

Exploring the diversity of motivations to join Payment for Environmental Services (PES): case of Costa Rica PES

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Research justification

- Discussion on PES efficiency (Muradian et al, 2013; Wunder, 2013; ...), in particular in Costa Rica (Daniels et al, 2010, Pfaff, Ariagada et al, 2009, Locatelli et al., 2008; Zbinden & Lee, 2004...)
 - Aditionality
 - Motivation
 - Access and effects on poor
- However
 - No clear understanding of PES adoption motivation
 - Limits to take into account and understand diversity of PES effects according to beneficiaries profiles and regions

Objective and research questions

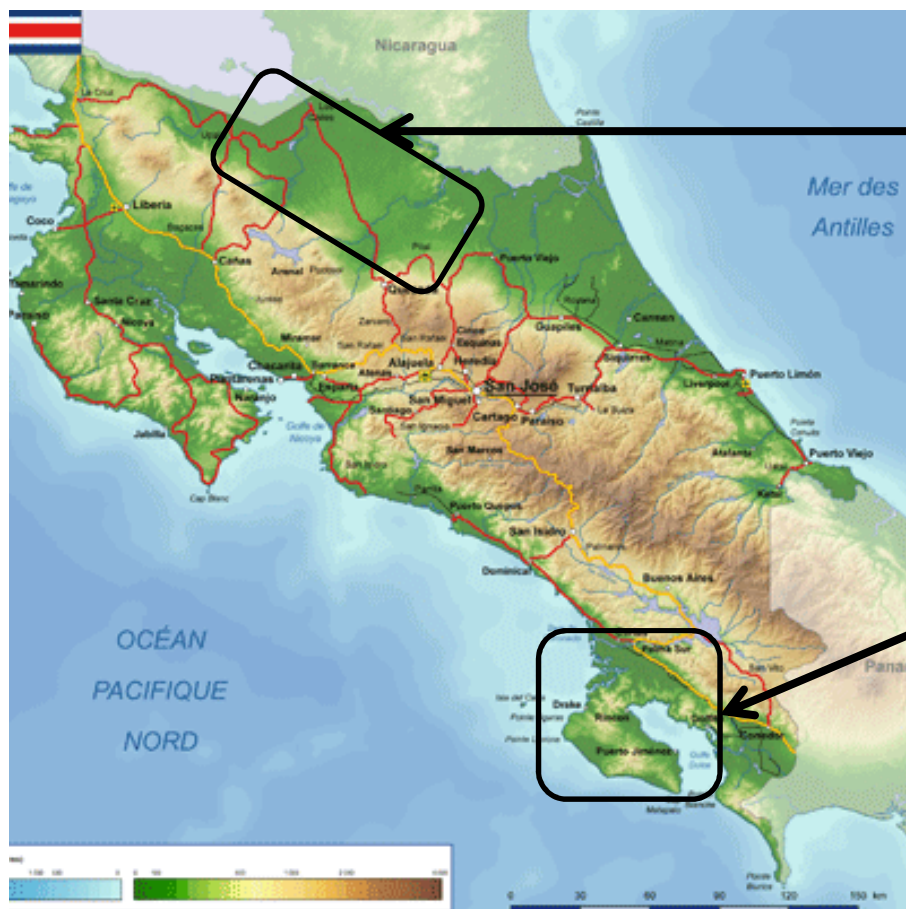
- Objective
 - Explore the motivations of land users to join the PES program
- Research questions
 - What are the socio-economic profile of beneficiaries ?
 - What are their motivation to join PES program ?
 - How do they use the PES resources in their strategy ?
 - What is the contribution of PES to rural development in territories ?

Costa Rican PES in a nutshell

- **Implemented since 1997**
- **Four Forest ES recognized :**
Carbon Sequestration, Hydrologic services, Biodiversity conservation, Scenic beauty
- **Five main types of PES contracts :**
Protection, Reforestation, tree plantation in Agro forestry System, Regeneration, Sustainable Forest Management
- **Diversity of funding source:**
oil tax, water tariff, international cooperation, and private fundings

Material and method (1)

Two regions of important ES issue and PES adoption



Huetar Norte
Low IDH (priority)
Deforestation issue in 80s

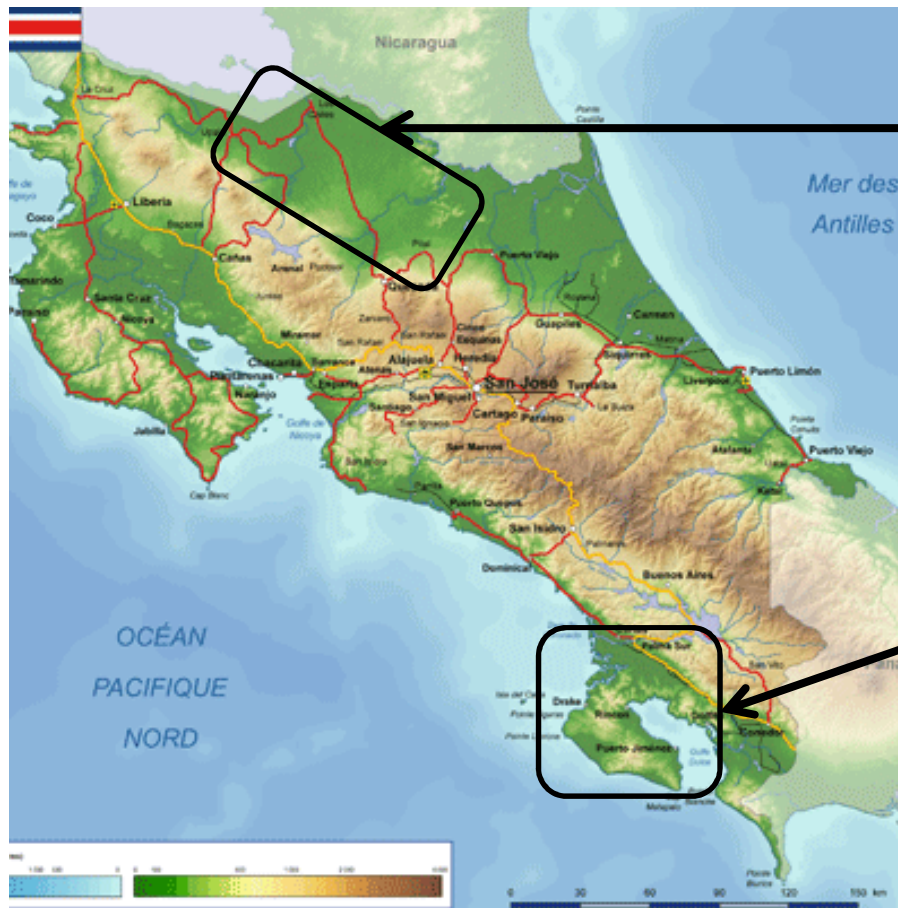
Osa Peninsula
Low IDH (priority)
Hot spot biodiversity

Material and method (2)

- A review of dynamics of regional
 - Key informant in institutions and local organizations
- An household survey
 - Characteristics of households and activity system
 - Relation with PES Program
 - Motivation to apply, perception PESP,
 - Use of the PES resources
 - Problem of access to PESP
- Analysis
 - Identification of types of households based on characteristics (system of activity and PES mobilization)
 - Comparison between regions

Survey

- A survey of 200 households in two regions



Huetar Norte

130 households

- 93 beneficiaries

- 37 no beneficiaries

Osa Peninsula

70 households

-35 beneficiaries

- 35 no beneficiaries

Main Criteria

- System of activity
 - Main source of income and occupation
 - On farm activities
 - Management model
- Assets
 - Land tenure, land Size
 - Capital
 - Education level
 - Participation in organizations
 - (Place of residence of the owner)
- PES
 - Modalities used
 - Motivations and strategies

Diversity of landholder

- Small family holder farmer
- Medium/large farms
- Large business enterprise
- Forestry
- Tourism
- Non farmers landholders

Small family farmer

- Activities
 - Integrated system or multiproduction
 - Tree planted has fences, or small patches
 - On farm & off farm
- Assets
 - Land < 50 Ha (holders or owner)
 - Low investment capacity
- PES
 - 1 contract : SAF or Protection
 - Integrated system/ SAF : Additional income from trees without additional work
 - Multiproduction / protection : PES as welcomed complementary income

Medium / Large Farms

- Activities
 - Farming (Cattle raising, Dairy cattle, Commercial Crops)
 - Limited off farm activities
- Assets
 - Land (50 – 300 ha) owner (or holder)
 - Fair investment capacity
- PES
 - 1 to 3 contracts : Protection (and/or Reforestation)
 - Cattle : Conservation (protection of water), Additional income as alternative to low prices of livestock.
 - Dairy : Would conserve the area anyway, Additional income, not very important for the functioning of the farm
 - Crop : Willingness to diversify, have other retired farm and want to use it

Large business enterprises

- Activities
 - Multiple farming activities – large commercial plantation
- Assets
 - Owner of 150 – 1000 ha
 - High production capital
 - Use of salaried labor
- PES
 - 1 - 6 contracts of PES, protection & reforestation
 - Forest is there and they cannot cut it (prohibition of land use change), PES as an extra income, forest to protect water and steep parts,
 - Acquired the farm after the ban on land use change, have no interests in cutting the forest, can be useful to receive green certification, PES help finance reforestation but is not necessary

Forestry

- Activities
 - Wood production / plantation
 - Off farm linked with forest industry
- Asset
 - Land (30 – 300 ha)
 - Medium / high capital
- PES
 - 1 to 5 contracts : Reforestation and Protection
 - Work in the timber industry, produce the raw material for their industry, receive payment for protection between periods of extraction

Tourism

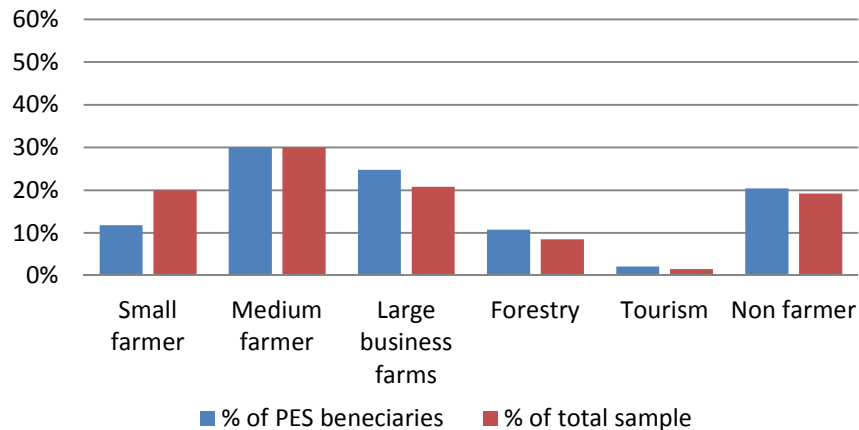
- Activities
 - Tourism activities
 - Forest conservation
- Assets
 - Land owner (50 – 250 ha)
 - Medium to high level of infrastructure
- PES
 - 1 or 2 contract Protection
 - Forest Protection as a good marketing strategy (added value to tourism activities), PES facilitate maintenance of a larger area.
 - Environnemental motivation

Non farmer landholders

Activities	Salarial or freelance activities and incomes	No incomes (unemployed, retired without pension,..)	Retired with pension
Assets	Land owner (or holder)	Land owner / holder Limited assets	Land owner / holder
PES	<p>1-3 contracts of Protection (Reforestation)</p> <p>Conservation (no option/recreational) Protect against invasion, PES pay for the maintenance of forest</p>	<p>1 contract of Protection</p> <p>Conservation (no option) PES as main source of income</p>	<p>1-3 contracts of Protection</p> <p>Conservation (patrimonial) PES pay for the maintenance of forest</p>

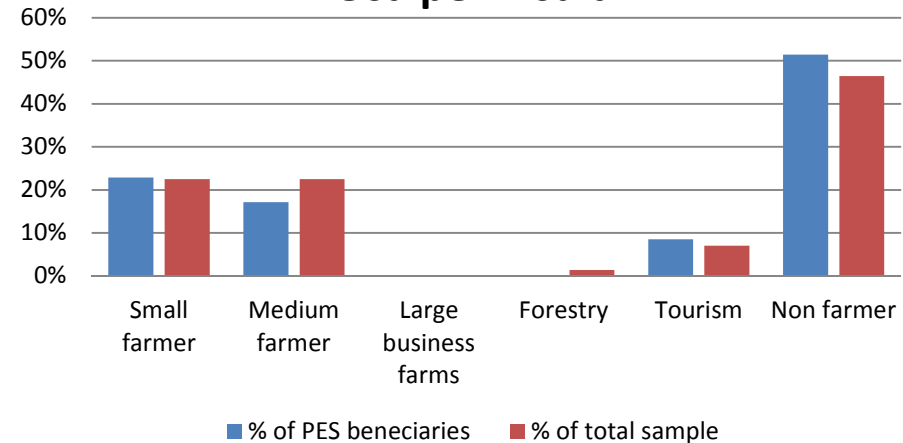
Forest landholders types distribution

Northern region



- Dominance of farmer landholders /including large business farms
- Non farming (56% other job / mainly land owner)
- Forestry sector
- Dissymmetry of participation of small holders compared with large business farm

Osa peninsula



- Large dominance of non farming holders (50% without no incomes / mainly land holder)
- Tourism activity
- Dissymmetry of participation of medium farmers compared with non farmer land holder

Different motivation/mobilization according to region

Nothern region

- PES as a valorization of marginal low agricultural potential land
- PES as an option for economic development through forestry sector
- PES facilitating economic transition toward non economic activities

Osa Peninsula

- PES as an social support / public transfer to maintain local rural population without economic development opportunity due land tenure problem and lack of development policy

Conclusions

- Diverse PES motivation and uses according to households types
- Role of PES in territorial development depend on land tenure and agricultural dynamic
- Conclusions regarding efficiency of Costa Rican PESP should be considered according to regions and types
- Assuming multi-objective of the program, targeting and contract priority setting should take into account farmers situation not only forest situation

Thanks for attention

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