

# Payments for Ecosystem Services - Forests for water quality benefits (PESFOR-W) – MC10

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England





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Netherlands
Norway
Poland
Portugal
Romania
Serbia
Slovakia
Slovenia
Spain
Sweden
Switzerland
Turkey
United Kingdom

*MC Rules of procedure: 1 vote per COST signatory country*

*Please mute your mic when not speaking*



1. Welcome to participants;
2. Verification of the presence of two-thirds of the Participating COST Countries or, if applicable, a quorum
3. **Adoption of agenda**
4. **Matters arising from last meeting & recent Core Group meetings**
5. **Update from the Action Chair:**
6. **Update from the Short Term Scientific Missions (STSM) Coordinator**
7. **Update from the Grant Holder: Action budget status**
8. **Update from the COST Association (Mónica Pérez-Cabero)**
9. **Monitoring of the Action: Implementation of COST policies**
  - a) Preparation of the **Final Action Report**
10. **Follow-up of MoU objectives: progress report of working groups**
11. **Scientific planning**
  - a) Scientific strategy (ongoing work on WG tasks/deliverables incl journal articles)
  - b) Budget Planning (last proposals for use of remaining funds?)
  - c) Activity planning (including location & timing of activities during 12-month **CIG** if approved)
  - d) Dissemination planning (including printing & distribution of hard copies of the User Manual)
  - e) Legacy issues (including potential to create a webpage within ESP & a new Working Group)
12. **Research funding opportunities (e.g. Horizon Europe calls)**
13. **AOB**
14. **Summary of MC decisions**
15. **Closing**

## i) Application for a 12-month CIg:

- MC eVote passed on CIg proposal submitted
- Awaiting confirmation whether passes initial sift by COST and if so, invitation to 'hearings' in April
- If proposal accepted, CIg will run from Nov 2021 – Oct 2022

## ii) User Manual:

- Up to €1000 allocated for printing hard copies of each other language version that the User Manual is translated into [CG decision 8<sup>th</sup> Feb]
- Funds allocated to help finalize layout of other language versions [CG decision 4<sup>th</sup> March]
- Funds for posting out hard copies (not other elements)

## Grant Periods

Start of the Action: 18 October 2016 (1<sup>st</sup> MC meeting)

1. GP 1: 1 Nov 2016 – 30 April 2017
2. GP 2: 1 May 2017 – 30 April 2018
3. GP 3: 1 May 2018 – 30 April 2019
4. GP 4: 1 May 2019 – 30 April 2020
5. GP 5: 1 May 2020 – 30 September 2020



Figure 2 – GANTT Diagram



**‘Forest ecosystem services, water regulation & public policies in the face of global changes’ session (B3) at Ecosystem Services Partnership Conference co-organized by PESFOR-W:**

- PESFOR-W abstract **‘Woodlands for water quality Payments for Ecosystem Services: findings of the PESFOR-W COST Action’** accepted
- Conference postponed from September 2020 to 7<sup>th</sup> – 10<sup>th</sup> June 2021 (Tartu, Estonia)
  - Planned as a hybrid event (partly online)
- Use of PESFOR-W funds to provide a dissemination grant to participate in the conference not now possible

## Work and Budget Plan for the Grant Agreement Period

### Work and Budget Plan Summary

<b>A. COST Networking Tools</b>	EUR
(1) Meetings	68,886.00
(2) Training Schools	21,152.00
(3) Short Term Scientific Missions (STSM)	5,000.00
(4) ITC Conference Grant	0.00
(5) COST Action Dissemination	1,500.00
(6) Other Expenses Related to Scientific Activities (OERSA)	245.00
<b>B. Total Science Expenditure (sum of (1) to (6))</b>	96,783.00
<b>C. Financial and Scientific Administration and Coordination (FSAC) (max. of 15% of B)</b>	14,517.45
<b>Total Grant (B+C)</b>	111,300.45

~€93k remains unspent:

	Cost (€)
Meetings	2,875
User Manual printing, distribution & additional layout (other languages)	10,000
Ecosystem services Open Access fee (€3,110+VAT)	3,993
Website	1,500
<b>All</b>	<b>18,368</b>

Science Officer

**Dr. Mónica Pérez-Cabero**

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## • Deliverables achieved?

- 1. Developing a website for the PESFOR-W COST Action and preliminary plan for the spatial hub.
- 2. 'Thought leadership' article on the cost-effectiveness of W-for-W Payment for Ecosystem Services schemes.
- 3. Publish look-up tables on the effectiveness of woodland measures in reducing agricultural diffuse pollution.
- 4. Report on the perceptions of investors of forestry for water benefits PES schemes
- 5. Report on the suitability of pollutant and ecosystem service models to quantify woodland creation impacts on diffuse pollutant losses to water, to account for other woodland water benefits and potential disbenefits, and services such as carbon sequestration, across a range of scales.
- 6. Publication of factsheets on existing Case Studies on W-for-W Payment for Ecosystem Services schemes
- 7. Report on the motivations of potential PES participants and on barriers to implementation of schemes.
- 8. Methodology with Case Study worked examples, to assess the effectiveness of woodland creation measures for reducing agricultural diffuse pollution.
- 9. Reports on demand-side and climate change investigations into W-for-W PES cost-effectiveness
- 10. Report on 'Communicating the PES "Wow factor" (Chapter of the 'User Manual')
- 11. Report on governance and policy-maker engagement issues including how to link W-for-W PES with agri-environmental schemes.
- 12. Paper on the effectiveness of woodland creation measures for reducing agricultural diffuse pollutants prepared for submission to a journal.
- 13. 'Design and Governance' chapter for the 'User Manual' on the design of W-for-W PES Schemes
- 14. Practical guidance on designing/managing woodland measures to optimise their effectiveness at pollutant removal, to form a Chapter for the 'User Manual'.
- 15. Guidance on Best Practice for socioeconomic evaluation and cost-effectiveness analysis of W-for-W PES for a chapter of the 'User Manual'.
- 16. Publication of the Final W-for-W Payment for Ecosystem Services schemes Case Study synthesis chapter for the 'User Manual'.
- 17. Publication of 'User Manual' providing smarter guidance on developing W-for-W Payment for Ecosystem Services schemes
- 18. Newsletters & trade articles on using targeted woodland creation to tackle agricultural diffuse pollution as part of integrated catchment management.
- 19. Submission of a journal paper, newsletter & trade articles on socioeconomic evaluation and cost-effectiveness analysis of W-for-W PES.
- 20. Other knowledge exchange activities on W-for-W Payment for Ecosystem Services schemes (e.g. via social media and press).
- 21. Final Conference proceedings and Final Project Report providing an overview of the achievements of the COST Action and pointers for the future.

**Additional outputs / achievements****Co-authored Action publications**

Please enter below ONLY publications (including publications that are submitted but not yet accepted):

- that are on the topic of the Action, and
- that are co-authored by at least two Action participants from two countries participating in the Action, and
- for which the Action networking was necessary.

Please pay special attention to representatives of Inclusiveness Target Countries (ITCs) in each publication. If there are more than 20 you may choose to enter only the most 20 significant (in terms of Inclusiveness, Excellence and the MoU objectives).

Bibliographic data	Countries participating in the Action among authors	Open Access	COST cited?	COST funds?	Relevance to H2020 Societal challenge	Peer Reviewed?

**Projects resulting from Action activities**

Please enter below all the projects on the topic of the Action resulting from Action activities, involving at least one Action participant, and for which the Action networking was necessary.

The Action reported 0 project(s) and 0 proposal(s) resulting from the Action networking.

#	Title	Countries participating in the Action among proposers	Main proposer name	Funder	Amount	Call Identifier	Relevance to H2020 Soc challenge

**Other outputs / achievements**

Please enter below any additional outputs/ achievements on the topic of the Action that contribute to the COST mission: "COST enables break-through scientific developments leading to new concepts and products and thereby contributes to strengthen Europe's research and innovation capacities", and for which the Action networking was necessary (e.g. a patent, standards, white paper).

Output / achievement description	Dependence of achievement on the Action networking

## Impacts

Please describe the impacts (the short- to long-term scientific, technological, and / or socioeconomic changes produced by a COST Action, directly or indirectly, intended or unintended) that have resulted, or might result, from the Action in the following table (one impact per line).

Description of the Impact, i.e. what will change, and for whom, as a result of what the Action achieved	Type of Impact	Timing of Impact

Please describe how the Action has advanced careers, skills and network of researchers, including Early Career Investigators (for example: joint supervision of graduate and PhD students, research exchanges not funded by the action, collaborations, Training Schools with ECTS accreditation, joint projects, Internship and job prospects.

## Dissemination and exploitation of Action results (other than co-authored Action publications listed previously)

Please describe the Action's dissemination and exploitation approach as well as all activities undertaken to ensure dissemination and exploitation of the Action results and the effectiveness of these activities.

### Dissemination and exploitation approach of the Action

#### Dissemination

##### Dissemination meetings funded by the Action

Title of Dissemination meeting	Meeting date	Meeting country	Action participant	Event name and hyperlink to the website	Title of presentation	Description of added value to the Action
N/A						

##### Other dissemination activities

E.g. participation to non-Action meetings, e.g. EU Parliament, meetings with policy makers, experts in the field, regional authorities.

Item/activity	Target audience	Outcome	Hyperlink
N/A			

#### Exploitation activities

Please describe below any activities undertaken to ensure exploitation (use, in particular in a commercial context) of the Action's achievements.

Item/activity	Target audience	Outcome
N/A		

## Action Success(es)

Taking into account the achievements, impacts and policy implementation of the Action described in the preceding sections, please describe below the two most significant successes of the Action.

### Annex 2: Dimensions of successes

#### 1 - Breakthroughs

- 1.a - Scientific breakthrough
- 1.b - Technological breakthrough
- 1.c - Breakthrough in socio-economic or societal applications

#### 2 - Policy contribution

- 2.a - Contribution to regulatory policy
- 2.b - Contribution to environmental, infrastructural or agricultural policy
- 2.c - Contribution to economic or socio-economic policy
- 2.d - Contribution to social, cultural or legal policy

#### 3 - Capacity building

- 3.a - Building capacity in an existing field of science and technology
- 3.b - Building capacity in bridging separate fields of science and technology
- 3.c - Building capacity in a new or emerging field of science and technology
- 3.d - Building capacity in valorising and implementing advances and applications in science and technology
- 3.e - Building capacity in the demographic inclusiveness of networks in science and technology, including representation of newly established research groups, Early-Career Investigators, the under-represented gender and teams from countries/regions with less capacity in the field of the Action

## Other matters

This section is confidential to the Management Committee, the Action Rapporteur and the COST Association, and is not included in the version of the report that is published on the COST website.

### Added value of extension

The Action end date was extended beyond the original end date (four years after the first MC meeting of the Action) please describe below why this extension was necessary and the added value of the extension.

### Difficulties in implementing the Action

If any difficulties were experienced in the implementation of the Action (e.g. imbalances of participation across the Working Groups, inactive country representatives) please describe these below. Please also describe the efforts made by the MC to address these.

### Suggestions for improvements to COST framework/ procedures

The mandate of the Scientific Committee includes providing advice to the COST Committee of Senior Officials on possible improvements to the COST framework. Please describe below any improvements that you believe should be made to the COST framework.

### Sustaining the network beyond the Action

Are there any plans to sustain the network beyond the end of the Action?	<input type="text"/>
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### Emerging topics/ developments in the field of the Action

Please describe any emerging topics or potentially important future developments identified during the Action and that could potentially be addressed by future COST activities such as Actions S&T Conferences or Exploratory Workshops.

## • How far have the Action's objectives been met?

- Primary objective: *increase Europe's capacity to use Payment for Ecosystem Services (PES) to help meet EU Water Framework Directive and wider policy goals by consolidating and developing knowledge on PES schemes involving planting Forests for Water quality benefits – especially targeted smaller-scale “Woodlands-for-water” schemes that reduce agricultural diffuse pollution*
- Secondary objectives:
  - 1. *The overall research aim is to combine practical, expert knowledge from the forestry, agriculture, water and financial sectors, to improve the design and environmental effectiveness of W-for-W PES, as a means of tackling the major problem of diffuse water pollution impacting on Europe and beyond.*
  - 2. *To characterize and critically evaluate the governance and design of W-for-W PES schemes with regard to: i) service provision (supply); ii) policy drivers; iii) payments/markets (demand); iv) type of governance. The aim is to assess existing PES schemes and identify organizational arrangements and metrics that could increase their effectiveness.*
  - 3. *To evaluate the environmental effectiveness of targeted woodland planting in reducing agricultural diffuse pollutants (sediment, nitrate, phosphate, pesticides and Faecal Indicator Organisms etc). This aims to address a general lack of awareness within water sectors of the potential for woodland creation to help tackle a major agricultural pressure.*
  - 4. *To develop a European repository of Case Studies that investigate lessons from existing W-for-W PES schemes, to share with practitioners, policy makers and stakeholders to promote best practice. This aims to draw together European and international examples into an open access, trans-disciplinary learning platform highlighting strengths and weaknesses.*
  - 5. *To develop User Guidance on the suitability of pollutant, ecosystem service and catchment scale models to quantify the effectiveness of tree planting to reduce diffuse pollution; and provide advice on how PES schemes linking these can be applied.*
  - 6. *To increase Europe's capacity to use W-for-W PES as a policy tool for delivering water benefits and meeting WFD targets, including by developing a critical mass of skilled 'experts' (both researchers and users) able to commission and deliver well-designed and cost-effective W-for-W PES schemes.*
  - 7. *To increase Europe's capacity to tackle the intractable diffuse pollution issue by providing training in technical and economic skills, particularly for Early Career Investigators (ECIs), the 'PES engineers' of the future. Over 100 individuals (more than 50% ECIs) will be trained through Training Schools and related workshops.*
  - 8. *Facilitate interaction between specialists with different skill sets (forestry, agriculture, ecology, hydrology/ hydrogeology, biophysical, economics, law, etc.) needed for PES schemes and create new professional and academic networks via a LinkedIn/Facebook 'European PES Skills Directory, allowing Training School delegates and linked professionals to register their skills and contact details.*
  - 9. *To build stakeholder (regulators, governments, land owners and managers, water companies, environmental consultants etc) understanding of the potential for W-for-W PES schemes to meet WFD targets, as well as to deliver other water and wider objectives.*
  - 10. *Increase Inclusiveness Target Countries' (ITCs') access to international expertise and funding, identifying and promoting excellence in science and finance across Europe via WG leadership, event hosting, STSM participation, and use of a Spatial Case Studies map and Glossaries on the web portal and the 'European PES Skills Directory'.*
  - 11. *Improve gender balance addressing the acute gender imbalance in the forestry, agriculture, water and environmental finance sectors by targeting female representation of at least 40% in the MC, 50% in Training Schools, and positive selection of women for leadership roles as well as implementation of the Gender Action Plan.*

## Summary

### Main aim/ objective

Increase Europe's capacity to use Payment for Ecosystem Services (PES) to help meet EU Water Framework Directive and wider policy goals by consolidating and developing knowledge on PES schemes involving planting Forests for Water quality benefits – especially targeted smaller-scale "Woodlands-for-water" schemes that reduce agricultural diffuse pollution

### The Action addressed this as described below



### Action website

<http://www.forestresearch.gov.uk/research/operations>

Deadline for submission: **17<sup>th</sup> May 2021**

**WG leaders responsible for  
compiling info needed for their WG**

**Action leadership and participants**

**COST Action  
Final Achievement Report  
(18/10/2016 to 17/04/2021)**

**CA15206: Payments for Ecosystem Services  
(Forests for Water)**

The Action was approved by the Committee of Senior Officials (CSO) on 26-2-2016 and has the MoU reference COST 007/16.

This report shows the data entered into e-COST to enable the Action Chair to verify the completeness and accuracy of the report with the MC prior to submitting the report via e-COST in fulfilment of the rules for COST Action Management, Monitoring and Final Assessment.





## Reflections (to feed into Final Action Report)

- WG1
- WG2
- WG3
- WG4



- WG1 (PES design & governance) training school
- WG2 journal paper (*the effectiveness of woodland creation measures for reducing agricultural diffuse pollutants*)
  - *Potential for submission prior to May 17<sup>th</sup>?*
- WG4 case study factsheets

- Any last suggestions for using some of remaining funds?



## Potential locations & organizers for PESFOR-I events (if CI G application approved)

The main objectives of PESFOR-I are:

To develop an effective business plan for solving the key problems that are preventing the upscaling of woodland for water PES schemes across Europe.

To organise 4 'hackathons' in different climate regions with policy and sector experts to jointly identify solutions to current barriers to mainstreaming woodlands for water PES schemes across Europe, including: how incentives can be implemented and structured to better reflect woodland water and related benefits; the need for structured evidence on environmental effectiveness and cost effectiveness; and the identification of governance mechanisms to facilitate their implementation.

To organise an international workshop to synthesize the findings from the hackathons and agree next steps.

To organise an international workshop to explore the potential for developing a European Woodland Water Code to secure greater private investment in developing woodlands for water PES schemes.

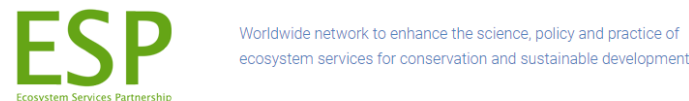
To organise two knowledge exchange events linked to high profile international fora (COP26 and UNECE/FAO) to highlight the potential of woodlands for water PES schemes to help meet water policy targets, as well as contribute to climate change mitigation and reducing the biodiversity crisis.

**Issues re finalizing/printing/distribution of User Manual other language versions?**



**Offer from Ecosystem Services Partnership to host a PESFOR-W web page** (e.g. along the lines of that for ESMERALDA project: <https://www.es-partnership.org/esmeralda-project/>, to provide some background of the project, perhaps contacts, links to deliverables) **& new WG**

- **E.g. potential vehicle for developing further factsheets (& perhaps spatial repository)?**



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## ESMERALDA Project

Enhancing ecosystem services mapping for policy and decision making

ESMERALDA is a three-and-a-half-year-long EU Horizon 2020-funded collaboration project. Focused on delivering a 'flexible methodology' to provide the building blocks for pan-European, national and regional ecosystem services mapping and assessment, ESMERALDA has generated a great deal of research insights and practical solutions on the topic.



**e.g. Horizon Europe opportunities of interest to further develop collaborations?**



- **Action Plan:** developing incentives across Europe for targeted tree planting to reduce agricultural diffuse pollution of watercourses to meet Water Framework Directive (WFD) water quality goals
- **Overcoming existing barriers:**
- **1) Lack of adequate financial incentives for landowners to plant woodland in target locations**
- Increase public resources devoted to developing woodlands for water PES schemes, removing any existing perverse incentives for removing trees that currently provide water benefits: role for international and EU institutions, as well as national governments.
- Develop partnerships to improve water quality that seek to realise new revenue opportunities (e.g. through payment for ecosystem services schemes): role for downstream water users (industries, households), private investors and environmental agencies.
- Increase climate change mitigation investment in nature-based solutions - e.g. woodlands for water schemes ('tangible action' rather than 'warm words' - cf emphasis stressed by Sir Ian Cheshire, UK government COP26 advisor, 10-day Challenge 11/3/21): role for governments and investors.
- **2) Lack of adequate governance frameworks**
- Establish appropriate governance frameworks to facilitate development of woodlands for water PES schemes; role for EU institutions, national governments, water regulators and land managers (in partnership with other stakeholder groups) .
- Create a partnership to consider establishing a Woodland Water Code to underpin development of future woodlands for water schemes (e.g. along similar lines to the UK Woodland Carbon Code [www.woodlandcarboncode.org.uk](http://www.woodlandcarboncode.org.uk)): role for governments, investors, water regulators and land managers.
- **3) Lack of adequate monitoring tools and evaluation frameworks**
- Foster standardisation of approaches to monitoring and evaluation of woodlands for water PES schemes: role for EU institutions, national governments, water regulators and land managers.
- **4) Lack of awareness of woodland water benefits and of environmental effectiveness**
- Commission more empirical and modelling studies on quantifying environmental effectiveness of woodlands for water schemes: role for international and EU institutions, national governments, and water-dependent industries.
- Make wider stakeholder groups more aware of environmental effectiveness of woodland creation to help meet water-related (e.g. EU Water Framework Directive) targets: role for EU institutions and national governments, as well as the scientific community.
- **5) Insufficient information on cost-effectiveness, including on the value of benefits woodlands provide**
- Commission more studies on quantifying cost-effectiveness of woodlands for water PES schemes, including co-benefits: role for international and EU institutions, as well as national governments.
- **6) Non-pecuniary barriers**
- Simplify regulatory procedures to reduce transactions costs for participants in woodlands for water PES schemes: role for EU institutions and national governments.



Level:	UN/International	EU	National	Regional	Local	PESFOR-I
	River Commissions					
Water Systems	Whole River System/Riparian Regions				Hydrological Response Units	
	River Basin District					
			Tributary Basin District			
	Barriers:				Headwater Catchments	
Lack of adequate financial incentives for landowners to plant woodland in target locations	B, G, P, R	B, G, P, R	B, G, P, R	B, G, R	B, G, R	✓
Lack of adequate governance frameworks	B, D, I, P, R	B, D, I, P, R	B, D, G, I, P, R	B, D, G, I, R	B, D, G, I, R, S	✓
Lack of adequate monitoring tools and evaluation frameworks	B, I, P, R, S	B, I, P, R, S	B, I, P, R, S	B, I, R, S	B, I, R, S	✓
Lack of awareness of woodland water benefits and of environmental effectiveness	I, P, R	I, P, R	I, P, R	I, R	I, R	✓
Insufficient information on cost-effectiveness, including on the value of water and other benefits woodlands provide	I, P, R	I, P, R	I, P, R	I, R	I, R	✓
Non-pecuniary barriers	B, D, P, R	B, D, P, R	B, D, P, R	B, D, G, R	B, D, G, R, S	

Stakeholders: B: Beneficiaries & Buyers; D: Designers; G: General Public; I: Intermediaries; P: Policy Makers; R: Regulatory bodies; S: Suppliers

interest in organizing an end of Action celebration?





**Draft minutes to be circulated in next few weeks**