Environment and Nature

LEARNING WEEK 2025

ASIA CLEAN BLUE SKIES PROGRAM

TECHNICAL SESSION 3: INVESTING IN CLEAN AIR

AIR QUALITY WORKING GROUP

ADB

Urban Resilience Trust Fund

UK International Development
Partnership | Progress | Prosperity

JFJCM
Japan Fund for the Joint Crediting Mechanism

From the People of Japan

CLEAN AIR FUND

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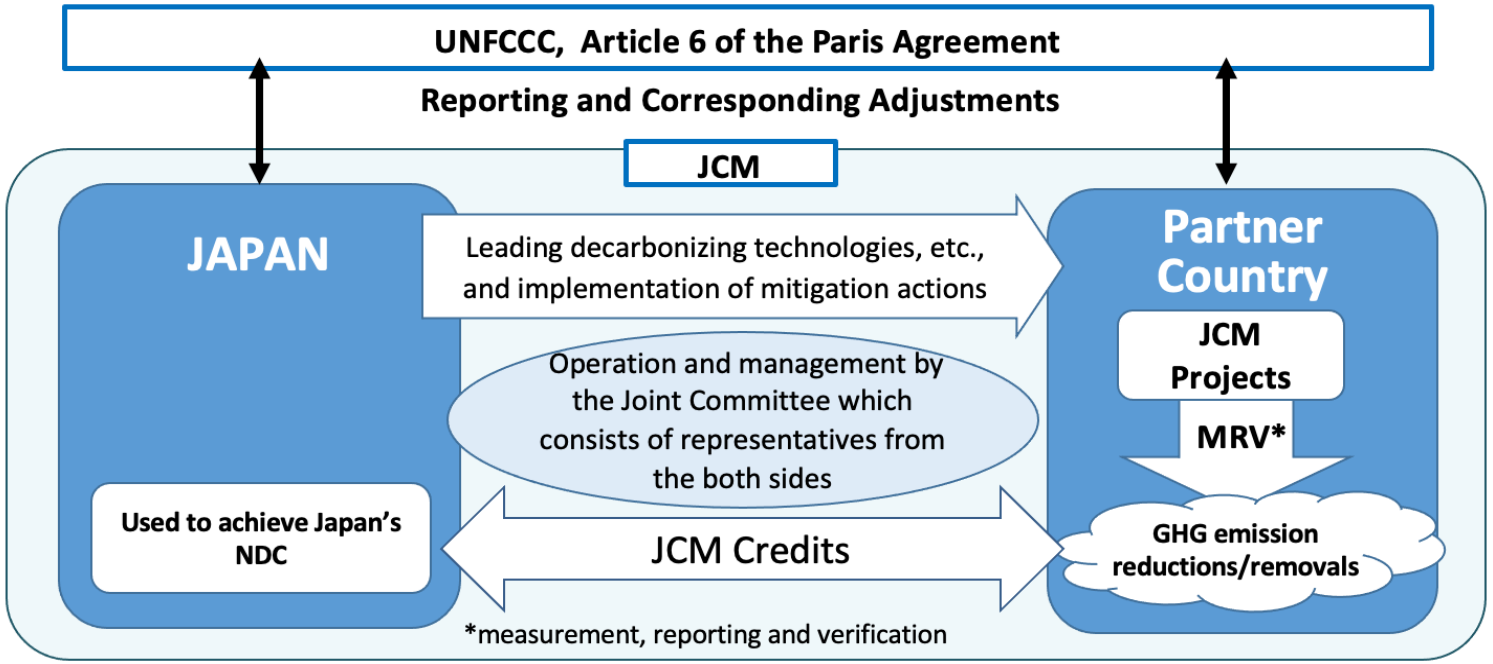
Japan Fund for the Joint Crediting Mechanism

October 2025

Japan Fund for the Joint Crediting Mechanism

- Established in June 2014 as one of ADB's trust funds
- Contribution by Government of Japan: $137.30M (2014-2024)
- Provides financial incentives for the adoption of advanced low-carbon technologies in ADB-financed projects that use the Joint Crediting Mechanism*
- Both sovereign and non-sovereign projects are eligible



***Joint Crediting Mechanism (JCM)**

- **Project-based bilateral offset crediting mechanism** managed by Japan and partner countries
- Facilitates the diffusion of low-carbon technologies that lead to GHG emission reductions that are measurable, reportable and verifiable
- A forerunner to cooperative approaches under Article 6 of the Paris Agreement.
- **Carbon credits from JCM** projects will be **shared among the countries** and used to achieve their **emission reduction targets** while ensuring the avoidance of double counting through corresponding adjustment

JFJCM Eligibility Criteria

Eligible Countries

- All ADB developing member countries that have signed bilateral agreements on the JCM with the Government of Japan (19 out of 31 JCM partner countries).
- Azerbaijan, Bangladesh, Cambodia, Georgia, India, Indonesia, Kazakhstan, Kyrgyz Republic, Laos, Maldives, Mongolia, Myanmar, Palau, Papua New Guinea, Philippines, Sri Lanka, Thailand, Uzbekistan, and Viet Nam (as of August 2025).

Eligible Projects

- Investment project financed by ADB or ADB administered funds.
- ADB technical assistance for developing JFJCM pipeline projects.

* Can be used for additional financing to ongoing ADB project.

Eligible Technologies

- Advanced low carbon technologies that reduce greenhouse gas (GHG) emissions.
- The technologies must have a proven track record but must be "advanced" in the host country context.

Other Requirements of the JFJCM support

- Environment and Social Impact
  - The project should benefit recipient DMCs through:
    - a **reduction of environmental pollution**, including **air** or water pollution, solid waste treatment, or conservation of natural resources; and/or
    - other **social economic benefits**, including increased job creation opportunities, better access to basic infrastructure, and gender equality.

- Cost effectiveness*
  - Cost of reducing 1tCO_2e ≤ $40

* grant amount / (annual GHG emission reduction x project period)

This sets a ceiling of the grant amount.

Requirements for the JCM (after grant approval)

- After approval of the JFJCM funding, a borrower (grant recipient) is required to meet JCM application requirements as follows.

JCM Requirements

- Preparation and approval of JCM Methodology
- Preparation of Project Design Documents (PDD)
- Validation by Third Party Entities (TPEs), and registration of the project
- Monitoring, reporting and verification of GHG emission reduction
- Issuance of the JCM credits and delivery to government(s)

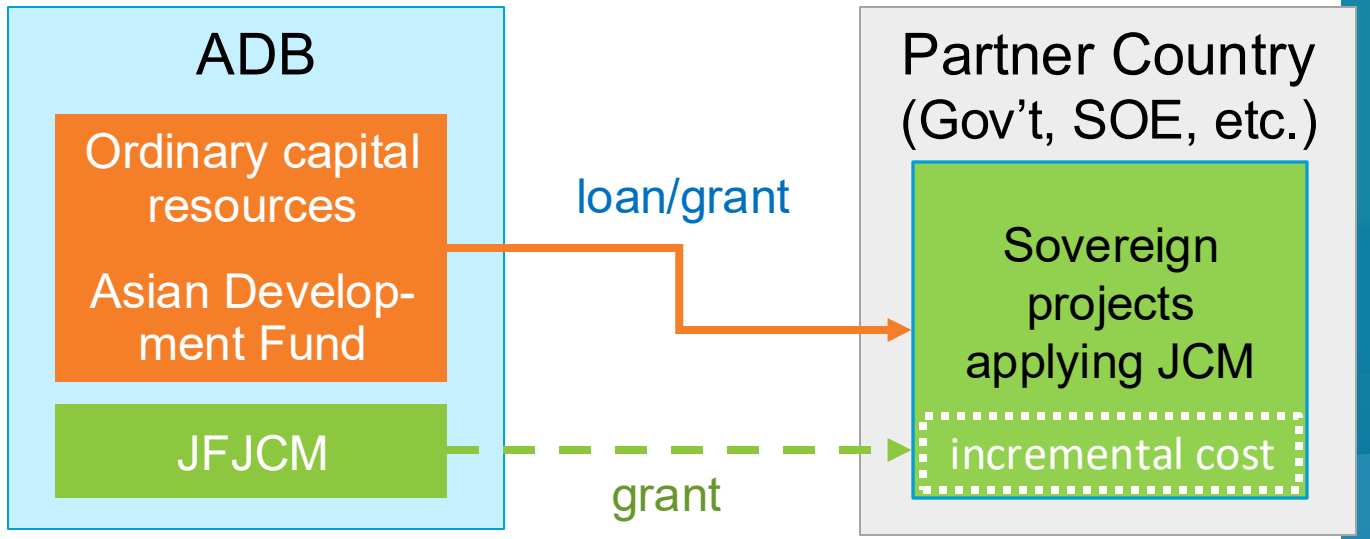
Reference: Handbook for Developing JCM Projects

Borrower needs to engage consultant
by using the JFJCM grant
JFJCM secretariat may help the process

JFJCM Support Schemes

For Sovereign Project

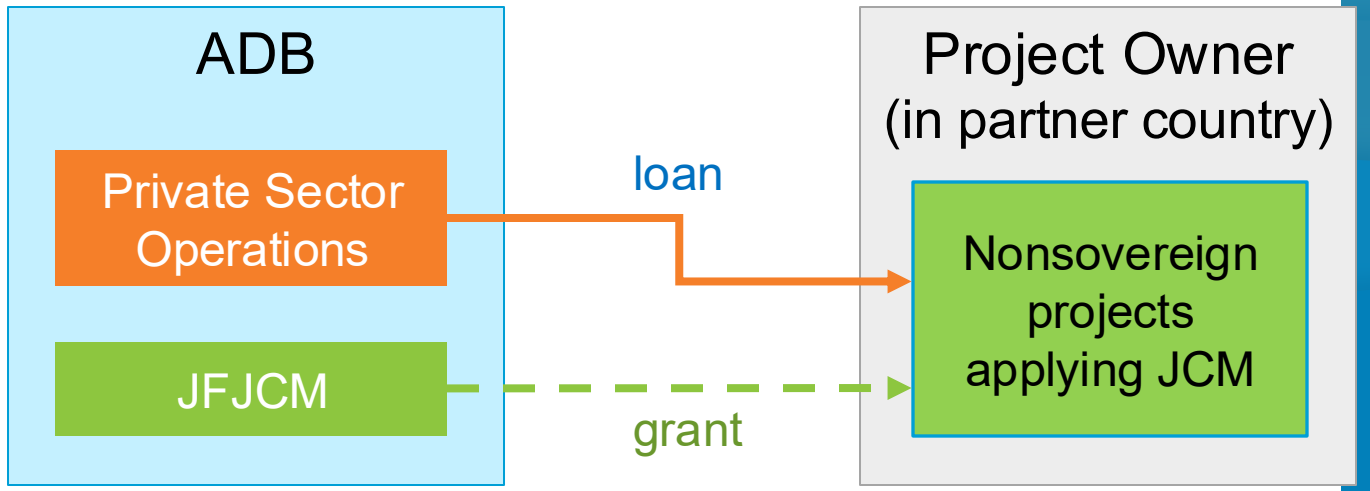
- JFJCM provides grant for incremental cost of advanced low-carbon technologies
- Maximum amount of grant:
  i. 10% of total project cost (capped to $10 million)
  ii. $5 million if the project cost < $50 million



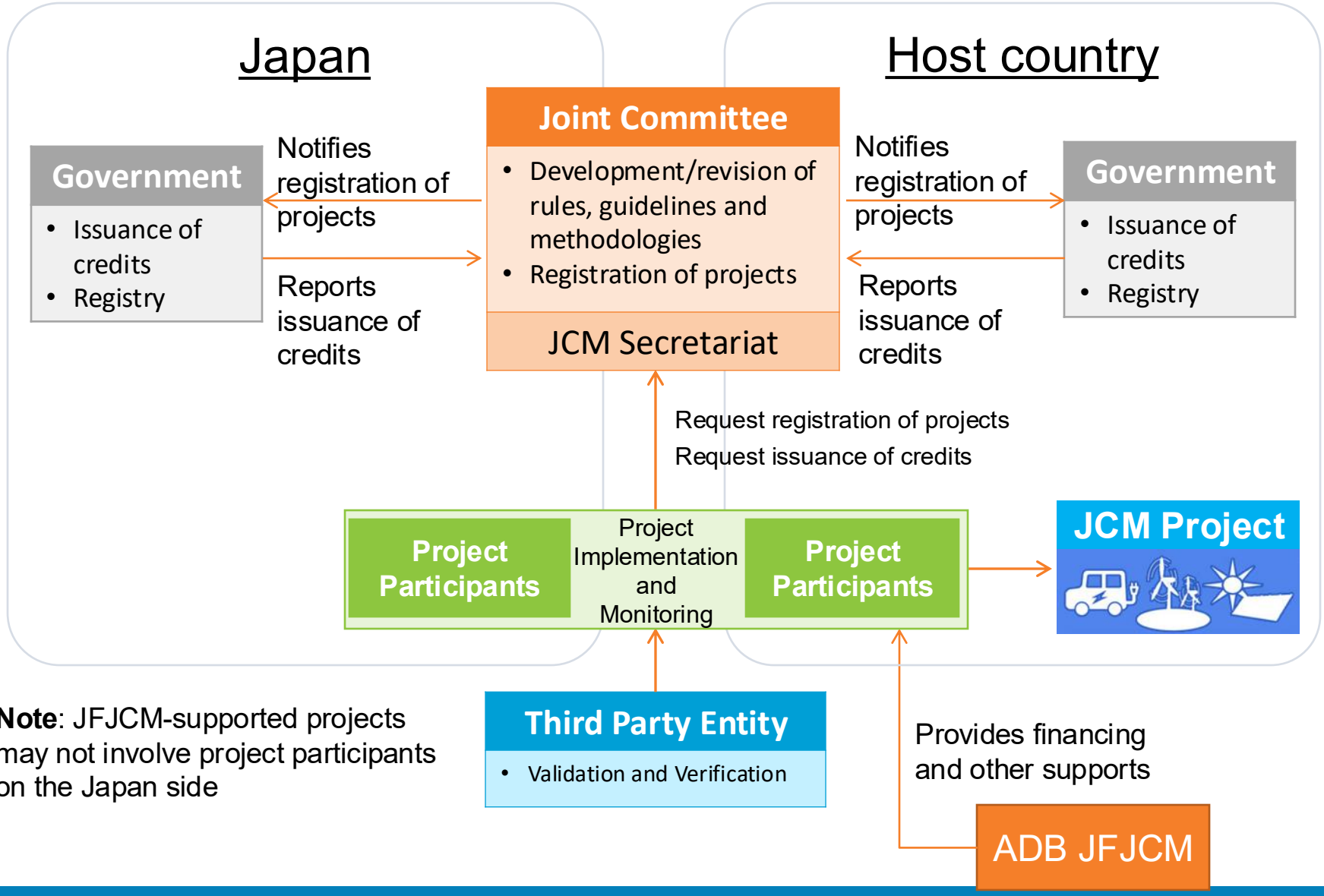
For Nonsovereign Project

- On top of the ADB loan, JFJCM provides grant by milestones to support deployment of advanced low-carbon technologies
- Maximum amount of grant:

  10% of total project cost (capped to $10 million)



Roles of key entities in JCM projects



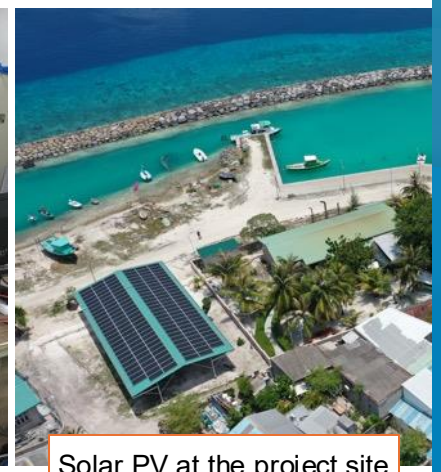
Note: JFJCM-supported projects may not involve project participants on the Japan side

Case study 1: Advanced micro-grid technology in Maldives

Project name	Preparing Outer Islands for Sustainable Energy Development Project (POISED)
JFJCM grant	$5 million(total project cost: $129 million)
Technology supported	Advanced battery energy storage system (BESS) and energy management system (EMS)
Description	On top of 1.6 MW of solar PV installed under the POISED project, the advanced BESS and EMS are supported by JFJCM. The systems enable: ➢ Smoothing out the fluctuation of variable solar PV generation ➢ Optimizing diesel generator operation ➢ Integrating large amounts of renewable energy to the grid The BESS and EMS have started operation since August 2021.
Location	Addu, Maldives
Emission reductions	1.3 thousand tCO_2/year (estimate)

BESS at the project site


Training local staff for EMS operation


Solar PV at the project site

Air Quality Benefit of the project

ISSUES

- Electricity : Relying on Diesel, one of the sources of air pollution.
- Fuel Import Cost : 10% of GDP in 2020.

JFJCM

Solar PVs

+ $5M JFJCM

Advanced low-carbon tech.

Training

Result

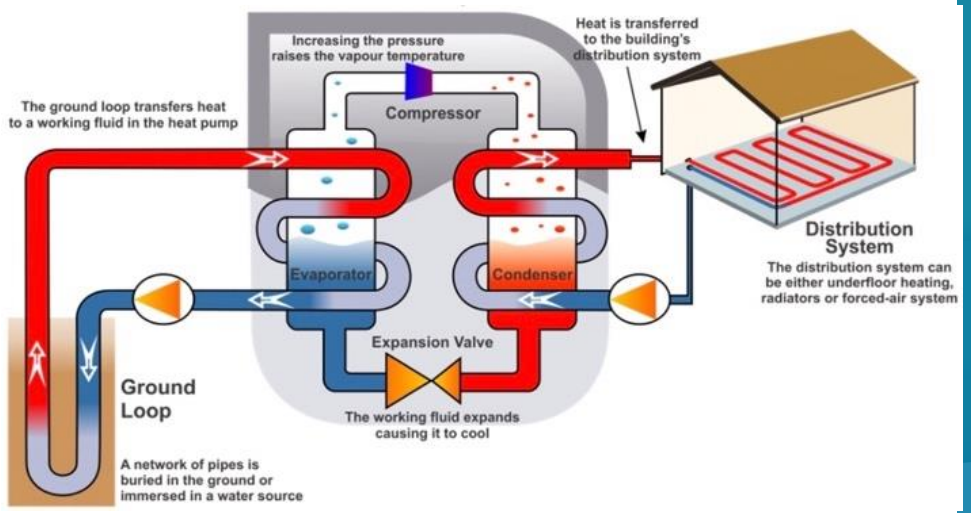
- 30% reduction of diesel ⇒ GHG↓, Cost↓
- 25 local jobs created
- Air quality improved

"With the reduction of sulfur dioxide (SO2) and nitrogen oxides (NOx), the risk of respiratory illnesses declined, creating a healthier living environment for all."

Director of Addu Equatorial Hospital

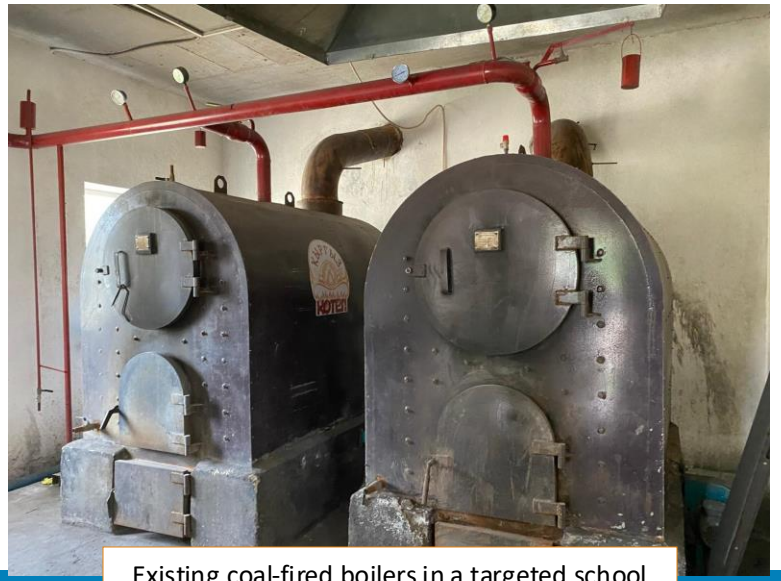
Case study 9: Low-carbon Municipal Building Upgrading Pilot

Project name	Bishkek Low-carbon Municipal Building Upgrading Pilot under the Multisector Activities Support Facility 2025–2030
JFJCM grant	$5 million(total project cost: $8.8 million)
Technology supported	(i) Heat pumps (closed-loop ground-source, air-to-water, and wastewater types) (ii) Heat recovery ventilation (iii) Building energy management systems
Description	The project will introduce low-carbon and energy-efficient technologies in five schools and one preschool in Bishkek. It will combine conventional measures (mainly building envelope insulation) with advanced technologies such as energy-efficient space conditioning using heat pumps, heat recovery ventilation, and building energy management systems. These upgrades will replace coal-fired heating, reducing GHG emissions and energy costs, and improving indoor and outdoor air quality. The project will also build local expertise and demonstrate scalable, replicable energy-efficient building solutions in the country and the region.
Location	five schools and one preschool in Bishkek, Kyrgyz Republic
Emission reductions	6.4 thousand tCO_2e/year (estimate)



Source: Niessink, R.J.M. 2019. Ground-source Heat Pump (GSHP) – Households. Energy.nl

How closed-loop ground-source heat pumps work



Existing coal-fired boilers in a targeted school

Air Quality Benefit of the project

ISSUE

"Air pollution is the single biggest risk factor for premature death and ill-health in Kyrgyzstan."

(UNICEF (2023) "Health and social impacts on air pollution on women and children in Bishkek, Kyrgyzstan")

- Annual avg. PM2.5 (30 μg/m³) ~ 6 times WHO guideline of 5 μg/m³
- Winter peaks ~ 150 μg/m³ in some areas.

JFJCM

Coal Heating

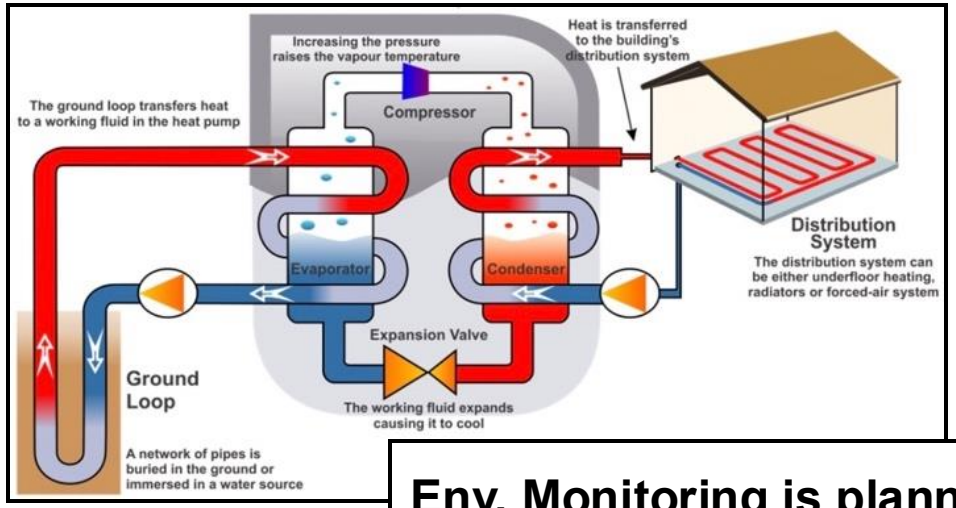
5 schools and 1 preschool

$8.8M (incl.$5M JFJCM)

Advanced low-carbon tech.

Geothermal Heat Pump

Building Energy Management System etc.



Env. Monitoring is planned

- Daily average of PM2.5 Levels
- Compared with control group schools

Approved JFJCM Projects

S.No.	Project Portfolio	Host Countries	JFJCM Support	Technologies Deployed
1	**Preparing Outer Islands for Sustainable Energy Development Project (POISED)**	Maldives	$5.00 M	Advanced battery and energy management system
2	**Southwest Transmission Grid Expansion Project**	Bangladesh	$7.00 M	Energy efficient transmission lines
3	**Upscaling Renewable Energy Sector Project**	Mongolia	$6.00 M	Solar PV with advanced battery system and EMS
4	**Improving Access to Health Services for Disadvantaged Groups Investment Program**	Mongolia	$3.48 M	Energy efficient HVAC, high insulation window, rooftop solar PV and ground source heat pump
5	**Greater Male Waste to Energy Project**	Maldives	$10.00 M	Waste-to-energy plant (incineration)
6	**Geothermal Power Generation Project (Phase 1)**	Indonesia	$10.00 M	Geothermal power plant with advanced designs
7	**Accelerating Sustainable System Development Using Renewable Energy Project (ASSURE)**	Maldives	$6.20 M	Advanced flow battery system Ocean renewable energy pilot
8	**Disaster Resilient Clean Energy Financing Project (DRCEF)**	Palau	$5.00 M	Financial intermediation to support investment in low-carbon technologies
9	**Bishkek Low-carbon Municipal Building Upgrading Pilot**	Kyrgyz Republic	$5.00 M	Energy efficient heat pumps, ventilation system with heat recovery, and building energy management systems
10	**Sustainable Energy Sector Development Program**	Papua New Guinea	$10.00 M	Energy efficient transmission lines
		Total	**$67.68 M**	

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(Public)

(ADB-Internal)

Thank you.

ADB's Carbon Market Program

Climate Action Catalyst Fund

- Commenced Operations in Jan 2024.
- **Financial Commitment: A total of $ 77 million from the Swedish Energy Agency and the Norwegian Ministry of Climate and Environment.**
- **Mobilize carbon finance** to catalyze investments for the deployment of low-carbon technologies and solutions **including through the private sector.**
- Incentivize transformative Mitigation Actions in ADB DMCs by **purchasing ITMOs and MOs** under **Article 6 of the Paris Agreement** on behalf of the Financing Partners.
- Support a diverse range of Mitigation Actions and facilitate the **delivery of sustainable development impacts** in ADB's DMCs.

Article 6 Support Facility

- Commenced Operations in Jan 2019.
- Funded under TA 9695 (**US$ 8.8M**) by ADB's TASF, Govt of Germany, Swedish Energy Agency and Govt of New Zealand.
- **Enhance Carbon Market Readiness**
  - **Upstream:** Policy, Regulatory & institutional infrastructure
  - **Midstream**: Identify potential sector and develop pipeline
  - **Downstream:** Technical support for project preparation for carbon markets
- **Collaboration** with Other Development Partners for the co-creation of **high integrity carbon markets**.
- **Knowledge Products & capacity building**
- **Global Public Goods**
  - Attribution
  - SD Impact Assessment
  - MOPA/Term Sheet Templates

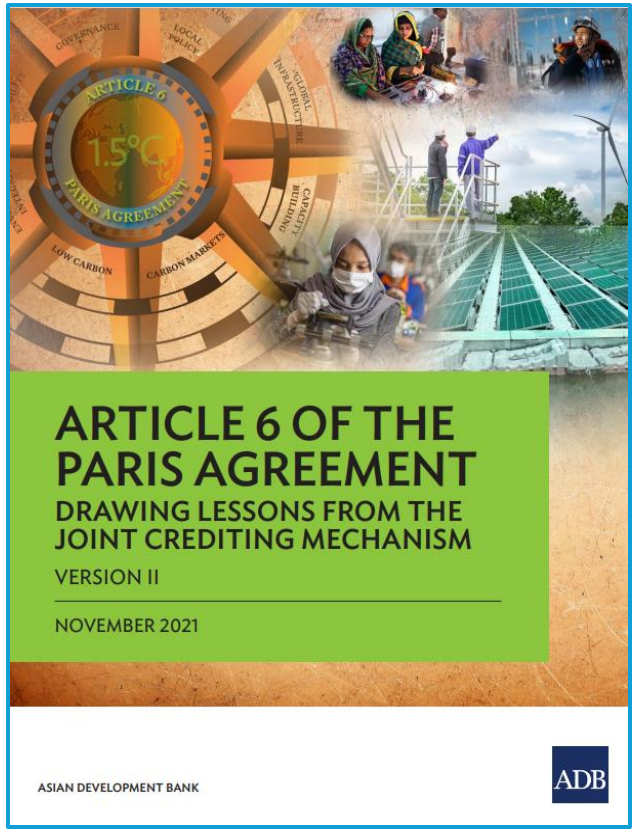
Japan Fund for the Joint Crediting Mechanism

- Commenced Operation in June 2014.
- **Financial Contribution: $137.30 million by the Ministry of Environment Japan, Government of Japan.**
- Provide financial incentives (grant) for the deployment of advanced low-carbon technologies and solutions.
- Support GHG mitigation actions through the Joint Crediting Mechanism, a bilateral carbon market mechanism between Japan and the DMCs, aligned with Article 6.2 of the Paris Agreement.
- Provide co-financing support to ADB-financed projects including investment projects financed by ADB or ADB administered funds, and ADB TAs for developing JFJCM pipeline projects.

Knowledge Products

ADB publications on promoting the JCM as a forerunner of Article 6.2 mechanisms.

https://www.adb.org/publications/article-6-paris-agreement-lessons-jcm



https://www.adb.org/pubications/article-6-paris-agreement-lessons-jcm-v2

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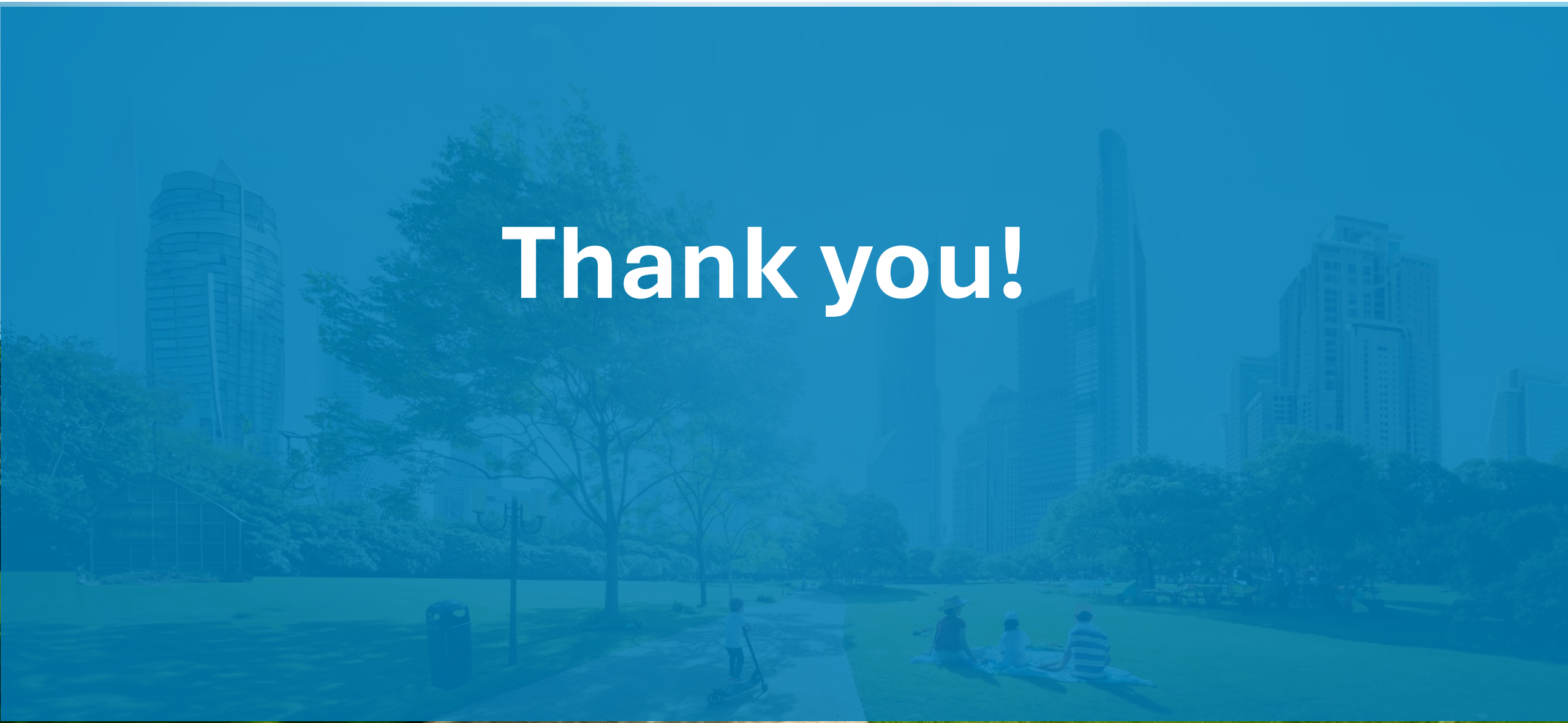

Thank you!