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# Experiences with Pro-Poor Payments for Environmental Services



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# Structure

- I. Payments for Environmental Services (PES) -  
definition and key features
- II. CIFOR Case Studies
- III. Conceptualizing PES and Poverty
- IV. Empirical Results
- V. Conclusions

# **I. Payments for Environmental Services – Definition and Key Features**

In CIFOR studies we defined the PES principle as:

1. a **voluntary** transaction where
2. a **well-defined** environmental service (ES)  
- or a land-use likely to secure that ES -
3. is being "bought" by a (min. one) ES **buyer**
4. from a (min. one) ES **provider**
5. if and only if the ES provider continuously secures ES provision (**conditionality**).

- The provider is paid to deviate from his/her first-best (most profitable) resource-use plan – “to do something that he/she does not perceived as being in his/her best interest”
- PES are thus only relevant where there is an existing (or potential) conflict of interest between ES buyers and providers
- These conflicts occur mainly in landscapes with mounting pressures on natural resources



- ES “markets”/ positive landscapes externalities commercially developed:
  1. Carbon
  2. Watershed
  3. Biodiversity
  4. Landscape beauty/ recreation
- Managing a landscape for several of these four objectives simultaneously can yield both **synergies** and **trade-offs**
- 1) state-run schemes (S. Africa, China, C. Rica)  
2) self-organized (e.g. watershed Latin Am.)  
3) cap & trade (e.g. carbon trade)

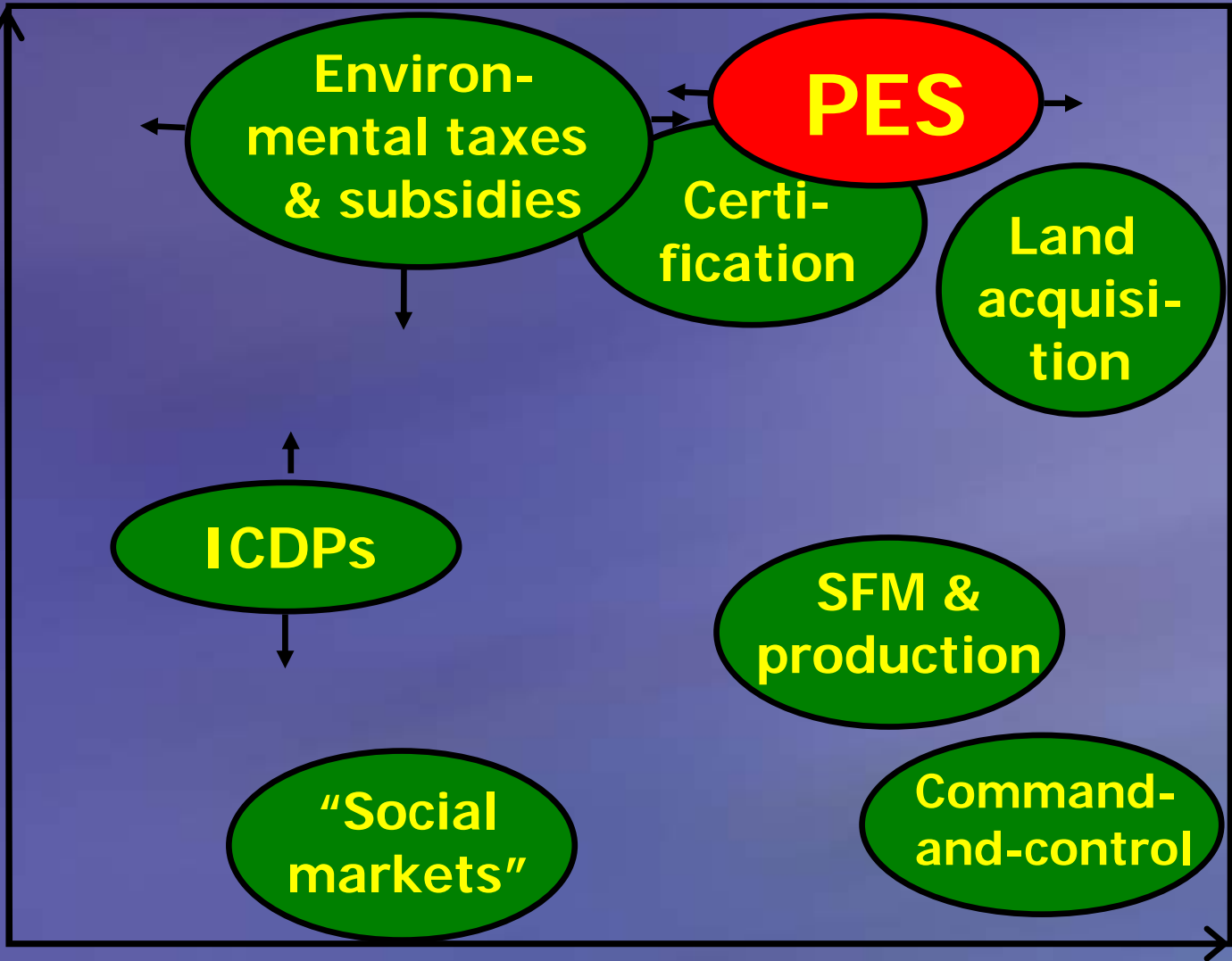
- “**Conditionality**” means that ES outcomes are contractually fixed, and reversible/withdrawable in case of non-compliance.
  - PES are **periodic** (not up-front) payments, contingent upon provider’s **compliance**, which is **monitored** by the buyer over time
- => PES are commercial transactions (sometimes “markets”, mostly bilateral deals) – *quid pro quo*, not altruism!

"Economic incentives vital"

+ *Use of economic incentives*

÷

"No economic incentives"



÷ *Directness* +

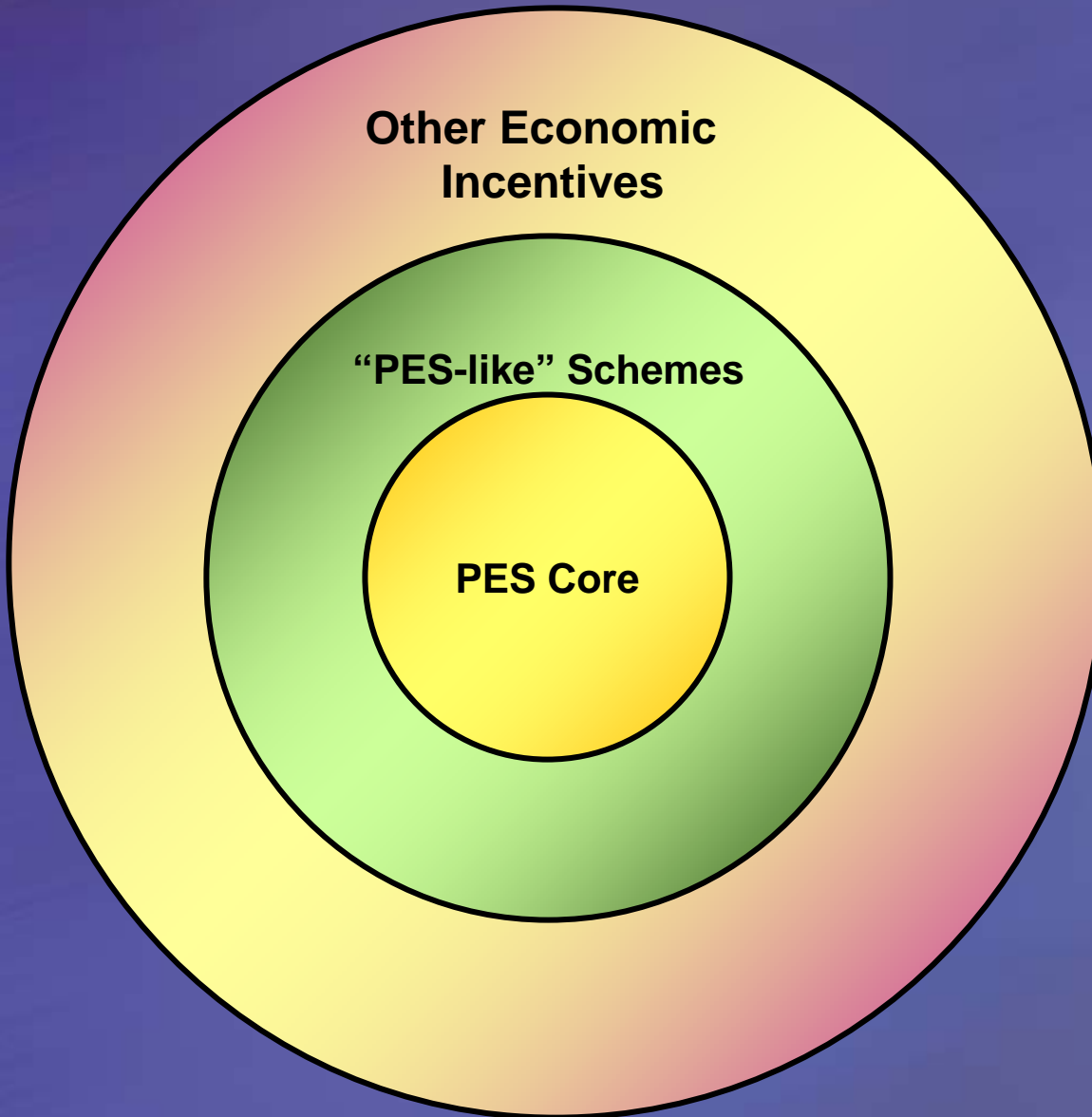
"Integrated conservation"

"Direct Conservation"

# Taking PES to a **messy world** (the tropics):

- Include **insecure land tenure** – and tenure tied to “active” (ES degrading) land use?
- Adding “carrots” (=PES) on pre-existing “paper sticks” (=defunct **command-and-control** land-use caps)?
- **Illegal resource uses** (timber, charcoal game, ...) – reward people to respect the law?
- PES = “victim pays” principle.  
⇒challenge to avoid “perverse incentives”

# PES definitions -- between hardcore and periphery



**PES Core**  
**5 criteria**  
Theory & some private PES

**“PES-like” Schemes:**  
**Some of 5 criteria**  
Public agro-environmental schemes; community-based ecotourism, etc.

**Other Economic Incentives:**  
**Any “payment” for any “environmental service” by “anybody”**  
ICDPs, park-ranger salaries, reforestation subsidies, etc.

## **II. CIFOR Case Studies**

# Payments for Environmental Services

Completed CIFOR PES assessments







# HUELLAS FRESCAS EN EL BOSQUE

EVALUACIÓN DE INICIATIVAS  
INCIPIENTES DE PAGOS POR SERVICIOS  
AMBIENTALES EN BOLIVIA

Nina Robertson y Sven Wunder





## Payment is good, control is better

Why payments for  
forest environmental services  
in Vietnam have so far  
remained incipient

Sven Wunder  
Bui Dung The  
Enrique Ibarra



Center for International Forestry Research

CIFOR Occasional Paper No. 42

## Payments for environmental services: Some nuts and bolts

Sven Wunder

# Payments for Environmental Services

## Ongoing CIFOR Activities - 2006



# **III. Conceptualizing PES and Poverty**

# Three PES poverty effects (work with IIED):

- 1) **Poor ES providers' participation:**  
What access to and 'market share' in PES schemes can they compete for?
- 2) **Effects on poor ES providers:**  
When they do get access, how does PES participation affect their livelihood?
- 3) **Effects on other poor (non-providers):**  
How does PES affect non-participating farmers, landless laborers, poor ES users, product consumers, etc.)?

# Some ex-ante considerations

- PES potentially provide additional and stable monetary income sources for poor peasants and communities
- Since PES are voluntary transactions, they are unlikely to make 'rational' poor providers worse off (unless forced, cheated, or surprised by unanticipated effects)
- If PES does not deliver the service, they will remain low-scale - and not benefit the poor in the end.

# For PES access, the poor face **structural constraints**, but also **opportunities**:

## 1. Often insecure land tenure

Ex. Indonesia: overlapping claims, low degree of control over resource use => unreliable supplier

## 2. High transaction costs of dealing with many smallholders. Ex Dutch Kyoto 50,000 USD min.

- ...but they often occupy environmentally sensitive (=economically marginal) lands producing ES
- ...and they tend to have lower opportunity costs (simple ag tech) lowering their ES price bids

=> The more "market-like" (less spatially targeted) the service, probably the higher the disadvantage for the poor. Ex carbon vs watersheds

# **IV. Empirical results**



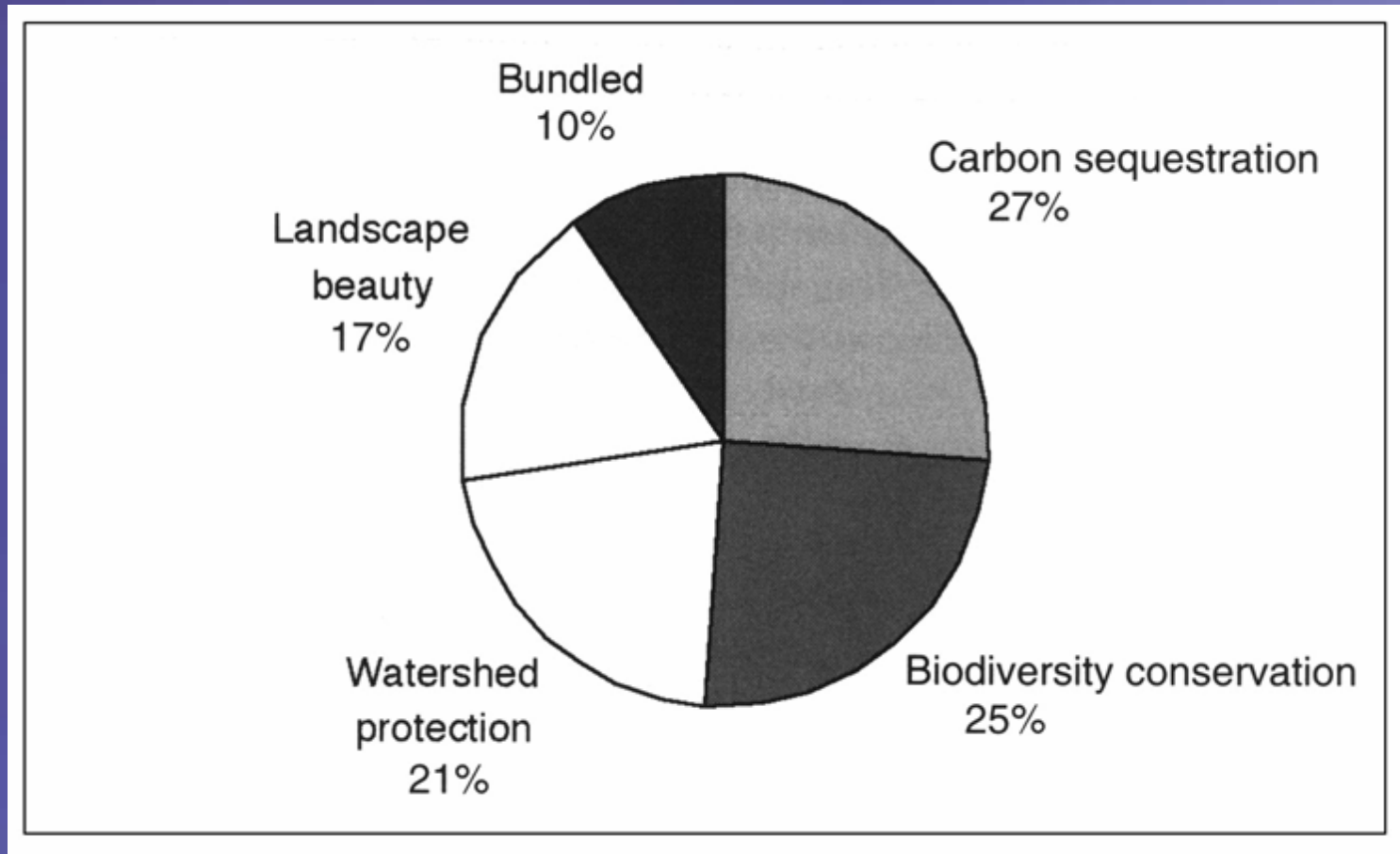
# Silver bullet or fools' gold?

A global review of markets for  
forest environmental services  
and their impacts on the poor

Natasha Landell-Mills  
Ina T. Porras

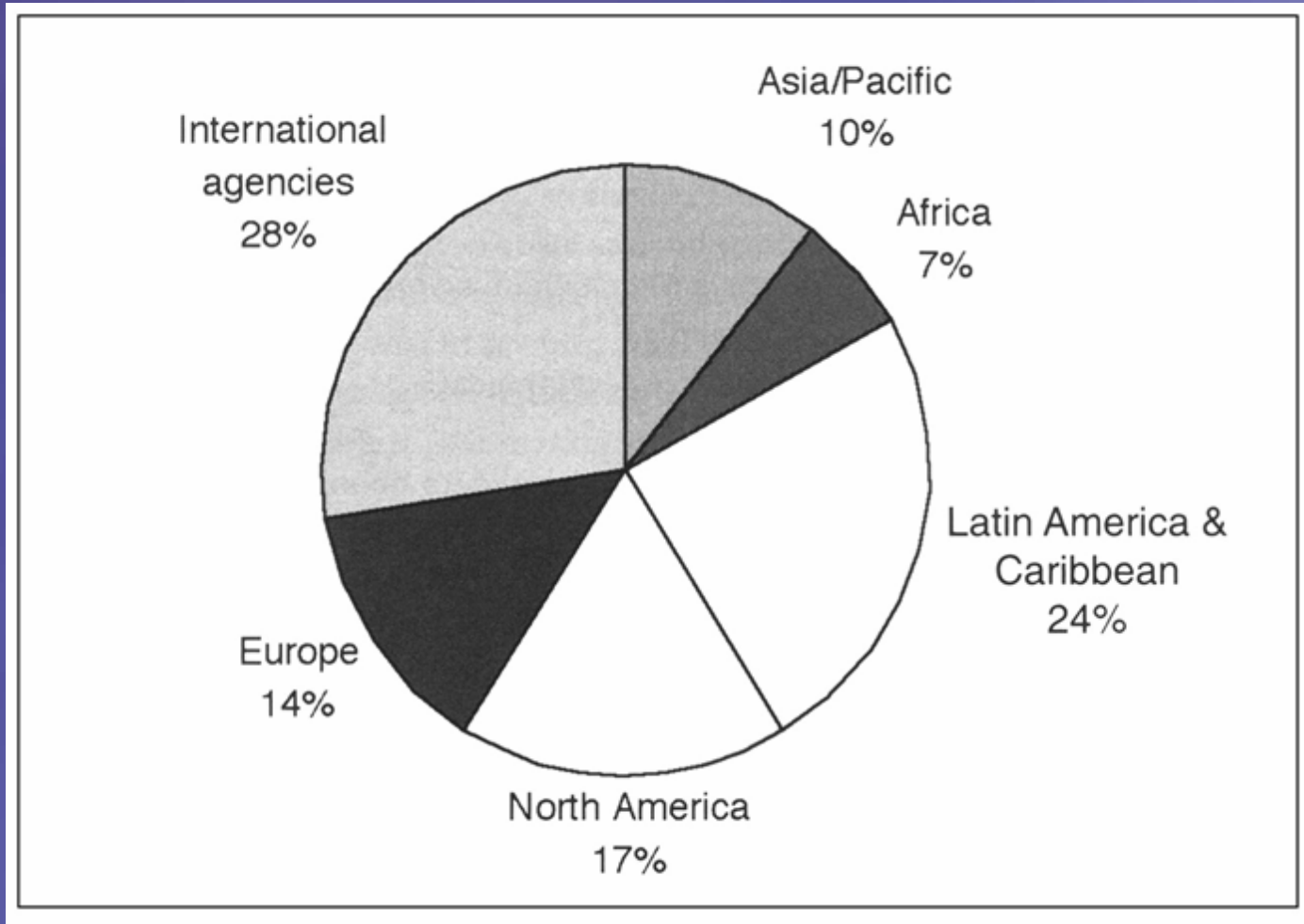


# Forest environmental services - types



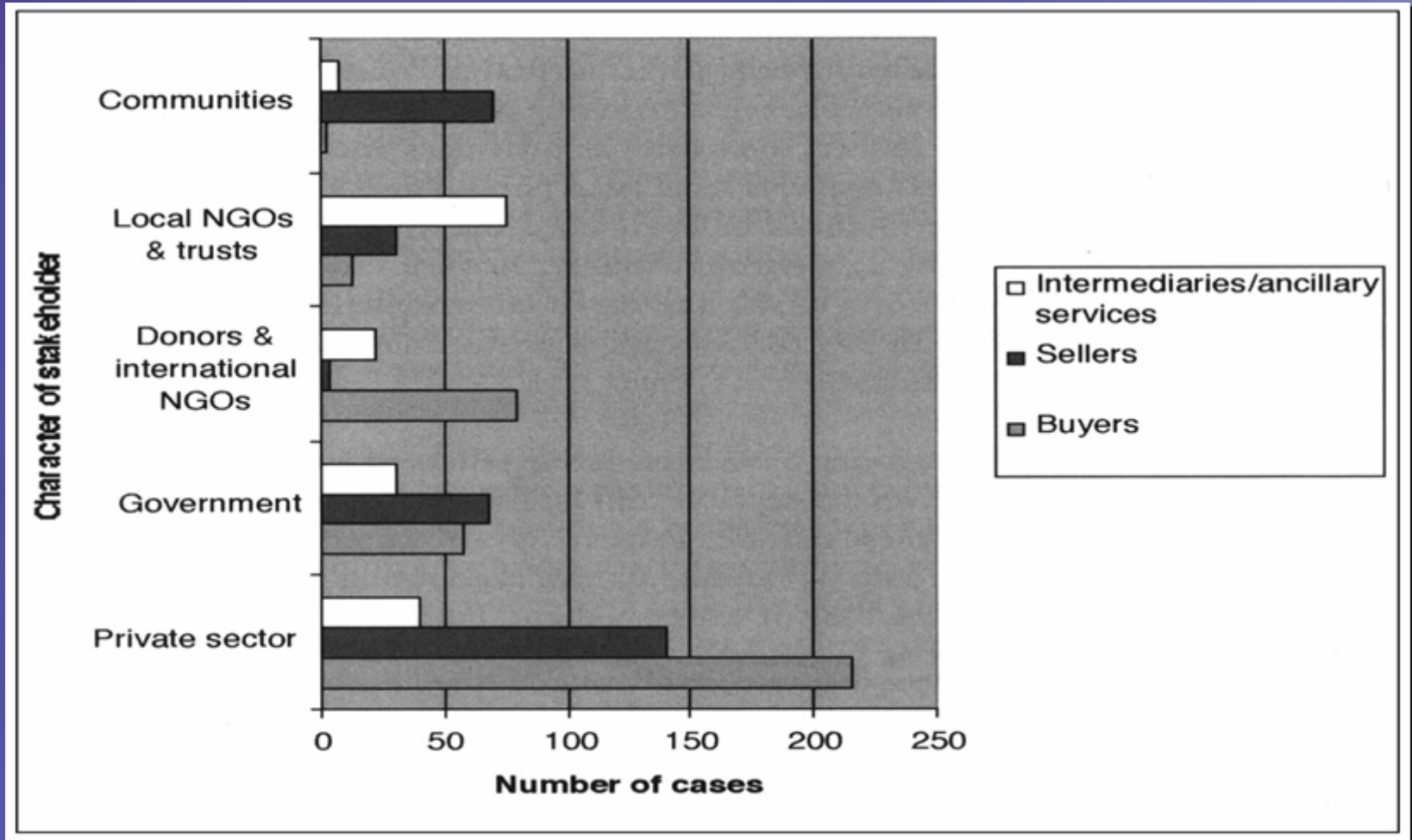
Source: Landell-Mills and Porras (2002)

# Regional distribution



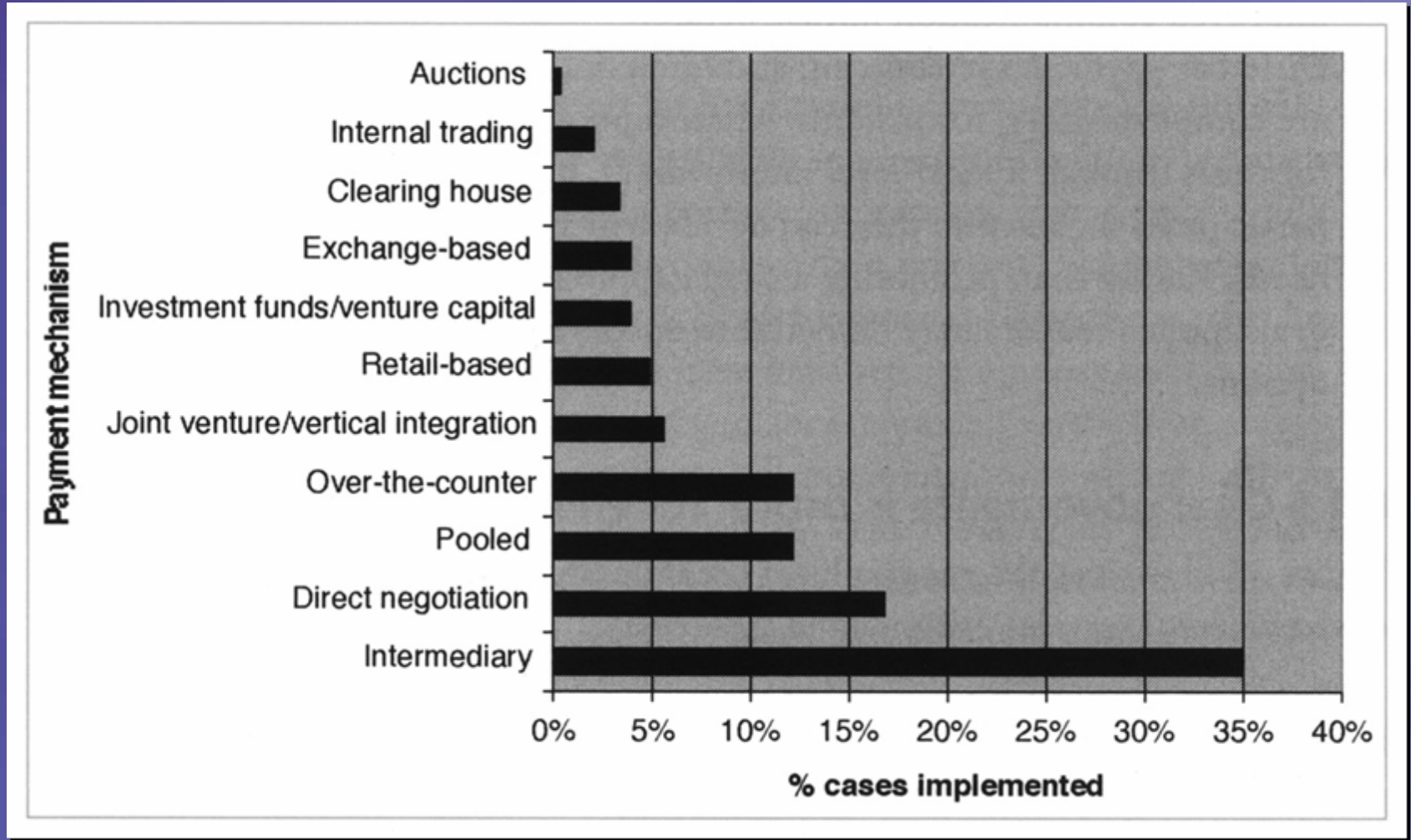
Source: Landell-Mills and Porras (2002)

# Stakeholder participation



Source: Landell-Mills and Porras (2002)

# Payment mechanisms



Source: Landell-Mills and Porras (2002)

# Some caveats on PES-poverty data

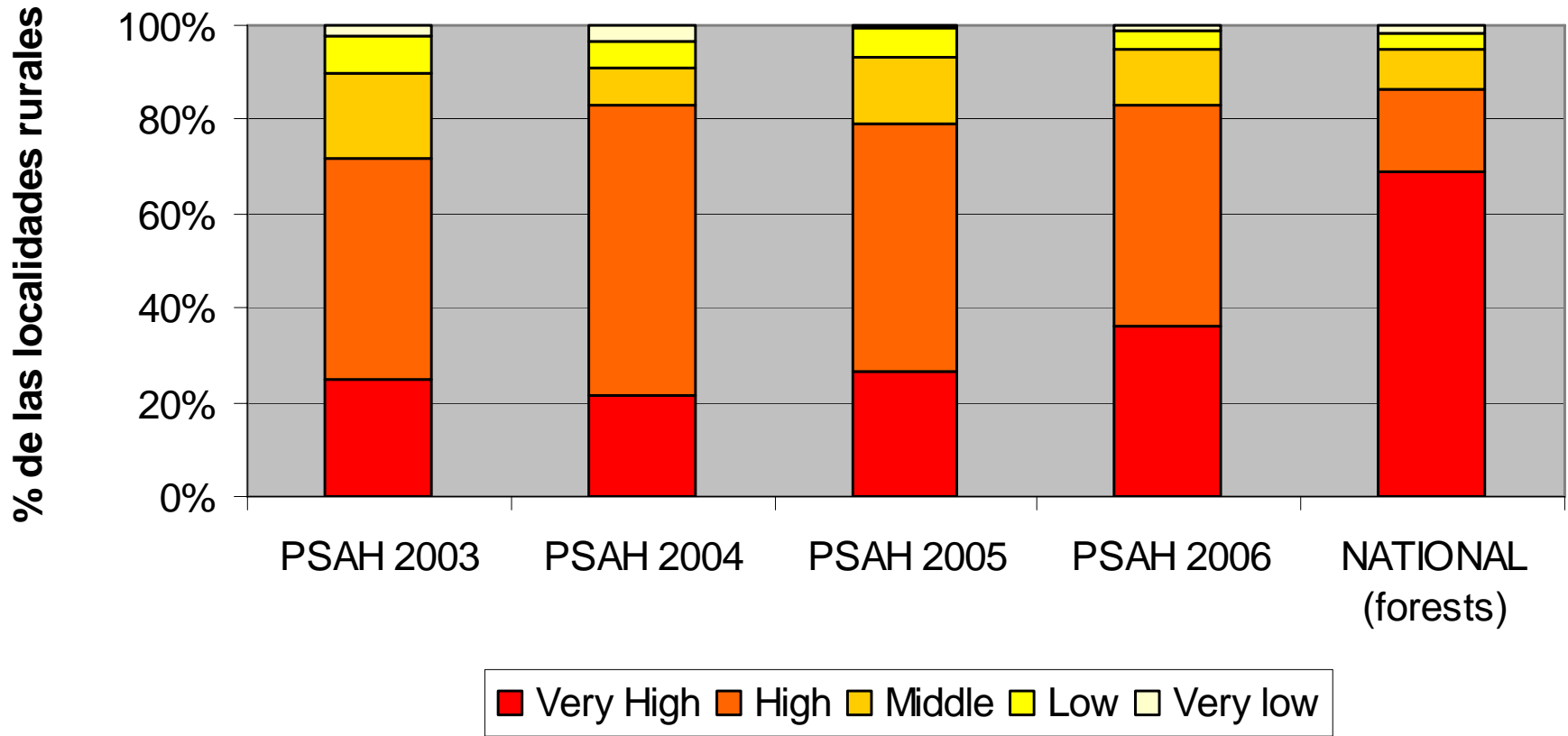
- A lot of the 287 IIED study cases remained “planned initiatives” - no money changed hands, or not contingent (...a lot of “fools gold”!)
- **Poverty assessment** is prelim – young schemes, small numbers (except for Costa Rica, China), no systematic studies
- No opportunity costs assessed – only **gross** effect



# Eight Latin America PES initiatives

- *World Development* Grieg-Gran, Porras and Wunder (2005): four countries (Bolivia, Brazil, Costa Rica, Ecuador), 6 carbon + 2 watershed projects.
- PES household **income/spending share**:  
16% (Virilla, CR), 30% Pimampiro (Ecu)  
[C.Rica: for 25%, PES > 10% off hh income. Osa Peninsula: PES = primary inc. source for 44% of hh]
- **Asset generation** from carbon plantations (Huetar Norte, PROFAFOR: exp. return IRR = 12-27% 30 yr)
- Positive **side effects**: +tenure security, +community organization, +visibility vis-à-vis external actors

# Targeting poverty – the Mexican scheme





# What PES poverty effects?

- Some access rules and structural constraints hamper participation by the poor, others are in their favor
- Net positive effects for ES sellers (often 'moderately poor' smallholders) are likely - including non-income benefits
- Mixed effects on other poor (non-sellers), but landless poor engaged in environmentally degrading activities could lose out significantly

# **V. Conclusions**

# Will PES reduce poverty?

- For smallholder ES providers – most probably. Effect is scale-dependent.
- Can poor participants be made worse off? They could be 'PES-trapped', but is not very likely.
- Some non-participants being the 'poorest of the poor' (e.g. landless) may be harmed by PES schemes effectively capping land conversion...
- ...but by the end of the day, that is a side-effect of any successful conservation measure.

# Policy-relevant observations:

- The push for PES comes from demand side – not from sellers. Almost every real PES schemes has started from user side (possibly except carbon)!
- Services that are not strategic/ not threatened will likely never be sold!
- Donors can support start-up development of PES schemes (measurement, monitoring, negotiation & trust-building), and help make PES transparent and equitable.
- Potential pro-poor interventions: reducing smallholders' transaction costs, remove inappropriate access restrictions, targeting, premiums and subsidies.

# Don't put the (poverty) carriage before the (PES) horse!

- If we impose a lot of PES side objectives (poverty, gender, indigenous people, human rights...), PES will not be “**transactions**” but **development projects**.
  - If so, PES would become the new toys of donors, NGOs, etc. – mainly of the altruistic type...
  - ....but their **scale** would be much more limited, as the private sector will remain a secondary actor.
- => Poverty alleviation is an important **side objective** of PES – but it should never become the **primary goal**!
- => The best way to achieve pro-poor PES may be to apply only minimal interventions that “grease the wheels”.



