



# Payments for Environmental Services: Institutional Preconditions in Developing Countries

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**THINKING** beyond the canopy



# **Structure**

- I. Defining payments for environmental services (PES)**
- II. Institutional preconditions for PES – and examples**
- III. Conclusions**

# **I. Defining PES**



# Coasean definition -- Wunder (2005)

1. a **voluntary** transaction where
  2. a **well-defined** environmental service (ES)  
- or a land-use proxy -
  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**).
- Adding Engel, Wunder, Pagiola (2008) SI EcolEcon
- “User-financed vs Gov’t-fin. PES” (Coase vs Pigou) – free-riders, transaction costs.

# Critiques of Coasean definition

1. “Based narrowly on **market** institutions only!” a)  
Muradian, Corbera, Vatn 2010 b) Farley, Costanza 2010

...but who said so? Beyond carbon, few ES markets

2. “**ES too complex** to commodify & monitor!”  
Same + Kinzig et al. 2012 (*Science*), Tacconi (in print)

...For watersheds, biodiv – for C, recreation, less so

3. “PES should include criterion of **poor providers!**”  
Swallow, van Nordwijk (RUPES) (Somerville: add.ity)

...normative targeting mix-up of PES **definition?**

# Critiques of Coasean definition cont'd

4. "No **voluntary** participation of single ES users!"

Same as above

...True for collective/ club goods – institutions decide

5. "PES incentives only destroy **intrinsic motives**!"

Vatn 2010 and others (...but little empirical work!)

...does reciprocity work? Balance incentive & reward

6. "Most real efforts **don't comply** with 5 criteria!"

Most of above

...Should an innovative conceptual definition express  
"Durchschnittstypus" or "Idealtypus" (Max Weber)?

# Definitional advantages of Idealtypus

...“Der Idealtypus wird vorwiegend unter forschungspragmatischen Gesichtspunkten formuliert. Er muß nicht "wahr" sein, in dem Sinne, daß sich die Wirklichkeit nahtlos in ihn einfügt, aber er muß dem Forschungsprozeß dienlich sein... indem man einzelne Bestandteile... in einem gedanklichen Konstrukt hervorhebt... die diesen Forschungsgegenstand am schärfsten von... verwandten Gegenständen, mit denen er unter einem Gattungsbegriff subsumiert werden könnte, trennen.”

=> Defining PES “ideally”, as an asymptotical model, discriminates them dialectically from similar instruments with differing design features.



# An alternative PES definition?

- “a transfer of resources between **social actors**, which aims to create **incentives** to align individual and/or collective land use decisions with the social interest in the **management** of natural resources” (Muradian, Corbera, Pascual, Kosoy, May, 2010)
- ⇒ This includes ICDPs, environmental taxation, ecocertification premiums, park entry fees ...and their Uncle Joe, and his dog, too! 😊
- ⇒ Welcome to the “PES bubble”: follow the money!?
- => It may be preferable to stay closer to the Coasean ideal type (incl. Pigouvian variants) – without expecting reality to conform a 100% to it



# Revisiting the Coasean definition

1. a **voluntary** transaction – to a variable extent on the buyer side; to full extent on provider side
2. a **well-defined** environmental service (ES)  
- or a land-use proxy, or some bundle thereof
3. is being “bought” by a (min. one) ES **buyer** –  
in the Pigouvian case a public entity
4. from a (min. one) ES **provider** or a community
5. if and only if the ES provider continuously secures ES provision -- i.e. **conditionality** has to be present to some extent in design and function

*NB:* explanatory notes; non-negotiable elements

## **II. Institutional preconditions – and examples**

# PES and institutions

- “Institutions” = solutions to collective choice problems (ES shared, neighbors => *externalities*)
- Pop & econ growth => resource scarcity => more functional separation, capitalistic privatization, commodification => externalities on the rise!
- Three institutional **governance** types – all for PES:
  1. **Hierarchy** (command & control) – state, firm  
ex: caps create carbon & biodiv offset markets
  2. **Market** (voluntary exchange) -- ex carbon
  3. **Community** (reciprocal exchange) – watersheds

Main source: Vatn (2010)



# PES preconditions

1. *Economic*:  $WTP > WTA \Leftrightarrow$   
value of ES service > costs of ES provider
2. *Cultural-political*: PES are widely accepted, and providers react positively to new incentives
3. *Informational*: ES relevant knowledge available, at reasonable transaction costs
4. *Institutional*:
  - a) clear land exclusion rights
  - b) clear “rights to pollute” (or leverage) landscape
  - c) trust between ES buyer and seller $\Rightarrow$  PES = cooperative tool (can be ACM) & entry

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

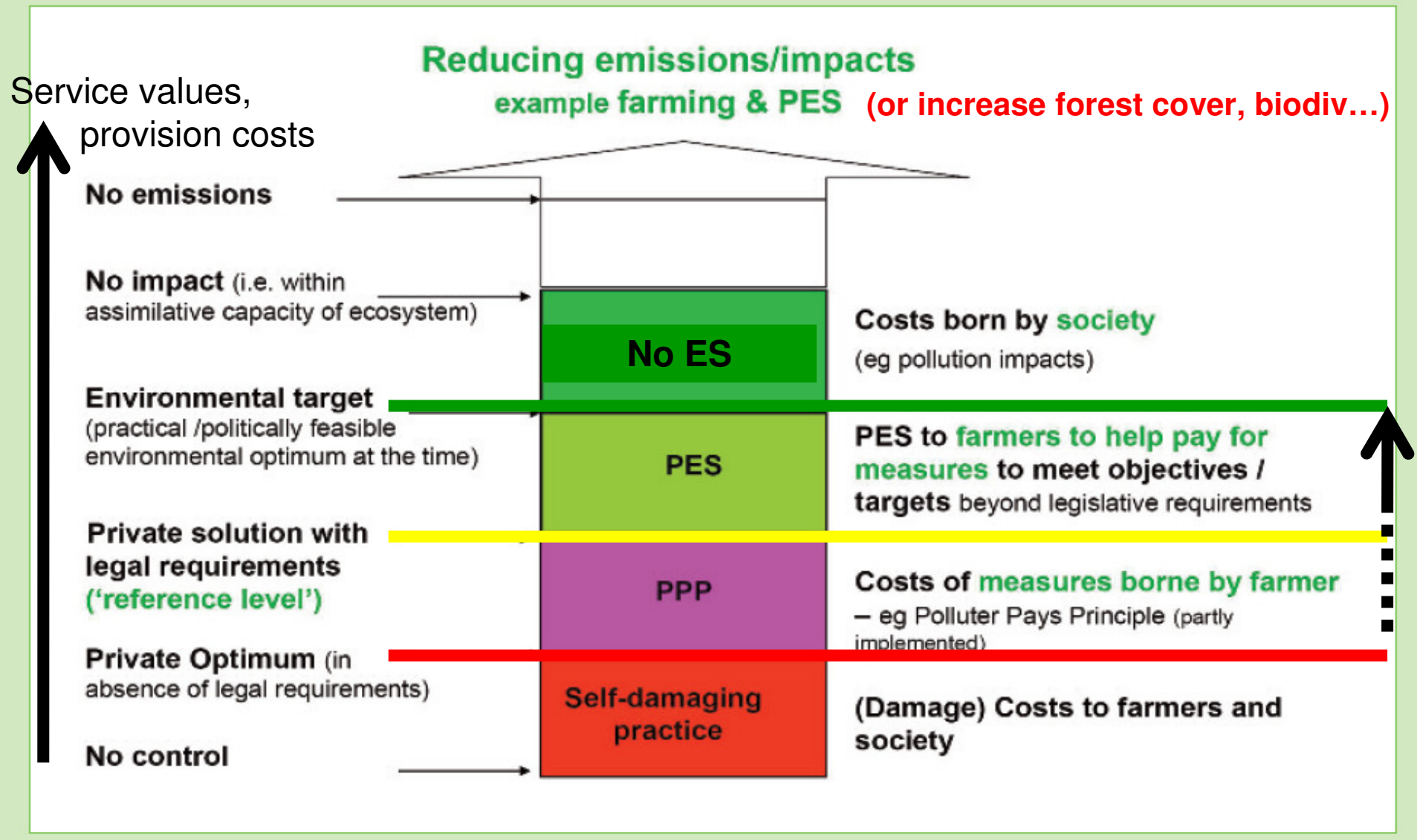
- Include **insecure land tenure** rights – tenure tied to “active” (ES degrading) land use?
- **Illegal** (but tolerated) **resource uses** (timber, charcoal, game) – reward people to respect the law?

Adding “carrots” (=PES) on pre-existing “paper sticks” (=defunct **command-and-control** land-use caps)?

- PES = “provider gets”= “victim pays” principle.  
⇒ challenge to avoid “perverse incentives”

# PES & legality: theory vs. practice

Source: Adapted from TEEB (2009)

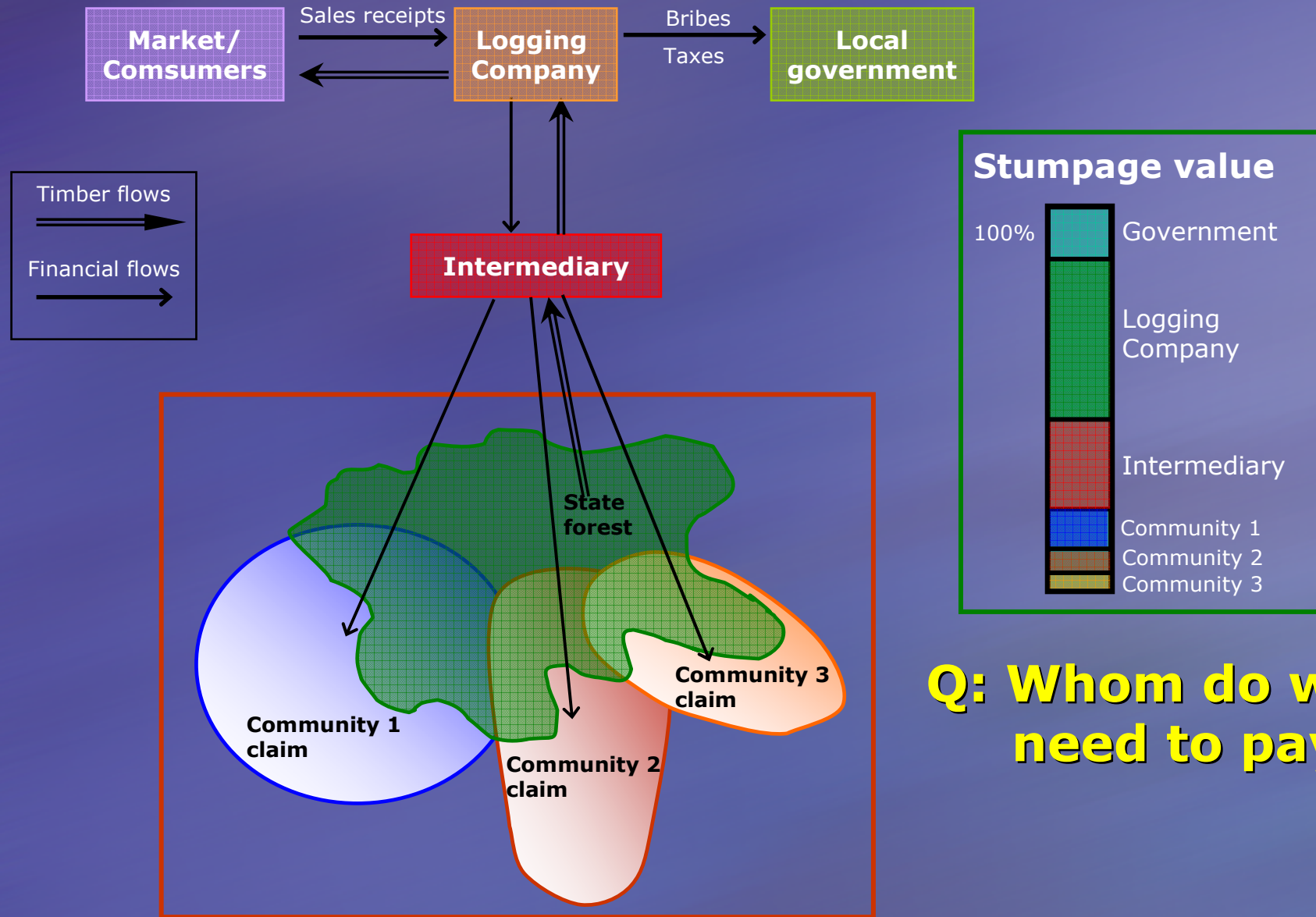




# **Role of property rights: Conservation Easement in Kalimantan, Indonesia**



# Ex: Paying for biodiversity conservation





## Case 1: Pimampiro (Ecu), “user-financed”



- *Service*: Watershed protection
- *Buyer*: Municipal water company
- *Seller*: Community in upper watershed, 550 ha protected
- *Voluntary*: individual contracts 2000—
- *Conditional*: Previous sanctions
- *Instit*: gov't/ community reciprocity, “market”?



## Case 2: PSA Costa Rica, “gov’t financed”



- *Services*: biodiv, C, water, landscape
- *Buyer*: State C Rica
- Seller: Forest owners, nationally
- *Voluntary*: contracts 5 years, 1996-
- *Conditional*: Monitoring, sanctions
- Flat rate, additonal?
- **Institutions: gov’t but “outsourced” (donors & markets) hierarchy**



## Case 3: RISEMP silvopasture -“Intern. org”



- *Services*: Biodiv, C
- *Buyer*: GEF
- *Provider*: Ranchers in Col, Nicar, C.Rica
- *Voluntary*: Contracts 4 years, 2002-06
- *Conditional*: Paying land-use practices
- Environmental index, adoption subsidy
- *Institut.*: IO=“gov’t”? user-financed? hybrid

# **III. Conclusions**



# Institutions and PES

1. **PES between Coase and Pigou:** PES gov't policies, bilateral contracts. Is the EcolEcon school shooting down a straw man?
2. **Defining PES:** a broad, “average-typus” PES definition may make us lose sight what PES is all about -- “normal typus” differs, for good or bad
3. **The bare essentials of PES?** a) fully voluntary ES providers; b) some conditionality
4. **PES institutional needs:** cooperation & trust, land & pollution rights, low transaction costs.



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