Payments for Environmental Services and Poverty

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Structure

I. PES definition and concepts

II. What poverty impacts?

III. Conclusions

I. PES definition and concepts

Definition of PES

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**).

= "purist definition" – more PES-like than PES-pure out there …but good to have a prototype in mind!

Application of PES

– Four services: **carbon, watersheds**, biodiversity and landscape beauty protection

– 1) user-financed >< 2) gov't financed PES

– **"Contractual conservation"** conservation paradigm is a response to hard conservation trade-offs – compensations creating 'win-win

– Goal: conservation; side-objectives: variable

– REDD = inter-national PES system; nations may or may not use PES on the ground

Case 1: Pimampiro (Ecu), "user-financed"

- *Service*: Watershed protection

- *Buyer*: Municipal water company

- *Seller*: Comunity in upper watershed, 550 ha protected

- *Voluntary*: individual contracts 2000—

- *Conditional*: Previous sanctions

3.03.2009, MMA , Brasília

Case 2: PSA Costa Rica, "gov't financed"

- *Services*: biodiv, C, watershed, landscape

- *Buyer*: State C Rica

- Seller: Forest owners, nationally

- *Voluntary*: contracts 5 years, 1996-

- *Conditional*: Monito-ring, sanctions

- Uniform rate, politics

What trade-offs can PES address?
(TEEB 2009)

1. Beneficiaries ("winners – losers")
2. Spatial ("benefits here – costs there")
3. Service type ("provisioning – other services")
4. Temporal ("benefits now – costs tomorrow")

(Increasing relevance)

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

- Include **insecure land tenure** – and tenure tied to "active" (ES degrading) land use?
  => need (to create) *de facto* rights to exclude

- Adding "carrots" (=PES) on existing "paper sticks"
  => combine carefully with (defunct) **command-and-control** measures

- PES = "victim pays" principle

  => What de facto entitlements exist?

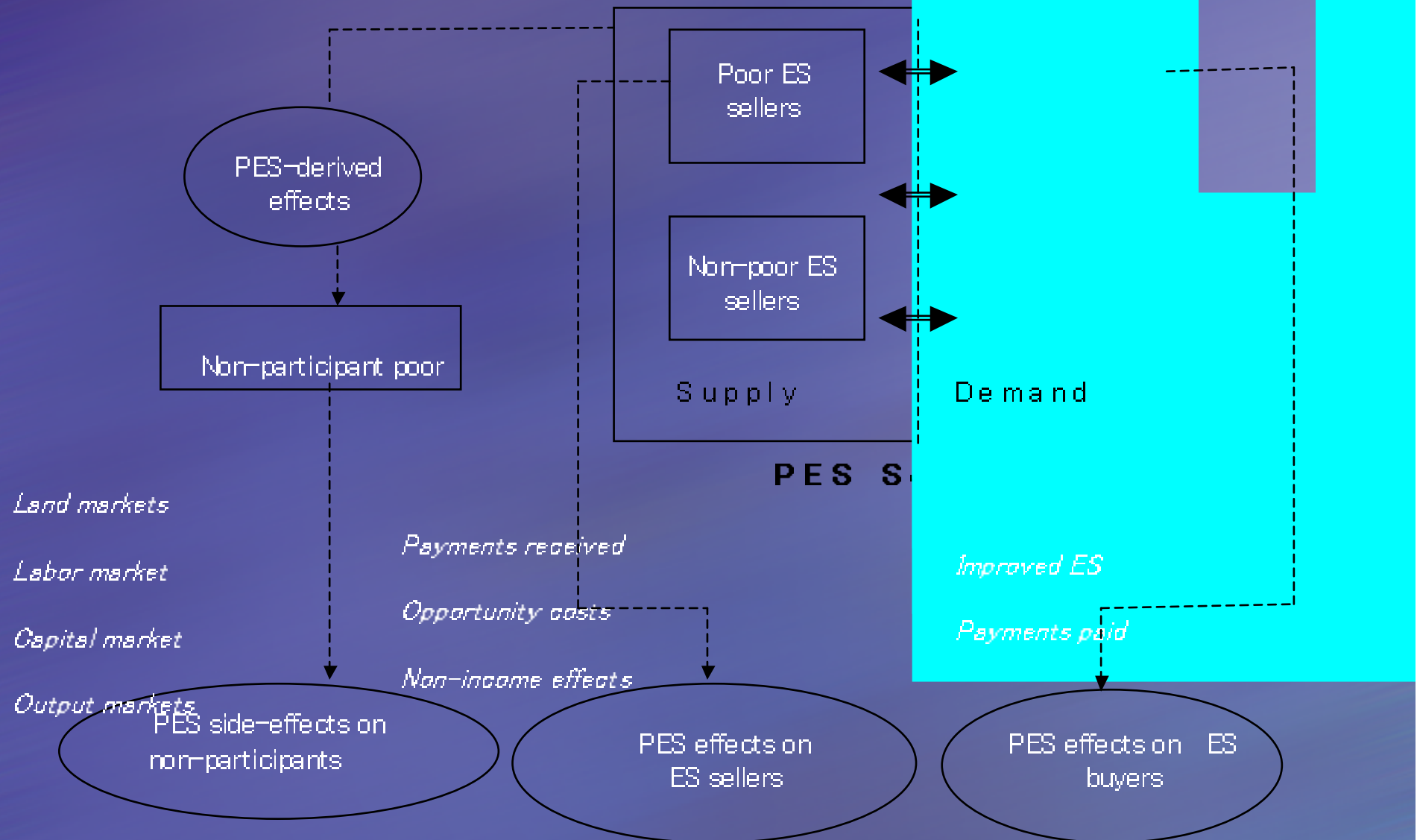⇒ Think 'carrots' (~PES) as a **complement** (not substitute) to 'sticks' and institutions

Will PES pay for all the Ecosystem Services identified by the MEA?

…No!

- MEA "provisioning services" are really **products** not services (ex: fuelwood, NTFPs)

- Among services, **PES** pays for "**externalities**", not internalized ES (ex: downstream flood protection – yes; enhance on-farm soil fertility – no)

- Among externalities, only credibly **threatened** ES will normally be paid for

- Among threatened externalities, only those perceived as **most valuable** (WTP > WTA) are paid for

=> PES will target **strategic subset** of ES

II. What poverty impacts?

Impacts of PES schemes o

PES-derived effects

Non-participant poor

Poor ES sellers

Non-poor ES sellers

Supply

Demand

PES S

Land markets

Labor market

Capital market

Output markets

Payments received

Opportunity costs

Non-income effects

Improved ES

Payments paid

PES side-effects on non-participants

PES effects on ES sellers
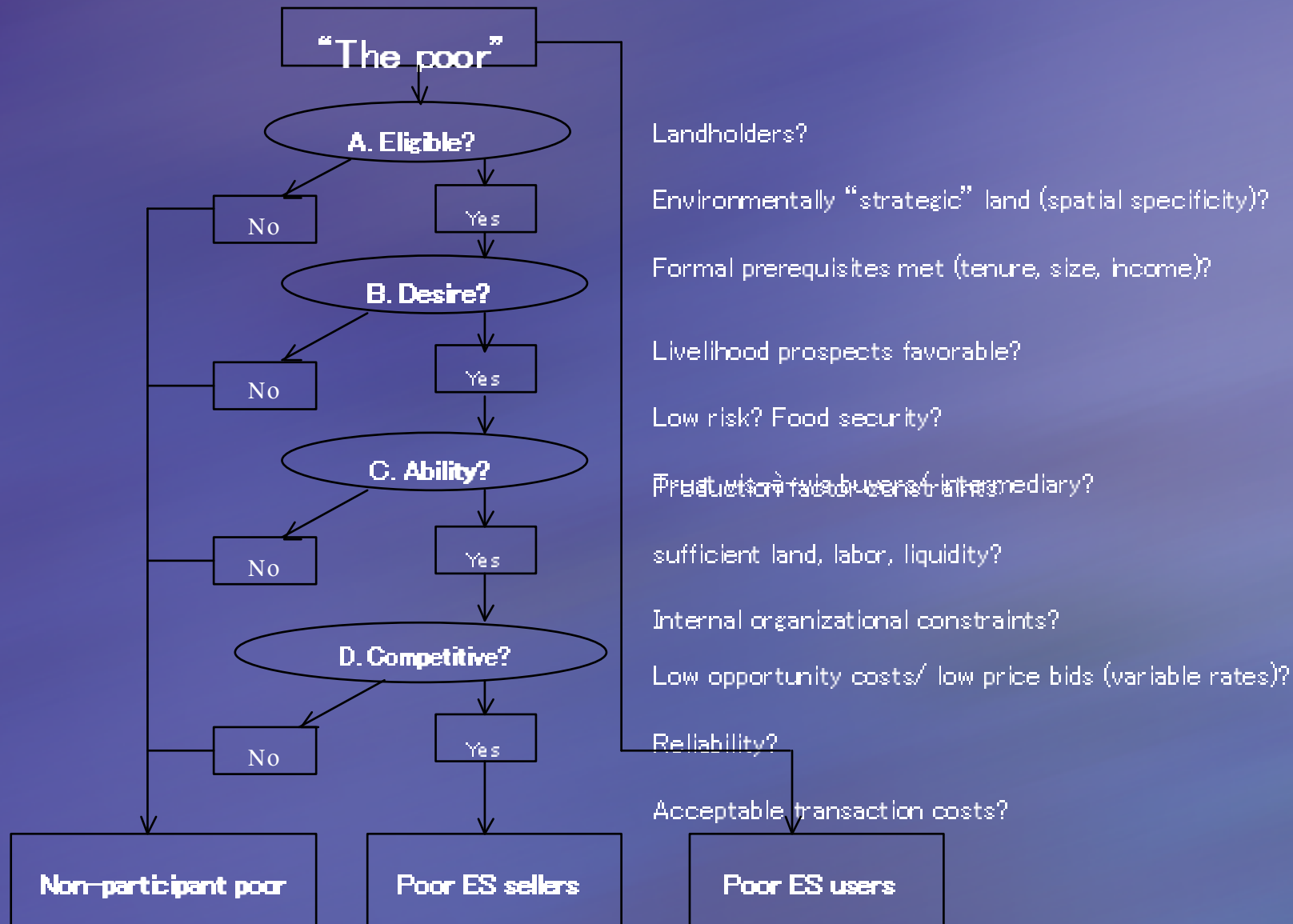
PES effects on ES buyers

Three PES-poverty target groups
1) Poor ES providers

2) Poor ES users

3) Poor non-participants

Four PES-poverty dimensions
1) Can poor **ES providers participate?**

2) When they do, do they **gain** significantly?

3) Are poor **service users** better off from PES?

4) What happens to **non-participants** (landless laborers, food consumers, etc.)?

1. Participation of the poor in PES schemes


```
"The poor"
      |
      v
  A. Eligible? ----No----> [No]
      |
     Yes
      |
      v
  B. Desire? ----No----> [No]
      |
     Yes
      |
      v
  C. Ability? ----No----> [No]
      |
     Yes
      |
      v
  D. Competitive? ----No----> [No]
      |
     Yes
```

Non-participant poor   Poor ES sellers   Poor ES users

Landholders?

Environmentally "strategic" land (spatial specificity)?

Formal prerequisites met (tenure, size, income)?

Livelihood prospects favorable?

Low risk? Food security?

Production factor constraints?
Trust in two buyers/intermediary?

sufficient land, labor, liquidity?

Internal organizational constraints?

Low opportunity costs/ low price bids (variable rates)?

Reliability?

Acceptable transaction costs?

Poor providers may face **structural access constraints,** but also **opportunities**:

1. Often **insecure land tenure**
   Claims overlap, inability to exclude

2. **High transaction costs**
   of dealing with many smallholders

   – …but they often occupy <u>environmentally sensitive</u> (=economically marginal) lands producing ES

   – …and they tend to have <u>low labour opportunity costs</u> (simple ag tech) lowering their ES price bids

   – …all gov't-financed PES in the South (C. Rica, Mexico, China, Vietnam, S Africa) do <u>pro-poor targeting</u>

   => Little overall 'bias against the poor' – but moderately poor may have better access (Pagiola et al. 2008 - Nicaragua)

2. Effects on service providers

- *World Development* (Grieg-Gran, Porras & Wunder 2005): 8 PES cases in Latin America.

- PES household **income/spending share**: 16% (Virilla, CR), [C.Rica: for 25%, PES>10% of hh income. *Poorer* areas: Osa Peninsula: PES=primary inc. source for 44% of hh; Pimampiro: PES/Y=30%]

- **Asset generation** from carbon plantations (Huetar Norte, PROFAFOR: exp. return IRR=12-27% 30 yr)

- Positive **non-income effects**: +tenure security, +better organization, +visibility: in some cases preferred to cash!

$\Rightarrow$ Poor providers generally benefit – incl. poorest!

  Excep: coll. PES intra-community losers; ES users don't pay

3. What about poor <u>service users</u>?

- PES Villa de Leyva, Colombia: ~15 upstream farmers; ~2,500 downstream water consumers – yet NGOs neglect the latter re. "poverty"!

- Most poor ES users do not become ES buyers because they lack organization (e.g. mangrove restoration <=> small fishermen). Most PES are buyer-led and monopsonic!

- Some poor ES users benefit as "free riders" – e.g. *urban non-metered water users*

=> Poor service users stand to gain!

4. PES impacts on non-participants

- Depends on derived effects from labour, capital, land, output markets.

- Ex: Noel Kempff (Bolivia), protected area financed by carbon + biodiversity interests; main losers: landless labourers losing timber company jobs.

- Consumer effects: if food supply inelastic, large set-asides cons. hurt the poor (Zilberman 2008)

- Counter-ex: Environmental restoration cons. (A/R or agroforestry) stimulate local employment

=> PES, like any (effective) set-aside conservation – can cost jobs – espec. in large-scale (e.g. REDD)!

III. Conclusions

PES-poverty effects

1. Some access rules and structural constraints may hamper **participation** by poor ES providers; others are in their favour

=> Curb/ subsidize transaction costs, espec. start-up

2. Net positive effects for **ES sellers** (often for 'moderately poor' smallholders), cash + non-income benefits – but not huge gains, temporary

=> Little need to intervene on their behalf

3. **ES users** also benefit – incl. as free riders

=> Oil the wheels to increase scale of efficient PES

4. **Other poor** – positive or negative side-effects

=> Pre-diagnosticize problems, remedy if significant

Two (seemingly happy) PES recipients in Pimampiro, Ecuador

www.cifor.cgiar.org/pes/_ref/home/index.htm