

Institutional analysis of incentives for the provision of forest goods and services: an assessment of incentive schemes in Catalonia (North-East Spain)

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Payments for ecosystem services and their institutional dimensions

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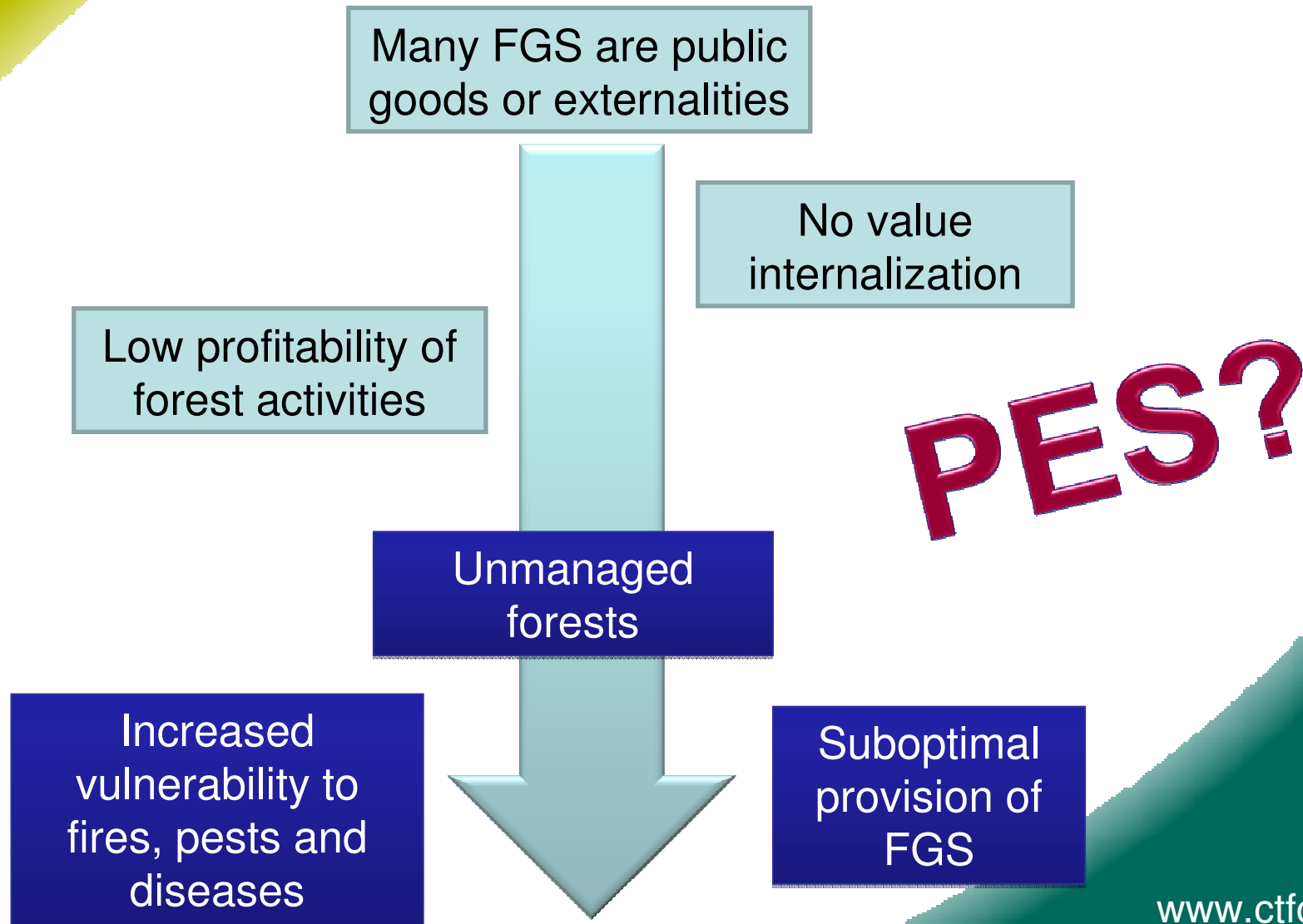
- Provision of FGS in Catalonia: context
- Methodology
- Mature Forest Reserves
- Forest Defence Groups
- Land Stewardship
- Discussion
- Conclusions

Provision of FGS in Catalonia

- Forest: 60% of the territory (80% private)
- Fragmented forest: >50% of parcels are <1ha
- Large forest owners (>100ha) only 1,67% of all private forest owners
- Marginal importance of forestry in regional GDP (1,3% of the agrarian and livestock sector)
- Low financial returns from forest activities
- 30% of private forest area is under a management plan, but only 25-30% on them are actually managed
- Unmanaged forests → forest fires, other risks (snow- or windstorms)



Motivation for incentive schemes

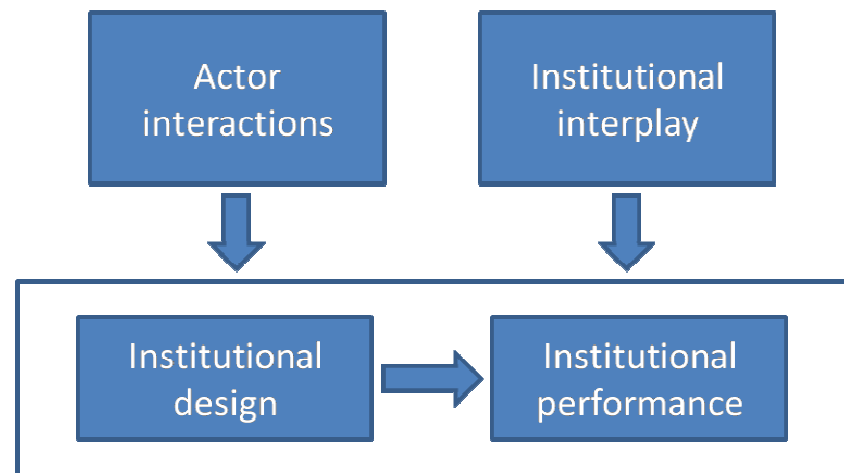


Objective

- How do institutional factors influence the success and durability of PES schemes in Catalonia?
- How do actor and institutional interactions affect the design and the performance of PES schemes?

Methodology

- Institutional analysis and development framework
(e.g. Ostrom et al. 1994, Polski and Ostrom 1999, Ostrom 2007)
- The role of institutions in global environmental change
(Young 2002, Young et al. 2005)
- Institutional dimensions of PES schemes
(Cabrera and Brown 2008, Corbera et al. 2009)



Actors and actor interactions

The evolution of institutions is influenced by the existing **power structure** and the prevailing **patterns of interactions** among different actors (e.g. Knight 1995, Ostrom 2005)

- Rights
- Responsibilities
- Interests/expectations/values

- Use and management of resources
- Information sharing
- Lobbying
- Deliberation

Institutional interactions

The performance of a particular institutional arrangement is influenced by its interaction with other institutions (e.g. Young 2002)

- **Institutional interplay** (Young 2002, Young et al. 2005, Oberthür 2008)
 - **Horizontal interactions:** institutions on the *same level* of social organization
 - **Vertical interactions:** institutions located at *different levels* of social organization

Institutional design

- Environmental service or land-use
- Buyers
- Sellers/providers
- Financing mechanism
- Payment mechanism
- Technical mechanism
- Governance mechanism

Institutional performance

- Criteria:
 - Environmental effectiveness
 - Efficiency
 - Equity
 - Flexibility
 - Implementation complexity
 - Acceptability

Evaluation of *actual* and *perceived* performance
(Latzner et al. 2007)

Data collection methods

- Document analysis
- Face-to-face semi-structured interviews with programme officers, technicians and NGOs (spring-autumn 2010) and forest owners (summer 2011)

Mature forest reserves

- **Biodiversity**
- Province of Girona (Catalonia)
- Conservation of mature forest stands (>80-100 y.o.) – natural evolution
- Providers: private and public landholders
- Mechanism: compensation for lost profit
- Public-private financing: public subsidies, private foundation (Caixa Catalunya Social Projects)
- Payment: cash transfer
- Contract duration: 30 years
- 27 contracts with municipalities, 21 contracts with private forest owners (2010)
- Protected area: 700 ha



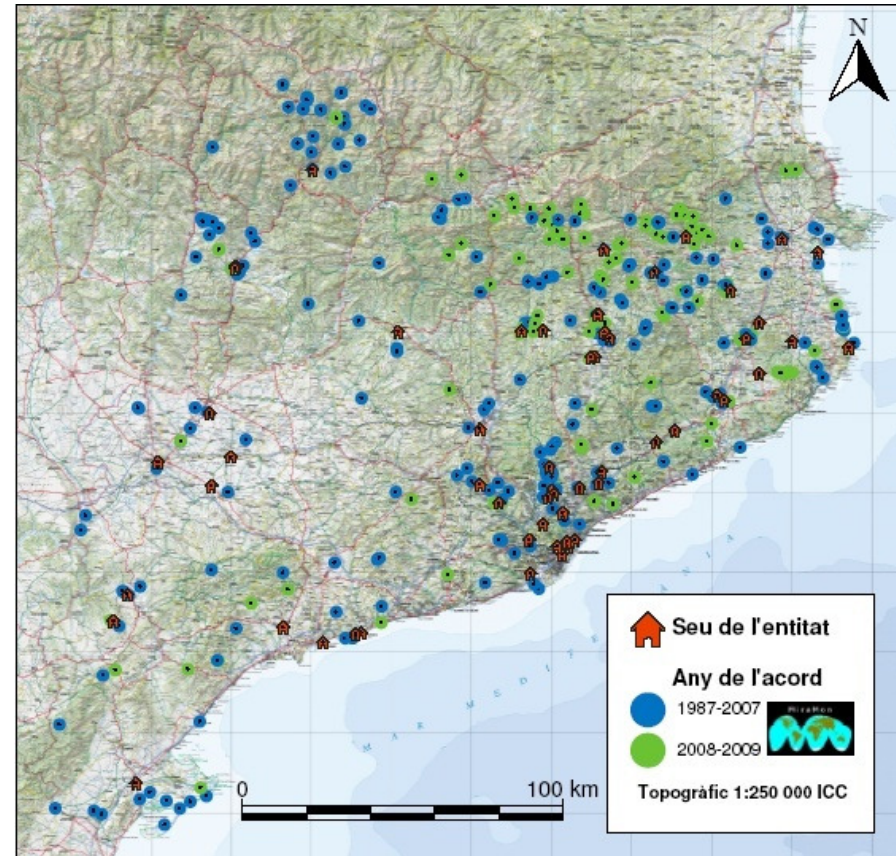
Forest Defense Groups

- Forest fires
- 296 FDGs in over 650 municipalities
- Providers: Private forest owners
- Mechanisms: collaboration in the fight against forest fires
- Public-private financing: public subsidies, private in-kind contributions
- Payment: cash, technical assistance and training



Land stewardship

- Biodiversity, recreation
- **Land Stewardship Network** (2003) – 163 individual and institutional members
- Providers: Private and public landowners
- Over 629 agreements (2009)
- Mechanisms: Land purchase, land management, land use
- Public-private financing: public subsidies, private donations, membership fees (60-3000€/y)
- Payment: mainly in-kind (voluntary work)



More information: <http://www.custodiaterritori.org/>

Actors

Mature Forest Reserves

Public-private contracts (mainly)
Private companies involvement increasingly important
Conflict of interest with the biggest forest owner's association on fundamental grounds (non-management vs. active management and impacts on biodiversity) and over the funds

Forest Defense Groups

Emerge out of a conflict over fire extinction competences
Close collaboration between forest owners
Strong private interest
Recognition of work among local community
Extended cooperation in other social spheres

Land stewardship

Private-private contracts
Many actors on both sides
Conflicts over contracts avoided thanks to the umbrella association (Land Stewardship Network)
Lack of coordination of activities

Institutional interplay

Mature Forest Reserves

Mutually exclusive with cost-sharing subsidies for management activities
Compulsory management plan
Cooperation with Land Stewardship Network
Positive effect on **mapping of singular forests** initiative

Forest Defense Groups

Compatible with other incentive mechanisms
As **social formations** participate in other institutional arrangements on local level

Land stewardship

Compatible with other incentive mechanisms
Some activities are executed for the protection of mature forests

Institutional design

Mature Forest Reserves

Municipal forests are eligible participants
Private donors essential for implementing payments to private forest owners
Annual public budget allocations → **upfront payments**

Forest Defense Groups

Payments based on the **reimbursement of actual expenses**
Multi-level payments
Annual public budget allocations
Low monitoring costs

Land stewardship

Flexible and fairly open contracts
Direct contracts without intermediaries
Payments are typically **in-kind** (voluntary work)

Institutional performance

Mature Forest Reserves

Additionality highly questionable

Positive side effect: **induces conservation of non-enrolled stands**

No contract revision clause

Transparent process

Forest Defense Groups

Additionality through **increased cooperation** among forest owners

Risk of perverse incentives (inducing incendiary), although not yet observed

Efficiency improves in time (search and organization costs go down)

Land stewardship

Additionality assumed

Scattered initiatives

Lack of continuity in time

Conclusions

- **Availability of funds** is not a critical issue for the schemes relying mainly on **in-kind voluntary work** (LS) or where public financing plays a **complementary role** (FDG); however it is determinant for the **expansion and continuity** of all schemes;
- **Budgetary rigidity of public administration** that relies on annual allocations constraints **instrument design** (i.e. determining the timing of payment – upfront; rigid agreement terms) and the **long-term strategy** of the public scheme (MFR);
- **The rigidity of agreement terms** in the public scheme (i.e. review of timber prices) may discourage **participation** of landowners, but it is not perceived as an issue so far;
- **The role and the degree of involvement of landowners** varies among the schemes and constitutes a distinctive feature of their design, however it does not necessarily affect the schemes' **performance**;

Conclusions

- **Compliance** relies on the **strong intrinsic motivation** of participating actors in the private and mixed schemes (LS and FDG); whereas in the public scheme (MFR) it is mainly driven by **economic incentives** and the level of existing **control**;
- **The success and durability** of the private and mixed schemes (LS and FDG) rely on **strong interest** of involved stakeholders, existence of **local social networks** and **public recognition** of the landowners' role; suggesting that these schemes may even function in the absence of strong economic incentives;
- **Permanence** beyond agreement period is not secured (LS, MFR), especially in the absence of additional resources; but is expected in the mixed scheme where private interest of landowners is strong (FDG).

Conclusions

- **PES in Catalonia** are still in its initial stage
- **Efficiency** is not stated as a primary goal
- No clear **environmental targets** → difficult to assess the performance
- “Schemes function well enough”
- **Learning process** “preparing the soil”

THANK YOU!

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New ways to value and market forest externalities

