



# **International Examples of Financial Mechanism for REDD+**

November 2011

# Forest Carbon Partnership Facility (FCPF)

## 37 Countries preparing for REDD+

Rich experience to share in a south-south dialogue

FCPF provides grants for readiness and

set up first Multidonor Carbon Fund



# REDD+ financial structure challenges

## Bali Conference

- Performance based approach
  - Annual contributions from Norway depend on performance -> annual revenues are uncertain
  - Size of fund is uncertain
- Make REDD+ Fund attractive for investors:
  - Fiduciary responsibilities
  - Safeguard competence
  - Quick disbursements
  - Funds tackle underlying drivers of deforestation on the ground
  - Transparent structures and technical competence
- National institutions should manage REDD+ in Indonesia in future:
  - Enhanced role of national banks
  - Well structured REDD+ Agency
  - Provincial ownership and regional coordination
  - Good implementing agencies, ready to manage programs and projects

A photograph of a dense tropical forest with various green plants and palm leaves, serving as a background for the title text.

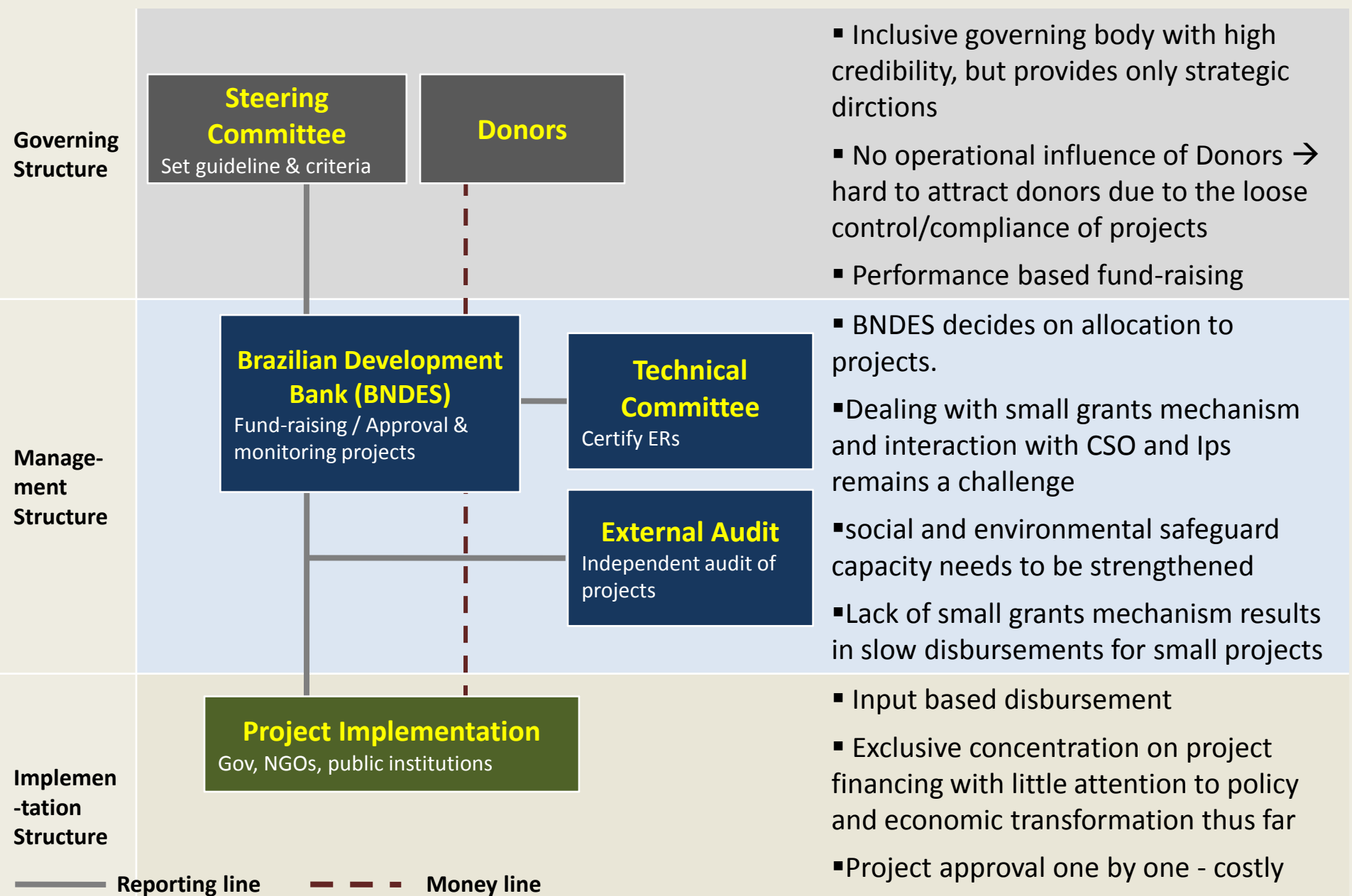
**Lessons from relevant Initiatives**

# **Amazon Fund - Brazil**

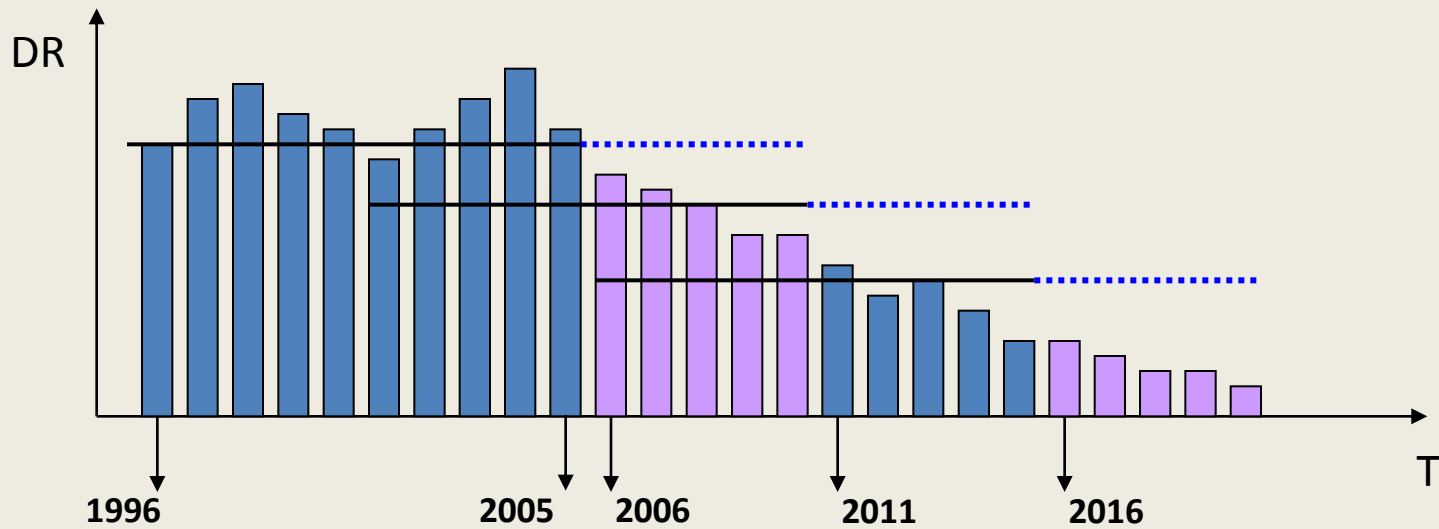
# Amazon Fund in Brazil

- Launched in 2008, with a plan for 10 years of operation to combat deforestation and promote conservation and sustainable use of forest in Amazon.
- Amazon fund allocates finance to eligible projects competitively:
  - Status of financing (as of Feb. 2011)
    - 13 projects selected thus far, further 25 are under analysis.
    - 51 million deposited into Amazon Fund
    - 7.1 million disbursed to Fund beneficiaries
- Funds are managed by Brazilian Development Bank BNDES
  - Steering Committee provides strategic directions
  - Project finance selection is done by BNDES

# Amazon Fund in Brazil



# REPRESENTATION OF THE CALCULATION MODEL FOR REDUCING DEFORESTATION IN ORDER TO CALCULATE THE REDUCTION OF EMISSIONS



# Situational analysis

- Brazil relies on 15 years of structural changes in the Amazon reality
  - Functioning monitoring system
  - Advance Forest Governance at the national and subnational level
  - Common vision of all civil society and private sector to preserve the Amazon
  - Organized civil society groups are actively participating in forest governance
  - Sustainable Amazon Plan: all stakeholder involved
- Project financed under the Amazon fund:
  - Projects were largely prepared by Brazilian Pilot Program (PPG7) or build on those previous efforts (10+ years of engagement)
  - Amazon Fund is only one financial source to conserve the Amazon. Sustainable Amazon Plan is mainly financed by national budget
- Funds are managed by Brazilian Development Bank BNDES
  - Long standing fiduciary experience and development vision
  - Little own safeguard and communication experience
  - No or little experience with REDD, direct engagements with communities and grant financing



A photograph of a dense tropical forest with various green plants and palm fronds. The text "Lessons from relevant Initiatives" is overlaid in white.

Lessons from relevant Initiatives

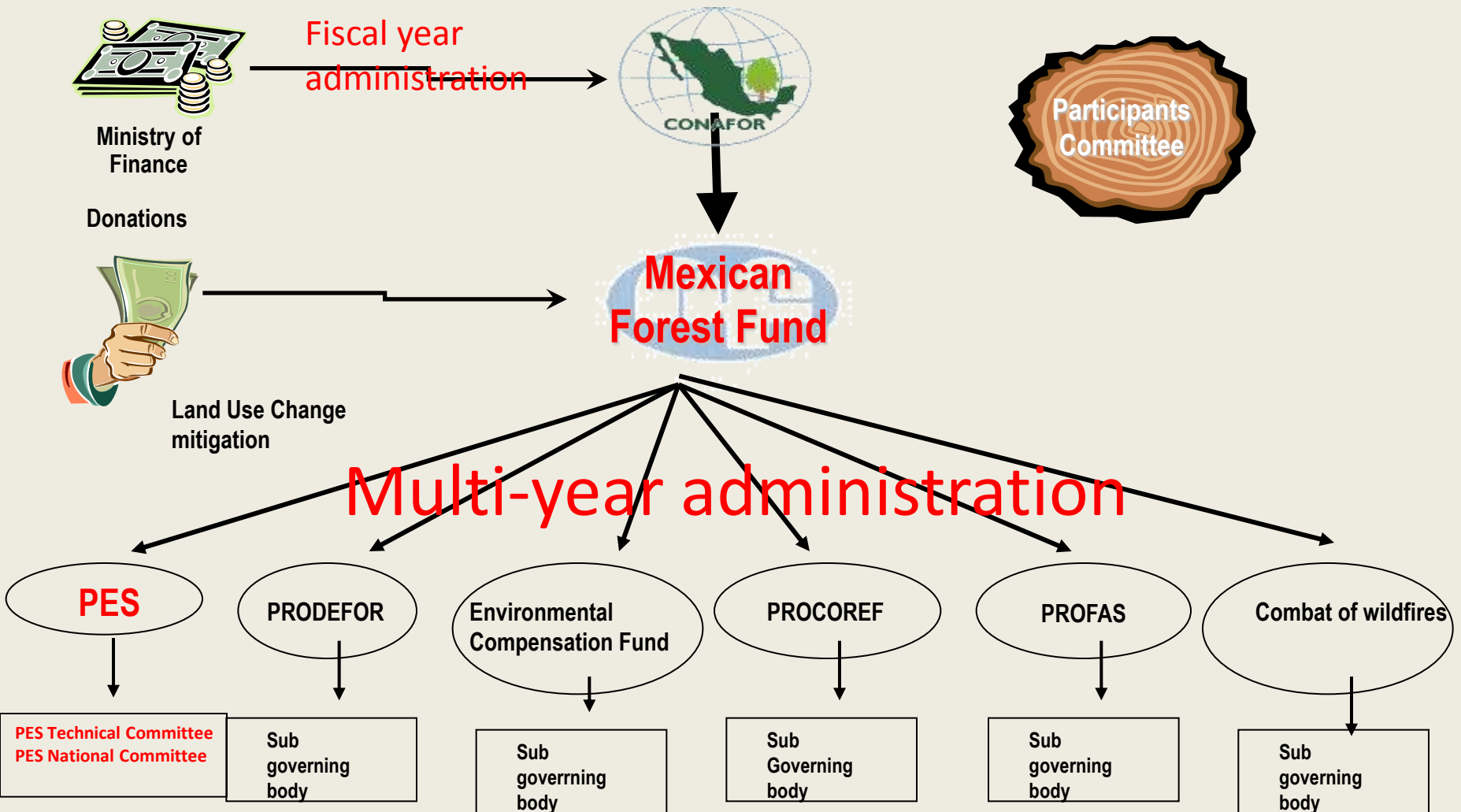
# **Mexican Forest Fund Environmental Payment System**

# Mexico PES

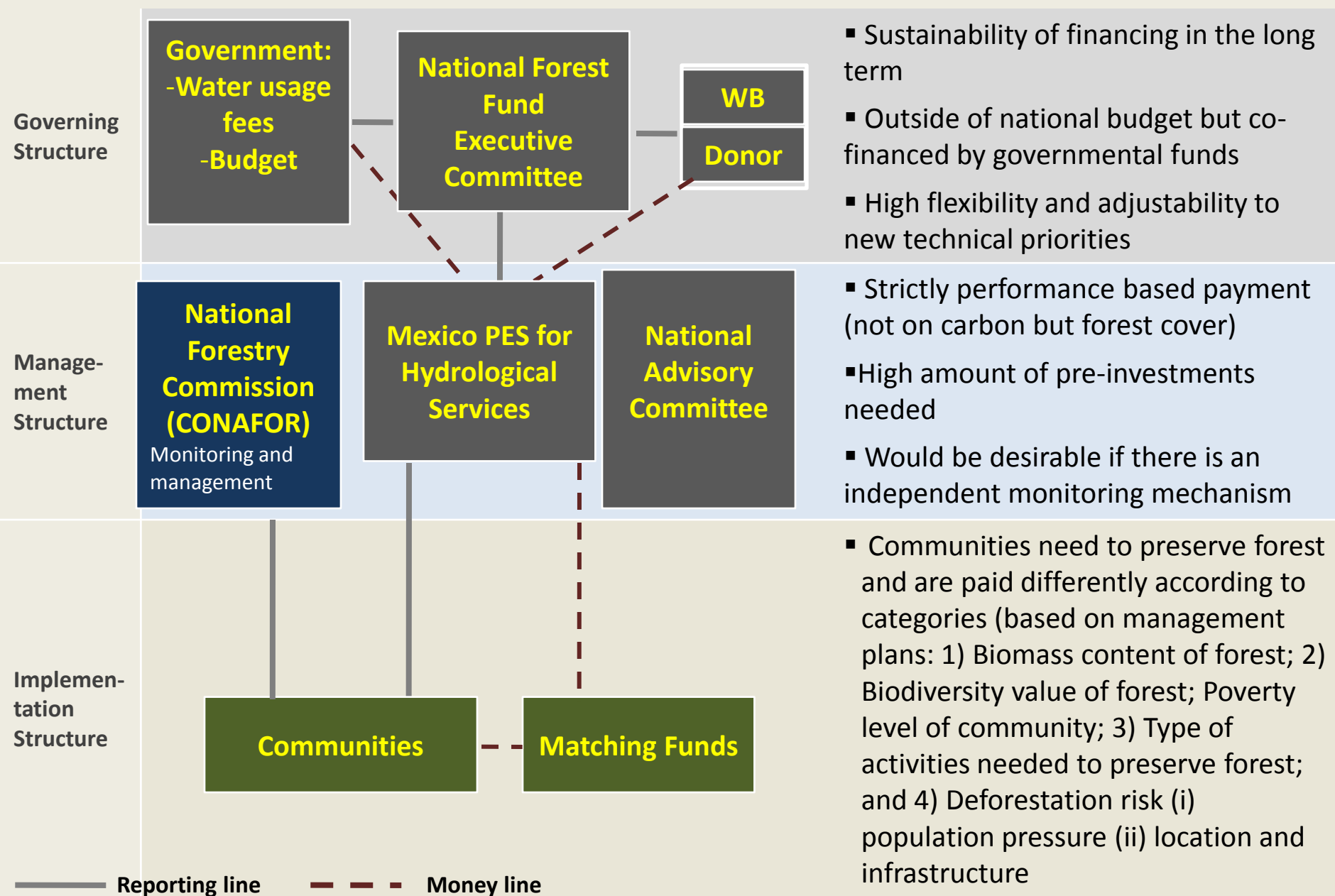
- Payment for Environmental Services is part of the Mexican Forest Fund
- Direct payment program for hydrological environmental services to landowners, operated since 2003
  - Provide economic incentives to avoid deforestation in areas where water problems are severe
  - Currently, reaches out to more than 5,000 communities covering around 3 Million Ha forest land
- Size of Payment to beneficiaries
  - US \$ 30-100/ha/yr over a period of 5 years
  - Maximum 6,000 ha
- Mexican PES relies on:
  - secure land titles and tenure
  - Strong community organization
  - Defined environmental services structure,
  - Long term financing (multiple sources)
  - Strong technical administration unit
    - Monitoring, Technical assistance

# Mexico Forest Fund and PES

Mexican Forest Fund is a Multi-Year mechanism financed by water-usage fees, donations and the national budget



# Mexico PES



- Sustainability of financing in the long term
- Outside of national budget but co-financed by governmental funds
- High flexibility and adjustability to new technical priorities
- Strictly performance based payment (not on carbon but forest cover)
- High amount of pre-investments needed
- Would be desirable if there is an independent monitoring mechanism
- Communities need to preserve forest and are paid differently according to categories (based on management plans: 1) Biomass content of forest; 2) Biodiversity value of forest; Poverty level of community; 3) Type of activities needed to preserve forest; and 4) Deforestation risk (i) population pressure (ii) location and infrastructure

— Reporting line    - - - Money line

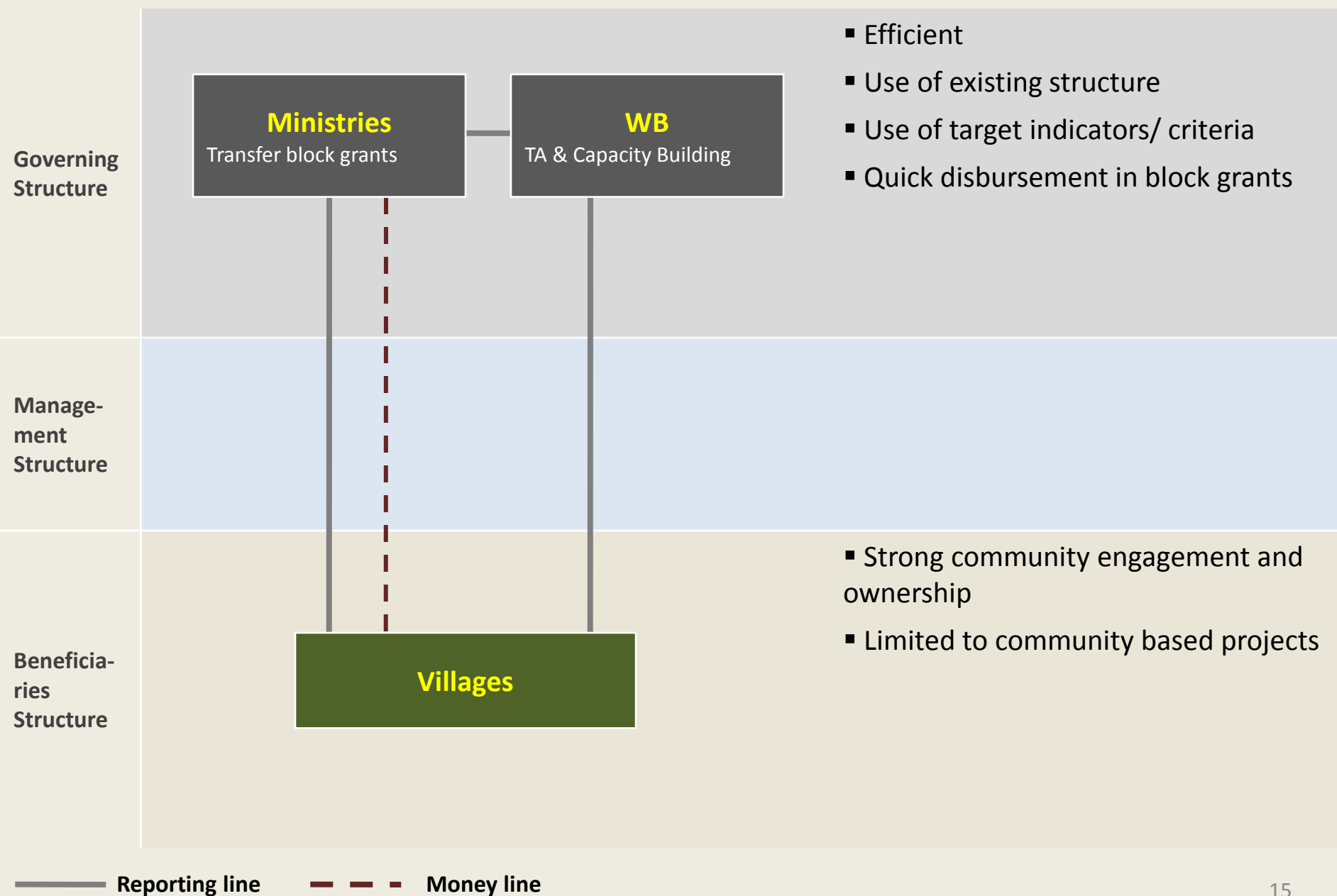


# **Green PNPM Indonesia**

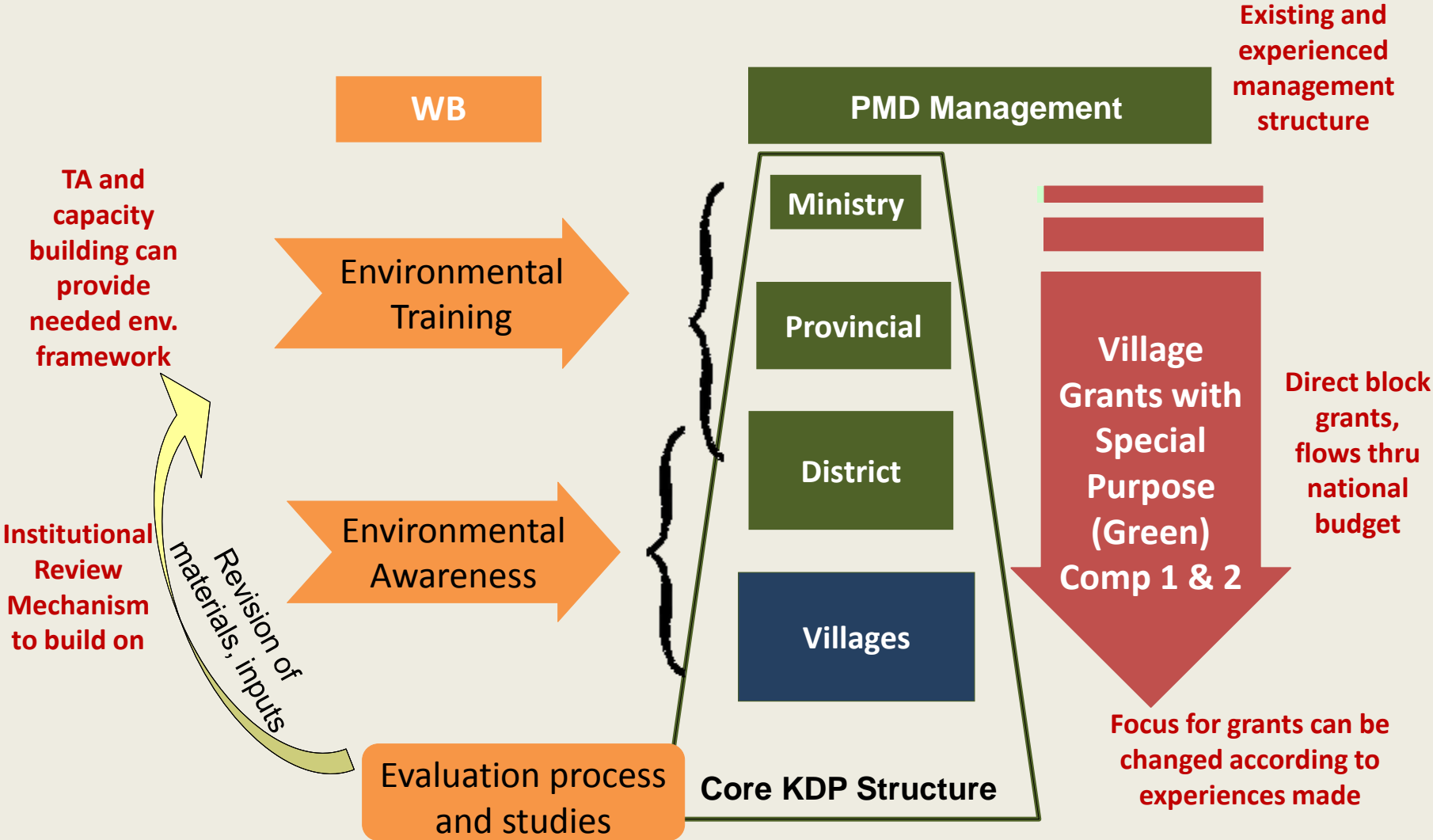
# Indonesia PNPM/Green PNPM

- Background
  - Community driven development mechanism, launched in 2007 as a nation-wide program
  - Block grants to communities, covering 6000 sub-districts, working through the national budget
  - Green PNPM as a sub-component of the PNPM with focus on environmentally sustainable natural resource management
- Scale of Green PNPM
  - US \$ 1.2 Million for 10-15 micro-hydro projects
  - US \$ 8.8 Million for other environmental project activities for 4 years

# Indonesia PNPM/Green PNPM



# Green PNPM in Sulawesi





# Contacts

- Amazon Fund in Brazil:  
<http://www.amazonfund.org/>
- PES in Mexico
- ICMS-E in Brazil:  
<http://www.icmsecologico.org.br/>
- PDA in Brazil
- PNPM in Indonesia

# Analysis Matrix

	Non-Performance Based		
	Green PNPM	PDA Demonstration Project	Amazon Fund
Country	Indonesia	Brazil	Brazil
Grant Size	Small	Small/medium	Medium/large
Beneficiaries	Communities	Communities, NGOs, Institutes, Public sector	Communities, NGOs, Institutes, Public sector
Basis for Payment	Cost based Competitive	Cost based Competitive	Performance + cost based
Conditions For Successful replication (expansion)	Effective instrument where drivers of deforestation are communities, Needs regulatory and policy framework	Needs strong technical committee and parallel TA and capacity building	Inclusive Governing body, good governance
Pros	Bottom up community organization Quick disbursements in block grants	Quick disbursement, favors innovation, positive impacts on REDD	Simple concept, but slow disbursements

# Analysis Matrix

	Performance Based			
	ICMS-E	Private Forest Reserve	PES	Ecosystem Restoration Concession
Country	Brazil	Brazil	Mexico	Indonesia
Activity	Budget transfer	Tax exemptions	PES for hydrological services	Concessions
Beneficiaries	Public Sector	Private Sector, landowners	Communities	Project developer
Basis for Payment	Env. indicators	Forest mgt plan	Perceived opp. costs	Delivery of Emission Reductions
Conditions For Successful replication (expansion)	Simple Indicators easy to monitor within district responsibility	Tax exemption needs to be attractive incentive	Strong long term financing in place, conflict free land tenure, strong community organizations	Functioning REDD+ market, Strong regulations and monitoring capacity
Pros	Effective instrument, relies on existing institutions	Simple, can be adapted to other public policies	Cost efficiency, Long term vision, Bottom up community involvement	Simple concept, ideal for carbon market

# **ANNEX**

## **Details of International Examples**



	PNPM/Green PNPM	PDA
Objective	<ul style="list-style-type: none"> <li>Community-driven development (CDD) mechanism with an aim to support MDG activities in sub districts and villages</li> <li>Green PNPM: a sub-component of the PNPM, with focus on environmentally sustainable natural resource management</li> </ul>	<ul style="list-style-type: none"> <li>Grant program to benefit organizations in the Amazon and Atlantic Forest of Brazil</li> <li>Stimulate social and economic development combined with natural resource management through a medium scale grant program to local communities, organizations, research bodies and municipalities.</li> </ul>
Scope	<ul style="list-style-type: none"> <li>Launched in 2007 as a nation-wide program and decentralized</li> <li>Block grants to communities, covering approximately 6000 sub-districts</li> <li>CDD mechanisms including community planning, execution, accountability mechanisms</li> <li>Capacity building and TA are provided.</li> </ul>	<ul style="list-style-type: none"> <li>Initially financed more than 200 project, starting in 1996</li> <li>Replicated and specifically targeted to specific regions, stakeholder groups (IPs) and purposes (forest management, fisheries)</li> <li>Initial size of program: US\$ 100 million</li> </ul>
Beneficiaries	<ul style="list-style-type: none"> <li>Block grants to communities through a direct disbursement</li> <li>Eligible communities are selected based on national poverty list area.</li> </ul>	<ul style="list-style-type: none"> <li>Block grants to community organizations, cooperatives, municipalities, institutes and research bodies</li> <li>The grants are allocated to best project proposal – competitively screened.</li> </ul>



	PNPM/Green PNPM	PDA
<b>Basis for Payment</b>	<p><u>Input based</u></p> <ul style="list-style-type: none"><li>▪ Disbursement directly to communities after review and evaluation of proposals</li><li>▪ Eligible projects : development projects, capacity building, micro credit initiatives and services with specific targeting development indicators</li><li>▪ Green PNPM: funding “green” activities to promote sustainable natural resource management</li></ul>	<p><u>Input based</u></p> <ul style="list-style-type: none"><li>▪ Project design is very open to innovative ideas, structured approaches to address economic and social development in the forest area, including forest management, working capital, technical assistance and research.</li></ul>
<b>Form of Benefit Transfer</b>	<ul style="list-style-type: none"><li>▪ Block grants in cash from a Special Account through a Government Operational Bank to collective community bank accounts via an independent transfer bank</li></ul>	<ul style="list-style-type: none"><li>▪ Project finance through local financial institutions</li><li>▪ Communities receive orientation during project design from Program Management team.</li><li>▪ Technical assistance during implementation is part of the project finance arrangement</li></ul>
<b>Conditions &amp; Regulations</b>	<ul style="list-style-type: none"><li>▪ 20% of matching fund from local contribution</li><li>▪ Final distribution to communities happens through reviewed and approved proposals.</li></ul>	<ul style="list-style-type: none"><li>▪ 20% of matching fund from local contribution.</li><li>▪ Final distribution to communities happens through reviewed and approved proposals.</li><li>▪ Almost no restrictions on eligibility of expenditures, including working capital, land acquisition, etc.</li></ul>



	PNPM/Green PNPM	PDA
Pros	<ul style="list-style-type: none"><li>▪ Minimization of the leakage of resources through disbursement of funds in block grants to communities</li><li>▪ Bottom-up involvement of the community through an intensive public consultation</li><li>▪ Whole sale approach facilitates repeater projects at low administrative costs</li></ul>	<ul style="list-style-type: none"><li>▪ Very efficient to address very complex local problems in natural resource management</li><li>▪ Creation of a lot of innovation and local social capital, especially in areas where very little capacity existed</li><li>▪ The flexibility of project design with all kind of expenditures, which makes it a very interesting model for larger investments, economic activities</li><li>▪ Direct disbursement without going through national budgets</li><li>▪ Beneficiaries can be public, private and community groups</li><li>▪ No need of local governance structures to design and disburse funds.</li><li>▪ Wholesale approach to a large number of projects with similar objectives.</li></ul>
Cons	<ul style="list-style-type: none"><li>▪ Indicators for performance-based still limited to health and education sector through PNPM program.</li><li>▪ More complex environmental projects and livelihood projects are more complicated to fund</li></ul>	<ul style="list-style-type: none"><li>▪ Prior dissemination and communication is needed to understand more complex programs</li><li>▪ Direct disbursement without going through national budgets does not create necessarily Government ownership</li></ul>



	RPPN	ICMS-E
<b>Objective</b>	<ul style="list-style-type: none"> <li>Private landowners can voluntarily register private protection areas on their lands.</li> <li>The private protection area would be by either State or Federal private reserve.</li> <li>The private landowner's incentive lies in the tax exemption and publicity.</li> </ul>	<ul style="list-style-type: none"> <li>Voluntary intergovernmental fiscal transfer program in Brazil, with an aim to compensate municipalities subject to environmental indicators</li> <li>ICMS is a state tax on goods and services. 75% of the overall revenue is allocated based on fixed algorithms, 25% is of the discretion of each State and can be allocated based on other indicators</li> </ul>
<b>Scope</b>	<ul style="list-style-type: none"> <li>Operation since 2001, creating more than 4,7 million ha of registered protection areas under RPPN</li> <li>The law obligates the owner under RPPN to develop a management and monitoring plan and to earn money from limited extractive activities.</li> </ul>	<ul style="list-style-type: none"> <li>First introduced in 1991 by the state of Parana and is now implemented in 10 other states and under discussion in 6 states out of 27 states in Brazil</li> <li>Its fundamental principle is to use ecological indicators for partial allocation of tax revenues from State to municipalities.</li> <li>Disbursement of US\$ 5 – 45million per year per state to municipalities based on environmental achievements</li> </ul>
<b>Beneficiaries</b>	<ul style="list-style-type: none"> <li>Private landowners</li> </ul>	<ul style="list-style-type: none"> <li>Local government</li> <li>Direct fiscal transfer as a lump-sum, but not to individuals regardless of attribution and contribution, e.g. ownership and management of the protected areas.</li> </ul>



	RPPN	ICMS-E
Basis for Payment	<ul style="list-style-type: none"> <li>▪ <u>Tax exempts (rural or land taxes)</u></li> <li>▪ Depends on State taxes</li> <li>▪ Tax exemption only refers to land portion that is put under protection</li> </ul>	<ul style="list-style-type: none"> <li>▪ <u>Fiscal Transfer</u> : Transfer of the ICMS-E revenue to municipalities according to their ecological indicators</li> <li>▪ The basic feature of ICMS-E is relatively similar across the states, but the choice of ecological indicators and ecological shares of total ICMS are at state's discretion</li> <li>▪ The most-used ecological indicators are watershed protection areas, conservation areas and waste management.</li> </ul>
Form of Benefit Sharing	<ul style="list-style-type: none"> <li>▪ Tax exempts for landowners</li> <li>▪ Needed to be registered and monitored, Forest reserves will be permanent.</li> <li>▪ Annual calculation of tax exemptions re local legislation.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Automatic fiscal transfer as a lump-sum, according to ecological indicators selected and monitored by states.</li> <li>▪ No mandatory provision to be in place to share the benefits to communities or other stakeholders.</li> <li>▪ The share of ICMS-E revenue varies from 0.5% to 13% of the total tax revenue.</li> </ul>
Measure ment	<ul style="list-style-type: none"> <li>▪ Monitoring by Federal Agency, based on satellite images, field visits</li> <li>▪ Tax exemption amount estimated based on rural or land tax – depends on local legislation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Each state calculates ecological indicators for local communities. E.g. the calculation can be based on the registered protected areas.</li> <li>▪ The frequency of the calculation varies from every three months to every year. Monitoring indicators are usually kept simple and easy to verify</li> <li>▪ Each state has its own institution that is in charge of monitoring all information related to ICMS-E transfers.</li> <li>▪ Performance based payments based on monitored indicators (e.g. implementation of ecological reserves, etc.). The value is either meant to be a compensation for foregone profits or ICMS revenue loss (by having a large number of land protected) or it is an incentive to implement laws more effectively (by improving waste management indicators)</li> </ul>



	RPPN	ICMS-E
<b>Conditions &amp; Requirements</b>	<ul style="list-style-type: none"> <li>▪ Federal or State Legislation in place</li> <li>▪ Procedures for approval in place</li> <li>▪ Monitoring and Verification</li> <li>▪ No Governance needed</li> </ul>	<ul style="list-style-type: none"> <li>▪ The maximum share of ICMS-E is 25% of the total funds</li> <li>▪ States need to identify the need for allocating ICMS for environmental purposes and need to approve a State regulation for ICMSE</li> <li>▪ Good and transparent information policy is key, increasing the awareness of municipalities regarding the development objectives of the program and its potential benefits .</li> <li>▪ States needs to set the algorithm for the distribution of revenues and set the publically available monitoring arrangements</li> </ul>
<b>Pros &amp; Cons</b>	<ul style="list-style-type: none"> <li>▪ The designation is permanent; reluctance of most landowners</li> <li>▪ Weak incentive due to already low tax itself and poor enforcement</li> <li>▪ The bureaucracy created to administer the SNUC makes it difficult to create RPPNs.</li> <li>▪ While for-profit landowners have generally paid little heed to getting RPPN designation, we are seeing interest on the part of environmental NGOs and research organizations.</li> </ul>	<p><b>Pros</b></p> <ul style="list-style-type: none"> <li>▪ No additional institutions or administrative procedures are necessary for its implementation.</li> <li>▪ Overall performance of ICMS-E in promoting and increasing protected areas seems to be successful, by increasing the size of the protected areas by 160% between 1992 and 2007 in the case of the state of Parana.</li> </ul> <p><b>Cons</b></p> <ul style="list-style-type: none"> <li>▪ Ecological indicators do not fully capture the quality of the protected areas.</li> <li>▪ The lump-sum transfer does not guarantee that the money would be spent for environmental purpose.</li> <li>▪ No direct compensation towards individual owners of the protected areas</li> </ul>

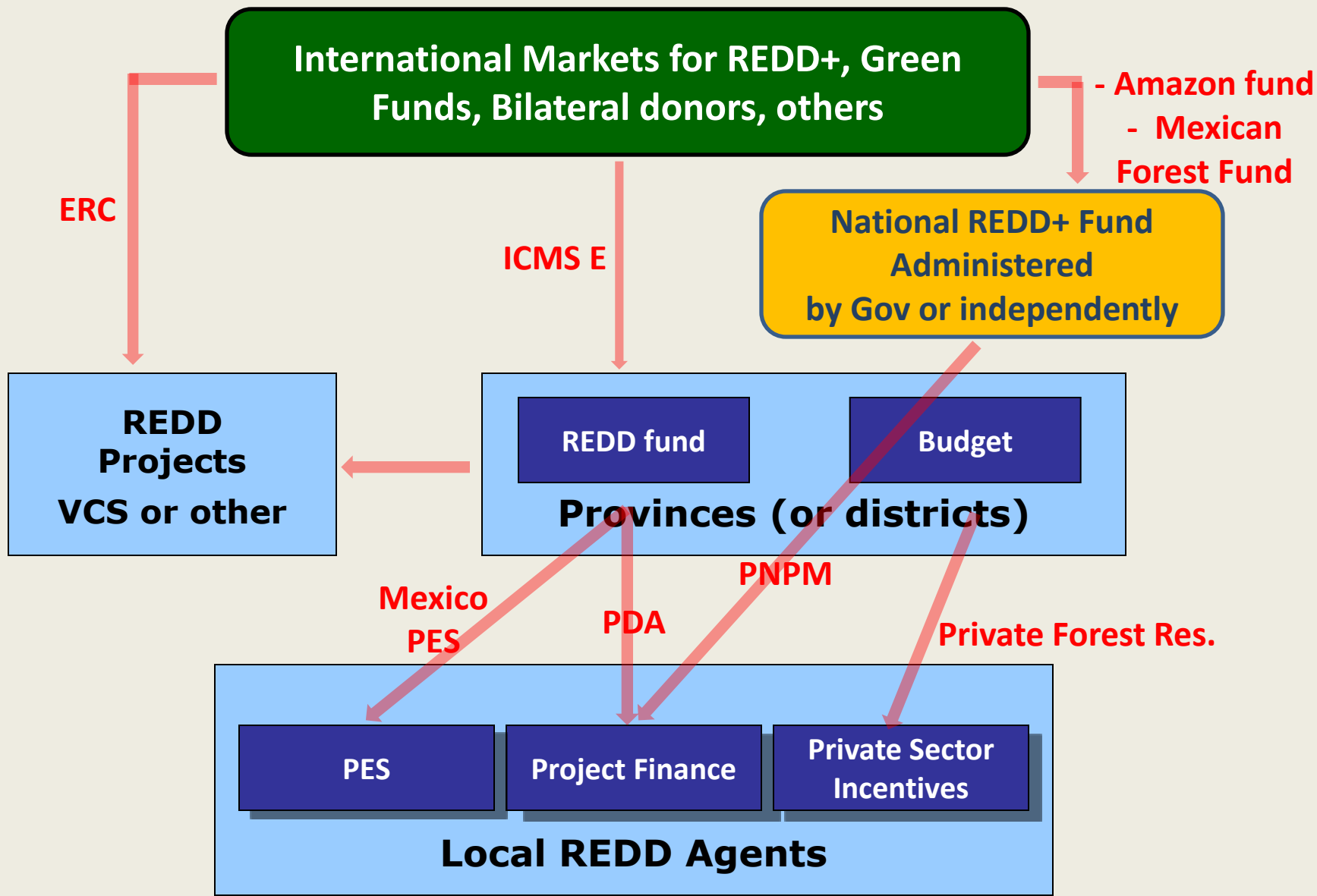


	Mexico PES	Amazon Fund
Objective	<ul style="list-style-type: none"><li>▪ The Payments for Hydrological Environmental Services Program (PSAH), managed by National Forestry Commission (CONAFOR), is one of the largest PES systems, with more than 500,000 beneficiaries and is primarily targeting the conservation of native forests</li></ul>	<ul style="list-style-type: none"><li>▪ Brazilian initiative to raise funds to be used for projects that combat deforestation and promote conservation and sustainable use in the Amazon biome.</li><li>▪ The funds are allocated to projects competitively</li></ul>
Scope	<ul style="list-style-type: none"><li>▪ Started in October 2003, was designed to complement other initiatives by providing economic incentives to avoid deforestation in areas where water problems are severe, but where in the short or medium-term commercial forestry could not cover the opportunity cost of switching to agriculture or cattle ranching</li><li>▪ More than 5,000 communities covering around 3 million ha forest land</li></ul>	<ul style="list-style-type: none"><li>▪ Launched in 2008 with a plan for 10 years of operation, supported by an initial pledge of US \$1 Billion from the government of Norway.</li><li>▪ Fund raising is performance based and the distribution of funds is input based.</li></ul>
Beneficiaries	<ul style="list-style-type: none"><li>▪ Direct payments (over periods of 5 years) to landowners with forest in a good state of conservation.</li><li>▪ Payments to the president of the community organization.</li><li>▪ Allocation between community members is organized by the community itself.</li></ul>	<ul style="list-style-type: none"><li>▪ Direct financing for project activities that are proposed by institutions such as public institutions, state-owned companies and nongovernmental organizations.</li><li>▪ As of December 2010, there are 13 projects approved and 25 projects under analysis.</li></ul>



	Mexico PES	Amazon Fund
<b>Basis for Payment</b>	<ul style="list-style-type: none"> <li>▪ <u>Performance Based</u></li> <li>▪ Communities need to preserve forest land and are paid differently according to categories: 1) Biomass content of forest; 2) Biodiversity value of forest; Poverty level of community; 3) Type of activities needed to preserve forest; and 4) Deforestation risk (i) population pressure (ii) location and infrastructure</li> <li>▪ A maximum of 6,000 ha of land is eligible</li> </ul>	<ul style="list-style-type: none"> <li>▪ <u>Input based</u></li> <li>▪ Eligible activities are 1) actions to add value to standing forests, 2) actions to improve regional development and land tenure regularization, and 3) actions to organize and integrate the systems of environmental control, monitoring and enforcement in Brazilian Amazon.</li> </ul>
<b>Form of Benefit Transfer</b>	<ul style="list-style-type: none"> <li>▪ Cash payment to communities for defined services (US\$ 30 – 100/ha/year over a period of 5 years).</li> <li>▪ Communities prepare their report. The report is verified by technicians of the Government (Conafor).</li> <li>▪ The forest owners get two types of payments, one for the environmental service and other for technical assistance to design and implement the BMPP.</li> <li>▪ Maximum 6,000 ha. Over a period of time, the community could earn US\$ 3,000,000 (max. value).</li> </ul>	<ul style="list-style-type: none"> <li>▪ According to the terms of the signed contract, direct financing is made in installments, following the timetables agreed upon and the progress of the project.</li> <li>▪ As of Dec. 2010, the Amazon fund supports US \$114 Million in total for 13 projects.</li> </ul>
<b>Measurement</b>	<ul style="list-style-type: none"> <li>▪ Conafor relies on community reports on forest estate, but verifies based on satellite images and field visits, before payment is done.</li> <li>▪ Value is estimated on <u>perceived</u> opportunity costs and/or revenues. They also represent occurred costs, e.g. costs for forest preservation efforts or afforestation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Deforestation rates are measured through the analysis of satellite images by INPE.</li> <li>▪ ERs at national level is verified and calculated by the technical committee.</li> <li>▪ For the simple calculation of ERs, they used the value of 100tC/ha and US 5\$/ton CO2 for biomass and carbon price, respectively.</li> </ul>

	Mexico PES	Amazon Fund
Condition & Requirement	<ul style="list-style-type: none"> <li>▪ Strictly performance based payments</li> <li>▪ Good community organization is important</li> <li>▪ Only based on 6,000 ha per community independently on the overall estate</li> <li>▪ Undisputed tenure situation as a condition for participation</li> <li>▪ Only in selected municipalities</li> </ul>	<ul style="list-style-type: none"> <li>▪ The limit of fund raising is determined by the amount of emission reductions achieved in the previous year. According to the deforestation rates in 2006, the limit for the first fund-raising period is roughly US \$1 Billion.</li> <li>▪ Geographic restrictions in project locations</li> </ul>
Pros	<ul style="list-style-type: none"> <li>▪ Overall high cost efficiency</li> <li>▪ 0.5 million beneficiaries covering 3 M ha, more than US\$ 100 million are allocated annually</li> <li>▪ Fund is well managed and is highly attractive for further funding, including REDD+ and is flexible and adjustable to new technical priorities</li> </ul>	<ul style="list-style-type: none"> <li>▪ Simple design and idea: simple model for a combination of performance based payments and project funding on the ground</li> <li>▪ Inclusive Governing body and transparent decision taking body</li> <li>▪ High legitimacy, transparency, inclusiveness</li> </ul>
Cons	<ul style="list-style-type: none"> <li>▪ Limited coverage of 6,000 ha per community</li> <li>▪ Monitoring by the Government: an independent monitoring mechanism would be desirable .</li> <li>▪ Local disbursement and use of funds depends on quality and capacity of local community organization</li> <li>▪ Performance is not based on carbon (forest cover)</li> <li>▪ Fund management structure seems adequate for the Indonesian conditions. Fund is kept outside the national budget, but co-financed by Governmental funds</li> <li>▪ Long-term, mixed Governmental and international funding guarantees long term vision and funding. Governmental funding is based on a national law</li> </ul>	<ul style="list-style-type: none"> <li>▪ Slow processing of grants. BNDES is not used to deal with small-scale projects nor with grant management and local communities</li> <li>▪ Safeguard capacity of BNDES is still low - Difficulty in attracting donors with the current “loose” control/compliance on projects</li> </ul>



# Acknowledgment

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