



# ADB's Carbon Market Initiative

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24-28 November 2008*

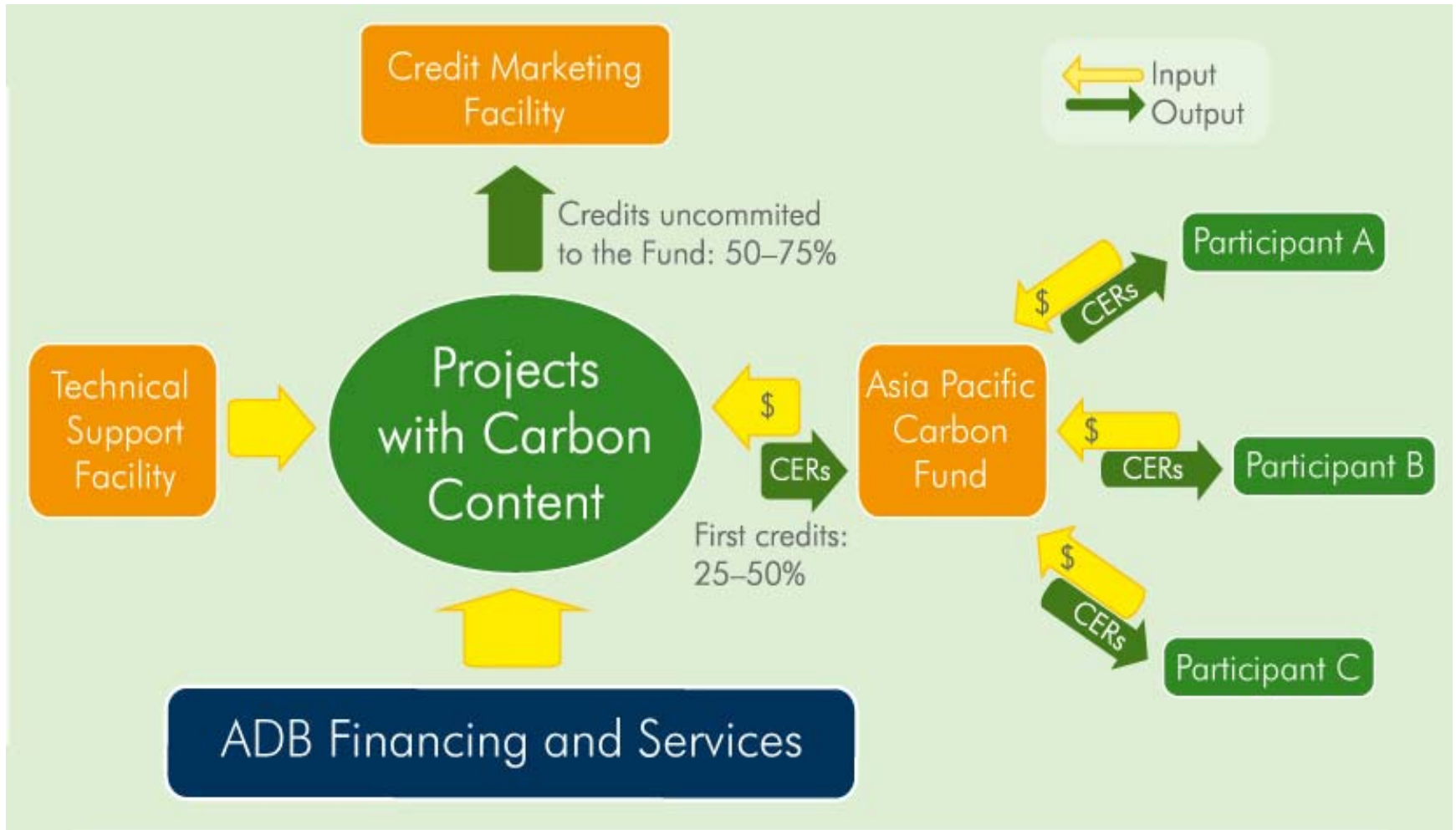


# Carbon Market Initiative

- ❑ 3 Components
  - **Asia Pacific Carbon Fund:** up-front financing against carbon credit purchase
  - **Technical Support Facility:** grant-based technical support for project preparation and implementation
  - **Credit Marketing Facility:** marketing support to project developers for additional credits
- ❑ 1 Additional component
  - **Future Carbon Fund:** similar features as APCF



# Carbon Market Initiative

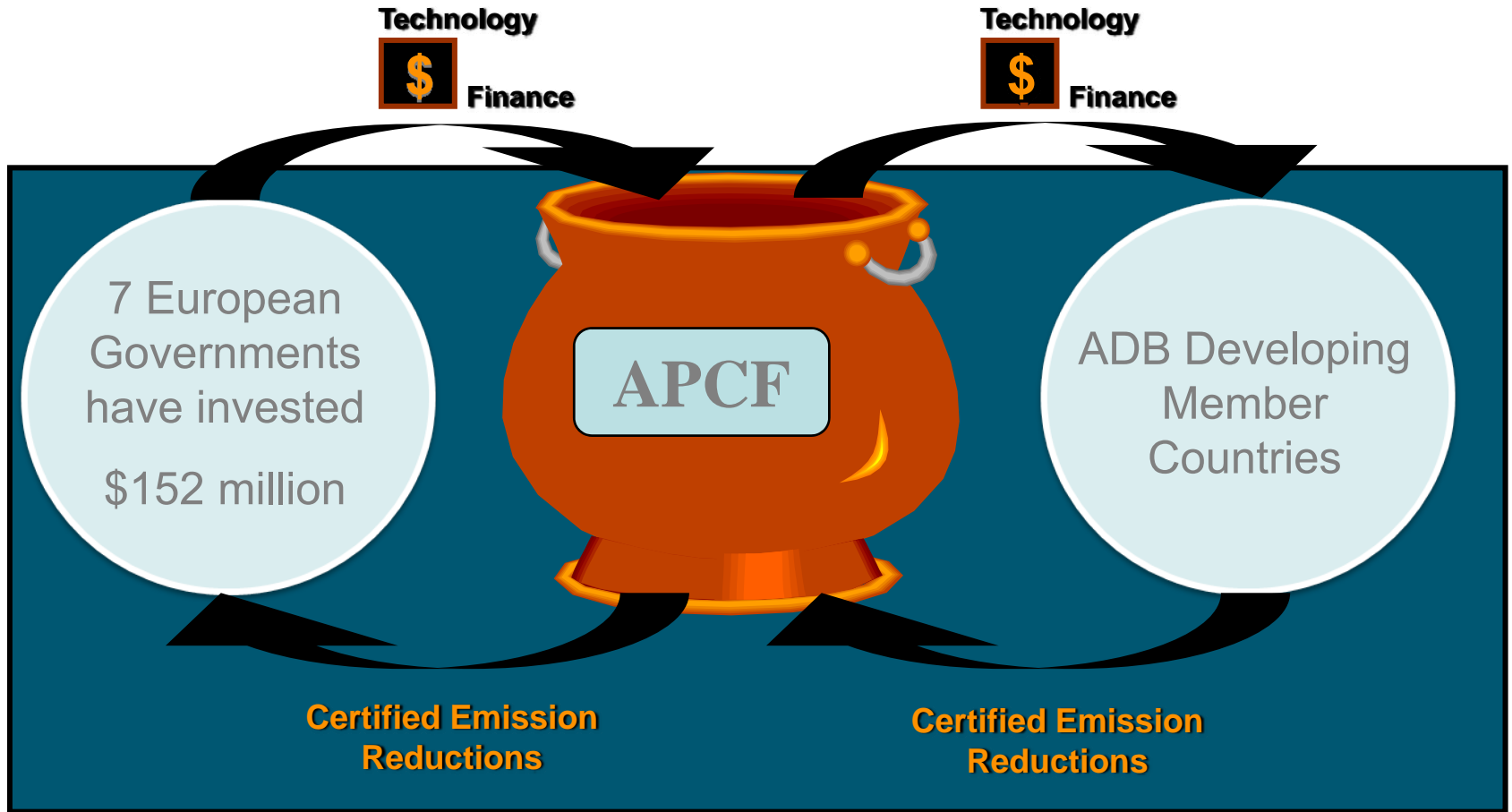


# Asia Pacific Carbon Fund

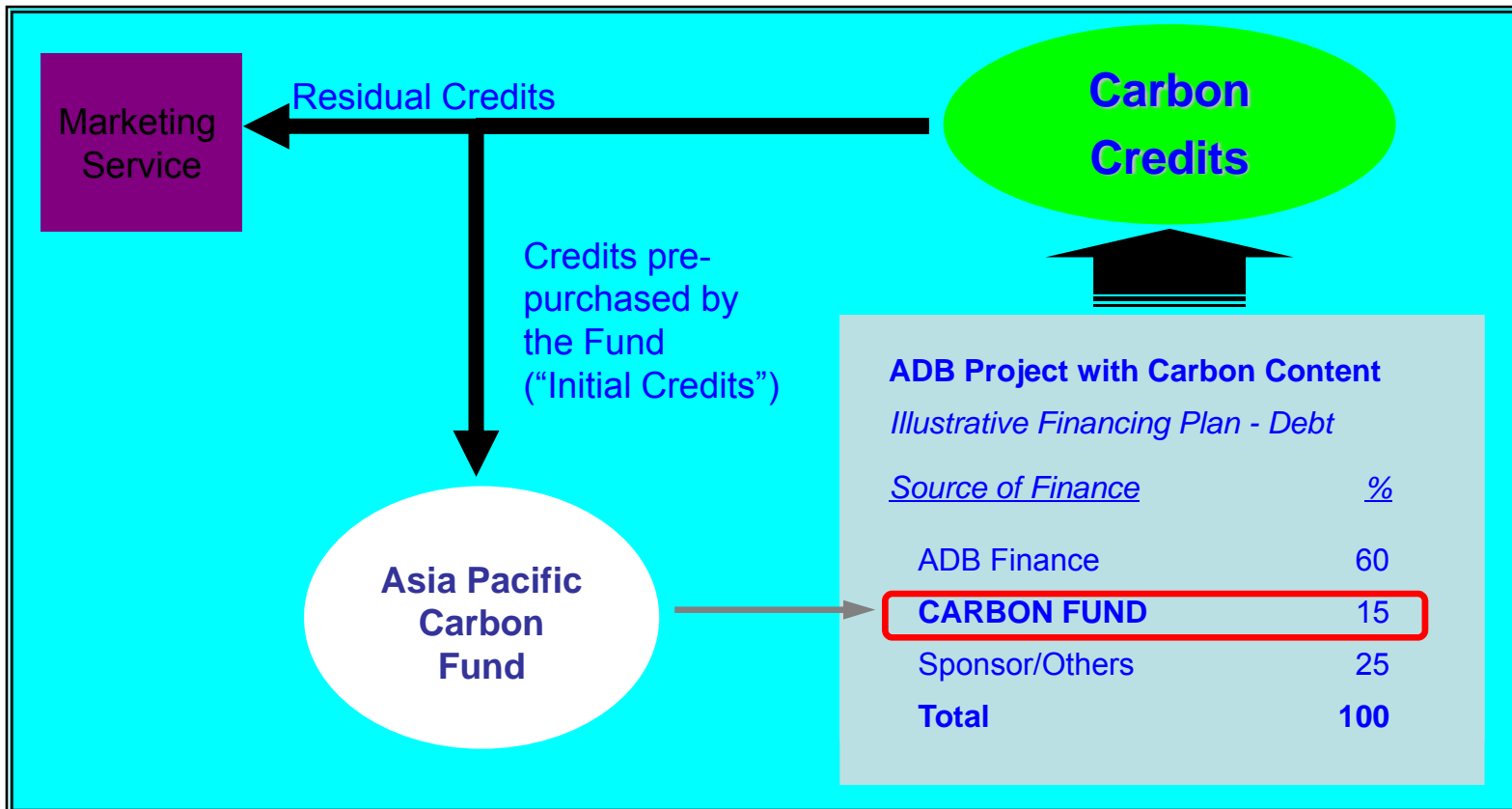
- Fund Principles
  - Increase volume of clean energy and energy efficiency projects with GHG abatement potential in developing Asia and Pacific;
  - Assist Fund participants satisfy Kyoto targets
  - catalyze investment and energy access in the Asian Pacific region.
- Fund participants are Belgium, Finland, Luxemburg, Portugal, Spain, Sweden and Switzerland
- The fund started operating in June 2007
- Fund amount: 152 M USD



# How the APCF works



# Sample Project Financing Plan



# Main APCF features cont.

- ❑ Co-finances projects alongside ADB funded projects or projects with other satisfying funding receiving ADB technical support
- ❑ Amount of CERs
  - Pay up-front 25 - 50% of first CERs to be generated up to 2012
  - Pay on delivery for the remaining % CERs generated up to 2012 for a project not generating more than 100 000 CO<sub>2</sub>e emission reductions annually
- ❑ Price of CERs
  - 3 independent quotations for each specific project → Price range
  - Discount factor: time value and prepayment risks → Adjusted price
- ❑ Payment
  - Full up-front payment for CERs after Validation/Registration and CERPA conditions precedent have been met



# APCF Workflow: 10 Steps

1. APCF Review: Accept / Reject / Request further information
2. Heads of Agreement: Key terms + Exclusivity Period
3. Documentation: (Feasibility study, PDD, Financial, Legal...)
4. Due Diligence: (Financial, Safeguards, Legal, Risk...)
5. ERPA negotiation: (Based on independent price quotes)
6. Validation (Registration)
7. APCF Board approval
8. ERPA signing
9. CER up-front payment
10. Project Registration, monitoring and CER delivery





# Technical Support Facility

- ❑ CDM Project Screening
- ❑ Upstream support in project preparation phase
  - Due diligence: technical, financial, legal, safeguards, governance
  - Capacity building trainings
  - Carbon credit valuation
  - Documentation preparation for credits (PIN, PDD, methodology)
  - Obtaining host country approvals
  - Facilitating project Validation & Registration
- ❑ Downstream support in project execution and commercialization
  - Implementation / commissioning
  - Monitoring & Verification
  - Certification & Issuance of CERs to sponsor/developer & fund



# Priority Target Projects

## ❑ Fugitive Methane Capture

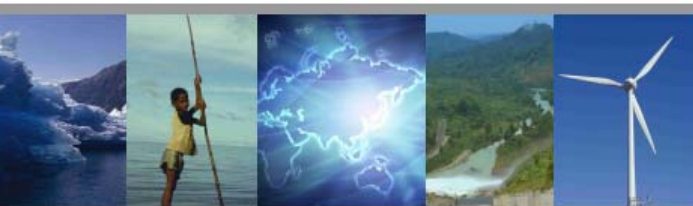
- Coalmine methane
- Municipal waste management (landfill methane)

## ❑ Energy Efficiency

- Industrial technology
- Supply-side efficiency (e.g. upgrade of generation equipment)

## ❑ Renewable Energy

- Biomass energy
- Small to mid-scale run-of-river hydropower
- Wind power
- Geothermal power



# Asia Pacific Carbon Fund operations

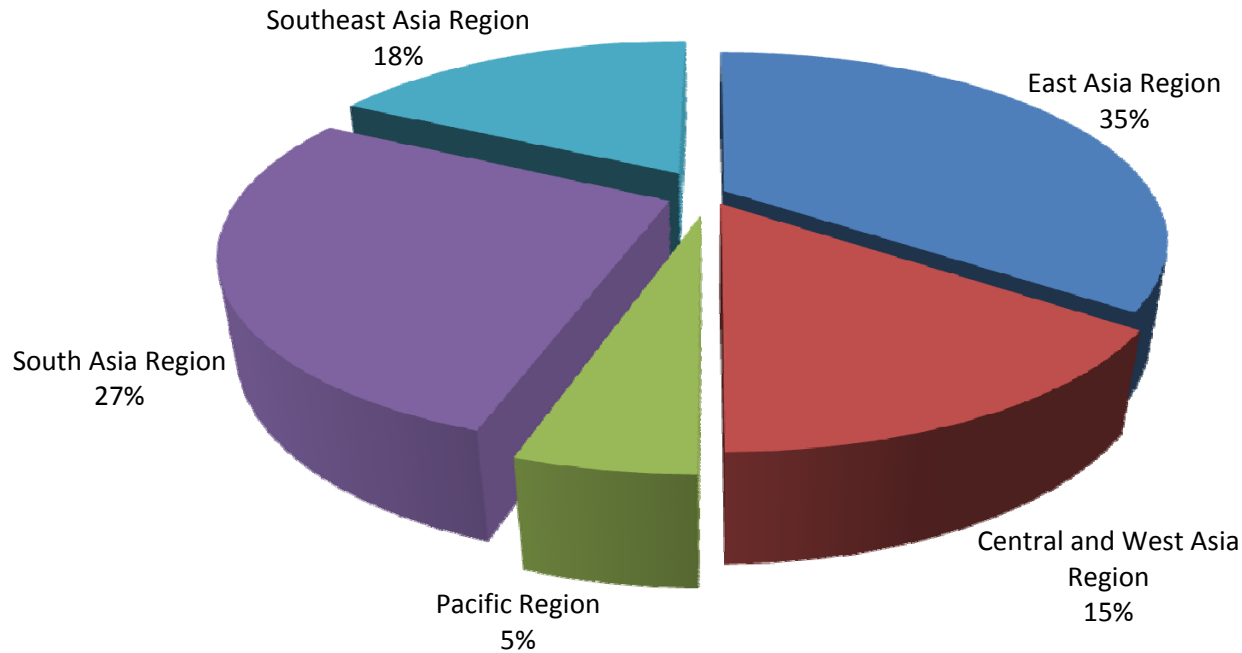


# APCF Operation

- ❑ ERPAs 12 signed or under process
- ❑ HoAs: 25 signed, 6 under process
  - ADB projects: 19 HoAs signed, 4 under process
  - Second window: 5 HoAs signed
- ❑ Total Pipeline 40 projects
- ❑ Estimate CERs up to 2012: approx. 12.6 million
- ❑ Estimate CERs for APCF: approx. 8.6 million
  - ADB projects: 29
  - Second window: 11



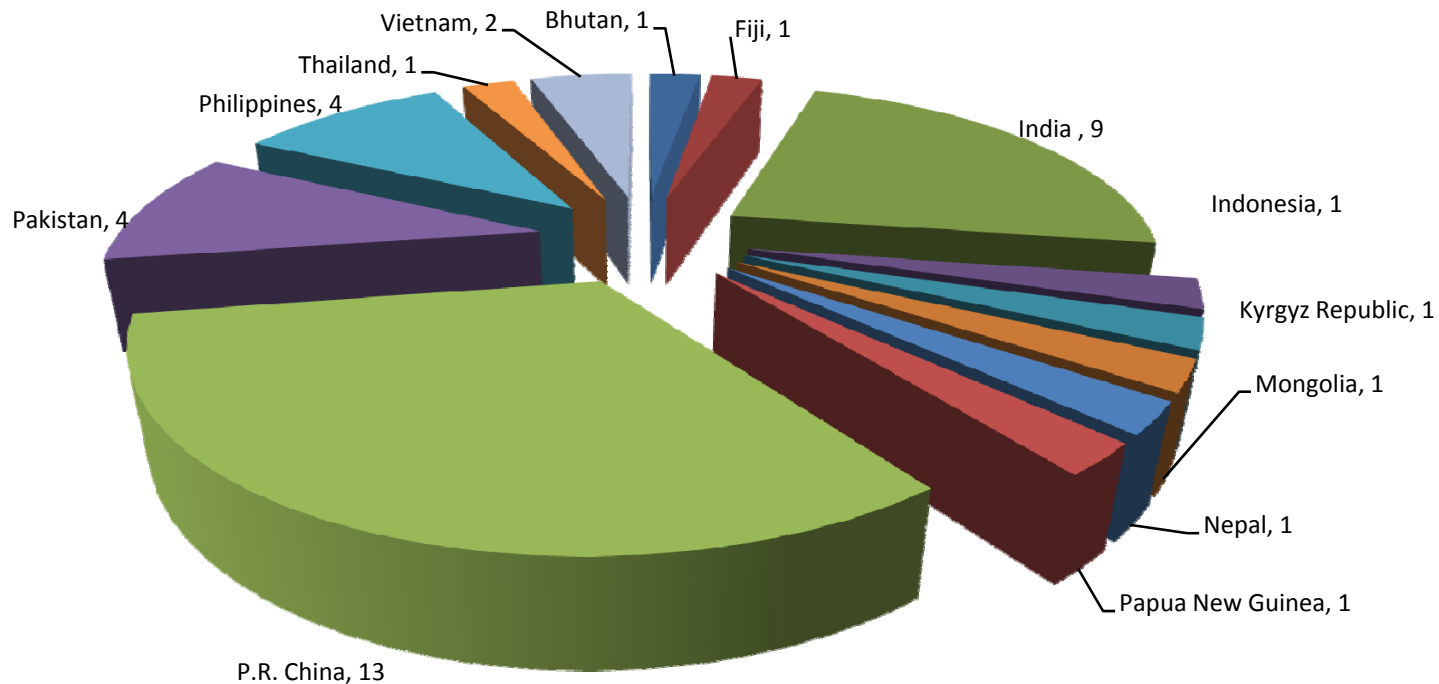
# Regional Distribution of APCF Projects



**Total No. of Projects: 40**



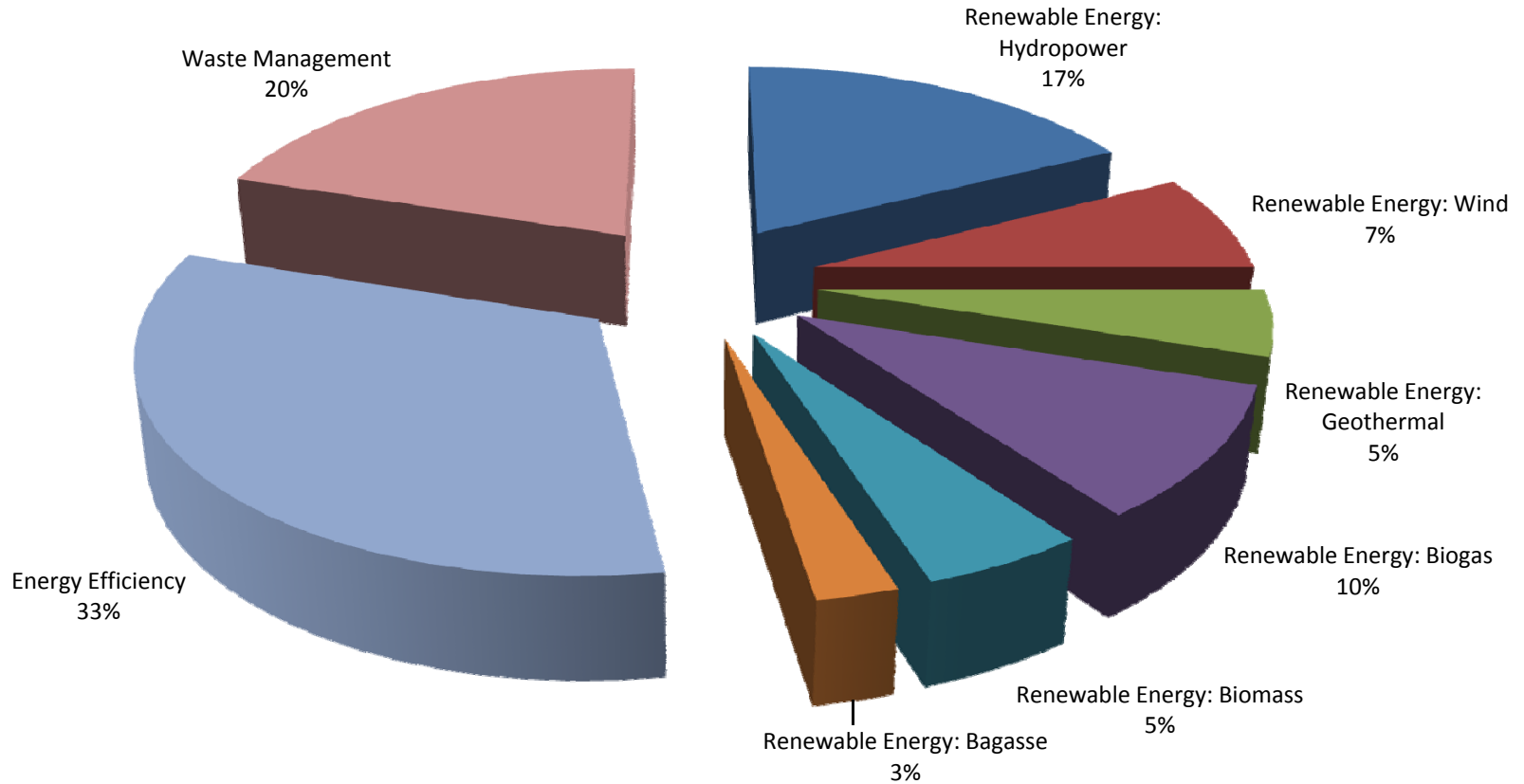
# Country Distribution of APCF Projects



**Total No. of Projects: 40**



# Project Type Distribution of APCF Projects



**Total No. of Projects: 40**



# Climate Change-Related Funds

## Mitigation

## Adaptation

## Both

### INTERNAL - DMCs

**Clean Energy Financing Partnership Facility**  
(\$95 m)

**Small Grants for Promoting Climate Change Adaptation**  
(\$1.2 m)

**Climate Change Fund**  
(\$40 m)

**Carbon Market Initiative Funds**

- Asia-Pacific Carbon Fund (\$151 m)
- Future Carbon Fund (target \$100 m)

**Water Financing Partnership Facility**  
(\$65 m, including adaptation)

**Poverty and Environment Fund**  
(\$3.6 m, including adaptation)

### EXTERNAL - GLOBAL

**Global Environment Facility (GEF) Climate Change Focal Area**  
(\$250 m/ year)

**Least Developed Countries Fund**  
(GEF as administrator)  
(\$189 m)

**Special Climate Change Fund**  
(GEF as administrator)  
(adaptation priority, target \$75 m;  
mitigation, target \$15 m)

**Clean Technology Fund of the Climate Investment Funds**  
(WB as Trustee)  
(target \$5 b)

**Strategic Priority on Adaptation**  
(part of GEF Trust Fund)  
(\$50 m)

**Strategic Climate Fund of the Climate Investment Funds**  
(WB Trustee)  
Target:

**Adaptation Fund**  
(GEF as administrator in cooperation with UNFCCC Secretariat) (\$100 m by 2009)

- Pilot Program for Climate Resilience \$500 m
- Forest Investment Prog. \$500 m
- Greening Energy Access \$500 m



# Key Initiatives on Climate Change

## Mitigation

### Low-Carbon Energy Options

### Efficient Transport Systems

### Improved Urban Sanitation and Reduction of Fugitive Methane Emissions

### Sustainable Land Use and Forestry

- Energy Efficiency Initiative
- Carbon Market Initiative
- Sustainable Transport Initiative
- Energy for All Initiative
- Cities Development Initiative for Asia

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- Sustainable Transport Initiative
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- Reduced Emissions from Deforestation and Land Degradation

# Summary APCF features

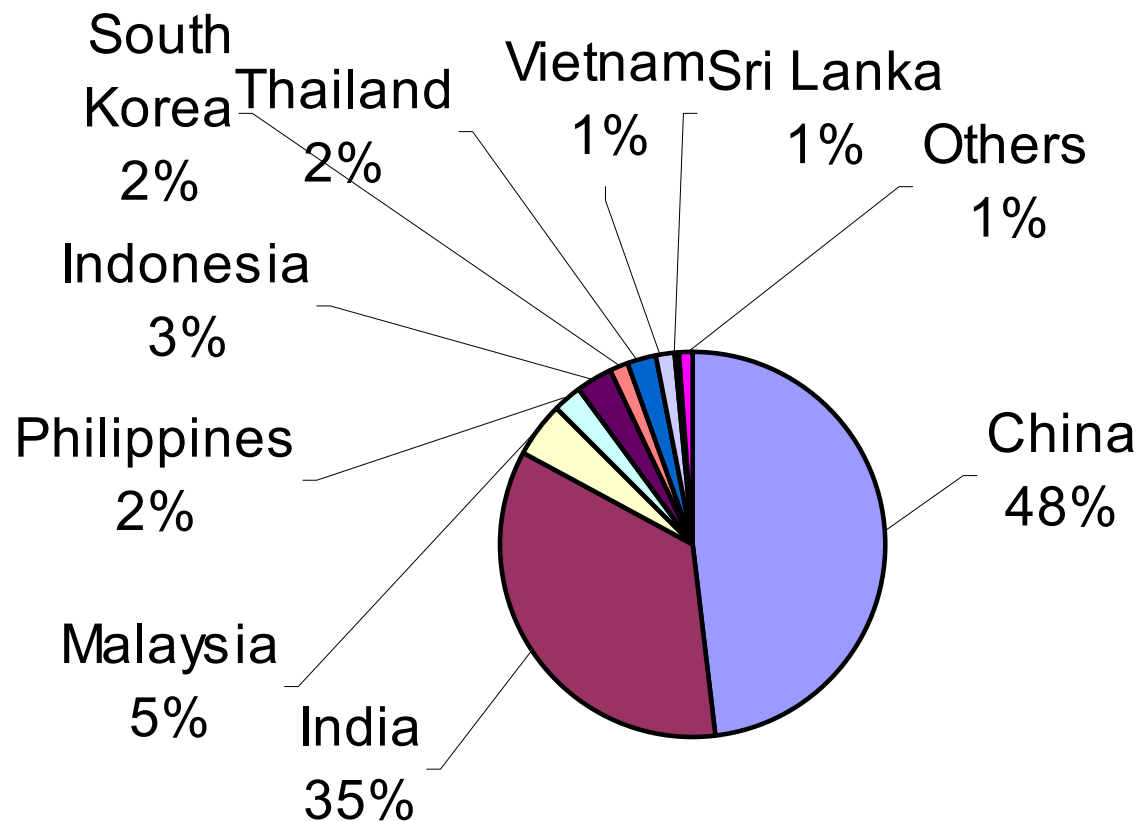
- ❑ Pay up front for carbon credits
- ❑ Technical support for CDM project development
- ❑ Take transaction costs for CDM development
  - PDD costs
  - Capacity building for monitoring the emission reductions
  - Validation / registration costs
- ❑ Do small scale projects
- ❑ Make an effort for Pacific
- ❑ Make an effort in bundling and programmatic CDM
- ❑ Future carbon fund for post 2012
- ❑ Cooperate with other ADB resources (ex Clean Energy Fund)
  - Additional funding
  - Support for CDM Capacity building



- ❑ 1190 CDM projects registered by the Executive Board
- ❑ 412 CDM projects have CERs issued
- ❑ Issued CERs: **204.3 million tCO<sub>2</sub>e**
- ❑ Expected CERs from the 949 CDM projects that are registered: **1.36 billion tCO<sub>2</sub>e by 2012**



# Number of CDM projects in Asia by country



# CDM in Pacific



- ❑ 2 CDM projects registered in Pacific
  - Fiji: Vaturu and Wainikasou Hydro Projects
    - 9.5 MW Hydro run of river
    - Methodology: AMS-I.D.
    - 25 000 t CO<sub>2</sub>e/year
  - PNG:Lihir geothermal power project
    - Geothermal
    - Methodology: ACM 2
    - 270 000 t CO<sub>2</sub>e/year
- ❑ DNA only in PNG and Fiji, appointed in Vanuatu
- ❑ 0 projects in pipeline



# CDM potentials in Pacific

- ❑ Agricultural waste, wood waste for biomass/biofuel
  - Coconut waste
- ❑ Landfill or sludge waste methane capture
  - Flaring
  - Utilization for electricity
- ❑ Fuel switch
  - Replacing kerosene in households with bio-diesel
- ❑ Run-of-river hydro
- ❑ Solar
- ❑ Wind
- ❑ Geothermal



## Lowering the transaction costs of CDM

- Small scale CDM - Simplified methodology
  - Renewable energy: max output of capacity 15 MW
  - Energy efficiency: reduced energy consumption of max 60 000 MWh per year
  - Other projects: emission reductions of max 60 000 tCO<sub>2</sub>e annually
- Bundling of CDM projects
  - Several projects under one umbrella
  - All identified from the start
  - Crediting period fixed
- CDM Programme of activities
  - Several projects under one umbrella
  - Add new activities
  - Crediting period can be renewed





- 70% of people in the PICs still do not have access to electricity
- High dependence fossil fuels - petroleum accounting for 90% of commercial energy consumption
- 365 MW of potential renewable energy capacity in the Pacific - PNG (238 MW), Fiji (107 MW), Samoa (11 MW)
- Renewable energy (SS), Methane emissions recovery, Energy Efficiency
- Forestry - Conservation/preservation, rehab/reforestation, improved forest management and reduced impact logging



- ❑ Need and request for CDM Capacity Building
  - Public/Private involvement
  - Address Industry Associations, Municipalities/local government
- ❑ DNA empowerment
  - Regional Assistance body in Pacific
- ❑ Financing mechanisms (local banks, micro financing..)
  - Up-front financing
- ❑ Technology appropriate for local conditions
- ❑ Small structures – large impacts
- ❑ Small scale - Bundling or Program of Activities
- ❑ Methodologies approved: use historic baseline – need for baseline surveys



# Ensuring CDM project performance - sustainability and maintenance

- ❑ Ownership
  - capacity building, stakeholder participation, workshops, design, responsibility
- ❑ Existing infrastructure and procedures
  - reduce costs and capacity burden
- ❑ Agreements
  - responsibilities, rights and titles, contracts
- ❑ Incentives
  - share profit, supplier responsibility
- ❑ Disbursement of benefits
- ❑ Financing of project costs



# THANK YOU FOR YOUR ATTENTION!

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# CDM Project Approval Process Flow

