

# PESFOR-W Action Plan: overcoming barriers to development of woodlands for water PES schemes

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## **COST Innovators' Grant application (Nov 2021- Oct 2022):**

### **Stakeholder events to consider wider PES uptake & identify solutions to overcome existing barriers:**

- **Lack of adequate financial incentives for landowners to plant woodland in target locations;**
- **Lack of adequate governance frameworks for W-for-W PES schemes;**
- **Lack of adequate monitoring tools and evaluation frameworks;**
- **Lack of awareness of woodland water benefits and of environmental effectiveness;**
- **insufficient information on cost-effectiveness, including on water-related and other associated benefits that woodlands provide (synergies & trade-offs)**



To facilitate wider forests for water PES uptake, 6 types of barriers need to be addressed:

- i) Lack of adequate **financial incentives** for landowners to plant woodland in target locations;
- ii) Lack of adequate **governance frameworks** for W-for-W PES schemes;
- iii) Lack of adequate **monitoring** tools and evaluation frameworks;
- iv) Lack of **awareness of woodland water benefits and of environmental effectiveness**;
- v) Insufficient information on **cost-effectiveness**, including on water-related and other associated benefits that woodlands provide (synergies & trade-offs)
- vi) **Non-pecuniary barriers**



- Variable nature of the environmental effectiveness of woodland, depending on local site, design and management factors;
- Lack of data to quantify the effect of woodland design and management factors across different typologies;
- Complexity of models to predict environmental effectiveness and need for expertise to apply them;
- Deficiencies of models, reducing confidence in predictions;
- Uncertainty over lag times for effectiveness;
- Uncertainty over potential negative impacts on water resources and how to estimate these.

## Participants' ranking of barriers to wider PES uptake :

- 1) Lack of adequate **financial incentives** for landowners to plant woodland in target locations (~60%)
- 2) Lack of adequate **governance frameworks** for W-for-W PES schemes (49%)
- 3) insufficient information on **cost-effectiveness**, including on water-related and other associated benefits that woodlands provide (synergies & trade-offs) (38%)
- 4) Lack of adequate **monitoring** tools and evaluation frameworks (36%)
- 5) Lack of **awareness of woodland water benefits** and of environmental effectiveness (32%)
- 6) **Non-pecuniary** barriers (6%)

## Participants' feedback:

- 1) Policy dimension/elements** (including enabling changes 'bottom-up')
- 2) Cultural/social enabling conditions**
- 3) Trust** (& importance of 2-way communication & of intermediaries)

Barriers highlighted fit under existing categories:

## 1) Policy dimension/elements (including enabling changes ‘bottom-up’)

- **Fits under:** ‘Lack of adequate **governance** frameworks for W-for-W PES schemes’;

## 2) Cultural/social enabling conditions

- **Fits under:** ‘Lack of adequate **governance** frameworks for W-for-W PES schemes’;

## 3) Trust (& importance of 2-way communication & of intermediaries)

- **Fits under:** ‘**Non-pecuniary** barriers’

Level:	UN/International	EU	National	Regional	Local	PESFOR-I
	River Commissions				Hydrological Response Units	
Water Systems	Whole River System/Riparian Regions					Hydrological Response Units
	River Basin District					
Barriers:			Tributary Basin District			
			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, I, P, R	B, D, I, P, R	B, D, I, P, R	B, D, I, G, R	B, D, I, G, R, S	

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

PESFOR-W CIG application (PESFOR-I) explicitly mentions addressing barrier: ✓





- **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, [recognising the importance of cultural/social enabling conditions and facilitating changes 'bottom-up'](#); 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.
- [Foster trust and good 2-way communication between stakeholder groups: role especially for intermediaries](#)

## Action to increase incentives & avoid perverse subsidies:

- **Governments, public & private investors:**
  - financial investment in natural capital is small both in absolute terms (~US\$78 to US\$143 billion per year - equivalent to around 0.1% of global nominal GDP), & relative to what is required to prevent further declines in the stock of natural assets

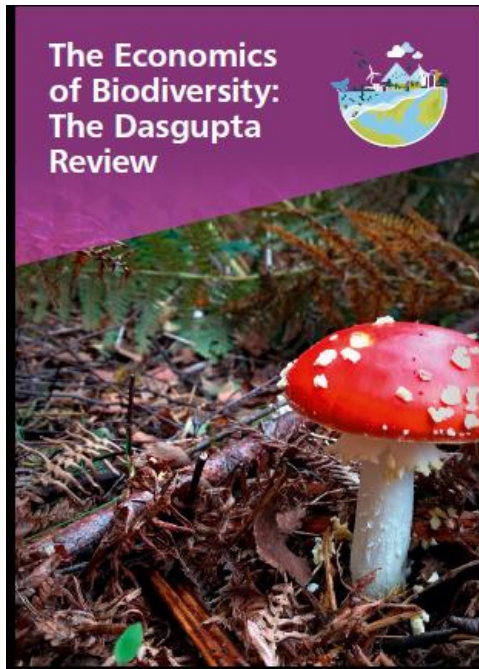
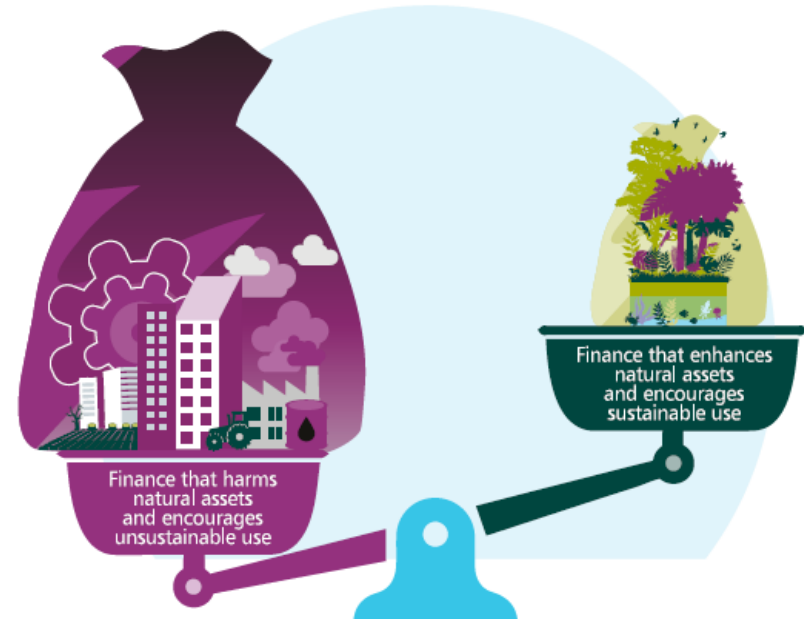


Figure 20.1 Balance of Nature Positive and Negative Financial Flows



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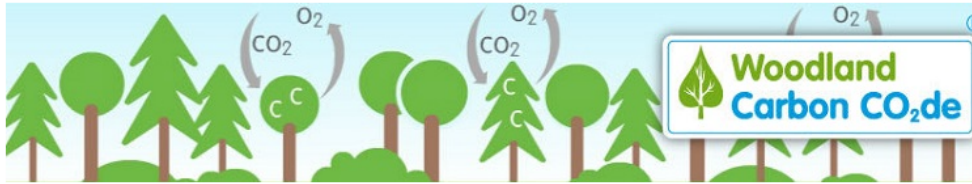
There is also an urgent need to tackle perverse subsidies, which in total are equivalent to some 5-7% of global GDP

## 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 W-for-W PES schemes, recognising the importance of cultural/social enabling conditions and facilitating changes ‘bottom-up’; 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.



<https://woodlandcarboncode.org.uk/>

## UK Woodland Carbon Code

The Woodland Carbon Code is the voluntary standard for UK woodland creation projects where claims are made about the carbon dioxide they sequester. Independent validation and verification to this standard provides assurance and clarity about the carbon savings of these sustainably managed woodlands.

[About the Code](#)

[Standard and Guidance](#)

### Projects on the UK Woodland Carbon Registry

As at 31 Mar 2019 in the UK:

**Number of projects:**

- Awaiting Validation: 79
- Validated: 187
- of which Verified: 70
- **Total: 266**

**Area of woodland (hectares):**

- Awaiting Validation: 9,134
- Validated: 8,261
- of which Verified: 2,404
- **Total: 17,394**

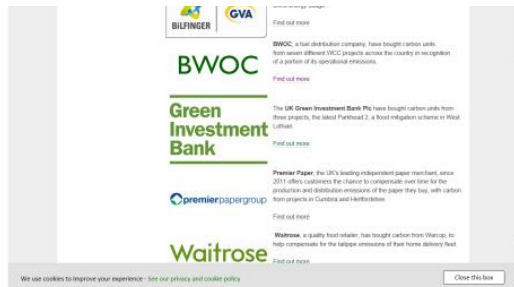
**Projected carbon sequestration over project lifetime (up to 100 years, Million tCO<sub>2</sub>e):**

- Awaiting Validation: 2.8
- Validated: 3.4
- of which Verified: 1.1
- **Total: 6.2**

[Projects](#)

[Purchased woodland carbon](#)

[Mark](#), [Rules of use](#).




### WCC News to your inbox

[Sign up for updates](#) from the Woodland Carbon Code.

[View previous e-alerts](#).

### Woodland Carbon Guarantee

[Find out more](#) about this developing scheme.

### WCC Leaflets

[Woodland Carbon Code Leaflet for Landowners](#) (pdf)

[A buyers' guide to Woodland Carbon Units](#) (pdf)



### 3) 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.

## 4) 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.



## 5) Lack of awareness of woodland water benefits & 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, & 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.





## 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.
- **Foster trust** and good 2-way communication between stakeholder groups: role especially for intermediaries