

ADB Low Carbon Development Projects

At 2nd APEC LCMT Symposium

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Asian Development Bank

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Outline

- 1. ADB's Climate Change Program**
- 2. Cases of ADB Low Carbon Development Projects**
- 3. Procedures of seeking ADB support**

1. ADB's Climate Change Program

ADB Climate Strategy

ADB Climate Change Operational Framework 2017-2030:

- 1. Support to ambitious climate objectives (NDCs) and climate plans by developing members**
- 2. Accelerating low GHG emissions development**
- 3. Promoting climate change adaptation**
- 4. Integrating climate change adaptation and disaster risk management**
- 5. Linking climate actions to the wider sustainable development agenda.**

ADB Climate Strategy

ADB climate change actions:

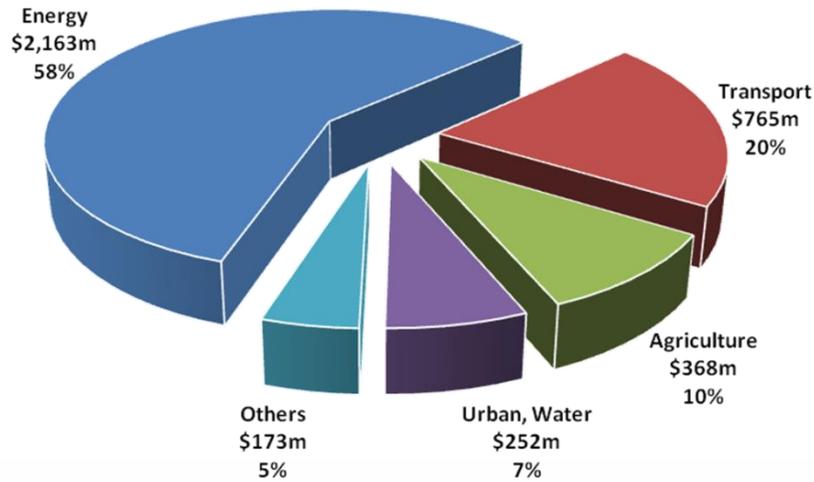
- 1. Supporting institutional development and appropriate policy frameworks**
- 2. Access to finance**
- 3. Promoting use of climate technology**
- 4. Developing knowledge solutions and capacity development**
- 5. Strengthening partnerships and networks.**

ADB Climate Finance

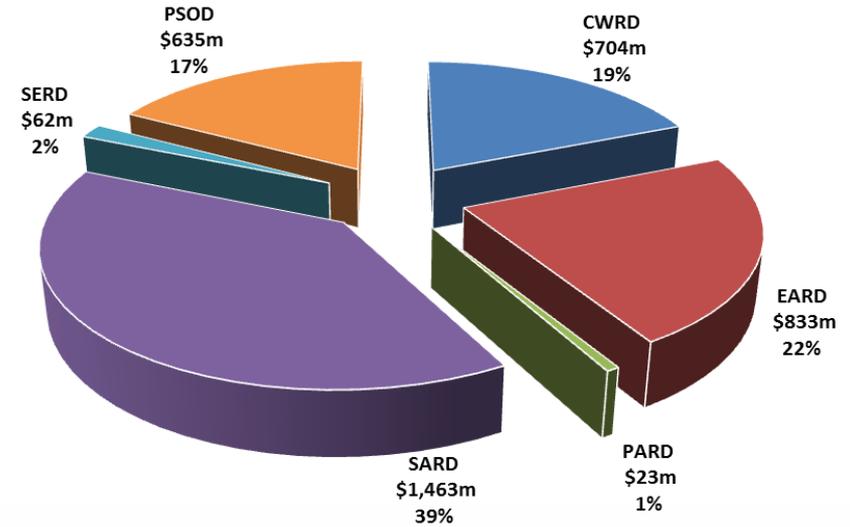
- ❑ In 2015 ADB made a commitment to double its climate financing from its own resources to \$ 6 billion by 2020.
- ❑ 2016: ADB climate investments: \$3.7 billion (\$2.6 b in mitigation and \$1.1 b in adaptation)
- ❑ 2017: ADB climate investments: \$5.15 billion (\$4.2 b in mitigation and \$0.95 b in adaptation)
- ❑ From 2019 – 2030, ADB cumulative climate finance of own source reaches \$80 billion

ADB Climate finance in 2016

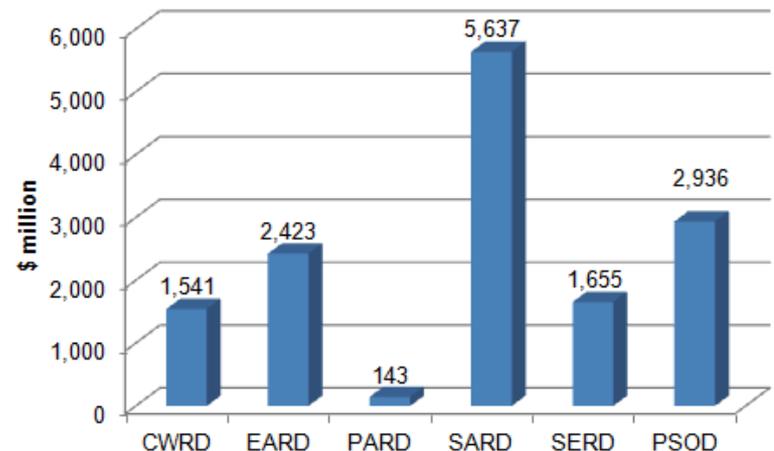
By Sector



By region



Regional Department climate finance (2012-2016)



Total climate finance: \$3.7 B

Mitigation
\$2.6 B

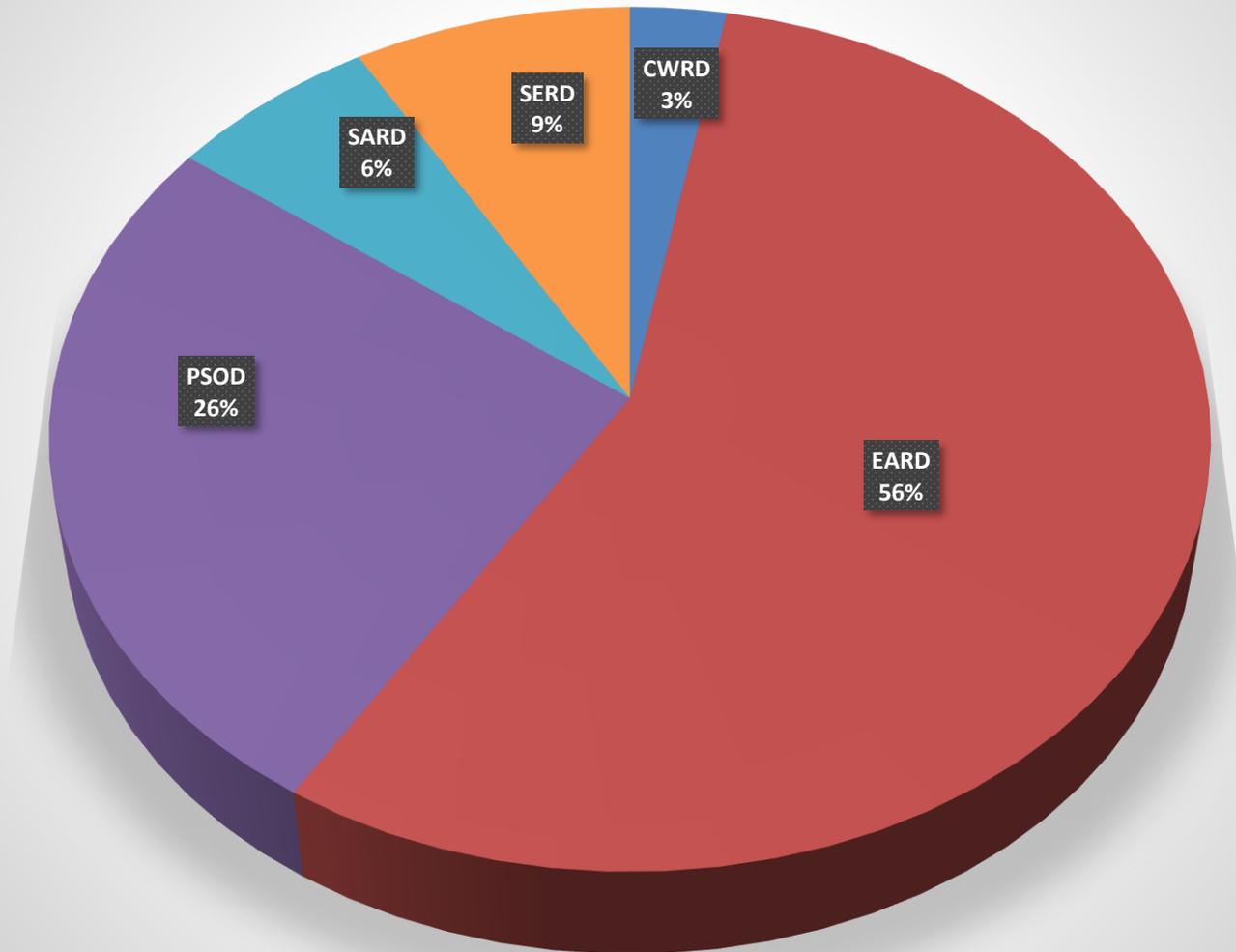
Adaptation
\$1.1 B

External resources \$701 million for climate support.

Total Annual GHG Emission Reductions by ADB Supported Loan projects (tCO2e/yr)

Region/Year	2013	2014	2015	2016	2017
PRC	897,916	3,765,728	1,975,694	1,054,350	2,052,960
CWRD	600,000	-	60,000	-	7,989
EARD	897,916	3,765,728	343,991	-	1,444,222
PARD	-	-	-	-	-
PSOD	-	830,150	1,787,276	1,571,215	674,133
SARD	91,000	-	-	383,000	508,790
SERD	-	258,550	173,789	-	1,497,794
ADB	1,588,916	4,854,428	2,365,056	1,954,215	4,132,928

GHG Emissions Reduction by ADB Loan projects (2010-2017) (tCO₂e/yr)



ADB Approaches to Climate Finance Mobilization

Deploying concessional resources

Internally-managed funds

- Clean Energy Financing Partnership Facility (CEFPPF)
- Climate Change Fund (CCF)
- Others with bilaterals

Externally-managed funds

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

Maximizing market mechanisms

- **Carbon finance**
 - ✓ Asia Pacific Carbon Fund (closed in 2014)
 - ✓ Future Carbon Fund
- **Carbon Market Technical Support Facility**
 - ✓ CDM support
 - ✓ domestic emissions trading
- Supporting **other market mechanisms**
 - ✓ Japan Fund for the Joint Crediting Mechanism
 - ✓ Renewable energy credits; feed in tariffs
- **Green and climate bonds**

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 Climate Funds

ADB has established more than 20 funds related to climate change. In 2017, three new climate related Funds were established:

- 1. Asia-Pacific Climate Finance Fund (ACliFF), aiming to support the development of climate-relevant financial risk management products.**
- 2. High-Level Technology Fund (HLTF), providing support to promote the integration of high-level technology and innovative solutions throughout the project cycle.**
- 3. Canadian Climate Fund for the Private Sector in Asia II, providing cofinancing for ADB private sector projects focused on climate change mitigation and adaptation.**

ADB Green/Climate bonds

- 1. \$500 M green bonds issued in March 2015 for mitigation and adaptation**
- 2. \$225 M climate bonds issued in Feb 2016 to support a geothermal power project in The Philippines**
- 3. \$1.3 B Climate Bonds issued in August 2016 for mitigation and adaptation**
- 4. \$46 M green bonds issued in May 2017 to help fund more than 700 megawatts of solar and wind energy capacity in India.**
- 5. \$1.25 B green bonds issued in August 2017 to help finance climate change mitigation and adaptation projects**
- 6. In July 2018, €600 million climate bonds issued to finance ADB climate change mitigation and adaptation projects**

Mitigation Initiatives

❖ Clean Energy

- > \$2b investments
- Hub for SE4All Initiative/ E4All Partnership

❖ Sustainable Transport

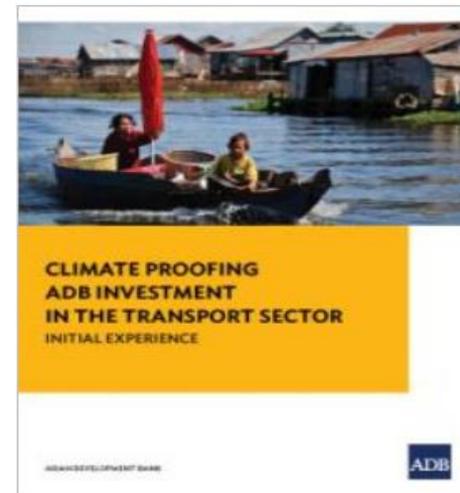
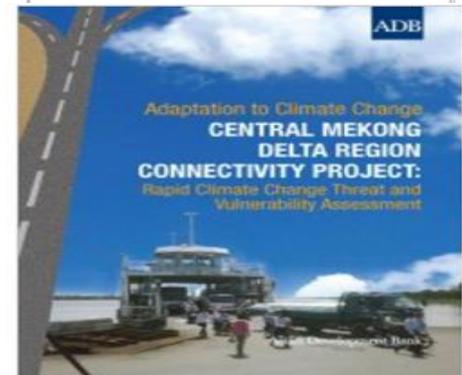
- urban transport
- railway
- Climate proofing of road infrastructure

❖ Land Use and Forest Management

- Piloting REDD in Indonesia and Lao PDR

Adaptation Initiatives

- **Mainstreaming climate resilience in core development planning**
 - **Pilot Program on Climate Resilience for Bangladesh, Cambodia, Nepal, Papua New Guinea, Samoa, Tajikistan and the Pacific**
- **Climate proofing vulnerable projects: roads and bridges, ports, water supply and drainage**
- **Knowledge support: regional climate projections consortium data facility , and tools**



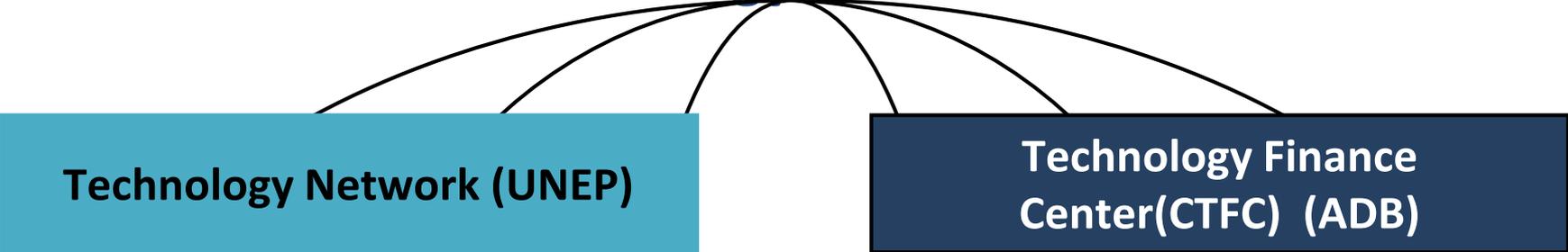
ADB Climate Knowledge Products

- ❑ **Catalyzing Green Finance: A Concept for Leveraging Blended Finance for Green Development: an innovative financing solution for enhancing both financially bankable and environmentally sustainable infrastructure projects.**
- ❑ **Emissions Trading Schemes and Their Linking: Challenges and Opportunities in Asia and the Pacific**
- ❑ **Roadmap for Carbon Capture and Storage Demonstration and Deployment in the People's Republic of China**
- ❑

ADB's Pilot Asia-Pacific Climate Technology Finance Center (CTFC)

ADB-UNEP Collaboration

Pilot A-P Climate Technology Network and Finance Center



1

2

3

4

5

6

Facilitating
Technology
Network

Building
Technology
Centers

Enabling
Policies

Technology
Main-
streaming

Catalyzing
Project &
Venture
Capital
Investments

Pilot
Marketplace
for Low-
Carbon
Technologies

Network Facilitation and
Development

Enhancing Enabling
Environment

Investment
Facilitation



Capacity Building



2. Cases of ADB Low Carbon Development Projects

New Approach: Low carbon and resilient city

ADB is supporting developing member countries to develop low carbon and resilient city to address climate change and pollution while maintaining economy development.

- **TA: Promoting Low-Carbon Development in Central Asia Regional Economic Cooperation Program Cities**
- **Loan: Xiangtan Low Carbon City Development**

TA: Promoting Low-Carbon City Development

The project will strengthen the city government capacity to plan and implement climate actions in city investment plans to further enhance sustainable, inclusive, and low carbon development.

TA: Promoting Low-Carbon City Development

Project budget: \$2.8 million, covering four components:

- 1. GHG data management systems**
- 2. Investment roadmaps for low-carbon growth**
- 3. Collection of successful cases driving low-carbon development**
- 4. Capacity building for city governments**

Xiangtan Low-Carbon City Transformation

The project will address complex development issues and support to cities for its integrated, inclusive, low carbon and green development.

Xiangtan Low-Carbon City Transformation

The project cost is estimated about \$400 million, covering four components.

1. Intelligent, integrated, low-carbon urban transport system
2. Green city infrastructure for increasing carbon sink and enhancing climate adaptation
3. Enabling ICT-based systems for informed decision-making
4. Green Procurement Policy and action plans

ADB first climate bonds project

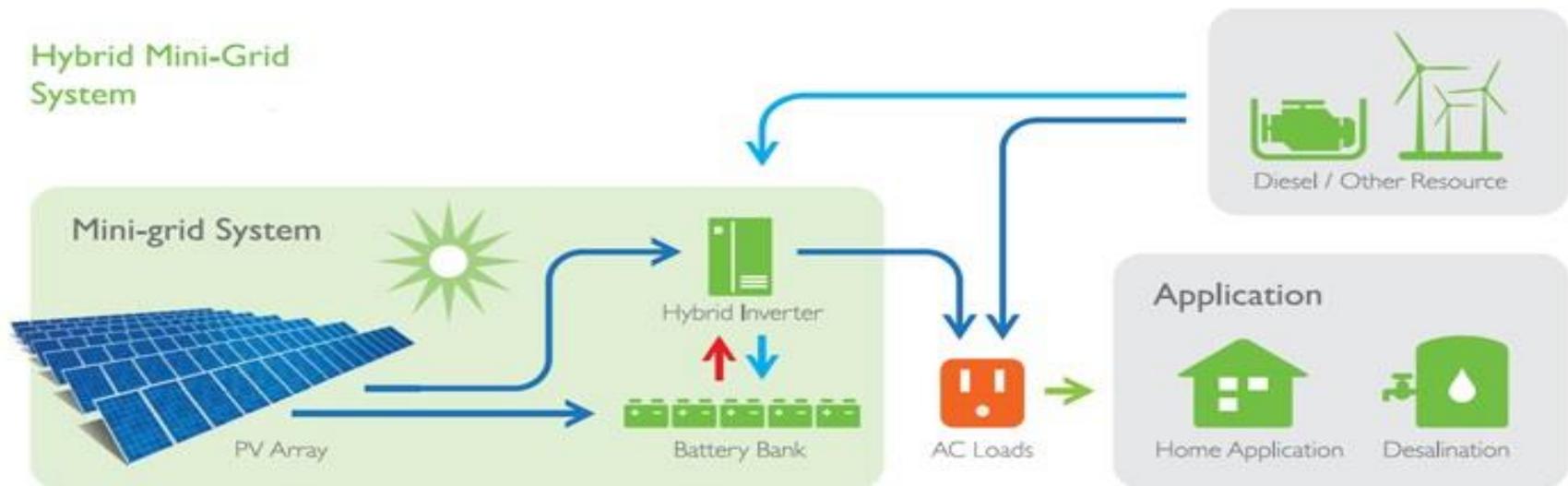
**ADB first climate bonds project:
Tiwi and MakBan Geothermal
Power, operated by AP
Renewables, Inc. (APRI), The
Philippine**



Maldives Solar/Diesel Project

Maldives Outer Islands for Sustainable Energy Development Project:

Transform the existing energy grids of outer islands into a hybrid renewable energy system, by installing energy management and control systems; energy storage; and improvements in distribution networks to reduce the need for diesel to generate electricity.



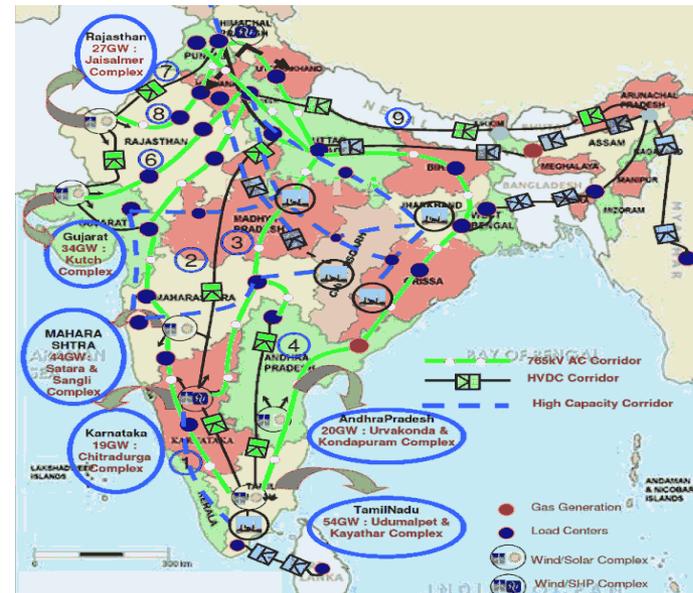
Solomon Islands Solar Power Development Project

The Project will develop a solar PV Power with capacity of 1.8MW to provide reliable, cleaner electricity supply from renewable sources



India Green Corridor Project

- India's "Green Energy Corridor" facilitates the transfer of RE from RE rich states to other states
- Absorption and smoothing out of the RE intermittency
- Static compensators (STATCOMs) to enhance grid stability
- \$500 million sovereign + \$300 million non-sovereign loans



BTH Air Quality Improvement and CO₂ reduction

Promote high technology in major polluting sources in BTH

- Targets large industrial, urban and rural emitters to demonstrate advanced technologies – e.g. coke-oven flue gas to LNG, renewable energy-based heating, distributed renewable + smart micro grid etc.
- Partners with city governments, technology institutes, financial institutions to de-risks high technology investments and leverage co-financing
- Large co-benefits of CO₂ mitigation



3. Procedures of seeking ADB support

Ways of ADB support

ADB support its developing members through following:

- 1. Financing (loan) – sovereign and non-sovereign loan**
- 2. Technical assistance (TA) – sovereign TA, regional TA, knowledge and policy TA, and transaction TA**
- 3. Knowledge partnership/support**
- 4. Others: human resources, ---**

Procedures of seeking ADB support

- **For sovereign loan and TA: consultation with counterpart of governments - governments proposed projects to be supported**
- **For non-sovereign loan and TA: ADB to work with clients/partners directly while keeping governments informed**
- **Knowledge partnership: work with knowledge institutes while keeping government informed**

Promotion of Climate Technology Transfer and Investment

Asia-Pacific Forum on Low Carbon Technology

24-26 October 2018

Changsha, Hunan, China

Thank you!

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