



ADB's Climate Change and Disaster Risk Management Program

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Asian Development Bank

ADB

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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

Leveraging Knowledge and Partnerships

Climate Change Operational Framework (2017-2030)



Asia-Pacific Climate Change and Disaster Risk Management Challenges



Climate Change and DRM Challenges

ASIA AND THE PACIFIC IS KEY

2017 CO₂ emissions:

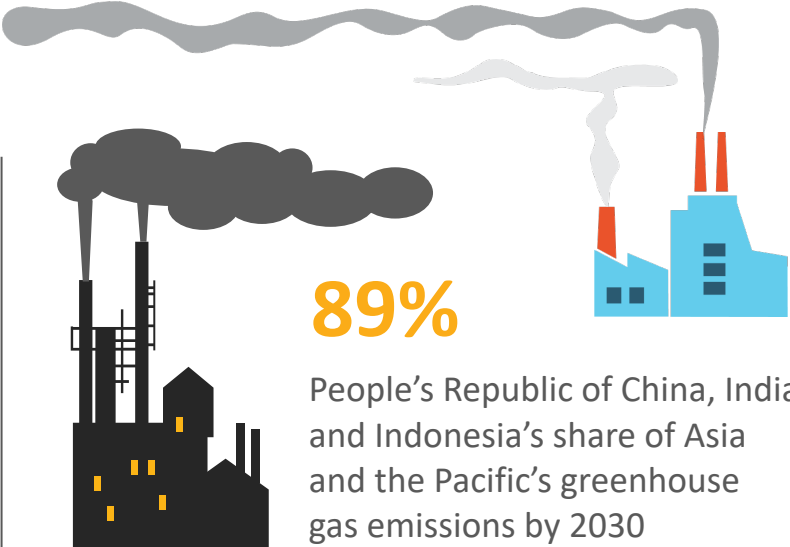


43%

Asia and the Pacific

57%

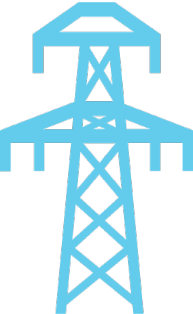
Rest of the world



89%

People's Republic of China, India, and Indonesia's share of Asia and the Pacific's greenhouse gas emissions by 2030

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

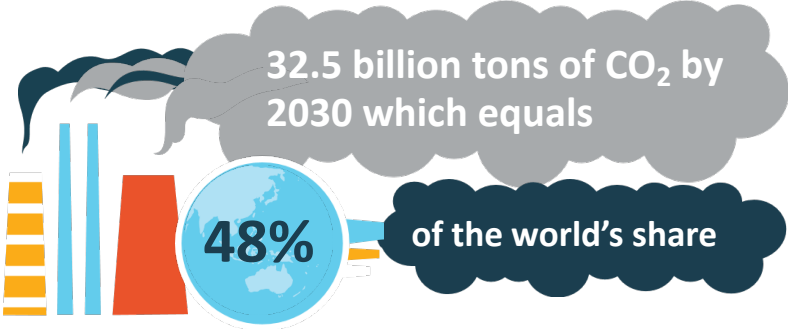


43%
in 2030

The PRC and India will make up **64%** of Asia's power consumption

*projection under New Policies scenario

Without radical changes, Asia and the Pacific will emit



32.5 billion tons of CO₂ by 2030 which equals

48%

of the world's share

Climate Change and DRM Challenges



IMPACTS WILL BE COSTLY

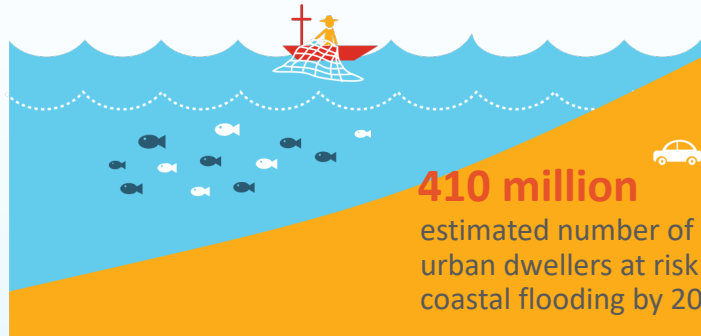
7 of the 10

Countries with the highest disaster risk are ADB DMCs



18 million

Bangladeshis will be displaced by a **1-meter rise** in sea level by 2050



>60%

Of the region's population work in sectors most at-risk from climate change impacts

Climate change will hike food prices, thus

64 million

Asians will be pushed into poverty for every 10% rise in food prices



410 million

estimated number of Asian urban dwellers at risk of coastal flooding by 2025



In inland areas, the number of people at risk will rise to **341 million by 2025**

For the past 30 years, disasters in Asia and the Pacific has affected **5.2 billion people**, causing **one million deaths** and total damage of **\$843.6 billion**



In the Pacific, sea levels rises **4X faster** than the global average. By 2010, sea level rise may reach **more than 1 meter**

Priorities of ADB on Climate Change and Disaster Risk Management

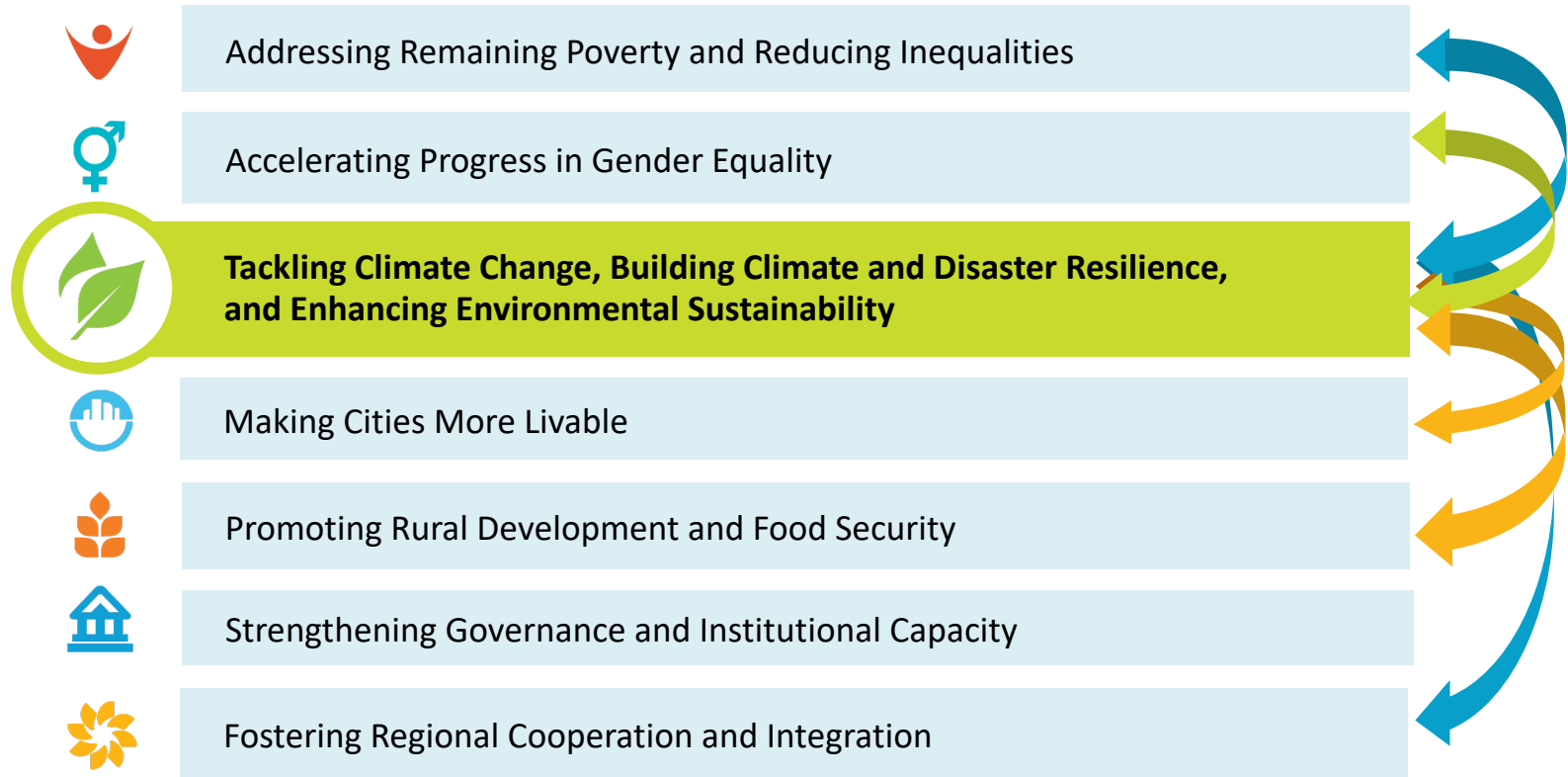


ADB Strategy 2030:

Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific



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:

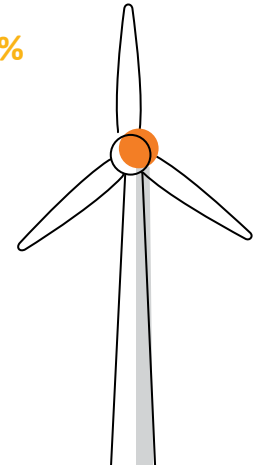
ADB-assisted projects that support climate mitigation and/or adaptation: **45% for ADB, 35% for ADF**



Funding for tackling climate change will rise to **around 30%** of its overall financing



ADB will double its annual climate financing to



OUT OF THE \$6 BILLION



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



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



Clean Energy

- > \$2 billion annual investments
- Sustainable Energy for All Program
- Review of 2009 Energy Policy

Sustainable Transport Initiative

- 20% of investments for urban transport; 18% for railways by 2020

Climate-Smart Agriculture

- enhanced management and climate resilience of natural resources

Land Use and Forest Management

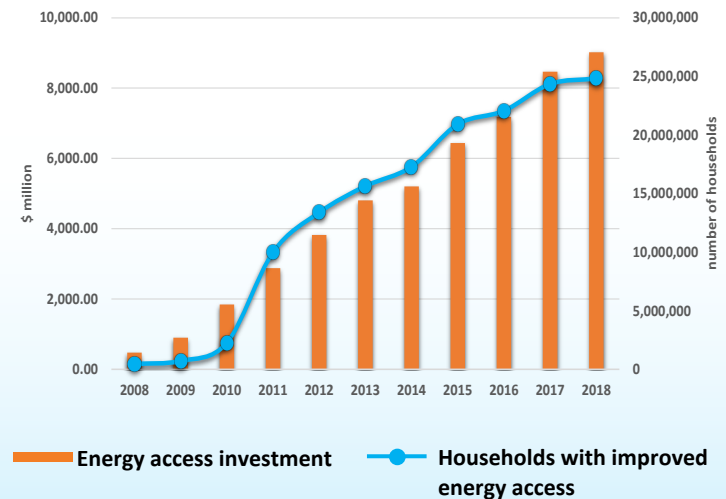
- Piloting REDD+/Forest Investment Program: Indonesia, Lao PDR



Clean Energy Investment Indicators
(2012–2018)

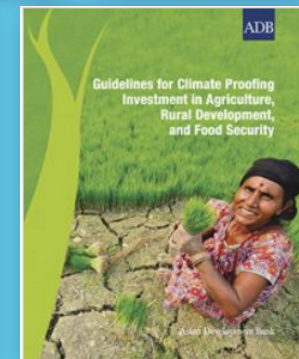
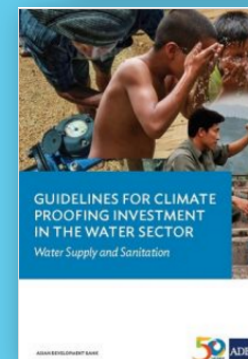
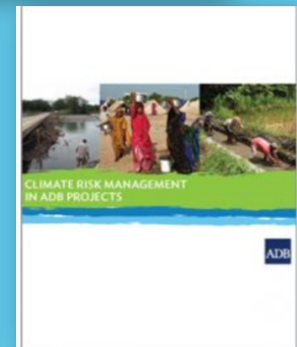
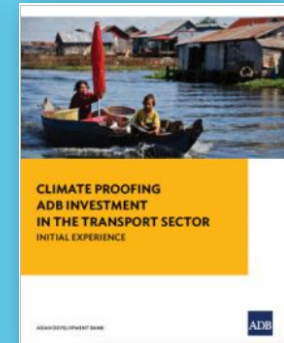
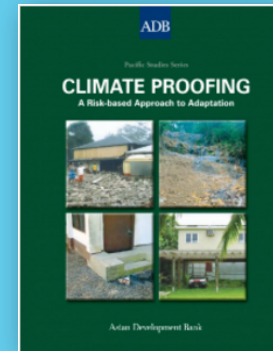
Electricity saved	17 gigawatt equivalent/year
Renewable energy capacity	9.5 gigawatts
GHG reduction	79.7 million tons of CO₂ equivalent/year

Impact of ADB's Investment on Energy Access
(2008-2018 cumulative)

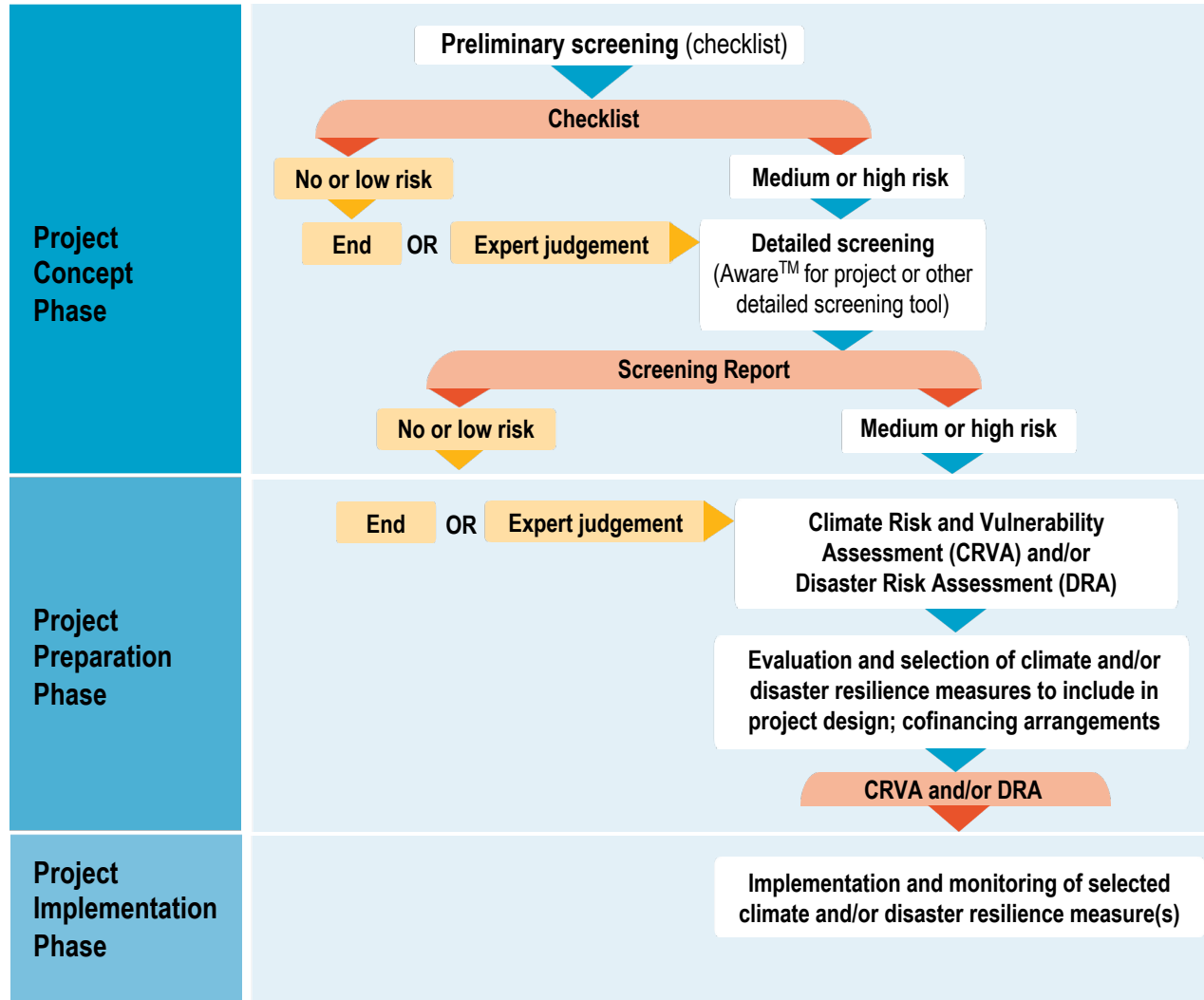


Adaptation Initiatives

- **Mainstreaming climate resilience in core development planning**
 - Pilot Program on Climate Resilience for Bangladesh, Cambodia, Nepal, Papua New Guinea, Tajikistan, Tonga and the Pacific Region
- **Climate proofing vulnerable projects:** energy generation, urban greenfield developments, water supply and irrigation systems, and transport infrastructure
- **Ecosystem-based adaptation**
- **Knowledge support:** regional climate projections consortium data facility , guidance and tools
- **Addressing social dimensions:** migration, gender, health impacts
- **Greater emphasis on integration of adaptation and disaster risk management**

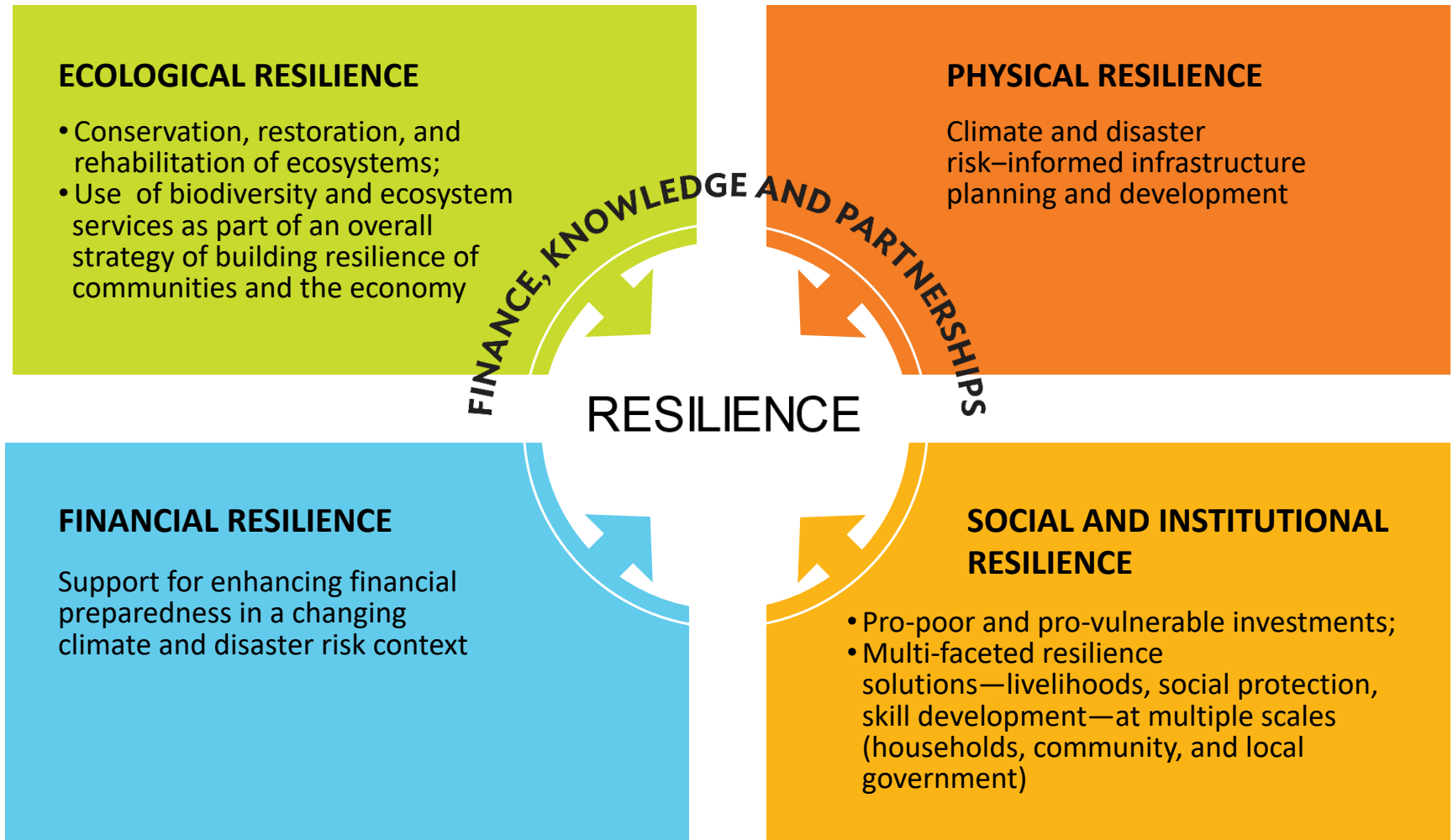


ADB Approach to Managing Climate Risks

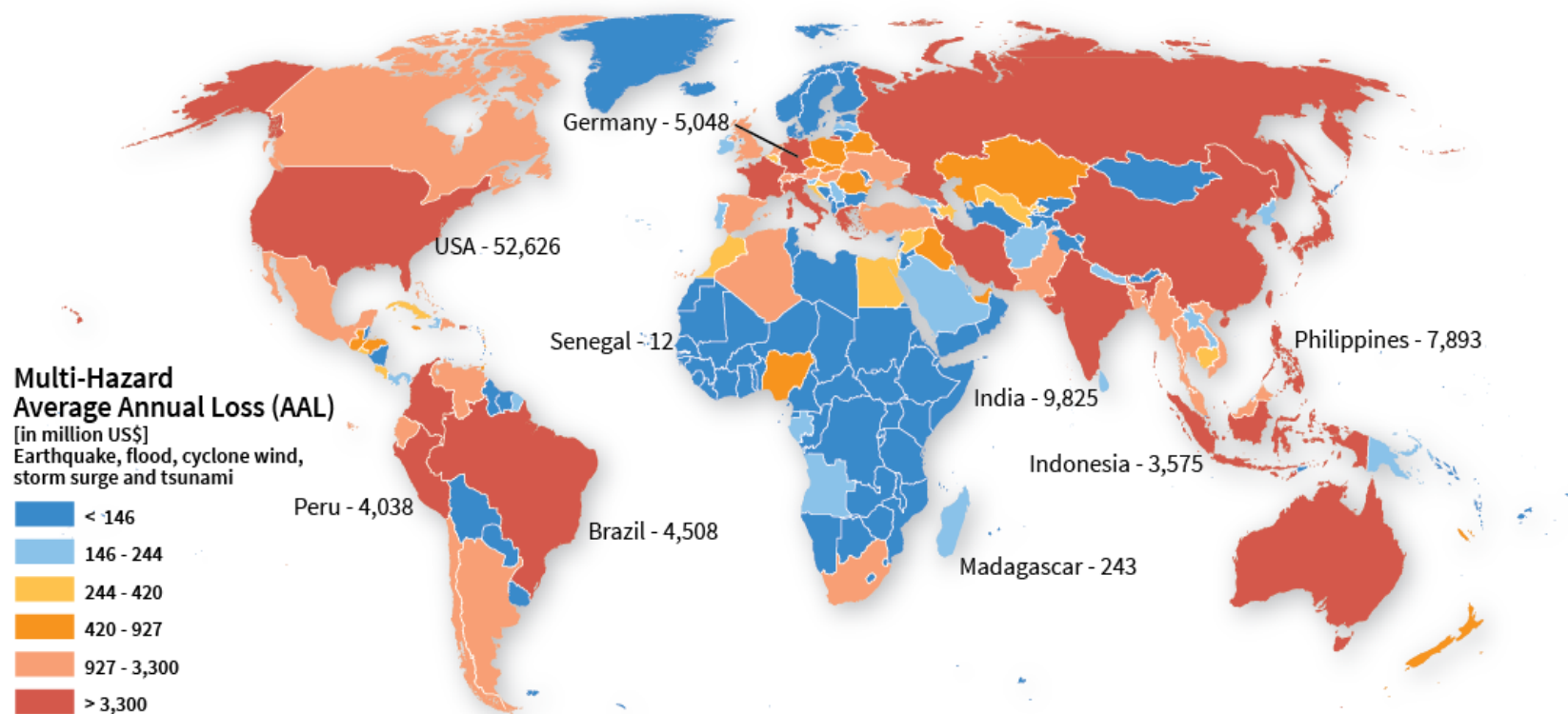


1. **Climate risk screening** at the concept development stage
2. **Climate risk and vulnerability assessment** in the preparation of projects at risk
3. **Technical and economic evaluation** of adaptation options
4. **Identification of adaptation measures**
5. **Monitoring and reporting** of climate risk ranking and adaptation spending

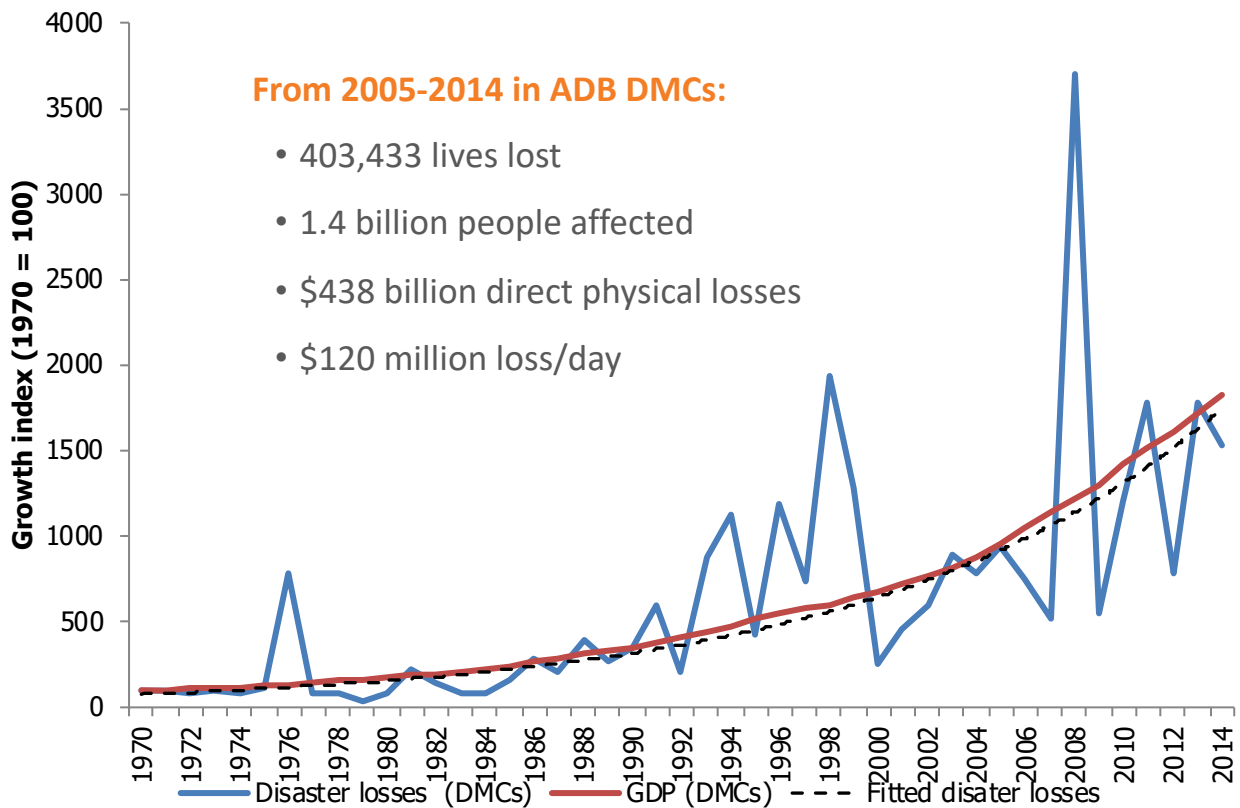
Holistic Approach to Resilience



Expected future disaster losses annualized over the long term



Disaster losses are growing at the same rate as GDP in ADB's DMCs



ADB DRM approvals, 2004-2018



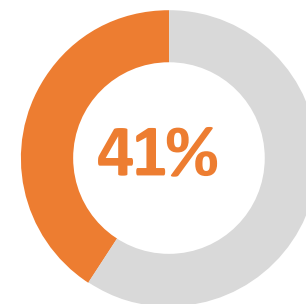
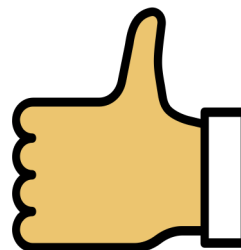
38 standalone disaster risk reduction grants and loans, totaling **\$1.52 billion**

518 grants and loans embedding disaster risk reduction components or design aspects

9 disaster risk financing grants and loans, totaling **\$44 million**

117 post-disaster early recovery and reconstruction grants and loans, totaling **\$6.04 billion**

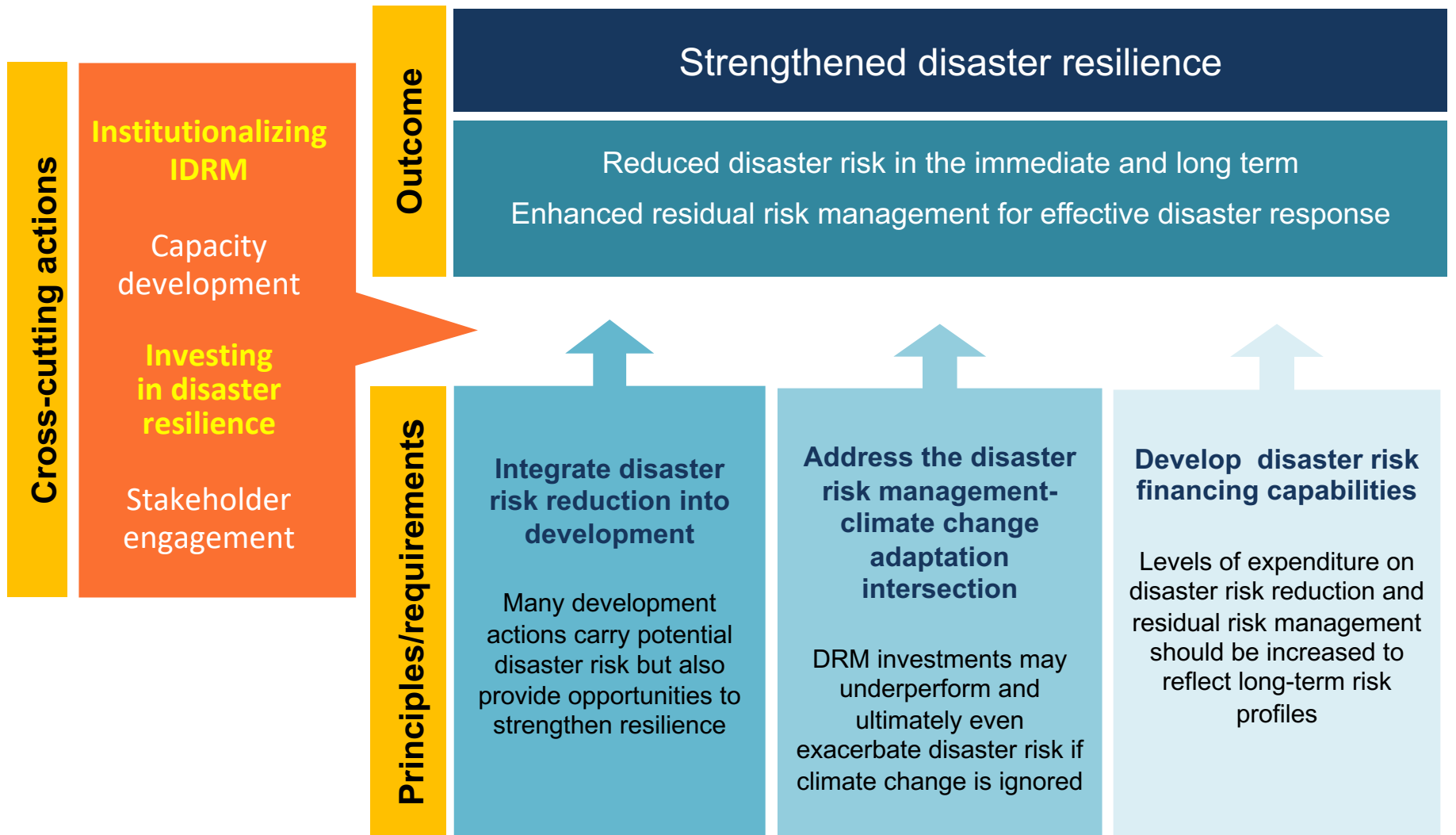
40 disaster risk reduction technical assistance projects, totaling **\$73.2 million**



In 2018, 41% or a total of **61 out of 150 projects** have DRM features



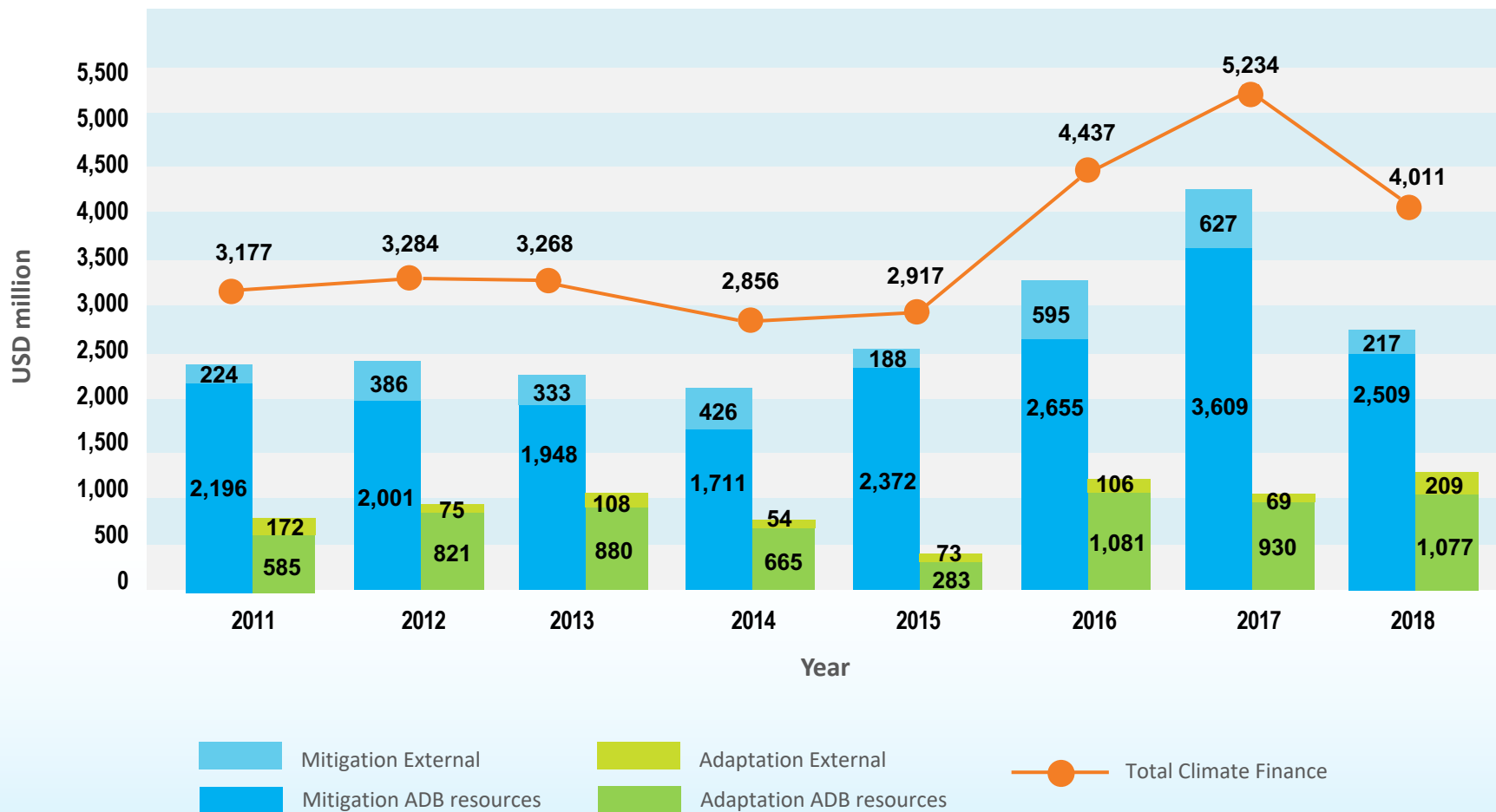
ADB's Disaster Risk Management Operational Approach



Climate and Disaster Risk Management Finance



ADB Climate Finance Approvals: Based on Joint MDB Methodology*



Notes: * See: <https://www.ebrd.com/documents/climate-finance/-2018-joint-report-on-multilateral-development-banks-climate-finance.pdf>

ADB Approach to Climate Finance Mobilization

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

Internally-Managed Resources



	Fund	Date Established	Fund Size \$ million	Available Balance \$ million
ADB Climate Change Fund (ADB net income)		May 2008	74.0	7.9
	Clean Energy		39.0	2.5
	REDD and Land Use		7.8	2.4
	Adaptation		27.0	3.0
	Climate Finance Readiness		0.3	0.0
Clean Energy Financing Partnership Facility			329.3	26.5
	Clean Energy Fund (multi-donor)	Apr 2007	122.0	16.7
	Asian Clean Energy Fund (Japan)	Jan 2008	55.7	5.2
	Carbon Capture and Storage Fund (Global CCS Institute and UK)	Jul 2009	70.9	1.9
	Canadian Climate Fund for the Private Sector in Asia	Mar 2013	80.7	2.7
Canadian Climate Fund for the Private Sector in Asia II		Apr 2017	149.5	69.5
Urban Climate Change Resilience Trust Fund		Nov 2013	149.4	12.4
Asia Pacific Disaster Response Fund		2009	80.0	21.0
Japan Fund for the Joint Crediting Mechanism		2014	71.1	40.7
Integrated Disaster Risk Management Fund (Canada)		Feb 2013	9.7	0.5
Carbon Finance (multi-donor)				
	Asia-Pacific Carbon Fund (up to 2012)^a	Nov 2006	151.8	
	Future Carbon Fund (post-2012)	Jul 2008	115.0	38.5
Asia-Pacific Climate Finance Fund		Apr 2017	33.3	11.5
Ireland Trust Fund for Building Climate Change and Disaster Resilience in Small Island Developing States (SIDS)		May 2019	13.5	1.6
Total			1,176.6	230.1

Note: Fund Size is the total commitment amount from partners. Available Balance as of 30 September 2019.

^a Closed.

Asia-Pacific Climate Finance Fund (ACliFF)

- 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



ACliFF Approved Allocations

(by financing modality and cost in '000 US\$)



Project	Total	Direct Charge	Investment Grant
Bangladesh: Scaling up Weather Index-Based Crop Insurance Pilot Project	5,200	200	5,000
Kazakhstan: Scoping the Green Technologies Finance Program	175	175	-
Pacific: Renewable Energy Guarantee Program	200	200	
Philippines: City Disaster Insurance Pool (PCDIP)	5,000	200	4,800
Regional: Climate Disaster Facility for Microfinance Institutions	190	190	
Total	10,765	965	9,800

- 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.



Sernsang 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

Deploying Concessional Resources Multilateral Climate Funds



Fund	Date Established	Total Global Fund Size (\$ million)	Allocated to ADB (\$ million)
A. Climate Investment Funds		8,095.0	1,441.1
Clean Technology Fund (CTF)	2008	5,400.0	1,000.0
Scaling-Up Renewable Energy Program for Low Income Countries (SREP)	2008	720.0	134.3
Forest Investment Program (FIP)	2008	775.0	30.8
Pilot Program for Climate Resilience (PPCR)	2008	1,200.0	276.0
B. Global Environment Facility (GEF)	1991	8,419.9	152.2
GEF Trust Fund	1991	6,619.7	127.9
GEF-Least Developed Countries Fund (LDCF)	2002	1,446.6	13.7
GEF-Special Climate Change Fund (SCCF)	2005	353.6	10.6
C. Kyoto Protocol Adaptation Fund (AF)	2009	565.3	0.0
Total		17,080.2	1,593.3

*As of September 2019

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



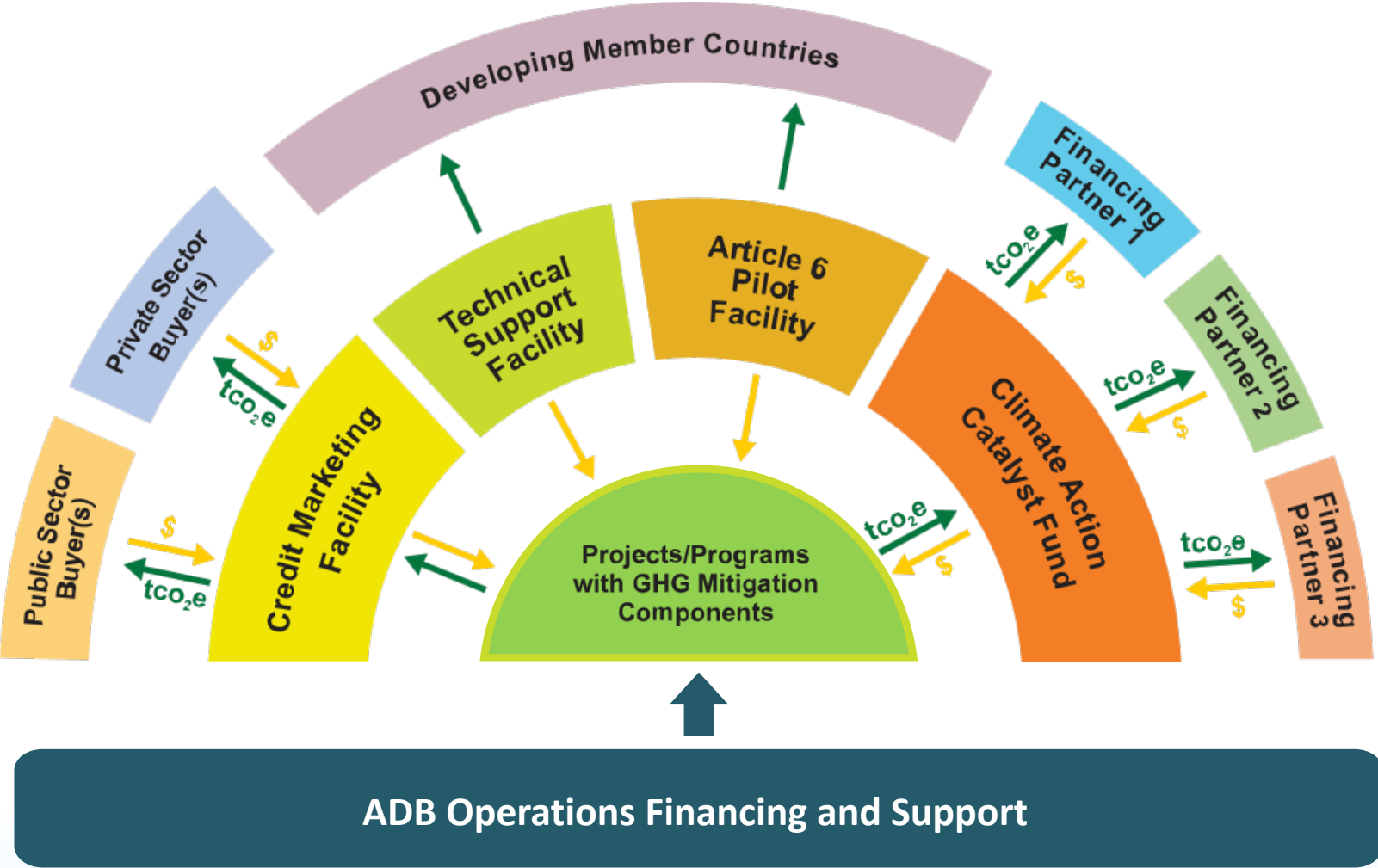
ADB Project	Total Project Cost (in \$ million)	Type and Approval Date	Total GFC Funding (in \$ million)
Fiji Urban Water Supply and Wastewater Management Project	100 (Tranche 1)	Adaptation November 2015	31 (grant)
Pacific Islands Renewable Energy Investment Program	sum of subprojects	Mitigation November 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)
Approved Total			473

*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.

ADB Carbon Market Program

Technical Support Facility	Asia Pacific Carbon Fund Pre-2013	Future Carbon Fund Post-2012	Japan Fund for the Joint Crediting Mechanism
<p>Commenced in 2006 Implemented through several Technical Assistance</p> <p>TA 6363: Preparing Clean Energy Projects Eligible for the Clean Development Mechanism</p> <p>TA 6438: Implementation of the Technical Support Facility under the Carbon Market Initiative</p> <p>TA 8223: Supporting the Use of Carbon Financing to Promote Green Growth in Asia and the Pacific</p> <p>TA 8654: Supporting the Use of Carbon Financing from New Carbon Market Mechanisms to Promote Green Growth in Asia and the Pacific</p> <p>TA 9062: Supporting Low-Carbon Development in Asia and the Pacific through Carbon Markets</p>	<p>\$151.8 million (TC) Trust Fund</p> <p>Commenced in 2007</p> <p>Fund Participants include Seven European Governments</p> <p>Supported 71 CDM projects in 9 DMCs</p> <p>Contracted 15.63 million CERs</p> <p>Provided carbon finance to 1.9 GW renewable energy projects</p> <p>All contracted CERs received and distributed to Fund Participants</p> <p>Fund closed in 2014</p>	<p>\$115 million Trust Fund</p> <p>Commenced in 2009</p> <p>Fund Participants include Four Governments and two private sector entities from Europe and Asia</p> <p>Contracted 10.6 million CERs</p> <p>Supporting 36 CDM projects in 12 DMCs</p> <p>Providing carbon finance support to 1.95 GW renewable energy projects</p> <p>Disbursed more than \$48.1 million as of October 2019</p> <p>Fund will close in 2021</p>	<p>Commenced in June 2014</p> <p>\$71 million</p> <p>Total contributions from Ministry of Environment Japan (MOEJ)</p> <p>JFJCM provides financial incentives for adoption of advanced low-carbon technologies in ADB-financed projects</p> <p>Grant to sovereign projects (max. \$10 million)</p> <p>Interest subsidy to non-sovereign projects (max. \$10 million)</p>

Carbon Market Program



New Initiatives

- **Article 6 Support Facility:** a \$4 million initiative, funded by ADB, the Government of Germany, and the Swedish Energy Agency, to help developing member countries in Asia and the Pacific combat climate change through a key provision of the Paris Agreement. This facility will provide technical, capacity building, and policy development support to help the DMCs meet Article 6 of the Paris Agreement.
- **NDC Advance platform** will help countries mobilize finance to implement Nationally Determined Contributions (NDCs) regarding greenhouse gas emissions reductions that each country has voluntarily committed to under the Paris Agreement. Funded through a \$4.55 million ADB grant, it aims to provide technical assistance that helps countries better engage with potential sources of climate finance and to make use of innovative finance mechanisms; identifying and prioritizing climate projects; and supporting countries in tracking how projects deliver against their NDC goals.



Disaster Risk Reduction Funding

- Up to \$200 million of grant funding for disaster risk reduction (DRR) during the Asian Development Fund (ADF) 12 period (2017-2020), with supplementary concessional OCR loans
- DRR grant funding is available for all concessional-assistance countries, including for concessional-OCR only countries, in addition to their performance-based allocations.
- The earmarked DRR funding is intended to strengthen disaster resilience and help spur more investment in this area, contributing to sustainable, inclusive development in ADB's concessional assistance only countries.
- DRR funding will support: (i) stand-alone DRR projects; (ii) discrete DRR components of other grant and loan projects; and (iii) the incremental cost in strengthening the disaster resilience of other ADB investments.

Disaster Response Funding

ADF Disaster Response Facility (DRF)

- Provides concessional assistance only countries additional allocations for post-disaster response
- The DRF was piloted under ADF 11 and regularized under ADF 12, marking a more flexible, predictable, and systematic approach to disaster response
- It provides concessional assistance only countries up to an additional 100% of their annual performance-based allocation to respond to disasters caused by natural hazards.
- The DRF has received a \$163 million ADF grant allocation under ADF 12. DRF lending will be funded from the 5% concessional OCR lending reserve.

Asia Pacific Disaster Response Fund (APDRF)

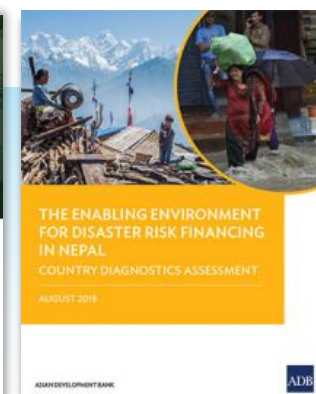
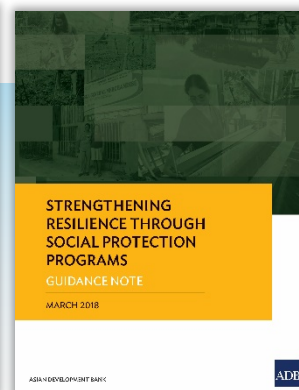
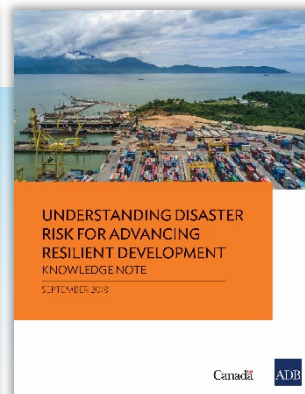
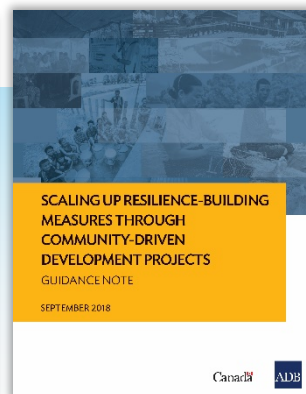
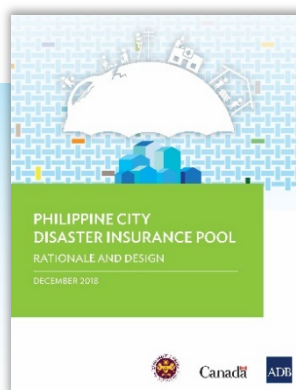
- a special fund established by ADB in April 2009 with total **US\$80.0 million fund resources** to date. Since the APDRF's establishment in 2009, 33 grants totaling **\$60.6 million** (as of September 2019) have been approved in response to disasters in 16 countries.
- responds to the urgent need for financial **assistance immediately after the occurrence of a disaster triggered by natural hazards**, providing incremental and **quick-disbursing grant** resources of up to US\$3 million to any ADB DMC for the restoration of life-preserving services to the affected communities
- assistance is granted once the following **three emergency conditions** are satisfied: (i) a natural disaster has occurred in a DMC, (ii) a statement of national emergency has been officially declared by the affected DMC, and (iii) the United Nations humanitarian/resident coordinator (H/RC) has confirmed the scale and implications of the disaster and has indicated a general amount of funding that would be required to assist in alleviating the situation.

Integrated Disaster Risk Management Fund



- established by ADB in February 2013 with **CAD10 million (US\$9.7 million) financing** from the Government of Canada
- aims to develop practical regional measures in line with the disaster risk management priorities of ADB's DMCs in Southeast Asia, benefiting **key stakeholders and vulnerable groups, particularly women**
- initiatives are centered on **ADB's integrated disaster risk management (IDRM) framework**—combining disaster risk finance, disaster risk reduction, and climate change adaptation to build disaster resilience
- promotes disaster risk management activities with **regional applications** and which provide **opportunities for cross-border benefits**
- also supports undertakings on risk identification and analysis, community-based and gender-focused IDRM, regional cooperation, and generation of knowledge and tools (including organization of regional events)

Notable knowledge products



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



- a trust fund 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.
- overall objective of the fund is to increase the preparedness and resilience of SIDS to disasters caused by natural hazards and to the impact of climate change. The expected outcome of the fund is an increased number of investments in climate change and disaster resilience

Leveraging Knowledge and Partnerships



Recent Knowledge Products

1. NDC Advance: Accelerating Climate Action in Asia and the Pacific
2. Climate-Smart Practices for Intensive Rice-Based Systems in Bangladesh, Cambodia, and Nepal
3. Asian Development Outlook (ADO) 2019: Strengthening Disaster Resilience
4. Article 6 of the Paris Agreement
5. The Enabling Environment for Disaster Risk Financing in Sri Lanka: Country Diagnostics Assessment
6. The Enabling Environment for Disaster Risk Financing in Fiji: Country Diagnostics Assessment
7. The Enabling Environment for Disaster Risk Financing in Pakistan: Country Diagnostics Assessment
8. Decoding Article 6 of the Paris Agreement
9. Understanding Disaster Risk for Advancing Resilient Development
10. Scaling Up Resilience-Building Measures through Community-Driven Development Projects
11. Philippine City Disaster Insurance Pool

Partnerships

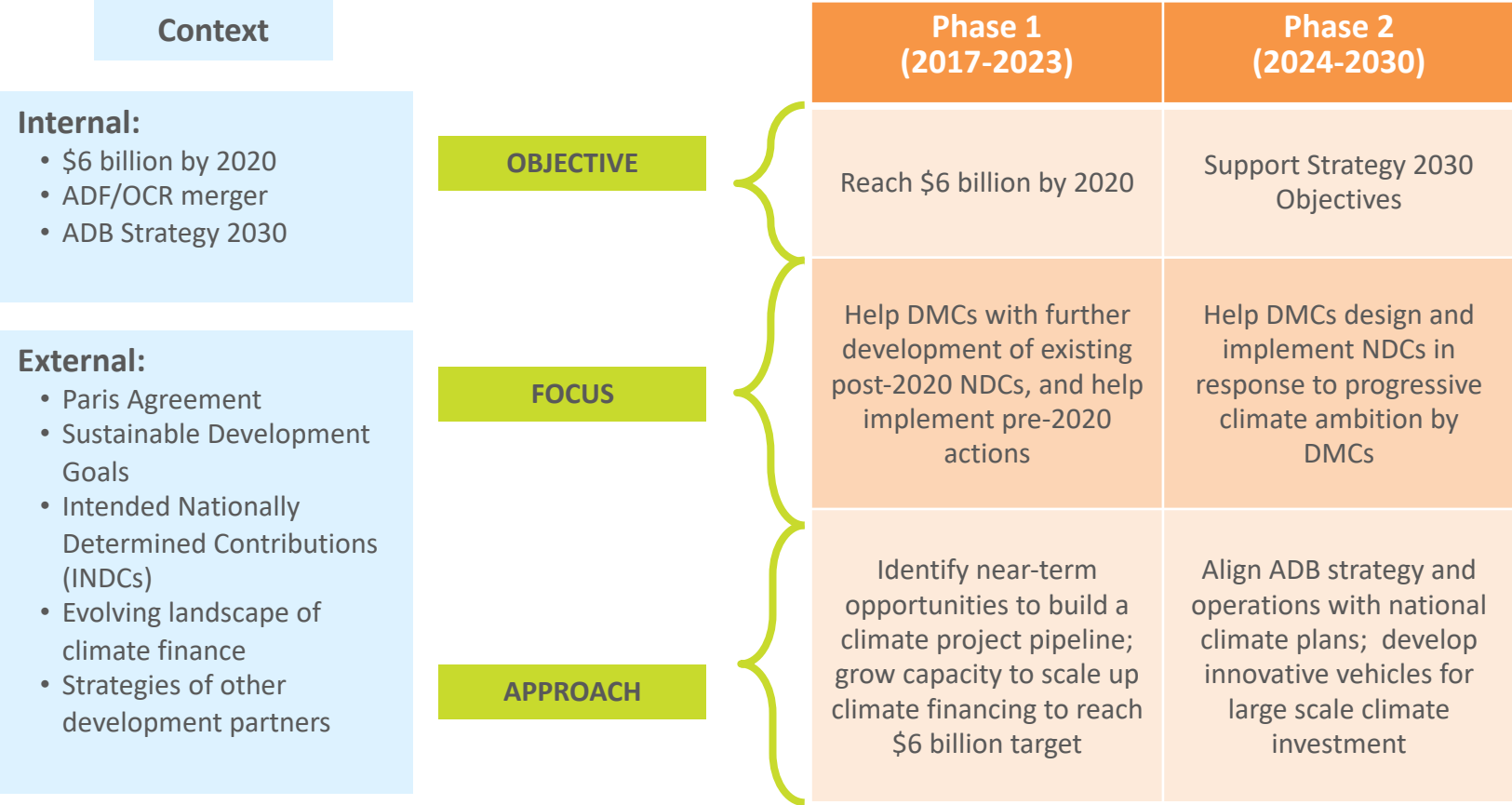
1. Climate finance tracking and reporting, GHG accounting, transport (with MDBs, others)
2. Asia Pacific Adaptation Network (with UNEP, IGES, others)
3. Asia Clean Energy Forum, Urban Forum, Transport Forum (with several partners)
4. The Global Commission on the Economy and Climate
5. Centers of excellence (COEs) actively providing ideas (knowledge solutions) to solve problems
6. The NDC Partnership
7. InsuResilience



Climate Change Operational Framework (2017-2030)



Climate Change Operational Framework (CCOF) 2017-2030

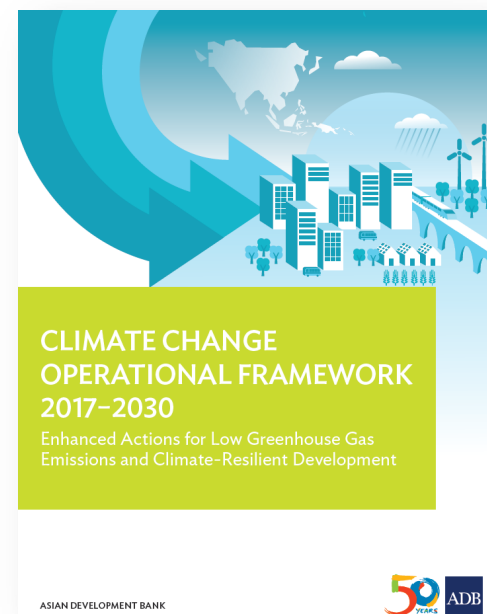


Strengthen ADB position as the “go to” partner in the region

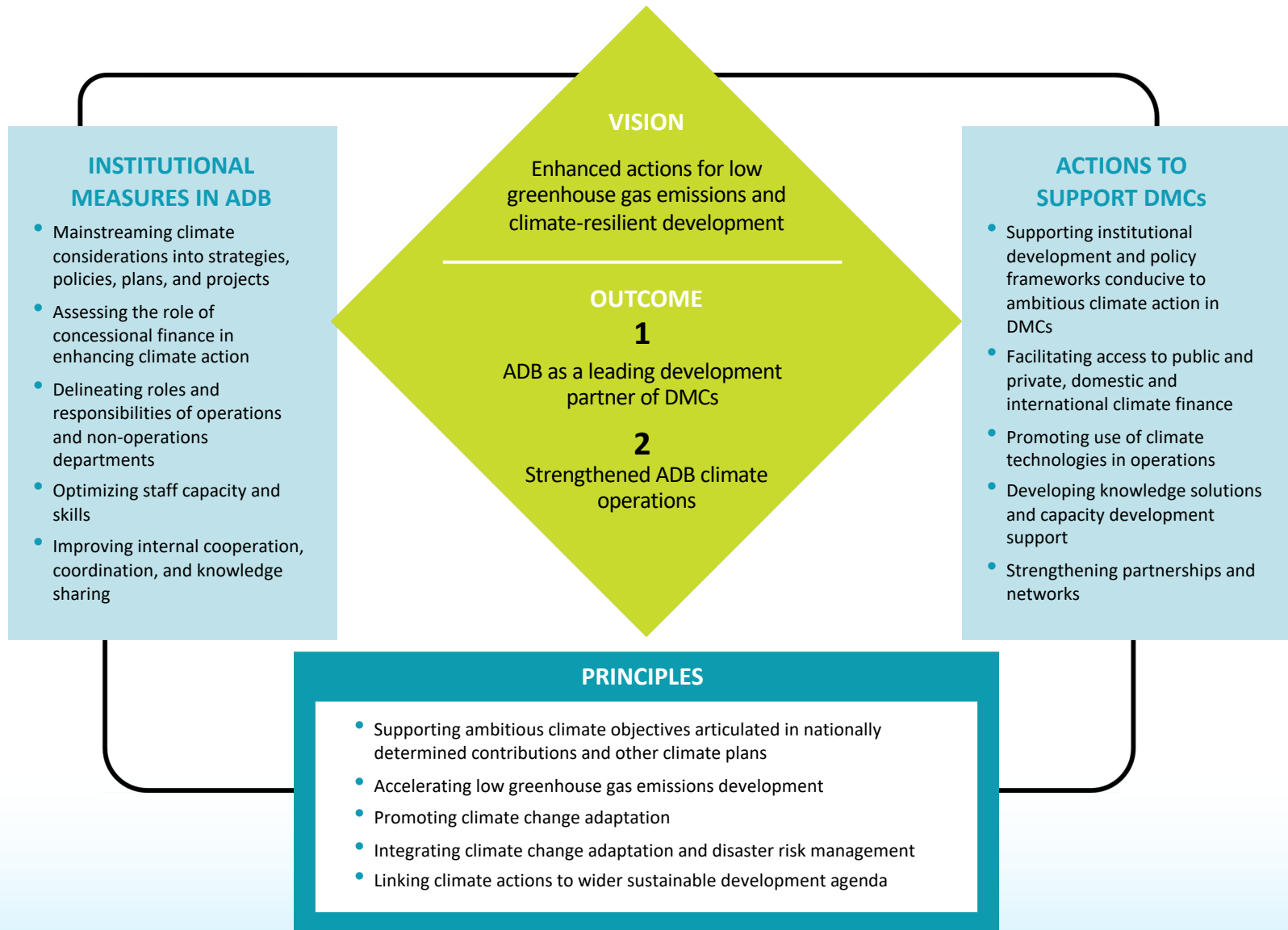
CCOF2030: ADB response to DMCs and global context



Level of Action	CCOF2030 Phase 1		CCOF2030 Phase 2
	2017–2020	2020–2023	2024–2030
DMCs	<p>Incorporate climate mitigation and adaptation in national development objectives</p> <p>Prepare first generation NDCs by 2020</p>	<p>Translate climate plans, including NDCs, into climate investment plans</p> <p>Mobilize domestic climate financing resources</p> <p>Prepare second generation NDCs by 2023</p>	<p>Implement second generation NDCs</p> <p>Scale up domestic climate financing resources</p>
ADB	<p>Provide \$6 billion climate finance by 2020</p> <p>Climate-proof projects in the pipeline</p> <p>Review operational modalities, institutional structures, new financing and TA mechanisms</p> <p>Work with operational departments to provide upstream support aligned with DMC national development and climate objectives</p> <p>Prepare Strategy 2030</p>	<p>Review progress, assess lessons from reaching 2020 targets, and outline delivery plan for more ambitious targets</p> <p>Pilot-test innovative, climate-smart approaches (technology, finance, business models)</p>	<p>Apply lessons from phase 1</p> <p>Reflect DMC expectations in second-generation NDCs and other relevant strategies and plans, including regional approaches</p> <p>Reassess operational modalities, institutional structures, new financing (e.g., investment bank, impact investing) and TA mechanisms</p> <p>Revisit analytical and other actions to help DMCs confirm opportunities for climate action in support of national development objectives</p>
Global	<p>Sustainable Development Goals (SDGs)</p> <p>Paris Agreement, 2°C warming limit (aspiration: 1.5°C)</p> <p>Sendai Framework for Disaster Risk Reduction</p> <p>Reach \$100 billion annually in global climate finance by 2020</p>	<p>Conduct global stock taking of NDCs</p> <p>Monitor progress toward achievement of SDGs and Sendai Framework for Disaster Risk Reduction</p>	<p>Achieve SDGs by 2030</p> <p>Achieve Sendai Framework for Disaster Risk Reduction by 2030</p> <p>Be on target for keeping global warming at, or below, 2°C</p>



ADB = Asian Development Bank,
 CCOF2030 = Climate Change Operational Framework 2017–2030, DMC = developing member country,
 NDC = nationally determined contribution,
 TA = technical assistance.



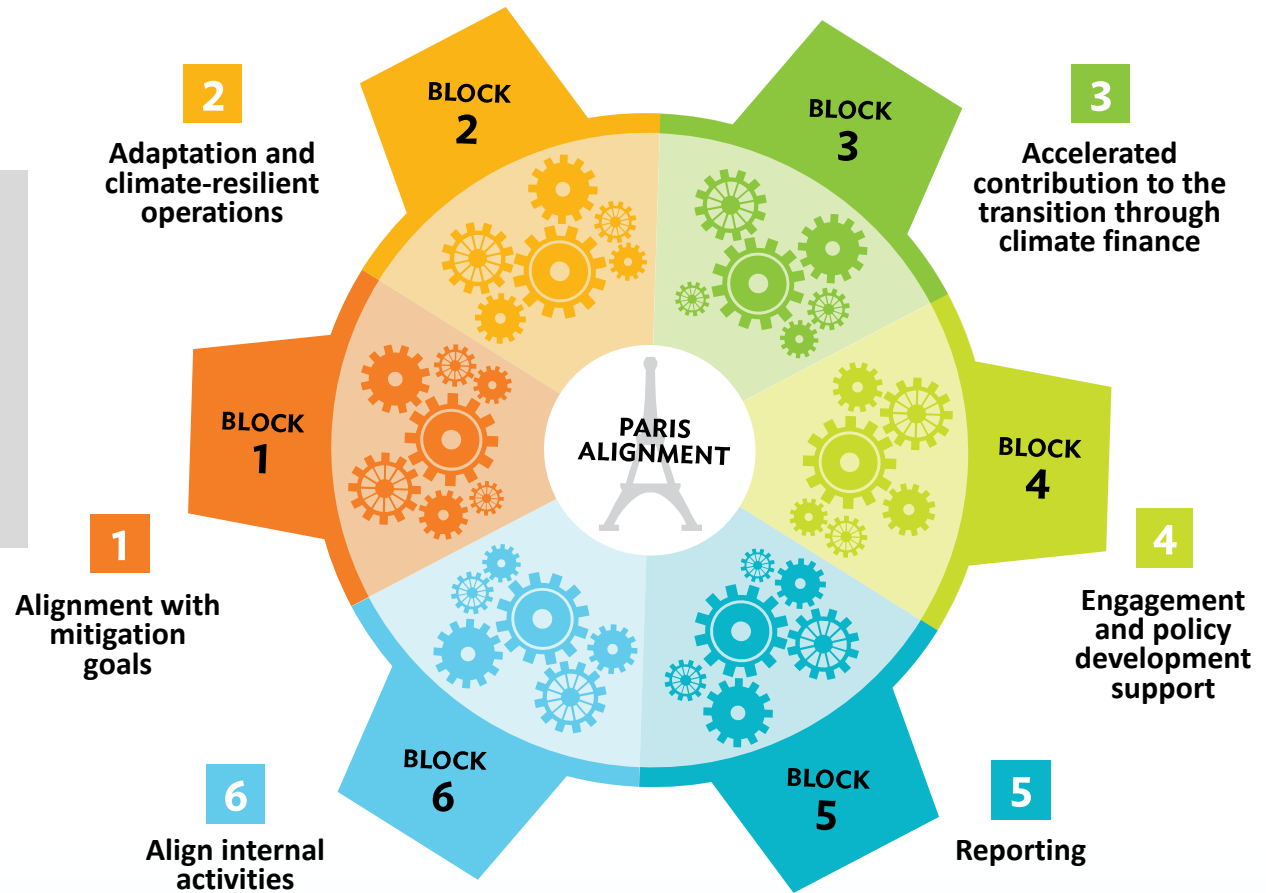


Paris Alignment



6 Building Blocks

6 building blocks and principles jointly agreed by the MDBs as core areas for aligning with the Paris Agreement



Established tools at ADB to support PA include:



Integration of climate change in CPS



Climate and disaster risk screening mainstreamed



Climate finance targets



Exclusion lists - oil/gas exploration, fossil fuel extraction, commercial logging in primary forests



Target to peak emissions - by 2030 at the latest



NDC Advance Platform



Social cost of carbon a part of economic evaluation of projects

The elements from the joint MDB method will build on and be integrated into these processes and tools

For further information

<https://www.adb.org/themes/climate-change-disaster-risk-management/main>

<https://www.adb.org/climate-change-financing>

