

Appendix 1



COST Action CA15206

Payments for Ecosystem Services (Forests for Water) (PESFOR-W)

QUESTIONNAIRE

We are conducting a survey about the stakeholder' perception and opinions on forests for water Payment for Ecosystem Services (PES) schemes¹. Our study is realized under the framework of the COST Action CA15206 "Payments for Ecosystem Services (Forests for Water)" (web site: <https://it-it.facebook.com/pesforW/>), which is financed from the European Union – Short-term Scientific Mission (STSM).

We are asking for your help, as stakeholder/consumer, for understanding your opinion about the importance and future developments of forests for water PES schemes in your Country. The information provided with this questionnaire will be processed in an aggregated and anonymous way, and they will be used only for scientific purposes within the COST Action CA15206.

Hoping to have your support, we are sending you these questions. Completely filled-in questionnaires will be essential for our study. The data collected will be used only for the purpose of the study and its aim – to compare the stakeholders' opinions about the water PES schemes in chosen European countries.

Section 1. General and personal information

1.1. Name of your organization/association: _____

1.2. Country/Region: _____

1.3. Your role in the organization/association: _____

1.4. Your scientific field/University of post-university degree: _____

1.5. Years of work in your scientific field:

- Less than 1 year • 1-5 years • 6-10 years • 11-15 years • More than 15 years

Section 2. Relationship between forests and water

Internal competition in forest ecosystem utilisation occurs between subjects utilising its individual functions. Interactions between forests and water provide an extensive range of products and services that are of vital importance to the functioning of the biosphere, to society and to human well-being. In this section of the questionnaire we would like to know your opinion about this topic.

2.1. What is the level of importance of forests in providing the following water ecosystem services in your opinion (from 1=very low importance to 5=very high importance)? Please indicate your preference with "X" in each row.

Water ecosystem service	1	2	3	4	5
Provisioning services					
Recharge of groundwater					

¹ PES can be defined as a transfer of resources between social actors, aiming to create incentives for aligning individual and/or collective land use decisions with the social interest in the management of natural resources (Muradian et al. 2010).

Provision of clean drinking water					
Regulating services					
Buffering and filtering of pollutants from surface waters					
Reduction of surface runoff					
Reduction of soil erosion					
Protection from the flooding risk					
Supporting services					
Provision of habitats for different species					
Maintenance of genetic diversity in water ecosystem					
Cultural services					
Provision of scenic landscape of forests and water bodies (aesthetic values)					
Provision of recreation and leisure activities of forests and water bodies (recreation and tourism)					

2.2. Considering the water ecosystem services included in provisioning, regulating, supporting, cultural services categories (Question 2.1), could you compare the importance of forests in providing each ecosystem services category based on your experience?

(**Example of the first row:** In your opinion are water ecosystem services included in category of provisioning services more important/ equal /less important than water ecosystem services included in category of regulating services?) Please mark your choice in **bold**.

Provisioning services	more important	equal	less important	Regulating services
Provisioning services	more important	equal	less important	Supporting services
Provisioning services	more important	equal	less important	Cultural services
Regulating services	more important	equal	less important	Supporting services
Regulating services	more important	equal	less important	Cultural services
Supporting services	more important	equal	less important	Cultural services

2.3. Trade-offs occur when the provision of one ecosystem service is reduced as a consequence of increased use of another ecosystem service. Do you think that forest management can generate trade-offs between water ecosystem services?

- YES
- NO

If "YES", could you indicate among which water ecosystem services there is a trade-off please?

2.4. Do you think that afforestation/reforestation can generate trade-offs between water ecosystem services?

- YES
- NO

If "YES", could you indicate among which water ecosystem services there is a trade-off please?

Section 3. Payment for Ecosystem Services (PES) schemes

3.1. In your opinion, how efficient are the PES schemes compared to the use of regulation policy instruments (e.g., environmental taxes) to protect and sustain the ecosystem services provided by forests?

- Less efficient
- Equal
- More efficient

3.2. What is, in your opinion, the level of importance of the following aspects in the implementation of PES schemes related to the water ecosystem services? Please indicate your preference with "X" in each row.

Implementation aspects	1	2	3	4	5
Multi-level governance: incorporating local and indigenous knowledge about ecosystem services and payment mechanisms in the decision-making process					
Shared values for ecosystem services: understanding the various values (e.g., ecological, ethical values) that can be shared by different groups within the society in relation to the natural environment.					
Bundling or layering of services across multiple scales: considering the trade-off between ecosystem services provided by forests					

3.3. What is in your opinion, the level of importance of the following factors to determine the environmental effectiveness² of PES schemes related to the water ecosystem services?

Environmental effectiveness factors	1	2	3	4	5
Transaction and implementation costs net of PES transfers which determine the number of contracts that can be offered from a given program budget (e.g., Buyers do not have perfect information on the costs associated with PES enrolment, and hence payments will tend to overcompensate providers).					
The direct changes in management activities among participants induced by the program compared to the traditional management activities (without PES)					
The indirect positive or negative effects of the change in management activities on ecosystem services provision outside of contracted land (neighbouring areas)					

Section 4. Stakeholders' involvement in the PES schemes

4.1. What the role of the public authorities should be in PES schemes in water sector (payments for watershed services) (possible multi-answer)?

- Payments for watershed services should be managed without any intervention from the public authorities (i.e. user-and non-government financed payments)
- Public authority should be involved as a buyer (i.e. government-financed payments such as the European Union agri-environmental schemes)
- Public authority should be involved as a regulator (i.e. compliant payments)

²Environmental effectiveness is defined as the change in provision of services included by the program, with comparison of provision of ecosystem services without PES scheme. Effectiveness could be determined by program costs, the direct changes in land/resource-use and indirect effects of the program (Börner, et al. 2017).

- Public authority should be involved both as a buyer and as a regulator (i.e. compensation payments for legal restriction)

4.2. The main actors involved in PES schemes can be divided into three main categories:

- Buyers (side of the demand - i.e. state, private),
- Sellers (side of the supply - i.e. state and non-state forest owners),
- Intermediaries,
- Knowledge providers.

In your opinion, how the following other stakeholders (listed in the table below) should be involved in the decision-making process related to the PES schemes in the water sector? Please indicate your preference with "X" in each row.

	Not involved	Information	Consultation	Collaboration	Co-decision
Single farmers not directly involved in the PES scheme					
Single forest owners not directly involved in the PES scheme					
Environmental NGOs					
Tourism associations					
Agricultural and farmers associations					
Fishing associations					
Citizens (local community)					
Other (_____)					

Thank you very much for your help.