

Payments for Ecosystem Services - Forests for water quality benefits (PESFOR-W) – MC3

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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 and recent Core Group meetings**
5. **Update from the Action Chair:**
 - a) Status of Action: start & end dates of Action, participating COST countries, participating NNC/ IPC institutions and Specific Organisations.
6. **Update from the Short Term Scientific Missions (STSM) Coordinator**
 - a) GP2 calls & recommendations for future calls
7. **Update from the Grant Holder: Action budget status**
8. **Update from the COST Association (if a representative is present)**
9. **Monitoring of the Action (12-month report)**
10. **Implementation of COST policies on:**
 - a) Promotion of gender balance and Early Career Investigators (ECI) & Inclusiveness (see list of ITCs) and Excellence
11. **Follow-up of MoU objectives: progress report of working groups**
12. **Scientific planning**
 - a) Scientific strategy (MoU objectives, GP Goals, WG tasks and deliverables) - Spatial repository, online survey & case studies...
 - b) Action Budget Planning – **ITC Conference Grants**
 - c) Long-term planning (including anticipated locations and dates of future activities) – **Italy, Norway**, Bulgaria...;
 - d) Dissemination planning (Publications and outreach activities) – **RIO & FBT** articles published; Dissemination & Exploitation plan
13. **Requests to join the Action:**
 - a) COST countries - **Turkey**
 - b) Institutions in Near Neighbouring Countries, International Partner Countries, International Organisations, etc – **IWMI** (Ghana)
14. **AOB**
 - a) **COST connect event**
 - b) Potential to create an **IUFRO Working Group on Woodlands for Water PES?**
 - c) **Woodlands for Water PES Session:** at the Ecosystem Partnership conference 14-19 October 2018 (San Sebastián, Spain)?
 - d) Invitation to participate in the **International Climate Show 2018**
15. **Location and date of next meeting**
16. **Summary of MC decisions**
17. **Closing**

1) Logo for the Action



2) IUFRO World Forestry Congress: Woodlands for Water PES

- i) 9 papers presented – all but one authored by PESFOR-W participants
- ii) only one of the two dissemination grants approved was taken up – (€1.9k remains)

3) ITC conference grants

- i) First call for applications (12th Oct 2017 deadline).
- ii) *Selection procedure*

MC Rules of procedure: 1 vote per COST signatory country

Grant Periods

Start of the Action: 18 October 2016 (1st 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

31 COST countries have signed MoU:

ITCs (16):

- *Bosnia and Herzegovina*
- Bulgaria
- Czech Republic
- Croatia
- Estonia
- **Hungary**
- Latvia
- Luxembourg
- fYR Macedonia
- Montenegro
- Poland
- Portugal
- Romania
- Serbia
- Slovakia
- Slovenia
































Other (15):

- Austria
- Belgium
- Denmark
- Finland
- France
- Germany
- Greece
- Ireland
- Italy
- The Netherlands
- Norway
- Spain
- Sweden
- Switzerland
- United Kingdom

5 countries yet to join:

- **Turkey**
- **Cyprus**
- **Lithuania**
- Malta
- Iceland

5) >100 MC Members & Subs

COST countries:	MC Members	MC Substitutes
 Austria [AT]	1	1
 Belgium [BE]	1	
 Bosnia and Herzegovina [BA]	2	1
 Bulgaria [BG]	2	
 Croatia [HR]	2	2
 Czech Republic [CZ]	2	3
 Denmark [DK]	2	4
 Estonia [EE]	2	
 Finland [FI]	2	
 France [FR]	1	1
 Germany [DE]	2	1
 Greece [EL]	2	2
 Hungary [HU]	2	1
 Ireland [IE]	2	
 Italy [IT]	2	5
 Latvia [LV]	2	
 Luxembourg [LU]	2	1
 FYR Macedonia [MK]	2	1
 Montenegro [ME]	2	1
 Netherlands [NL]	1	1
 Norway [NO]	2	
 Poland [PL]	2	4
 Portugal [PT]	2	2
 Romania [RO]	2	1
 Serbia [RS]	2	3
 Slovakia [SK]	2	2
 Slovenia [SI]	2	2
 Spain [ES]	2	3
 Sweden [SE]	2	1
 Switzerland [CH]	2	1
 United Kingdom [UK]	2	2
Chair	1	
	59	46

Current MC Observers:

NNCs:

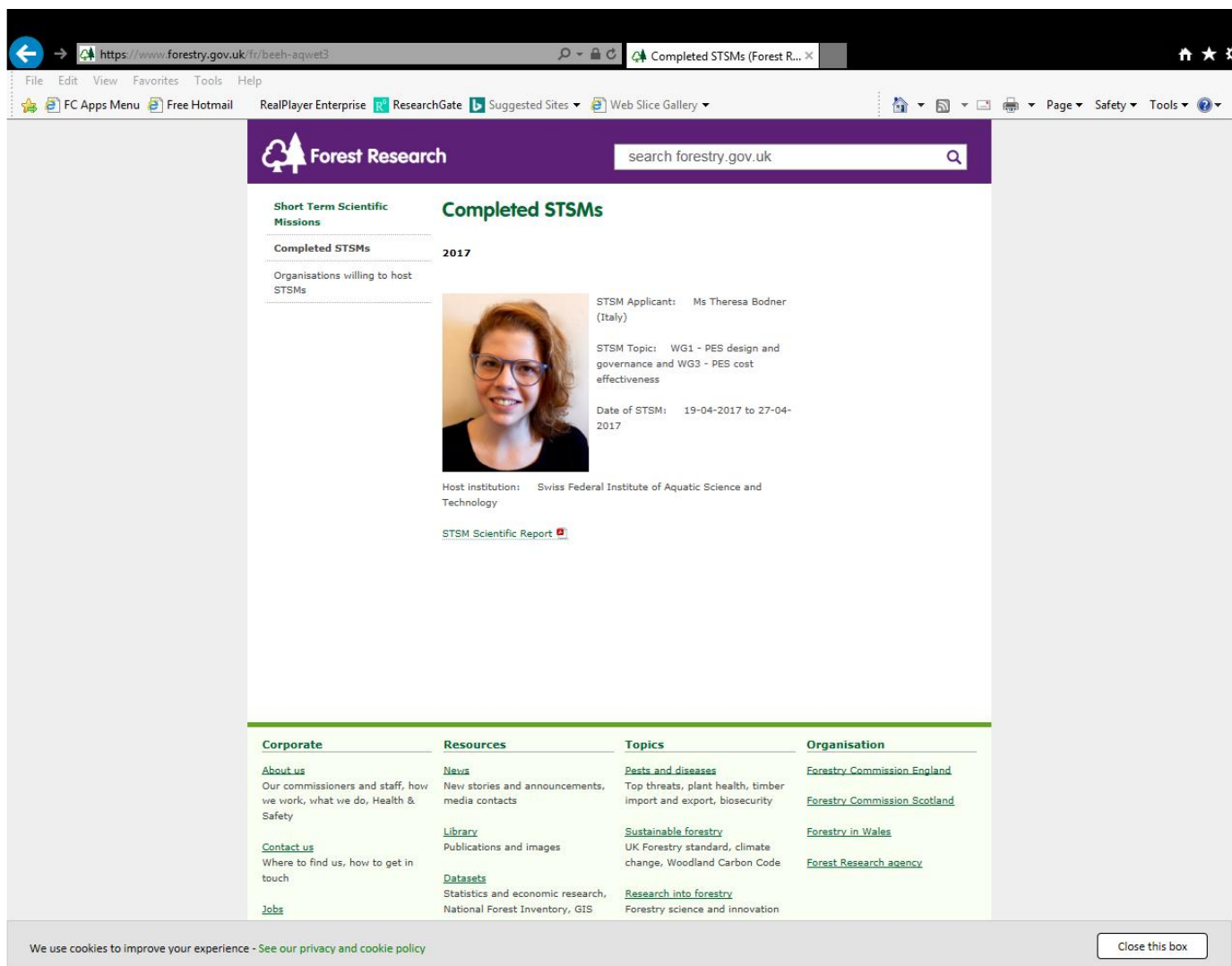
- Morocco
- Jordan
- Tunisia
- Ukraine (2+1 sub)

IPCs:

- China
- New Zealand

IOs:

- European Forestry Institute (2)
- UNECE/FAO



https://www.forestry.gov.uk/fr/bee-h-aqwet3

Completed STSMs

2017

Organisations willing to host STSMs

STSM Applicant: Ms Theresa Bodner (Italy)

STSM Topic: WG1 - PES design and governance and WG3 - PES cost effectiveness

Date of STSM: 19-04-2017 to 27-04-2017

Host institution: Swiss Federal Institute of Aquatic Science and Technology

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Short term scientific mission by Theresa Bodner
(April 2017) on **PWS programmes in Switzerland:**
Report of STSM available to download:

Table 1. Classification of the 6 investigated PWS schemes.

Name of the program	Eligible as PES	Forest areas included	Watershed services as main interest	PESFOR-W	Status
Swiss National Nitrate Strategy	Yes	No	Yes	No	closed
Henniez SA	Yes	Yes	?	-	open
Basel water utility	No	Yes	Yes	No	closed
Winterthur	No	Yes	Yes	No	closed
Lausanne water supply	?	Yes	Yes	-	open
Baden water utility	Yes	Yes	Yes	Yes	closed

<https://www.forestry.gov.uk/fr/beeH-aqwet3>

call	applications	approved by SG	grant	Period	Duration	WG	home country	host country	PhD
Call 2016	Ms Theresa Bodner	Yes	1,240 €	2017-04-19 to 2017-04-27	9	WG3	Italy	Switzerland	student
First call 2017	Mr Ignacio Pérez-Silos	Yes	2,500 €	2017-09-04 to 2017-10-13	40	WG2	Spain	UK	student
31. May 2017	Ms Viera Bastakova	No	2,400 €	2017-10-16 to 2017-12-02	47	WG1	Slovakia	Denmark	student
	Ms Khrystyna Vasylyshyn	Yes	2,500 €	2017-10-02 to 2017-10-20	19	WG1	Ukraine	Croatia	2016
Second call 2017	Ms. Giulia Amato		2,500 EUR	2018-03-20 to 2018-04-20	32	WG1	Italy	Netherlands	project
30/09/2017	Ms. Soumia Touhami		2,500 EUR	2018-01-01 to 2018-02-28	59		Marocco	Portugal	student
	Mr. Cristian Accastello		2,450 EUR	2018-02-18 to 2018-03-31	42	WG3	Italy	France	student
	Ms. Viera Bastakova		2,400 EUR	2017-11-06 to 2017-12-15	40	WG1	Slovakia	Denmark	student
	Ms. Martina Štěrbová		1,700 EUR	2018-02-11 to 2018-02-24	14	WG1	Slovakia	Italy	ECI
	Mr. Eros Borsato		2,450 EUR	2018-01-01 to 2018-03-31	90	WG2	Italy	Netherlands	student

1) Agree ranking of the 6 new applications & which would like to fund (budget allowing)

2) Consider increasing €5k budget allocated:

- Use of €1.9k dissemination grant allocated for IUFRO not taken up
- Use of unallocated budget from Croatia meeting (if not fully spent)
- potential to reallocate funding from ITC Conference Grants

GP2 (May 2017 to April 2018): **Initial**; **New**; diff

Total Budget:	€156000	€170000	+€14k
• Meetings:	€123152	€128092	+€5k
• IUFRO World Forestry Congress (Sept)		€ 3942	
• Croatia:		€ 61360	€66300
• Italy		€ 57850	
• STSMs:	€10000		
• ITC Conference Grants		€7233	+€7k
• Dissemination: €2400			
• (Website etc)			
• Other Expenses Related to Scientific Activities: €100			
• Admin (15% of total science expenditure):	€20347	€22173	+€2k

Science Officer

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Tel: +32 (0)2 533 38 22



REPORT AT MONTH 12

- **COST inclusiveness policy**
- **Scientific committee recommendations**

REPORT AT MONTH 24

- **Co-authored publications & H2020 proposals**
- **Additional outputs & achievements**
- **Success stories?**



MoU objective	Achieved Yes/ Partially/ No	Evidence of (partial) achievement including hyperlink to enable assessment of the achievement. Justification if full achievement is not foreseen
Copy from e-COST or MoU		For each objective insert evidence of (partial) achievement including hyperlink to enable assessment (by the Action Rapporteur) of the achievement and access by end users
Copy from e-COST or MoU		
Copy from e-COST or MoU		
Copy from e-COST or MoU		

Period 1 (Nov 2016 – April 2017) goals:

- **GAPG1:** Define a **Dissemination & Exploitation Plan**
- **GAPG2:** Create **Website & Spatial hub**
- **GAPG3:** State of the Art: Commence **evidence review on the effectiveness of woodland creation for reducing agricultural diffuse pollution**
- **GAPG4:** State of the Art: Commence **discussions on a common protocol to assess cost-effectiveness** of woodlands for water PES schemes
- **GAPG5:** State of the Art: Commence **characterisation of design & governance** aspects of European woodlands-for-water PES

Period 2 (May 2017 – April 2018) goals:

- **GAPG1:** Explore potential **investors' perceptions** of what would be needed to attract them to purchase credits
- **GAPG2:** Populate and publish **preliminary look-up tables** on the effectiveness of woodland measures to reduce agricultural diffuse pollution
- **GAPG3:** Write a thought leadership article on **assessing the cost-effectiveness of woodlands for water PES**
- **GAPG4:** Launch an **online web survey** to gather information on woodlands for water PES schemes
- **GAPG5:** Maintain and add to the **website and spatial hub**

1) EXCELLENCE: contribute to improvement of existing EU legislation**2) IMPACT**

- greater recognition of **agricultural sector impacts**
- recognition of relevance of creating **new opportunities in value chains**
- strong **involvement of water management sector**
- plan for **involvement of stakeholders** (water management / agriculture)
 - **'COST does not provide an adequate instrument for the involvement of such broad variety of stakeholders'**
- incorporation of **experts from other sectors**
- clear **plan for** the **exploitation** of the results **& management of IPRs**
- clear **assessment of how woodland creation measures are capable of reducing agricultural diffuse pollutants needed to encourage business involvement**

3) IMPLEMENTATION

- **'It is doubtful that such broad kind of network could come to functional life inside COST Action, for instance due to the lack of resources which could be devoted to private actors.'**
- ensure the excellent participation of Inclusiveness Target Countries and Early Career Investigators, gender balance (including at the leadership level), industrial engagement & international cooperation are maintained.

1) Geographic balance:

• Inclusiveness Target Countries (ITCs)

- Leadership of WG activities
- Host activities
- Short-term scientific missions

2) Early Career Investigators (ECIs)

- encouraging ECIs (<8yrs experience after PhD) through **training** + **leadership** of activities

3) Gender
































- overcoming an acute imbalance in forestry
 - >40% representation of women in the MC
 - Positively selecting women for:
 - **Leadership** roles
 - **Training** schools (>50%)
 - dissemination plan

4) low Carbon footprint
































land travel rather than air encouraged



10) Nancy: ITC participants

COST countries:	MC Members	MC Substitutes	Other	Total
 Austria [AT]	1			1
 Belgium [BE]	1			1
 Bosnia and Herzegovina [BA]				
 Bulgaria [BG]	2			2
 Croatia [HR]	1		1	2
 Czech Republic [CZ]		1		1
 Denmark [DK]				
 Estonia [EE]	2			2
 Finland [FI]	1			1
 France [FR]	1	1	1	3
 Germany [DE]	2		1	3
 Greece [EL]				
 Hungary [HU]	2			2
 Ireland [IE]	1	1		2
 Italy [IT]	2	1	1	4
 Latvia [LV]	1			1
 Luxembourg [LU]				
 fYR Macedonia [MK]	2	1		3
 Montenegro [ME]	2	1		3
 Netherlands [NL]	1	1		2
 Norway [NO]	1			1
 Poland [PL]	1	1		2
 Portugal [PT]		1		1
 Romania [RO]	2	1		3
 Serbia [RS]	1			2
 Slovakia [SK]	2		1	3
 Slovenia [SI]		1		1
 Spain [ES]	1		1	2
 Sweden [SE]	1			1
 Switzerland [CH]	1	1		2
 United Kingdom [UK]	1	1		2
Chair	1			1
	18/37	7/13	2/6	27/57

10) Croatia: ITC participants

COST countries:	MC Members	MC Substitutes	Other	Total
 Austria [AT]				
 Belgium [BE]	1			1
 Bosnia and Herzegovina [BA]	1	1		2
 Bulgaria [BG]	1			1
 Croatia [HR]	2	2	2	6
 Czech Republic [CZ]	1	1		2
 Denmark [DK]	1			1
 Estonia [EE]	2			2
 Finland [FI]	1			1
 France [FR]	1	1	1	3
 Germany [DE]	2		1	3
 Greece [EL]	1	1		2
 Hungary [HU]	2			2
 Ireland [IE]	1	1		2
 Italy [IT]	2	2	1	5
 Latvia [LV]	2			2
 Luxembourg [LU]		1		1
 FYR Macedonia [MK]	2	1		3
 Montenegro [ME]	2	1		3
 Netherlands [NL]		1		1
 Norway [NO]	1			1
 Poland [PL]	2			2
 Portugal [PT]	1	1		2
 Romania [RO]	1	1		2
 Serbia [RS]	1	1	1	3
 Slovakia [SK]	1		1	2
 Slovenia [SI]	2	1		3
 Spain [ES]			1	1
 Sweden [SE]	1	1		2
 Switzerland [CH]	1	1		2
 United Kingdom [UK]	1	1		2
Chair	1			1
	23/38	11/19	4/7	38/68

Core Group:	Number	Percentage
Inclusiveness Target Countries (ITCs)	3	27%
Early Career Investigators (ECIs)	3	27%
Female	4	36%
Total	11	



PESFOR-W **aims to:**

improve Europe's capacity to use Payments for Ecosystem Services (PES) to achieve **Water Framework Directive (WFD) targets & other policy objectives through incentives for planting woodlands to reduce agricultural diffuse pollution to watercourses.**



Research Coordination:

- 1) **Characterize & evaluate governance models & design of W-for-W PES**
- 2) **Evaluate environmental effectiveness of targeted woodland planting**
- 3) **European PES repository of Case Studies** drawing together European & international examples into an open access, **trans-disciplinary learning platform**
- 4) **User Guidance** on suitability of pollutant, ecosystem service & catchment scale models to quantify the effectiveness of tree planting to reduce diffuse pollution



Capacity Building

- i) **Training in technical & economic skills: 'PES-engineers' of the future**
- ii) **Interaction between specialists with different skill sets**
- iii) **Stakeholder understanding** (regulators, governments, land owners...)

MoU envisages:

- **3 STSMs (+ associated reports)**
- **1 training school**
- **Chapter for User Manual**

Table 1: WG1 tasks, milestones and deliverables		
Task	Month	
T1.1	1-27	Characterise design and governance aspects of European W-for-W PES.
T1.2	22-38	Identify Best Practice in PES design and governance, using Case Studies.
T1.3	31-48	Training and guidance for 'Design and Governance' chapter of 'User Manual'.
Milestones		
M1.1	15	STSM (A), exploring potential investors' perceptions of what would be needed to attract them to purchase credits, and interest in providing finance.
M1.2	24	STSM (B), exploring motivations and barriers of other potential PES participants (e.g. farmers, water utilities, landowners and the general public).
M1.3	33	STSM (C), engaging with policy-makers on best governance of new schemes + explore potential for citizen science to monitor completed PES schemes.
M1.4	39	Training School 'PES design and governance', including participatory approaches to stakeholder interaction at river basin level.
Deliverables		
D1.1	18	Report on investors' perceptions
D1.2	28	Report on motivations of potential PES participants and barriers.
D1.3	36	Report on governance and engaging with policy-makers.
D1.4	39	'Design and Governance' chapter for 'User Manual'

MoU envisages:

- 3 STSMs
- 2 training schools
- 2 workshops
- Look-up tables
- 1 journal article
- Chapter for User Manual
- Newsletters & trade articles

Task	Month	
T2.1	1-9	Review evidence on the effectiveness of woodland creation measures for reducing a range of agricultural diffuse pollutants.
T2.2	7-12	Agree a value range for the effectiveness of woodland creation measures to reduce different diffuse pollutants for use in pollutant and ES models.
T2.3	7-24	Populate look-up tables: evaluate how well existing pollutant and ES models quantify woodland creation impacts on diffuse water pollution. Assess models' ability to account for other W-for-W benefits (e.g. flood risk, water temperature), possible disbenefits (e.g. water yield) & linked services (e.g. carbon sequestration). Evaluate mapping tools; write methodologies; and provide guidance on data, models and mapping tools, as a Chapter for 'User Manual'.
T2.4	19-48	Training and guidance on designing and managing woodland measures to enhance their effectiveness at pollutant removal; chapter for 'User Manual'.
Milestones		
M2.1	9	STSM (D) , to review the effectiveness of woodland creation measures in reducing a range of agricultural diffuse pollutants and design a standard set of measures.
M2.2	12	1st Workshop , to discuss and agree value ranges for the ability of woodland measures to reduce individual diffuse pollutants; and populate look-up tables.
M2.3	15	STSM (E) , completing review of pollutant and ES models' suitability to quantify impacts of woodland measures on diffuse pollution at a range of scales.
M2.4	21	2nd Training School , on applying and comparing usefulness of preferred models to assess impacts of woodland measures on losses of agricultural diffuse pollutants to water in selected Case Study sites.
M2.5	24	STSM (F) completes methodology for assessing the effectiveness of woodland creation measures to reduce agricultural diffuse pollution, and provides guidance on the strengths and weaknesses of data, models and mapping tools.
M2.6	36	2nd Workshop , to write guidance on the design and management of woodland measures to maintain/enhance pollutant removal effectiveness at minimum risk.
Deliverables		
2.1	15	Publish look-up tables on the effectiveness of woodland measures in reducing agricultural diffuse pollution.
2.2	24	Report: '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.' (Chapter of 'User Manual').
2.3	30	Methodology, with Case Study worked examples , to assess the effectiveness of woodland creation measures for reducing agricultural diffuse pollution.
2.4	36	Journal paper: 'The effectiveness of woodland creation measures for reducing agricultural diffuse pollutants'.
2.5	39	Practical guidance on designing/managing woodland measures to optimise their effectiveness at pollutant removal, for Chapter for 'User Manual'.
2.6	18-48	Newsletters & trade articles on using targeted woodland creation to tackle agricultural diffuse pollution as part of integrated catchment management.

MoU envisages:

- 4 STSMs & associated reports
- 1 training school
- 1 thought leadership article
- 1 journal paper
- Chapter for User Manual
- Newsletters & trade articles

Table 3: WG3 tasks, milestones and deliverables		
Task	Month	
T3.1	1-12	Agree common protocols ; to estimate the cost-effectiveness of W-for-W PES (by month 6) and for socioeconomic evaluation (by month 12).
T3.2	13-27	Evaluate demand-side (buyer) motivations.
T3.3	16-30	Evaluate impact of applying climate change scenarios on PES cost-effectiveness.
T3.4	31-48	Training and guidance on Best Practice for socioeconomic evaluation and cost-effectiveness analysis of W-for-W PES; chapter for 'User Manual'.
Milestones		
M3.1	24	STSMs (G&H) on demand-side (buyer) motivations of W-for-W PES.
M3.2	27	STSMs (I&J) on demand-side and climate change investigations into PES cost-effectiveness completed.
M3.3	33	3rd Training School on Best Practice (socioeconomic evaluation and cost-effectiveness analysis of W-for-W PES).
Deliverables		
D3.1	12	' Thought leadership ' article on 'Cost-effectiveness of W-for-W PES'.
D3.2	24;27;33	Reports on demand-side and climate change STSM results.
D3.3	27-48	Journal paper, newsletters & trade articles on socioeconomic evaluation and cost-effectiveness analysis of W-for-W PES.
D3.4	39	Guidance on Best Practice for socioeconomic evaluation and cost-effectiveness analysis of W-for-W PES for a chapter of the 'User Manual'.

MoU envisages:

- 2 STSMs (+ associated report)
- 1 online survey
- factsheets
- Website, spatial hub & skills database
- Synthesis chapter & User Manual
- Use of Social Media + Other KE activities
- Final conference proceedings & Project report

Table 4: WG4 tasks, milestones and deliverables		
Task	Month	
T4.1	1-3	Agree Dissemination and Exploitation Plan (M2).
T4.2	1-48	Design, create, promote, extend and maintain the PESFOR-W web hub .
T4.3	1-15	Expand the network of countries involved in assisting collection of information on existing PES pilots, projects and best practice.
T4.4	1-9	Conduct EU online web survey to gather information/opinions on W-for-W PES.
T4.5	10-45	Collect key details, including financial and socioeconomic information for W-for-W PES fact sheets for existing and new Case Studies.
T4.6	24-48	Synthesise and edit Best Practice in the ' User Manual: Smarter Guidance on Woodlands-for-Water PES '; translated into 6 European languages.
T4.7	24-48	Organise/deliver Final Conference (Month 45) by Conference Committee.
Milestones		
M4.1	6	Spatial hub operational.
M4.2	10	Launch online web survey .
M4.3	21	STSM (k) collecting key data, including financial and socioeconomic information, on W-for-W PES schemes for Case Study fact sheets.
M4.4	27	Existing Case Studies are all on Spatial Repository on PESFOR-W website.
M4.5	28	Establish skills database on 'European PES Expertise '.
M4.6	29	STSM(I) on best marketing and communication practices for PES.
M4.7	45	Final Conference takes place.
M4.8	45	4th Training School , on applying the User Manual.
Deliverables		
D4.1	6	PESFOR-W website .
D4.2	27	Publication of factsheets on existing Case Studies on W-for-W PES.
D4.3	33	Report on ' Communicating the PES "Wow factor" ' (- 'User Manual' Chapter).
D4.4	39	Publication of Final Case Study synthesis chapter for 'User Manual'.
D4.5	42	Publish ' User Manual: Smarter guidance on W-for-W PES schemes '
D4.6	1-48	Other knowledge exchange activities (e.g. via social media and press).
D4.7	48	Final Conference published proceedings and Final Project Report.

Period 2 (May 2017 – April 2018) goals:

- **GAPG1: Explore potential investors' perceptions of what would be needed to attract them to purchase credits**
- **GAPG2: Populate and publish preliminary look-up tables on the effectiveness of woodland measures to reduce agricultural diffuse pollution**
- **GAPG3: Write a thought leadership article on assessing the cost-effectiveness of woodlands for water PES schemes**
- **GAPG4: Launch an online web survey to gather information on woodlands for water PES schemes**
- **GAPG5: Maintain and add to the website and spatial hub**

GP2 first call (deadline 12th October 2017):

- **One application:**
- Title: ***Hydrological properties of trees under the influence of PAH's pollution***
 - the amount of polycyclic aromatic hydrocarbons (PAH's) accumulated in 4 coniferous species affects the water content of tree crowns
 - **Increasing forest cover to improve environmental quality is a PESFOR-W objective**
- Conference: Air & Water Components Of The Environment (15-18 March 2018, Romania)
<http://aerapa.conference.ubbcluj.ro/Engleza/index.htm>
- Cost: €1250 (incl €170 conf + field trip fee)

Should we allocate some/all of remainder GP2 allocation to other instruments (e.g. STSMs)?

i) Italy (13th-15th March 2018)

ii) Norway (20th-22nd June 2018?)

iii) Bulgaria (September 2018)

ITCs:

i) Portugal

ii) Serbia

iii) Czech Republic

iv) Luxembourg

Other COST countries:

i) Germany

ii) Ireland

iii) Finland

iv) UK

v) Spain?

vi) Denmark?

i) Woodland creation & water quality related PES schemes

Country	Name of scheme(s)	Aim of woodland creation
Denmark	1) Aalborg city council groundwater quality improvement 2) Vigersted Groundwater Scheme 3) Water Supply Act Reforestation Levy	Protection of groundwater reservoir.
France	4) Massif de la Nerthe (Coca Cola) 5) Rennes (city council) 6) Vittel (Nestle Waters)	Protection of water quality for drinking water / mineral water production.
Germany	7) Lower Saxony Oldenburg and East-Frisia Water Association 8) Munich water supply - Mangfall Valley - Stadtwerke München	Reduction in nitrate pressure on the groundwater supply from agriculture / increasing water quality for drinking water
Switzerland	9) Henniz SA	Increasing water quality
UK	10) SCAMP (United Utilities) 11) English woodland grants scheme - New woodlands for water 12) Forestry grants scheme (Scotland) - Woodlands for water	Increasing water quality for public water supply

ii) PES schemes: woodland creation for groundwater recharge

Country	Name of scheme(s) / organisation	Aim of woodland creation
Italy	1) AQUOR Forest Infiltration Areas (Province of Vicenza & Padova)	infiltration/groundwater recharge
Spain	2) upper Guadiana river basin – SPUG / Western La Mancha Aquifer	groundwater recharge

iii) PES schemes: forest management for water quality/quantity

Country	Name of scheme(s) / organisation	Aim of woodland creation
Austria	1) Taugl (Water Association of the Salzburg Basin)	Prohibition of certain pesticides to improve water quality
Bulgaria	2 WWF pilot: Persina-Nature-Park	Removal of biomass to improve water quality & provide other benefits
Italy	4) Romagna Acqua SQA	Management to reduce soil erosion to protect water quality & quantity
Portugal	5) Green Heart of Cork (Coca Cola)	Management for Water quantity (infiltration/groundwater recharge) benefits

1) Stakeholder engagement:

- plan for **involvement of stakeholders in water management & agriculture**
 - strong **involvement of water management sector**
- **Engaging policy makers**
 - **contribute to improvement of existing EU legislation**
- **Engaging private sector**

2) Dissemination & Exploitation Plan

- **plan for the exploitation of the results & management of IPRs**
- **Which events (e.g. conferences) to target for dissemination?**

iii) Please take copies of the PESFOR-W flyer back with you to distribute at other events




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Objectives:

- Characterize & evaluate governance models
- Evaluate environmental effectiveness of targeted woodland planting
- Explore cost-effectiveness of woodland planting for reducing diffuse pollution
- Create an European PES repository of case studies
- Develop User Guidance on suitability of pollutant, ecosystem service & catchment scale models to quantify the effectiveness of tree planting to reduce diffuse pollution




COST Action CA15206
PESFOR-W
Payments for Ecosystem Services_Forests for Water

RESEARCH NETWORK

PESFOR-W COST Action (CA15206):
 (2016-2020) covering ≈40 countries

Chair: Gregory Valatin, Forest Research,
gregory.valatin@forestry.gov.uk

Home page: <https://www.forestry.gov.uk/fr/pesforw>

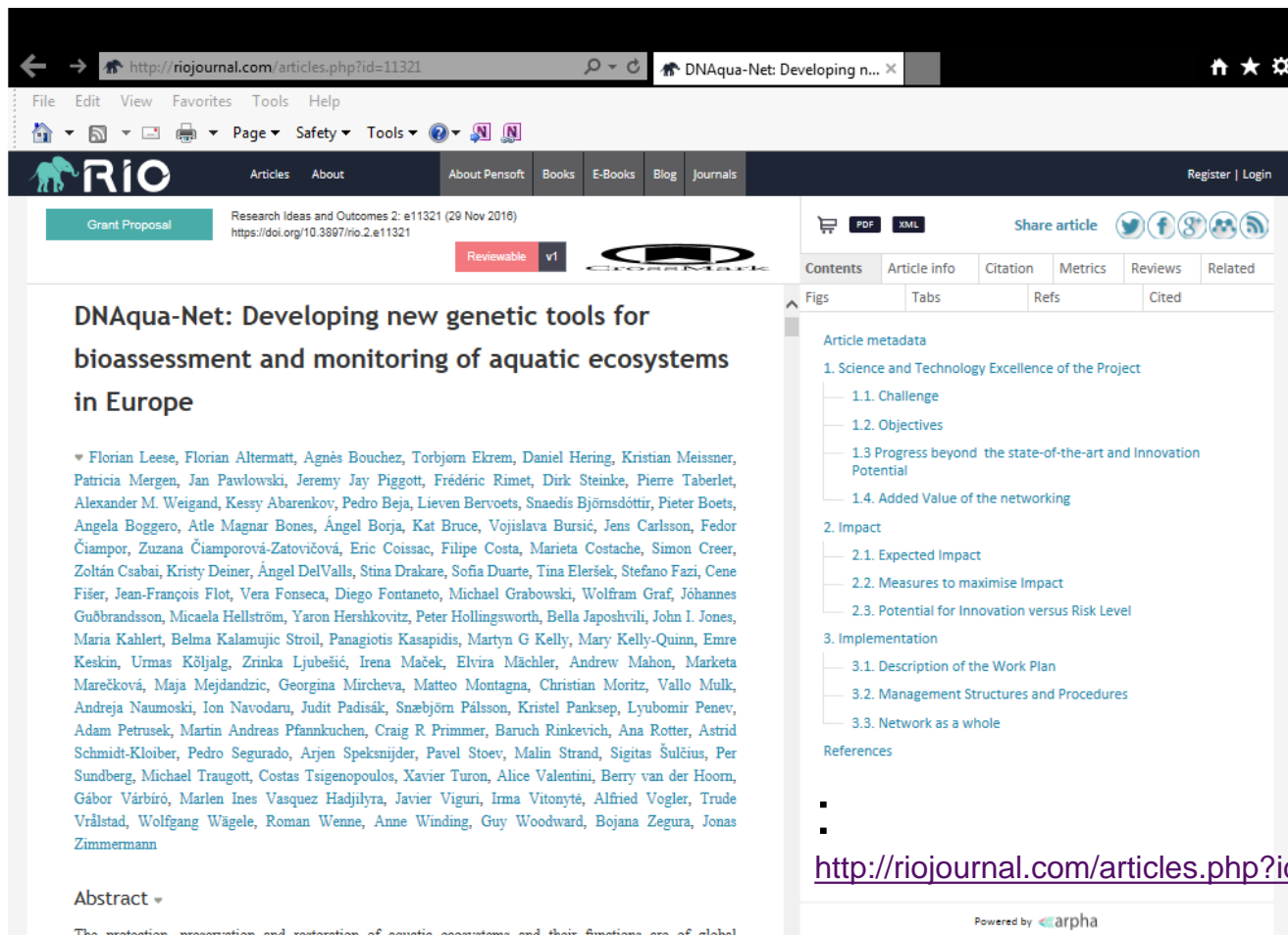


Funded by the Horizon 2020 Framework programme of the European Union



Funded by the Horizon 2020 Framework programme of the European Union

1) Introductory journal article published in RIO (>600 reads since published in May 2017)



The screenshot shows the RIO journal website. The article title is "DNAqua-Net: Developing new genetic tools for bioassessment and monitoring of aquatic ecosystems in Europe". The authors listed are Florian Leese, Florian Altermatt, Agnès Bouchez, Torbjørn Ekrem, Daniel Hering, Kristian Meissner, Patricia Mergen, Jan Pawlowski, Jeremy Jay Piggott, Frédéric Rimet, Dirk Steinke, Pierre Taberlet, Alexander M. Weigand, Kessy Abarenkov, Pedro Beja, Lieven Bervoets, Snaedis Björnsdóttir, Pieter Boets, Angela Boggero, Atle Magnar Bones, Ángel Borja, Kat Bruce, Vojislava Bursić, Jens Carlsson, Fedor Čiampor, Zuzana Čiamporová-Zatovičová, Eric Coissac, Filipe Costa, Marieta Costache, Simon Creer, Zoltán Csabai, Kristy Deiner, Ángel DelValls, Stina Drakare, Sofia Duarte, Tina Eleršek, Stefano Fazi, Cene Fišer, Jean-François Flot, Vera Fonseca, Diego Fontaneto, Michael Grabowski, Wolfram Graf, Jóhannes Guðbrandsson, Micaela Hellström, Yaron Hershkovitz, Peter Hollingsworth, Bella Japoshvili, John I. Jones, Maria Kahlert, Belma Kalamujic Strojil, Panagiotis Kasapidis, Martyn G Kelly, Mary Kelly-Quinn, Emre Keskin, Urmas Köljal, Zrinka Ljubešić, Irena Maček, Elvira Mächler, Andrew Mahon, Marketa Marečková, Maja Mejdandzic, Georgina Mircheva, Matteo Montagna, Christian Moritz, Vallo Mulk, Andreja Naumoski, Ion Navodaru, Judit Padišák, Snæbjörn Pálsson, Kristel Panksep, Lyubomir Penev, Adam Petrušek, Martin Andreas Pfannkuchen, Craig R Primmer, Baruch Rinkevich, Ana Rotter, Astrid Schmidt-Kloiber, Pedro Segurado, Arjen Speksnijder, Pavel Stoev, Malin Strand, Sigita Šulčius, Per Sundberg, Michael Traugott, Costas Tsigonopoulos, Xavier Turon, Alice Valentini, Berry van der Hoorn, Gábor Várkonyi, Marlen Ines Vasquez Hadjilyra, Javier Viguri, Irma Vitonty, Alfred Vogler, Trude Vrålstad, Wolfgang Wägele, Roman Wenne, Anne Winding, Guy Woodward, Bojana Zegura, Jonas Zimmermann.

The article is marked as "Reviewable v1". The abstract is partially visible: "The protection, preservation and restoration of aquatic ecosystems and their functions are of global".

On the right side, there is a "Share article" section with social media icons and a "Contents" table of contents. The table of contents includes sections like "1. Science and Technology Excellence of the Project", "2. Impact", and "3. Implementation".

At the bottom right, there is a link: <http://riojournal.com/articles.php?id=13828>.

RESEARCH

Towards a Woodland Water Code?

Encouraging tree planting for water quality benefits

Gregory Valatin and **Tom Nisbet**
of Forest Research provide
insights into collaborations in the
PESFOR-W project

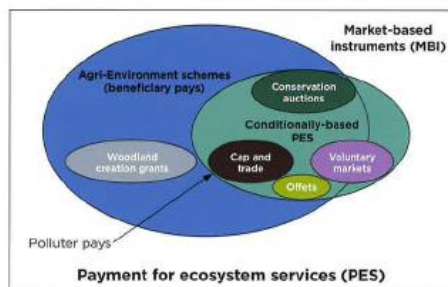
Diffuse pollution from agriculture is a major environmental problem. It is a significant pressure for over 40% of Europe's river and coastal water bodies, responsible for degrading water quality, damaging freshwater life and reducing recreational and cultural amenity values. This represents a major cost to society. For example, South West Water estimate that 17% of their customers' bills is for water treatment to remove diffuse pollutants for the provision of clean drinking water.

While efforts continue by farmers and researchers to find ways of reducing diffuse pollutant losses through changes to farming practices, it is increasingly recognised that other 'measures' will be required to achieve water targets and protect the water environment. This includes utilising the ability of trees to intercept and reduce the flow of pollutants from adjacent agriculture. Strategically placed woodlands can be very effective at controlling diffuse pollution, as well as delivering other water services.

The benefits of tree planting for protecting water quality and reducing flood risk have informed woodland creation grants in England since 2012, with additional payments or points awarded in priority areas. However, planting rates remain limited, which in a large part is thought to be due to insufficient incentives for landowners to plant trees on higher valued agricultural land, where pollutant losses are often greatest. Better quantification of the value of woodland creation for removing diffuse pollutants would strengthen the economic case for supporting tree planting for water benefits through grants, or other Payments for Ecosystem Services (PES) schemes.



The benefits of tree planting for protecting water quality and reducing flood risk have informed woodland creation grants in England since 2012



The effectiveness and cost-effectiveness of woodland planting to reduce diffuse pollution is the subject of a new international research network (PESFOR-W) created in autumn 2016 and supported by the European Cooperation in Science and Technology (EU COST) programme. PESFOR-W aims to improve Europe's capacity to use woodland for water PES and help tackle diffuse water pollution by pooling knowledge and experience from across many countries. It will develop standard approaches and tools to quantify the cost-effectiveness of woodland planting for reducing the five main diffuse pollutants - sediment, nitrate, phosphate, pesticides and Faecal Indicator Organisms, as well as consider potential trade-offs for water quantity.

PESFOR-W currently draws on expertise from 38 countries and spans a range of disciplines, including forestry, agriculture, water and environmental economics. It includes participants not just from research institutes, but also from those engaged in existing woodland for water PES schemes, and aims to involve a wide spectrum including landowners, industry and regulators. A key task is to gather evidence from case studies across Europe. The aim is to incorporate this information into a publicly available web-based, spatial repository, and to draw lessons from existing schemes to provide guidance for future PES implementation.

As the diagram above illustrates, broadly defined, PES schemes can be considered to encompass a range of different types of mechanisms. These include publicly funded schemes such as woodland creation grants, agri-environmental schemes such as the EU Rural Development Programme and use of

Continued on page 51

CONFOR.ORG.UK

RESEARCH



Riparian woodland as buffer to agricultural land

auction mechanisms to achieve greater environmental returns per £ of public expenditure. They also include in a carbon markets context, for example, cap and trade schemes such as the EU Emissions Trading Scheme, as well privately-funded voluntary transactions such as for carbon savings from projects certified under the Woodland Carbon Code. Some of the schemes involve those undertaking activities that pollute paying for measures to minimise and compensate for associated environmental impacts in line with the 'polluter pays' principle.

An underlying ambition of PESFOR-W is to explore potential for developing a Code covering the water quality benefits of woodland planting along the lines of the UK Woodland Carbon Code. After reviewing evidence on the environmental effectiveness of woodland creation, the aim is to develop standard look-up tables for the ability of woodland planting to reduce each diffuse pollutant. These numbers would underpin the valuation of water benefits and the development of a Woodlands for Water Code. This could play an important role in expanding the development and implementation of PES schemes and encouraging landowners and managers to plant trees to improve water quality, with potential for synergies by integrating with the Woodland Carbon Code.

Biannual meetings of the Action include field visits to learn about existing PES schemes and to explore first hand with stakeholders how barriers to practical implementation were overcome and schemes made to work.

The next meeting will be held in Opatija, Croatia

in October 2017 and will include a visit to the Motovun forests and Botonega reservoir to find out about payment schemes for tree planting to increase water quality.

Meetings are open, so anyone with an interest in the topics PESFOR-W covers is welcome to become involved (although funding is not available to cover expenses of additional UK participants at present).

RESOURCES

Further details about the network, activities, working groups, as well as presentations and minutes from previous meetings, can be found at www.forestry.gov.uk/h/pesforw

The proposal to create PESFOR-W has recently been published in the journal *Research Ideas and Outcomes*.

ADDITIONAL WEB RESOURCES

List and description of relevant European schemes at www.conforg.org

GET INVOLVED

We welcome expressions of interest in hosting short visits by researchers from other COST countries; help to host a future meeting were one to be held in the UK; information on existing woodlands for water PES schemes; and suggestions for potential investors to contact to explore perceptions of woodlands for water PES mechanisms for generating new investment. (Email: gregory.valatin@forestry.gsi.gov.uk).

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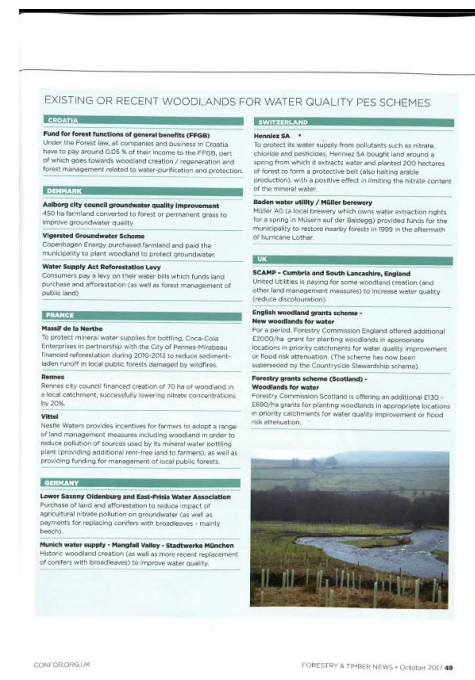
FORESTRY & TIMBER NEWS • October 2017 51

Currently 1 COST application & 4 MC Observer applications:

ITC:
• Turkey

IPCs (2):

- USA
- Canada
 - University of Alberta
 - University of Waterloo



IOs (1):

- International Water Management Institute, Ghana

Engin EROĞLU

(Landscape Architecture dept, Forestry faculty, Düzce University, Turkey)

project:

• **Determining of landscape character of urban water corridors as visual and ecological; a case study of Asar Suyu in Duzce**

Publications include:

- E EROĞLU, Z DEMİR (2016). Phenological and visual evaluations of some roadside deciduous trees in urban area. Biological Diversity and Conservation 9 (1), 143-153.
- E EROĞLU, H EROĞLU, S KAYA (2016). Visual Quality Assessment Along Road Corridor Inside And At The Side Of Some Forest Habitats Under Protection: The Case Of Düzce. Forest Engineering and Technologies FETEC 2016, 36.
- E Eroğlu, C Acar (2011). Visual landscape character of oriental spruce (*Picea orientalis* (L.) LINK.) mountain forests in Turkey. Journal of Environmental Engineering and Landscape Management 19 (3), 189-197.

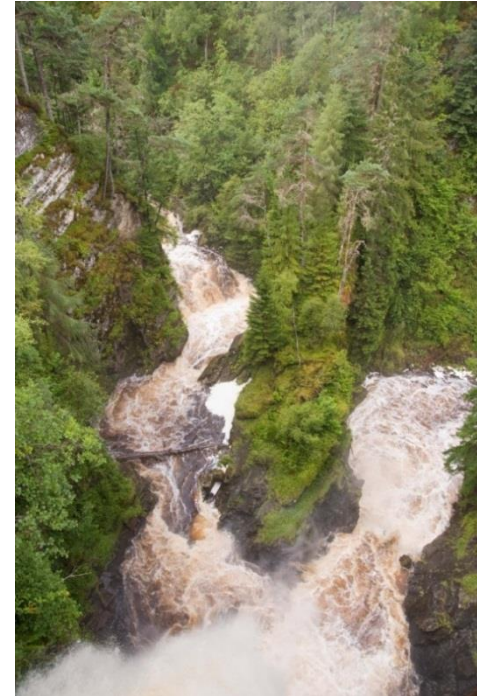
- a) **COST connect event**
- b) Potential to create an **IUFRO Working Group on Woodlands for Water PES?**
- c) **Woodlands for Water PES Session:** at the Ecosystem Partnership conference 14-19 October 2018 (San Sebastián, Spain)?
- d) Invitation to participate in the **International Climate Show 2018**

Collaborative funding opportunities?
• H2020, LIFE, Interreg...



Location: **Padova, Italy**

Date: 15th **March 2018**



Thanks to Dijana & team for organising Opatija meeting

- draft Minutes expected to be circulated within 3 weeks

