

# **Institutional Dimensions of Payments for Ecosystem Services: An analysis of Mexico's carbon forestry programme**

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# Outline

- [What are Payments for Ecosystem Services (PES)?]
- Overview of Mexico's PES programme
- Research objectives and questions
- Case studies and methods
- Results
- Discussion
- Conclusion and policy recommendations

## [What are PES?]

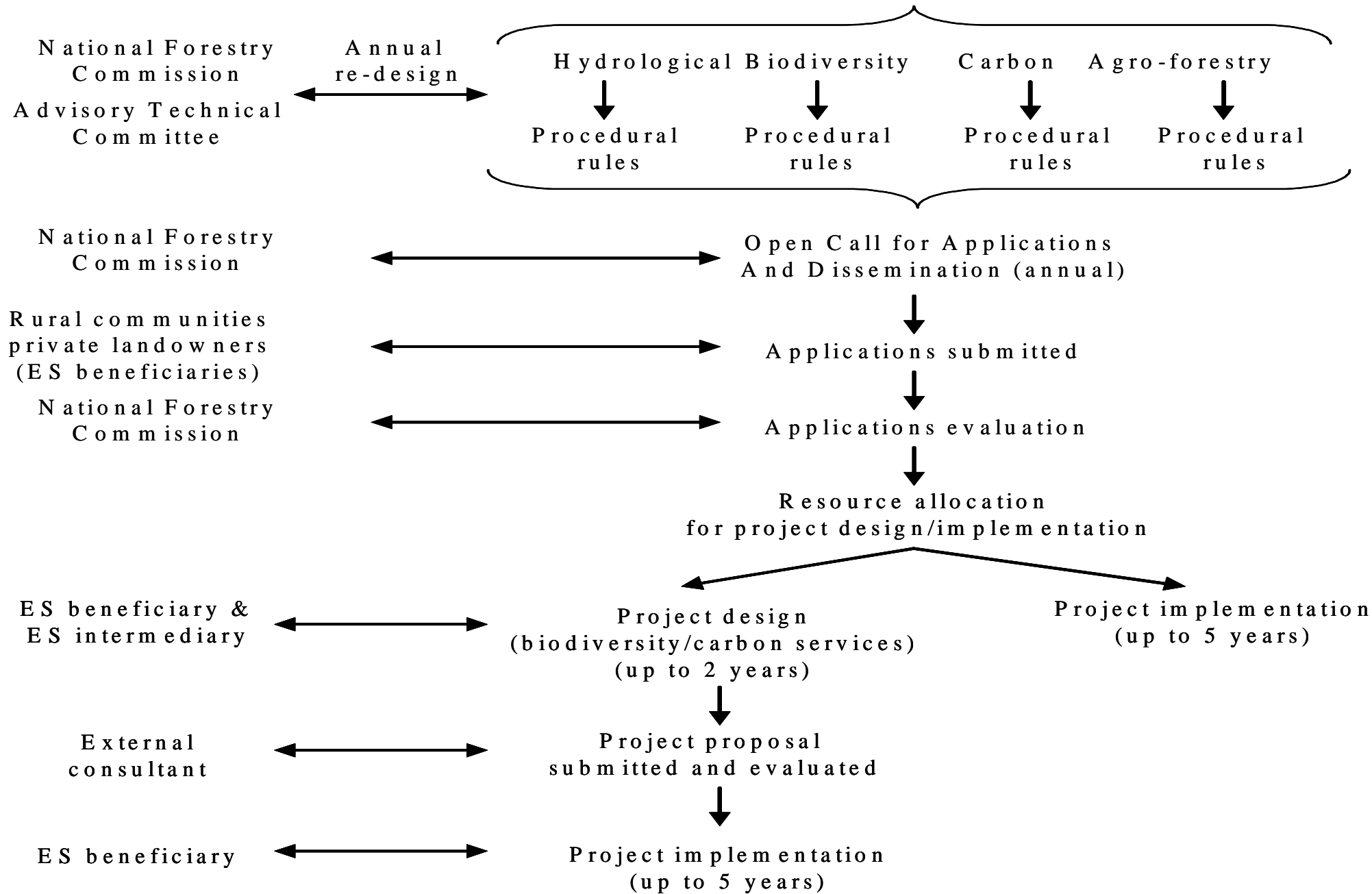
- Payments to rural communities or private landowners for the provision of an Ecosystem Service (ES)
- Major ES exchanged to date include watershed regulation, carbon fixation by forests, biodiversity protection
- In some cases, governments act as indirect buyers (e.g., Costa Rica, Mexico)
- PES are seen as a new policy tool for conservation and rural development –commodification of ES to address market failure

# Mexico's PES programmes

- Mexico's land-use change rate (1976-2000): 545,000 ha/year for all ecosystems
- Payments for Hydrological Services (PSAH) (2003) – Mexican Forestry Fund and Water Levy (US\$30million/year)
- Payments for Carbon, Biodiversity and Agroforestry (PSA-CABSA) (2004) – Funding negotiated annually in Congress
- Payment for Environmental Services (2006), funding streams and sub-programmes still procedurally different

## Actors

## PES Programme Operative Cycle



# Research objectives and questions

- o Develop and test an institutional framework for the analysis of PES programmes and projects
- o Review Mexico's PES carbon programme - emphasis on design rather than performance issues
- o Some guiding questions:

When, how, and why was the programme designed?

Which interests were mostly represented in programme rules?

Can we say something about (early) performance?

Transaction/implementation costs

Benefits/drawbacks at beneficiary level

How does the programme interact with other institutions?

# Institutional Framework for the study of PES

Analytical domain	Guiding research questions	Analytical variables
<b>DESIGN</b> Are rules conducive to achieve goals?	Why is PES proposed as a policy tool? Which actors shape the rule-design process and how are their interests represented? How and why rules evolve over time?	Definition and evolution of rules over time Number and type of actors involved Actors' interests Underlying reasons of procedural changes
<b>PERFORMANCE</b> Are goals achieved?	How do PES affect the beneficiaries, the services and the ecosystems? Why do beneficiaries decide to participate? How do PES measure and monitor the provision of ES and account for changes?	Monitoring of ES flows Participants and hectares under ES management Level of compliance Benefits and negative impacts of PES
<b>INTERPLAY</b> How do institutions affect each other?	How do PES account for other institutions? Which institutional synergies and conflicts exist as a result of interactions?	Number and type of institutions influencing affecting PES Types and effects of institutional interaction
<b>CAPACITY</b> How does capacity affect performance?	Has PES design or implementation been hampered by lack of capacity?	PES actors' level of organisational capacity
<b>SCALE</b> How does scale affect design and performance?	Does an optimal scale of governance exist for the provision of ES? How do cross-scale institutions benefit PES design and performance?	Differences in PES design, performance and interplay due to governance scale Type of cross-scale institutional linkages to address interplay

## Case study and methods

Focus on PSA-CABSA, particularly carbon component

ES valued globally

Procedural linkages with climate policy instruments (CDM)

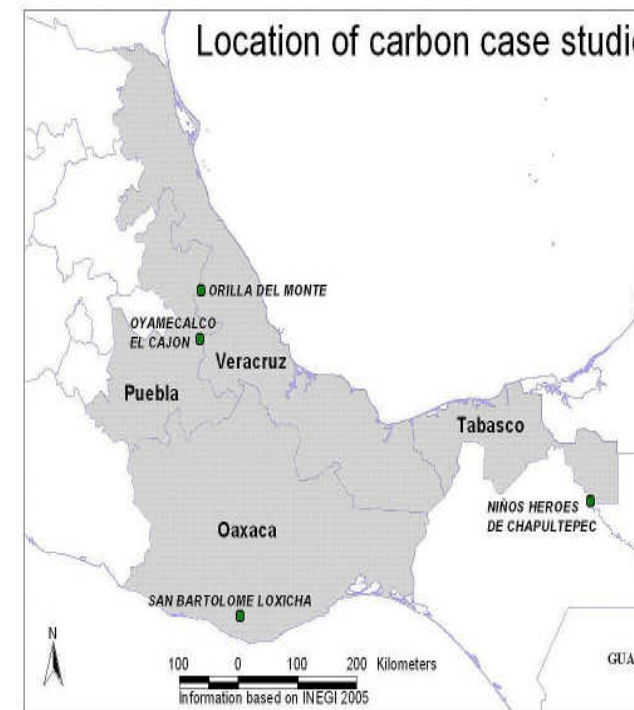
Thirteen interviews with policy-makers, NGOs  
and service intermediaries

Community-based research

Four out of seven carbon projects in 2007

Four focus groups with community leaders

Interviews with 104 farmers



# Results I: Institutional design

- o Lobbying activities of peasant and forest-based organisations
- o General rules: target areas, PRights, US\$40,000 for project design
- o Sub-programme rules (e.g., carbon)

US\$5-9tCO<sub>2</sub>eq, reforestation activities

US\$15,000 annual verification

US\$15,000 capacity building

US\$25,000 technical assistance

- o Changes in carbon procedural rules (2006)

Projects to comply with CDM –PDD, CDM methodologies-

Funding only for project design

Technical Advisory Committee (TAC)

## Results II: Institutional performance

- 670,964.07 hectares have received support to develop and/or implement PSA-CABSA projects (2004-2007) -0,1%-
- High rejection rates in applications and project design proposals

Missing documentation

Non-fulfilment of eligibility criteria

Lack of “additionality” and poor methodologies

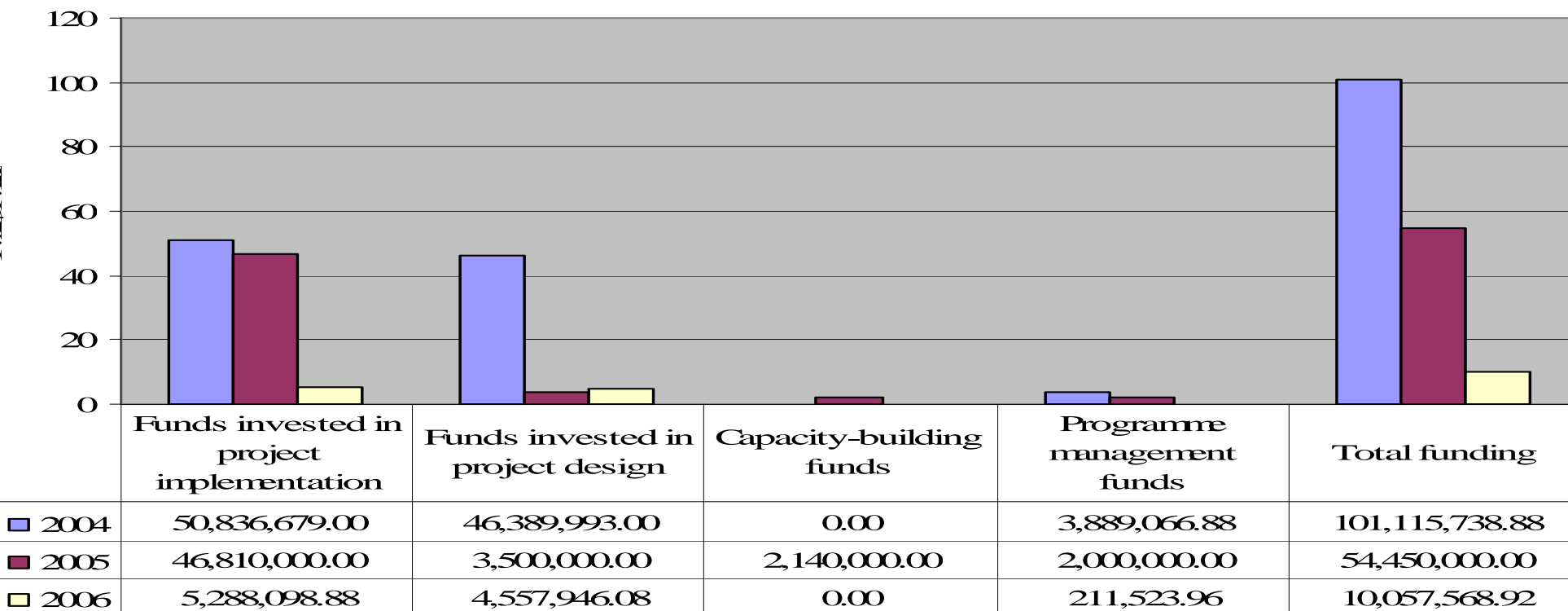
- Funding...

Concentrated into the hands of ES intermediaries

Lost in the preparation of unsuccessful project proposals  
(lack of knowledge, capacities and ineffective communication)

# Results II: Institutional performance cont'

Project funding declined from US\$10 million to US\$1 million



Variable transaction costs -never above 4% of total investment

Capacity-building funds unavailable in 2006

Year	Component	Approved for design (% over total)	Approved for implementation (% over total)	Approved but lack of public funding (% over total)	Rejected (% over total)	Total
2004	Agro-forestry	<b>51 (12.7)</b>	<b>4 (1)</b>	Not available	345 (86.3)	400
	Biodiversity	<b>83 (38.4)</b>	<b>8 (3.7)</b>	Not available	125 (57.9)	216
	Carbon	<b>69 (31.4)</b>	<b>2 (0.9)</b>	Not available	149 (67.7)	220
2005	Agro-forestry	<b>4 (2.4)</b>	<b>13 (8)</b>	Not available	146 (89.6)	163
	Biodiversity	<b>16 (2.5)</b>	<b>7 (1.1)</b>	Not available	621 (96.4)	644
	Carbon	<b>6 (4)</b>	<b>5 (3.4)</b>	Not available	138 (92.6)	149
2006	Agro-forestry	<b>0 (0)</b>	<b>17 (12.1)</b>	13 (9.3)	110 (78.6)	140
	Biodiversity	<b>24 (3.9)</b>	<b>4 (0.6)</b>	36 (5.9)	551 (89.6)	615
	Carbon	<b>12 (8.5)</b>	<b>0 (0)</b>	10 (7.1)	119 (84.4)	141

## Results II: Institutional Performance cont' – case studies

- Differences in project finance

  - 77-38% community's share of total investment

- Differences in PES income distribution strategies

  - Social organisation (coffee coop.), individual payments,...

- Comparable benefits

  - Forest management training and patrolling

  - Collective goods (radio equipment, greenhouse)

- Similarities in terms of ES provision and future concerns

  - 33-29.000 tCO<sub>2</sub>eq over five years

  - Lack of future funding – inability to capture non-govt funds

## Results III: Institutional Interplay

- o Positive synergies with other forestry programmes

Seedlings acquisition from state nurseries

- o Federal policy has generated interest and other levels of governance have promoted other PES initiatives

- o Procedural tensions with international climate policy

CDM rules difficult to understand and comply with

Access funding for implementation: conflicting views

- o Interactions between PES and community institutions

Local institutions reduce costs of PES outreach/implementation

- o TAC: multi-stakeholder body to address problems of design/interplay

# Discussion and conclusions

- ES are ill-defined – leads to bad project proposals

Are agroforestry systems and biodiversity conservation ES?  
ES definition becomes a trade-off between actors' interests

- ES governance is complex and conflictual

PES funds distributed unevenly due to unequal knowledge  
Procedural flexibility is critical for ongoing learning & adaptation

- Carbon forestry governance is hierarchical

Long-term funding institutions are critical to PES success

- *Scale* of PES governance *may* have implications on which rights are recognised and who benefits

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