




**WAYS TO ADDRESS CHALLENGES IN FES  
INNOVATION: LEARNING FROM EXPERIENCES**

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**3 KEY WORDS**

- Instruments
- Mechanism
- Innovation/innovative

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## INSTRUMENTS AND MECHANISMS

**INSTRUMENT:** a type of policy tool adopted or proposed by an organization in order to implement a policy

**MECHANISM:** a specific model characterised by structural and relational features, i.e.;

- actors,
- payment vehicle and
- governance structure

Cap and trade

→ European Trading System

Fixed compensation

→ RDP afforestation measures

Certification & labelling

→ FSC scheme

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## INNOVATION – INNOVATIVE INSTRUMENT AND MECHANISMS

Traditional, non-Market Based Instruments:

Command & Control (licenses, permits, limitations, ... )  
→ rights/duties in implementation

MBIs

Economic tools, mainly based on voluntary participation, used to drive human behavior ("soft tools")

Source: OECD 1994, Stavins 2001, Windle et al. 2005

**A general trend (in theory!):  
from Command-and-Control (C&C)  
to Market Based Instruments (MBI)**

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	Instruments	Mechanisms (examples)	Direct costs for the public sector	Transaction costs for the public sector	Approach	Participation by the private	
<b>Passive: Command and Control</b>	Thresholds, limitations, constraints, taxes	Carbon tax	Relatively low	Relatively low	Top down	Compulsory	sticks
<b>Active: voluntary participation</b>	Tax deductions, tax exemption		Relatively high	Relatively low	Top down	Voluntary	
<b>Market-Based Instruments (MBIs)</b>	Fixed compensations, grants	EC RDP afforestation measures	Relatively high	Relatively low	Top down	Voluntary	carrots
	PES schemes	REDD+ schemes	Zero costs	Generally low	Bottom up	Voluntary	
	PES-like schemes	EC RDP Agro-environmental measures	Very low	Medium-low	Mixed	Sometimes compulsory	
	Tradable permits (Cap and Trade schemes)	European Trading System	Low	Low	Mixed	Compulsory	
	Certification and labelling	SFM standards and Certification schemes	Zero costs (very low)	Zero costs	Bottom up	Voluntary	
	Public Procurement Policy	National schemes for PPP	Relatively high	Low-medium	Top down	Voluntary	
	ES public auctions		Relatively high	Low-medium	Top down	Voluntary	sermons
	Philanthropy	Donations, sponsoring	Zero costs	Zero costs	Bottom up	Voluntary	
	Land acquisition	Management contracts, Long term concessions, leases	Relatively high	Low-medium	Mixed	Voluntary	
	Information, provision of services	Forest seedling offered at reduced prices	Relatively high	Low	Mixed	Voluntary	

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<b>Passive: Command and Control</b>	Thresholds, limitations, constraints, taxes	Carbon tax	sticks
<b>Active: voluntary participation</b>	Tax deductions, tax exemption	Land tax exemption for land restoration	
<b>Market-Based Instruments (MBIs)</b>	Fixed compensations, grants	EC RDP afforestation measures	carrots
	PES schemes	REDD+ schemes	
	PES-like schemes	EC RDP Agro-environmental measures	
	Tradable permits (Cap and Trade schemes)	European Trading System	
	Certification and labelling	SFM standards and Certification schemes	
	Public Procurement Policy	National schemes for PPP	
	ES public auctions	Auctions to create recreational areas	sermons
	Philanthropy	Donations, sponsoring	
	Land acquisition	Management contracts, Long term concessions, leases	
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**Innovative instruments and mechanisms**

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A variety of instruments to deal with a large variety of ES, local conditions and actors



## HOW? INSTRUMENTS OF PUBLIC POLICY

### ■ **Passive: Command and control (regulative instruments) (“stick”):**

Taxes and fees (Eco-taxation: “who pollutes, pays”)  
Licenses, permits, thresholds, standards, ...

### ■ **Active: stimulus to economic incentives (based on voluntary participation) (“carrot”):**

Tax deduction, tax exemption  
Incentives and compensation

#### ■ **Market-based instruments:**

Payments for Environmental Services (PES) and PES like schemes  
Socially responsible procurement policies  
Tradable permits, deposit-refund systems, offset schemes  
Standard setting, certification & labeling.  
Technical support, provision of services (e.g. seedling, irrigation water, infrastructures, ... provided at no price or at below costs prices), direct management of some economic activities (e.g.: hospital, school, forests, ...)

### ■ **Information (“sermon”)**

Technical assistance, Training & education, R&D

## MAIN CATEGORIES OF MARKET BASED INSTRUMENTS (MBI)

	Price-based instruments	Quantity-based instrument	Market friction reducing instrument
Operational principle (how to influence the behavior)	by modifying or discovering prices for non-market goods and services	by modifying or specifying rights or obligations associated with the use of natural resources. "Rights trade".	by making existing markets work better to achieve environmental outcomes. Generally it enhances: - market information - lower market transactions costs

Source: Stavins 2001, Windle *et al.* 2005 (mod.)

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Examples	<ul style="list-style-type: none"> <li>• Taxes and charges</li> <li>• Subsidies and grants</li> <li>• Tax concessions</li> <li>• Competitive tenders/auctions</li> </ul>	<ul style="list-style-type: none"> <li>• Offsets</li> <li>• Cap-and-trade schemes</li> <li>• Mitigation banking</li> </ul>	<ul style="list-style-type: none"> <li>• PES</li> <li>• Debt-for-nature swaps</li> <li>• Leveraging private investments</li> <li>• Insurance schemes</li> <li>• Product differentiation (eco-labelling, certification)</li> </ul>

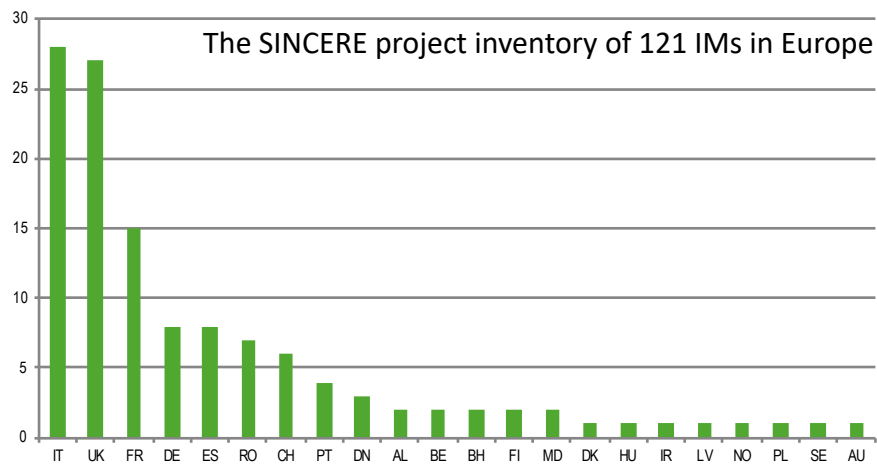
Source: Stavins 2001, Windle *et al.* 2005 (mod.)

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## FES SUPPORTED BY THE IMs IN EUROPE

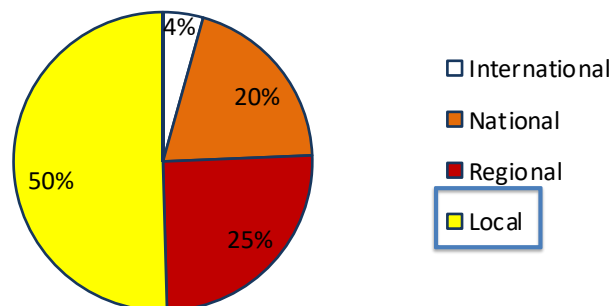


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## INSTITUTIONAL SCALE AT WHICH THE IMs HAVE BEEN IMPLEMENTED

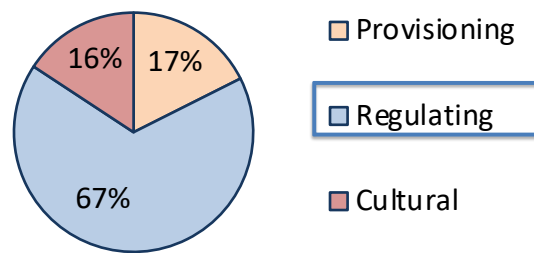


WTP higher for **small-scale, local initiatives**,  
with well-identified, local beneficiaries

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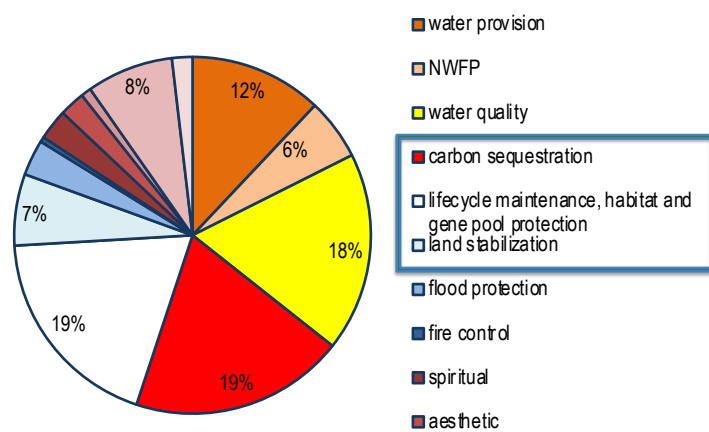
## CATEGORIES OF FES SUPPORTED BY THE IMs IN EUROPE



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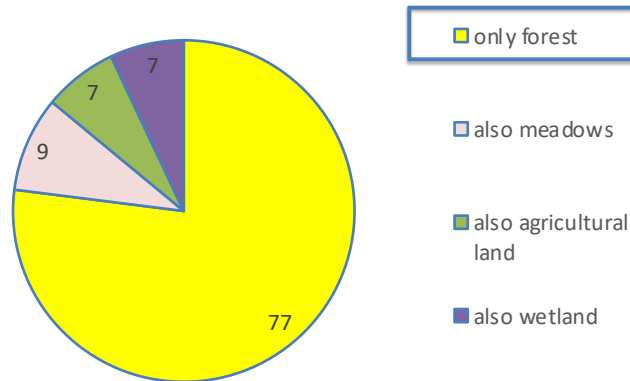


Quite large opportunities for increasing the use of IMs for cultural services

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## CATEGORIES OF FES SUPPORTED BY THE IMs IN EUROPE



An approach based on ICDP (Integrated Conservation and Development Program) needs to be supported?

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## FOUR SCENARIOS OF INNOVATION

### 1. A new FES supported by an already existing mechanism

e.g.: reverse auctions in PPP → auctions to offer ES  
art museums → land art forest museums

### 2. A new mechanism supporting an already existing FES

e.g.: water infiltration/purification → infiltration plantations with involvement of different stakeholders ("Bosco Limite" in Italy)

### 3. A new FES supported by a new mechanism

e.g.: forest schools in DK in the '50s  
deforestation avoidance projects in the '80s in the non-institutional Carbon market  
adventure/agility forests in the '90s

### 4. An already existing mechanism or FES used for the first time in a different spatial context

e.g.: forest therapy, *Shinrin-Yoku* from Japan and Korea  
funeral forests in Italy

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## FRAMEWORK TO SYSTEMATIZE IM INFORMATION PROPOSED FOR THE SINCERE PROJECT

Dimensions	Code	Variable
Identification	ID1	Country
	ID2	Mechanism name (in original languages)
	ID3	Mechanism name (in English)
	ID4	Mechanism administrator
	ID5	Is the mechanism part of an overall programme or scheme?
	ID6	if YES, name
	ID7	administrators
	ID8	scale (institutional)
	ID9	location
	ID10	Is the mechanism including different cases?
Spatial and time scale	ID11	Source of information
	ST1	Mechanism Scale (institutional)
	ST2	Mechanism Location
	ST3	Name of the forest
	ST4	Mechanism Year of establishment
	ST5	Mechanism Duration (time horizon)
	ST6	Mechanism Status
Targeted Ecosystem and Ecosystem Services (ES)	ES1	Other ecosystems involved
	ES2	Type of forest subsystem
	ES3	Type of bioclimatic region
	ES4	Type of setting
	ES5	ES Targeted by the mechanism
	ES6	ES Bundling (with other ES)
IM Description (actors, payment and governance structure)	MD1	Short narrative description
	MD2	Seller/provider of FES targeted
	MD3	Buyers/demanders of FES targeted
	MD4	Intermediaries/facilitators
	MD5	Beneficiaries
Innovation	IN1	Mechanism innovation features
	IN2	Innovation drivers



## FINAL REMARKS (1/2)

A delay in implementing IMs in Europe due the strong relevance of traditional **instruments of C&C** (and of the institutions to implement them)

A relevant role played by **public forest owners** with a more or less explicit mandate to provide ES (without special payment schemes), but ... in a changing financial environment now also **public forest owners** are becoming **innovative** in using MBIs

In a context with frequent and heavy constraints imposed by public authorities, a **negative public attitude towards the financialization and commodification of ES**



## FINAL REMARKS (2/2)

Quite large **opportunities for relative innovation** (introducing already existing mechanism or FES for the first time in a different spatial context)

No special attention to the problem of **fair distribution of the payments** (marginal, mountain areas vs. rich areas). MBIs activated in the socially and economically most dynamic regions (**high social capital**)

From a focus to a single IM to a focus on «**innovation systems**» (Rametsteiner and Weiss, 2006): interaction between different actors and institutions that contribute to the development and the implementation of innovations within a specific context

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