



ADB

# Climate Change

January 2023

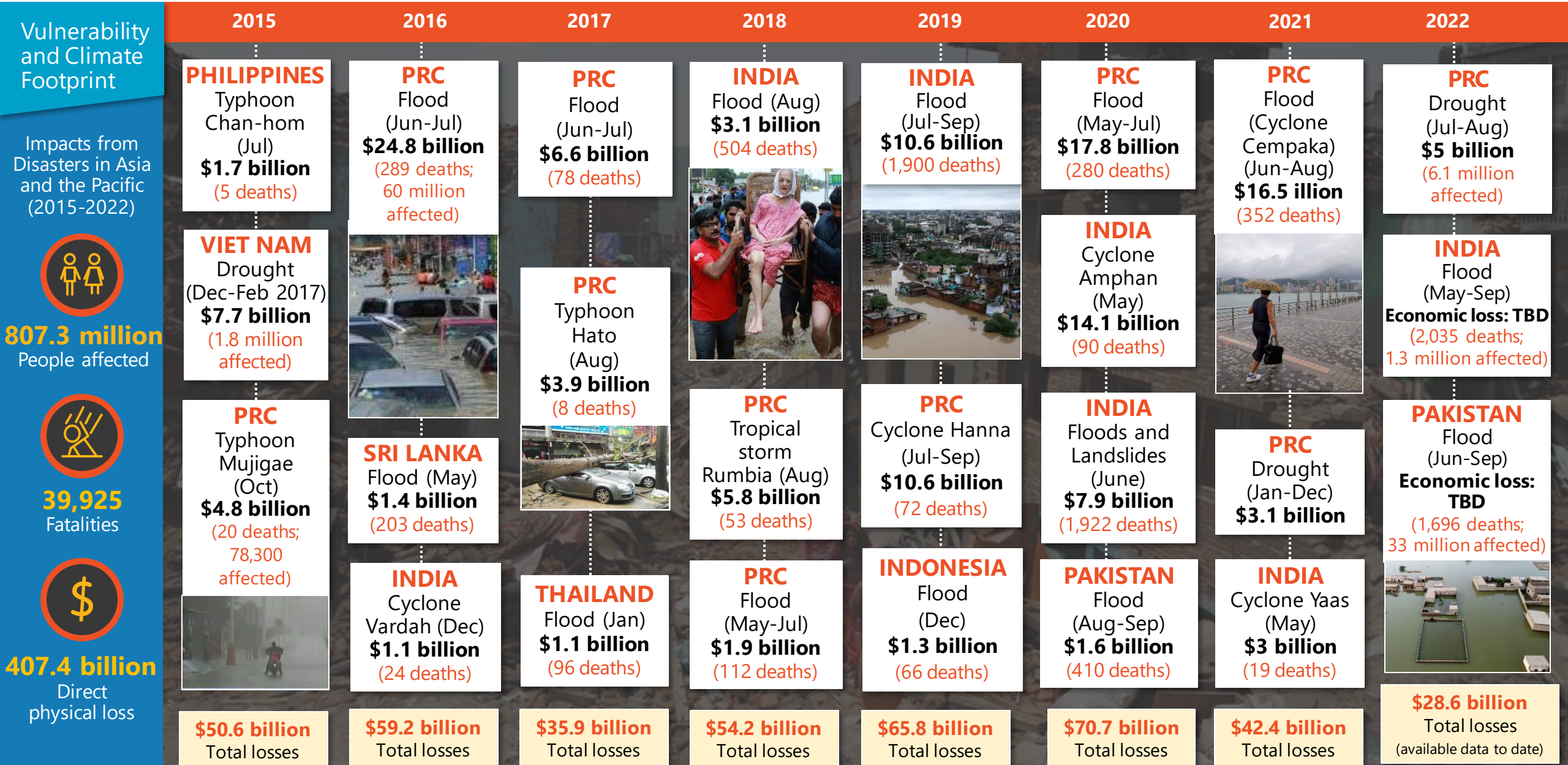
Virtual Business Opportunities Seminar with the Netherlands Enterprise Agency

*The views expressed in this presentation are the views of the author/s and do not necessarily reflect the views or policies of the Asian Development Bank, or its Board of Governors, or the governments they represent. ADB does not guarantee the accuracy of the data included in this presentation and accepts no responsibility for any consequence of their use. The countries listed in this presentation do not imply any view on ADB's part as to sovereignty or independent status or necessarily conform to ADB's terminology.*



## Overview of the challenge and ADB's high-level response

# Climate Change and Disasters in Asia and the Pacific



Note: 1. The amounts refer to the monetary amount of damage to property, crops and livestock at the year of the event. (Center for Research on the Epidemiology of Disasters)

# ADB High Level Climate Change Commitments

1

## Cumulative climate finance target (\$2030)

- a) \$35 billion during 2019-2024 (CRF).
- b) \$80 billion during 2019-2030, with elevated ambition of \$100B
- Status: \$20.4 billion as of end-2022.

2

## Cumulative climate finance for adaptation and resilience (\$2030 and President's Vision July 2021)

- a) \$9 billion during 2019-2024
- b) \$34 billion during 2019-2030

3

## Private sector climate finance (\$) announced October 2021

- a) \$12 billion during 2019-2030
- b) Anticipate crowding in of an additional \$18B-30B

4

## Projects supporting climate action (%; 3-year rolling average) (\$2030)

- a) 65% by 2024 (CRF).
- b) 75% by 2030

5

## Paris Agreement (%) (President's Vision July 2021)

- a) Full Paris alignment of all sovereign operations by 1 July 2023
- b) At least 85% of NSO aligned by 1 July 2023 and 100% by 1 July 2025

## UPSTREAM

- Rigorous diagnostics on climate change and disaster risk management
- Engaging DMCs to shape legal, regulatory and policy environment – **including business enabling environment**
- Country Partnership Strategy (CPS)
- Climate Change Policy Based Lending (PBL)

## MIDSTREAM

- Translating climate planning into national budget cycles and government national and development plans
  - NDC – nationally determined contribution
  - LTS - 2050 long-term low GHG emissions development strategies
  - NAP- National Adaptation Plan (NAP) Investment Plans
- Multi-hazard climate and disaster risk analysis
- Sector Plans
- Blended finance integrated into government and corporate planning

## DOWNSTREAM

- ADB's Indicative Country Pipeline
- ADB's private sector operations
- Projects designed to be climate smart and Paris aligned
- Country climate investment plans
- Technical Assistance - support to project development
- Blended finance instruments available to private sector



## Mobilizing climate finance

## Deploying concessional resources

### Internally managed resources (ADB donor trust funds and special funds)

- **Climate Change Fund (CCF)**
- Clean Energy Financing Partnership Facility (CEFPF)
- Urban Climate Change Resilience Trust Fund (UCCRTF)
- **Asia-Pacific Climate Finance Fund (ACliFF)**
- High Level Technology Fund (HLTF)
- **Others with bilaterals**
  - » Ireland Trust Fund for Building Climate Change and Disaster Resilience in Small Island Developing States

### Multilateral funds

- **Climate Investment Funds (CIF)**
- Global Environment Facility (GEF)
- **Green Climate Fund (GCF)**

## Maximizing market mechanisms

- **Upfront carbon finance**
  - » **Future Carbon Fund**
  - » **Japan Fund for the Joint Crediting Mechanism**
- **Article 6 Support Facility**
  - » Carbon Pricing / Carbon Markets
  - » Article 6 of the Paris Agreement
  - **Carbon Market Technical Support Facility**
    - » Joint Crediting Mechanism
    - » domestic emissions trading Systems
    - » Lifecycle Management of Fluorocarbons
- **Green, Blue and Climate Bonds**
- ASEAN Catalytic Green Finance Facility

## Catalyzing private capital

- **Direct project finance** (lending, guarantees, syndications), and equity investment
- **Public private partnerships:** (PPPs) working with client DMCs across stages of PPPs

### Facilities for private sector

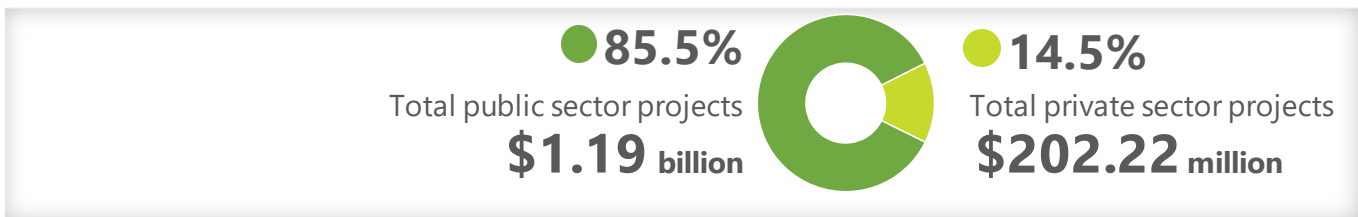
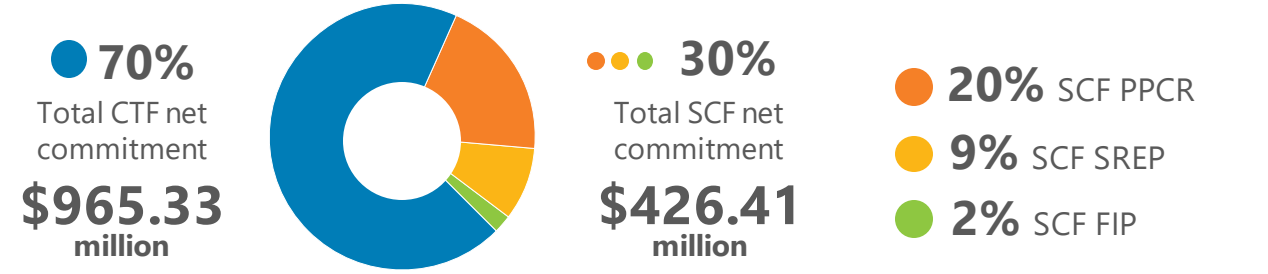
- Canadian Climate Fund for the Private Sector in Asia (I and II)
- Australian Climate Finance Partnership
- ADB Ventures Financing Partnership Facility



Established in 2008 represents one of the first global efforts to invest in a dedicated climate finance vehicle.



### For ADB-administered Project



CTF=Clean Technology Fund, SCF=Strategic Climate Fund. FIP=Forest Investment Program, PPCR=Pilot Program for Climate Resilience, SREP=Scaling Up Renewable Energy in Low Income Countries Program



Established in 2010 to channel climate finance, with pledges of **\$10.3 billion** from **49 state governments**

ADB's total GCF Funding to date: **\$946 million**

### Green Climate Fund (GCF)

has so far committed **\$10 billion** to



**190** projects globally



# ADB's Carbon Market Program

## Mobilizing carbon finance for incentivizing investments in low-carbon technologies



Future Carbon Fund	Japan Fund for the Joint Crediting Mechanism	Article 6 Support Facility	Technical Support Facility
<ul style="list-style-type: none"> <li>• Commenced in 2009</li> <li>• Provides financial and technical support for CDM projects by purchasing post-2012 CERs</li> <li>• <b>\$115 million</b> contributed by 4 governments and 2 private sector entities from Europe and Asia</li> <li>• Contracted <b>8.68 million CERs</b> with an investment of \$53.0 million</li> <li>• Supports <b>33 CDM projects</b> in 10 DMCs</li> <li>• Provides carbon finance support to 1.1 GW renewable energy projects</li> </ul>	<ul style="list-style-type: none"> <li>• Commenced in June 2014</li> <li>• Provides grants for advanced low-carbon technologies in ADB-financed and administered projects utilizing the Joint Crediting Mechanism initiated by Japan</li> <li>• <b>\$88.46 million</b> contributed by the Government of Japan</li> <li>• Supports six mitigation activities in <b>Maldives, Cambodia, Bangladesh and Mongolia</b> allocating \$ 41.48 million</li> </ul>	<ul style="list-style-type: none"> <li>• Established in 2018</li> <li>• Provides technical, capacity building, and policy development support to enhance DMC's preparedness to participate in new carbon markets under the framework of Article 6</li> <li>• <b>\$5 million</b> facility funded by ADB and the governments of Germany and Sweden</li> <li>• Supports <b>Bhutan, Indonesia, Mongolia, Pakistan, Philippines, Thailand and Viet Nam.</b></li> </ul>	<ul style="list-style-type: none"> <li>• Established in 2006</li> <li>• Implemented through a series of <b>6 Technical Assistance projects</b>, with a total amount of <b>\$13.25 million</b></li> <li>• Provides technical and capacity building support for enhancing mitigation actions through carbon markets</li> <li>• TA on <b>Promoting Life Cycle Management of Fluorocarbons</b> to support DMCs in promoting proper management of fluorocarbons. \$0.75 million.</li> </ul>

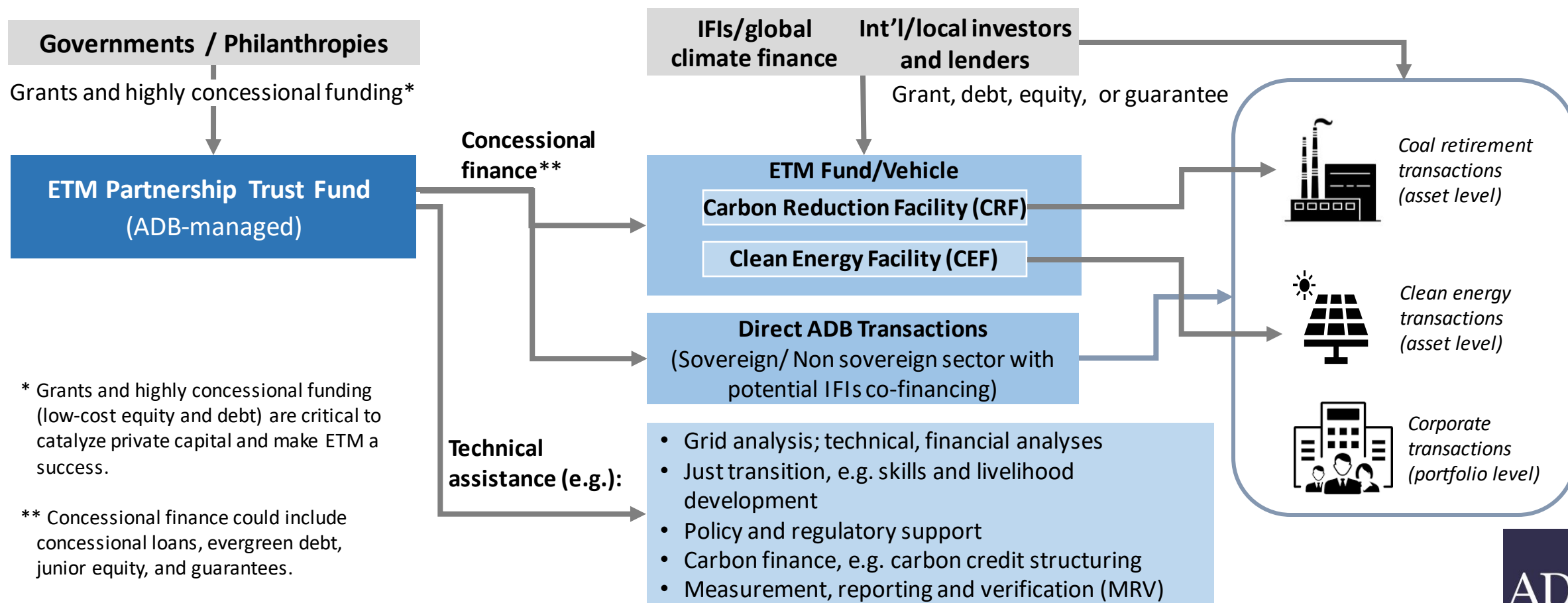
CDM: Clean Development Mechanism; CER: certified emission reduction; ETS: Emission Trading Systems



## Innovations and private sector finance

# The ETM program in a nutshell

- (i) Accelerates the retirement or repurposing of coal-fired plants using public and private finance through refinancing, acquisition or sustainability linked corporate loans; and (ii) scales up investment in clean energy and energy storage.
- Aims to achieve **just and affordable transition** addressing impacts to people and communities from coal retirement.



# Finance Sector - Innovative and Transformative Climate Finance Initiatives

## Green Financing

- **Green Banks**
  - Capitalizing public or nonprofit financial institutions purpose-built to develop, facilitate, and scale investment in greenhouse-gas-reducing projects

## Agriculture Supply and Value Chain Financing

- **Financing of sustainable high-value crop, reforestation and seaweed in Southeast Asia**
  - Tailoring financial services to develop a sustainable product supply and food value chain combined with carbon credit and insurance solutions

## Disaster Risk Financing

- **Disaster and Climate Risk Transfer Facility in the CAREC region**
  - Establishing earthquake, Flood and Infectious Disease Risk Financing Framework to enhance physical and financial resilience

## Green Housing Financing

- **Green loans for heating and cooling systems, solar panels, insulation and energy efficiency in Uzbekistan**
  - Combined with Financial Risk Management Products such as Energy Efficiency and Savings Insurance

## Blue Financing

- **SME BlueImpact Asia, a blended finance platform for blue SMEs across Asia**
  - Developing bankable, scalable and replicable small scale blue economy businesses leveraging catalytic funding to attract private sector financing

## Resilient Infrastructure Financing

- **Hindukush Himalaya Climate Risk-Informed Investments**
  - Leveraging the insurance industry for risk advisory, de-risking and co-financing services ensuring sustainable infrastructure against glacier melting

# ADB's Private Sector Operations investing in a low carbon future



Ambition to massively scale up climate finance  
 \$12b of ADB's own resources, and \$18-30b of private sector finance mobilized

Through loans and other debt instruments, equity investments, guarantees, loan syndication and technical assistance

## Climate finance for infrastructure

- Wind, solar, water, waste, agriculture

## Climate finance for financial intermediaries

- Climate bonds, green housing, renewable energy portfolios

## Climate funds providing concessional finance

- To address market failures



**GHG emissions reduced**  
 37.6 million tCO<sub>2</sub>e/year

**Power delivered**  
 57,887 GWh/year

**Generation capacity**  
 18,900 MW

**Households with access to power**  
 46,426

**Houses built**  
 319,905

**Wastewater treated**  
 513,070 m<sup>3</sup>/year

**Households with access to water**  
 888,607

**Potable water produced**  
 484.3 million m<sup>3</sup>/year

**Climate Bonds** INITIATIVE

First Climate Bond Initiative Certified bonds and loans in Asia-Pacific, Philippines, Thailand and Vietnam

**ADB Ventures**

Invests in seed and early stages of a companies developing innovative climate solutions, and partner with them across rounds



## Sectors and project examples



## BAN: Urban Project 2022

Adaptation project under development to respond to priorities of National Delta Plan 2100 by focusing on infrastructure, livelihoods and institutional strengthening for climate resilience in 22 coastal towns.





**Philippines: Davao Public Transport Modernization Project** – committed Dec 2022 - the establishment of a modern urban bus system in Davao City

<https://www.adb.org/projects/45296-006/main>



**China, People's Republic of: Gansu Environmentally Sustainable Rural Vitalization and Development Project** - aims to demonstrate innovative, low-carbon, and environmentally sustainable rural development models in Gansu Province by supporting the use of

renewable energy, sustainable agriculture practices, and high-level technology. <https://www.adb.org/projects/53077-001/main>

**Lao PDR: Monsoon Wind Power Project** -The project entails a wind power project with a contracted capacity of 600-megawatt (MW) to be constructed in Lao PDR that will export and sell electricity into neighboring Viet Nam

<https://www.adb.org/projects/documents/lao-55205-001-esia>



**Cambodia: Energy Transition Sector Development Program** - A sector development program that combines a \$50 million policy-based loan package with \$23 million in project investments to support the energy transition of Cambodia. Subprogram 1

<https://www.adb.org/projects/54430-001/main>





**Chennai Metro Rail Investment Project (India):** \$780 million facility to build new lines and improve the connectivity of the metro rail system at Chennai, the capital of India's Tamil Nadu state, with the city's existing bus and feeder services. By fostering a shift to less greenhouse-gas-emitting metro systems, it will also benefit climate change mitigation and, through appropriate design elements, improve resilience to climate change.



**South Commuter Railway Project (Philippines):** Up to \$4.3 billion to help finance the construction of nearly 55 kilometers (km) of modern suburban railway line connecting Metro Manila with the city of Calamba in the Philippines. The investment in the South Commuter Railway Project, which is part of the North–South Commuter Railway (NSCR) network, is ADB's largest infrastructure financing in the Asia and Pacific region to date. This has big implications for achieving green, resilient, and high economic growth.

## 1. Example: Multi Hazard Disaster Risk Assessment, Tongatapu



**PILOTING**

Longer term focus on setting parameters for resilient development and adaptation strategies and supportive investments

**Integrating CC projections methodically into analysis of inundation hazards**

**Covering geophysical and weather-related hazards**

## 2. Example: Development of Type 2 Coastal Towns Climate Resilience Project, Bangladesh

Adaptation project under development to respond to priorities of National Delta Plan 2100 by focusing on infrastructure, livelihoods and institutional strengthening for climate resilience in 22 coastal towns.



Sl. No.	Upazilashilpa	District	Climate Population (2010)	Annual population growth rate (%)	Projected population (2030)	Sl. No.	Upazilashilpa	District	Climate Population (2010)	Annual population growth rate (%)	Projected population (2030)
1	Barisal	Barisal	47,272	0.9	50,212	1	Barisal	Barisal	47,272	0.9	50,212
2	Barisal	Barisal	47,272	0.9	50,212	2	Barisal	Barisal	47,272	0.9	50,212
3	Barisal	Barisal	47,272	0.9	50,212	3	Barisal	Barisal	47,272	0.9	50,212
4	Barisal	Barisal	47,272	0.9	50,212	4	Barisal	Barisal	47,272	0.9	50,212
5	Barisal	Barisal	47,272	0.9	50,212	5	Barisal	Barisal	47,272	0.9	50,212
6	Barisal	Barisal	47,272	0.9	50,212	6	Barisal	Barisal	47,272	0.9	50,212
7	Barisal	Barisal	47,272	0.9	50,212	7	Barisal	Barisal	47,272	0.9	50,212
8	Barisal	Barisal	47,272	0.9	50,212	8	Barisal	Barisal	47,272	0.9	50,212
9	Barisal	Barisal	47,272	0.9	50,212	9	Barisal	Barisal	47,272	0.9	50,212
10	Barisal	Barisal	47,272	0.9	50,212	10	Barisal	Barisal	47,272	0.9	50,212
11	Barisal	Barisal	47,272	0.9	50,212	11	Barisal	Barisal	47,272	0.9	50,212
12	Barisal	Barisal	47,272	0.9	50,212	12	Barisal	Barisal	47,272	0.9	50,212
13	Barisal	Barisal	47,272	0.9	50,212	13	Barisal	Barisal	47,272	0.9	50,212
14	Barisal	Barisal	47,272	0.9	50,212	14	Barisal	Barisal	47,272	0.9	50,212
15	Barisal	Barisal	47,272	0.9	50,212	15	Barisal	Barisal	47,272	0.9	50,212
16	Barisal	Barisal	47,272	0.9	50,212	16	Barisal	Barisal	47,272	0.9	50,212
17	Barisal	Barisal	47,272	0.9	50,212	17	Barisal	Barisal	47,272	0.9	50,212
18	Barisal	Barisal	47,272	0.9	50,212	18	Barisal	Barisal	47,272	0.9	50,212
19	Barisal	Barisal	47,272	0.9	50,212	19	Barisal	Barisal	47,272	0.9	50,212
20	Barisal	Barisal	47,272	0.9	50,212	20	Barisal	Barisal	47,272	0.9	50,212
21	Barisal	Barisal	47,272	0.9	50,212	21	Barisal	Barisal	47,272	0.9	50,212
22	Barisal	Barisal	47,272	0.9	50,212	22	Barisal	Barisal	47,272	0.9	50,212

## 3. Example: Establishing Community Resilience Partnership Program to scale up adaptation in non-infrastructure sectors

**Community Resilience Partnership Program**

Supporting investments that reach scale while ensuring no one is left behind

What is the Community Resilience Partnership Program?

The Community Resilience Partnership Program (CRPP) is intended to help countries and communities in Asia and the Pacific scale up investments in climate adaptation, especially investments at the community level, that explicitly target the nexus between climate change, poverty, and gender. In doing so, the CRPP aims to support countries to meet their commitments to the Paris Agreement, the Sendai Framework for Disaster Risk Reduction, and the Sustainable Development Goals.

The CRPP in support of Global Calls on Adaptation and Resilience

- The CRPP responds to the COP26 goal of scaling up adaptation to protect communities and natural habitats, and mobilizing finance for climate adaptation measures that meet the needs of the poor and vulnerable communities.
- The CRPP is aligned with the priorities of the Global Commission on Adaptation and its principles for locally-led adaptation.



**Kiribati South Tarawa Water Supply Project** funded by ADB, GCF, World Bank and GoK aims to improve water supply services by construction of a desalination plant supported by solar PVs.

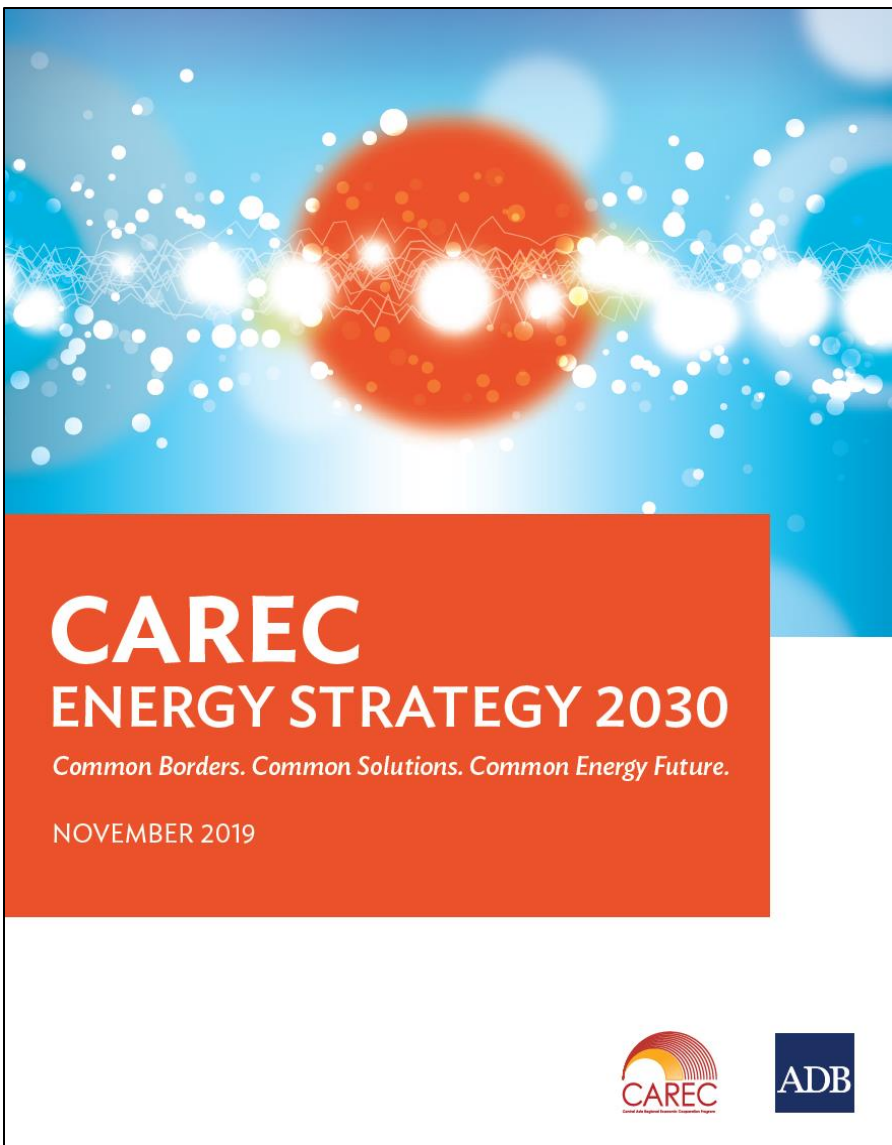


**Nauru –Climate Resilient Connectivity Project** - Port Upgrade supported by ADB, Australia and GoN – allowing year-round port operation

### **Tonga Renewable Energy Project - (TREP)**

- large Battery Energy Storage System (BESS) capacity on Tongatapu funded by private independent power producers – power can be stored and used overnight without negatively affecting Tonga Power Limited's grids
- electricity generation from the most feasible renewable resources in Tonga in Eua and Vava'u islands, and in five outer islands
- grid technologies and management upgrade to adapt to new electricity sources in five outer islands.





## **ADB Energy Investments in Central Asia (\$4.2 billion from 2017-2022), including:**

- Tajikistan: Reconnection to the Central Asian Power System Project (2018)
- Kazakhstan (2018 and 2019) Baikonyr 50 MW Solar and Total Eren Access M-KAT Solar
- Kyrgyz Republic: Uch-Kurgan Hydropower Plant Modernization Project (2019)
- Uzbekistan: Solar Public-Private Partnership Investment Program (2021)
- Azerbaijan: Alat Solar Power Project (2022)
- Uzbekistan: Zarafshan 500 MW Wind Power Project (2022)

## **Mongolia Energy Projects**

- 2018** – Upscaling Renewable Energy Sector Project (\$60m)
- 2020** - First Utility-Scale Energy Storage Project (\$103m)
- 2023** – Supporting Renewable Energy Development (\$100m)



**Further Background for Information**

## Loss and Damage Fund:

- New funding arrangements for assisting developing countries that are particularly vulnerable—this may possibly include efforts by MDBs. MDBs expected to submit inputs to the process on how they can support countries to address Loss and Damage – 2023 WB/IMF Spring Meetings.

## Climate Finance:

- Climate finance gap pre-2030 for developing countries is estimated at just below \$6 billion. Calls shareholders of MDBs and IFIs to reform MDBs practices and priorities, align and scale up funding, ensure simplified access and mobilize climate finance. Call for a new vision and commensurate operational model, channels and instruments.

## Joint MDB Work:

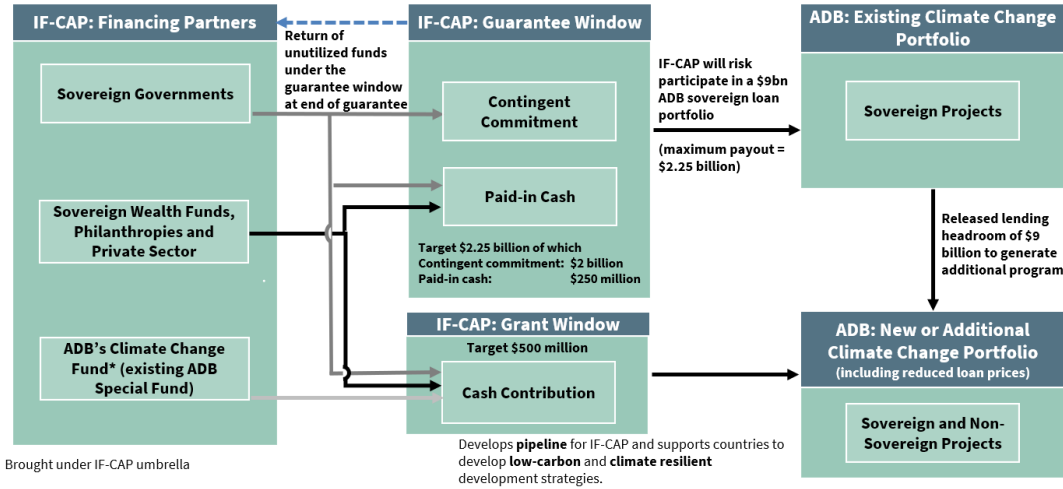
- Implementing Paris Alignment approaches; Mainstreaming Just Transition efforts: Boosting adaptation finance; Supporting efforts on nature; and Scaling up private sector mobilization.

## ADB Flagship

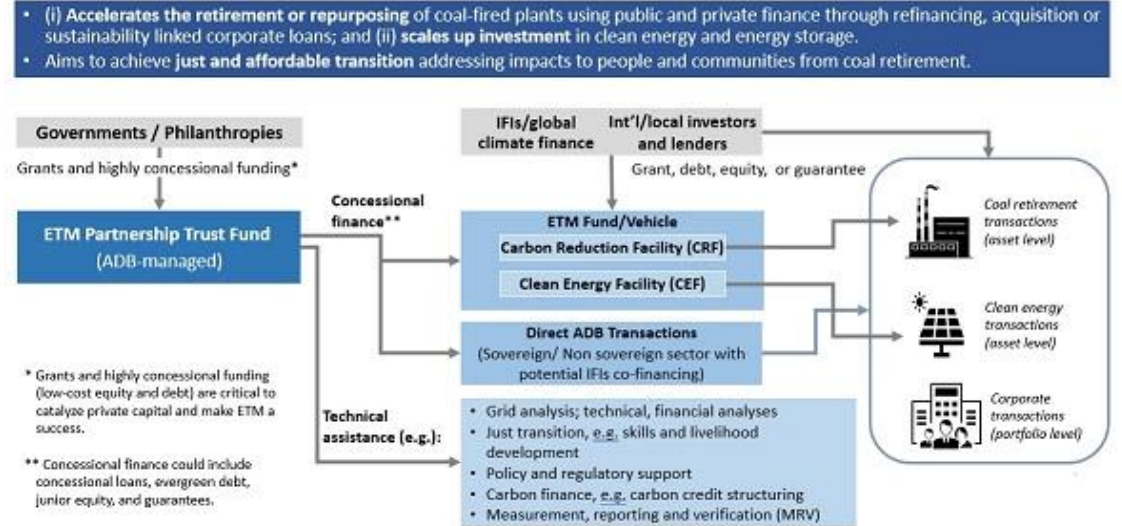
- Several initiatives, including the Asia and the Pacific Water Resilience Initiative (funding from the Netherlands and the Gates Foundation). Also, a Blue Finance Hub (ocean investments), a Just Transition Support Platform and Accelerating Climate Transitions through Green Finance in Southeast Asia Program.

# Mobilizing Finance for Climate Change Operations

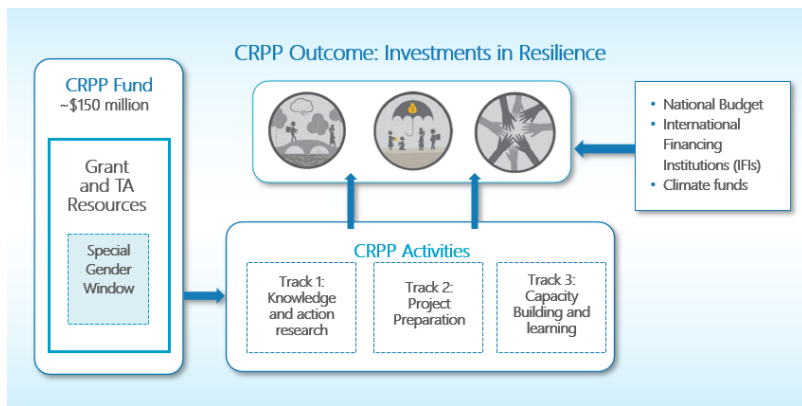
## 1. Innovative Finance Facility for Climate in Asia and the Pacific (IF-CAP)



## 2. Energy Transition Mechanism (ETM)



## 3. Community Resilience Partnership Program (CRPP)



## 4. ASEAN Catalytic Green Finance Facility (ACGF)



## 5. Carbon Market Program

