III Mediterranean Forest Week
Tlemcen, Algeria, 17-21/03/2013

Instruments to preserve or restore woodlands and to improve the supply of forest goods and services

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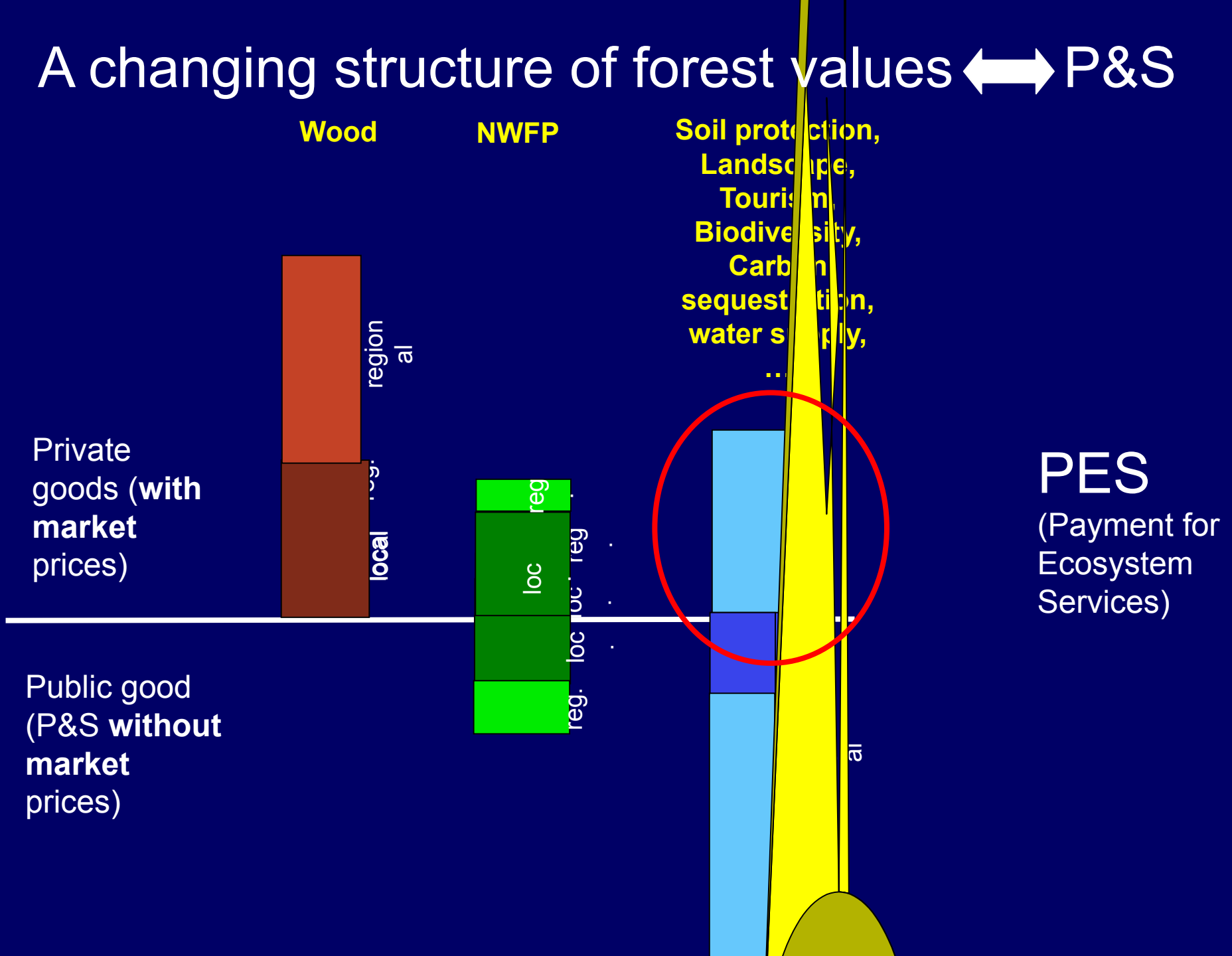
A changing structure of forest values ⟷ P&S



Wood production

- A **decreasing role of wood production**, both in absolute and relative terms

Roundwood production value in Mediterranean countries compared to total gross and primary sector GDPs (1990, 2000, 2005, 2010)

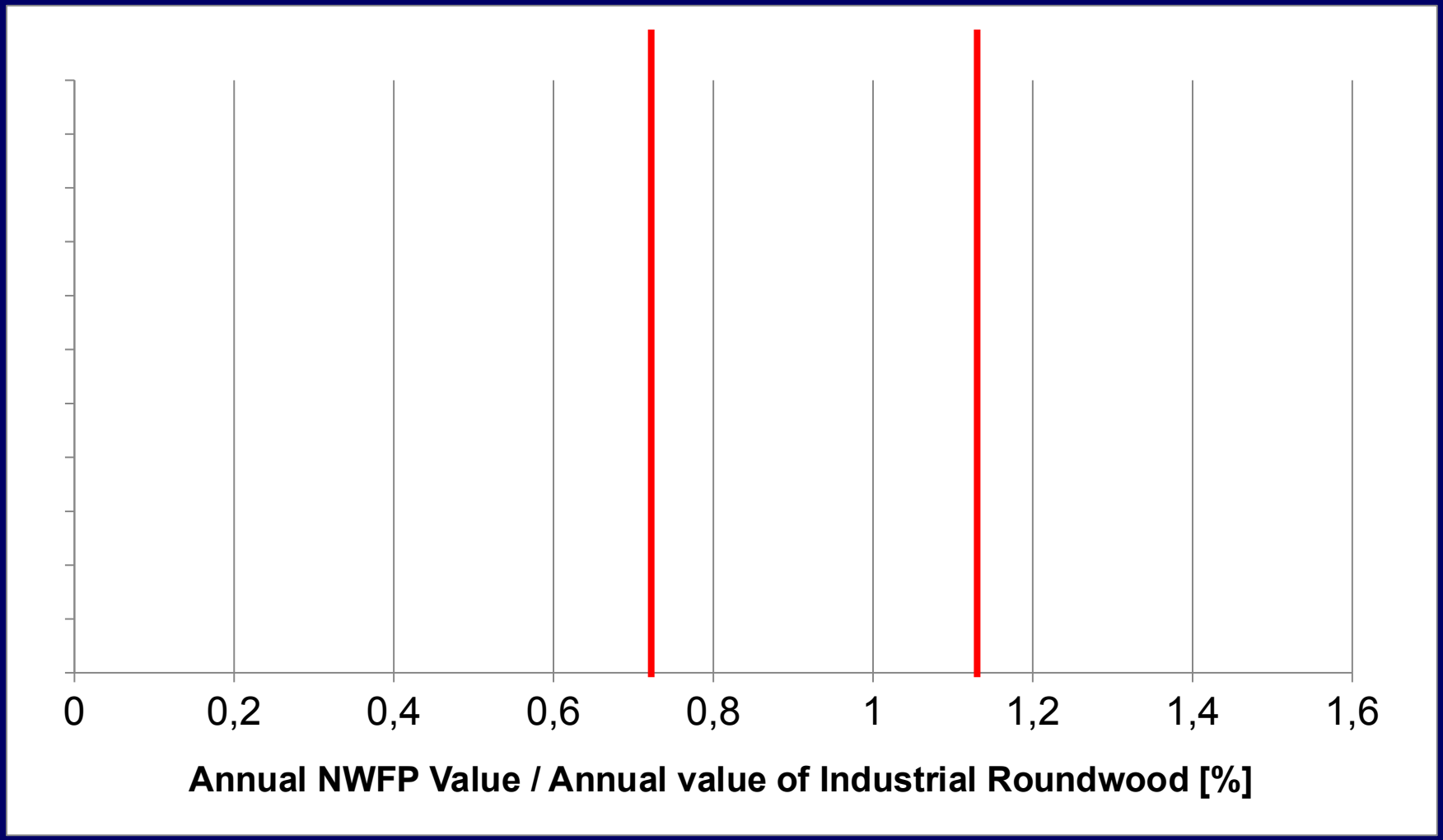
Sub-regions	1990		2000		2005		2010	
	% on total GDP	*% on primary sector GDP*	*% on total GDP*	*% on primary sector GDP*	*% on total GDP*	*% on primary sector GDP*	*% on total GDP*	*% on primary sector GDP*
SM sub-region	**0.4%**	**3.9%**	**0.3%**	**3.7%**	**0.2%**	**2.5%**	**0.2%**	**2.0%**
EM sub-region	0.3%	2.9%	0.3%	3.5%	0.3%	3.4%	0.3%	4.5%
NEM sub-region	1.2%	19.2%	1.0%	17.8%	0.8%	15.3%	0.8%	15.0%
NWM sub-region	0.2%	10.1%	0.2%	10.8%	0.2%	7.6%	0.2%	7.5%
Tot. Mediterranean	**0.3%**	**7.7%**	**0.2%**	**8.0%**	**0.2%**	**5.8%**	**0.2%**	**5.9%**

Source: own elaboration from FAOSTAT, 2012 and UN, 2012.

Impacts of the decreasing role of wood production

- A **decreasing role of wood production**, both in absolute and relative terms
- **No** relevant **gain** in terms of **forest cover** and **growing stock**
- **No relevant investments** in productive forestry by foreign (or domestic) financial institutions
- Increasing **dependence** from abroad

A changing market: EU NWFP production compared to round wood



Source: Forest Europe 2011, modif. (year 2007)

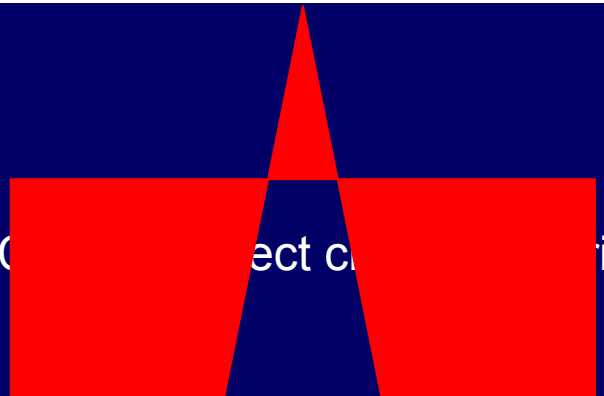
Studies on forest externalities values

Average biodiversity and recreational values in European Forests (**TEEB**, 2009)

(Values per hectare – methodology: value transfer)

	Mediterranean EU Latitude 45-65	Northern and Central-Northern EU Latitude 65-71	Scandinavian EU Latitude 35-45
Range US$ (2000)	356-615	123-182	123-255
Average $ (2000)	485.5	152.5	189.0
€ (2000)	379,3	119,1	147.7
€ (2008)	467.1	146.7	181.9

3.2 **2.5**



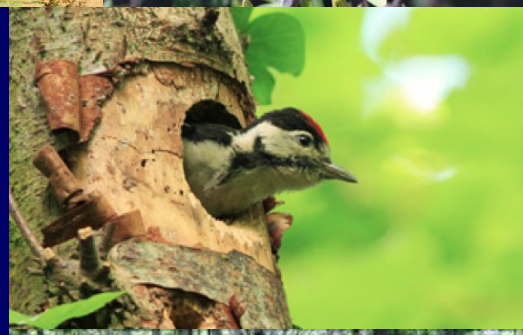
Source: TEEB Report; C ect c ink et al. (2009)

Outline

- 3 points:
  - Instruments of forest policy
  - A basic problem for PES implementation: WTP for ES
  - Importance of quasi-PES
- Final considerations




Instuments of forest policy



How to support the supply of public goods by the forestry sector?

	Tools	Direct costs for the public sector	Transaction costs for the public sector	Approach	Participation by the privates
Passive: Command and control	Thresholds, limitations, constraints	Relatively low	Relatively low	Top down	Compulsory
Active: creation of new sources of income	Tax deductions, tax exemption	Relatively high			Voluntary or imposed by the State
	Fixed compensation				Voluntary
Soft tools	Marked-based instruments				
	- PES schemes	Zero costs	Relatively high	Bottom up	Voluntary
	- PES like schemes	Very low	Low	Mixed	Compulsory for some parties
	- PPP	Relatively high	Low	Top down	Voluntary
	- Land acquisition by public authorities or large companies (lease, concessions, ...)		Low		Normally voluntary
	- Tradable permits (cap & trade schemes)	Relatively low	Low	Mixed	Compulsory for some parties
	- Certification and labelling (premium price)	Zero costs	Zero costs	Bottom up	Voluntary
	- Sponsoring, donations (philanthropy)				
	- Information, provision of services, goods free of charge or a low prices	Relatively high	Low	Mixed	

sticks

carrots

sermons

Payments for Environmental Services (PES)

Definition (Wunder, 2005):

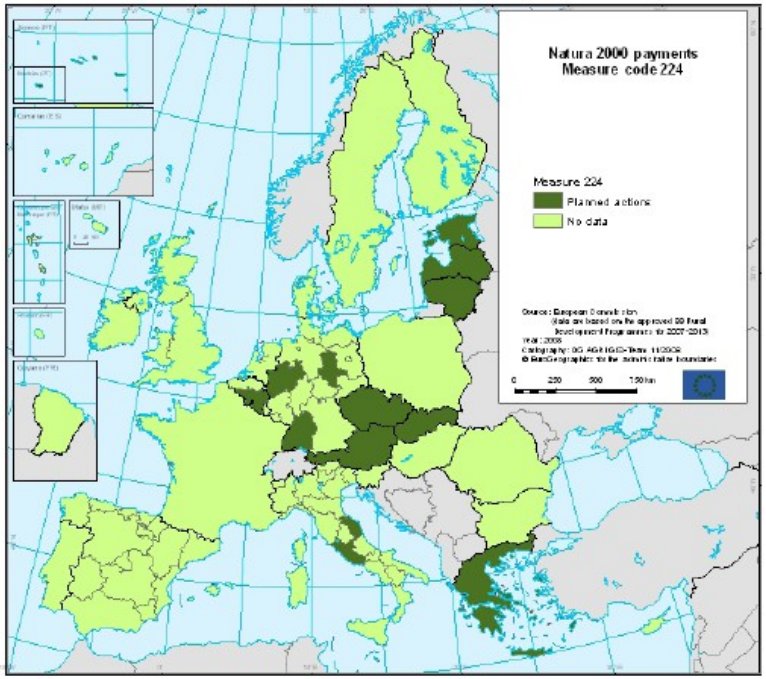
- *"a **voluntary** (1) transaction where*
- *a **well-defined ecosystem service** (2) (or a land-use likely to secure that service)*
- *is being bought by a (**minimum one**) ecosystem **buyer** (3)*
- *from a (**minimum one**) ecosystem **provider** (4)*
- *if and only if the ecosystem service provider secures ecosystem service provision (5) (**conditionality**)"*.

PES implementation in the Med area

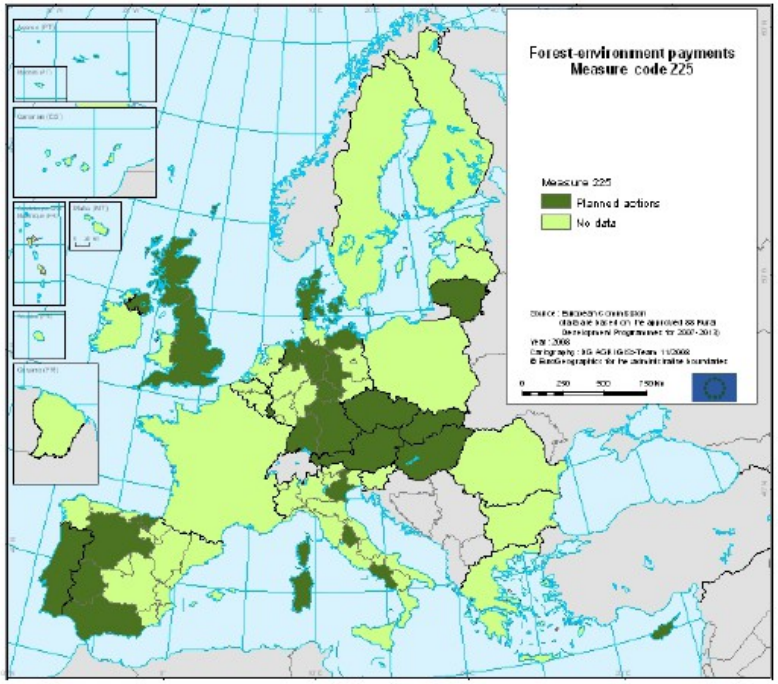
- **Mechanisms of payment or compensation still to be developed** in the region (more delay than in other regions), not withstanding the strategic role of water, biodiversity and landscape (tourism along the coast)

Few payments for ES with the RDP

Natura 2000 payments (measure 224, article 46)



Forest environment payments (measure 225, article 47)



Source: DG AGRI, 2009. Report on implementation of forestry measures under the rural development regulation 1698/2005 for the period 2007-2013

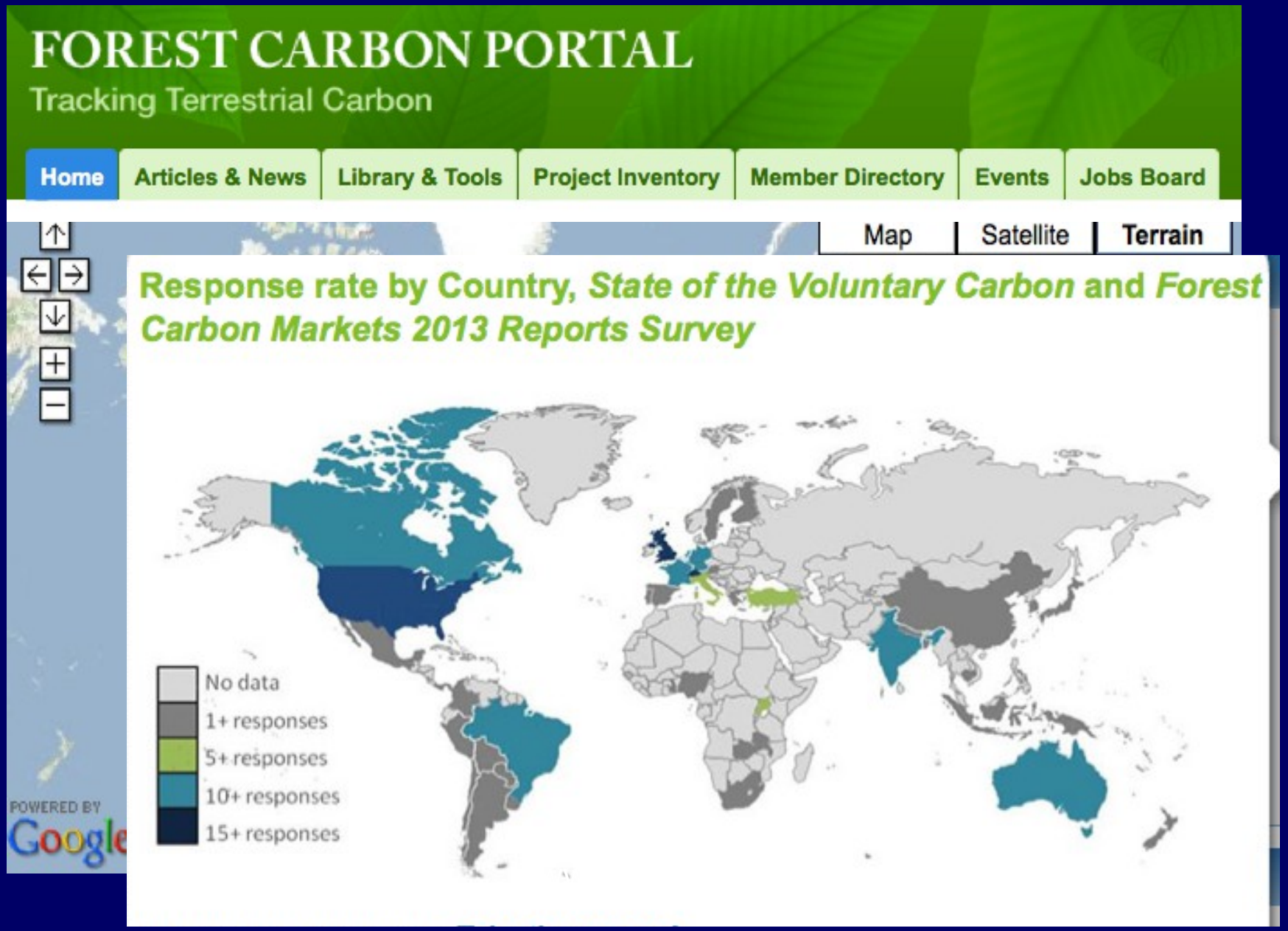
Water related PES

Table 2: Summary of Transaction Data for 2008 and Historically						
	Programs Identified	Active Programs	Transactions 2008 (US$ Million)	Hectares Protected 2008 (million ha)	Historical Transactions through 2008 (US$ Million)	Hectares Protected Historically
Latin America	101	36	31	2.3	177.6	NA
Asia	33	9	1.8	0.1	91	0.2
China	47	47	7,800	270	40,800	270
Europe	5	1	NA	NA	30	0.03
Africa	20	10	62.7	0.2	570	0.4
United States	10	10	1,350	16.4	8,355	2,970
Total PWS	216	113	9,245	289	50,048	3,240
Water Quality Trading	72	14	10.8	NA	52	NA
Totals	**288**	**127**	**9,256**	**289**	**50,100**	**3,240**

Stanton, Tracy, Echavarria, Marta, Hamilton, Katherine, and Ott, Caroline. 2010. State of Watershed Payments: An Emerging Marketplace. Ecosystem Marketplace. http://www.foresttrends.org

Water related PES

Carbon PES


FOREST CARBON PORTAL
Tracking Terrestrial Carbon
Home
Articles & News
Library & Tools
Project Inventory
Member Directory
Events
Jobs Board
Map
Satellite
Terrain
Response rate by Country, State of the Voluntary Carbon and Forest Carbon Markets 2013 Reports Survey
No data
1+ responses
5+ responses
10+ responses
15+ responses
POWERED BY
Google

Biodiversity PES

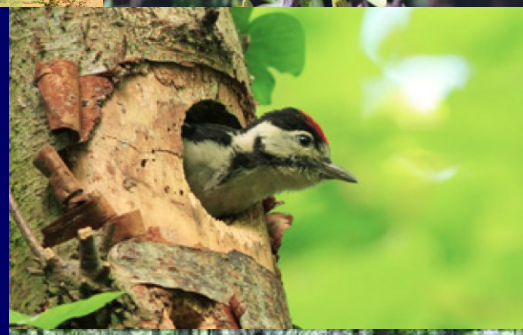
http://www.ecosystemmarketplace.com

Main points for reflection

- Still the **traditional regulative instruments** are playing **a fundamental role** in the Med area:
  - A **passive role** of the civil society
  - "Soft" tools require a **proactive public administration** open to partnership, negotiation, innovative attitude in sharing responsibilities, costs (from training too loss of political power) and benefits, …




A basic problem for PES implementation: Willingness To Pay (WTP) for ES



- Cost of ES provision
- PES inventory
- New Market Mechanisms: PES introduction (Choice Experiment)

6 case studies

Newforex

New ways to value and market forest externalities

CASE STUDIES

Across Europe there is a huge variation in forest types, landscapes in which forests are situated, degree of urbanisation, importance of forest goods and services, and socioeconomic context. Consequently, there are significant variations in the demand as well as the value of forest externalities, their cost of provision and options for their marketing. Therefore NEWFOREX will base its work on a set of carefully chosen European case studies representing a range of these variations, and in addition a developing country case study.

The case study regions serve four main purposes:

1. as working labs where we will collect among the relevant populations (e.g. general public, forest owners, stakeholders, etc.) the needed empirical data on forest externalities values, costs of provision, and assess market-based methods;
2. provide data and models for forest production and uses to assess, for example the role of trans-boundary effects for costs;
3. as test and demonstration labs for the application of the developed methods for valuation of forest externalities and assessment of costs of provision, and evaluation of the potential for implementing market-based methods for forest externalities provision;
4. as an excellent basis for communicating general guidelines and recommendations to the main stakeholder groups.

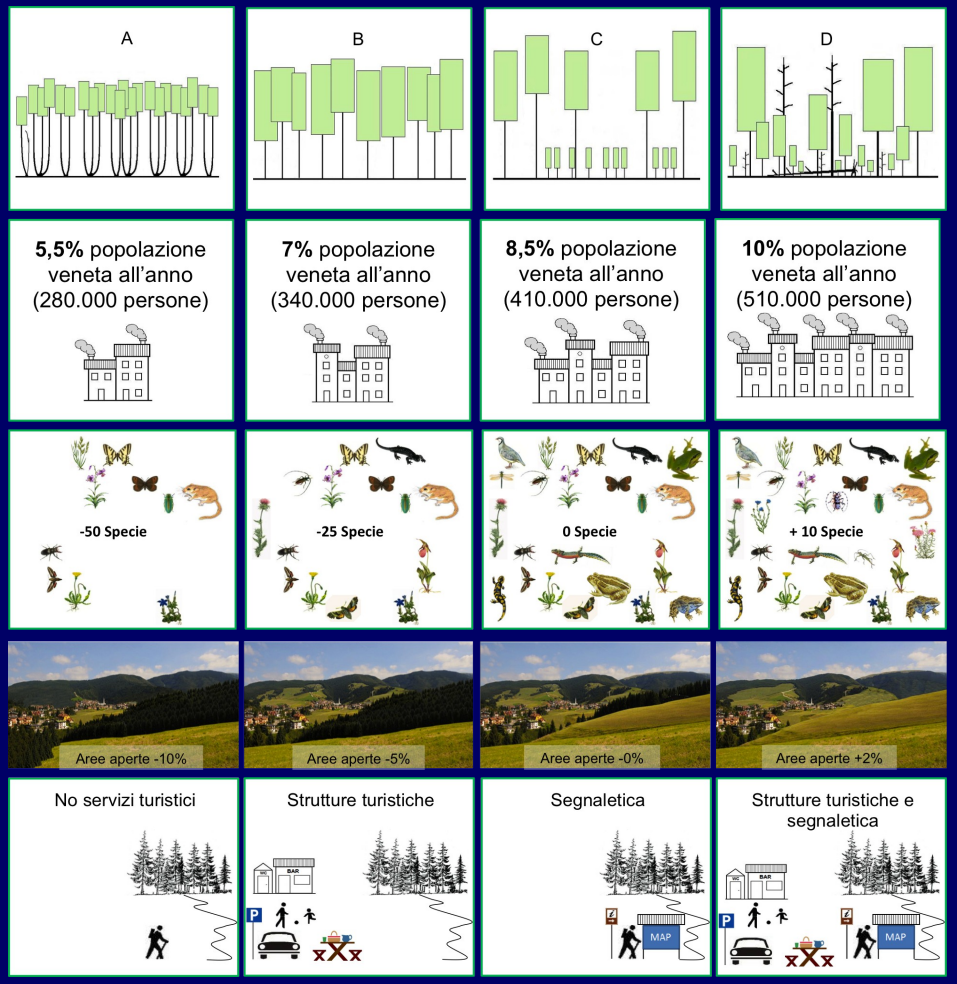
CASE STUDY	REGION (COUNTRY)	KEY FOREST EXTERNALITIES	KEY ISSUES	RESPONSIBLE PARTNER
Mediterranean region	*Catalonia (Spain)*	*biodiversity, recreation, erosion protection*	*High share of non-managed forests, low wood productivity, and high fire risk*	*CTFC, EFIMED*
Atlantic urbanized	*Eastern Danish forest (Denmark)*	*water quality, recreation*	*semi-urban forests in an old agricultural landscape*	*UCPH*
Boreal region	*(Finland)*	*biodiversity, recreation/ tourism, carbon*	*timber production important, recreation and nature tourism increasing importance*	*METLA*
Mountainous region	*Veneto (Italy)*	*non-wood forest products, biodiversity, recreation*	*multipurpose close-to-natureforest management, timber production is no longer competitive*	*UOP*
Central European region	*Białowieża (Poland)*	*biodiversity, carbon*	*natural forest reserve under pressure from production forestry*	*WU*
Developing country	*Amazon (Brazil)*	*carbon, biodiversity, watershed*		*CIFOR*

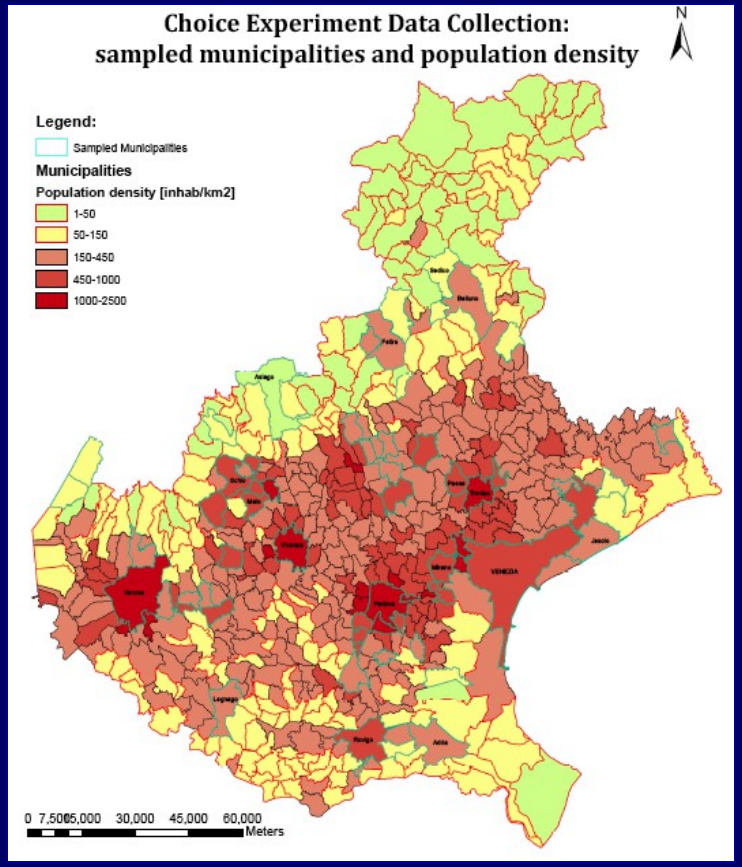
http://www.newforex.org

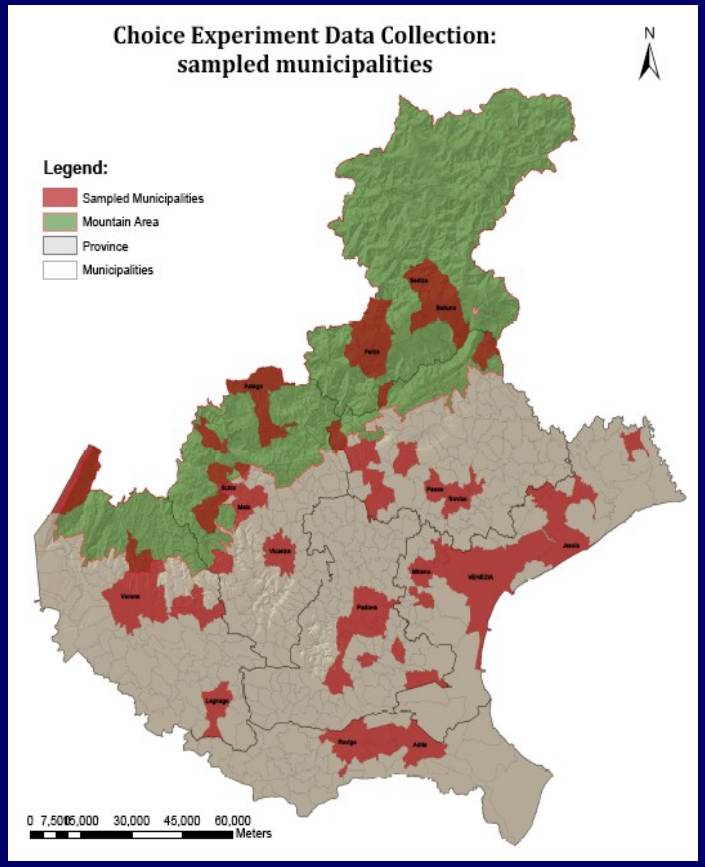
A survey on WTP for 5 ES

Method: Choice Experiment

1. Forest structure
2. Carbon sequestration
3. Biodiversity
4. Landscape
5. Recreation in forest





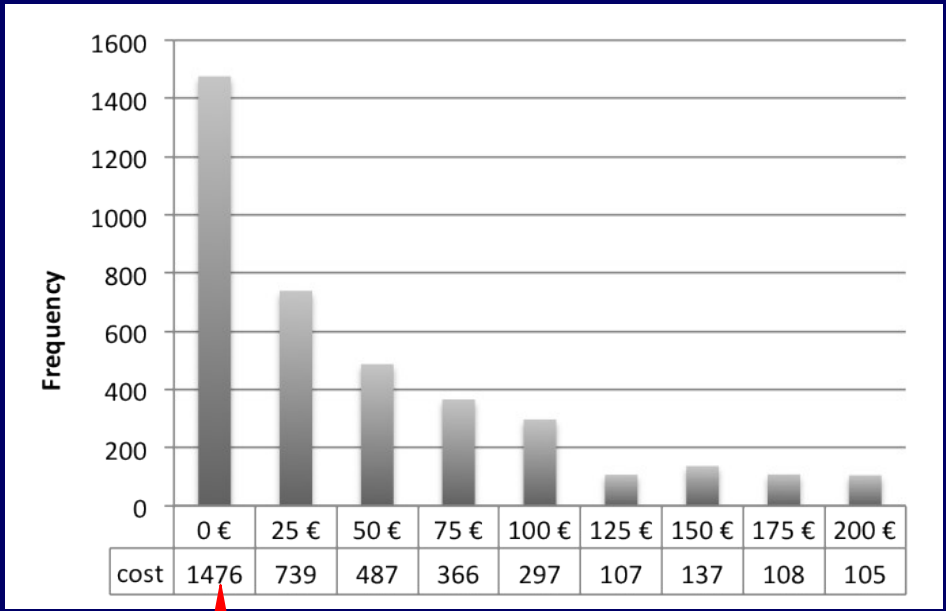


Size of municipal population	PROVINCE							Number of interviews
	VR	VI	BL	TV	VE	PD	RO	
0-5,000	**21**	**27**	**12**	**19**	4	21	13	117
5,000-10,000	27	**30**	**5**	21	14	33	3	156
10,000-100,000	47	52	**6**	56	71	51	11	294
Capital town	35	17	**5**	12	37	31	7	144
Total	130	126	28	131	126	136	34	711

Sample design

	Number of respondents	[%] of protesters	[%] of the sample
It is too costly	55	90.2	8.6
I have no enough money	58	95.1	9.1
I pay enough taxes	61	100.0	9.6
I prefer to spend my money in other things	56	91.8	8.8
The program is not important	35	57.4	5.5
I don't believe it'll be implemented	38	62.3	6.0
Other programs could be better	29	48.3	4.6
I want to leave things like they are now	31	50.8	4.9

Frequency of choice for cost attribute



Main results

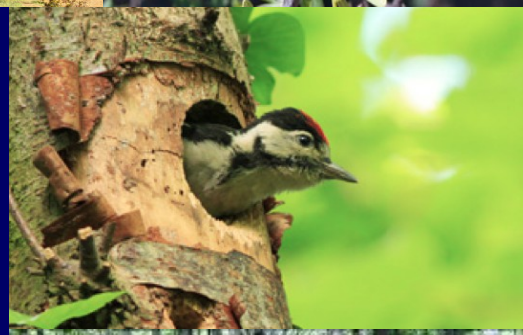
- **Biodiversity** protection, **landscape** conservation and maintenance of **forest structure** should be provided at **zero cost** for the beneficiaries
- Some **positive WTP** for **Carbon** sequestration and organized **recreation**
- WTP is highly influenced by the **level of education** (not always correlated to income)

→ As proved by other surveys, positive WTP is much higher in the **small-scale PES systems**




Important role played by PES-like (or quasi-PES

A frame regulation introducing some general obligations and defining the “rules of the game”



1. Mushrooms and truffle picking permits

National frame law, Regional Acts and local regulations → daily permits of 5-15 €/persons per max 2-3 kg

A case-study: Borgotaro Forest Community (Parma province – Emilia-Romagna Region)

- Total number of permits sold: 25-36,000 €/year
- Annual revenue from permits: 300-420,000 €
- Revenues from PES: 15-19 €/ha/year
- Revenues reinvested in forest maintenance and local development policies

WELCOME TO TRAIL OF PORCINO MUSHROOM

Territorio
- THE TRAIL
- MAP OF THE TRAIL
- ITINERARI
- TOWNS ALONG THE TRAIL
- PARKS
- MUSEUMS
- TOURIST INFORMATION
- FOTOGALLERY

FIRMS
- Bed & Breakfast
- Caseificio / Salumificio / Az. Vitivinicola
- Farmhouse holidays
- Fattoria Didattica
- Hotel
- Museo / Collezione privata
- Restaurant
- Sale of local products

Link
- Fungo di Borgotaro
- Meteo Apuane
- Strada del Prosciutto
- Emilia Romagna Turismo

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FIERA DEL FUNGO DI BORGOTARO IGP
Il fungo porcino di Borgo val di Taro, prodotto

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Enterprises: 62 (in 2008); > 100 in 2011

15 Agritourisms/ Farm businesses

12 Hotels/Guest quarters

8 Bed&Breakfasts/Inns/Hostels

9 Cheese, sausage and wine producing factories

2 Didactic farms

3 Museums/Private collections

30 Restaurants/Porterhouses

26 Typical products sellers

2. Hydro power generation

- The first source of renewable energy in Italy (5.1% of total final consumption)
- National frame law: no. 959 in1953
- PES is based on power of hydroelectric plant (>220 kW/h): 28 €/kWh installed/year (in 2012)
- Beneficiaries: Municipalities, frequently organised in Consortia (BIM – *Bacini Imbriferi Montani*)
- Numbers: 69 BIMs; 1,684 Municipalities involved; 252 dams; 518 power plants

3. Drinking water provision

An exemplary case: *Romagna Acque* and the Ridracoli dam

- Dam built in the 1982; capacity of 33 M m3; more than 100 M m3 of high quality drinking water provided/year
- Managers: a public company controlled by the local administrations
- From 1982 to 2007: 25 years of constant investments in the catchment basin area (mainly forest area): an almost fixed amount of 4% of the total company revenues from water tariff, equal to a annual PES of 5-600,000 €
- The cost of removing the soil from the dam-bed could have been 10 times higher in the same period

Final considerations

- The regulative framework allows the establishment of PES (-like) schemes, but implementation is lacking behind
- Public administration has the responsibility of changing its culture and general approach …

… from a passive role in controlling the resources …

… to an active partnership in rural development …