

ADB Trust Fund: Japan Fund for Joint Crediting Mechanism (JFJCM)

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2. Outline of Japan Fund for Joint Crediting Mechanism (JFJCM)
3. Advanced Low Carbon Technologies eligible for JFJCM
4. Examples of JFJCM Projects
5. Website and Contact Information of JFJCM

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Outline of Asian Development Bank (ADB)

ADB, established in 1966, is dedicated to reducing poverty in Asia and the Pacific through inclusive economic growth, environmentally sustainable growth and regional integration. ADB currently has 67 members.

Relations with Japan:

Japan is a founding member of ADB and the largest shareholder (15.624%), having votes of 12.798% of total membership.

ADB's Vision:

An Asia and Pacific region free of poverty

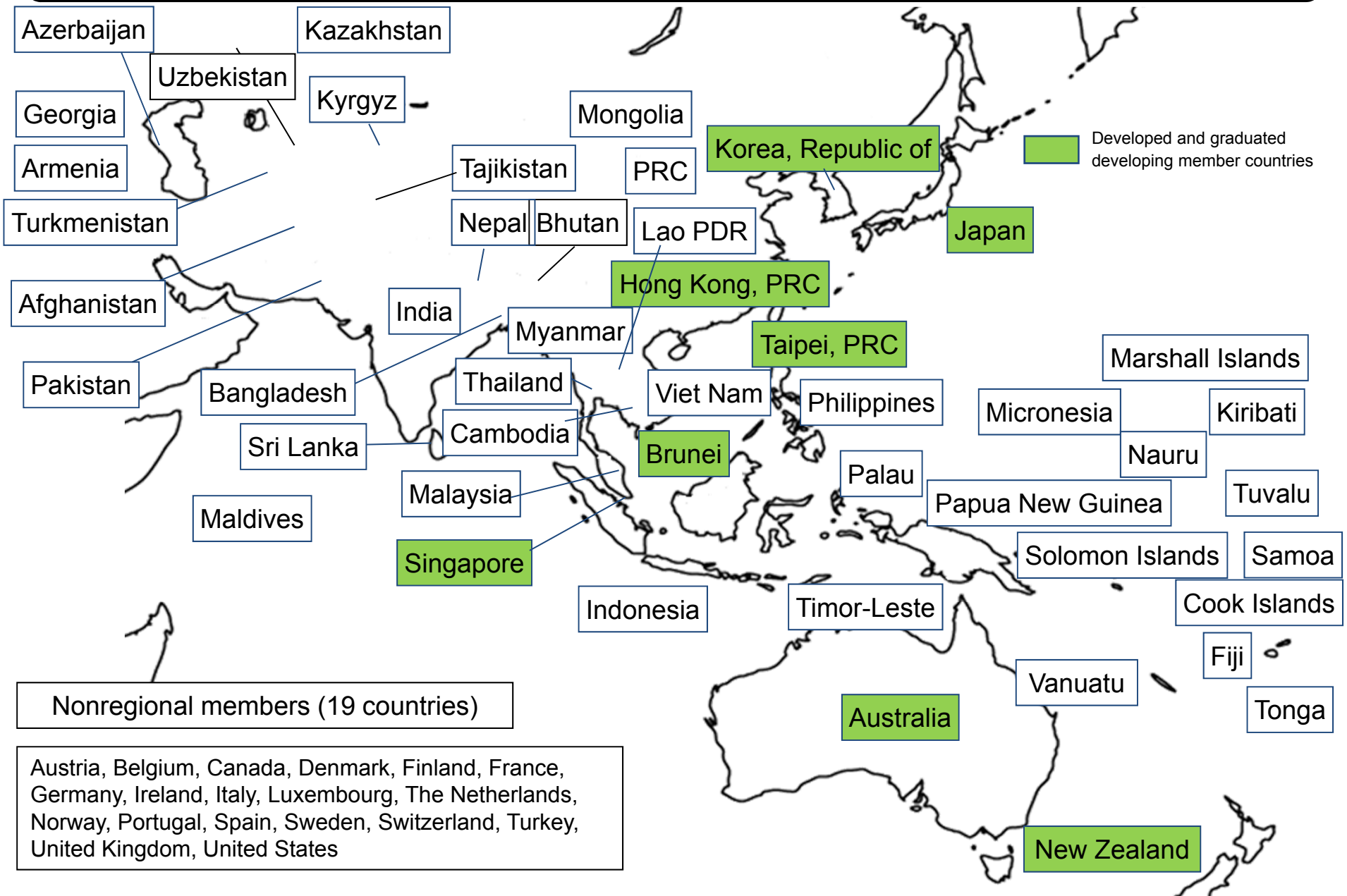
ADB's Mission:

To help our developing member countries reduce poverty and improve quality of life

ADB's Mode of Operation:

- ADB finances projects and programs in the territories of its developing members.
- Main instruments comprise loans, equity investments, guarantees, grants, and technical assistance.
- ADB mobilizes financial resources through its co-financing operations.
- ADB also provides policy dialogues and advisory services.

ADB Members



Nonregional members (19 countries)

Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States

Outline of Asian Development Bank (ADB)

Source: Annual Report 2015

Headquarter	Manila, Philippines
Foundation	1966
Members	67 (48 of which are from Asia and the Pacific)
President	Takehiko Nakao (2013~, all former Presidents are Japanese)
Subscribed Capital	USD 147 Billion (end of 2015) (Paid-in; USD 7.4 Billion, Callable USD 139.7 Billion)
Main Shareholders	Japan (15.6%), USA (15.5%), PRC (6.5%), India (6.3%), Australia (5.8%) etc. (end of 2015)
Loans, Grants, Others	USD 16.29 Billion (in 2015)
Technical Assistance	USD 141 Million (in 2015)
Co-Financing	USD 10.74 Billion (including Trust Funds) (in 2015)
Investment, Loan balance	USD 83.4 Billion (end of 2014)
Major Recipients	India, PRC, Pakistan, Indonesia, Bangladesh (in 2015)
Staff number (Headquarter)	3,105 (1,104 of which are international staff (152 Japanese) (end of 2015)

Fiscal Resources of Asian Development Bank (ADB)

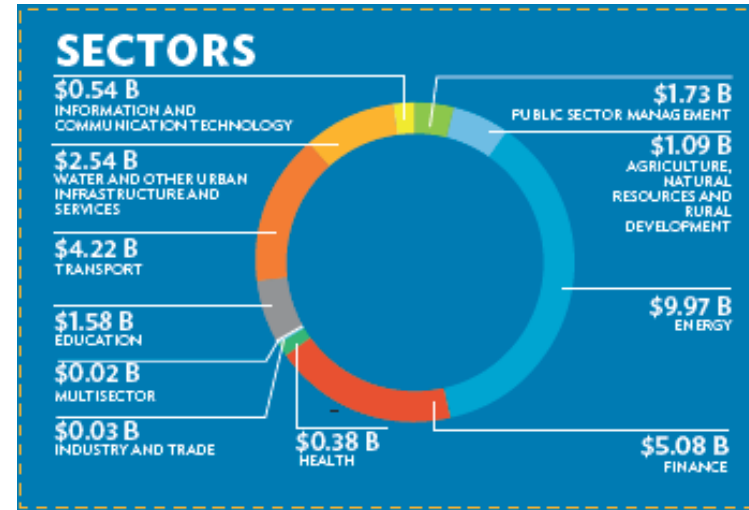
- ADB's financial resources consist of Ordinary Capital Resources (OCR) and Special Funds.
 - **Ordinary Capital Resources (OCR)**
 - (1) Paid-in capital provided by shareholders
 - (2) Funds borrowed from capital markets and private placements
 - (3) Accumulated retained income (reserves)
 - *OCR loans are provided to middle-income countries at a quasi-market rate.*
 - **Special Funds**
 - the Asian Development Fund (ADF), the Technical Assistance Special Fund (TASF), the Japan Special Fund (JSF), ADB Institute (ADBI), the Climate Change Fund (CCF) etc.
 - Japan has been the top contributor to ADB's Special Funds
 - *ADF offers concessional loan and grant to low-income countries.*

In May, 2015, the initiative of combining the ADF's equity and lending operations with the OCR balance sheet was approved, and becomes effective in January, 2017.

ADB's Operation by sector and region

ADB's operation amount by sector in 2015

Sector	Operation Amount (Billion USD)
Energy	9.97
Finance	5.08
Transport	4.22
Water and Other Urban Infrastructure and Services	2.54
Public Sector Management	1.73
Education	1.58
Agriculture, Natural Resources and Rural Development	1.09



ADB's operation amount by region in 2015



Region	Operation Amount (Billion USD)
Southeast Asia	7.95
South Asia	7.80
Central and west Asia	7.30
East Asia	3.12
Pacific	0.46

Source : Annual Report 2015

ADB's Contribution to Climate Finance (2015)

Global Climate Finance

Finance Sources related to Climate Change	Unit (USD Billions)
Public	148 (38%)
-National Development Financial Institutions	66
-Multilateral Development Financial Institutions	47 (12%)
-Bilateral Development Financial Institutions	17
-Climate Funds	2
-Governments and Agencies	15
-Others	1
Private	243 (62%)
Total	391

Source: Climate Policy Initiative. The Global Landscape of Climate Finance 2015.

*Note: External resources managed by Development Financial Institutions are excluded for the purpose of minimizing the risk of double counting.

ADB's Climate Finance

Area	ADB resources (USD Millions)	External resources (Co-financing etc) (USD Millions)	Total (USD Millions)
Mitigation	2,372	189	2,561
Adaptation	283	73	356
Total	2,655	262	2,917

Source: 2015 Joint Report on Multilateral Development Bank's Climate Finance (August 2016)

Approaches to Climate Finance Mobilization by ADB

Deploying its own resources	Deploying concessional resources	Maximizing market mechanisms	Catalyzing private capital
<p>Ordinary Capital Resources / Asian Development Fund (for sovereign and non-sovereign projects)</p> <ul style="list-style-type: none"> Loans Grants Equity investments Guarantees technical Assistance Direct Value-Added Cofinancing 	<p>Internally-managed funds</p> <ul style="list-style-type: none"> Clean Energy Financing Partnership Facility (CEFPF) <u>Fund size: USD 138 million (cumulative since 2007)</u> Climate Change Fund (CCF) <u>Fund size: USD 50 million (cumulative since 2008)</u> Others with bilaterals <p>Externally-managed funds</p> <ul style="list-style-type: none"> Climate Investment Funds (CIFs) <u>Fund size: USD 1.6 billion (ADB administered), USD 8.0 billion (Total) (cumulative since 2008)</u> Global Environment Facility (GEF) <u>Fund size: USD 10.5 billion (Grants), USD 51 billion (Co-financing) (cumulative since 1991)</u> Green Climate Fund (GCF) <u>Fund size: USD 10.2 billion (cumulative since 2010)</u> 	<p>Carbon finance</p> <ul style="list-style-type: none"> Asia Pacific Carbon Fund (closed in 2014) Future Carbon Fund <p>Carbon Market Technical Support Facility</p> <ul style="list-style-type: none"> CDM support Domestic emissions trading <p>Other market mechanisms</p> <ul style="list-style-type: none"> Japan Fund for the Joint Crediting Mechanism <u>Fund size: USD 42.6 million (JPY 4.8 billion) (cumulative as of 2016)</u> Renewable energy credits; FIT 	<p>Direct project finance (lending, guarantees, syndications), and equity investment</p> <p>Public private partnerships: (PPPs) working with client DMCs across stages of PPPs</p>

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5. Website and Contact Information of JFJCM

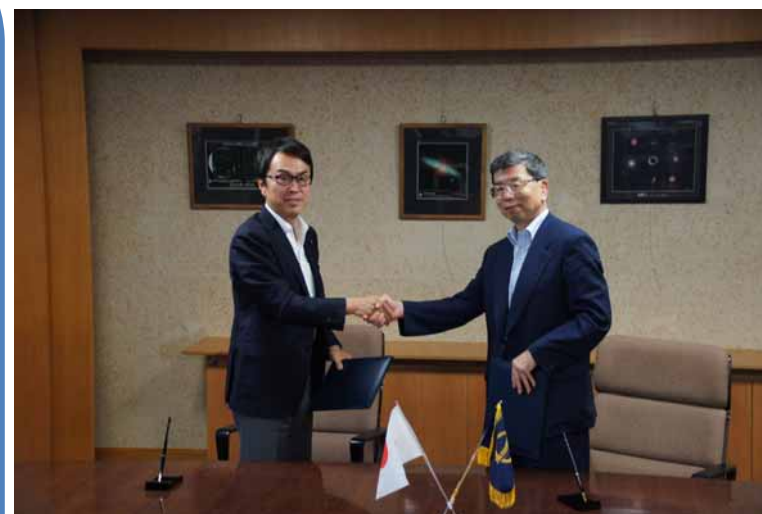
Main activities related to JFJCM

- June 25th, 2014 Announced establishment of JFJCM by the Minister of Environment, Japan (MOEJ) and ADB President
- February 2nd, 2015 1st MOEJ-ADB Environmental Policy Dialogue
- March 23rd, 2015 Adoption of 1st JFJCM project
(Smart Micro-Grid system for POISED Project in Addu atoll, Maldives)
- January 18th – 19th, 2016 2nd MOEJ-ADB Environmental Policy Dialogue

【Outline of Letter of Intent on Cooperation for Environment】

- ✓ Areas of Cooperation
 - (i) climate change mitigation and adaptation
 - (ii) conservation and sustainable use of biodiversity
 - (iii) chemical management
 - (iv) air quality management
 - (v) waste water management
 - (vi) solid waste management
 - (vii) environmentally sustainable cities
 - (viii) Other areas of environmental protection and improvement as may be confirmed by both Participants.

- ✓ Forms of Cooperation
 - (i) Cooperation for effective implementation of JFJCM
 - (ii) Support for knowledge networks and environment related institutions
 - (iii) Support for knowledge exchange and activities relating to capacity and human resource development
 - (iv) Participation of experts from the MOEJ and ADB in events, seminars, workshops etc.



Minister of Environment, Japan and ADB President in 2014

Establishment of JFJCM (May, 2014)

<http://www.adb.org/documents/japan-fund-for-the-joint-crediting-mechanism>

JFJCM Purpose and Scheme

Draft Budget for FY2017

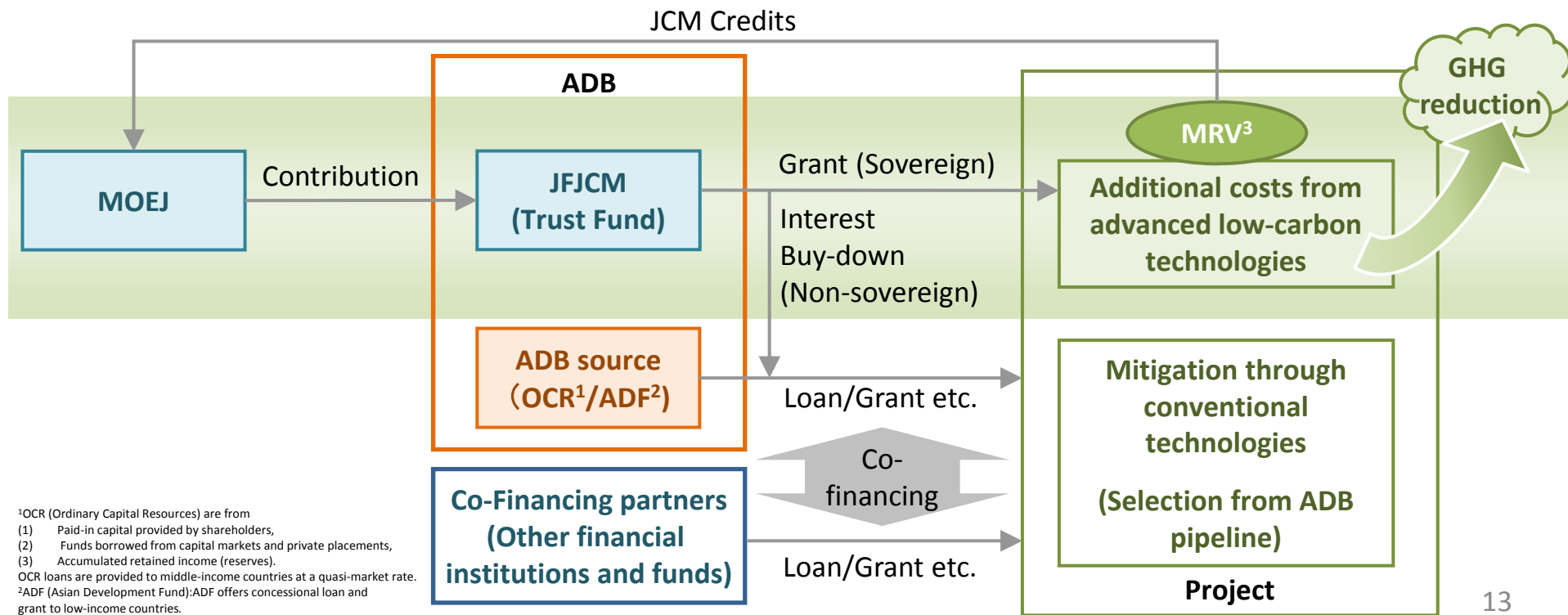
JPY 1 billion (approx. USD 9million) ※JPY 1.2 billion in 2016, and 1.8 billion in 2015 and 2014 respectively

Scheme

To provide the financial incentives for the adoption of advanced low-carbon technologies which are superior in GHG emission reduction but expensive in ADB(Asian Development Bank)-financed projects

Purpose

To develop ADB projects with sustainable and low-carbon transition perspective by introducing advanced low-carbon technologies as well as to acquire JCM credits



¹OCR (Ordinary Capital Resources) are from
 (1) Paid-in capital provided by shareholders,
 (2) Funds borrowed from capital markets and private placements,
 (3) Accumulated retained income (reserves).
 OCR loans are provided to middle-income countries at a quasi-market rate.
²ADF (Asian Development Fund): ADF offers concessional loan and grant to low-income countries.
³MRV: Measurement, Reporting, Verification

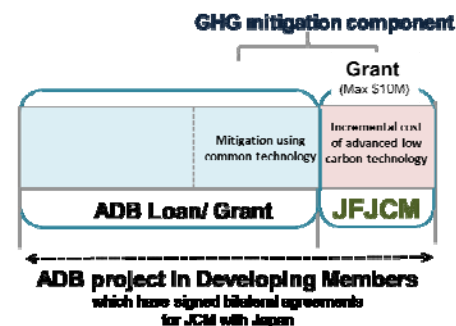
Eligible Countries for JFJCM and Use of JFJCM

Eligible Countries for JFJCM

- Japan has established the JCM scheme with 16 countries as of December 2016 and 10 countries are ADB developing member countries, being eligible for JFJCM.
 - (1) Bangladesh, (2) Cambodia, (3) Indonesia, (4) Lao PDR, (5) Maldives, (6) Mongolia, (7) Palau, (8) Viet Nam, (9) Myanmar and (10) Thailand
- In addition, the Philippines and Japan signed an aide memoire with intent to establish the JCM.

Use of JFJCM

- **Sovereign Projects (Finance to Governments / Public Sector (State-owned enterprises etc.))**
 - Max: (1) Project cost < USD50MM: USD 5MM
 - (2) Project cost > USD50MM: Smaller of (i) 10% of the project cost and (ii) USD 10MM
 - Grant for incremental cost of adopting advanced low-carbon technologies from “Business-As-Usual” (including Goods, Services, Consulting services, Training for Capacity Building)
- **Non-sovereign Projects (Finance to Private Sector)**
 - Max: Smaller of (i) 10% of the project cost and (ii) USD 10MM
 - Support margin component of the interest rate of the ADB loan



Comparison of JFJCM and JCM Model Project (FY2016)①

Item	JFJCM		JCM Model Project by MOEJ	
	Sovereign Project	Non-Sovereign Project		
Items related to Finance	Grant Rate	(1) Project cost < USD50MM: –USD 5MM (2) Project cost > USD50MM: –Smaller of (i) 10% of the project cost and (ii) USD 10MM	Smaller of (i) 10% of project cost and (ii) USD 10 MM	The first project in the host country: Max. 50% of the CO2 reduction-related cost Second to fourth projects: Max. 40%, From fifth projects and on: Max. 30%
	Project Formation	Governments / Public Sector (State-owned enterprises etc.)	Private Sector	Private Sector
	Bidding Requirement	International Competitive bidding	Procurement needs to be made though competitive processes	Individual negotiation (Bidding may be required in case government of a host country is a counterpart)
	Confirmation of finance feasibility	Confirmed by MOEJ and ADB at ITD and JCM Application stage		Confirmed by Executive body and MOEJ
	Cost Effectiveness ※	Equal to or less than USD 50/ton CO2 (in case Grant amount exceeds USD 5MM) Equal to or less than USD 100/ton CO2 (in case Grant amount goes below USD 5MM)		
	Applicant	Governments of the eligible ADB developing member countries (DMCs)	Private entities in DMCs	Japanese private entities only

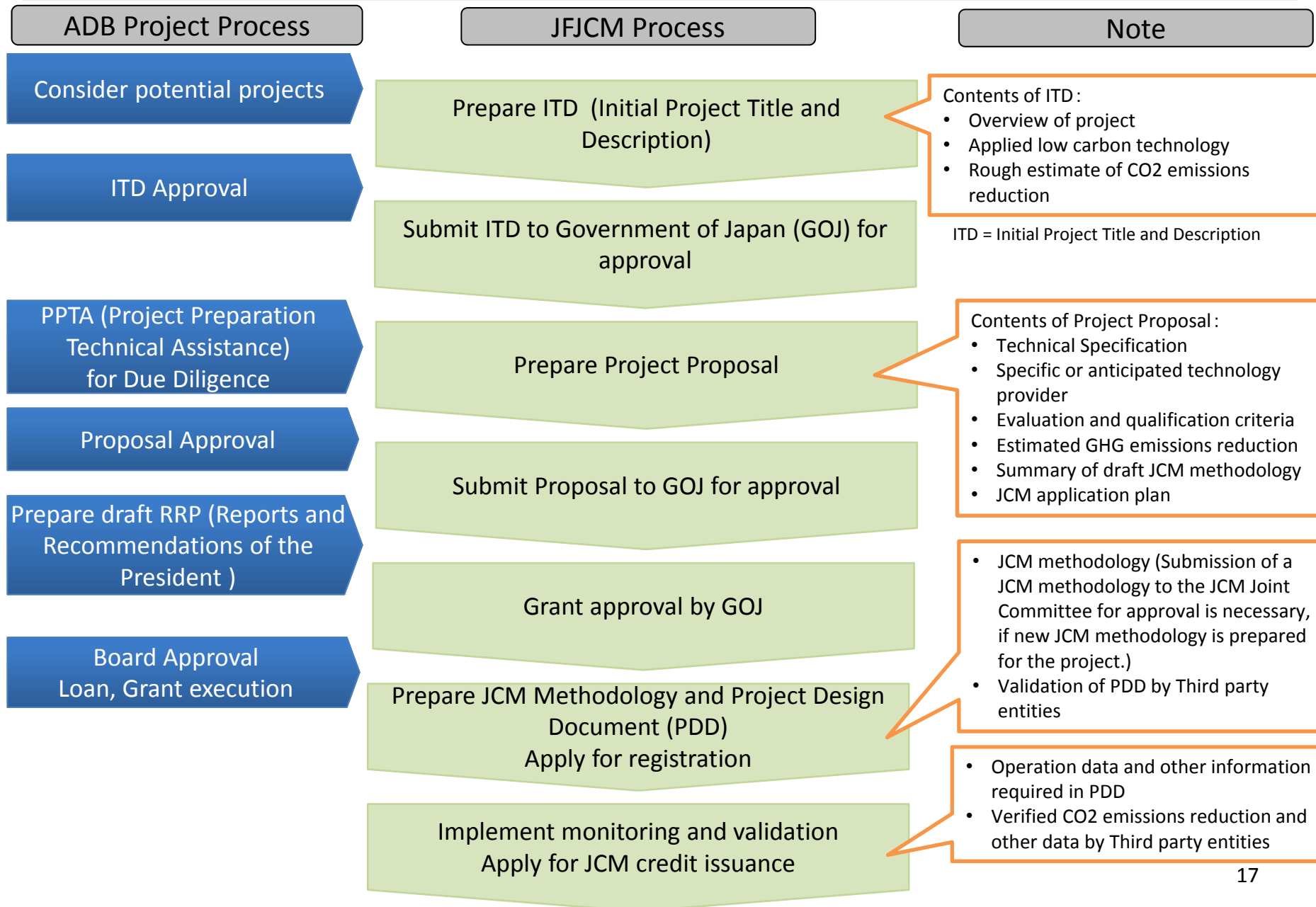
※Note: -Cost Effectiveness = Grant Rate / (Annual GHG emission reduction × Monitoring period)
 -Exchange rate for cost effectiveness is set as USD 1 = JPY 100
 -The value of Cost Effectiveness is only a guide, not a stipulated standard.

Comparison of JFJCM and JCM Model Project (FY2016)②

Item	JFJCM		JCM Model Project by MOEJ	
	Sovereign Project	Non-Sovereign Project		
Items related to JCM Process	Methodology, PDD	ADB has a scheme of technical assistance		Supported by MOEJ budget
	Responsibility of TPE cost (validation, verification)	ADB has a scheme of financial assistance for some portion		Validation and 1 st verification supported by MOEJ budget.
	Monitoring Period	※		Japanese legal durable year of the facility
	Credit Distribution	※		More than 50% of the credits delivered to Japanese Government
	Verification Frequency	※		First time: one year after monitoring begins Second and third time: year of 2020 and 2030 Verification is also required at the end of legal durable year of the facility.
	Responsibility of MRV	Loan borrower (Project proponent)		Japanese representative of international consortium
	Confirmation of eligibility for JCM project	Confirmed by the Joint Committee consists of governmental representative of Japan and a host country		
	Targeted greenhouse gas	7 GHGs types defined by UNFCCC (energy-related CO2 emissions reduction needs to be included)		

Regarding the item of ※, it is to be determined by discussion with ADB based on the rules of JCM Model Project by MOEJ.

JFJCM Project Process



Average duration of JFJCM project formulation and examination points

- Average lead time for JFJCM project adoption

Sovereign project : **2~3 years** from financing consultation with ADB staff to Board Approval※

Non-sovereign project : **6 months~1 year** from financing consultation with ADB staff to Board Approval

※Depending on project characteristics, degree of maturity, and safeguards requirement etc.

- Points of Attention for project examination

Examination can go smoothly by preparing required information and establishing institutional arrangements based on the points of project examination described below.

Main points of JFJCM project examination

- Projects must be implemented in JCM partner countries
- Installation of advanced low-carbon technologies and long-term GHG emissions reduction
- Cost effectiveness of GHG emissions reduction
- Co-benefit effects

Main points of ADB project examination

Sovereign project :

Cited from "PROCESSING SOVEREIGN AND SOVEREIGN-GUARANTEED LOAN PROPOSALS"

- Project's technical and financial design
- Macro- and microeconomic institution
- Sectoral policy
- Safeguard contexts, country partnership strategy (CPS)
- Operational experience, and institutional capacity
- Lessons from evaluations of previous projects
- Cost estimates and financing plans
- Implementation arrangement

Non sovereign project :

Cited from "OPERATION MANUAL BANK POLICY AND PROCEDURE, NONSOVEREIGN OPERATIONS"

- Project's technical feasibility, market prospects, financial and economic viability
- Best practices of corporate governance
- Environmental and social soundness
- Integrity, experience, success record, financial resources, and competence of the sponsors and/or shareholders and management

Typical Information required by ADB for non-sovereign project

Below is a typical list of information for non-sovereign projects that require ADB assistance

Source: <http://www.adb.org/site/private-sector-financing/applying-assistance>

1. Executive Summary

- Project's summary and important points
- Explain how and why ADB can assist the project

2. Project description

- Describe project in detail
- Discuss how much support has been obtained from the government, lending institutions and other investors.

3. Feasibility study (F/S)

- Establish the technical, financial, economic, and environmental and social viability
- F/S should be prepared by a reputable consultant

4. Background and sponsor(s)

- Ownership and management structure
- Sponsor's experience, financial history and plans

5. Project ownership structure

- The proposed ownership and management structure
- Explain the legal, tax, and other advantages
- Contractual arrangements with any company

6. Project's implementation arrangements

- Construction and supervision methodology
- Provide the draft construction contracts
- Project's schedule, liquidated damage provisions, and performance bond requirements

7. Project operations

- Describe operational arrangements
- Discuss expected efficiency levels of operation, maintenance plan, training

8. The market

- Market, marketing arrangements, off-take concession and/or purchase agreements
- Provide current and projected markets
- Market risks, credit-worthiness of customers

9. Environmental and social aspects

- Confirm environmental and social impacts
- Provide environmental and social management plans

10. Cost estimates

- Cost estimate analysis
- Detailed taxes and duties, development expenses, working capital requirements, and investment payments

11. Financing plan

- List the financing sources
- Escrow and retention arrangements, dividend policy, ADB's mode of assistance that applicant desires

12. Financial model

- Financial projections for the project
- Financial model, balance sheet, profit and loss statement, cash flow statement etc.

13. Risk analysis

- Risk analysis in implementing and operating
- Mitigation measures and cost responsibility

14. Permits and licenses

- List all permits and clearances required, issuing authority, the date of issue

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Technologies eligible for JFJCM

Sector	Category	Examples of advanced low-carbon technologies
Energy	Renewable Energy	Floating type offshore wind power generation Highly efficient biomass power generation especially for biomass which is difficult to utilize Highly efficient small hydro-power generation
	Energy Efficiency	Highly efficient devices with inverter such as pump, air conditioner, and fan Energy saving energy distribution technology such as conductor, transformer Low carbon building with design, insulation, energy saving facilities
	Smart Grid	Efficient and fast charging battery storage EMS for the distribution (Community Energy Management System (CEMS)) Building Energy Management System (BEMS)
Transport		Highly efficient train, ship Electric-bus and/or taxi
Water		Highly efficient devices with inverter such as pump Highly efficient wastewater treatment equipment Demand side water saving technology
Urban		Waste to energy
Agriculture		High efficient pump for irrigation

Note: The above list provides examples of advanced low carbon technologies that would be eligible but this does not limit the technologies to be supported to those included in this list.

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1st JFJCM project

-Smart Micro-Grid system for POISED Project in Addu atoll, Maldives-

*JFJCM project installs **smart micro-grid technology with advanced battery system and energy management system (EMS)** as advanced low-carbon technologies, which was not introduced by the existing ADB project of Solar PV with smart grid systems*

- **Existing ADB project “Preparing Outer Islands for Sustainable Energy Development (POISED)”**

- Total project cost USD110 MM (including co-financing from CIF SREP, EIB and IDB)
- Install Solar PV with smart grid systems in 160 islands

<Project Background>

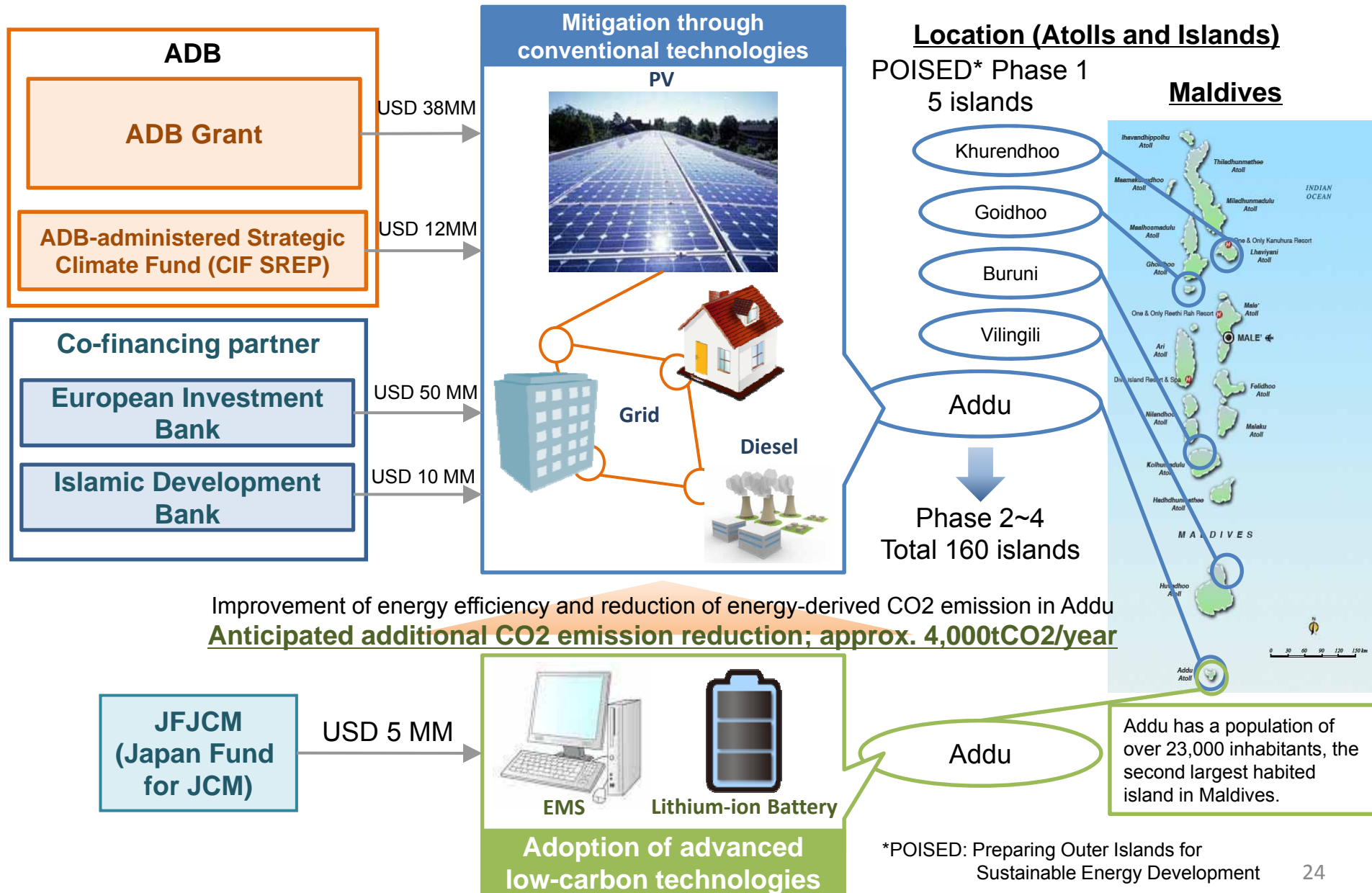
- Maldives: 26 atolls and land area of about ~300 km² with a population of 340 thousands
- Electrification rate is 100%, powered almost entirely by diesel (250MW)
- Government Goal: Carbon neutral till 2020

- **Additional assistance using JFJCM**

- USD 5 MM Grant to Addu atoll sub-project
- Install smart micro-grid technology with advanced battery system and energy management system (EMS)
- Increased Solar PV penetration level in the island (33% → 54%)

1st JFJCM project

-Smart Micro-Grid system for POISED Project in Addu atoll, Maldives-



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Contact Windows of JFJCM

【General】

- JFJCM Fund Manager: jfjcm@adb.org
- ADB Japan Representative Office (JRO): Contact Form
(<http://www.adb.org/ja/japan/contacts>)

【Specific projects】

- Sovereign project: Project Officer of the concerned project
or ADB Japan Representative Office (JRO): Contact Form
(<http://www.adb.org/ja/japan/contacts>)
- Non-sovereign project: Private Sector Operations Department (PSOD)
The URL below shows contacts of the relevant Division and country offices
(<http://www.adb.org/site/private-sector-financing/contacts>)

【JFJCM website】

<http://www.adb.org/site/funds/funds/japan-fund-for-joint-crediting-mechanism>

