



CLIMATE-RELATED FINANCIAL DISCLOSURES 2021

PROGRESS REPORT ON IMPLEMENTING
THE RECOMMENDATIONS OF THE TASK FORCE
ON CLIMATE-RELATED FINANCIAL DISCLOSURES



CLIMATE-RELATED FINANCIAL DISCLOSURES 2021

PROGRESS REPORT ON IMPLEMENTING
THE RECOMMENDATIONS OF THE TASK FORCE
ON CLIMATE-RELATED FINANCIAL DISCLOSURES



Creative Commons Attribution 3.0 IGO license (CC BY 3.0 IGO)

© 2022 Asian Development Bank
6 ADB Avenue, Mandaluyong City, 1550 Metro Manila, Philippines
Tel +63 2 8632 4444; Fax +63 2 8636 2444
www.adb.org

Some rights reserved. Published in 2022.

ISBN 978-92-9269-748-8 (print); 978-92-9269-749-5 (electronic); 978-92-9269-750-1 (ebook)
Publication Stock No. TCS220398
DOI: <http://dx.doi.org/10.22617/TCS220398>

The views expressed in this publication are those of the authors and do not necessarily reflect the views and policies of the Asian Development Bank (ADB) or its Board of Governors or the governments they represent.

ADB does not guarantee the accuracy of the data included in this publication and accepts no responsibility for any consequence of their use. The mention of specific companies or products of manufacturers does not imply that they are endorsed or recommended by ADB in preference to others of a similar nature that are not mentioned.

By making any designation of or reference to a particular territory or geographic area, or by using the term “country” in this document, ADB does not intend to make any judgments as to the legal or other status of any territory or area.

This work is available under the Creative Commons Attribution 3.0 IGO license (CC BY 3.0 IGO) <https://creativecommons.org/licenses/by/3.0/igo/>. By using the content of this publication, you agree to be bound by the terms of this license. For attribution, translations, adaptations, and permissions, please read the provisions and terms of use at <https://www.adb.org/terms-use#openaccess>.

This CC license does not apply to non-ADB copyright materials in this publication. If the material is attributed to another source, please contact the copyright owner or publisher of that source for permission to reproduce it. ADB cannot be held liable for any claims that arise as a result of your use of the material.

Please contact pubsmarketing@adb.org if you have questions or comments with respect to content, or if you wish to obtain copyright permission for your intended use that does not fall within these terms, or for permission to use the ADB logo.

Corrigenda to ADB publications may be found at <http://www.adb.org/publications/corrigenda>.

Notes:

In this publication, “\$” refers to United States dollars.
All photos by ADB.

Cover design by Rocilyn Laccay.

On the cover:

Agricultural field with the Burgos Wind Farm seen in the background. Ilocos Norte, Philippines.

Water channel used to irrigate terraced farms in Nepal. The Community-Managed Irrigated Agriculture Sector Project has rehabilitated farmer-managed irrigation systems that helped the farmers in 35 districts of central and eastern Nepal.

The Railway Sector Investment Program aims to improve the performance of the railway sector in Bangladesh.

Sunny Bangchak solar farm in Chaiyabhum Province. Ilocos Norte, Philippines.

The Apo Reef Natural Park in the province of Occidental Mindoro, Philippines. The coral reefs cover a total area of 34 square kilometers. The park, including its peripheral buffer zone, is a marine sanctuary and a popular site for tourists.

Steam from deep within the Earth is used to generate electricity at the Lahendong geothermal power plant in Manado, Indonesia.

Farmers working at the Dalat Hasfarm greenhouses in Lam Dong, Viet Nam. The High-Value Horticulture Development Project will scale-up and transfer a successful high-value horticulture business model built on the introduction of climate-controlled greenhouse technology in tropical highlands in Asia, and the integration of its business downstream into distribution in domestic and export markets.

Port in Fiji.

CONTENTS

Tables, Figures, and Boxes	v
Foreword	vi
Acknowledgments	viii
Abbreviations	ix
Executive Summary	x
Background	xii
About the Asian Development Bank	xii
About the Task Force on Climate-Related Financial Disclosures	xii
I. Overview	1
II. Governance	2
Board Oversight of Climate-Related Risks and Opportunities	2
Role of the Board of Governors	2
Role of the Board of Directors	3
Management Responsibilities in Assessing and Managing Climate-Related Risks and Opportunities	7
Role of Management and Departments	7
Management Committees	8
Internal and External Cooperation	8
Future Enhancements	10
III. Strategy	11
ADB's Evolution on Climate Action	11
Strategies Related to Climate Change	13
Organizational Strategies	13
Operational Approaches	14
Climate-Related Opportunities	18
Climate Finance Ambition	18
Supporting Climate Action in ADB Developing Member Countries	19
Green and Blue Bonds	21
Future Enhancements	22

IV. Risk Management	23
Processes for Identifying and Assessing Climate-Related Risks	23
Characterization of Climate-Related Risk against Current Risk Categories	23
Three Lines of Defense Model	26
Processes for Assessing Climate-Related Risks for ADB Projects	27
Processes for Managing Climate-Related Risks at the Portfolio Level	30
Overview of ADB Portfolio Exposure	30
Capturing Climate-Related Risks in Credit Risk Ratings	32
Limiting Portfolio Exposure to Carbon-Intensive Sectors	32
Performing Extreme Climate Scenario Analysis	32
Processes for Assessing and Managing Organizational Resilience	33
Future Enhancements	33
V. Metrics and Targets	35
Metrics on Internal Operations	35
Metrics and Targets Used to Measure and Manage Climate-Related Opportunities in ADB's Portfolio	37
Metrics and Targets Used to Measure and Manage Climate-Related Risks in ADB's Portfolio	39
Future Enhancements	44

TABLES, FIGURES, AND BOXES

Tables

1	ADB's Board Committees	6
2	ADB's Management Committees	9
3	Time Horizons of Strategies' Operationalization	13
4	Impacts of Climate Change on Key Risk Categories	24
5	Operational Greenhouse Gas Emissions	36
6	Greenhouse Gas Emissions Intensity	36
7	ADB Operations Supporting Climate Change Mitigation and Adaptation	37
8	Climate Opportunity Metrics within ADB's Development Effectiveness Review	39
9	ADB Operations Portfolio Project Sector Climate Sensitivity Heat Map	40

Figures

1	ADB's Functional and Organizational Chart	4
2	Strategy 2030's Seven Operational Priorities	14
3	ADB's Climate Change Operational Framework, 2017–2030	15
4	ADB's Three Lines of Defense Model Applicable to Climate-Related Risks and Opportunities	26
5	ADB Sovereign, Nonsovereign, and Treasury Portfolio Exposure, as of 31 December 2021	30
6	Sovereign Portfolio Country Exposure, as of 31 December 2021	31
7	Nonsovereign Portfolio by Obligor Industry Sector, as of 31 December 2021	31
8	ADB Cumulative Financing for Climate Change Mitigation and/or Adaptation since 2019, with 2024 and 2030 Targets	38
9	Operations Portfolio Sensitivity to Physical Climate Risks and Carbon Transition, Based on Project Industry Sector, as of 31 December 2021	42
10	Operations Portfolio Exposure to Physical Climate Risk and Carbon Transition, Based on Moody's ESG Scores for Sovereigns as of 31 December 2021	43

Boxes

1	Examples of Trust Funds	19
2	The Climate Risk Management Framework	28

FOREWORD



I am pleased to introduce the Asian Development Bank's inaugural Task Force on Climate-Related Financial Disclosures (TCFD) report.

The Asian Development Bank (ADB) is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty. As a multilateral development bank, ADB works with governments and civil society to mobilize financing and implement knowledge solutions to mitigate and adapt to the impacts of climate change.

ADB recognizes that the battle against climate change will be won or lost in Asia and the Pacific.

As Asia and the Pacific's climate bank, we have identified “tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability” as one of ADB's seven operational priorities under our long-term strategy, Strategy 2030.

To address the climate crisis, ADB is supporting a low-carbon transition in line with the Paris Agreement, building climate resilience, and addressing the region's climate finance needs. In 2018, we announced our commitment to deliver \$80 billion in cumulative climate financing from ADB's own resources and to ensure that at least 75% of the total number of our operations support climate action by 2030. We have since increased our climate finance and other commitments as follows:

- We elevated ADB's ambition to deliver \$100 billion in cumulative climate financing from our own resources from 2019 to 2030.
- We committed to fully align ADB's sovereign operations with the goals of the Paris Agreement by 1 July 2023, and 85% of nonsovereign operations by 1 July 2023 and 100% by 1 July 2025.
- We approved a new energy policy to support universal access to reliable and affordable energy services, while promoting the low-carbon transition in Asia and the Pacific.
- With partner governments, we launched the Energy Transition Mechanism to accelerate the transition from coal and other fossil fuels to clean energy.
- We launched the Community Resilience Partnership Program to help local communities in Asia and the Pacific scale up investments in climate adaptation, focusing on the nexus between climate change, poverty, and gender.

ADB became a supporter of the TCFD in 2021, and this is the first report on ADB's climate-related financial disclosures. The publication of this report further demonstrates to ADB's investors, shareholders, and other stakeholders that ADB is committed to strengthening its climate action and climate business operations in line with the vision laid out in Strategy 2030, while increasing transparency on ADB's exposure to climate-related opportunities and risks through enhanced disclosures.

ADB is firmly committed to integrating climate-related risk and opportunity assessments in our everyday operations. However, we recognize that more work needs to be done. This first TCFD report serves as a milestone upon which we will continue to build. The TCFD Recommendations will also provide a road map to enhance our disclosures as we deepen our understanding of climate risks and opportunities in the years ahead.

We hope you enjoy reading our inaugural TCFD report.

A handwritten signature in black ink, appearing to read 'M. Asakawa', with a long horizontal stroke extending to the right.

MASATSUGU ASAKAWA

President and Chairperson of the Board of Directors
Asian Development Bank

ACKNOWLEDGMENTS

Preparation of this inaugural report on the implementation of the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) was sponsored by Woochong Um, managing director general (MDG); overseen by Bruno Carrasco, director general concurrently chief compliance officer, Sustainable Development and Climate Change Department (SDCC), and Stephen O’Leary, head of the Office of Risk Management (ORM); supported by Michael Kjellin, director, Risk Policy and Architecture Division (RMPA) of ORM, and Noelle O’Brien, chief of Climate Change and Disaster Risk Management Thematic Group and concurrently director of the Climate Change and Disaster Risk Management Division (SDCD) in SDCC of the Asian Development Bank (ADB).

Preparation and production of this report was managed by Sopanha Sa, risk management specialist and concurrently core project management team leader of ADB’s Interdepartmental Working Group (IWG) on TCFD, and Josh Ling, climate change specialist and concurrently core project management team leader of the ADB IWG on TCFD, with core support from Nicholas Plummer (consultant), who provided technical guidance. In addition, essential support was provided by Leika Ramirez, associate risk management analyst. Monina Gamboa copyedited this report for publication.

The following focal points from the IWG provided essential information and advice: Setijo Boentaran, Rie Matsubayashi, Nathan Rive, Yuji Miyaki, Ayun Sundari, Neil Hickey, Kang Hang Leung, Shannon Cowlin, Alfredo Bano Leal, Jennifer Romero-Torres, Kosintr Puongsophol, Marcel Schroder, Makoto Kubota, Yuko Keicho, Do Keun Cho, Daniele Quaggiotto, Per Ola Nilsson, Przemek Prutis, Bosco Hoelscher, Ian Bryson, Noel Peters, Arghya Sinha Roy, Christian Ellermann, Karan Chouksey, Katharine Thoday, Duncan Lang, Sungsup Ra, Junkyu Lee, Arup Kumar Chatterjee, Thomas Kessler, Yoonhee Kim, Srinivasan Ancha, Antoine Morel, Takafumi Kadono, Fiona Bannert, Marie Christine Montoya, Mary Kim, Ana Kotamraju, Ruben Param Soothy, Keerthi Kumar Challa, and Annika Seiler.

We also gratefully received assistance from many people across ADB, including Harumi Kodama from the Office of the Secretary (SEC); Adriana Bonomo from the Office of the General Counsel (OGC); Sarah O’Connor, Robert Alcala, Keech Hidalgo, Noren Jose, and Rodel Bautista from the Department of Communications (DOC); Andreas Rimkus, Aleh Kourloukov, Peter Whelan, Ellen Adisoabrata, Yoshimasa Ito, Marian Gimeno-Arellano, and Jamila Fernandez from ORM; and Bruce Dunn, Esmyra Javier, and Ken Edward Concepcion from SDCC.

ABBREVIATIONS

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
BOD	Board of Directors
CCOF2030	Climate Change Operational Framework 2017–2030
CPS	country partnership strategy
CRA	climate risk and adaptation assessment
CRPP	Community Resilience Partnership Program
DEfR	Development Effectiveness Review
DMC	developing member country
ETM	energy transition mechanism
GHG	greenhouse gas
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
IWG	Interdepartmental Working Group
MDB	multilateral development bank
MDG	managing director general
NDC	nationally determined contribution
ORM	Office of Risk Management
PBL	policy-based lending
PSOD	Private Sector Operations Department
SDCC	Sustainable Development and Climate Change Department
SDCD	Climate Change and Disaster Risk Management Division
SPS	Safeguard Policy Statement
TA	technical assistance
TCFD	Task Force on Climate-Related Financial Disclosures
tCO ₂ e	ton of carbon dioxide equivalent
WPBF	Work Program and Budget Framework

EXECUTIVE SUMMARY

The Asian Development Bank (ADB) became a supporter of the TCFD in November 2021 and this first disclosure report provides an overview of ADB's progress in implementing the TCFD Recommendations. Reporting under the TCFD framework is instrumental to integrating the consideration of climate-related risks and opportunities into ADB's development agenda and to supporting ADB's vision of achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific. The report follows the disclosure structure recommended by the TCFD under four thematic pillars: (i) Governance; (ii) Strategy; (iii) Risk Management; and (iv) Metrics and Targets.

The Governance section outlines how ADB governance addresses climate-related issues including how the Board of Directors exercises oversight through frameworks, policies, and committees. In recognition of the coordination that climate change-related issues require, ADB in 2022 established the Climate Action Coordination Committee (CACC), a senior leadership group reporting to the Managing Director General that will oversee the planning, implementation, monitoring, and coordination of ADB's actions to meet its climate goals. TCFD reporting is integral to this, and an Interdepartmental Working Group (IWG) was formed in 2021 to adopt the TCFD Recommendations and drive public reporting going forward.

The Strategy section describes the organizational strategies and operational approaches that ADB has implemented in response to the climate-related risks and opportunities. In particular, it reports on ADB's considerable actions over recent decades as well as providing a forward-looking view of actions ADB is currently taking to mobilize flows of its own capital resources and those of its partners into climate change mitigation and adaptation in its DMCs. ADB is currently developing a climate change action plan to supplement Operational Priority 3 of the Strategy 2030. Over the coming years, ADB's climate-related strategies will strengthen and deepen as the bank improves its tools and dedicates resources to increase its understanding of the interlinkages between climate change and its business, operations, and its borrowers (clients). Actions have already been taken with the roll-out of dedicated training of staff on climate-related matters including through a United Nations-accredited course.

The Risk Management section presents ADB's framework to identify, assess, and manage climate-related risks. It includes a description of how climate change impacts various risk categories that ADB faces, as well as how ADB's three lines of defense model acts to manage those risks. This includes processes to assess and manage climate risks at the project level, and a climate scenario analysis conducted in 2021 on ADB's portfolio susceptibility to extreme physical climate risks. The report also describes the organizational resilience framework ADB has implemented to adapt to changes in its operating environment including climate change. Actions underway to improve

these processes include the review of the Safeguards Policy Statement, the implementation of a revised sovereign credit risk model, and the development of an in-house tool for climate and disaster risk screening for projects.

Finally, the Metrics and Targets section discloses ADB's greenhouse gas (GHG) emissions from its internal operations, as well as its ambitious climate finance targets. A high-level view of ADB's portfolio is provided, including a climate sensitivity heat map classifying ADB's project industry sectors by their exposure to physical climate risk and carbon transition, as well as portfolio exposure to sovereign climate-related risks. ADB plans to keep improving on its climate-related metrics and targets disclosures in the future, including through the development of metrics relating to portfolio GHG emissions, as well as assessments of the impact of climate-related risks to ADB over different time horizons and climate scenarios.

BACKGROUND

About the Asian Development Bank

The Asian Development Bank (ADB) is a multilateral development bank (MDB) committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty.

ADB transfers resources from global capital markets and from donor funds to its developing member countries through government (sovereign) and private sector (nonsovereign) projects. ADB provides a range of financial products, including loans, grants, concessional finance, equity investments, guarantees, and technical assistance. These instruments are funded through ordinary capital resources, special funds, and trust funds. Financing modalities available to borrowers (clients) include policy-based (program-based) lending, sector-based lending, project lending, results-based lending, multitranche finance facilities, emergency assistance loans, financial intermediation loans, and general corporate finance.

About the Task Force on Climate-Related Financial Disclosures

The Task Force on Climate-Related Financial Disclosures (TCFD) was established in 2015 by the G20's Financial Stability Board (FSB) to develop recommendations for climate-related financial disclosures for consistent use by companies in providing information to investors, lenders, insurers, and other stakeholders.¹ In 2017, the Task Force published the TCFD Recommendations (updated in 2021) for the voluntary disclosure of such climate-related information against two key risks:²

- (i) **Carbon transition risks** or risks related to the transition to a lower-carbon economy. Transitioning to a lower-carbon economy may entail extensive policy, legal, technology, and market changes to address mitigation and adaptation requirements related to climate change. Depending on the nature, speed, and focus of these changes, transition risks may pose varying levels of financial and reputational risk to organizations.

¹ The FSB, established in 2009 by the Heads of State and Government of the G20 group of the world's major developed and emerging economies, is an international body that monitors and makes recommendations about the global financial system. More information can be found on the TCFD website: <https://www.fsb-tcfd.org/>.

² These definitions are based on the Recommendations of the Task Force on Climate-Related Financial Disclosures. June 2017.

- (ii) **Physical climate risks** or risks related to the physical impacts of climate change. Those can be event-driven (acute) or longer-term shifts in climate patterns (chronic). Physical risks may have financial implications for organizations, such as direct damage to assets and indirect impacts from supply chain disruption. Organizations' financial performance may also be affected by changes in water availability, sourcing, and quality; food security; and extreme temperature changes affecting organizations' premises, operations, supply chain, transport needs, and employees' safety.

The TCFD Recommendations are structured around these four thematic areas that are core elements of how organizations operate:

- (i) Governance
- (ii) Strategy
- (iii) Risk management
- (iv) Metrics and targets



I. OVERVIEW

The Asian Development Bank (ADB) declared its support for the Task Force on Climate-Related Financial Disclosures (TCFD) in November 2021, reflecting the importance it places on financial transparency around climate-related risks and opportunities.¹ ADB has started to implement the TCFD Recommendations to raise awareness of climate-related risks and opportunities across its operations portfolio, resulting in better risk management and more informed strategic planning. ADB also views the TCFD framework as an important tool for disclosing climate risks and opportunities across the institution.

This report is ADB's first disclosure under the TCFD framework. It provides an overview of ADB's current achievements in the four thematic areas identified by the TCFD Recommendations. It also presents proposed future actions to integrate climate-related risks and opportunities into the core of ADB's business strategy and decisions.

¹ ADB. 2021. *ADB Announces Support for Task-Force on Climate-Related Financial Disclosures*. Manila.

II. GOVERNANCE

ADB was established in 1966 under the Agreement Establishing the Asian Development Bank (the Charter).² It is owned and governed by its 68 members, 49 members within the Asia and Pacific region and 19 nonregional members from Europe and North America.³

ADB's governance structure consists of a Board of Governors, a Board of Directors (BOD, the Board), the President, and the Management team.⁴

Figure 1 illustrates ADB's current functional and organizational structure. Governance of climate-related issues takes place at various levels throughout ADB, with ultimate responsibility resting with its Board of Governors, BOD, and President.

Board Oversight of Climate-Related Risks and Opportunities

Role of the Board of Governors

The Board of Governors is ADB's highest policymaking body and comprises one representative from each member.⁵ The ADB Charter vests all the powers of the bank in the Board of Governors which, in turn, has delegated some of these powers to the BOD.

ADB's governors recognize that addressing climate change is one of the biggest challenges the Asia and Pacific region faces, as illustrated by rapidly growing greenhouse gas (GHG) emissions, increasing risks and impacts from climate change and disasters, as well as accelerating environmental degradation.⁶ Since 2012, reflecting this increasing focus of the Board of Governors on climate change, discussion on this topic has been on the agenda of Annual Meetings.⁷

² ADB. 1966. *Agreement Establishing the Asian Development Bank*. Manila.

³ ADB. 2022. *Asian Development Bank Sustainability Report 2022 Part II: Detailed Global Reporting Initiative Content Index*. Manila.

⁴ ADB. 2022. *Asian Development Bank Sustainability Report 2022 Part I: Highlights*. Manila.

⁵ Footnote 2, p. 2.

⁶ ADB. 2019. *Strategy 2030 Operational Plan for Priority 3: Tackling Climate Change, Building Climate and Disaster Resilience, and Enhancing Environmental Sustainability, 2019–2024*. Manila.

⁷ ADB. 2012. *Highlights from the 2012 Annual Meeting Knowledge Sharing and Partnership Event*. Manila; ADB. 2019. *52nd ADB Annual Meeting Prosperity through Unity: Highlights*. Manila; ADB. 2021. *54th Annual Meeting Climate Change and Sovereign Risk*.

Role of the Board of Directors

The BOD comprises 12 members elected by the Board of Governors, with 8 directors elected by members from the Asia and Pacific region, and 4 elected by members from outside the region (e.g., Europe and North America). The directors are elected for a 2-year term and may be reelected. The BOD is responsible for the overall direction of ADB's general operations. The BOD's work includes but is not limited to (i) reviewing the economic, social, and environmental impacts of ADB's operations prior to approval of projects and policies; (ii) approving all loans, guarantees, and equity investments;⁸ (iii) endorsing all policies; (iv) reviewing the work of the accountability mechanism and complaints raised with the Compliance Review Panel; and (v) reviewing the performance of ADB's administration and corporate management.

Part of the BOD's work includes exercising oversight of ADB's climate-related issues, including defining the bank's strategies and policies with respect to climate change. The BOD achieves this through various climate-related frameworks, policies, and committees:

- The BOD endorsed ADB's Climate Change Operational Framework 2017–2030 (CCOF2030), which was approved by the President in 2017. Given the central role of integrating climate action in achieving ADB's Strategy 2030 objectives, this framework provides guidance across all ADB sectors and thematic groups to operationalize the strategy.⁹ It provides ADB with a framework for enhancing resilience and strengthening climate action in ADB's operations and business processes. It outlines actions and updates institutional measures designed to help ADB meet the climate needs of its DMCs up to 2030. The CCOF2030 aligns with ADB's elevated ambition to provide a cumulative \$100 billion of ADB's own resources in climate change financing by 2030.¹⁰
- The BOD approved the Safeguard Policy Statement (SPS) in 2009, which applies to all ADB investment projects. The SPS aims to promote the sustainability of project outcomes and protect the environment and people by (i) avoiding, where possible, the adverse impacts of projects on the environment and affected people; (ii) minimizing, mitigating, and/or compensating for adverse project impacts on the environment and affected people when avoidance is not possible; and (iii) helping borrowers (clients) strengthen their safeguard systems and develop the capacity to manage environmental and social risks. The SPS process ensures that climate change is considered as part of project development and focuses on environmental impact management and reduction. For example, pollution prevention and control technologies and practices consistent with international good practices should be applied during all phases of the project. In addition, borrowers (clients) should promote the reduction of GHG emissions in a manner appropriate to the nature and scale of the project, and GHG quantification and monitoring should be conducted annually. Also, borrowers (clients) must evaluate the technical and financial feasibility of GHG emission reduction and offsetting options during project design and operation.¹¹

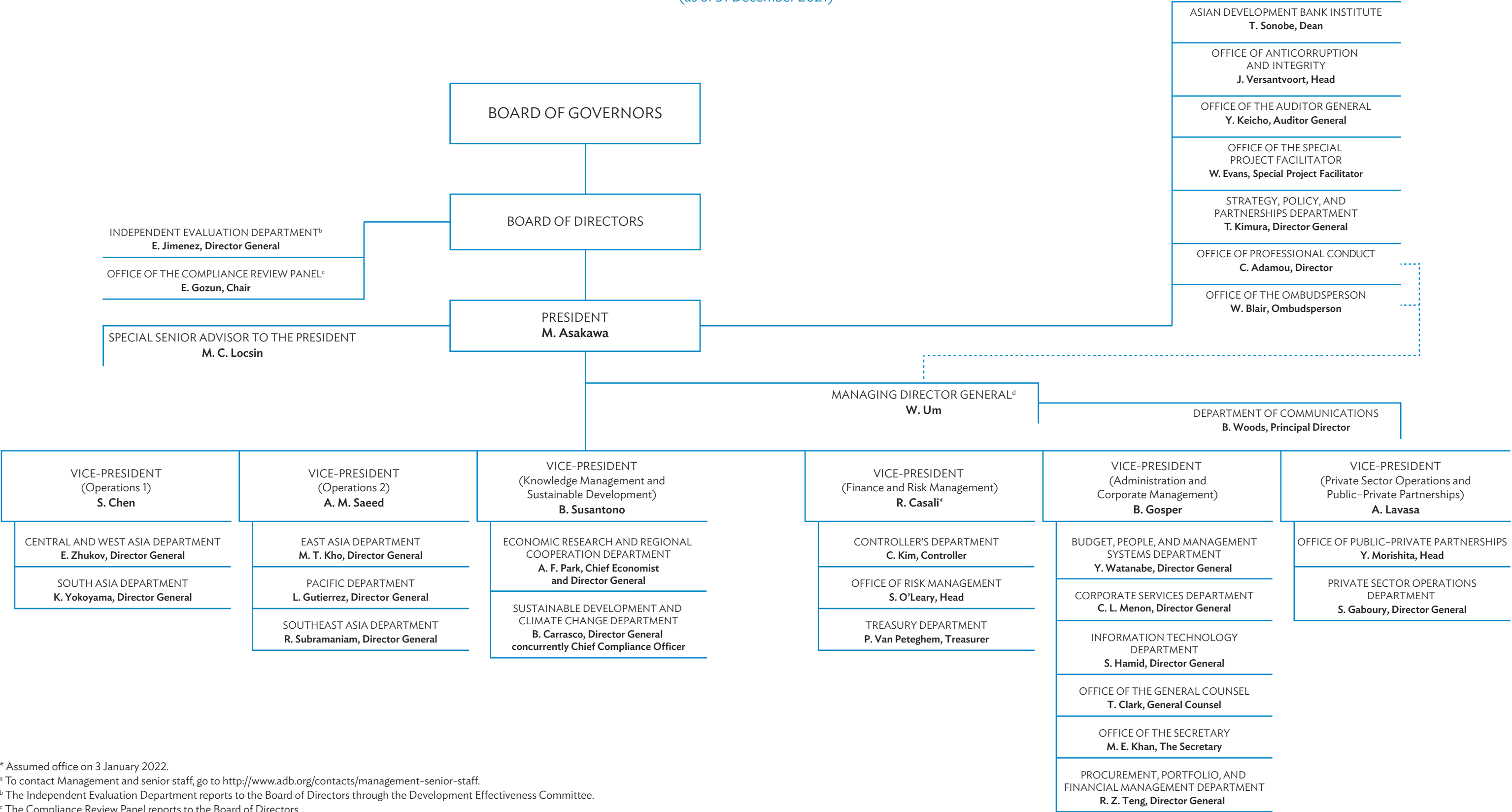
⁸ While approval powers are generally not delegated by the BOD, the BOD approved the Faster Approach to Small Nonsovereign Transactions (FAST) framework in March 2015. The FAST mechanism aims to improve ADB's operational efficiency for smaller private sector transactions that produce significant development impact, but come with higher upfront risks and costs. Under the framework, the Board authorizes the President to approve qualifying transactions in accordance with predefined Board-approved eligibility criteria.

⁹ ADB. 2017. *Climate Change Operational Framework 2017–2030*. Manila.

¹⁰ ADB. 2021. *ADB Commits to Full Alignment with Paris Agreement*. Manila.

¹¹ ADB. 2009. *Safeguard Policy Statement*. Manila.

Figure 1: ADB's Functional and Organizational Chart
(as of 31 December 2021)



* Assumed office on 3 January 2022.
^a To contact Management and senior staff, go to <http://www.adb.org/contacts/management-senior-staff>.
^b The Independent Evaluation Department reports to the Board of Directors through the Development Effectiveness Committee.
^c The Compliance Review Panel reports to the Board of Directors.
^d The Managing Director General provides support to the President in their oversight of the Office of Professional Conduct and the Office of the Ombudsperson.
Source: Asian Development Bank.

- The BOD annually reviews the *Development Effectiveness Review (DEfR)*, which is a flagship report of ADB's performance against corporate priorities and targets.¹² The report includes performance against climate change metrics such as GHG emission reductions, indicators such as the number of people with strengthened climate and disaster resilience and number of people experiencing strengthened environmental sustainability, and ADB's climate finance targets. (For more information, please refer to the Metrics and Targets section of this report). The report enables ADB to spot and analyze trends in corporate effectiveness, identify underlying issues, and develop actions to improve. The findings of the DEfR exercise are used to guide ADB's strategic and operational directions and resource planning through the President's planning directions and the corporate work program and budget framework (WPBF) process.

The BOD has two committees to assist with its work as it relates to the governance over climate-related matters: the Audit and Risk Committee and the Development Effectiveness Committee.¹³ Table 1 provides information about the purpose and meeting frequency of these two Board committees.

Table 1: ADB's Board Committees

Board Committee	Purpose	Meeting Frequency
Audit and Risk Committee	Assists the BOD in overseeing ADB's finances, accounting, internal control and risk management, anticorruption, and integrity, and how these are being managed and how accountabilities are being enforced. This committee reviews and discusses assessment of ADB's risk exposure, including to climate change. The Office of Risk Management (QRM) reports to the committee through the Quarterly Risk Management report, which has included an update on ADB's implementation of the TCFD's recommendations since Q3 2021.	On average, 14 meetings a year.
Development Effectiveness Committee	Assists the BOD in ensuring that ADB's programs and activities are achieving desired development effectiveness, progress on climate finance targets, and climate-related operational metrics as outlined in the <i>Development Effectiveness Review</i> . The committee focuses its attention on ADB's operations evaluation programs and activities results. In 2021, it reviewed the independent thematic evaluation of ADB Support for Action on Climate Change 2011–2020, prepared by the Independent Evaluation Department.*	On average, 10 meetings a year.

ADB = Asian Development Bank, BOD = Board of Directors, IED = Independent Evaluation Department, Q3 = third quarter, TCFD = Task Force on Climate-Related Financial Disclosures.

* ADB. 2021. *ADB Support for Action on Climate Change, 2011–2020*. Manila. The IED independently and systematically evaluates the policies, strategies, operations, and special concerns of ADB relating to organizational and operational effectiveness. It contributes to development effectiveness by providing feedback on performance and through evaluation lessons. Since 2004, it has reported to the BOD through the Board's Development Effectiveness Committee.

Source: Asian Development Bank.

Additional committees, such as the Budget Review Committee and the Human Resources Committee, also support the work of the BOD, particularly as it relates to budget and human resources implications of the bank's agenda on climate change.

¹² ADB. 2022. *2021 Development Effectiveness Review*. Manila.

¹³ ADB. *How We're Organized*.

Management Responsibilities in Assessing and Managing Climate-Related Risks and Opportunities

Role of Management and Departments

ADB's Management team is led by a President elected by the Board of Governors and comprises six vice-presidents and a managing director general (MDG). This team supervises the work of ADB's operations, finance and risk management, administration and corporate management, and knowledge and sustainable development departments under the direction of the BOD.

The President is the legal representative of ADB and is responsible for managing staff and conducting ADB's operations under the direction of the BOD. As such, the President's responsibilities cover, among other things, all matters relating to climate change, including at the corporate level and at the project level. In 2022, ADB created and filled a new role, special senior advisor for climate change, sitting within the Office of the President.

Additionally, the following departments and offices have been contributing to climate-related activities through the following ways:

- The **Sustainable Development and Climate Change Department (SDCC)** is the focal point for sector and thematic work related to ADB operations. The department delivers an enhanced program of assistance to ADB and DMCs through strategic guidance, technical support, and knowledge leadership to address both the causes and consequences of climate change and disaster risks. SDCC also manages trust funds with resources dedicated to climate activities and collaborates on producing knowledge products, including technical reports, working papers, and other publications that are useful for ADB operations in scaling-up climate, disaster risk management, environment, and water–food–energy nexus initiatives. The department also houses the Safeguards Division and SDCC's director general is concurrently the chief compliance officer responsible for advising Management and operations departments on safeguard compliance, which is monitored throughout the project cycle.
- The **Office of Risk Management (ORM)** is responsible for ensuring that ADB's goals are sustainably met via: (i) safeguarding ADB's AAA credit rating, (ii) advising the Board and Management on risk issues, and (iii) promoting a strong risk culture.¹⁴ ORM monitors the credit profile of existing transactions in the operations portfolio, conducts risk assessments of new nonsovereign transactions, and assumes responsibility for resolving distressed transactions when necessary. It also monitors market and credit risks in treasury operations, such as the credit quality of counterparties, interest rate risk, and foreign exchange risk.¹⁵ In addition, it has developed an operational risk management framework for the institution. ORM has been scaling up its analysis and monitoring of ADB's exposure to climate-related risks and opportunities since 2021 (see Risk Management section).

¹⁴ Risk culture reflects the shared values, goals, practices, and principles ingrained in an organization's governance framework to ensure common understanding of risk issues.

¹⁵ ADB. 2022. *ADB Annual Report 2021*. Manila.

- **Operations departments**, which are the five regional departments and the Private Sector Operations Department (PSOD), lead interactions with DMC governments and the private sector to influence the design of projects, operations, and strategic plans. They play a key role in mainstreaming climate change into business operations and in supporting the achievement of climate commitments in DMCs. The Climate Finance Team was established in 2022, under PSOD, to fully support climate finance-related activities, including support to origination teams in identifying mitigation and adaptation opportunities. The team will also work toward ensuring alignment with the goals of the Paris Agreement for ADB's private sector operations and will provide support for GHG emissions accounting.¹⁶
- The **Treasury Department (TD)** and SDCC mobilize and manage ADB green and blue bonds to support low-carbon and climate- and disaster-resilient projects. TD applies fossil fuel and carbon emissions exclusion filters to its externally managed corporate portfolios' mandate to actively limit its exposure to carbon-intensive sectors.
- The **Office of the General Counsel (OGC)** assists DMCs in assessing and developing their legal frameworks to encourage climate action and disaster resilience, and to enable climate investments.
- The **Economic Research and Regional Cooperation Department (ERCD)** leads ADB's efforts on the climate research agenda to promote green growth and finance through flagship publications such as the *Asian Development Outlook*, *Asia Bond Monitor*, and other technical studies. Additionally, ERCD provides technical assistance to promote the issuance of green corporate bonds in the ASEAN+3 region and provides direction and advice on the use of shadow carbon pricing.¹⁷
- The **Strategy, Policy, and Partnerships Department (SPD)** leads the formulation of ADB's long-term (Strategy 2030) and medium-term (WPBF) strategies, the corporate results framework used to monitor strategy implementation, and annual planning directions and other strategic guidance.

Management Committees

ADB has three management committees chaired by vice-presidents that assist with its work related to monitoring climate-related risks. These are the Risk Committee, Investment Committee, and Management Review Meeting. Table 2 provides information about the purpose of these committees.

Internal and External Cooperation

To support the TCFD Recommendations' implementation, in 2021, ADB established the Interdepartmental Working Group (IWG) on TCFD, jointly led by ORM and SDCC with support from 17 departments and offices across the bank. IWG activities are carried out within a formal establishment of two committees. The TCFD Project Steering Committee (PSC) is chaired by the head of ORM with director general concurrently chief compliance officer, SDCC, as alternate chair.¹⁸ The TCFD Project Management Committee is chaired by the chief of Climate

¹⁶ ADB. 2021. *ADB Commits to Full Alignment with Paris Agreement*. Manila.

¹⁷ ASEAN+3 includes the 10 members of the Association of Southeast Asian Nations (Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Viet Nam), the People's Republic of China, Japan, and the Republic of Korea.

¹⁸ The PSC comprises director general, SPD; controller; directors, RMPA, SDCC; senior advisor to the vice-president (Finance and Risk Management); or their representatives; and staff from ORM, SDCC, SPD, and the Controller's Department. Its responsibilities are to ensure effective cross-departmental relationships, to monitor the TCFD project status, and to address escalated issues and risks.

Table 2: ADB's Management Committees

Risk Committee Meeting	Monitors and discusses risks, including climate risks, recommends proposed risk policies and actions to the President, and provides senior management oversight on risk policy matters to ensure that the Asian Development Bank (ADB) maintains its superior credit standing. The Office of Risk Management reports to the Risk Committee on the development of the risks in ADB's operations through the Quarterly Risk Management (QRM) report. The Risk Committee endorses the QRM report prior to submission to the Audit and Risk Committee.
Chaired by the Vice-President for Finance and Risk Management	
Investment Committee Meeting	Monitors and oversees risks in the nonsovereign portfolio and reviews all new nonsovereign transactions for creditworthiness and pricing. Climate risks are captured in the nonsovereign credit risk rating process, and therefore, may also be reviewed by the committee.
Chaired by the Vice-President for Private Sector Operations and Public-Private Partnership	
Management Review Meeting	Reviews the status of complex sovereign operations projects preparation, implementation readiness, quality of documentation, due diligence, and alignment with ADB's policies.
Chaired by the Vice-President for Operations 1 or for Operations 2	

Source: Asian Development Bank.

Change and Disaster Risk Management Thematic Group and concurrently director of Climate Change and Disaster Risk Management Division (SDCD) in SDCC with the director, Risk Policy and Architecture Division (RMPA) of ORM as alternate chair.¹⁹ The IWG was first tasked with determining organizational responsibilities and resource needs for operationalization of ADB's official support to TCFD and of the publication of a pilot ADB TCFD report. The IWG now leads ADB's reporting in line with the TCFD Recommendations.

Several thematic groups sitting within SDCC focus on addressing development issues and challenges that cut across sectors. Each of these groups plays a role in contributing to the mainstreaming of climate change and disaster resilience through its support to ADB operations and other departments. These thematic groups cover the themes of agriculture, climate change and disaster risk management, digital technology, environment, gender, governance, public-private partnerships, regional cooperation and integration, and social development. Other units within SDCC cover other relevant themes such as collaboration with civil society organizations and fragile and conflict-affected situations.

ADB cooperates with other MDBs and international organizations on climate-related issues, including TCFD reporting and alignment with the Paris Agreement goals. Examples of external collaboration include participation in MDBs' working groups and joint publications such as the *Climate Risk Country Profile* series developed with the World Bank.²⁰ ADB has also contributed to the broader development of climate risk management in the financial sector by acting as an

¹⁹ The PMC's role is to provide primary oversight over the management and execution of the project, to guide project managers, and to implement governance decisions made by the PSC.

²⁰ These profiles synthesize the most relevant data and information on climate change, disaster risk reduction, and adaptation actions and policies at the country level. The profiles are designed as a quick reference source for development practitioners to better integrate climate resilience in development planning and policymaking. <https://www.adb.org/publications/series/climate-risk-country-profiles>.

observer in the Central Banks and Supervisors Network for Greening the Financial System (NGFS) since 2020.²¹ ADB is also part of the Sustainable Finance Working Group (SFWG) of the Institute of International Finance (IIF).²²

Future Enhancements

ADB has recently established a high-level leadership group for climate action, the Climate Action Coordination Committee (CACC). Chaired by the MDG and convened every quarter, the committee is expected to have oversight responsibilities for the planning, implementation, monitoring, and coordination of ADB's actions to meet climate goals.²³

In the years ahead, ADB's governance of climate-related issues will continue to expand. In particular, ADB will focus on improving BOD oversight through increased reporting on climate-related issues to the BOD, delivering training sessions that build capacity and know-how of the BOD and Management, and tracking actions and results from BOD decisions.

ADB will continue to enhance its identification and management of climate-related risks and opportunities. This includes the proposed update to ADB's SPS. As part of the process, a comparison with other MDBs' policies, including coverage of climate change, is being undertaken to ensure that the revised SPS is aligned with other MDBs and complements ADB's existing policies and strategies. The updated SPS will be submitted for the Board's approval in 2023. The IWG will spearhead additional efforts under an expanded mandate to support the implementation of the TCFD Recommendations, with accountability to the CACC.

²¹ ADB. 2020. *ADB Becomes Observer for the Network for Greening the Financial System*. Manila.

²² The SFWG brings together key stakeholders to identify and promote capital markets solutions that support the development and growth of sustainable finance.

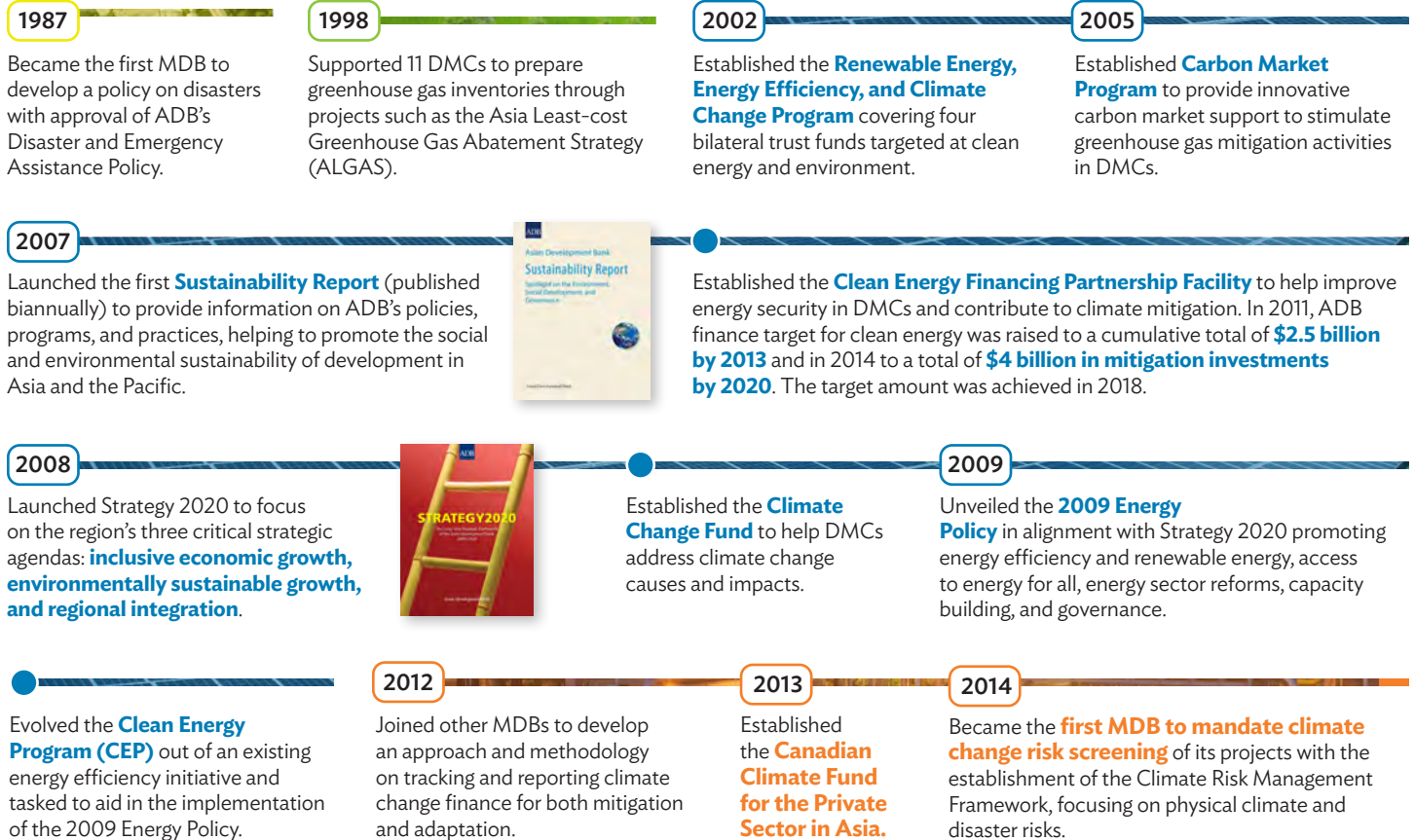
²³ The committee will have the following workstreams, outputs, and milestones: (i) achieving medium- and long-term commitments for climate action; (ii) preparing the Climate Change Action Plan; (iii) identifying adequate technical assistance pipeline; (iv) improving business process with respect to climate action and alignment to the Paris Agreement; (v) supporting Just Transition; (vi) supporting climate adaptation and resilience; (vii) implementing TCFD Recommendations; (viii) recruiting relevant staff to support climate action; and (ix) undertaking strategic mobilization of partner resources to support climate action.

III. STRATEGY

ADB's Evolution on Climate Action

Together with its commitment to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, ADB has long supported environmental sustainability in its operations and institutional practices. As Asia and the Pacific's climate bank, ADB plays a leading role in supporting its DMCs with their efforts to mitigate GHG emissions, to enhance climate change adaptation and resilience, and to meet their nationally determined contribution (NDC) targets. ADB prioritizes the sustainable development and needs of its DMCs through all of its operations and strategies.

Below is a summary of selected ADB initiatives in relation to climate action:



2015

Became the first MDB to be accredited by the Green Climate Fund.

Published **ADB's Green Bond Framework** and issued ADB's inaugural green bond.

Created the **Climate Change and Disaster Risk Management Division** and renamed the Regional and Sustainable Development Department (RSDD) as the **Sustainable Development and Climate Change Department (SDCC)**.

Committed to increase climate investments up to **\$6 billion** annually by 2020

2017

Established the **Asia-Pacific Climate Finance Fund (ACliff)**

ACliff

Established the **Canadian Climate Fund for the Private Sector in Asia II**

Announced intent to align financial flows with the objectives of the Paris Agreement together with other MDBs and the International Development Finance Club (IDFC).

Implemented a shadow carbon price under ADB's Guidelines for the Economic Analysis of Projects.

2018

Launched Strategy 2030, which is closely aligned with Sustainable Development Goals (SDGs), the Financing for Development Agenda, the Paris Agreement on climate change, the Sendai Framework for Disaster Risk Reduction, and the G20 agenda for quality infrastructure, and includes a specific Operational Priority 3 that focuses on climate change and environmental sustainability.



Committed to deliver **\$80 billion** in cumulative climate financing from own resources by 2030.

Launched **Action Plan for Healthy Oceans and Sustainable Blue Economies** to invest in healthy oceans.



Established the **Association of Southeast Asian Nations (ASEAN) Catalytic Green Finance Facility** with ASEAN member governments to help economies prepare and finance green infrastructure projects.



Met 2015 commitment to increase climate investments up to **\$6 billion annually by 2020**.

2020

Launched the first joint report on financing SDGs together with MDBs and the International Monetary Fund (IMF).



Launched **ADB Ventures** to finance early-stage companies offering bold technology solutions that generate climate mitigation and adaptation impact.



2021

Raised its ambition to deliver **\$100 billion** in cumulative climate financing from own resources by 2030.

Established an **Interdepartmental Working Group** to implement the TCFD Recommendations.

Became a TCFD supporter in November.



Published the **Revised Disaster and Emergency Assistance Policy (RDEAP)**, which seeks to support DMCs to strengthen their resilience to disasters and emergencies.

Approved the **2021 Energy Policy**, which supports the low-carbon transition in Asia and the Pacific, and aligns with operational priorities of Strategy 2030 and the goals of the Paris Agreement.

Expanded the green bond framework to include **blue bonds** for ocean health investments. Issued first dual-tranche blue bonds denominated in Australian and New Zealand dollars to finance ocean-related projects in Asia and the Pacific.

Joined other MDBs in committing to a just transition that supports DMCs to move toward net-zero emission economies.

Launched the **Southeast Asia Energy Transition Mechanism (ETM)** in partnership with the governments of Indonesia and the Philippines that will accelerate their transition from coal to clean energy.

Launched the **Community Resilience Partnership Program (CRPP)** in partnership with the Government of the United Kingdom, the Nordic Development Fund, and the Agence Française de Développement to strengthen climate resilience for local communities, including for women and girls, by scaling up climate adaptation measures in Asia and the Pacific.

2022

Launched a new carbon fund, the **Climate Action Catalyst Fund (CACF)** to help DMCs to meet their NDC targets and raise ambition over time.

Launched the **ASEAN Green Recovery Platform** managed by ADB announcing **\$665 million** in funding through partnerships with Green Climate Fund, Italian state lender Cassa di Risparmio di Roma, Government of the United Kingdom, and the European Union to support low-carbon and climate-resilient infrastructure projects in Southeast Asia and accelerate the region's recovery from the COVID-19.

Appointed special senior advisor to the President on climate change.

Introduced fossil fuel and carbon emissions filter criteria to screen corporate security investments for externally managed corporate portfolios' mandate.

Established the **Climate Action Coordination Committee (CACC)** chaired by the MDG.

Published inaugural **TCFD report**.



Strategies Related to Climate Change

ADB continues to develop strategies that identify risks and opportunities related to climate change. ADB considers these strategies over various time horizons as climate-related risks and opportunities can manifest themselves differently across the short, medium, and long term. The horizons and their operationalization are defined in Table 3.

Table 3: Time Horizons of Strategies' Operationalization

Time Horizon	Number of Years	Operationalization
Short term	≤3	Work Program and Budget Framework
Medium term	6	2019–2024 Corporate Results Framework
Long term	10+	Strategy 2030

Source: Asian Development Bank.

In this context, ADB has launched the following organizational strategies and operational approaches in relation to climate change:

Organizational Strategies

1. Strategy 2030

In July 2018, ADB transitioned to a new long-term strategy, Strategy 2030, with the goal of achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific. To achieve Strategy 2030's vision, ADB is focusing on seven operational priorities (Figure 2). While climate considerations are embedded throughout Strategy 2030, Operational Priority 3 explicitly addresses climate, as it focuses on tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability.

2. Corporate Results Framework, 2019–2024

In August 2019, ADB approved a new Corporate Results Framework for 2019–2024 to ensure that ADB's actions and investments align with the operational priorities. In conjunction with the framework, ADB has set an \$80 billion target in cumulative climate finance by 2030 with 75% of the number of committed sovereign and nonsovereign operations to support climate change mitigation and adaptation by 2030.²⁴ In October 2021, ADB announced its elevated ambition to deliver climate financing to its DMCs amounting to \$100 billion from 2019 to 2030. The additional finance will provide scaled-up support for the climate agenda in five main areas, including climate mitigation; transformative adaptation projects focusing on resilience outcomes; climate finance in ADB's private sector operations; support for a green, resilient, and inclusive recovery from the coronavirus disease (COVID-19); and support for policy and institutional reforms in DMCs through policy- and results-based lending for enhanced climate resilience and climate mitigation.

²⁴ Climate finance refers to the financial resources (from own accounts and ADB-managed external resources) committed by ADB to development operations and components thereof, which enable activities that mitigate climate change and support adaptation to climate change. This definition is based on the 2020 Joint Report on Multilateral Development Banks' Climate Finance.

Figure 2: Strategy 2030's Seven Operational Priorities



Source: Asian Development Bank.

ADB will work toward reaching this cumulative ambition, where \$66 billion is expected for climate mitigation and \$34 billion for climate adaptation, drawing on better project design, stronger upstream engagement, and use of a broader range of financing instruments.

Operational Approaches

1. Climate Change Operational Framework (CCOF2030) 2017–2030

CCOF2030 outlines the plan for enhancing resilience and strengthening climate action in ADB's operations and business processes in the long term. The intent is to make finance flows consistent with a pathway toward low carbon transition and climate-resilient development. Further details of the framework can be found in Figure 3.

2. Work Program and Budget Framework (WPBF) 2022–2024

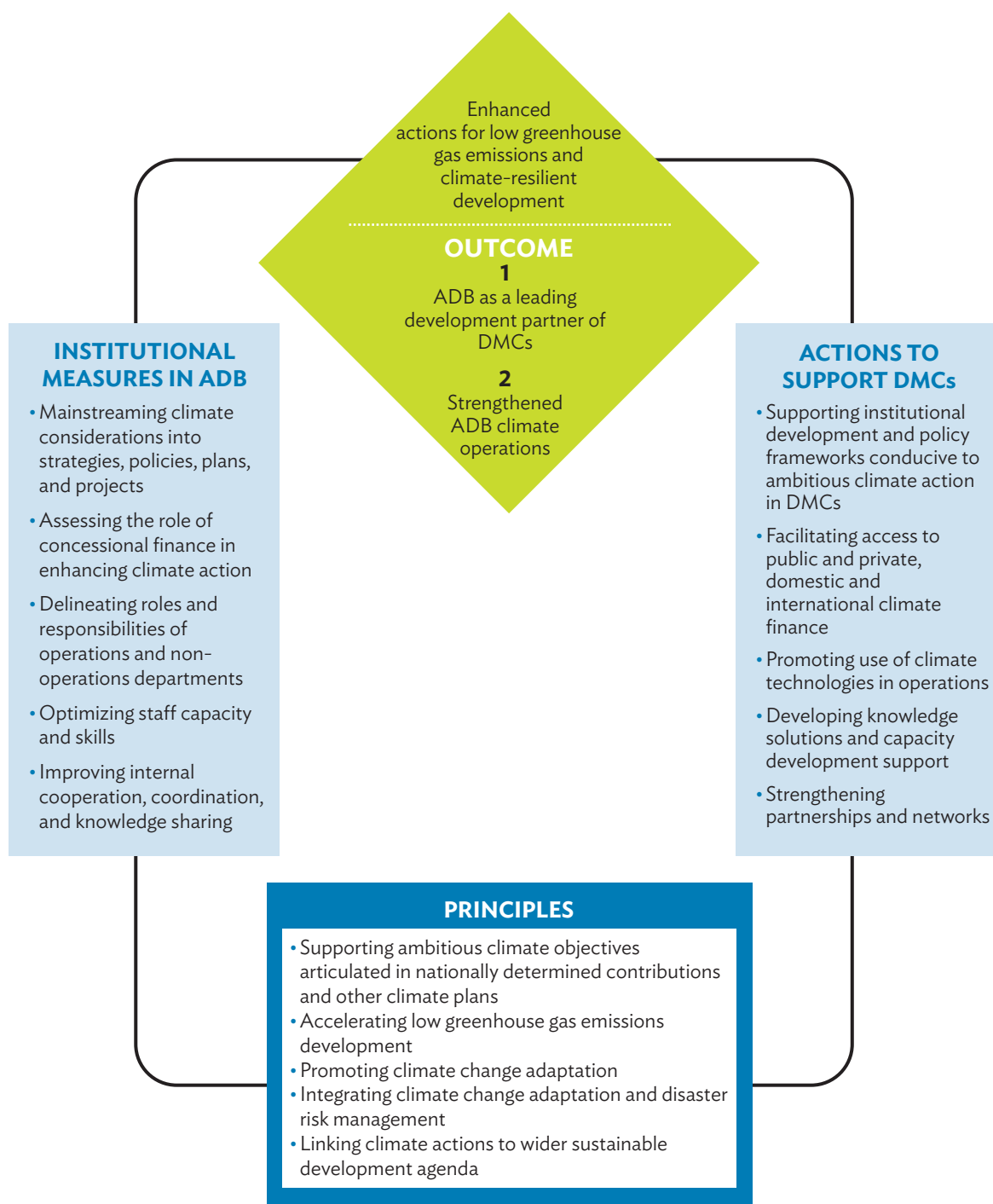
As outlined in its Strategy 2030 Operational Priority 3, ADB will invest in more projects with climate adaptation as their primary purpose and promote the strong integration of the environmental, social, institutional, and financial aspects of resilience in its investments. This is reflected in the WPBF where ADB seeks to double its annual average adaptation and resilience financing during 2021–2024 compared to 2015–2018, which will result in cumulative financing of \$9 billion from 2019 to 2024.

3. Operational Plan for Priority 3

In 2019, ADB approved the Operational Plan for Priority 3, which outlines the strategic priorities to achieve its Strategy 2030 vision. The priorities include:

- (i) climate change mitigation increased by supporting DMCs in implementing their NDCs and reducing greenhouse gas (GHG) emissions through projects and programs in areas such as clean energy, sustainable transport and urban development, and sustainable agriculture and land use management;

Figure 3: ADB's Climate Change Operational Framework, 2017–2030



ADB = Asian Development Bank, DMC = developing member country.

Source: Asian Development Bank.

- (ii) climate and disaster resilience built by systematically assessing and addressing climate and disaster risk and supporting holistic development solutions to manage such risks; and
- (iii) environmental sustainability enhanced through natural capital management and sustainable land, forest, and water management.

4. Operational Plan for Private Sector Operations 2019–2024

In 2019, ADB approved the Operational Plan for Private Sector Operations to fully align with Strategy 2030, including Operational Priority 3. The private sector operations will be a core contributor to tackling climate change and boosting environmental sustainability, with a focus on supporting new technologies, financing climate adaptations, and scaling-up best practices. PSOD will pursue projects for renewable energy, energy efficiency, waste to energy, battery storage, other emerging technologies, and climate adaptation.

5. Energy Policy

In 2021, the Board approved the updated energy policy to support the low-carbon transition in Asia and the Pacific to align with the operational priorities of Strategy 2030 and the goals of the Paris Agreement.²⁵ The energy policy principles will be implemented in each DMC through the Country Partnership Strategy (CPS), and ADB will finance projects that focus on renewable and low-carbon solutions. ADB will offer limited and conditional support to natural gas projects under some conditions. Natural gas can offer a lower-carbon alternative to more polluting fuels and provide flexible resources to allow for more renewable energy to be integrated into the grid. These projects involving natural gas must meet all of the following conditions:

- (i) No other low-carbon or zero-carbon technology, or combination thereof, can provide the same service at an equivalent or lower cost at a comparable scale.
- (ii) The project's operating lifetime is consistent with the carbon stabilization trajectory aiming to achieve carbon neutrality by about 2050, and by a time set by DMCs that is consistent with their NDCs. The project also avoids long-term lock-in into carbon infrastructure and the associated risk of creating stranded assets.
- (iii) The project is economically viable considering the social cost of carbon and an operating lifetime consistent with condition (ii).

Additionally, ADB will uphold its current practice of not financing new coal-based capacity for power and heat.

6. Country Partnership Strategy (CPS)

The CPS process is participatory and developed in conjunction with government and becomes ADB's platform for designing operations at the country level. As a trusted development partner, ADB adds value to its DMCs by combining finance, knowledge, and partnership, and seeks to promote dialogue and collaboration among diverse partners and stakeholders, including government officials, development partners, and civil society organizations.

ADB has been promoting and supporting its DMCs in environmental sustainability, climate change, and disaster risk management over the last 3 decades.²⁶ ADB is strengthening internal processes and systems related to country programming and project cycle to ensure development

²⁵ ADB. 2021. *Energy Policy: Supporting Low-Carbon Transition in Asia and the Pacific*. Manila. pp. 8, 27.

²⁶ Currently, ADB has operations in 40 of its DMCs.

projects selected for ADB financing are identified based on a robust understanding of the climate and disaster risks faced.²⁷ The projects are designed to intentionally steer development outcomes in a resilient direction by including outputs that explicitly reduce vulnerability to climate change over the long term and build resilience of the wider system in which the project is located. ADB will also support the identification, design, and financing of adaptation projects (i.e., projects that are primarily motivated by the need to reduce the adverse impacts of current and future expected climate risk and/or address barriers to adaptation).

To successfully operationalize this strengthened approach, ADB is increasingly engaged with government during CPS and country programming processes to identify adaptation priorities that can inform ADB's pipeline; enhance capacity of sovereign and nonsovereign clients to mainstream climate adaptation and resilience considerations in planning prioritization and implementation of investment projects based on robust multihazard climate and disaster risk assessment; promote adoption of innovative climate adaptation measures, especially nature-based solutions; and support borrowers to access concessional climate finance for scaling-up climate adaptation and resilience.

7. MDBs' Joint Approach on Climate Finance and Paris Alignment

Since 2012, ADB and other MDBs have developed a granular approach for tracking and reporting climate finance. The Joint Report on MDBs' Climate Finance is an annual collaborative report to make MDBs climate finance public and provide a clear explanation on the methodologies used to track and report climate finance. Each MDB discloses its individual and aggregate climate finance volumes for both climate mitigation and adaptation across its portfolio. Following a 2018 Joint Declaration by the MDBs to commit to work together in meeting the goals of the Paris Agreement, in July 2021, ADB announced its commitment to align 100% of its sovereign operations and 85% of its nonsovereign operations by 1 July 2023, and 100% of its nonsovereign operations by 1 July 2025.²⁸ The MDBs' efforts are further supported by the Joint Climate Statement made by ADB and other MDBs at the 26th Conference of Parties of the UN Climate Change Conference in Glasgow (COP26) in November 2021 to increase climate finance ambitions and private capital mobilized in support of mitigation and adaptation investments and to work with clients to develop plans to integrate the transition to a net-zero emissions and climate-resilient economy.²⁹

In addition, at the COP26, the MDBs made a Joint Statement on Nature highlighting the interconnectedness between global sustainable and economic development, climate change, resilience, and biodiversity. ADB and other MDBs have committed to mainstream nature into their analysis, advice, and investments. This includes agreeing on a common approach to identifying nature-positive investments as well as reviewing the financial and systemic risk of nature loss to current investments and their impact on nature. The MDBs have also committed to develop projects, business models, and/or financing instruments to support economic activity that seeks to reverse the drivers of nature loss.³⁰

²⁷ A country programming mission is undertaken by ADB, in consultation with key DMC stakeholders, to review progress on CPS implementation and to discuss potential adjustments, if required.

²⁸ ADB. 2018. *MDBs Announce Joint Framework to Combat Climate Change*. The aim is to limit the increase in global temperatures to well below 2°C, above pre-industrial levels and to pursue efforts toward limiting it to 1.5°C.

²⁹ UN Climate Change Conference (COP26). 2021. *MDB Joint Climate Statement*. Glasgow.

³⁰ UN Climate Change Conference (COP26). 2021. *MDB Joint Nature Statement*. Glasgow.

Climate-Related Opportunities

Under its mandate, ADB is committed to supporting its DMCs to invest in and build a low-carbon, climate-resilient future, helping them to prepare and to adapt to current and future climate change impacts while promoting sustainable development. ADB recognizes the impact of climate change on economies and people across Asia and the Pacific and that the poor and vulnerable segments of society are more exposed to such climate change risks. There is also an important realization that climate mitigation and adaptation and sustainable finance present opportunities to promote inclusive and risk-informed green growth, such as the design, construction, and operation of infrastructure based on the principles of sustainability, resilience, and a circular economy. ADB is pursuing a wide range of opportunities, including channeling finance into climate change activities, supporting climate action in DMCs, and issuing green and blue bonds, among others.

Climate Finance Ambition

ADB channels donor funded grants or concessional financing for climate change activities through four main vehicles:³¹

- **Trust funds dedicated for climate change activities.** ADB utilizes trust funds to enable development partners to channel grants and loans for a group of DMCs, focus areas, or programs, such as those dedicated to climate activities. In 2021, ADB had 11 active funds and facilities that are purely dedicated to climate change activities. Examples of trust funds can be found in Box 1.³²
- **Project-specific cofinancing for climate projects.** ADB actively works with bilaterals, other partners, and global climate funds, such as the Green Climate Fund (GCF), Climate Investment Funds (CIF), and Global Environment Facility (GEF), to seek cofinancing of climate projects that support ADB DMCs. In early 2015, ADB was among the first entities accredited by the GCF; since which, the GCF has approved over \$900 million to support 12 ADB projects.
- **ADB Special Funds dedicated to climate change activities.** The most recent replenishment of one of ADB's Special Funds, the Asian Development Fund (ADF) 13 for the period from 2021 to 2024, saw the inclusion of a climate adaptation and disaster risk reduction thematic sub-window for the first time. The sub-window serves to incentivize DMC governments to consider ambitious projects that significantly support climate adaptation and disaster risk reduction. Established in May 2008, the Climate Change Fund (CCF) is a further example of an ADB Special Fund that was created to facilitate greater climate investments in DMCs by supporting low-carbon and climate-resilient development. The fund focuses on adaptation, clean energy, sustainable transport, low-carbon urban development, reduced emissions from deforestation and degradation (REDD+), and improved land use management.³³

³¹ A full list of funds and financing facilities administered by ADB can be found here: <https://www.adb.org/what-we-do/funds>.

³² Further details of ADB's trust funds, including global and special funds, can be found in the ADB Trust Fund Report 2020: <https://www.adb.org/documents/adb-trust-funds-report-2020>.

³³ As of 2021, the CCF has received a total of \$98 million ADB financing and \$92 million of the total fund resources has been allocated to 149 projects: 46 on clean energy development, 90 on adaptation, 12 on REDD+ and land use and 1 on climate finance readiness.

- **Other funding vehicles** that are not dedicated specifically to climate change, but that may support climate change activities, such as the Technical Assistance Special Fund (TASF) or the regular support of the ADF.

Box 1: Examples of Trust Funds

Community Resilience Partnership Program

At the COP26, the Asian Development Bank (ADB) launched the Community Resilience Partnership Program (CRPP), which aims to strengthen climate resilience for local communities, including women and girls, by scaling-up climate adaptation measures in Asia and the Pacific.^a The CRPP will be operationalized through a Financing Partnership Facility, where investments will explicitly target the nexus between climate change, poverty, and gender. In doing so, the CRPP aims to scale up investments in climate adaptation and to support ADB's developing member countries to meet their commitments to the Paris Agreement, the Sendai Framework for Disaster Risk Reduction, and the Sustainable Development Goals.

Carbon Funds

Through its carbon funds, ADB incentivizes investments in low carbon technologies through bilateral and international carbon markets. ADB has a long-standing engagement with carbon markets, mobilizing carbon finance in Asia and the Pacific through the Asia Pacific Carbon Fund, Future Carbon Fund, and the Japan Fund for the Joint Crediting Mechanism. In addition, ADB has launched the Climate Action Catalyst Fund at the COP26, which is one of the first international carbon funds under the Paris Agreement.

^a ADB. 2021. *ADB Launches Program to Strengthen Community Resilience in Asia and Pacific*. News Release. 8 November.

Source: Asian Development Bank.

Supporting Climate Action in ADB Developing Member Countries

Recognizing the unprecedented scale of societal and economic transformations required by many DMCs to combat climate change and to meet their NDCs, ADB is working to ensure it remains responsive to the needs of DMCs to enable a just transition. ADB has undertaken preliminary research and consultations to assess and better understand issues, opportunities, and challenges related to just transition confronting the DMCs. Guided by this, as well as continuing discussions, ADB is mobilizing resources to establish a just transition platform to enable support to DMCs to ensure that the costs and benefits of a low-carbon and climate-resilient future are fairly distributed. The platform is envisioned to help DMCs ensure just transition is embedded in their climate strategies, policies, and plans aligned with their Paris Agreement commitments; identify innovative ways to finance just transition needs; and develop operational approaches ensuring just transition is integrated in ADB's operations, policies, and procedures. ADB has also established the NDC Advance platform to assist its DMCs in developing climate investment plans, mobilizing finance, building capacity, and providing knowledge and other support needed to implement their NDCs.

ADB is continually evolving its lending instruments, including the use of dedicated policy-based lending (PBL) programs to address climate change challenges, to meet the changing needs of its DMCs.³⁴ In 2022, ADB approved a new lending limit “ceiling” of up to \$18 billion in PBL for 3 years

³⁴ PBL is provided in the form of sovereign budget support or a sovereign guarantee to support policy reforms and development expenditure programs of a DMC.

from 2022 to 2024 to support climate action in its DMCs through a green, resilient, and inclusive recovery from the COVID-19 crisis. In May 2022, ADB approved a \$250-million policy-based loan to support the Philippines in adapting and mitigating climate change.

In 2021, ADB announced the launch of a new partnership in Southeast Asia to establish an Energy Transition Mechanism (ETM) to help accelerate the transition from coal to clean energy in a just and affordable manner.³⁵ ADB also announced an ETM partnership with the governments of Indonesia and the Philippines. ETM aligns with ADB's Strategy 2030 and supports Southeast Asian economies in tackling climate change by reducing their GHG emissions, enhancing energy sector governance and transparency, fostering opportunities for power system integration within the ASEAN, and supporting knowledge transfer among DMCs. ETM is a scalable, collaborative initiative developed in partnership with DMCs to leverage a market-based approach to accelerate the transition from fossil fuels to clean energy. The ETM leverages public and private investments to finance the retirement of coal power assets on an earlier schedule. To pilot the ETM, ADB will seek to retire 5–7 coal-fired power plants in the near term and support renewable energy generation. This initiative will help accelerate climate action, reduce energy costs, drive investment, and provide a scalable model to other parts of Asia and the world, which could drive significant reductions in global emissions.

ADB's Carbon Market Program has also been providing technical and capacity building support to enhance the capacity of its DMCs in utilizing carbon pricing and carbon market mechanisms through its Technical Support Facility and the Article 6 Support Facility.³⁶ The Technical Support Facility provides support on the Clean Development Mechanism under the Kyoto Protocol, domestic carbon pricing and emissions trading schemes, bilateral crediting mechanisms, and market-based approaches under Article 6 of the Paris Agreement.³⁷ A new technical assistance project is supporting participating DMCs to promote the life cycle management of fluorocarbons through technical and capacity building support. The Article 6 Support Facility aims to enhance DMCs' readiness to take advantage of the next generation of international carbon markets under Article 6 of the Paris Agreement. Through such support, ADB will enhance DMCs' ability to develop and take advantage of domestic, bilateral, and international carbon markets, and, where applicable, integrated markets to scale-up their efforts in achieving their NDCs and raising ambition over time.

ADB manages the ASEAN Catalytic Green Finance Facility (ACGF), under the ASEAN Infrastructure Fund, which is owned by the ASEAN member countries and ADB. The ACGF is a green financing vehicle that supports governments in Southeast Asia to prepare and finance infrastructure projects that promote environmental sustainability and contribute to climate change goals. It supports green finance to help bridge the investment gap, overcoming the barriers such as the high perceived risk and often large initial costs, to unlock private sector investment into green infrastructure projects. Launched in 2019, the ACGF focuses on projects that promote renewable energy, energy efficiency, sustainable urban transport, water supply and sanitation,

³⁵ ADB. 2021. *Launch of the Partnership for Energy Transition Mechanism*. Glasgow.

³⁶ ADB. 2007. *Implementation of the Technical Support Facility under the Carbon Market Initiative*. Manila.

³⁷ The Clean Development Mechanism, defined in Article 12 of the Kyoto Protocol, allows a country with an emission-reduction or emission-limitation commitment under the Kyoto Protocol to implement an emission-reduction project in developing economies. Such projects can earn saleable certified emission reduction (CER) credits, each equivalent to one ton of carbon dioxide (CO₂), which can be counted toward meeting Kyoto targets.

waste management, and climate-resilient agriculture, among other areas.³⁸ At COP26 in 2021, a Green Recovery Platform was launched in partnership with the Green Climate Fund, Italian state lender Cassa Depositi e Prestiti, Government of the United Kingdom, and the European Union, to support ACGF. It aims to support low-carbon and climate-resilient infrastructure projects in Southeast Asia and accelerate the region's recovery from COVID-19.³⁹ These new partnerships complement about \$1.4 billion in cofinancing already pledged to the ACGF, bringing total pledges of the facility to \$2 billion.⁴⁰

Green and Blue Bonds

ADB has a strategic role in providing support to both governments and the private sector in its DMCs in the development of local bond markets and sustainable finance. In 2021, ADB expanded its Green Bond Framework and established the Green and Blue Bond Framework to support its DMCs seeking to deliver environmentally sustainable growth to help reduce poverty and the quality of life of their people. All ADB green and blue bonds are consistent with the Green Bond Principles that recommend transparency and disclosure and promote integrity in the development of the green bond market. In addition to the Green Bond Principles, ADB blue bonds are consistent with the voluntary Sustainable Blue Economy Finance Principles, hosted by the United Nations Environment Programme – Finance Initiative (UNEP FI), of which ADB is a signatory.⁴¹

Since 2015, when ADB's Green Bond Program was launched, ADB has raised around \$10 billion, representing 7% of ADB's total outstanding bond issues.⁴² In 2021, ADB issued around \$1.7 billion in green bonds. By market, green bond commitments are concentrated in India (26% of the total), Philippines (19%), and the People's Republic of China (14%). By sector, transport represents 70% of total commitment followed by renewable energy (20%). Based on the new framework, ADB issued its first ever dual-tranche blue bonds denominated in Australian and New Zealand dollars, raising \$302 million in September 2021, to finance ocean-related projects in Asia and the Pacific. By market, more than half of blue bond commitments are to the People's Republic of China (55%). In terms of sector, wastewater management absorbs two-thirds of total commitments (66%).

While supporting DMCs in their efforts in issuing green and blue bonds, ADB may also act as an anchor investor. Through its participation in selected green and blue bond issuances, ADB supports in building the interest and confidence of other investors to participate. For example, ADB recently invested in a blue bond issued by a DMC's bank to support marine environment protection and sustainable blue economies and in a green bond issued by a DMC's railway corporate to improve the bottleneck in a 40-kilometer mountainous region, which delays operations and accelerates the depreciation of tracks and rolling stock.⁴³

³⁸ ADB. *Overview: ASEAN Catalytic Green Finance Facility (ACGF)*.

³⁹ ADB. 2021. *Partners Pledge \$665 Million to Support Green Recovery in ASEAN*. Manila.

⁴⁰ The original financing partners supporting ACGF include ADB, the Agence Française de Développement, the European Investment Bank, German state-owned development bank KfW, and the Government of the Republic of Korea.

⁴¹ Green bonds include investments that support climate change mitigation (such as renewable energy, energy efficiency, and sustainable transport) and climate change adaptation (such as energy infrastructure resilience, water supply and infrastructure, agriculture, and transport). Blue bonds include investments that contribute to: (i) marine and coastal ecosystem management and restoration; (ii) pollution control for marine and coastal environments, including the rivers that drain to the ocean; and/or (iii) sustainable coastal and marine development.

⁴² ADB. 2022. *ADB Green and Blue Bonds Newsletter and Impact Report 2022*. Manila.

⁴³ ADB. 2022. *Report and Recommendation of the President to the Board of Directors: Proposed Bond Investment Bank of Qingdao Company Limited Bank of Qingdao Blue Finance Project (People's Republic of China)*. Manila; ADB. 2021. *Report and Recommendation of the President to the Board of Directors: Proposed Debt Investment Georgian Railway JSC Georgian Railway Green Bond Project (Georgia)*. Manila.

ADB has also closely collaborated with the Bank of International Settlements (BIS) to develop the BIS Asian Green (BISAG) Fund, a United States-dollar-denominated, open-ended fund. The fund channels central bank reserves through investments in high-quality green bonds issued by sovereigns, international financial institutions, and corporates that meet internationally accepted green standards. These bonds help finance investments in environmentally friendly projects in critical areas such as renewable energy production and energy efficiency in the Asia and Pacific region.⁴⁴

Future Enhancements

ADB is currently developing a fast-reacting and innovative facility to address climate change, the Innovative Finance Facility for Climate in Asia and the Pacific (IF-CAP). IF-CAP aims to provide financing partners with higher leverage and development impact by optimizing ADB's balance sheet. Through IF-CAP, ADB is closely engaging development partners and ADB's DMCs to accelerate decarbonization and scale up climate-resilient pathways. The facility will focus on a system approach on policy dialogue, sector reforms, capacity development, project preparation, project delivery, climate change mitigation and adaptation finance especially for the most vulnerable economies.

ADB's climate-related strategies will strengthen and deepen as ADB improves its tools and dedicates resources to increase its understanding of the interlinkages between climate change and its business, operations, borrowers (clients), and communities in which it operates. In this respect, ADB is committed to building the capacity of staff across various departments on climate change topics as part of its role as the climate bank of Asia and the Pacific. In 2022, ADB enrolled 85 staff in the joint training course on the Paris Agreement on Climate Change as a Development Agenda that was accredited by the UN Climate Change–United Nations System Staff College (UNSSC). This training will help build ADB's capacity to understand the key elements of the Paris Agreement on Climate Change and the role of climate action in the broader context of sustainable development.

A key first step is to identify climate-related risks over the short, medium, and long terms, and assess the potential financial impact of these risks to ADB. ADB is aware of the importance of conducting scenario analysis to assess the resiliency of its strategies. In the coming period, the IWG will oversee the development of various scenarios drawn from publicly available climate projections. This analysis will help to illustrate potential pathways and outcomes at various time horizons, including a transition to a low-carbon economy consistent with a 2°C or lower scenario, as well as scenarios consistent with increased physical climate risks.

ADB also continues to integrate climate change opportunities into CPSs, including the development of rapid assessment and diagnostic tools. Over the course of 2022, ADB is also developing a climate change action plan, which is expected to be approved in 2023 to supplement Operational Priority 3 of the Strategy 2030. The plan will further embed climate change considerations into its operations, enhancing the bank's focus on achieving climate outcomes. Through these activities, ADB will set out the road map to achieve its current climate strategies.

⁴⁴ BIS. 2022. BIS launches Asian Green Bond Fund. Press Release. 25 February.



IV. RISK MANAGEMENT

As ADB operates within the Asia and Pacific region, where climate change and disasters are more prevalent, the bank and its DMCs are exposed to increasing climate-related risks. Of the 10 economies worldwide with the highest estimated disaster risk, 7 are ADB DMCs.⁴⁵ As reported in the recently published Climate Change 2022: Impacts, Adaptation, and Vulnerability of the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), widespread, adverse impacts from climate change are already present and projected to be worse than previously estimated.⁴⁶ In this context, ADB has scaled-up its processes for identifying, assessing, and managing its exposure to climate-related risks and opportunities.

Processes for Identifying and Assessing Climate-Related Risks

Characterization of Climate-Related Risk against Current Risk Categories

In carrying out its mandate, ADB faces four key types of risk: credit risk, market risk, liquidity risk, and operational risk. ADB views climate risk as transversal, that is as a type of risk that is able to manifest across all of these risk categories. Table 4 illustrates how various climate risk drivers may impact ADB across each type of risk. Reputational risk has also been added to the table as another type of risk relevant to climate change.

⁴⁵ As cited in Strategy 2030: These are Bangladesh, Cambodia, the Philippines, Solomon Islands, Timor-Leste, Tonga, and Vanuatu. L. Kirch et al. 2017. *WorldRiskReport: Analysis and Prospects 2017*. Berlin: Bündnis Entwicklung Hilft.

⁴⁶ IPCC. 2022. *IPCC Sixth Assessment Report*.

Table 4: Impacts of Climate Change on Key Risk Categories

Risk Category	Impact of Climate Change	Risk Response
<p>Credit risk: Risk of loss that could result if a borrower or counterparty defaults or if its creditworthiness deteriorates.</p> <p>Concentration risk arises when a high proportion of the portfolio is allocated to a specific country, industry sector, obligor, type of instrument, or individual borrower.</p>	<ul style="list-style-type: none"> Increased frequency or intensity of disaster events or policy changes resulting from low-carbon economy transition (e.g., carbon taxes, increased regulations) can result in borrower's reduced ability to pay. Concentration risk in ADB's portfolio means that physical and transition risk events can impact the largest borrowers. 	<ul style="list-style-type: none"> ADB conducts climate risk screening and applies its Safeguard Policy Statement for all projects it finances. Additional climate risk assessments are conducted for medium- and high-risk projects prior to approval by the Board or by the President. Physical climate risks are captured in the sovereign credit risk assessment process. Transition risks are also considered. Extreme climate change scenario analysis was conducted for the first time as part of the 2021 assessment of ADB's capital adequacy to understand the potential impact of climate change risks on the bank's portfolio. For nonsovereign operations, the credit risk assessment examines all vulnerabilities, including climate-related factors, of a borrower that may, over time, lead to a reduced ability to pay. For nonsovereign operations, exposure limits are regularly reviewed. In 2021, new limits were introduced to reduce ADB's exposure to the oil and gas sector and the nonrenewable energy sector. ADB has approved a policy framework to guide its collaboration with multilateral development banks on sovereign exposure exchanges to manage risks created by the concentration of its portfolio.
<p>Market risk: Risk of loss on financial instruments resulting from changes in market prices. This includes interest rate risk and foreign exchange risk.</p>	<ul style="list-style-type: none"> Physical impacts of climate change (such as flooding, large storms, rising sea levels) can cause a devaluation of assets. Disruptive transition to low-carbon economy or increase in physical risks related to extreme weather events could cause a shift in demand for financial products. Over time, disruptive transition to low-carbon economy may adversely affect the market value of investment securities in carbon-intensive sectors. 	<ul style="list-style-type: none"> ADB invests in high credit quality liquid assets, primarily issued by sovereign, supranational, and agency issuers. Interest rate and foreign exchange risks are prudently managed through hedging activities, as well as the establishment and regular monitoring of limits on market risk metrics (including value at risk, expected shortfall, and duration). ADB limits its exposure to carbon-intensive sectors through its fossil fuel and carbon emissions filter for its externally managed corporate portfolios' mandate.

continued on next page

Table 4 continued

Risk Category	Impact of Climate Change	Risk Response
Liquidity risk: Risk that ADB is unable to access market funding and the risk that ADB has insufficient liquidity to meet its financial and operational obligations.	<ul style="list-style-type: none"> This type of risk is often a consequence of other risk types such as credit or market risks and can be amplified by physical or transition risk, which could challenge ADB's ability to meet various funding requirements. 	<ul style="list-style-type: none"> ADB's strong credit rating and capitalization ensure market access at suitable pricing. ADB's liquidity policy ensures that ADB maintains liquidity equal at least to 12 months of net cash requirements. ADB's fossil fuel and carbon emissions filter for its externally managed corporate portfolios' mandate demonstrates to the market that ADB actively limits its exposure to carbon-intensive sectors as an issuer of green and blue bonds.
Operational risk: Risk of loss resulting from inadequate or failed internal processes, people, and systems, or from external events.*	<ul style="list-style-type: none"> Physical climate risk related to extreme weather events may affect the ability of the personnel, field offices, and suppliers to operate. 	<ul style="list-style-type: none"> Since 2016, ADB has established an organizational resilience framework to improve ADB's ability to anticipate and respond to disruption risks, including disaster events, such as earthquakes and volcanos, as well as those that may be caused by climate change, such as large storms or water shortages affecting Metro Manila. The framework is regularly maintained. ADB's business continuity management manages the recovery or continuity of ADB's operations in the event of a disaster and ensures that ADB can reasonably withstand a business disruption. Business Impact Analysis and Risk Assessment are updated and validated by each department on an annual basis to identify and assess potential business disruptions that are event-based and opportunities to improve.
Reputational risk: Risk of loss resulting from negative perceptions from the public causing a decline of established trust and confidence.	<ul style="list-style-type: none"> Negative perceptions due to ADB continuing to finance carbon-intensive sectors. Negative perceptions due to poor support of communities impacted by large-scale infrastructure projects like hydropower exposed to extreme weather events. 	<ul style="list-style-type: none"> ADB has committed to fully align its sovereign operations to the Paris Agreement by 1 July 2023, 85% alignment of its nonsovereign operations by 1 July 2023, and 100% alignment of its nonsovereign operations by 1 July 2025. ADB has announced its elevated ambition of \$100 billion in cumulative climate finance by 2030. ADB is strengthening the capabilities of its developing member countries and private sector clients to address climate change. The Safeguard Policy Statement applies to all projects ADB finances.

* In line with the definition of the Basel Committee for Banking Supervision (Revisions to the Principles for the Sound Management of Operational Risks. March 2021), this definition includes legal risk, but excludes strategic and reputational risk.

Source: Asian Development Bank.

Three Lines of Defense Model

ADB has a risk management framework that is built on three core components of governance, policies, and processes to identify and manage these various kinds of risks. In implementing this framework, ADB promotes a culture of managing risk as part of its core values. This is propagated through the “three lines of defense” model illustrated in Figure 4.

Figure 4: ADB’s Three Lines of Defense Model Applicable to Climate-Related Risks and Opportunities



* The first and second lines are supported by the Economic Research and Regional Cooperation Department, by the Office of General Counsel, and by the Strategy, Policy, and Partnership Department.

Source: Asian Development Bank, Office of Risk Management.

- **First line of defense.** ADB Management and operations departments are all mandated to identify and monitor the inherent risks to which ADB is exposed, and to report on potential deterioration or crystallization of risks.
- **Second line of defense.** ORM is responsible for promoting a strong risk culture that needs to be embedded throughout the whole organization and is the shared responsibility of all stakeholders involved in the creation and management of risks, and not just by ORM.⁴⁷ SDCC works with operations departments to ensure adequate due diligence on the environment, climate risks, financial management, and institutional and social assessments of programs and projects as well as compliance with safeguard policies across ADB operations.⁴⁸ The Controller's Department (CTL) and the Office of Anticorruption and Integrity (OAI) also have a key role in the second line of defense. CTL is responsible for providing financial information to support informed decision-making, authorizing, and overseeing disbursements, and working with regional departments to ensure optimal fiduciary control over project funds. OAI upholds ADB's zero tolerance for fraud and corruption in ADB-financed activities ensuring that public entrusted funds are being directed toward achieving ADB's vision of a prosperous, inclusive, resilient, and sustainable Asia and Pacific region.

⁴⁷ This is achieved by providing risk training and/or e-learning to operations departments, rolling out risk champion initiatives, showcasing best practices, disseminating knowledge products, and participating in working groups and risk forums.

⁴⁸ ADB Administrative Order 1.02.

- **Third line of defense.** The Office of the Auditor General (OAG) provides independent and objective assurance and advisory services designed to add value and improve ADB operations by evaluating and improving the effectiveness of governance, risk management, and control processes.

Processes for Assessing Climate-Related Risks for ADB Projects

ADB has established the following operational approaches to assist in further assessing climate-related risks:

1. Safeguard Policy Statement (SPS)

The SPS applies to all ADB-financed and ADB-administered sovereign and nonsovereign projects and their components, regardless of the source of financing. It requires ADB's borrowers (clients) to examine and incorporate resource conservation and energy efficiency measures into their operations. The potential direct and indirect climate change impact, as a result of GHG emissions, of every ADB-financed and ADB-administered project is assessed prior to receiving final approval from the Board or from the President. ADB is in the process of reviewing and updating the SPS.

2. Climate Risk Management Framework

Since 2014, ADB has been implementing a Climate Risk Management Framework, which requires all investment projects to consider physical climate risk. This framework guides climate risk management from the concept phase of projects to projects implementation. See Box 2 for more details. ADB is also increasingly working on upstream climate risk analysis, conducting multihazard disaster risk analysis in a growing number of its DMCs.

3. Shadow Carbon Prices

Economic analysis at ADB has mainstreamed the consideration of climate change externalities in the economic evaluation of project costs and benefits required as part of project due diligence. ADB has been implementing a shadow carbon price on projects since 2017 under its Guidelines for the Economic Analysis of Projects to estimate the benefit in damage avoided for projects that reduce emissions and to estimate the cost in damage created for projects that increase emissions.⁴⁹ Within cost-benefit analysis, carbon prices are used to value the difference in emissions between a scenario with project interventions and an alternative scenario without the project, and this without-project scenario is consistently used for both carbon and noncarbon costs and benefits. The shadow carbon price is required for projects in the energy and transport sectors and those with a primary objective of GHG emissions reduction, and such projects cannot be approved unless they hurdle economic analysis thresholds when carbon values are included. Under the guidelines, the shadow carbon price of \$36.3 per ton of carbon dioxide equivalent (tCO₂e) in 2016 prices will be increased by 2% annually in real terms to allow for the potential of increasing marginal damage of global warming over time. As of 2022, the shadow carbon price is \$49.8 tCO₂e, which is broadly consistent with the price used most frequently by other MDBs that have introduced carbon pricing. By applying a shadow carbon price, ADB is able to determine an economic value of GHG emissions and measure the global social cost of carbon for all projects. The unit value may be revised in the future as more and new estimates of global warming damage become available.

⁴⁹ ADB. 2017. *Guidelines for the Economic Analysis of Projects*. Manila.

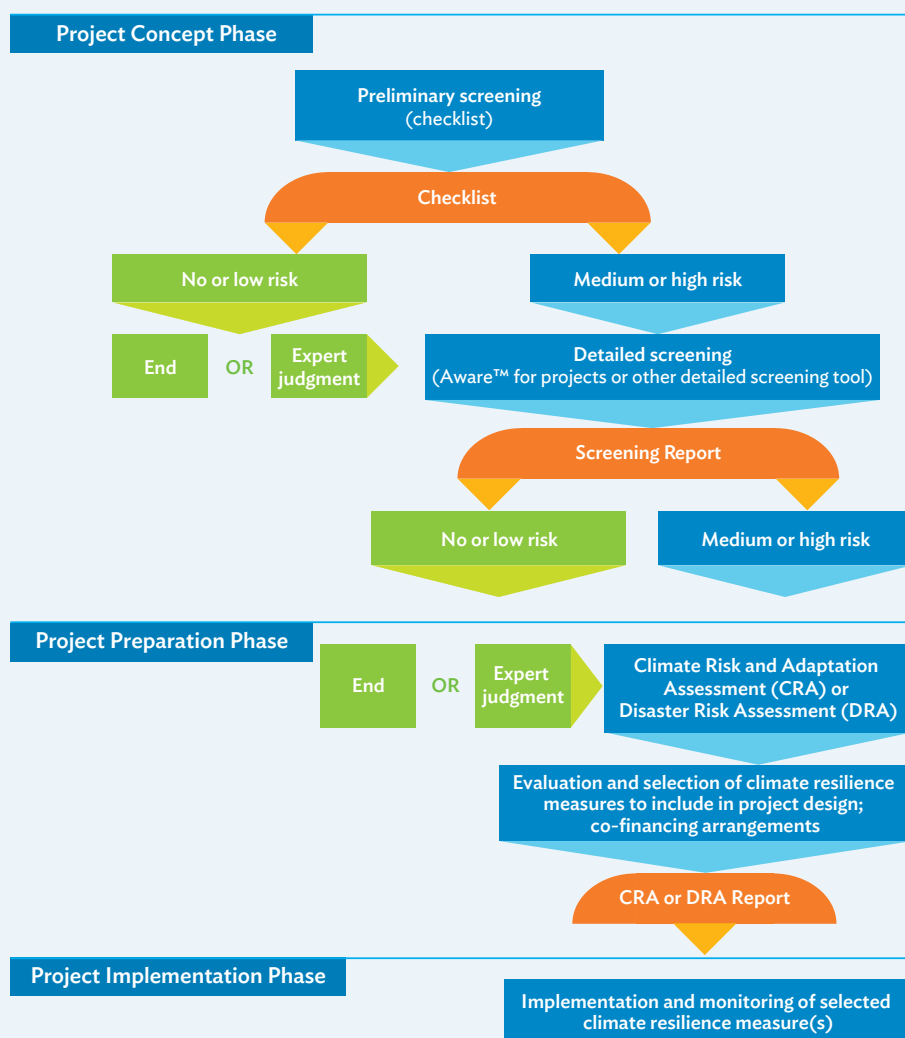
Box 2: The Climate Risk Management Framework

The Climate Risk Management Framework, introduced in 2014, allows the Asian Development Bank to identify climate change risks to projects' physical integrity, longevity, and performance. The approach aims to identify these risks in the early stages of project development to assess these risks and incorporate adaptation measures into the design of projects at risk.

The framework is comprised of three phases as illustrated in the figure that follows:

- (i) Concept phase
- (ii) Preparation phase
- (iii) Implementation phase

Climate Risk Management Framework

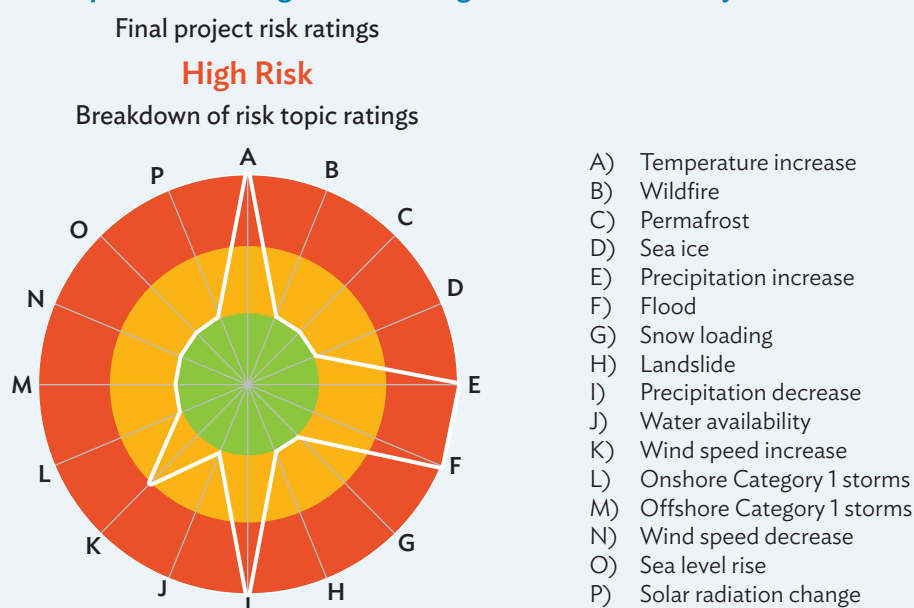


continued on next page

Box 2 continued

As illustrated in the concept phase, all ADB projects are subject to a preliminary climate risk screening carried out by the project team using a mandatory checklist. This screening aims to identify whether the project may be vulnerable to climate change hazards. If the preliminary screening of climate risk results in a medium or high risk, a further detailed screening is undertaken, using dedicated tools such as the online AWARE for Projects tool which is depicted in the figure that follows. The AWARE for Projects tool is a proprietary tool developed by Acclimatise and uses data from general circulation models and databases on physical risk events. The tool generates an overall climate risk ranking of low, medium, or high; key risk areas; and narratives on potential impacts and adaptive measures to guide subsequent activities.

Example of Screening Results Using the AWARE for Projects Tool



Source: Acclimatise.

As illustrated in the preparation phase, projects that are assessed as medium or high risk by the project team during the screening process are subject to a more detailed and context-sensitive climate risk and adaptation assessment (CRA) or disaster risk assessment (DRA). The CRA or DRA will feed into the design of the project and the adaptation measures.

The risk identification and risk assessment process described is performed by the project team with support from climate focals in regional departments and Climate Change and Disaster Risk Management Division (SDCD) if needed. SDCD also provides quality assurance that the findings of the CRA have been adequately integrated in the project design and any estimations for the projects' climate mitigation and adaptation finance, including the calculation for emissions reductions, are reasonable. The results of the risk screening and the impact to the design of the project are documented by the project team and included in the Climate Change Assessment Linked Document and in the Report and Recommendation of the President (RRP), which is approved by the Board; or in the Faster Approach to Small Nonsovereign Transactions (FAST) report, which is approved by the President.

Source: Asian Development Bank.

Processes for Managing Climate-Related Risks at the Portfolio Level

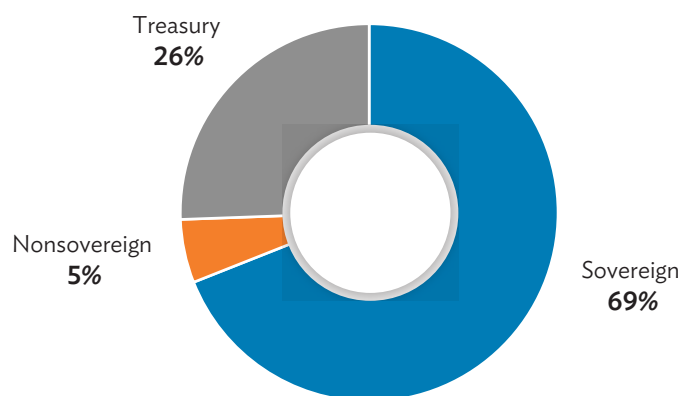
Overview of ADB Portfolio Exposure

Because of ADB's mandate, ADB's portfolio is predominantly comprised of sovereign exposure, which accounts for 69% of total exposure as of 2021, as shown in Figure 5. ADB's climate risk management approach is thereby guided by this large sovereign exposure.

Credit risk for sovereign exposure is primarily determined by the country where the exposure is held. As seen in Figure 6, as of end-2021, the largest sovereign exposures by country are India, People's Republic of China, Pakistan, Bangladesh, and the Philippines. ADB's portfolio is quite geographically concentrated with these five economies accounting for about 60% of the bank's total assets.

While country of exposure for nonsovereign projects is an important driver of credit risk, industry sector is also particularly relevant. As shown in Figure 7, ADB's nonsovereign portfolio is mainly exposed to the energy and finance sectors, which account for around 75% of the total.

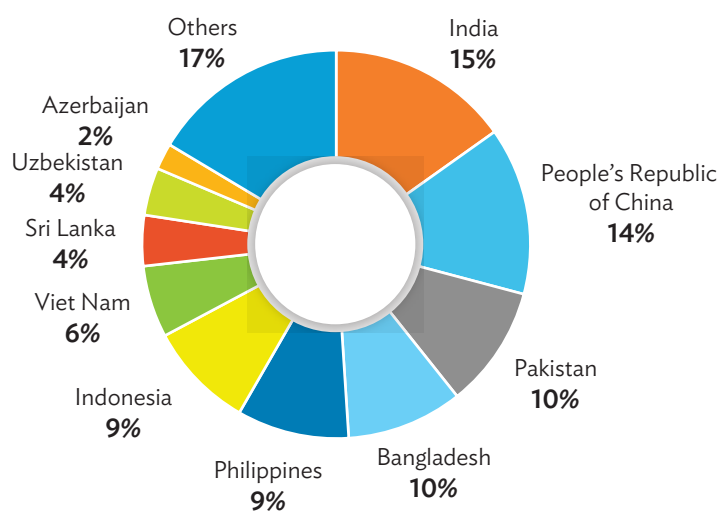
Figure 5: ADB Sovereign, Nonsovereign, and Treasury Portfolio Exposure, as of 31 December 2021
(% of total exposure)



Note: The chart represents the sum of disbursed loan balances and other debt securities, present value of guaranteed obligations, and fair value of equities, including both sovereign and nonsovereign portfolios.

Source: Asian Development Bank, Office of Risk Management.

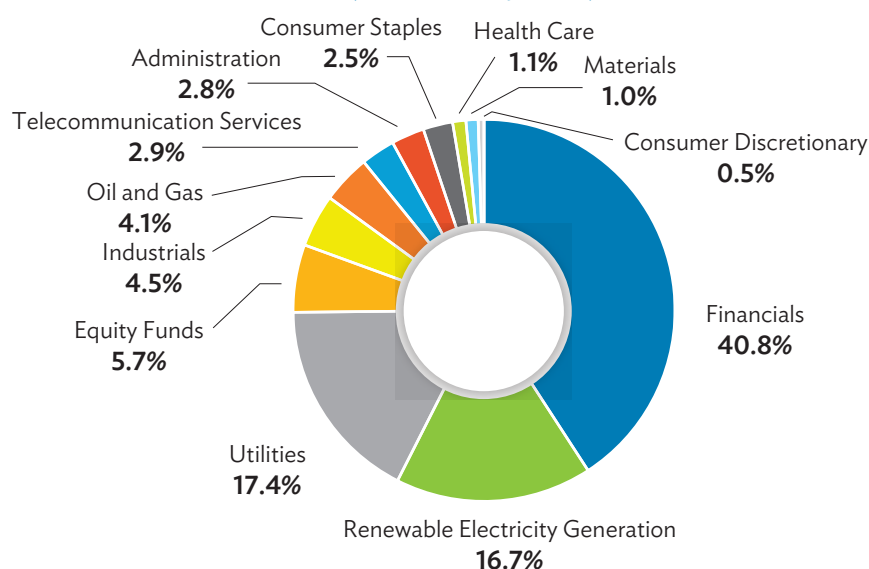
Figure 6: Sovereign Portfolio Country Exposure, as of 31 December 2021
(% of total exposure)



Note: The chart represents the sum of disbursed loan balances and other debt securities, present value of guaranteed obligations, and fair value of equities including both sovereign and nonsovereign portfolios.

Source: Asian Development Bank, Office of Risk Management.

Figure 7: Nonsovereign Portfolio by Obligor Industry Sector, as of 31 December 2021
(% of total exposure)



Notes: The chart represents the sum of disbursed loan balances and other debt securities, present value of guaranteed obligations, and fair value of equities, including both sovereign and nonsovereign portfolios. Industry sectors are based on level 1 of the Global Industry Classification Standard, with adjustments made to include additional categories for “renewable energy generation” which is normally included under “utilities” and “oil and gas” usually listed as “energy.”

Source: Asian Development Bank, Office of Risk Management.

Capturing Climate-Related Risks in Credit Risk Ratings

For sovereign operations, climate risks are considered in the sovereign credit risk assessment process via their inclusion in the internal sovereign credit risk rating model as well as in the qualitative analysis covering those factors only partially captured by the model.⁵⁰ This includes an assessment of how a sovereign is exposed to acute and chronic physical risks and to carbon transition risk based on its policies currently in place and planned. As indicated in the “Future Enhancements” section, this sovereign credit risk rating model is currently being updated to better capture climate risk through additional climate-related quantitative indicators.

For nonsovereign operations, borrowers’ exposure to climate-related risks (physical and transition) is reflected in the borrowers’ internal credit risk rating. ADB uses a set of expert judgment-based rating templates for various asset classes that allows the bank to identify the relevant risk factors, including climate change-related risks and their impacts on the borrower repayment capacity, and incorporate those risks in the overall credit rating of a borrower. The rating methodology supports the due diligence process by helping to identify relevant climate-related risks, which allows measures to be taken to mitigate these risks.

Limiting Portfolio Exposure to Carbon-Intensive Sectors

Under the 2021 Energy Policy, exposure to certain carbon-intensive sectors is limited. ADB will offer limited and conditional support to natural gas projects and will uphold its current practice of not financing new coal-based capacity for power and heat. For nonsovereign operations, in 2021, ADB introduced new limits to reduce its exposure to the oil and gas sector and the nonrenewables energy sector. Its adherence to the MDBs’ Joint Approach on Climate Finance for tracking and reporting on climate finance and to the MDBs’ Joint Commitment to align with the Paris Agreement goals further encourage ADB to move away from carbon-intensive sectors.

ADB also limits its exposure to carbon-intensive sectors through its investment policy for its treasury portfolio. In 2016, a review of the socially responsible investment strategy incorporated a provision to generate sustainable long-term returns by including a list of prohibited sectors and industries. In 2022, in a review of the ADB’s Investment Strategy and Authority Policy approved by the BOD, additional filter criteria were introduced to screen investments for its externally managed corporate portfolios that measure carbon emissions of corporate bond issuers using appropriate metrics and exclude issuers above a given threshold or whose activities are flagged as having any ties to fossil fuel reserves.

Performing Extreme Climate Scenario Analysis

In 2021, ADB conducted an extreme climate change scenario analysis for the first time as part of the annual assessment of ADB’s capital adequacy. This was jointly developed by ORM and SDCC to illustrate ADB’s susceptibility to risks related to climate change.

For the purposes of conducting this scenario analysis, DMCs were assessed as having high, moderate, or low vulnerability to physical climate risks. The assessment was based on a vulnerability index. The index measures a country’s exposure, sensitivity, and ability to adapt to the negative impact of climate change.

⁵⁰ The key objective of the sovereign credit risk assessment process is to provide ADB with the means to assess the ability and the willingness of sovereigns to comply with their debt obligations given the sovereign’s characteristics (macroeconomic variables, governance indicators, and others) and payment history.

Under the scenario, DMCs deemed to have high or moderate levels of vulnerability see a weakening of sovereign credit ratings over time. To better understand the risks facing ADB's operations portfolio and financial position, the timeline for risk crystallization was accelerated and is expected to occur in 2025. While the scenario was deemed to have a very low probability due to an unrealistically accelerated and compressed timeline, it indicated a material sensitivity to climate change risk over the long term. This impact came about even though the scenario considered only physical risk and did not aim to assess transition risk.

The scenario was reviewed by the Audit and Risk Committee of the Board, which expressed broad support from the Board for expanding and mainstreaming climate change scenario analysis as part of the capital adequacy assessment going forward.

Processes for Assessing and Managing Organizational Resilience

ADB headquarters is located in Manila, Philippines and, therefore, vulnerable to potential disruptions caused by disasters, including those exacerbated by climate change. In 2016, ADB has adopted an organizational resilience framework for 2016–2031 to maintain continuity of ADB's business operations, protect shareholder value in the event of a disaster, and to ensure long-term viability despite changes in the operating environment.

ADB's organizational resilience framework draws upon recognized international standards and best practices and adopts those principles and concepts best suited to ADB. The framework establishes the governance structures and optimizes the use of key resources—people, premises, information technology, business data, process, and supply chain—to enable ADB to prepare for and respond to disruption-related risks and strengthen its capacity to maintain operations.⁵¹

The organizational resilience framework can also provide a road map to enable ADB to prepare for and adapt to significant changes in its operating environment, including those caused by climate change. Under this model, ADB is improving its business continuity readiness by outlining actions to take across immediate, short- and medium-term time horizons as well as ongoing monitoring activities. The business continuity management plan will mitigate the risks of disruptive events at an organizational level, including physical climate-related events. ADB also uses insurance for mitigating low-frequency and high-severity operational risks.

Future Enhancements

Following the identification of climate-related risks, ADB will assess how these risks can be better managed. As data and modeling tools to assess physical and transition risks evolve, ADB will integrate these risks into its risk management framework and in operational strategies.

⁵¹ ADB. 2016. *Organizational Resilience*. Manila.

ADB is currently updating its internal credit rating model for sovereigns to better capture physical climate risk through explicit quantitative indicators to complement the expert judgement qualitative approach. Given that most of ADB investments are long term in nature and that some risks may amplify under long-term future climate scenarios, ADB also plans to augment its sovereign rating methodology by considering how climate change risk could impact sovereign credit risk in the long run.

While ADB has already implemented a tool to screen its investments for treasury operations, it will improve its process to assess climate-related risks at the project level. ADB has started the process to create an in-house tool for climate risk screening, which will include climate risk and disaster risk screening and assessment for sovereign and nonsovereign projects. While the overall methodology for project risk screening remains the same, the tool will further enhance ADB's ability to screen projects for climate risk and enable ADB to include further adaptation measures into the design of each project.



V. METRICS AND TARGETS

Metrics on Internal Operations

Developing Asia and the Pacific has the world's fastest-growing rate of GHG emissions, with the leading driver being emissions from power generation. Reducing these emissions is needed to ensure a sustainable future and respond to the threat of climate change.⁵²

To support these efforts within its internal operations, ADB has gradually decreased its direct GHG emissions under its Energy, Environment, Health, and Safety Management System (E2HSMS) policy.⁵³ Today, all of the electricity for ADB headquarters comes from 100% renewable sources, primarily geothermal and also on-site solar. ADB has not set a reduction target for GHG emissions since the key contributor for GHG emission inventory is business travel, which is mainly driven by ADB's business needs. To reduce GHG emissions from business travel, ADB staff are encouraged to use videoconferencing in lieu of a taking a flight or to combine mission trips to minimize distances traveled. In addition, ADB has been offsetting its GHG emissions since 2016 by purchasing certified emission reductions certificates from ADB-supported renewable energy projects.⁵⁴

The Corporate Services Department (CSD) maintains ADB's GHG emissions inventory, which includes Scope 1 (direct emissions), Scope 2 (energy indirect emissions), and Scope 3 (other indirect emissions). A summary of ADB's current and historical GHG emissions is shown in Table 5. These disclosures are also included in ADB's Sustainability Report in line with the Global Reporting Initiative (GRI) standards.⁵⁵ Lower emissions between 2020–2021 and 2019 are linked to the sharp reduction of Scope 3 emissions since mission travel came close to a halt during the pandemic years of 2020 and 2021. Lower electricity consumption is due to lower building occupancy during the pandemic as shown in Table 6.

⁵² ADB. 2017. *Guidelines for Estimating Greenhouse Gas Emissions of ADB Projects*. Manila.

⁵³ In 2021, ADB had its 2019–2020 GHG Emission Inventory externally verified and received the highest level of assurance statement (International Organization for Standardization [ISO] 14064–1) for quantifying and reporting GHG emissions and removals.

⁵⁴ These certified emissions reduction certificates are issued by the United Nations Framework Convention on Climate Change (UNFCCC).

⁵⁵ ADB. 2022. *Asian Development Bank Sustainability Report 2022 Part II: Detailed Global Reporting Initiative Content Index*. Manila.

Table 5: Operational Greenhouse Gas Emissions
(in tCO₂e/year)

Source	CO ₂ e Emissions (tons)				% Reduction vs. 2013		
	2013 (Base Year)	2019	2020	2021	2019	2020	2021
Scope 1 ^a	527.25	1,625.07	1,522.29	1,621.00	-208.22	-188.72	-207.44
Scope 2 ^b	10,532.78	745.06	547.5	506.26	92.93	94.80	95.19
Scope 3 ^c	9,467.65	10,216.07	1,291.77	185.80	-7.91	86.36	98.04
Total	20,527.68	12,586.20	3,361.56	2,313.06	38.69	83.62	88.73

GHG = greenhouse gas, tCO₂e = ton of carbon dioxide equivalent.

^a Direct emissions classified under Scope 1 of the GHG Protocol's Corporate Standard are those from sources owned and controlled by Asian Development Bank (ADB). Sources identified at ADB headquarters include (i) combustion of diesel fuel for power generator sets and fire pump system; (ii) combustion of liquefied petroleum gas for cooking and heating equipment; (iii) combustion of fuel in ADB-owned vehicles for official trips; (iv) fugitive emissions of refrigerants from the installation, operation, and maintenance, and disposal of refrigeration and air-conditioning equipment; and (v) fugitive emissions of refrigerant from fire suppression equipment.

^b Under Scope 2, energy indirect emissions are GHG emissions resulting from the generation of purchased electricity for ADB headquarters.

^c Scope 3 emissions calculated above include other indirect emissions from air travel and hotel stays of ADB staff on official business.

Source: Asian Development Bank.

Table 6: Greenhouse Gas Emissions Intensity
(in tCO₂e/capita)

Source	Greenhouse Gas Emissions (tons)			
	2013 (Base Year)	2019	2020	2021
Total	20,527.68	12,586.20	3,361.56	2,313.06
Building occupancy* (number)	5,985	6,804	1,866	922
GHG emissions intensity per capita	3.43	1.81	1.80	2.51

GHG = greenhouse gas, tCO₂e = ton of carbon dioxide equivalent.

* Building occupancy is based on the Corporate Services Department's estimates of staff, consultants, contractors, service providers, and non-Asian Development Bank (ADB) personnel who are based at the ADB headquarters.

Source: Asian Development Bank.

Metrics and Targets Used to Measure and Manage Climate-Related Opportunities in ADB's Portfolio

As Asia and the Pacific's climate bank, ADB is embracing the opportunities that climate change presents by working with governments and civil society to mobilize climate finance. ADB has established the following climate change targets in conjunction with Strategy 2030:

- 75% of the number of ADB's committed operations (on a 3-year rolling average, including both sovereign and nonsovereign operations) will support climate change mitigation and adaptation by 2030.
- A target set to a cumulative total of \$80 billion in climate finance from ADB's own resources from 2019 to 2030, and the 2019–2024 corporate results framework sets an interim target of \$35 billion from 2019 to 2024. In October 2021, ADB announced its ambition to scale-up its climate financing to \$100 billion cumulatively from 2019 to 2030. ADB will review its official targets during the midterm review of Strategy 2030 and the development of the 2025–2030 corporate results framework.

In 2021, ADB recorded \$4,265 million in climate finance—\$3,553 million from its own resources and \$712 million from external resources—which contributes toward meeting these targets. As Table 7 shows, the proportion of total committed ADB operations during 2019–2021 that supported climate change adaptation and/or mitigation fell slightly from the previous period of 2018–2020 (to 56% from 58%). While the number of climate change operations has continued to remain high, climate projects have formed a smaller proportion of ADB's portfolio due to the focus on health and public sector management interventions required to address the COVID-19 crisis.⁵⁶

Table 7: ADB Operations Supporting Climate Change Mitigation and Adaptation
(% of total ADB operations)

Type	2017–2019	2018–2020	2019–2021	2024 Target	2030 Target
Mitigation	16	14	13		
Adaptation	26	22	16		
Both	17	22	27		
Total	59	58	56	65	75

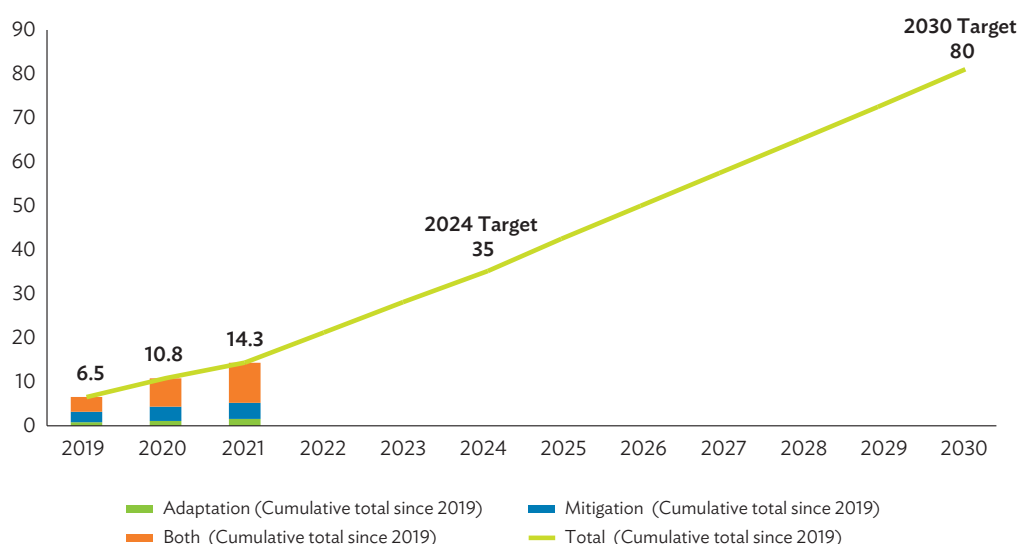
Notes: Figures are on commitments and ADB's own resources. Computation is based on 3-year-rolled average. Climate finance is the amount of financial resources that contributes to climate change mitigation and/or adaptation activities. Mitigation finance is the cost associated with activities that promote efforts to reduce or limit greenhouse gas (GHG) emissions or enhance GHG sequestration. Adaptation finance is the cost of activities undertaken to lower the current and expected risks to or vulnerabilities of the project, community, economy, or the environment posed by climate change. Dual or both activities provide simultaneous benefits: reducing GHGs and promoting adaptation to climate change. These definitions are based on the 2020 Joint Report on Multilateral Development Banks' Climate Finance.

Source: Asian Development Bank, Sustainable Development and Climate Change Department.

⁵⁶ For more information, see ADB. 2021. *Development Effectiveness Review 2020*.

Figure 8 shows ADB's progress toward meeting 2030 climate finance target and the 2024 interim target. It shows that sustained additional investment in climate finance will be required to meet these targets.

Figure 8: ADB Cumulative Financing for Climate Change Mitigation and/or Adaptation since 2019, with 2024 and 2030 Targets
(cumulative yearly commitments, \$ billion)



Notes: Figures are on commitments and ADB's own resources. Climate finance is the amount of financial resources that contributes to climate change mitigation and/or adaptation activities. Mitigation finance is the cost associated with activities that promote efforts to reduce or limit greenhouse gas (GHG) emissions or enhance GHG sequestration. Adaptation finance is the cost of activities undertaken to lower the current and expected risks to or vulnerabilities of the project, community, economy, or the environment posed by climate change. Dual or both activities provide simultaneous benefits: reducing GHGs and promoting adaptation to climate change. These definitions are based on the 2020 Joint Report on Multilateral Development Banks' Climate Finance.

Sources: Asian Development Bank, Office of Risk Management; Sustainable Development and Climate Change Department.

Additionally, ADB has established three strategic priorities for operational priority 3 of Strategy 2030:

- (i) climate change mitigation increased,
- (ii) climate and disaster resilience built, and
- (iii) environmental sustainability enhanced.

To monitor progress against these three strategic priorities, ADB has begun to track the metrics shown in Table 8 in its annual Development Effectiveness Review.

Table 8: Climate Opportunity Metrics within ADB's Development Effectiveness Review

Metric (unit of measure)	2019	2020	2021
Total annual greenhouse gas emissions reduction (tCO ₂ e/year)	12,778,000	19,325,000	17,807,000
People with strengthened climate and disaster resilience (number)	3,161,000	561,000	763,000
People benefiting from strengthened environmental sustainability (number)	5,137,000	3,127,000	3,597,000

tCO₂e = ton of carbon dioxide equivalent.

Source: Asian Development Bank. 2021. *Development Effectiveness Review Report*. Manila.

Within the DEF, ADB calculates total GHG emissions reductions across its portfolio for all projects that have been completed over the year. ADB has developed various guidelines for estimating GHG emissions for energy and transport sector projects. The *Guidelines for Estimating Greenhouse Gas Emissions of ADB Projects* were developed in 2017 to provide ADB with additional guidance for estimating ADB's emissions reduction attributed to clean energy projects.⁵⁷ The *Guidance Note on Greenhouse Gas Emissions Accounting for ADB Energy Project Economic Analysis* developed in 2019 focuses on the economic analysis of GHG emissions effects of projects in the energy sector.⁵⁸ ADB's overall approach has been derived from *International Financial Institutions (IFI) Framework for a Harmonized Approach to GHG Accounting* adopted in 2015.⁵⁹

In July 2021, ADB announced its commitment to align its new operations with the goals of the Paris Agreement. Along with this commitment, ADB has set the following targets:

- full alignment of sovereign operations by 1 July 2023,
- 85% alignment of nonsovereign operations by 1 July 2023, and
- 100% alignment of nonsovereign operations by 1 July 2025.

Since the announcement, ADB has initiated actions to align its operations with the Paris Agreement goals for each project, as well as for CPS and country programming. ADB has developed guidance on implementing operations' alignment with the Paris Agreement. All projects are to be assessed for Paris Alignment based on the Joint MDB Methodology and on this internal guidance.

Metrics and Targets Used to Measure and Manage Climate-Related Risks in ADB's Portfolio

Every project funded by ADB is assessed for climate-related risks using the Climate Risk Management Framework outlined in the Risk Management section. In this way, ADB manages climate risk on a project-by-project basis. ADB recognizes that in addition to this project-level analysis, a portfolio-level analysis is important for assessing and managing climate-related risks. Table 9 provides a portfolio-level summary of ADB's sovereign and nonsovereign exposures by internal project sector classifications. Project subsector level exposures are also included for

⁵⁷ ADB. 2017. *Guidelines for Estimating Greenhouse Gas Emissions of ADB Projects*. Manila.

⁵⁸ ADB. 2019. *Greenhouse Gas Emissions Accounting for ADB Energy Project Economic Analysis: Guidance Note*. Manila.

⁵⁹ World Bank. 2015. *IFI Approach to GHG Accounting for Renewable Energy Projects*. ADB was a member of the Technical Working Group of international finance institutions that developed this approach.

the Transport, Power and Energy, and Water and Urban Infrastructure and Services to provide additional granularity for these climate-sensitive sectors. The table also includes a heat map displaying an indicative sensitivity of each project sector to physical climate risk and carbon transition risk, based on four levels of sensitivity: low, moderate, high, and very high. These sensitivities are based on Moody's environmental risks heat map and ADB's internal assessment.⁶⁰ While the heat map helps to identify which project sectors within ADB's portfolio could have the greatest exposure to climate risk and the quantum of that exposure, it is only an indicative assessment. The levels of climate sensitivity do not relate to the specific projects within ADB's portfolio; that is, a sector rated as high risk does not imply that ADB's investments in that sector are necessarily also high risk. This assessment needs to be complemented by an analysis of the location of each project's key assets, the tenor of the project, and the level of climate risk management measures (adaptation) included in the project design.

Table 9 indicates that many of ADB's projects are likely to have some sensitivity to physical climate risks, with around one-tenth of the exposure by project-sector having a high sensitivity to physical climate risk and more than half are being classified with a moderate sensitivity. With respect to carbon transition, most of the exposure is classified with a low or moderate sensitivity. In the power and energy sector, exposure to oil and gas (the only sector with a sensitivity rating of very high for carbon transition) forms less than 1% of the portfolio as of 2021. Projects in the conventional electricity generation and electric utilities sector, which includes electricity generated using fossil fuels and has a high sensitivity for carbon transition, comprises 2.5% of the sovereign and nonsovereign project portfolio assets in 2021. Notably, ADB has not financed investments in coal power plants since 2013. Under its 2021 Energy Policy, ADB will finance projects that focus on renewable and low-carbon solutions, such as projects that use renewable energy technologies to harness wind and solar energy.⁶¹

Table 9: ADB Operations Portfolio Project Sector Climate Sensitivity Heat Map

Project Industry Sector	ADB Sovereign and Nonsovereign Outstanding Exposure						Indicative Industry Climate Sensitivity	
	2019 \$ billion	2019 %	2020 \$ billion	2020 %	2021 \$ billion	2021 %	Physical Climate	Carbon Transition
Transport	34.1	28.7	35.5	26.3	36.5	25.7	Moderate	Moderate
Roads	27.5	23.1	28.2	20.9	28.5	20.0	Moderate	Moderate
Rail	3.8	3.2	4.2	3.1	4.5	3.2	Moderate	Low
Other Public Transport	1.1	0.9	1.3	1.0	1.7	1.2	Moderate	Low
Aviation	0.5	0.4	0.6	0.4	0.7	0.5	Moderate	High
Other Transport	0.7	0.6	0.7	0.5	0.7	0.5	Moderate	Low
Shipping and Water Transport	0.5	0.5	0.5	0.4	0.5	0.4	High	High

continued on next page

⁶⁰ Moody's. 2021. *General Principles for Assessing Environmental, Social and Governance Risks Methodology*.

⁶¹ ADB. 2021. *Energy Policy Supporting Low-Carbon Transition in Asia and the Pacific*. Manila.

Table 9 continued

	ADB Sovereign and Nonsovereign Outstanding Exposure						Indicative Industry Climate Sensitivity	
Project Industry Sector	2019 \$ billion	2019 %	2020 \$ billion	2020 %	2021 \$ billion	2021 %	Physical Climate	Carbon Transition
Power and Energy	24.1	20.2	25.0	18.5	25.7	18.1	Moderate	Moderate
Electricity Transmission and Distribution	9.5	8.0	10.2	7.5	10.7	7.6	Moderate	Moderate
Renewable Electricity Generation	4.1	3.4	4.2	3.1	4.2	2.9	High	Low
Energy Sector Development	3.7	3.1	3.6	2.7	3.7	2.6	Moderate	Moderate
Conventional Electricity Generation and Electric Utilities	3.2	2.7	3.4	2.5	3.5	2.5	High	High
Energy Efficiency and Conservation	2.1	1.8	2.3	1.7	2.4	1.7	Moderate	Low
Oil and Gas	1.4	1.2	1.4	1.0	1.2	0.8	Moderate	Very High
Public Sector Management	15.5	13.0	23.7	17.5	25.6	18.0	Moderate	Low
Financial Institutions, Housing Finance, Leasing, and Insurance	12.9	10.8	14.7	10.9	14.9	10.5	Low	Moderate
Water Urban Infrastructure and Services	9.5	8.0	10.2	7.6	10.7	7.6	Moderate	Low
Water Management	5.2	4.4	5.7	4.2	6.0	4.2	Moderate	Low
Urban Development	2.4	2.0	2.6	1.9	2.8	2.0	Moderate	Low
Waste Management	0.9	0.8	1.0	0.7	1.0	0.7	High	Moderate
Other Municipal Services	0.9	0.8	1.0	0.7	1.0	0.7	Moderate	Low
Agriculture and Rural Development	8.4	7.1	9.4	7.0	9.8	6.9	High	Moderate
Education	5.5	4.7	6.3	4.7	6.7	4.8	Moderate	Low
Healthcare	2.0	1.7	3.3	2.4	5.6	3.9	Moderate	Low
Multisector	4.2	3.5	3.8	2.8	3.4	2.4	Moderate	Moderate
Industry and Trade	2.8	2.3	3.1	2.3	3.0	2.1	Moderate	Moderate
Grand Totals	119.1	100.0	135.1	100.0	142.0	100.0		

ADB = Asian Development Bank.

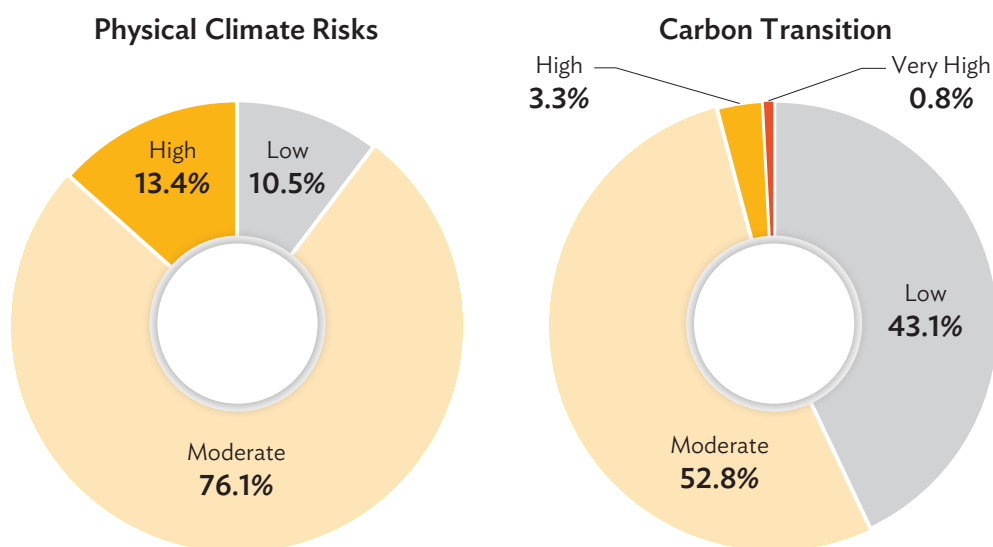
Notes: Table includes ADB's operations portfolio, including sovereign and nonsovereign exposure, based on the industry sector of projects. ADB's treasury portfolio is not included. It does not reflect climate risk sensitivity of the industry sector of ADB's counterparties, which is often different from the industry sector of the project, such as in the case for sovereign lending. Indicative sensitivities to carbon transition and physical climate risks are included for high-level analysis purposes only and do not imply credit risk exposure to climate-related risks for the individual projects and obligors. The indicative industry sector climate sensitivities are based on Moody's Investors Services. 2021. *ESG – Global, Environmental heat map: Updates to risk assessments for certain sectors*. 4 February 2022, with adjustments made to reflect ADB's project industry classification system.

Sources: Asian Development Bank, Office of Risk Management and Sustainable Development and Climate Change Department.

Table 9 also shows that ADB's largest portfolio project-sector concentration is in the transport sector (26% of total exposure), which carries overall moderate sensitivity to both carbon transition and physical risks. Components of the transport portfolio with high exposure to carbon transition risk represent less than 1% of the portfolio. While there has been a slight decrease in the percentage of transport projects funded over the past 3 years, ADB aims to support the building of smart infrastructure and integrates climate adaptation and mitigation measures in transportation projects.

Figure 9 shows ADB's exposure to physical climate and carbon transition risks in 2021, based on the project industry sector climate sensitivity classifications listed in Table 9. For physical climate risks, 76% of the industry sectors are listed with a "moderate" classification, 13% are classified with a "high" sensitivity, and the remainder is classified as "low." For carbon transition, it shows that most of the exposure is classified with a "low" or "moderate" sensitivity, while only 4% of projects are listed with a "high" or "very high" sensitivity.

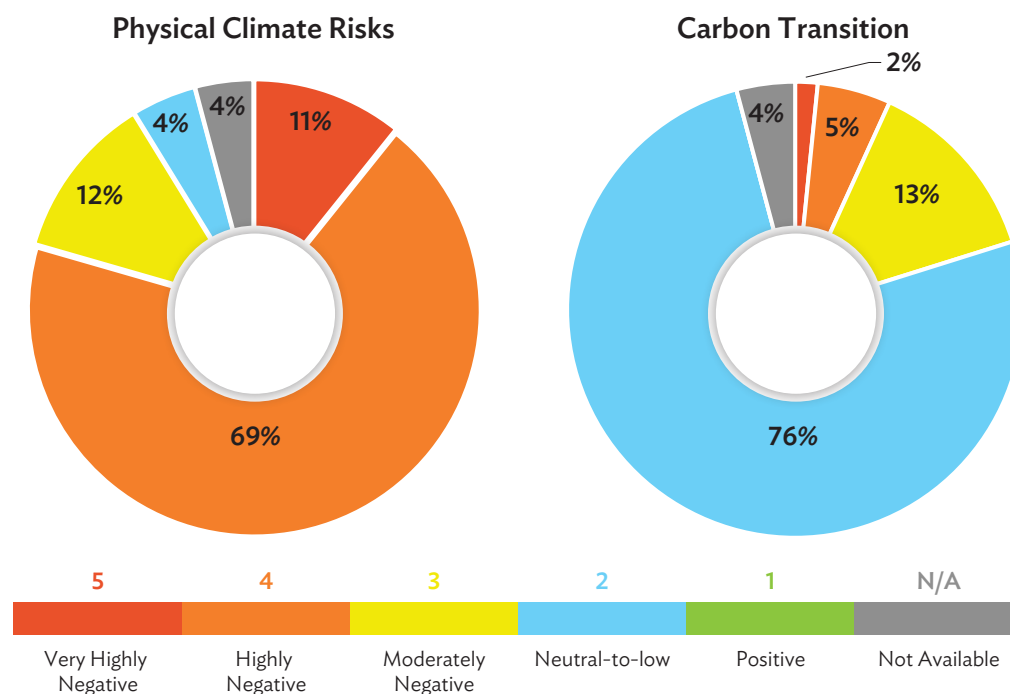
Figure 9: Operations Portfolio Sensitivity to Physical Climate Risks and Carbon Transition, Based on Project Industry Sector, as of 31 December 2021
(% of total exposure)



Notes: Charts include ADB's operations portfolio, including sovereign and nonsovereign exposure. ADB's treasury portfolio is not included. Definitions of "Very High," "High," "Moderate," and "Low" are based on the project industry sector heat map in Table 9.

Source: Asian Development Bank, Office of Risk Management.

Figure 10: Operations Portfolio Exposure to Physical Climate Risk and Carbon Transition, Based on Moody's ESG Scores for Sovereigns as of 31 December 2021
(% of total exposure)



ESG = environmental, social, and governance.

Note: Charts include ADB's operations portfolio, including sovereign and nonsovereign exposure. ADB's treasury portfolio is not included. Risk categories for "Physical Climate Risks" and "Carbon Transition" are based on Moody's ESG Environmental Issuer Profile Scores for the sovereign debt issuers of those country exposures. See Moody's. 2021. *General Principles for Assessing Environmental, Social and Governance Risks Methodology*, 19 October. Moody's "Physical Climate Risks" and "Carbon Transition" scores are not available for 17 out of 59 economies to which ADB has sovereign and/or nonsovereign exposure.

Source: Asian Development Bank.

As illustrated in Figure 10, ADB also tracks its exposure to physical risk and carbon transition risk utilizing Moody's Environmental, Social, and Governance (ESG) scores.⁶² Due to the region the bank operates in, ADB and its DMCs are subject to high physical risk as reflected in the large percentage of economies with a "highly negative" physical climate risk score. ADB knowingly takes on this risk and assists its DMCs by funding their efforts in climate adaptation, mitigation,

⁶² Moody's Physical Climate Risk and Carbon Transition scores are expressed on a scale from 1 to 5. A physical climate risk score of 5 for a sovereign indicates that physical climate risk has a very highly negative impact on the ESG issuer profile score (IPS). ESG IPS reflects Moody's opinion of an issuer exposure to environmental, social, and governance risks and benefits. The IPS also incorporates meaningful mitigating or strengthening actions related to those specific exposures. Metrics used for the assessment of the physical climate risk are indicators of relative exposure to heat stress, water stress, flooding and extreme precipitation, hurricanes and typhoons, sea level rise, and wildfires. Metrics used for the assessment of the carbon transition score include indicators of the hydrocarbon sector as a share of gross domestic product, fiscal revenues, and exports.

and resilience. A significant number of economies in the region have a carbon transition score of “neutral-to-low” indicating that those sovereigns may face limited exposure to risks associated with carbon transition. While this assessment helps in identifying which DMCs within ADB’s portfolio could have the greatest exposure to climate risk, it only provides a preliminary indicative assessment. This assessment needs to be complemented by an analysis of the capacity and ability of the sovereign to respond to or to mitigate those risks.

The data presented in Table 9, and Figures 9 and 10 represent only a high-level and preliminary analysis of ADB’s exposure to climate-related risks. This analysis does not include a borrower’s response to any potential sensitivity to climate-related risks nor does it consider a project’s exact location or tenor, which is critical to assessing ADB’s exposure to different types of physical climate risks. These exposures have also not yet been tested against crystallization of credit risks nor against different scenarios for climate-related risks.

Moreover, many of the projects within the portfolio classified as high risk are intended to help ADB’s borrowers improve their resilience to the impacts of physical climate risk or increase their energy efficiency and reduce their carbon emissions. They are, therefore, classified as part of ADB’s climate-related investments which are helping to respond to the threat of climate change.

Future Enhancements

While ADB has established metrics and targets to assess and manage climate-related risks and opportunities, there is room for improvement to better align with the TCFD Recommendations. As part of its Joint Commitment with other MDBs to align with the Paris Agreement goals, ADB is finalizing sector guidance notes for operations to assess alignment with the Paris Agreement based on the methodology developed by the MDBs. ADB is also currently developing guidelines for Assessing and Reporting the Carbon Footprint of ADB’s Project Portfolio. Under these guidelines, the absolute and relative (net) GHG emissions of all new processed projects (with certain exclusions) supported through ADB loans and grants will be assessed, but not the already approved projects. ADB will aggregate and report relative (net) GHG emissions attributable to ADB’s portfolio comprising of projects committed to during a particular financial year. ADB is planning to utilize the Partnership for Carbon Accounting Financials or a similar methodology to improve the disclosures on financed emissions.

ADB will continue to identify, track, and report climate-related metrics that will enable the Board and Management to more effectively assess the impact of climate-related risks to ADB’s operations, strategy, and targets. In line with the TCFD Recommendations, these disclosures will be subject to materiality, except for the disclosure of Scope 1 and Scope 2 GHG emissions. These metrics will be utilized to assess the impact of these risks over the short-, medium-, and long-term horizons and potentially impact future climate-related targets.

As Asia and the Pacific’s climate bank, ADB will continue to enhance the management of climate-related risks across its operations and portfolio. ADB will continue to engage DMCs in supporting the building of a more prosperous, inclusive, resilient, and sustainable Asia and the Pacific region, enable access to new and innovative cofinancing opportunities with public and private partners, and increase funding of climate finance in the private sector. ADB will continue to expand

partnerships that promote dialogue and collaboration among MDBs and other stakeholders. As ADB continues to implement the TCFD Recommendations, it aims to increase reporting and transparency on climate-related risk issues in future reports through metrics and progress toward targets. ADB will continue to monitor upcoming changes, if any, to the TCFD Recommendations to enhance the reporting process.

Climate-Related Financial Disclosures 2021

Progress Report on Implementing the Recommendations of the Task Force on Climate-Related Financial Disclosures

ADB became a Task Force for Climate-Related Financial Disclosures (TCFD) supporter in November 2021 and this report represents ADB's first climate-related financial disclosures under the TCFD framework. This publication provides an overview of ADB's progress in implementing recommendations in the four thematic areas identified by the TCFD framework: governance, strategy, risk management, and metrics and targets. It also presents proposed future actions to integrate climate-related risks and opportunities into the core of ADB's business strategy and decisions.

About the Asian Development Bank

ADB is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty. Established in 1966, it is owned by 68 members—49 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.



ASIAN DEVELOPMENT BANK

6 ADB Avenue, Mandaluyong City

1550 Metro Manila, Philippines

www.adb.org