7]	Macroprudential climate stress test conducted	Scenario selection based on international frameworks	Links to climate stress test results (if available)	Capital requirement adjustments (Pillar 1)	Risk management guidance (Pillar 2)	Climate risk disclosure (Pillar 3)
Page number within this report	/	Page 4	Page 6			Page 10	Page 11	Page 16
Japan	2050	No	Yes	Yes (NGFS)	FY2021 test	No	Yes	Yes
Malaysia	2050	Yes	In progress[10]	Yes (NGFS)	N/A	No	Yes (CRMSA 2022 guidance, updated in 2025)	Yes
New Zealand	2050	Yes	Yes	Yes (NGFS)[11]	2023 test	No	Yes	Yes
Philippines	N/A[12]	Yes	In progress	In progress	N/A	No	Yes	Yes
Singapore	2050	Yes	Yes (annually since 2022)	Yes (NGFS)	2018 test; Annual results since 2022	No	Yes (2020 ERM Guidelines)	Yes
South Korea	2050	Implicit	Yes	Yes (NGFS)	2021 test; 2025 results	No	Yes (2021 guidelines)	Yes (2021 guidelines)
Thailand	2050	Implicit	In progress	In progress	N/A	No	In progress	Yes

10 The results of Malaysia's climate risk stress testing in 2024 are not yet published at the time of publishing this brief.

11 Reserve Bank of New Zealand (RBNZ) used a scenario called "Too Little Too Late" (TLTL) for its 2023 test, which combined the effects of two NGFS scenarios—one of each type—in its scenario design, because the NGFS scenarios at the time, NGFS Phase III, contained either high physical or high transition risk. [RBNZ, 2023 Climate Stress Test Results, 22 April 2024.]

12 Although the Philippines has not yet set a net zero target, it has committed to reduce emissions by 75% below business as usual by 2030. [Republic of the Philippines, Nationally Determined Contribution (NDC), 15 April 2021.]

Several overall trends are evident across APAC countries in central banks' respective approaches to climate-related prudential regulation:

- A shift from voluntary to mandatory requirements. A survey of 12 Asian financial regulators in February 2025 shows nearly 70% of respondents plan mandatory climate disclosures.[13]
- Increasing alignment with international frameworks, particularly the TCFD and International Sustainability Standards Board (ISSB).
- Growing application and evolution of climate scenario analysis and climate stress testing.
- Expansion of scope from climate to broader environmental risks.

Overall, a deeper and broader integration of climate considerations into prudential frameworks is emerging. This integration is intended to support more resilient financial systems that are better equipped to navigate the challenges posed by climate change. It may also drive increased allocation of capital towards sustainable activities, potentially accelerating the transition to a low-carbon economy.

The implications of these developments extend beyond the financial sector. As banks incorporate climate risks into their decision-making processes, this could influence lending and investment decisions, potentially reshaping economic activities across various industries in the APAC region.

This policy brief is intended as a short, accessible primer, highlighting the diverse range of steps that a variety of APAC economies are taking to address climate-related financial risks.[14]

---

13 Asian Development Bank (ADB), Survey Findings: Asian Financial Regulators on International Sustainability Standards Board Standards and Voluntary Carbon Credits, April 2025.

14 This analysis includes a subset of APAC economies to highlight relevant best practices, rather than a holistic review of all countries.

Introduction

The Asia-Pacific (APAC) region has a critical role to play in mitigating global climate change while adapting and building resilience to its impacts. While APAC countries combined account for roughly 60% of global greenhouse gas (GHG) emissions,[15] they are also home to approximately 70% of the global population susceptible to sea-level rise.[16]

At the same time, APAC countries face competing needs and priorities of rapid development and economic growth. The region is home to 60% of the world's population[17] and 46.3% of global GDP based on purchasing power parity (PPP).[18] Despite being a global growth engine, the region faces significant development challenges, with about 185 million people still living in extreme poverty.[19] Ensuring a just transition across the region will help maximize the social and economic opportunities of climate and environmental actions.[20]

As governments, central banks, and supervisors have become increasingly aware of climate change, they have also come to realize the necessity of simultaneously addressing its potential impacts on economic and financial stability as well as social welfare. For these reasons, climate considerations have become increasingly prominent in policy decisions across the APAC region.

This shift in focus has cascaded to the financial sector, with central banks asking banks and insurers to incorporate climate-related risk considerations into their operational and strategic planning, lending, and financing activities.

15 ESCAP *et al*, 2024 Review of Climate Ambition in Asia and the Pacific, November 2024.
16 UNDP, For Asia-Pacific, climate change poses an 'existential threat' of extreme weather, worsening poverty and risks to public health, says UNDP report, 7 December, 2023.
17 ESCAP, Asia-Pacific Population and Development Report 2023, 2023.
18 International Monetary Fund (IMF), GDP based on PPP, share of world, 2025.
19 World Economic Forum (WEF), Cohesive societies, competitive economies: how to tackle remaining poverty in Asia and the Pacific, 18 October 2023.
20 UNEP FI and the International Labor Organisation (ILO), Just Transition Finance: Pathways for Banking and Insurance, December 2023.

Established in December 2017, the Network for Greening the Financial System (NGFS) "acknowledges that climate-related and environmental risks are a source of financial risks and that central banks and supervisors should therefore ensure that the financial system is resilient to these risks".[21] As of 11 March 2025, 35 out of 145 NFGS members are classified as APAC-based.[22]

NGFS has focused on sharing best practices, developing analytical work, and promoting the integration of climate and environmental risks into financial supervision and central bank activities. It has also developed climate scenarios to help FIs assess transition and physical risks. In November 2024, NGFS published the latest Phase V scenarios that incorporate updated climate data and a stronger assessment of physical impacts.[23]

The integration of climate considerations into prudential regulation has emerged as a key trend across APAC, with various central banks acknowledging the potential financial stability implications of climate change.[24] Prudential regulation aims to safeguard financial stability by strengthening the resilience of the financial sector. The primary objective of prudential supervision for banks by government or quasi-governmental agencies is to promote the safety and soundness of financial institutions and the financial system overall.

Globally, the Basel Committee on Banking Supervision (BCBS), the global standard setter for prudential regulation for banks, has set out a global framework with core principles to promote a forward-looking and risk-based approach to banking supervision.

The microprudential framework comprises three pillars:

- Pillar 1: Minimum regulatory requirements for bank capital and liquidity,
- Pillar 2: Supervisory review of banks' capital adequacy and risk management, and
- Pillar 3: Public disclosure requirements for banks to promote market discipline.

In April 2024, BCBS released its revised "Core Principles for effective banking supervision".[25] The revised Core Principles reinforce the need for preventive resilience-based supervision, taking a forward-looking approach to risk like climate-related financial risks explicitly into account and moving beyond relying mainly on backward-looking data for risk analysis and management.[26]

Prudential regulation operates within a broader framework of interconnected rules, standards, and regulations that both influence and rely on one another. Effective management of climate-related financial risks in the financial sector necessitates a coordinated approach, supported by a comprehensive set of policies that recognize the dynamic relationship between the real economy, banks, and the financial system (see Figure 1).

21 Network for Greening the Financial System (NGFS), Guide for Supervisors: Integrating climate-related and environmental risks into prudential supervision, May 2020.
22 NGFS, List of members (as of 11 March 2025), 2025. [Last accessed on 15 May 2025.]
23 NGFS, NGFS publishes latest long-term climate macro-financial scenarios for climate risks assessment, 5 November 2024.
24 Green Central Banking, Asia Pacific prudential regulation in the face of climate risks, 2023.
25 BCBS, Core Principles for effective banking supervision, April 2024.
26 Aziz Durrani and Bingler, Julia, The Basel Committee's Revised Core Principles for Effective Banking Supervision: Addressing Climate-Related Financial Risks in ASEAN+3, 29 May 2024.

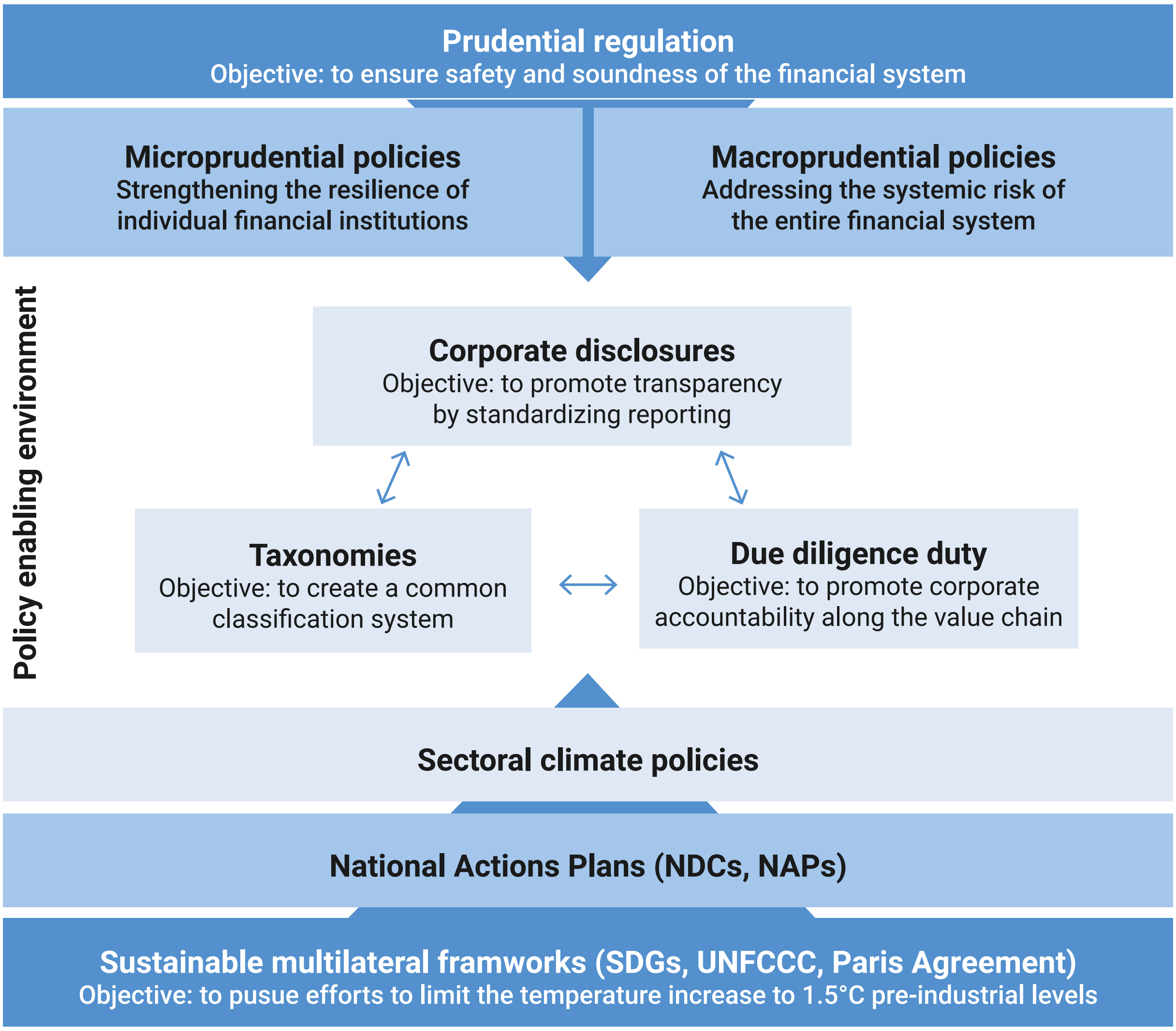

Figure 1: A conceptual framework of the climate-related policy landscape for banks[27]

This policy brief focuses on prudential regulation and policies. However, as shown in Figure 1, it is equally important to examine how prudential regulation intersects with the broader "policy enabling environment," which encompasses various key components such as taxonomies, corporate disclosures, and corporate due diligence frameworks.[28] These elements need to be understood in the context of national strategies and international convention in addressing the climate challenges.

A well-integrated approach to prudential regulation, aligned with broader policy frameworks and international commitments, will be essential in navigating climate-related financial risks and fostering a resilient and sustainable financial system.

27 Adapted from: UNEP FI & WWF, Navigating Nature-related Regulations for Banks: Mapping the Policy Landscape, December 2024.

28 Ibid.

Analysis of climate-related risks in financial regulation and supervision in APAC

Central bank mandates

The "norms" of central bank mandates are price and financial stability, but some in the region are going beyond this with an explicit or implicit economic growth and/or sustainability focus.[29]

Central bank mandates across APAC focus on diverse priorities, from the traditional emphasis on price and financial stability to broader considerations of economic growth and/or sustainability (see Table 2). Central banks in China (Hong Kong SAR) and Japan have a primary focus on monetary and financial stability. Others, such as in Australia and India, incorporate wider economic factors. The explicit inclusion of sustainability objectives into the mandates of central banks of Malaysia, the Philippines, Singapore, and New Zealand signals an emerging trend of future policy directions in the region.[30] For mainland China, South Korea, Thailand, and Indonesia, although such integration is not explicitly stated in their central banks' mandates, the "implicit" integration is evident from public statements and policies.

29 UNEP, Greening the Rules of the Game: How Sustainability Factors Are Being Incorporated Into Financial Policy and Regulation, 2018.

30 Dikau and Volz, 2021.

Table 2: Mandates of selected jurisdictions across APAC

Type of mandate	Jurisdiction	Integration of sustain-ability	Focus of mandates
Traditional stability-focused mandates	China (Hong Kong SAR)	No	Focuses narrowly on currency stability within its Linked Exchange Rate System, financial system stability and its status as a financial centre.[31]
	Japan	No	Price stability-linked to sound economic development.[32]
Broader economic mandates	Australia	No	One of the region's broadest mandates of currency stability, full employment, and economic prosperity, allowing or considering of wide-ranging economic factors in policy decisions.[33]
	India	No	A dual-mandate structure, balancing price stability with economic growth.
Sustainability integrated mandates[34]	Malaysia	Yes	Bank Negara Malaysia (BNM)'s mandate specif-ically requires monetary and financial stability conducive to sustainable economic growth
	Philippines	Yes	The Bangko Sentral ng Pilipinas (BSP) integrates sustainability through its balanced growth objective.
	Singapore	Yes	The Monetary Authority of Singapore (MAS) explic-itly references sustainable growth in its mandate.
	New Zealand	Yes	The Reserve Bank of New Zealand Act 2021 explicitly states its purpose to "contribute to a sustainable and productive economy".[35]
Mandates with implicit sustainability objectives	China	Implicit	As per recent government policies,[36] its mandate increasingly includes implicit sustainability objec-tives alongside its primary price stability goal.
	South Korea	Implicit	The Bank of Korea (BOK) established its climate-related risk response strategy, covering key pillars including Climate Risk Analysis, Supporting the Green Transition, Global Cooperation, and A Sustainable BOK.[37]
	Thailand	Implicit	The Bank of Thailand (BOT) states its main role as "to ensure orderly domestic macroeconomic and financial conditions to support stable and sustain-able economic growth of the Thai economy."[38]
	Indonesia	Implicit	Mandate includes implicit sustainability objectives alongside its primary price stability goal.[39]

31 Hong Kong Monetary Authority (HKMA), How does the LERS work?, 2024.
32 Dikau and Volz, 2021.
33 Reserve Bank of Australia (RBA), What is Monetary Policy?, 2025.
34 Dikau, and Volz, 2021.
35 New Zealand Parliamentary Counsel Office, Reserve Bank of New Zealand Act 2021, 16 August 2021.
36 For instance: People's Bank of China (PBoC), *et al*. Guiding Opinions on Further Strengthening Financial Support for Green and Low-Carbon Development (in Chinese), 27 March 2024.
37 Bank of Korea (BOK), Climate Risk Response Strategy, n.d.
38 Bank of Thailand (BOT), Our Roles, n.d.
39 Dikau and Volz, 2021.

Macroprudential regulation

Macroprudential regulation and supervision addresses the stability of the overall financial system by limiting the build-up of aggregate and systemic risk. The integration of climate-related risks into macroprudential regulation across APAC shows varying levels of depth.

While central banks address systemic risks through various macroprudential tools, this has been largely limited to scenario analysis and system-wide stress testing in the case of assessing climate-related risks. Integrating climate risks into macroprudential regulation involves comprehensive scenario analysis covering both short-term and long-term horizons and assessing physical and transition risks across multiple financial sectors.

Best practices include mandating financial institutions to undertake climate stress test and scenario analysis; setting up central bank climate stress test; aligning scenarios to be modelled with those produced by the NGFS with regional adaptations to address specific local climate vulnerabilities and market structures; phased implementation starting with pilot programs; continuous development of modelling capabilities and broader capacity; and improving climate data availability and quality.

Established macroprudential climate stress testing frameworks

- The Monetary Authority of Singapore (MAS) conducted its first climate stress test in 2018, focusing on insurers. Since 2022, MAS has been conducting an industry-wide stress test using long-term climate scenarios,[40] with results included in its annual Financial Stability Review.[41]
- The Hong Kong Monetary Authority (HKMA) has integrated climate risk into its macroprudential toolbox. For climate stress testing, HKMA progressed from a 2021 pilot with 20 banks to a 2023-2024 programme covering 46 banks, addressing both five-year scenarios and projections to 2050.[42]
- Japan's Financial Services Agency (FSA) and Bank of Japan (BOJ), in cooperation with three banks, conducted a pilot exercise of scenario analysis using common scenarios in FY 2021.[43] The second exercise, using short-term scenarios, was underway as of FY 2024.[44,45]
- The Bank of Korea (BOK) conducted a climate stress test in 2021, using scenarios based on transition pathways developed by NGFS.[46] BOK also conducted a joint climate stress test with the Financial Supervisory Service (FSS) and Korea Meteorological Administration, with results released in March 2025.[47]

40 Monetary Authority of Singapore (MAS), Regulatory and Supervisory Approach, 2022.
41 MAS, Financial Stability Reviews (multiple years), n.d.
42 HKMA, 2023-2024 Banking Sector Climate Risk Stress Test, 28 February 2025.
43 Bank of Japan (BOJ), Top-Down Scenario Analysis of Climate-Related Financial Risks: Perspective from Time Horizon and Inter-Industry Spillovers, 21 December 2023.
44 Financial Services Agency (FSA) and BOJ, Climate-Related Scenario Analysis: Next Step in the Banking Sector, 10 May 2024.
45 ASEAN +3 Macroeconomic Research Office (AMRO). AMRO Annual Report Consultation: Japan – 2024, March 2025.
46 BOK, Financial Stability Report (June 2021), page 118-120, Box 7, 2021.
47 BOK, Impact of Climate Change Risk on the Real Economy: Climate Action Scenario Analysis, 20 March 2025.

Initial integration of climate-related risks into stress testing

- Australia was an early adopter through the Australian Prudential Regulation Authority (APRA)'s Climate Vulnerability Assessment,[48] with results released in 2021[49] and 2022.[50]
- People's Bank of China (PBoC) conducted its pilot climate stress test in 2021 with 23 participating banks, covering thermal power, steel, and cement sectors.[51] In 2022, PBoC conducted another climate stress test with 19 participating banks, covering eight high-emitting sectors and focusing on the impact of increases in carbon emission costs.[52] Various central government policies in recent years highlight China's continued efforts to further refine the methodology.[53]
- The Reserve Bank of New Zealand (RBNZ) conducted its first top-down Climate Stress Test in 2023 on its five largest retail banks.[54] It also issued a guidance on managing climate-related risks in March 2024.[55]
- Malaysia's Bank Negara Malaysia (BNM) issued its detailed expectations and guidance on Climate Risk Management and Scenario Analysis (CRMSA) in December 2022,[56] followed by a "Methodology Paper on Climate Risk Stress Testing" in February 2024[57] and subsequent update of the CRMSA guidance in March 2025.[58]
- In the Philippines, Bangko Sentral ng Pilipinas (BSP), has integrated climate risks into its macroprudential framework by conducting climate risk stress testing and issuing relevant guidance for FIs.[59]

Early-stage development and integration of climate risk

Other jurisdictions are in earlier stages but recognize the importance of macroprudential risk assessment:

- India announced plans in 2023 for climate scenario analysis guidance[60] and included disclosure requirements related to climate scenario analysis in its "Draft Disclosure framework on Climate-related Financial Risks" published in February 2024.[61]
- Indonesia[62] and Thailand[63] are both developing approaches but have not yet implemented system-wide climate stress tests.

---

48 RBA, Financial Stability Review, 2021.
49 APRA, Climate Vulnerability Assessment, 2021.
50 APRA, Climate Vulnerability Assessment - November 2022, 30 November 2022.
51 PBoC, China Monetary Policy Report Q4 2021, 11 February 2022.
52 Financial Stability Analysis Group of the People's Bank of China, China Financial Stability Report, 2023.
53 National Financial Regulatory Administration (NFRA) and PBoC, Implementation Plan for the High-Quality Development of Green Finance in the Banking and Insurance Industries (in Chinese), 17 January 2025.
54 RBNZ, 2023 Climate Stress Test Results, 22 April 2024.
55 RBNZ, Managing Climate-related risk: Guidance for prudentially regulated entities, 26 March 2024
56 BNM, Policy Document on Climate Risk Management and Scenario Analysis, 2 December 2022.
57 BNM, Climate Risk Stress Testing Methodology Paper, 2024.
58 BNM, Policy Document on Climate Risk Management and Scenario Analysis, 17 March 2025.
59 Bangko Sentral ng Pilipinas (BSP), 2023 BSP Sustainability Report, August 2024; BSP, Sustainable Central Banking Strategy, December 2022; BSP, Guidance on the Implementation of the Environmental and Social Risk Management (ESRM) System, 29 September 2022; IMF, Philippines: Financial Sector Assessment Program-Technical Note on Bank Stress Test for Climate Change Risks, 7 June 2022.
60 Green Central Banking, RBI deputy governor stresses need for supervisory frameworks to include climate risks, 2023.
61 RBI, Draft Disclosure framework on Climate-related Financial Risk, 28 February 2024.
62 Bank Indonesia (BI), Navigating Climate Transition, 2023.
63 BOT, Internalizing Environmental and Climate Change Aspects into Financial Institution Business for Banks, 2023.

Table 3: Macroprudential climate scenario analyses and climate stress tests across APAC

Country	Macroprudential climate stress testing	Scenario selection based on international frameworks	Type of stress test (top-down vs bottom-up)[64]	Coverage of financial industry to date	Key metric(s) used in climate stress test	Links to climate stress test results (if available)
Australia	Yes	Yes (NGFS)	Top-down	Banks	Lending loss rate; Residential mortgage exposures	2021 analysis; 2022 analysis
China	Yes	Yes (NGFS)	Top-down	Banks	Capital adequacy ratio (CAR) (2021); Non-performing loan ratios (2022)	2021 pilot; 2022 result
China (Hong Kong SAR)	Yes	Yes (NGFS)	Top-down	Banks	GDP; CAR	2021 pilot; 2023-2024 testing
India	Yes[65]	In progress	Top-down	Banks	Expected capital shortfall (2022)	2022 initial test
Indonesia	In progress	In progress	N/A	N/A	N/A	N/A
Japan	Yes	Yes (NGFS)	Top-down	Banks	Credit cost ratio	FY2021 test
Malaysia	In progress[66]	Yes (NGFS)	N/A	N/A	N/A	N/A
New Zealand	Yes	Yes (NGFS)[67]	Top-down	Banks	Aggregate dividends; Lending loss rate	2023 test

64 "Top-down" means that a stress test is performed by a public authority using its own stress test framework, while "bottom-up" means that a stress test performed by a bank using its own stress test framework as part of a system-wide exercise. [BIS, Stress-testing banks – a comparative analysis, November 2018.]
65 Reserve Bank of India (RBI) conducted initial climate stress test in 2022 with limited scope (only covering transition risk and the impact to stock prices). [RBI, 2023.]
66 The results of Malaysia's climate risk stress testing in 2024 are not yet published at the time of publishing this brief.
67 Reserve Bank of New Zealand used a scenario called 'Too Little Too Late' (TLTL) for its 2023 test, which combined the effects of two NGFS scenarios — one of each type — in its scenario design, because the NGFS scenarios at the time, NGFS Phase III, contained either high physical or high transition risk. [RBNZ, 2023 Climate Stress Test Results, 22 April 2024.]

Country	Macroprudential climate stress testing	Scenario selection based on international frameworks	Type of stress test (top-down vs bottom-up)[64]	Coverage of financial industry to date	Key metric(s) used in climate stress test	Links to climate stress test results (if available)
Philippines	In progress	In progress	N/A	N/A	N/A	N/A
Singapore	Yes (annually since 2022)	Yes (NGFS)	Top-down	Insurers (2018); Industry-wide (since 2022)	Common Equity Tier 1 (CET1) capital adequacy ratio (CAR); Total provisioning coverage ratio	2018 test; Annual results since 2022
South Korea	Yes	Yes (NGFS)	Top-down	Banks	GDP; CAR	2021 test; 2025 results
Thailand	In progress	In progress	Top-down	N/A	N/A	N/A

Overview of trends

The differences in approach to integrating climate risk into scenario analysis and stress testing reflect varying regulatory priorities, resources, and market readiness. Generally, there is growing alignment with international frameworks, particularly the IPCC pathways for physical risks and NGFS scenarios, while maintaining regional flexibility, and adopters tend to start with pilots before expanding to comprehensive assessments.[68]

Early adopters take either a top-down or bottom-up approach, or a mix of both, for their climate stress testing, and use both short- and longer-term scenario analyses, recognizing the need to assess immediate and structural risks. They assess both physical risks—such as extreme weather events—and transition risks from policy changes. However, there are challenges and limitations of using global frameworks and scenarios at a country or very local level, necessitating further model development.

Anticipated climate risk assessment developments in the region include further convergence in approaches while keeping necessary regional adaptations, wider institutional participation, and better modelling capabilities. Jurisdictions' shared climate vulnerabilities may drive increased regulatory cooperation.

68 UNEP FI, A Comprehensive Review of Global Supervisory Climate Stress Tests, July 2024.

Microprudential regulation

Microprudential supervision focuses on assessing and managing risks to individual banks. The Basel Committee on Banking Supervision (BCBS), the global standard-setter for prudential regulation for banks, sets out a microprudential framework with core principles that promote a forward-looking, risk-based approach.[69] This framework comprises three pillars:

- **Pillar 1:** Minimum regulatory requirements for bank capital and liquidity,
- **Pillar 2:** Supervisory review of banks' capital adequacy and risk management, and
- **Pillar 3:** Public disclosure requirements for banks to promote market discipline.

Pillar 1: Adjustments to capital and liquidity requirements based on climate considerations

Most APAC jurisdictions have not yet implemented specific adjustments to capital requirements based on climate considerations.

- According to the Australian Banking Association (ABA), Australia maintains strong capital positions with higher capital ratios. APRA does not yet show specific climate-related risk capital overlay implementation as of April 2025; existing Pillar 1 and Pillar 2 frameworks already allow for the incorporation of climate-related risks.[70] The banking industry focuses on refining climate risk integration into capital methodologies, with a key challenge being the development of robust, Australia-specific short-term climate scenarios for more effective risk assessment.[71]
- China is considering potential lower-risk weights for green assets. However, the primary focus remains on strengthening climate information architecture and improving banks' accountability for climate investing, rather than direct capital requirement adjustments.[72]
- China (Hong Kong SAR), while conducting climate risk stress tests that highlight the financial implications from both climate-related physical and transition risks under both short-term and long-term scenarios, has not implemented specific capital requirement adjustments.[73, 74]
- Singapore's MAS has indicated that their existing banking capital rules, which align with Basel Committee standards, already provide banks the flexibility to incorporate climate risk considerations into their regulatory capital determinations.[75]
- India's RBI has not yet implemented specific capital requirement adjustments. It has issued draft guidelines on managing climate-related risks.[76]

---

69 BCBS, Core Principles for effective banking supervision, April 2024.

70 Australian Banking Association, Climate Risk and Capital, March 2023; APRA website, n.d. (accessed 24 February 2025).

71 Council of Financial Regulators Australia, Council of Financial Regulators Climate Change Activity Stocktake Paper, 2023.

72 PBoC, *et al*. Guiding Opinions on Further Strengthening Financial Support for Green and Low-Carbon Development (in Chinese), 27 March 2024. NFRA and PBoC, Implementation Plan for the High-Quality Development of Green Finance in the Banking and Insurance Industries (in Chinese), 17 January 2025.

73 HKMA, HKMA publishes the results of the pilot climate risk stress test, 2021.

74 HKMA, 2023-2024 Banking Sector Climate Risk Stress Test, 28 February 2025.

75 MAS, Written reply to PQs on risk-based CA requirements and Climate Risks, 2023.

76 Raga, S. *et al*. The treatment of physical climate risks by central banks – insights for the Reserve Bank of India. ODI Report. September 2024.

- Japan is not currently making climate-related adjustments to capital requirements.[77]
- Other countries that have not yet indicated specific climate-related adjustments to capital risk weights within their regulatory frameworks include Malaysia, New Zealand, Philippines, South Korea, Thailand, and Indonesia.

Overview of trends

This overview suggests that while there is growing awareness and consideration of climate-related risks in capital frameworks across the region, concrete adjustments to capital requirements specifically based on climate considerations remain largely in the discussion or exploration phase. This is largely in line with the developments elsewhere globally and reflects limited conclusive data on risk differentials.[78]

Pillar 2: Microprudential climate stress testing, supervisory risk management guidance on climate, and other supervisory review

Supervisory approaches to climate-related risk management in APAC show a clear evolution, with jurisdictions increasingly moving from voluntary to mandatory requirements. This shift reflects a growing recognition of the importance of climate-related financial risks.

Several jurisdictions have established comprehensive supervisory requirements. For example, Australia, Malaysia, Singapore, and China (Hong Kong SAR) have implemented frameworks covering governance, risk management, scenario analysis, and disclosure. These frameworks emphasize board-level oversight and integration with existing risk management processes. Other countries are taking a more gradual approach, including mainland China, India, Japan, and Thailand.

Comprehensive guidance

- Singapore's MAS has been particularly proactive, introducing its "Guidelines on Environmental Risk Management" in 2020[79] and subsequently enhancing these with additional requirements around transition planning.[80]
- Australia's APRA issued its prudential practice guide CPG 229 guidance[81] in 2021, setting expectations, albeit voluntary, for Australian FIs.[82] APRA also plans to consult on including climate risk in CPS 220 and SPS 220 Risk Management guidance (detailed in Case Study 1).[83]
- China (Hong Kong SAR)'s HKMA published its Supervisory Policy Manual (SPM) module GS-1 on "Climate Risk Management" in 2021, outlining specific requirements for authorized institutions. Its pilot Climate Risk Stress Test also combined top-down systemic risk assessment with bottom-up evaluation of physical and transition risks by participating banks to help FIs develop necessary capabilities. However, this partic-

77 Green Central Banking, Bank of Japan, 2024.
78 Green Central Banking, Is the Basel framework up to the challenge of climate risk?, 5 November 2024.
79 MAS, Guidelines on Environmental Risk Management, December 2020.
80 MAS, Consultation Paper on Proposed Guidelines on Transition Planning for Banks, October 2023.
81 According to the definition by APRA, CPG "refers to Prudential Practice Guides that affect more than one type of APRA-regulated institutions, such as general and life insurers and ADIs" (authorized deposit-taking institutions). [APRA, Prudential Standard APS 001: Definitions, January 2013.]
82 APRA, Prudential Practice Guide CPG 229 Climate Change Financial Risks, November 2021.
83 APRA, 2024-2025 Corporate Plan, 2024.

ipation and the guidance are voluntary, and HKMA encourages institutions to align with its principles.[84]

- In 2022, Malaysia's BNM established robust climate-related risk management standards. The country has also set concrete deadlines for climate stress testing, requiring FIs to conduct these exercises by June 2025 using NGFS scenarios. This signals a shift towards more structured and quantitative assessment requirements.
- Indonesia's Financial Services Authority (OJK), in its "2024 Climate Risk Management & Scenario Analysis", provides technical specifications for measuring climate risk and carbon emissions, suggesting a trend towards more detailed requirements. It also emphasized the importance of incorporating climate risk into governance and risk frameworks.[85]
- The Philippines' BSP issued the "Sustainable Finance Framework (Circular No. 1085)" in April 2020, providing broad supervisory expectations on the integration of sustainability principles in risk management and operations of banks, and has since issued further guidelines to support the implementation within the sector.[86]
- South Korea's Financial Supervisory Service (FSS) introduced a guideline on climate-related risk management in the financial sector in 2021 and has since promoted its use.[87]

Gradual approach

- Since 2022, India's RBI has been developing expectations for banks to integrate climate-related risks into overall risk management frameworks and assess climate-related financial risks in lending and investment decisions.[88] "A Draft Disclosure Framework on Climate-related Financial Risk" was issued in February 2024.[89]
- China has focused its guidance on reducing carbon intensity within asset portfolios, alongside broader ESG integration requirements.[90] Recent central government policies also highlight its plan to gradually integrate climate-related risks into the macroprudential regulatory framework and fine-tune stress testing methodologies based on climate-related risks.[91]
- As previously noted, Japan's Financial Services Agency (FSA) and Bank of Japan (BOJ) conducted a pilot exercise of scenario analysis using common scenarios in FY 2021 and initiated the second exercise in FY 2024.[92]
- Thailand's BOT issued its directional paper on "Transitioning towards Environmental Sustainability under the New Thai Financial Landscape" in August 2023, including its plan to develop a framework for climate scenario analysis and stress testing.[93]

---

84 HKMA, Supervisory Policy Manual GS-1: Climate Risk Management, 30 December 2021; HKMA, HKMA publishes the results of the pilot climate risk stress test, 30 December 2021; HKMA, Planning for net-zero transition, 29 August 2023.

85 Indonesia Financial Services Authority (OJK), 2024 Climate Risk Management & Scenario Analysis, March 2024.

86 BSP, 2023 BSP Sustainability Report, August 2024.

87 Financial Services Commission (FSC), 4th Green Finance Taskforce Meeting Reviews Progress and Discusses Additional Tasks, 8 December 2021.

88 Climate Bonds Initiative (CBI), The Treatment of Physical Climate Risks by Central Banks, September 2024; RBI, Discussion Paper on Climate Risk and Sustainable Finance, July 2022.

89 RBI, Draft Disclosure framework on Climate-related Financial Risk, 28 February 2024.

90 Green Central Banking, People's Bank of China, n.d.

91 PBoC, *et al*. Guiding Opinions on Further Strengthening Financial Support for Green and Low-Carbon Development (in Chinese), 27 March 2024.

92 FSA and BOJ, Climate-Related Scenario Analysis: Next Step in the Banking Sector, 10 May 2024.

93 BOT, Transitioning towards Environmental Sustainability under the New Thai Financial Landscape, 23 August 2023.

Overview of trends

Despite differences in the pace and specifics of implementation, there is clear momentum towards embedding climate risk considerations into core supervisory frameworks and practices. This evolving landscape reflects the financial sector's growing recognition of climate change as a significant source of financial risk and the need for robust regulatory responses.

In several emerging economies where central banks have broader mandates, bank financing plays a crucial role in supporting economic activity.[94] In these contexts, the growing momentum to embed climate risk considerations into financial decision-making reflects the view of financial regulators that banks, through their financing and investment activities, can serve as important catalysts in facilitating an orderly transition toward more climate-resilient economies.

A key emerging trend is the convergence around methodological approaches, particularly the adoption of NGFS scenarios for stress testing exercises. This suggests the region is moving towards more aligned approaches to climate risk assessment. In addition, some regulators, most notably Singapore (see Case Study 2), have also moved beyond just climate to integrate other environmental risks such as biodiversity loss[95] and pollution.[96]

94 Rogers, J. Asia-Pacific: Economic Growth Taking Off, 7 April 2025.

95 The Financial Stability Board (FSB), Stocktake on Nature-related Risks: Supervisory and regulatory approaches and perspectives on financial risk, 18 July 2024.

96 MAS, Guidelines on Environmental Risk Management for Banks, 8 December 2020.

Case study 1: Australian Prudential Regulation Authority's CPG 229 climate change financial risks

The Australian Prudential Regulation Authority (APRA) has developed a comprehensive framework—combining guidelines, scenario analysis, and ongoing supervision—for climate change financial risks management for APRA-regulated entities.

Methodology and scope: In April 2021, APRA released the draft Prudential Practice Guide CPG 229 Climate Change Financial Risks (CPG 229) for consultation, finalizing it in November 2021. The guide is designed to assist APRA-regulated entities in managing climate-related risks and opportunities within their existing risk management and governance frameworks. CPG 229 does not create new regulatory requirements but aims to support compliance with existing prudential standards, particularly CPS 220 Risk Management and CPS 510 Governance.[97]

Governance and risk management: APRA expects boards and senior management to maintain effective oversight of climate risk management. This includes integrating climate risks into the institution's overall business strategy and risk appetite. FIs are expected to identify, measure, monitor, manage, and report on their exposure to climate risks in a manner appropriate to their size, business mix, and complexity of operations.[98]

Scenario analysis and stress testing: APRA emphasises the importance of developing capabilities in scenario analysis and stress testing. APRA expects approaches to evolve over time but stresses that the expectation of future improvements is not a justification for delaying its use.[99]

Disclosure and transparency: APRA considers it best practice for any climate-related disclosures to align with the framework established by the TCFD.[100]

Ongoing supervision and guidance: APRA conducted a Climate Vulnerability Assessment (CVA) with Australia's five largest banks from 2021 to 2022, with results published in November 2022. In 2023, APRA expanded its climate risk analysis to other industries, launching a CVA for general insurers, with results expected to be released in 2025 and a public report to follow.[101]

Future plans: In its 2024-25 Corporate Plan, APRA announced plans to commence consultation in 2025 on amending CPS 220 and SPS 220 Risk Management to include climate risk.[102] Following the consultation, APRA made minor amendments to the final CPG 229, including clarifications on capital adequacy, the use of climate-related targets, and disclosure of key design features of scenario analysis. The regulator has maintained a principles-based approach to ensure flexibility and applicability across a wide range of institutions.

97 APRA, Prudential Practice Guide CPG 229 Climate Change Financial Risks, November 2021.
98 APRA, Climate Risk Self-Assessment Survey, 2024.
99 APRA, Climate Vulnerability Assessment, 2021.
100 APRA, Prudential Practice Guide CPG 229 Climate Change Financial Risks, November 2021.
101 APRA, Climate Vulnerability Assessment, 2021.
102 APRA, 2024-2025 Corporate Plan, 2024.

Case study 2: Monetary Authority of Singapore's climate and environmental risk management guidance for supervisory guidance, climate change reporting, and scenario analysis

The Monetary Authority of Singapore (MAS) has developed a comprehensive framework—combining guidelines, scenario analysis, and ongoing supervision—for climate- and environmental-related risk management supervision for FIs, including banks, insurers, and asset managers.

Methodology and scope: In December 2020, MAS issued Guidelines on Environmental Risk Management for banks, insurers, and asset managers. These guidelines set expectations for FIs in three key areas: governance, risk management, and disclosure of environmental risks. MAS provided an 18-month transition period, with full implementation expected by June 2022.[103]

Governance and risk management: The guidelines require boards and senior management of FIs to maintain oversight of environmental risk management. This includes approving frameworks and policies, setting roles and responsibilities, and ensuring expertise within the organisation. FIs are expected to integrate environmental risk into their existing risk management frameworks.

Scenario analysis and stress testing: MAS includes these tools as part of evaluating potential impacts of environmental risks. FIs are expected to develop capabilities in scenario analysis and stress testing, incorporate relevant short-term and long-term environmental scenarios, assess resilience to financial losses under various outcomes, and use results to review risk management policies and practices.[104]

Disclosure and transparency: The MAS approach includes an emphasis on regular disclosures of environmental risks by FIs, aligned with international reporting frameworks such as TCFD.[105]

Ongoing supervision and guidance: In May 2022, MAS published information papers highlighting practices and areas for improvement based on a thematic review of selected FIs. These papers provide insights for enhancing environmental risk management practices.[106]

Future plans: MAS intends to further develop its climate risk assessment capabilities through additional scenario analysis exercises. The regulator also plans to enhance environmental and climate-related disclosure standards to promote market transparency.[107] However, challenges remain in areas such as data availability, methodologies for quantifying environmental risks, and building expertise within the financial sector. MAS is working with industry stakeholders to address these challenges and build capacity.

---

103 MAS, Guidelines on Environmental Risk Management for banks, insurers, and asset managers, 2020.
104 MAS, Regulatory and Supervisory Approach, 2022.
105 MAS, Guidelines on Environmental Risk Management for banks, insurers, and asset managers, 2020.
106 MAS, Information Papers on Environmental Risk Management, 2022.
107 MAS, Financial Stability Review, 2022.

Pillar 3: Prudential climate-related disclosures

Prudential climate-related disclosure (Pillar 3) for banks has been evolving across the APAC region, from formalizing climate-related disclosure requirements to incorporating recommendations in international frameworks such as TCFD and ISSB, often in phases. For some APAC jurisdictions, such requirements also blend supervisory (regulator-facing) and public (market-facing) disclosures. This section examines several key developments and trends that have emerged as of April 2025.

Jurisdictions with formal requirements

- Singapore's MAS issued guidelines on environmental risk management in December 2020, requiring at least annual disclosures by banks aligned with international frameworks such as TCFD.[108] It subsequently proposed guidelines on transition planning for consultation in 2023.[109]
- China (Hong Kong SAR)'s HKMA issued the GS-1 guideline on climate risk management in December 2021, mandating TCFD-aligned disclosures for authorized institutions.[110] It sets requirements on climate-focused scenario analysis, seeking to align with international best practices.[111]
- Malaysia implemented one of the region's most explicit requirements, mandating TCFD-aligned annual climate-related disclosures since 1 January 2024.[112] All FIs are expected to be ISSB-aligned by 2027, as per the National Sustainability Reporting Framework (NSRF).[113]
- New Zealand has a comprehensive climate-related disclosures regime, with the Financial Markets Authority (FMA) providing detailed guidance through its "Scenario Analysis Information Sheet" released in 2023. The framework mandates climate reporting entities to conduct and disclose scenario analysis, demonstrating New Zealand's commitment to robust climate risk assessment and transparency.[114]

Countries with evolving requirements

- Thailand has a strong recommendation for TCFD or International Sustainability Standards Board (ISSB) alignment, providing flexibility while encouraging international standard adoption.[115] An industry Handbook was issued in October 2023 to provide further guidance.[116]
- China is transitioning towards mandatory disclosure, particularly for mega banks and listed institutions.[117] The PBoC's "Guidelines on Environmental Information Disclosure for Financial Institutions" issued in 2021 provides the foundation for future requirements.[118]

---

108 MAS, Guidelines on Environmental Risk Management for Banks, 8 December 2020.
109 MAS, Consultation Paper on Proposed Guidelines on Transition Planning for Banks, 18 October 2023.
110 HKMA, Supervisory Policy Manual GS-1: Climate Risk Management, 30 December 2021.
111 PwC, Sustainability Counts III – Financial services deep dive, 23 December 2024.
112 BNM, Climate Risk Management and Scenario Analysis, 17 March 2025.
113 BNM, Financial Stability Review - Second Half 2024, p.49-51, Box Article: Navigating the Financial Sector's Transition to the National Sustainability Reporting Framework, n.d.
114 PwC, Sustainability Counts III – Financial services deep dive, 23 December 2024.
115 BOT, Policy Statement of the Bank of Thailand, 15 February 2023.
116 BOT & The Thai Bankers' Association, Industry Handbook: Internalizing environmental and climate change aspects into financial institution business for banks, August 2023.
117 S&P Global Ratings. Bank Regulation and Disclosure To Foster Climate-Related Risk Analysis, 3 October 2022.
118 PBoC, Guidelines on Environmental Information Disclosure for Financial Institutions, 22 July 2021.

- Australia's APRA strongly endorses TCFD alignment as best practice.[119] The country's mandatory climate-related financial disclosures commenced on 1 January 2025 for large Australian businesses and financial institutions and will be phased in for other entities.[120]
- Japan is also incorporating TCFD/ISSB recommendations into its disclosure rules for listed companies. In January 2023, its Financial Services Agency (FSA) issued new rules on mandatory sustainability disclosure based on TCFD recommendations for listed companies.[121] In March 2025, the Sustainability Standards Board of Japan (SSBJ) released its finalized ISSB-aligned sustainability disclosure standards.[122]

Countries with soft or voluntary approaches

- The Philippines has a sustainability reporting requirement as part of its Sustainable Finance Framework for all banks, but alignment with internationally recognized standards is only in non-binding guidelines.[123]
- India's RBI maintains a flexible stance, suggesting TCFD alignment, allowing banks to develop disclosure practices at their own pace.[124]
- Indonesia's OJK issued the Banking Climate Risk Management & Scenario Analysis (CRMS) Guideline in 2024 that includes sustainability disclosure requirements for banks, with reference to common practice and international standards.[125]
- South Korea's Financial Services Commission (FSC) and Financial Supervisory Service (FSS) released the "Guidelines on Climate Risk Management" in 2021,[126] which was updated in 2022.[127] According to the revised guidelines, financial institutions are required to disclose information on overall climate risk management by referring to TCFD recommendations.

Overview of trends

The regional landscape demonstrates a clear trend towards formalization of climate risk disclosure requirements. However, the approach, scope, and timeline vary significantly, reflecting different market conditions and regulatory priorities. This creates a complex operating environment for international banks managing multiple jurisdictional requirements.

The adoption of international frameworks, particularly TCFD or ISSB, emerges as a common thread, suggesting potential future convergence in disclosure standards across the region. However, the varying levels of requirement formality and framework specificity indicate that complete standardization remains a longer-term goal.

119 APRA, Prudential Practice Guide CPG 229 Climate Change Financial Risks, November 2021.
120 Chartered Accountants Australia and New Zealand, Climate-related disclosures: key developments, 6 January 2025.
121 FSA, Cabinet Office Ordinance Partially Revising the Cabinet Office Ordinance Concerning Disclosure of Corporate Information, etc., 31 January 2023.
122 Sustainability Standards Board of Japan (SSBJ), SSBJ issues Inaugural Sustainability Disclosure Standards to be applied in Japan, 5 March 2025.
123 Bangko Sentral ng Pilipinas, Circular No. 1085, 2020.
124 RBI, Discussion Paper on Climate Risk and Sustainable Finance, 27 July 2022.
125 OJK, Climate Risk Management & Scenario Analysis (CRMS) 2024, 5 March 2024.
126 FSC, 4th Green Finance Taskforce Meeting Reviews Progress and Discusses Additional Tasks, 8 December 2021.
127 FSS, Principles for the effective management and supervision of climate-related financial risks, 19 September 2022.

Conclusion

As climate-related prudential regulation continues to evolve across APAC, there is a clear trend towards stronger mandates, greater alignment with international frameworks, and more sophisticated risk assessment methodologies. The broadening of central banks' regulatory scope to include environmental risks further signals a commitment to building resilient financial systems capable of navigating climate-related challenges.

Overall, a deeper and more comprehensive integration of climate considerations into prudential frameworks is emerging. This integration is intended to support more resilient financial systems that are better equipped to navigate the challenges posed by climate change. It may also drive increased allocation of capital towards sustainable activities, potentially accelerating the transition to a low-carbon economy.

The implications of these developments extend beyond the financial sector. As banks incorporate climate-related risks into their decision-making processes, this could influence lending and investment patterns, potentially reshaping economic activities across various industries in the APAC region.

Ultimately, a well-coordinated approach across regulatory bodies, financial institutions, and policymakers will be important in driving an effective and efficient low-carbon transition. Strengthened regulatory foundations, informed by industry input and international best practices, will support financial stability while contributing to a broader shift towards sustainable economic growth in the region.

Appendix

Regional Central Banks/Monetary Authorities and Regulators (as of April 2025)

Country	Central Bank/Monetary Authority	Prudential Regulator	Securities Regulator
Australia	Reserve Bank of Australia (RBA)	Australian Prudential Regulation Authority (APRA)	Australian Securities and Investments Commission (ASIC)
Brunei	Brunei Darussalam Central Bank (BDCB)		
Cambodia	National Bank of Cambodia (NBC)		Securities and Exchange Regulator of Cambodia (SERC)
China	The People's Bank of China (PBoC)	National Financial Regulatory Administration (NFRA)	China Securities Regulatory Commission (CSRC)
China (Hong Kong SAR)	The Hong Kong Monetary Authority (HKMA)		Securities and Futures Commission (SFC)
India	Reserve Bank of India (RBI)		Securities and Exchange Board of India (SEBI)
Indonesia	Bank Indonesia (BI)	Financial Services Authority (OJK)	
Japan	Bank of Japan (BOJ)	Financial Services Agency (FSA)	
Lao PDR	Bank of the Lao P.D.R.		Lao Securities Commission (LSC)
Malaysia	Bank Negara Malaysia (BNM)		Securities Commission Malaysia
Myanmar	Central Bank of Myanmar (CBM)		Securities and Exchange Commission of Myanmar (SECM)
New Zealand	Reserve Bank of New Zealand (RBNZ)		Financial Markets Authority (FMA)
Philippines	Bangko Sentral ng Pilipinas (BSP)		Philippine Securities and Exchange Commission (SEC)
Singapore	Monetary Authority of Singapore (MAS)		
South Korea	Bank of Korea (BOK)	Financial Services Commission (FSC); Financial Supervisory Service (FSS)	
Thailand	Bank of Thailand (BOT)	Securities and Exchange Commission Thailand (SEC)	

UNEP Finance Initiative (UNEP FI) brings together a large network of banks, insurers and investors that catalyses action across the financial system to deliver more sustainable global economies.

For more than 30 years the Initiative has been connecting the UN with financial institutions from around the world to shape the sustainable finance agenda establishing the world's foremost sustainability frameworks that help the finance industry address global environmental, social and governance challenges.

Convened by a Geneva, Switzerland-based secretariat, more than 500 banks and insurers with assets exceeding USD 100 trillion are individually implementing UNEP FI's Principles for Responsible Banking and Principles for Sustainable Insurance. Financial institutions work with UNEP FI on a voluntary basis to apply the sustainability frameworks within their industries using practical guidance and tools to position their businesses for the transition to a sustainable and inclusive economy.

Founded in 1992, UNEP FI was the first initiative to engage the finance sector on sustainability. Today, the Initiative cultivates leadership and advances sustainable market practice while supporting the implementation of global programmes at a regional level across Africa & the Middle East, Asia Pacific, Europe, Latin America & the Caribbean and North America.

unepfi.org

unepfi.org

info@unepfi.org

/UNEPFinanceInitiative

UN Environment Programme Finance Initiative