

Supporting the Provision of Ecosystem Services

Information-Prioritize-Collaborate: cooperation
of regions on innovation in forest management,
wood and forest related services

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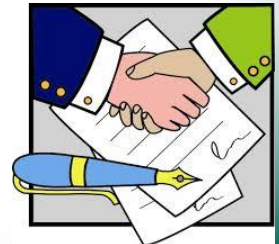
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1. Introduction – ES? PES?
2. Challenges
3. Ideas: actions & tools

Opportunities of ES

- Reducing a market failure (externalities):
 - “if ES have no market, then we don’t take them into account, unless obligation”
- Meeting social (externals’) demands with forest managers’ expectations
 - Feasibility of multifunctionality
- Potential new sources of funding for natural resources management



Challenges

1. Technical: Effective ES supply
2. Economic: Fragmented ES demand & provision
3. Institutional arrangements for ES
4. Cultural factors on ES

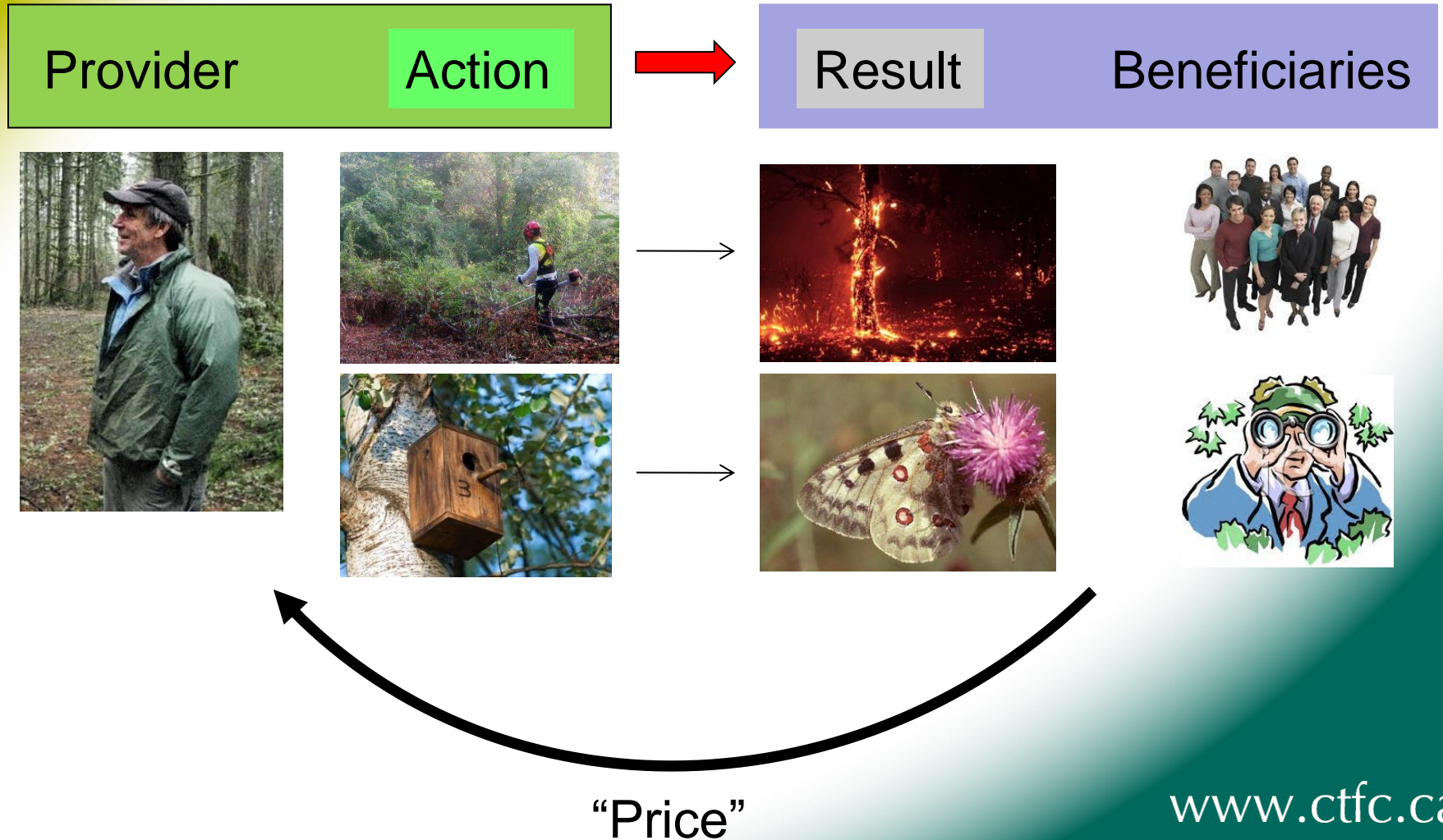
Ecosystem Services

- ES = direct and indirect contributions of ecosystems to human well-being (TEEB, 2010)

Ecosystem elements & processes	Goods and services	Impact (Benefits)	Beneficiary
CO2 fixation	Air with less CO2	Less global warming	All citizens
Filtration, sediment elimination	Water quality provision	Drinking water	Who drinks
Pollination (insects!)	Berries, chestnuts...	Food	Who eats
Trees mixture	Texture heterogeneity	Varied, pleasant landscape	Who watches
Season change	Leaves colour change		

Value!

Payments for Environmental Services



PES examples

- Forest maintenance and Water quality in S France (service fee)
- Fire prevention and fuel tax in Portugal (earmarked tax)



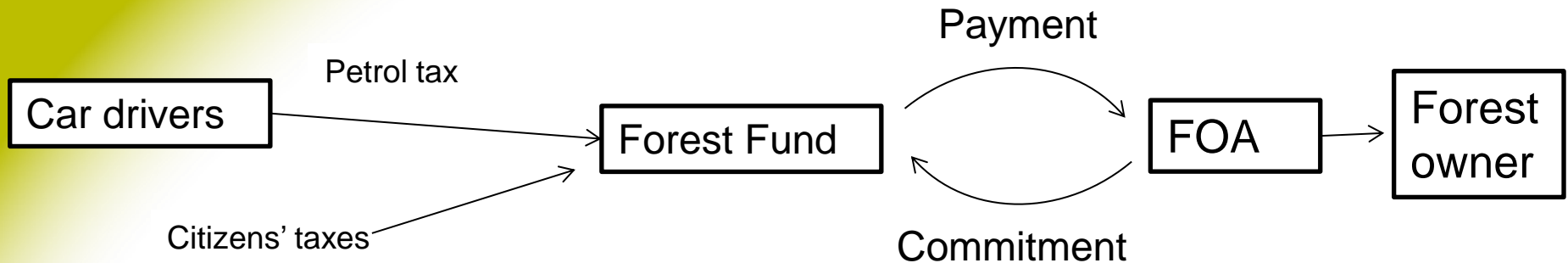
Ensuring water quality in La Verne (St Tropez, France)

- Upstream = high fire risk → dam sedimentation → ↓water quality
- Downstream = wealthy turistic area
- Water provider pays the association to help implementing forest fire prevention plan



Portugal: Permanent Forest Fund

CENTRE TECNOLÒGIC FORESTAL DE CATALUNYA



COMMITMENT:

Fire prevention activities - “Zones of Forest Intervention” (ZIFs)

Reduction land ownership fragmentation

Control of forest health conditions, biotic risks



Source: Mendes (2009). *PES in Portugal. The case of the Permanent Forest Fund.*



CHALLENGE 1: EFFECTIVENESS

Effectiveness!

- Lack of quantitative scientific information on ES provision and forestry interventions

“if A then B”

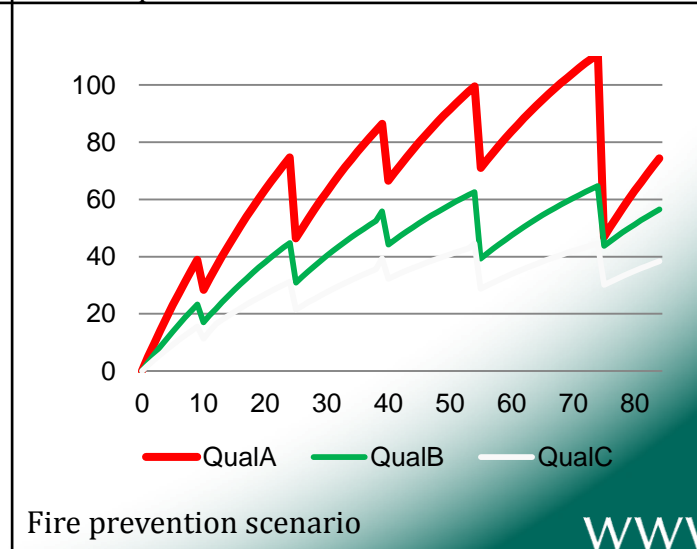
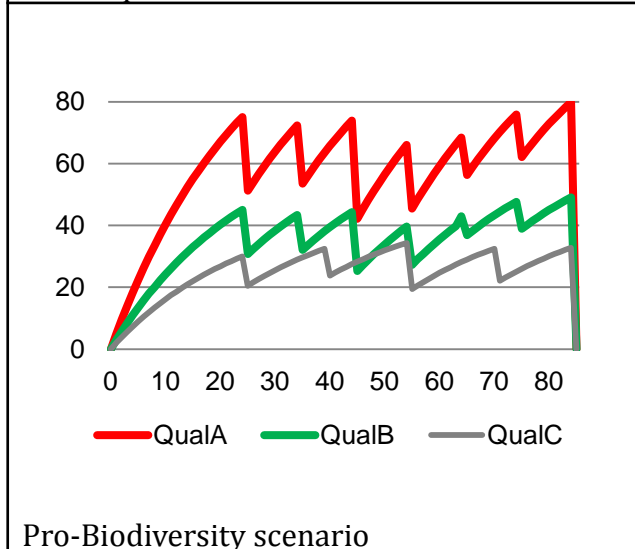
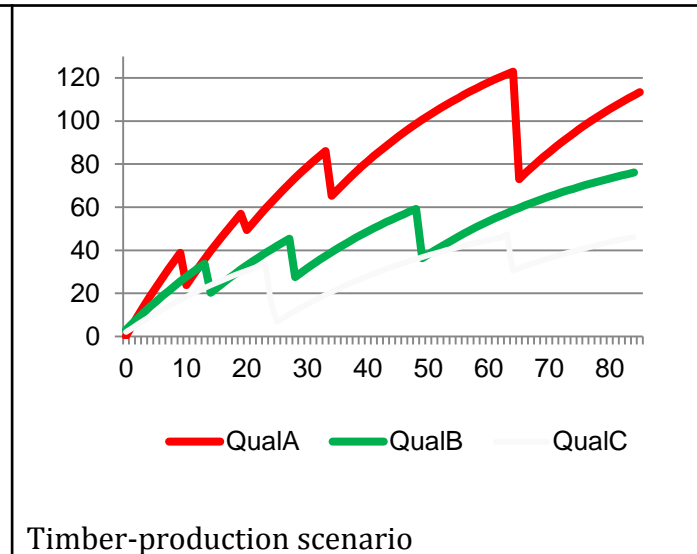
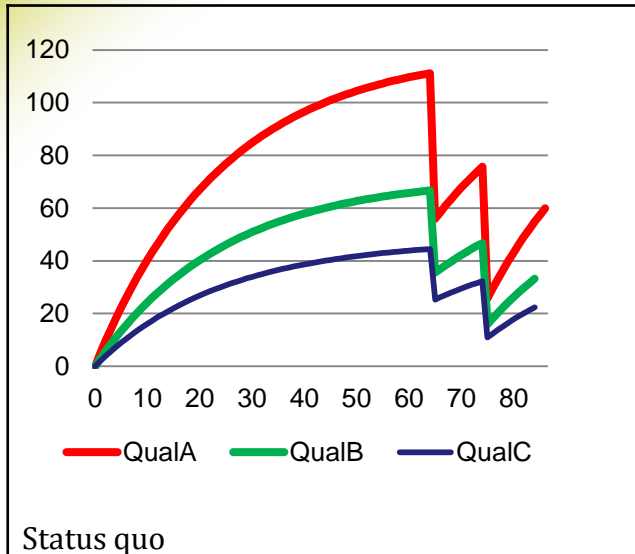
“if forestry action A then $\uparrow\downarrow$ % level of ES”

✓ intuition

✗ proofs, weights, contextual factors...

- Trade-offs?
- Seed-money!!!

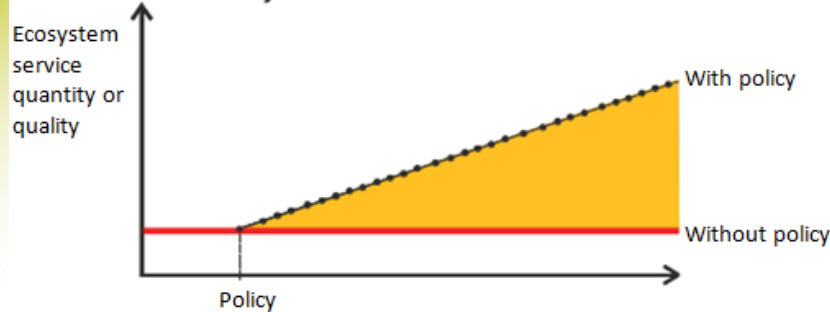
Management itineraries



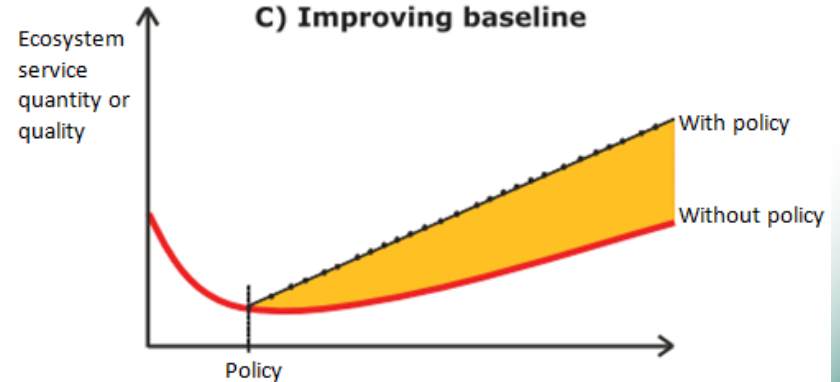
Baseline scenario

What would have happened without the intervention?

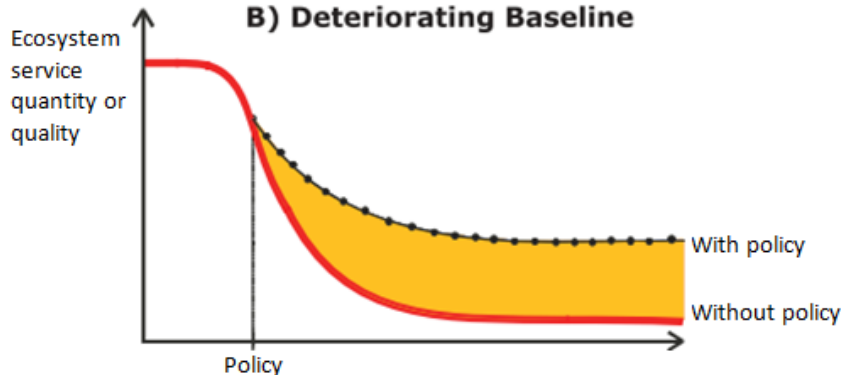
A) Static Baseline



C) Improving baseline



B) Deteriorating Baseline



IDEAS - Effectiveness

- Objective: targeted scientific information
 1. Foster applied multidisciplinary studies for proxies creation
 2. Baseline scenarios
 3. Manuals for main forest habitats & main ES (standards)
 4. Costs of provision vs ES valuation → amount



CHALLENGE 2: FRAGMENTED ES DEMAND & PROVISION

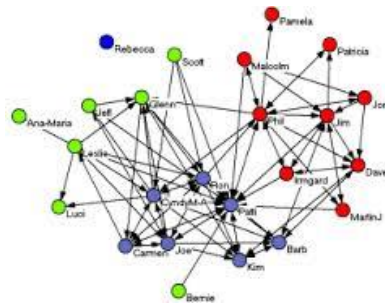
Fragmentation

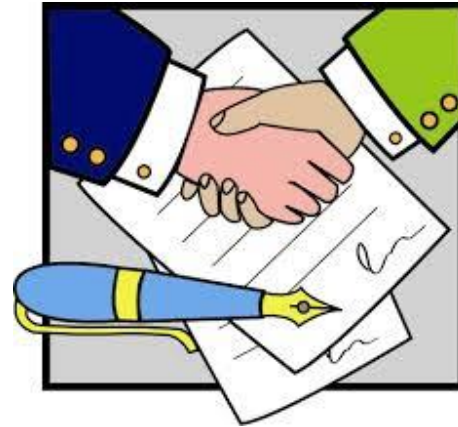
- Small & dispersed private forest owners
 - Heterogeneity in behavior
 - ES Scale effects
 - Small and no-coordinated beneficiaries
- transaction costs!
- free-riders



IDEAS - Fragmentation

1. Forest owners' coordination - groupings, Joint management plans for ES
2. Smart ES/proxies' control systems
3. Social Capital reinforcement on ES (trust, innovation, information flows, peer-control)
4. Intermediary (“broker”) for ES demand





CHALLENGE 3: INSTITUTIONAL CHALLENGES

Institutional arrangements

- Property rights' dimensions / Economic nature of many ES / Ownership of ES
- Contract length
- Forest managers' risk aversion
- Flows of €

IDEAS - Institutional arrangements

- Objective: ensure implementation
 1. ES Property Rights modification, with attention to traditional rights (legislation)
 2. Portfolio of ES contracts (start with territorial contracts & snowball effect?)
 3. Pluri-annual budgets & commitments
 4. Earmarked taxes for ES



CHALLENGE 4: CULTURAL FACTORS

Cultural factors

- Traditional “paternalism” vs private, decentralised initiatives - *path dependance*
- Traditional “free of cost” ES
- Disconnection with forest problems
- Beneficiary = Consumer?
- Full information? Dynamic values?
- Sensationalism = punctual reactions
- Behavioural patterns of forest managers → incentive

IDEAS

1. ES awareness: campaigns & participation
2. Progressive sharing of long-term responsibility (complementary to Gvmt role): public-private partnerships
3. Check social acceptance of different approaches (changing minds!)
4. Forest owners from only-wood providers to (wood+)ES providers

Thank you!

Kiitos Grazie
Gracias Eskerrik asko
Danke Gràcies

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Challenges	Ideas
Technical: Effective ES supply	<ol style="list-style-type: none">1. Foster applied multidisciplinary studies for proxies creation2. Baseline scenarios3. Manuals for main forest habitats & main ES4. Costs of provision vs ES valuation → amount
Economic: Fragmented ES demand & provision	<ol style="list-style-type: none">1. Forest owners' coordination2. Smart ES/proxies' control systems3. Social Capital reinforcement on ES4. Intermediary ("broker") for ES demand
Institutional arrangements for ES	<ol style="list-style-type: none">1. ES Property Rights modification, with attention to traditional rights (legislation)2. Portfolio of ES contracts3. Pluri-annual budgets & commitments4. Earmarked taxes for ES
Cultural factors on ES	<ol style="list-style-type: none">1. ES awareness: campaigns & participation2. Progressive sharing of long-term responsibility: public-private partnerships3. Check social acceptance of different approaches4. Forest owners from only-wood providers to (wood+)ES providers