



# Climate Resilient Infrastructure

Paris, 7 October 2020

Presented by:

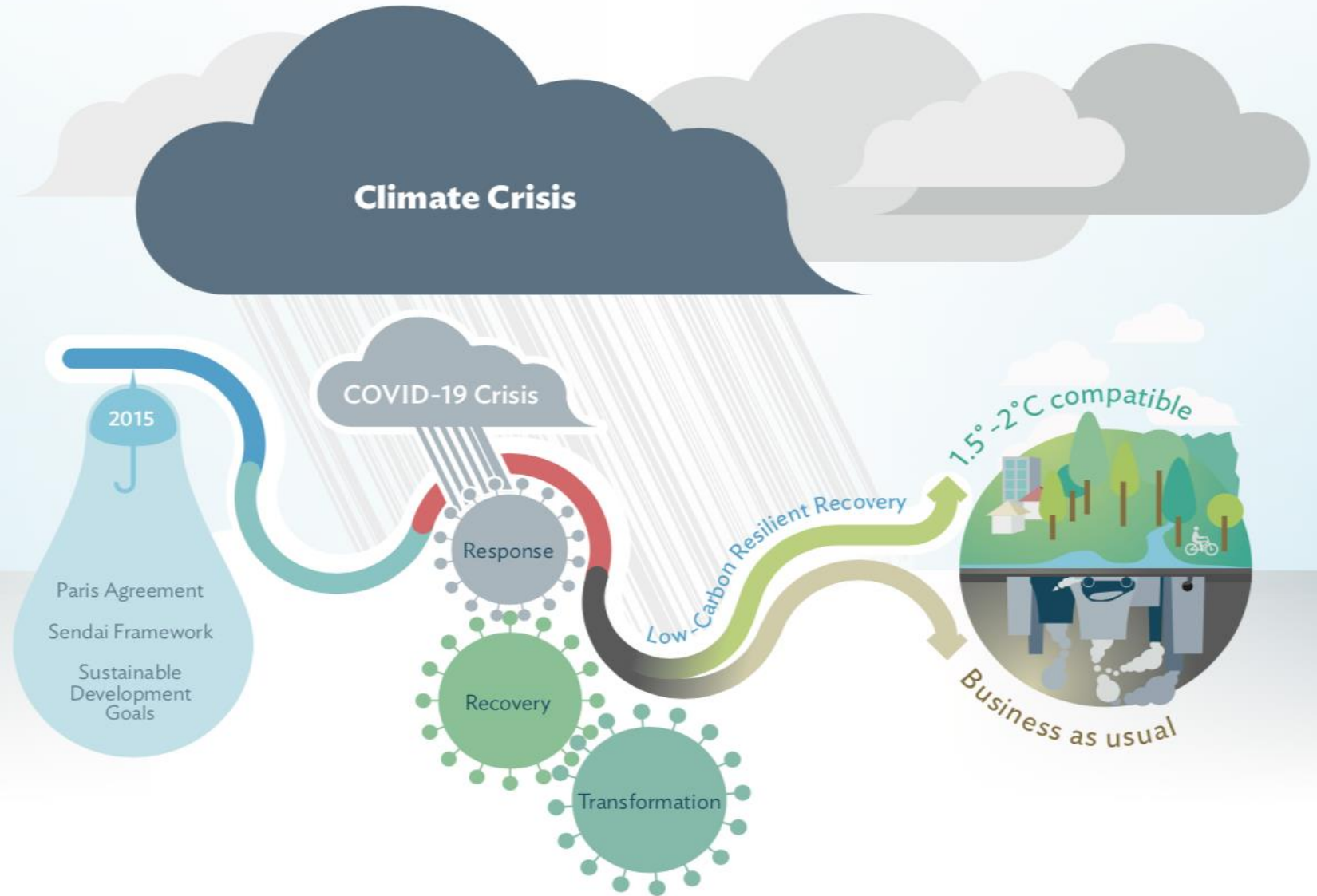
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# COVID-19 RECOVERY

## A Pathway to a Low-Carbon and Resilient Future



# Covid-19 Recovery | Pathway to a Low-carbon & Resilient Future

ADB

- Changes in climate will drive local and global risks – and these risks include pandemics like Covid-19.
  - We must think about the changing economics of the post-Covid 19 world. Will this time be different (e.g. the 2008 financial crisis and response)?
  - We need to integrate risks and opportunities in a context where social norms are challenged, companies are challenged, and virtual dialogues (like today's) take center stage.
- The economics of a post-Covid 19 world will require 1) a transformation of supply chains and 2) a massive reallocation of capital.
  - The world is at a turning point: opportunity to 1) push the climate agenda 2) do away with the jobs and infrastructure of yesterday by reducing further the dependence on fossil fuels.
  - The decisions taken in the coming months will have consequences for several generations to come, especially on vulnerable communities.
- Need to invest in energy efficient buildings, storage, transmission and distribution, climate resilient infrastructure, water management.
  - Need to de-risk these investments to make them bankable.



# OUTLINE

Asia-Pacific Climate Change and Disaster Risk Management (DRM) Challenge

Priorities of ADB on Climate Change and Disaster Risk Management

Climate and DRM Finance

Innovative Projects and Initiatives

ADB

ADB

# Asia-Pacific Climate Change and Disaster Risk Management Challenges

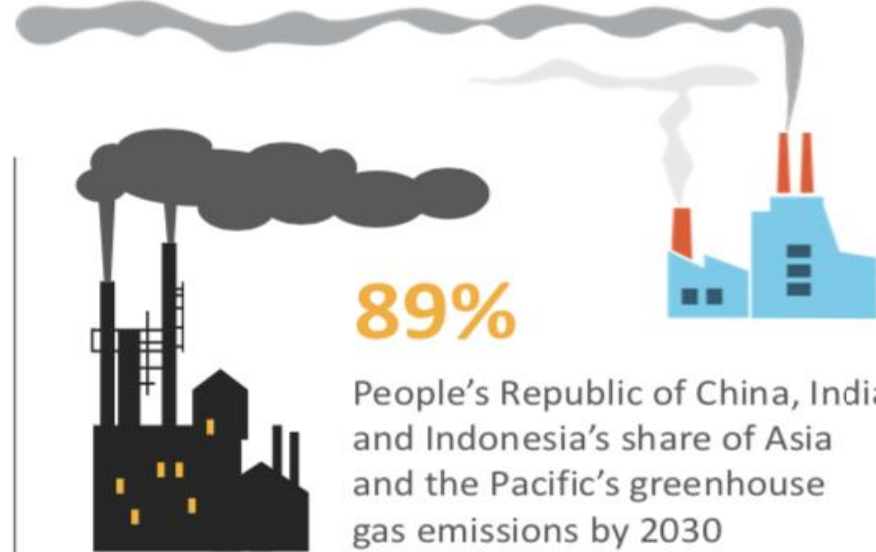
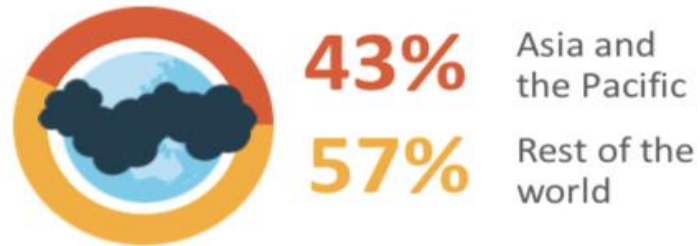




# Climate Change and DRM Challenges

## ASIA AND THE PACIFIC IS KEY

2017 CO<sub>2</sub> emissions:

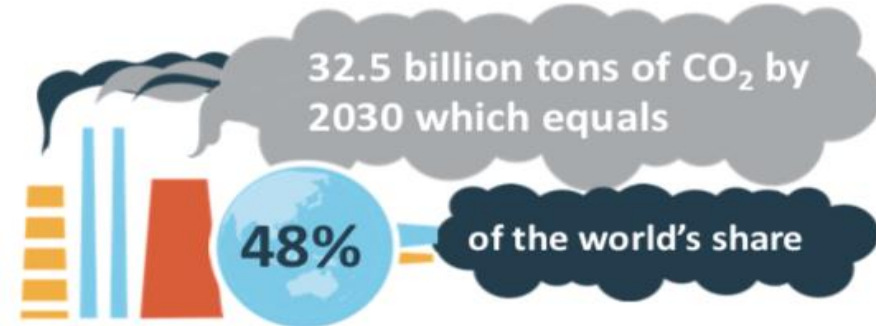


Developing Asia's share of world electricity demand will grow to\*



\*projection under New Policies scenario

Without radical changes, Asia and the Pacific will emit



## Impacts from Disasters in Asia and the Pacific (1989–2018)



**5.2 billion**  
People affected  
by disasters

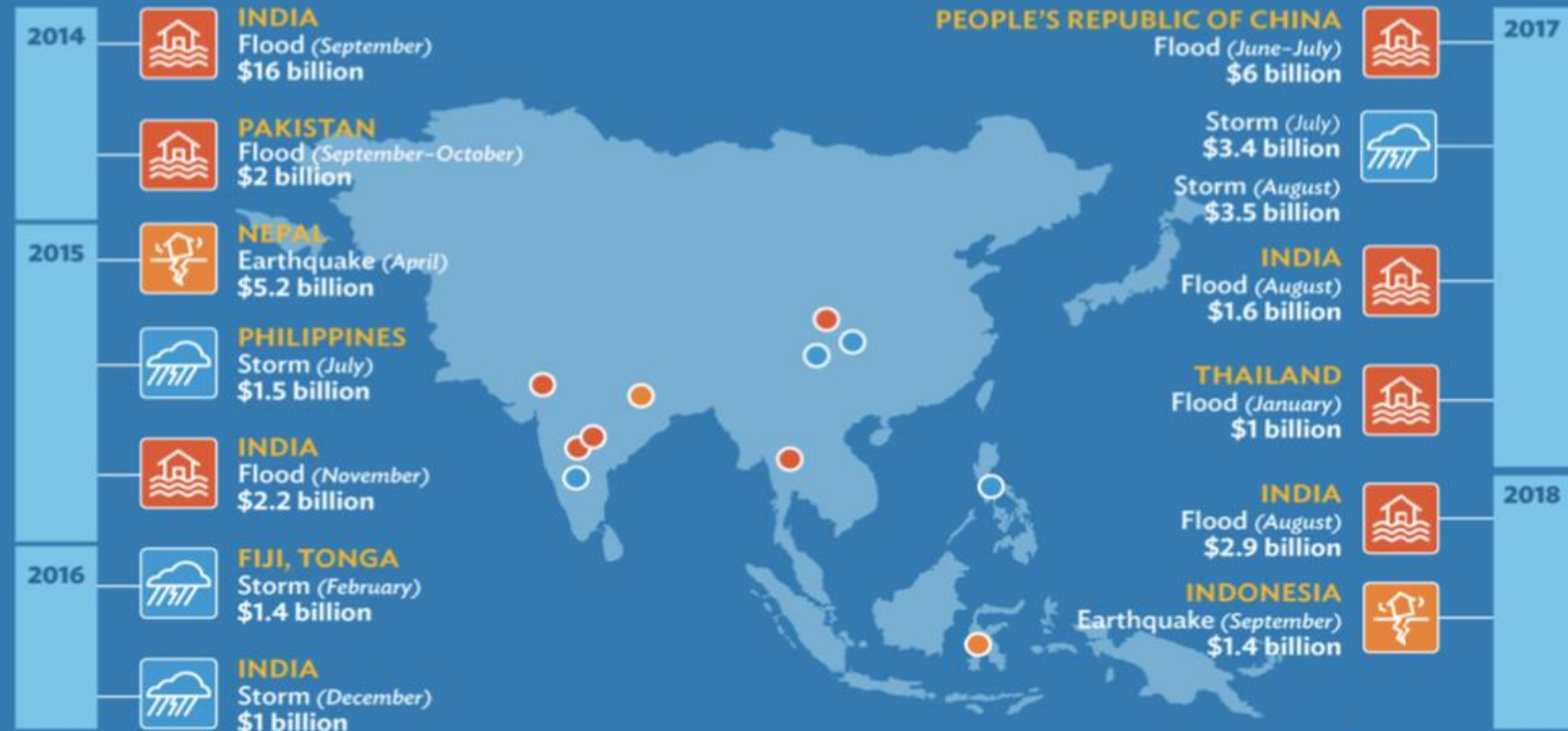


**1 million**  
Disaster fatalities



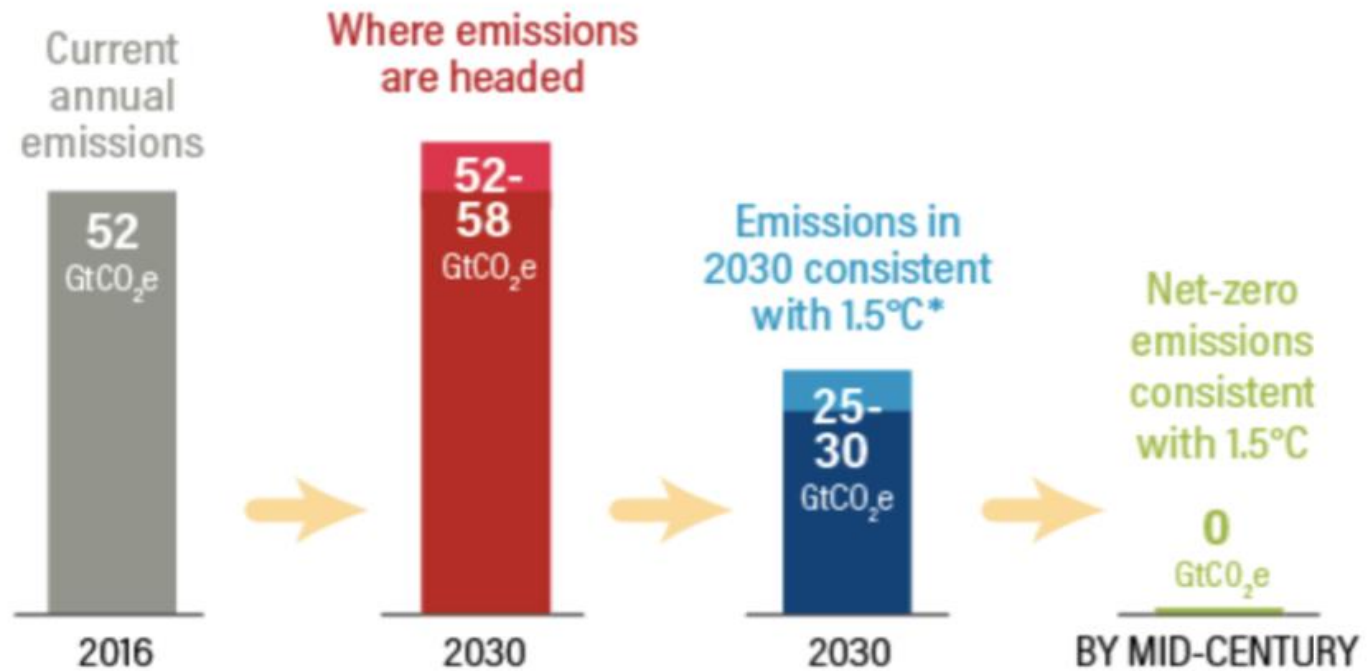
**843.6 billion**  
Total direct physical loss

## Damages from Recent Disasters in Asia and the Pacific<sup>1</sup>



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)

The World is **not** on Track to Limit Temperature Rise to 1.5°C



Notes: \*on average, no or low overshoot.



ADB

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# Priorities of ADB on Climate Change and Disaster Risk Management



Seven Operational Priorities



**Target** 75% of ADB's of the number of committed operations (on a 3-year rolling average) will support climate mitigation and adaptation by 2030

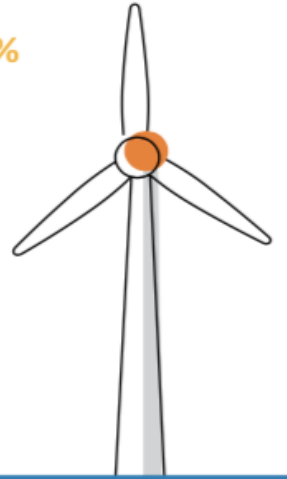


**Target** Climate finance from ADB's own resources reach \$80 billion (2019-2030)

# ADB's Climate Finance Target by 2020

-  **Target under the Corporate Results Framework:**  
ADB-assisted projects that support climate mitigation and/or adaptation: **45% for ADB, 35% for ADF**
-  Funding for tackling climate change will rise to **around 30%** of its overall financing
-  ADB will double its annual climate financing to

**\$6**  
billion



## OUT OF THE \$6 BILLION

**\$4**  
billion

will be dedicated to **mitigation** through scaling up support for renewable energy, energy efficiency, sustainable transport, and building smart cities.

**\$2**  
billion

will be **adaptation** through more resilient infrastructure, climate-smart agriculture, and better preparation for climate-related disasters.







### Clean Energy

- Expand **demand side** energy efficiency projects (e.g. electrical lighting), requiring new business models
- Increase **cross sectoral projects** (finance, urban, transport, water, agriculture etc.) requiring new financing instruments; integrated approach, e.g. **low carbon cities**



### Sustainable urban development

- Promote an integrated approach to address climate risks.
- Knowledge exchange on climate mitigation and adaptation measures.
- Build capacities of cities to utilize climate finance to achieve local environmental improvement objectives.
- Link nationally determined contribution frameworks to city-level greenhouse gas accounting.



### Sustainable transport

- Focus on low carbon transport modes (public transport, railways, e-vehicles)
- Ensure climate resilience in project design (additional drainage, raised road levels, storm surge protection)
- Achieving ADB climate change targets in transport sector support



### Climate-smart agriculture

- Explore new approaches, innovative ideas, and partnerships to ensure ADB investments are climate-smart by 2030
- Identify adaptation and mitigation measures to integrate in project pipelines
- Prepare guidance notes to track climate finance investments





**ECOLOGICAL RESILIENCE**

- Conservation, restoration, and rehabilitation of ecosystems (e.g. mangroves);
- Use of biodiversity and ecosystem services as part of an overall strategy of building resilience of communities and the economy

**PHYSICAL RESILIENCE**

Climate and disaster risk-informed infrastructure planning and development (e.g., elevated roads, cyclone shelters)

**FINANCIAL RESILIENCE**

Support for enhancing financial preparedness in a changing climate and disaster risk context (e.g., crop insurance, contingent financing)

**SOCIAL AND INSTITUTIONAL RESILIENCE**

- Pro-poor and pro-vulnerable investments (e.g. adaptive social protection, community driven development);

FINANCE, KNOWLEDGE AND PARTNERSHIPS

RESILIENCE

ADB

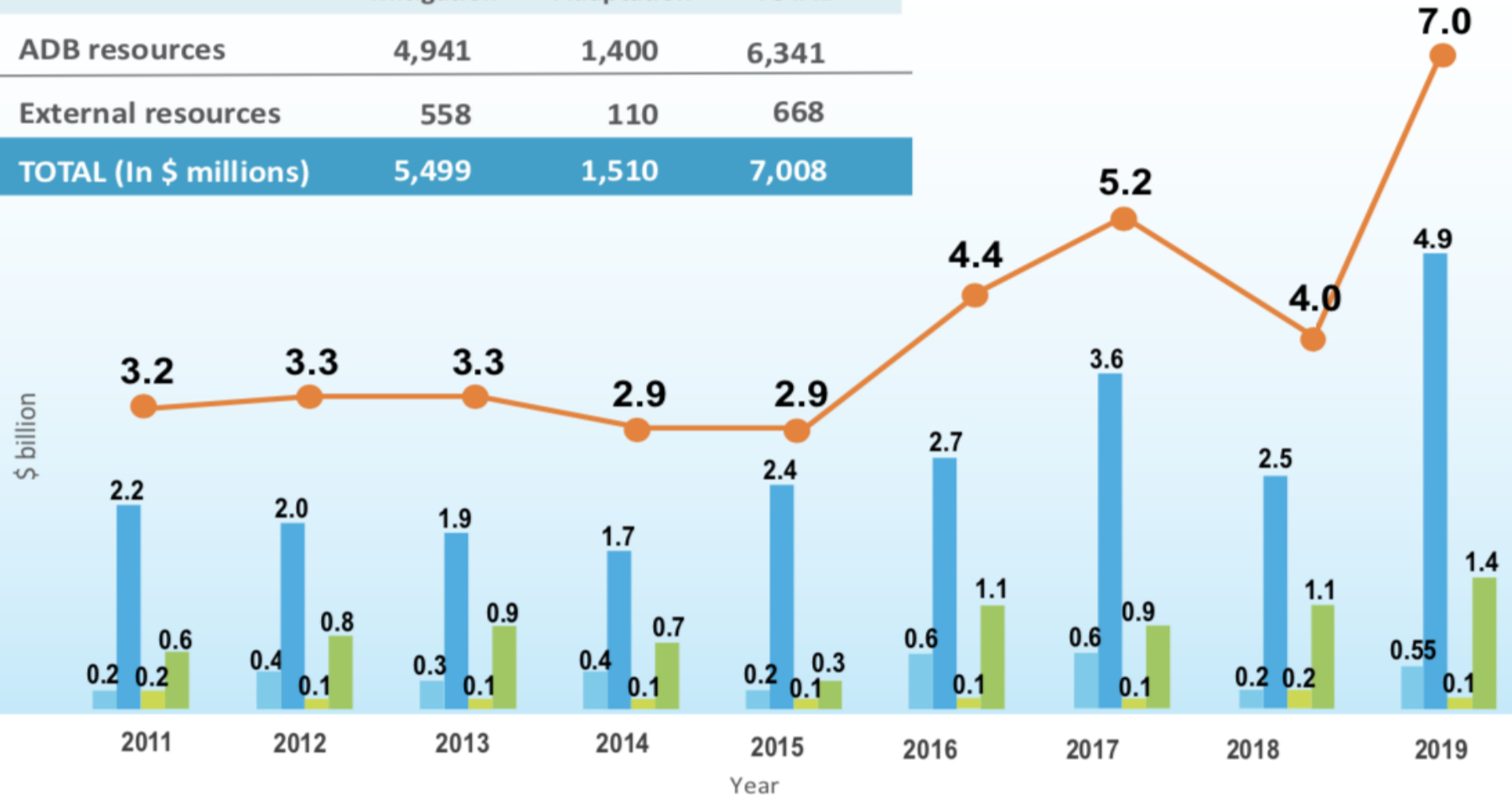
ADB

# Climate and Disaster Risk Management Finance



# ADB Climate Finance Approvals

2019 Climate Finance	Mitigation	Adaptation	TOTAL
ADB resources	4,941	1,400	6,341
External resources	558	110	668
<b>TOTAL (In \$ millions)</b>	<b>5,499</b>	<b>1,510</b>	<b>7,008</b>



■ Mitigation External      ■ Adaptation External  
■ Mitigation ADB resources      ■ Adaptation ADB resources  
—●— Total 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

**Multilateral funds**

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

## Maximizing market mechanisms

- **Upfront carbon finance**
  - Asia Pacific Carbon Fund
  - Future Carbon Fund
- **Carbon Market Technical Support Facility**
  - Clean Development Mechanism support
  - domestic emissions trading
- **Japan Fund for the Joint Crediting Mechanism**
- **Green and Climate Bonds**
- Supporting **other market mechanisms** (e.g. renewable energy credits; feed-in tariffs)

## Catalyzing private capital

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



# ADB and the Green Climate Fund

Established in **2010** to channel climate finance, with pledges of

**\$10.3 billion from 43 state governments\***

**Green Climate Fund**

has so far committed

**\$5.6 billion to**



ADB Project	Total Project Cost (in \$ million)	Type and Approval Date	Total GFC Funding (in \$ million)
Fiji Urban Water Supply and Wastewater Management Project	100 (Tranche 1)	Adaptation November 2015	31 (grant)
Pacific Islands Renewable Energy Investment Program	sum of subprojects	Mitigation November 2016	5 (grant)
Cook Islands Renewable Energy Subproject	14		12 (grant)
Nauru: Sustainable and Climate-Resilient Connectivity Project (formerly Port Development Project)	65	Mitigation and adaptation October 2017	27 (grant)
Tajikistan: Institutional Development of the State Agency for Hydrometeorology	11	Adaptation February 2018	5 (grant)
Cambodia: Climate-Friendly Agribusiness Value Chains Sector Project	140	Mitigation and adaptation February 2018	10 (loan) 30 (grant)
Mongolia: Ulaanbaatar Green Affordable Housing and Resilient Urban Renewal Project (AHURP)	544	Mitigation and adaptation February 2018	95 (loan) 50 (grant)
Kiribati South Tarawa Water Supply Project	58	Mitigation and adaptation October 2018	29 (grant)
Tonga Renewable Energy Project (TREP) under the Pacific Islands Renewable Energy Investment Program	53	Mitigation October 2018	30 (grant)
Pakistan Green Bus Rapid Transit	585	Mitigation October 2018	21 (grant), 29 (loan)
Shandong Green Development Fund	1200	Mitigation and Adaptation November 2019	100 (loan)
<b>Approved Total</b>			<b>473</b>

\*First replenishment received \$9.8 billion in pledges from 28 governments including two additional EU member states with pledges during the Replenishment Pledging Conference held in Paris on 24-25 October 2019.



## Ireland Trust Fund for Building Climate Change and Disaster Resilience in Small Island Developing States (SIDS)

- established by ADB and the Government of Ireland in May 2019
- committing to an initial 6-year program of funding of **€12 million (\$13.5 million)** for the period 2019 to 2024.
- primarily supports technical assistance and capacity development in the SIDS, through activities such as financing climate-proof infrastructure, helping countries plan for and respond to climate change, and leveraging global climate resources for mitigation and adaptation efforts
- aims to increase the preparedness and resilience of SIDS to disasters caused by natural hazards and to the impact of climate change; expected outcome of the fund is an increased number of investments in climate change and disaster resilience

Three proposals currently under consideration:

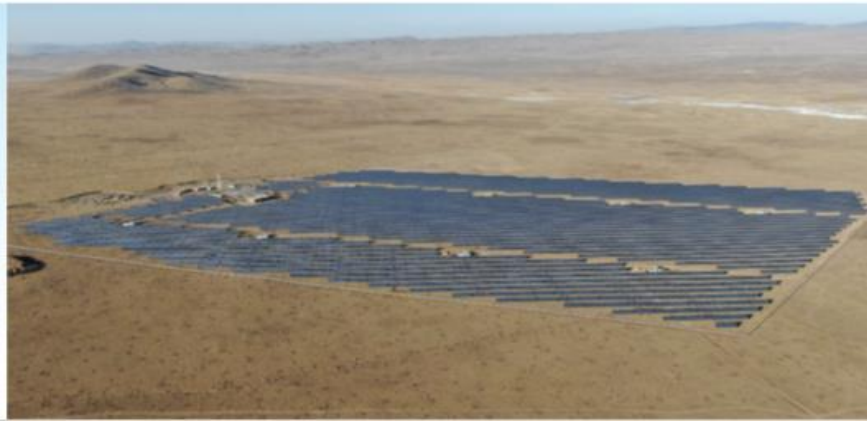
- i. Regional Technical Assistance (TA): Pacific Disaster Resilience Program (8 countries)
- ii. Tonga - Support to the Tonga Climate Change Trust Fund (CCTF) for community adaptation projects
- iii. Vanuatu, Port Vila - Community Action Plans for Strengthening Urban Resilience



- A multi-donor trust fund approved on 28 April 2017 with up to US\$30 million contribution from Germany. The maximum amount of aggregate contributions is envisaged to not exceed \$200 million.
- ADB has initial contribution of US\$1 million towards an accompanying Technical Assistance to support the operationalization of ACliFF.
- ACliFF will support the assessment, development and provision of **financial risk management products** that can help unlock financing for climate investments in clean technologies and practices, which are necessary for climate change mitigation and adaptation; and improve resilience of the poor and vulnerable to the impacts of climate change.
- Total contributions received: **\$11.39 million** as of September 2019



- established in April 2017 with a **CAD \$200 million contribution (US\$149.5 as of September)**
- designed to support greater **private sector participation** in climate change mitigation and adaptation in low and lower middle income countries and upper middle-income small island developing states in Asia and the Pacific.
- will seek to **promote gender equality and the empowerment of women** and girls in projects supported by the fund.
- will aim to play a key role in helping the private sector **overcome development risks** (including market risks, technology risks, financing risks, regulatory and other risks) by offering financing on **concessional terms** and conditions to projects that would not proceed solely on a commercial basis.



### Sermsang Khushig Khundii Solar Project

provided a technical assistance grant to offset first mover costs and to catalyze the financing of ADB's first private sector solar power project in Mongolia



# Innovative Projects and Initiatives





### Innovative Project Design

#### TOTAL FINANCING: \$21.65 million

- \$ 7.64 million COL/ADF
- \$ 11 million  
Strategic Climate Fund (loan)
- \$ 3 million  
Strategic Climate Fund (grant)

**DATE APPROVED** 23 May 2019

**TA 9736-CAM:** Capacity Development  
in the Electric Utility Industry  
**\$500,000** Republic of Korea e-Asia and  
Knowledge Partnership Fund (grant)

**TOTAL CLIMATE FINANCE** \$21.64 million

**TOTAL ADAPTATION FINANCE**  
\$1.17 million

**TOTAL MITIGATION FINANCE**  
\$6.47 million (COL/ADF)  
\$14 million (Strategic Climate Fund)

#### Collaboration between:

- Southeast Asia Department
- Office of Public-Private Partnership
- Private Sector Operations Department

#### CONTEXT

Project will support the expanded deployment of solar photovoltaic power plants in Cambodia and address the country's need to (i) expand low-cost power generation; (ii) diversify the power generation mix with an increase in the percentage of clean energy, in line with its greenhouse gas emission reduction targets; and (iii) expand the use of competitive tenders and other global best practices in the energy sector.

#### DESCRIPTION

The project will have two outputs: (i) a 100 MW solar power park in Kampong Chhnang Province and a transmission interconnection system to grid substation 6 (GS6) near the Phnom Penh demand center to supply power to the national grid.; and (ii) strengthened capacity of Electricite du Cambodge (EDC) in solar power plant construction and operation, project design and supervision, grid integration, and competitive procurement. EDC with ADB's support has tendered out the first 60 MW of generating capacity at the solar park to the private sector (independent power producer).

#### UNIQUE FEATURES

- first large-scale solar park in Southeast Asia
- exhibits **ONE ADB** approach (OPPP, SERD and PSOD working together) in providing end-to-end support to the country
- obtained the lowest solar procurement price in the ASEAN in 2019 at 3.88 cents/kilo watt-hour for the electricity



### Innovative Financing

#### TOTAL FINANCING: \$ 200 million (w/o cofinancing)

- \$100 million (OCR)
- \$100 million  
Green Climate Fund (concessional loan)
- \$ 84.53 million  
*Agence Francaise de Developpement*  
(Not ADB Administered)
- \$113.69 million  
KfW Bankengruppe  
(Not ADB Administered)

DATE APPROVED 25 September 2019

TOTAL CLIMATE FINANCE: \$200 million

#### TOTAL ADAPTATION FINANCE

\$25 million (OCR)  
\$25 million (GCF)

#### TOTAL MITIGATION FINANCE

\$75 million (OCR)  
\$75 million (GCF)

East Asia Department

### CONTEXT

PRC plays a pivotal role in managing the climate change challenge in Asia and the Pacific. Given the country's current level of greenhouse gas (GHG) emissions and climate vulnerability, there is a vast need for climate-related investments going beyond business as usual to underpin its development targets. With high reliance on coal power and heavy industry, Shandong Province is initiating systemic interventions to build climate resilience and decarbonize its economy.

### DESCRIPTION

The project will create a "fund" to catalyze private, institutional and commercial (PIC) capital for the development of climate positive infrastructure and business in Shandong Province and will support a portfolio of mitigation and adaptation subprojects assessed against both climate and financial eligibility criteria. It will also enhance knowledge and skills of local governments, civil society, and private sector to prepare climate-positive subprojects

### UNIQUE FEATURE

The project will have a leveraging effect with SGDF financing and will be time bound and targeted. It will incentivize subprojects to adopt green procurement standards, as greening a subproject's supply chain such that it shifts from "good practices" to "advanced benefits" will enable access to better financing terms and conditions from the SGDF. The project will also adopt SOURCE, a multilateral digital platform to fast-track the delivery of quality infrastructure projects.



# Regional: Legal Readiness for Climate Finance and Climate Investments

## TOTAL FINANCING

- **\$0.875 million**  
TSAF

**DATE APPROVED** 16 August 2016  
**DATE CLOSING** 30 June 2020

**TOTAL CLIMATE FINANCE**  
**\$0.88 million**

**TOTAL ADAPTATION FINANCE**  
**\$0.44 million**

**TOTAL MITIGATION FINANCE**  
**\$0.44 million**

**Office of the General Counsel**

## CONTEXT

Legal readiness for climate finance will become increasingly critical as DMCs start to translate their commitments under the Paris Agreement into specific actions on the ground. ADB provides TA to help its DMCs identify legal barriers to accessing climate and disaster finance, find opportunities for legal reform to address legal barriers to finance, and recommend ways to address interlinked regulatory, institutional, and administrative impediments to such finance.

## UNIQUE RESULT:

### LAO PDR

- ✓ ***Climate change decree enacted*** providing an umbrella framework for climate finance and coordination mechanisms for climate change monitoring and reporting requirements. Currently *developing a national climate change strategy*
- ✓ ***Disaster management law enacted*** setting out coordination mechanisms among the national and sub-national entities involved in disaster prevention, response and recovery efforts. Currently *developing a national disaster risk reduction strategy and related infrastructure*

### FIJI

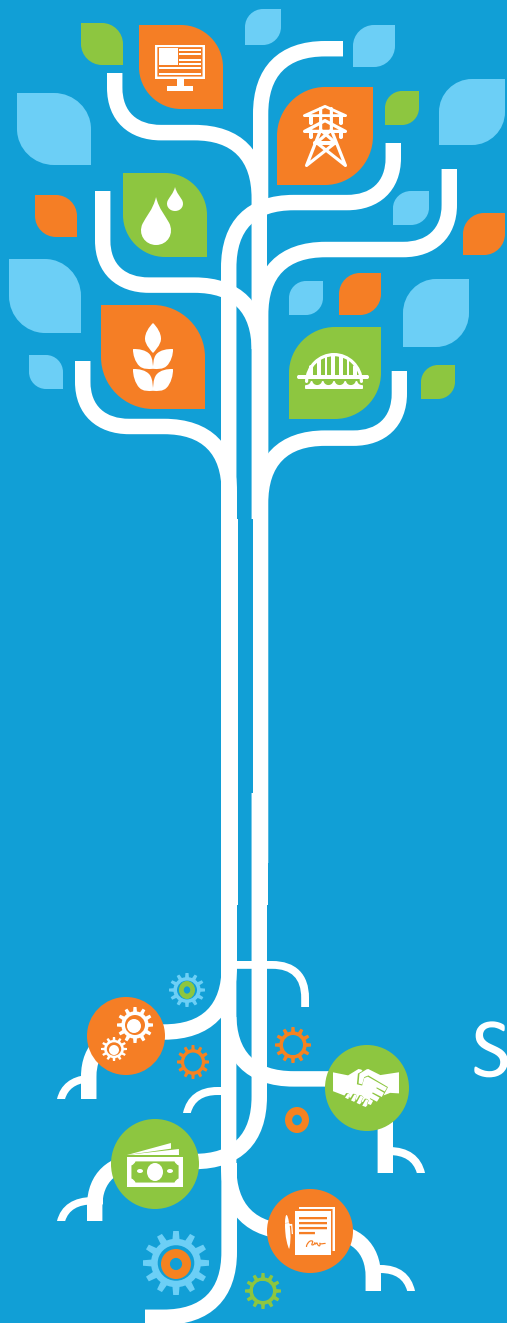
- ✓ ***Climate Change Bill introduced*** providing a comprehensive framework to guide Fiji's response to climate change, including key operative provisions of the Paris Agreement, governance structure and climate finance mechanisms

### NAURU

- ✓ ***Legal assessment conducted*** identifying the absence of legal framework to support renewable energy projects and to regulate an energy market in general. Currently *developing a new energy law* to fill the gap.







# THANK YOU!

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Department

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