



Evaluating Economic Policy Instruments for Sustainable Water Management in Europe

Learning from international experience: Review of PES and the case of the Evian Natural Mineral Water (voluntary agreement)

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1. What can we say about Payment for Environmental Services (PES)?

1. What can we say about PES?

Ecosystem services

- Concept developed in 1970s (by ecologists) and extended in 2000 with the Millennium Ecosystem Assessment
- Refers to the way ecosystems contribute to the human well-being : “the benefits people obtain from ecosystems”. These include:
 - provisioning services such as food and water;
 - regulating services (regulation of floods, drought & land degradation);
 - supporting services (soil formation and nutrient cycling); and
 - cultural services such as recreational and other nonmaterial benefits

Payment for ecosystem services (PES)

- Principle: practices favoring ecosystem services should be remunerated
- It can be an efficient and cost-effective method of preserving the environment (e.g. watershed protection)

1. PES definition

- A 5 steps definition: PES are...
 - ...voluntary transactions ...
 - ...where a well-defined environmental service (or a land use likely to secure that service) ...
 - ...is being “bought” by a service buyer ...
 - ...from a service provider.
 - + the service provider secures service provision (continuous).

Warnings:

1. tax and subsidy
are not PES
schemes

2. PES are not
financial instrument
(no revenue
generation)

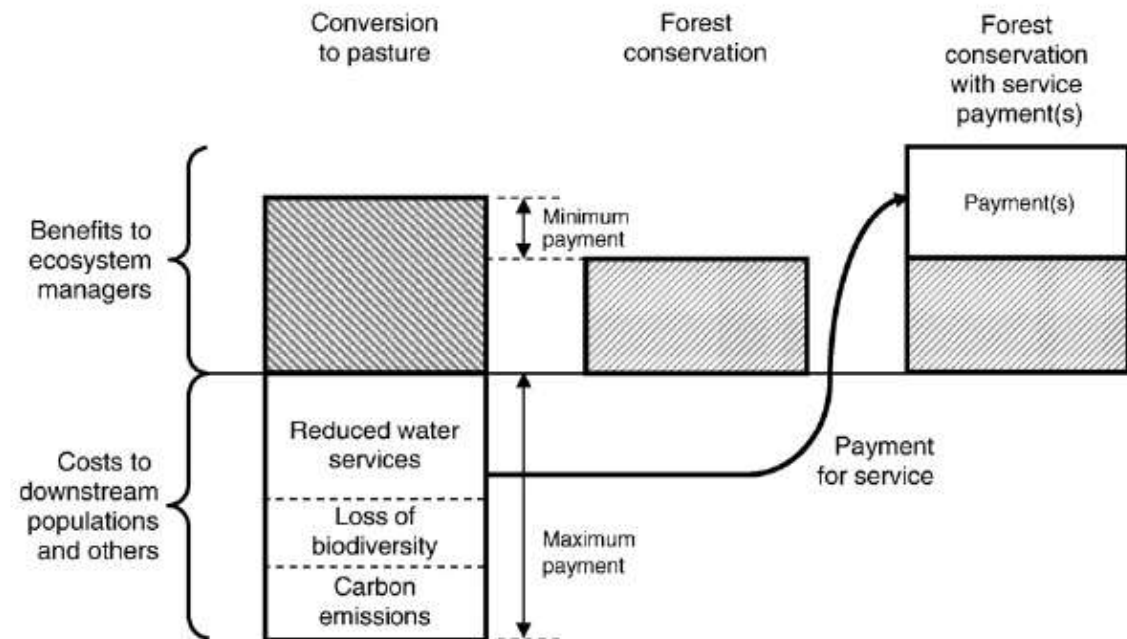


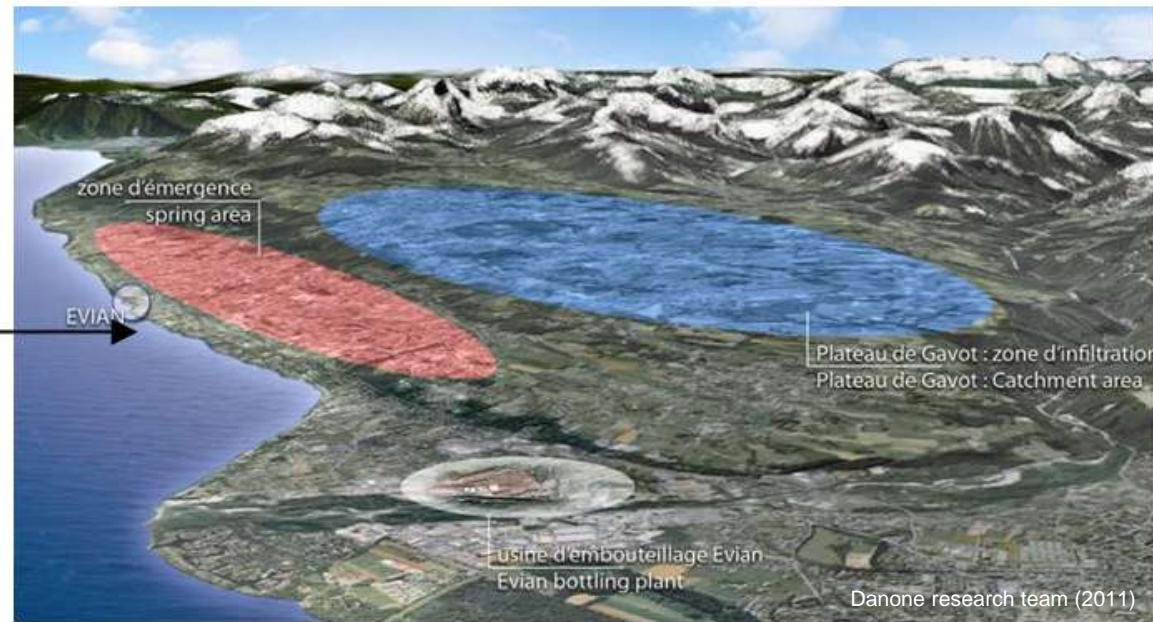
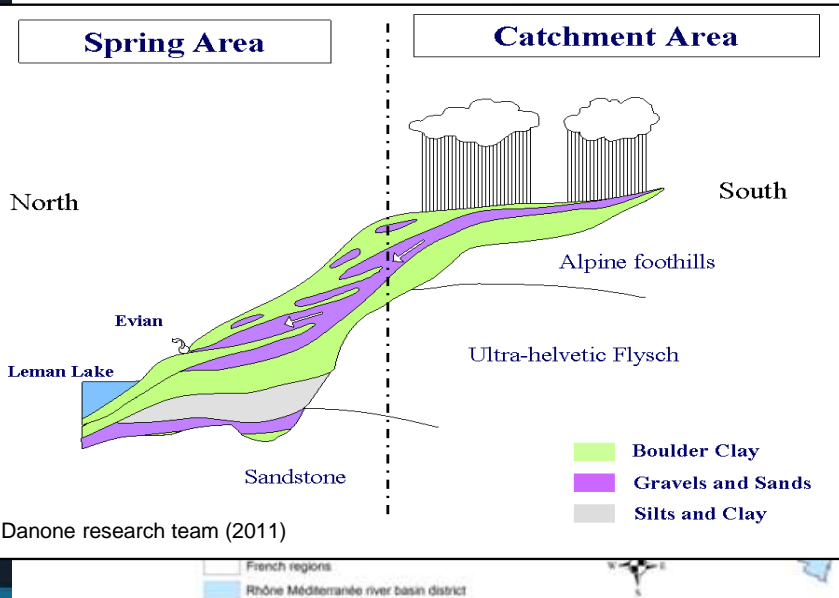
Fig. 1 – The logic of payments for environmental services. Source: Adapted from Pagiola and Platais (2007).

1. Presentation of the Evian case study



1. Presentation of the economic instrument

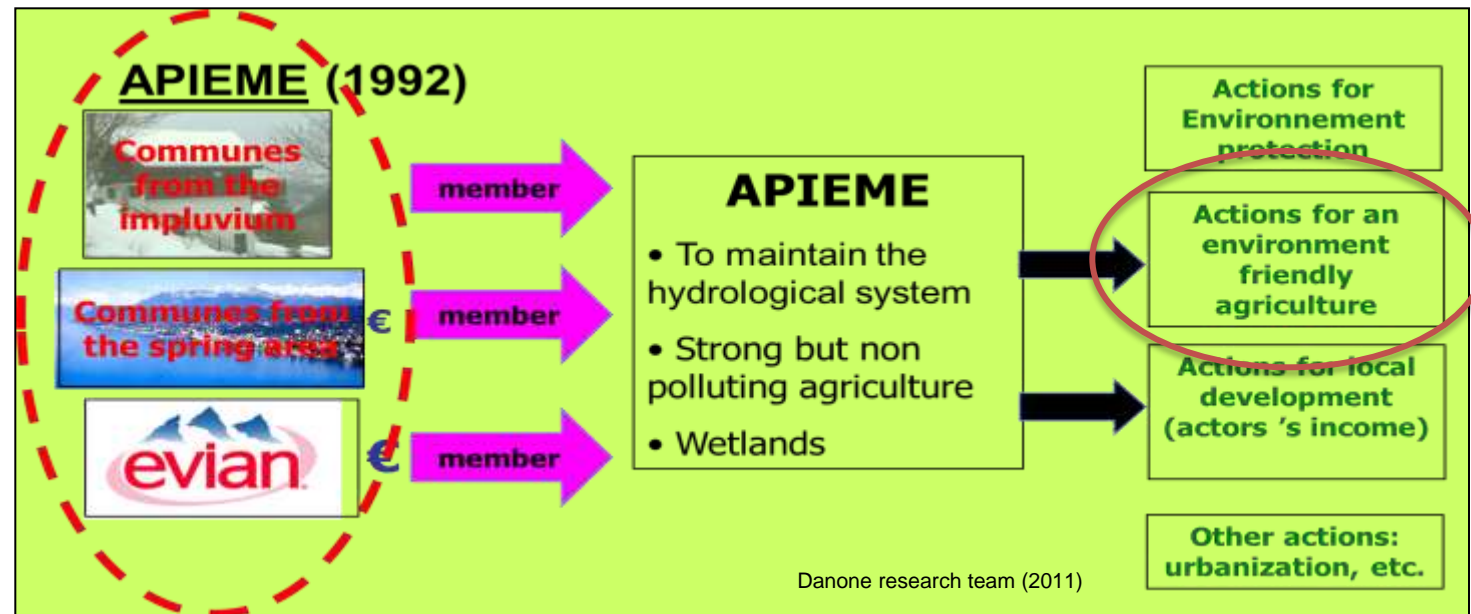
- Natural Mineral Water bottled by the Evian Company (Danone Waters)
 - (i) groundwater origin, (ii) geological natural protection, (iii) absence of any chemical treatment (iv) purity & stability of the mineral content
- The aquifer benefits from a 3-fold protection:
 - natural geological protection,
 - legal protection (the “Declaration of Public Interest”)
 - technical protection (design and protection of the spring catchwork)



1. Presentation of the economic instrument

EPI design

- In the 1980s, pressures = agriculture & urbanisation (potential crisis)
- Development of a new water protection policy based on
 - downstream-upstream relationships and voluntary agreements



Objective

→ Preserving NMW quality by developing of a modern environmentally friendly agriculture

1. Presentation of the economic instrument

- Principles of the protection policy
 - must both favour the protection of the NMW resource and the local development → win-win actions
 - No land acquisition or direct subsidy (such as hectare allowances for farmers) → collective projects
 - rely on a technical support from scientists and external research inputs
 - multi-sectorial policies (agriculture, forest, villages, natural spaces, etc.)
- Warnings:
 - What we did analyse in details : the agricultural projects of the APIEME (considered as a payment for ecosystem services - PES)

1. Presentation of the economic instrument

- Projects in the field of agriculture:
 - subsidies to comply with standards of livestock buildings
 - subsidy for dairy farms to comply with standards for dairy production facilities
 - subsidies to help renovating and building cooperative dairies specialised in cheese production
 - prevention of any leakage of the pesticides (technical studies) + manure management plan
 - technical support from the Chamber of agriculture
 - + charter of good practises
- Other projects of the APIEME:
 - Preservation of wetlands (Ramsar designation)
 - Financing of waste water treatment plants
 - Promote tourism based on nature

1. Evian: a private PES scheme

- The Evian bottling company = a private company playing a major role in the preservation of the water resource driving force
 - Financial interest... their activity depend on water purity and stability
→ they are the main beneficiary of the policy
 - Context of “quality”: NMW, cheese production under the protected designation of origin, tourism...
→ Switch from Polluter-Pays principle to Beneficiary-Pays principle
- Transferability to Armenian mineral waters and eventually to specific drinking water abstraction sites...

3. Focus on specific assessment criteria

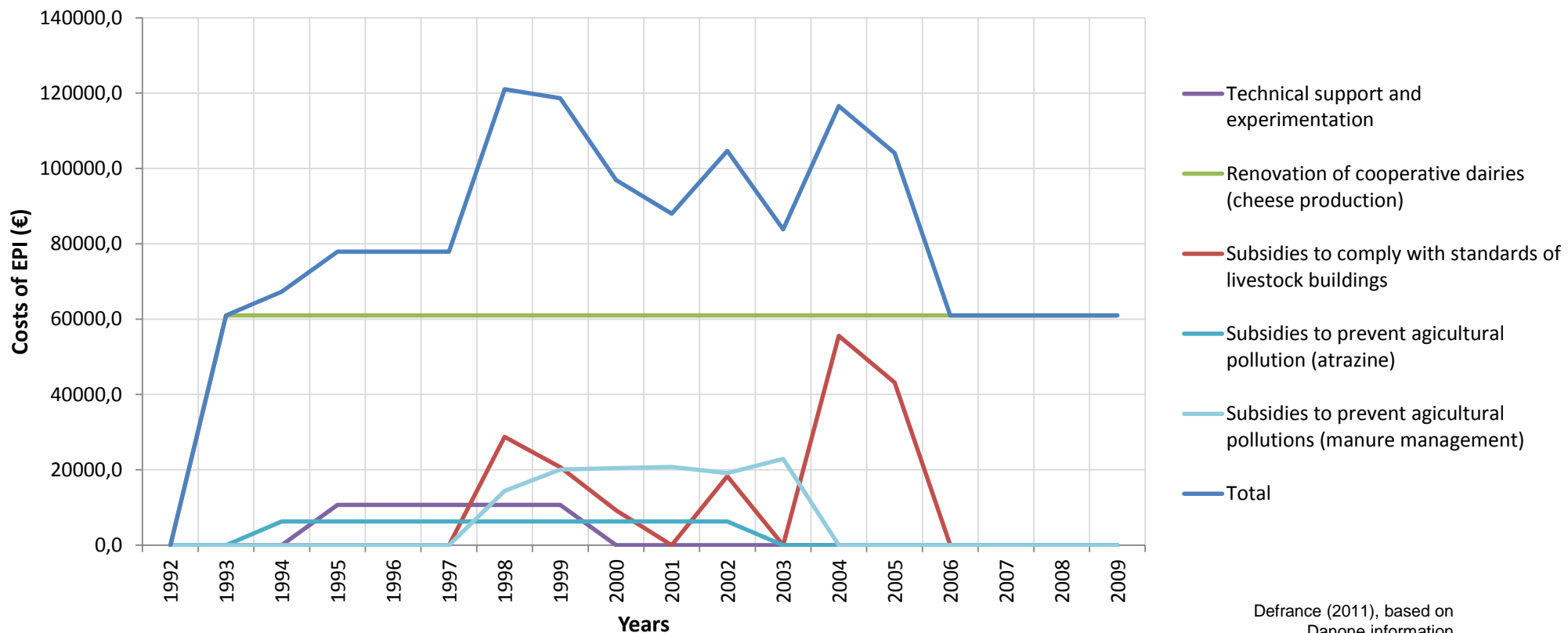
3.1 Environmental outcomes

- Difficult to assess (policy mix and long term policy context)
- No information on changes in water status !
- But... effective changes of practices and reduction of potential pressures on groundwater
 - surface of maize and
 - production of quality cheese

3.2 Economic assessment criteria

Is it cost-effective ?

- 1980s : no studies → the less risky and expensive
- Ex-post : annual budget APIEME= €700 000 (0,15%)
 - Agri budget = €85 000



3.3 Distributional effects and social equity

- Acceptability:
 - Paying polluters to reduce their pollution can be criticized
 - ... but, PES require that minimum quality standards are achieved
 - and PES should be kept for situation where “real ecosystem services” are provided
- Social impacts:
 - PES have not been conceptualized as mechanism to reduce poverty but as mechanism to improve efficiency of natural resource management
 - In the case of Evian,
 - farmers are compensated for additional efforts and
 - there is a redistributive effect due to the functioning of the APIEME
- Political voice of stakeholders :
 - Farmers have greater say (creation of the SICA) & relationships between farmers has been reinforced
 - Villages have improved their access to the decision-making process



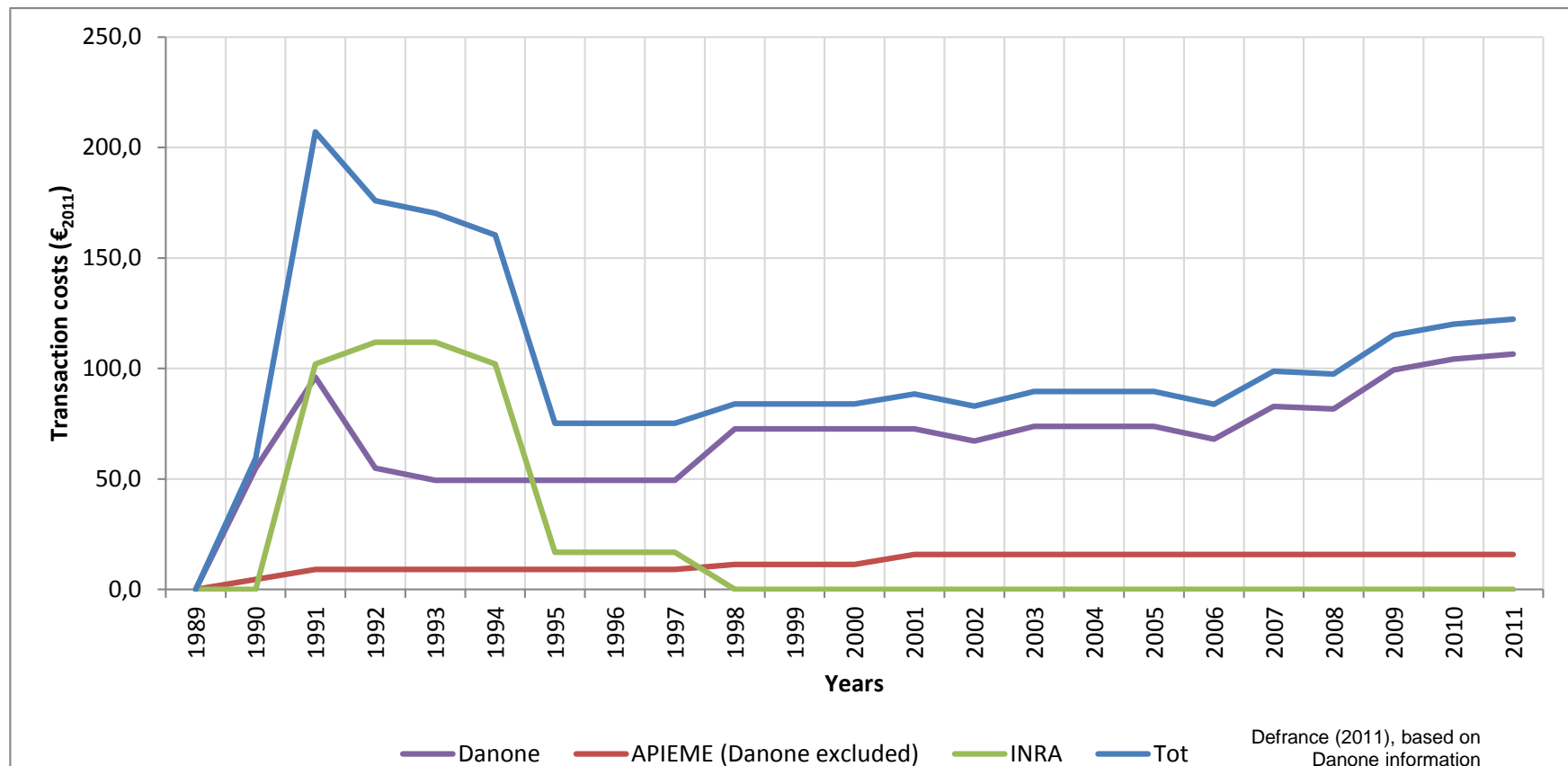
3.4 Institutions

- Preventive approaches are promoted by the Water Framework Directive (WFD)
- The implementation of the PES benefited from 3 mediators:
 - the APIEME (1992) → put stakeholders together to think about a sustainable land management
 - the farmer's association (1993) → reinforced the partnership between farmers, the APIEME and the Evian Company
 - French institute for Agricultural research → helped to switch from “ready-to-use” solutions to solutions compatible with the maintaining of a traditional agricultural based on quality products
- In Armenia:
 - The necessary legal framework for implementing PES already exists (marginal changes might still be required)
 - PES schemes can be defined at local scale (e.g. pilot project for the lake Sevan)



3.5 Level of efforts required for the process

- The estimated cost of efforts is high (close to the cost of actions)
- Even if the process helped lowering TCs:
 - Involving stakeholders → reduce the efforts linked to legal process
 - Diagnostic (background study) → reduce the efforts during the selection, design and the implementation of the economic instrument



4. Conclusions and food for thoughts for the Armenian context

4. Conclusions

The Evian PES: a successful economic instrument

- ...thanks to high level of efforts (studies, participative process, etc.)?
 - good understanding of the catchment area (ecological functioning, diversity of practises & potential pressures)
 - stakeholders took part in the decision making
- although the outcomes of the economic instrument were difficult to assess with certainty...
 - It seems to produce the right incentive
 - The objective seems to be achieved

4. Conclusions

Lesson learned

- The financial dimension may not be the most important one to explain the success of the economic instrument...
- Major contribution of:
 - the technical support (French institute for agricultural research, Chamber of agriculture, ...)
 - the social dimension (to offer space for discussion)

What about transferability?

- Key factors for success:
 - the dynamism and involvement of stakeholders
 - the size of the territory to be protected (small and few stakeholders)
 - the context: quality oriented approach promoted by the APIEME



Thanks!

For more information please visit our project website:

<http://www.feem-project.net/epiwater>

(only available in English)

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