



# RETOUCH NEXUS

REsilienT water gOvernance Under climate  
CHange within the WEFE NEXUS

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*FutureMed WG3*  
*04.12.2024*



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## General Information

# RETOUCH NEXUS

**Coordinator:**

Technical University of Munich (TUM)

**Partners:**

13 (11 beneficiaries + 2 associated)

**Funding:**

3 million €

**Duration:**

Jan. 2023 – Dec. 2026 (4 years)

# Horizon Europe call

*HORIZON-CL6-2022-GOVERNANCE-01-06* Water governance, economic and financial sustainability of water systems

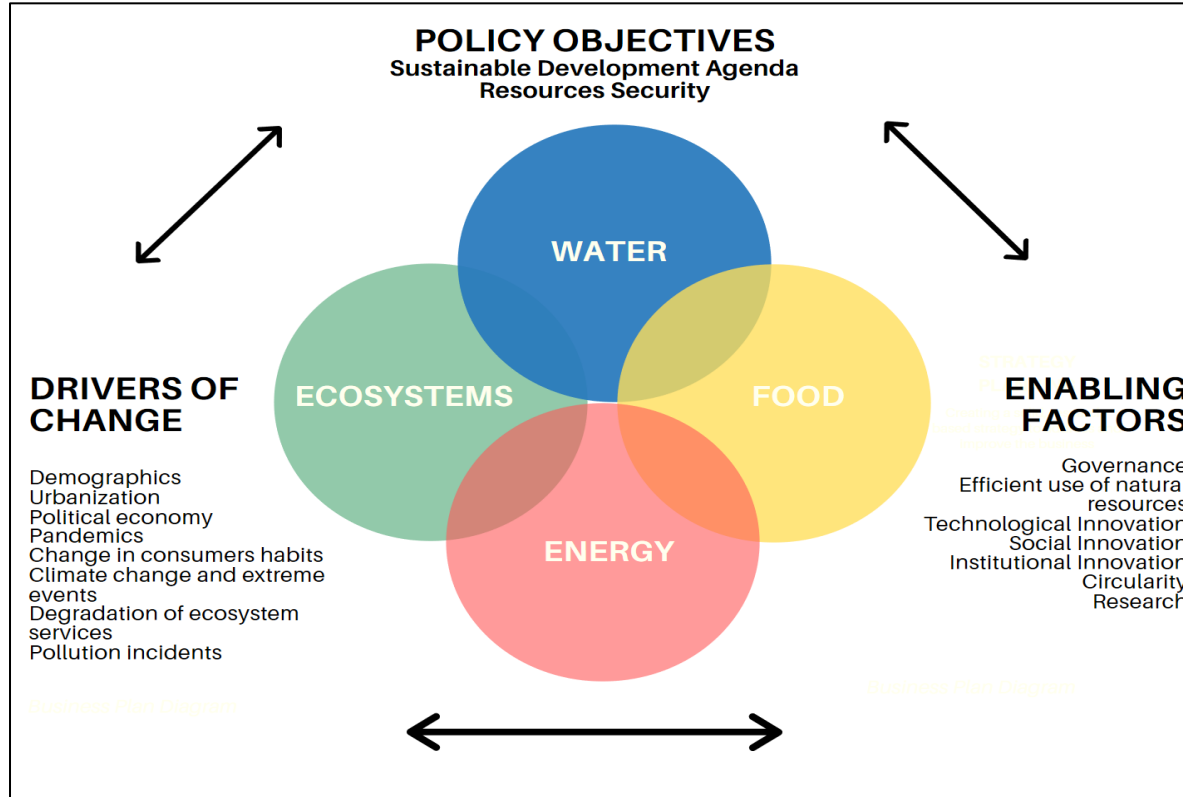
*HORIZON.2.6* - Food, Bioeconomy Natural Resources, Agriculture and Environment

RIA - Research and Innovation action

## ***Overall Goal***

Building on the **Water-Energy-Food-Ecosystems (WEFE) Nexus**,  
RETOUCH NEXUS aims to promote  
sustainable, inclusive and upscalable  
water governance practices.

# Defining the WEFE Nexus



● Countries of the consortium

● Case Study areas

○ Case Study areas

● Main water users



**Hoogheemraadschap Holland Noorderkwartier**

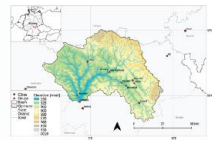


● Floods, heavy rainfalls, droughts, soil subsidence, fluctuations in salination of groundwater levels.

● Household, agriculture, industry



**Upper Main region**



● Floods, flash floods, droughts.

● Drinking water suppliers  
Ecology  
Energy producers  
Agriculture  
Forestry  
Recreation



**South Western Slovakia region**



● Extreme droughts, uneven precipitation, floods, rising groundwater levels, compaction of land, soil contamination, erosion and landslides.

● Agriculture, municipalities, environment



**WaterProof business park**

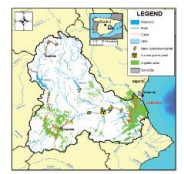


● Droughts and floods, heat stress

● Commercial companies, business park, agriculture, public water utility



**Jucar River Basin**



● Water scarcity, drought

● Municipalities, agriculture, energy

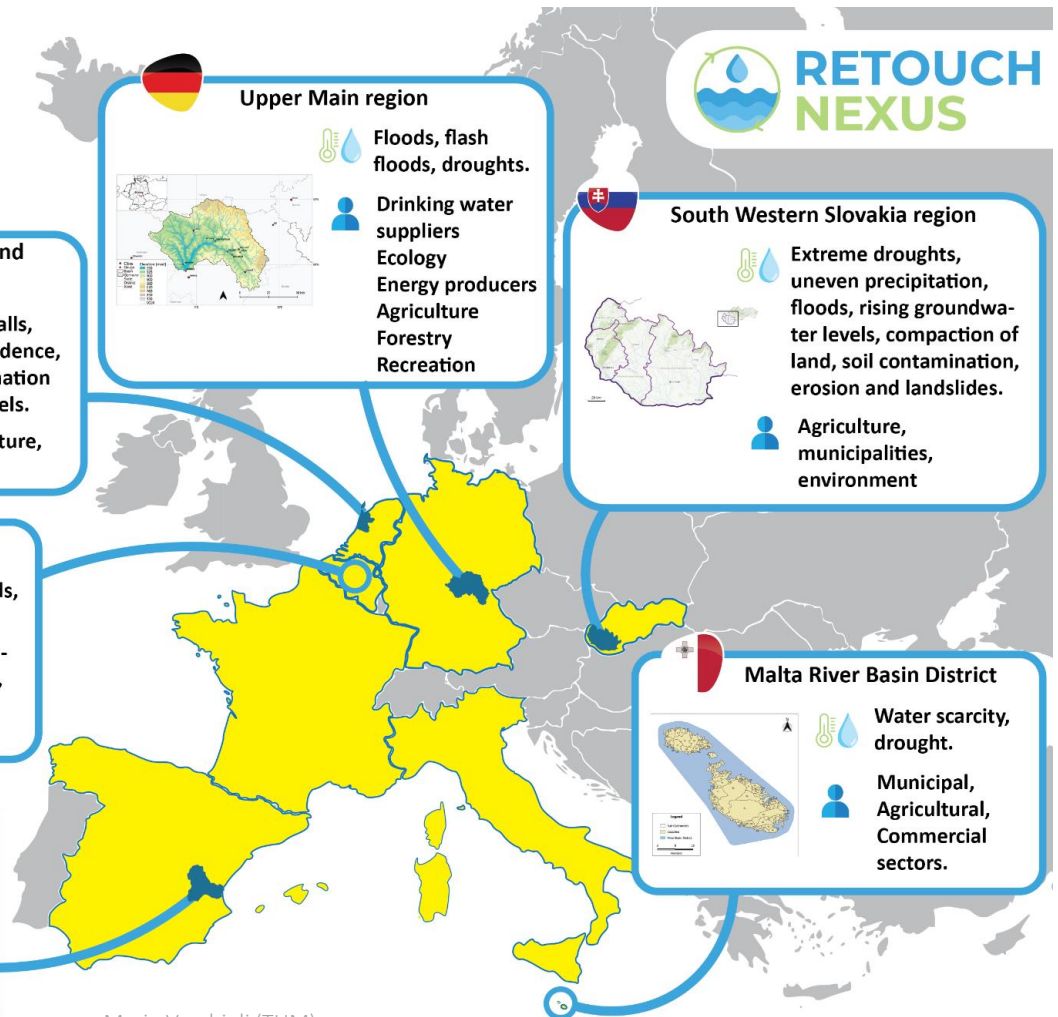


**Malta River Basin District**



● Water scarcity, drought.

● Municipal, Agricultural, Commercial sectors.



## TWIN GROUPS

Feedback, co-learning and exchange between CS

Group 1



River  
Basin/Sub-  
Basin focus

Group 2



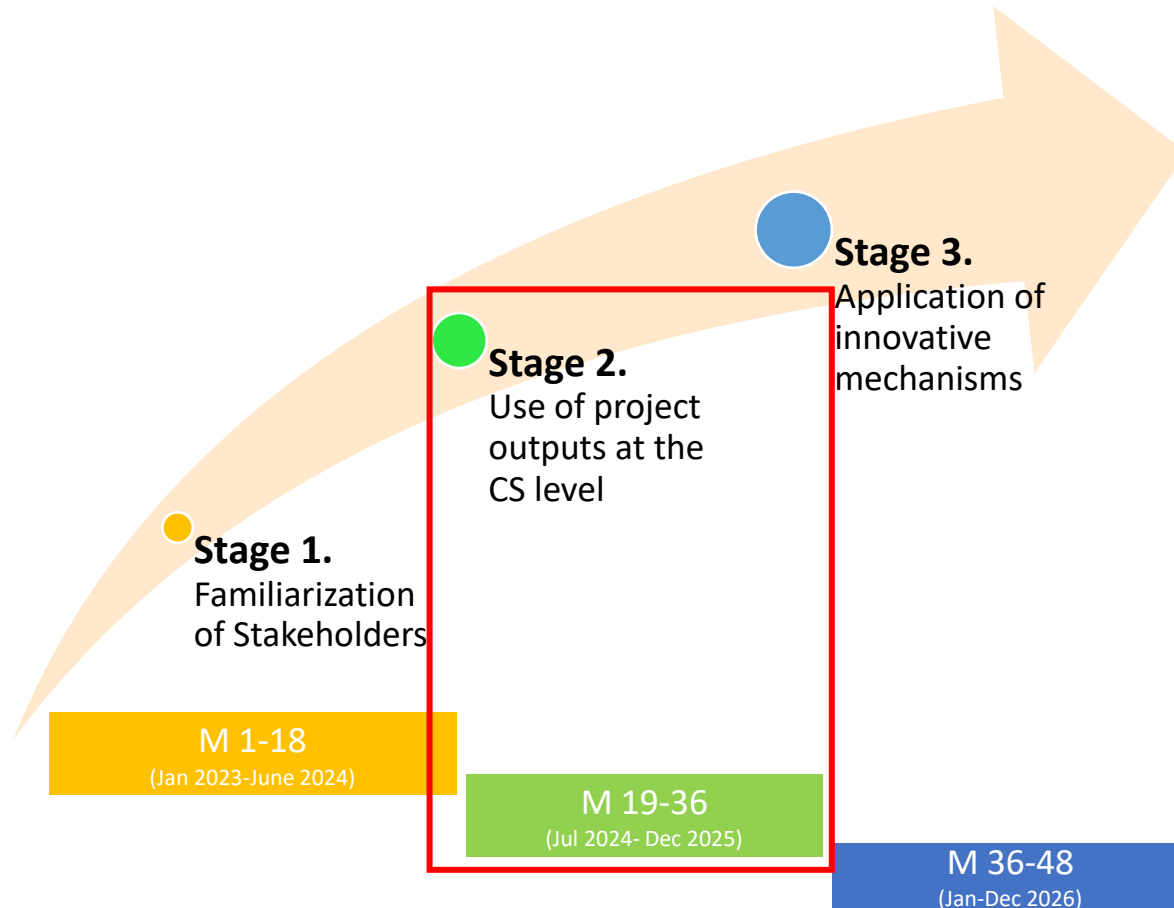
Sub-  
national/  
national  
level

Group 3



Focus on  
private  
sector

## 2. Project timeline and stages of CS activities



## So far


**9 stakeholder events** across 5  
Case Studies

**20 policymakers** engaged in  
adopting a WEF E approach  
for Water Governance

**5 water/river basin  
authorities** using engagement  
mechanism for their decision  
process



Group 1	2024					
	Jan	Feb	Mar	Apr	May	Jun
Germany		<ul style="list-style-type: none"> <li>In-person meeting between TUM and representatives from the German Upper Main government (22 Feb)</li> </ul>			<ul style="list-style-type: none"> <li>Online survey on coordination mechanisms for governmental and non-governmental stakeholders (Apr-May)</li> <li>Kick-off workshop with the Government of Upper Franconia (25 June)</li> </ul>	
Spain		<ul style="list-style-type: none"> <li>In-person workshop with all consortium partners during the GA in Valencia (19 Jan)</li> </ul>				

Group 1	2024					
	Jan	Feb	Mar	Apr	May	Jun
Germany		<ul style="list-style-type: none"> <li>In-person meeting between TUM and representatives from the German Upper Main government (22 Feb)</li> </ul>			<ul style="list-style-type: none"> <li>Online survey on coordination mechanisms for governmental and non-governmental stakeholders (Apr-May)</li> <li>Kick-off workshop with the</li> </ul>	
Spain						



Group 2	2024					
	Jan	Feb	Mar	Apr	May	Jun
Malta			<ul style="list-style-type: none"> <li>In-person Business Breakfast for introducing the project to the stakeholders (8 March)</li> </ul>		<ul style="list-style-type: none"> <li>In-person workshop on integrated Stakeholder Engagement (May 28-29)</li> </ul>	
Slovakia			<ul style="list-style-type: none"> <li>In-person workshop on resilient water governance under climate change within the WEFE nexus (April 19)</li> </ul>			

Group 2	2024					
	Jan	Feb	Mar	Apr	May	Jun

Malta

- In-person Business Breakfast for introducing the project to the stakeholders (8 March)



Slovakia

- In-person governance within the



Group 3	2024					
	Jan	Feb	Mar	Apr	May	Jun
Netherlands						<ul style="list-style-type: none"> <li>• Kick-off meeting with various stakeholders of the public sector (July 25)</li> <li>• Meeting with part of the consortium of the 'AquaConnect' project (July 25)</li> </ul>
Belgium			<ul style="list-style-type: none"> <li>• In-person workshops at VITO's water experience container with local employers, local government officials, and local farmers (several sessions)</li> </ul>			<ul style="list-style-type: none"> <li>• In-person workshop at VITO's water experience container with RETOUCH Nexus consortium partners (June 18)</li> </ul>

Group 3

2024

Jan

Feb

Mar

Apr

May

Jun

Netherlands












Belgium



- Kick-off meeting with various stakeholders of the public sector (July 25)
- Meeting with part of the consortium of the 'AquaConnect' project (July 25)



# Outlook on CS stakeholder engagement activities

Month CS	July	August	September	October	November	December	tba
Germany							
Spain							
Malta							
Slovakia							
Netherlands							
Belgium							



Awareness raising



Citizen engagement



Training



Workshop



Innovative engagement mechanisms

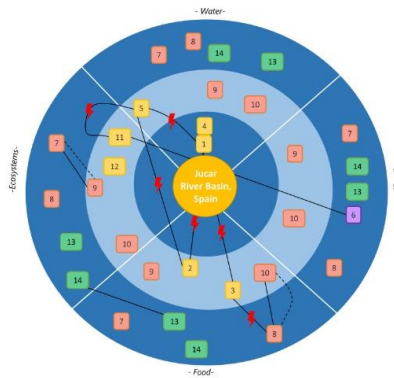


In person



Online

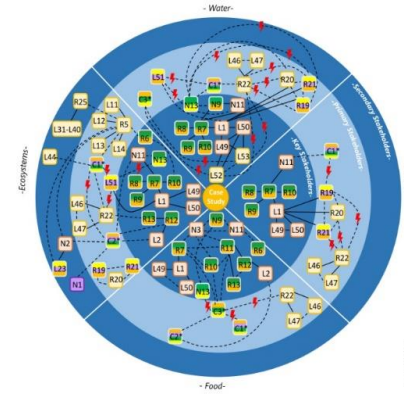
# D2.1: Mapping of stakeholders and engagement mechanisms in RETOUCH NEXUS case studies and at European level



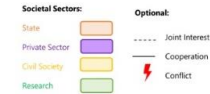
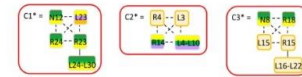
## Júcar River Basin, Spain

Stakeholders relevant for the case study

1. Júcar Basin Agency (CJA)
2. Júcar Users Union (USJU)
3. Acequia Real Del Júcar (ARJ)
4. Canal Júcar-Turia (CT)
5. Junta Central de Regantes de la Mancha Oriental (JCRMO)
6. Iberdrola
7. City of Valencia
8. City of Albacete
9. Government of the Valencian Region
10. Government of Castilla – La Manch
11. Xúquer Viu
12. AEMS Ríos con Vida
13. University of Valencia
14. Polytechnic university of Valencia (UPV)



## Upper Main, Germany



\* For clearer view not all stakeholders are displayed; for complete list of stakeholders see Annex. C1, C2, C3 summarize stakeholders that are broken down next to the Onion (see above). Stakeholders with cross-sectoral responsibilities are listed in each sector and appear multiple times (e.g. L50). Therefore, cross-sectoral connections are not illustrated.

## Identifying Stakeholders

- Stakeholder Mapping & Analysis
- Understand key roles in relation to WEFE Nexus
- Identify existing collaborations and potential conflicts
- Recommendations





# D2.2: Factsheets on Good Practices and Innovative Tools for Stakeholder Engagement and Public Participation

## 6. INCLUSIVE ENGAGEMENT MECHANISMS

To achieve sustainable and equitable development of the Water-Energy-Food-Ecosystems (WEFE) nexus, it is necessary to consider gender equality and inclusion of women, youth and vulnerable groups

Youth Gender Inclusion Equity Information Capacity  
Public participation Accessibility ecommunication



### GENDER

Gender-related stakeholder engagement mechanisms aim to ensure the active participation of both women and men in decision-making processes. Firstly, they play a vital role in promoting gender equality by actively involving women and men in decision-making processes. By empowering women as key stakeholders, these mechanisms contribute to breaking down gender barriers and creating a more inclusive governance framework. Secondly, gender-sensitive stakeholder engagement ensures that the specific needs, priorities, and perspectives of women and men are considered. This approach helps address gender disparities and promotes inclusive development by recognizing the diverse experiences and challenges faced by different genders. Thirdly, engaging a diverse range of stakeholders leads to more comprehensive and informed decision-making. By incorporating gender perspectives, water and WEFE governance efforts become more effective and sustainable, as they acknowledge the different roles, knowledge, and experiences of women and men in relation to water resources and the environment. Lastly, gender-related stakeholder engagement mechanisms promote equity and social justice by ensuring that marginalized or underrepresented groups, particularly women, have a voice and influence in shaping policies and decisions that directly impact them. The European Institute for Gender Equality (EIGE) provides information on gender stakeholder consultation. Gender stakeholders, such as women's organizations and gender experts, act as 'critical towers', watching over public-policy processes to ensure that governments fulfil their commitments to gender equality and are accountable for their gender equality commitments (EIGE).

Gender-sensitive consultations actively engage all genders, seeking their perspectives and incorporating their inputs into decision-making. These consultations promote gender equality, recognizing diverse needs and avoiding marginalization. They create inclusive policies, strategies, and projects addressing gender-specific challenges. Gender-focused working groups address disparities and advance gender equality in water and WEFE governance. They foster collaboration and develop gender-responsive approaches. Women's networks and organizations amplify women's voices, advocate for their rights, and contribute to gender-responsive policies.

Gender impact assessments understand differential impacts of governance decisions on women and men. They identify gender gaps and integrate considerations into policies, programs, and projects. This promotes gender equality and empowerment.

### DIMENSIONS OF GENDER-INCLUSIVE PARTICIPATION

- Disaggregated Gendered Data
- Focused Group Discussions and individual interviews
- Gender-related Task Force/Committees
- Gender-Responsive Budgeting
- Gender-Responsive Communication and Outreach
- Gender-Responsive Consultations
- Gender-Sensitive Surveys
- Gender Training and Capacity Building
- Gender Mainstreaming
- Mentorship and Leadership Programs
- Women's and Gender Forums



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## Key activities

- 40 good practices and innovative approaches
- Specific focus on Public Participation, Transparency, Gender, Youth and Social Inclusion
- Step by step approach, with practical information for case studies to adopt
- Database of good practices

## D2.2: Factsheets on Good Practices and Innovative Tools for Stakeholder Engagement and Public Participation

### 3. E-PARTICIPATION

E-Participation is the use of digital tools for public participation in a more:

Youth Inclusiveness Equity Information Transparency  
Innovation Awareness Accessibility

E-Participation is the use of digital tools for public, political participation. For monitoring purposes, E-Information is a form of accessible and relevant and encourage people to participate. Further, online deliberation and discussion create a more dynamic and interactive engagement between participants for agenda setting. This can be done through E-Campaigning, where mobilized online and potentially lead to E-Petitions with formal request. Consultation aids in the decision-making process through evaluation and budgets can be determined through E-Participatory Budgeting and votes mechanisms. Allow for wide range of immediate expression as well as fast (Andrianianto, 2022).

E-Participation allows for more inclusion and equity when web-based platform to access, and the digital platform is well designed, transparent, and initial designed. It can also achieve the

OECD principles of streamlining the process of inclusive engagement to prevent stakeholder consultation "fatigue" and lack of motivation by reducing the time and resources needed for broad participation. In addition, E-Participation can allow certain groups, such as women and minorities, to participate since in-person participation can create obstacles for some (OECD, 2015). E-Participation is a uniquely powerful tool in stakeholder engagement because it has the potential to link all societal sectors, from state to civil organizations and across local to global scales (Andrianianto, 2022).

While there is great potential to access a wide range of stakeholders and handle large amounts of information through electronic forms of participation, many people still cannot access the internet which can limit the kinds of stakeholders that can participate in e-activities. Digital divide is also worth noting, as web based platforms can exclude those who do not have access or knowledge on how to use them, thereby losing the original goals of E-Participation (Andrianianto, 2022). Awareness and convenience are other strengths of E-Participation, however if the platform is poorly designed, people may not be able to find what they need and participate in an effective manner (OECD, 2015).

### LIMITS

- Crowdsourcing
- Digital Citizen Engagement
- E-Campaigning
- E-Deliberation
- E-Information
- E-Participatory Budget
- E-Petitions
- E-Voting
- Online Consultations
- Online Deliberation
- Online Reporting and Monitoring
- Open Data Initiatives
- Social Media Engagement
- Virtual Town Halls

# Increase capacity of water stakeholders

## Training modules

- (including training on indicators) for policy and decision makers on innovative mechanisms and enabling conditions for inclusive stakeholder engagement and public participation

## Communities of Practice (CoPs)

- Capacity development of water professionals and other relevant practitioners through the setting up of Communities of Practice (CoPs) that allow peer-to-peer exchanges and knowledge sharing across case studies

## Capacity development and awareness raising activities

- to empower citizens in the case studies to meaningful participate and influence water governance

**Economic instruments and national policies for  
water governance in the EU**

# Economic instruments for water governance

### Water governance economic instrument - Insurance

**DESCRIPTION OF THE INSTRUMENT**

Insurance involves a widely used tool for risk management. In this system, the insurer takes on the risk in exchange for a premium. The insurer takes on the risk in exchange for a premium.

**CONTRIBUTION TO GOVERNANCE**

- Management of risk

**MAP SHOWING THE LEVEL OF IMPLEMENTATION**

Legend: High, Medium, Low, Not implemented

### Water governance economic instrument - Public-private partnerships (PPPs)

**DESCRIPTION OF THE INSTRUMENT**

Public-private partnerships (PPPs) are arrangements between public and private entities to provide a service or infrastructure. They offer a unique financial burden sharing mechanism.

**CONTRIBUTION TO GOVERNANCE**

- Efficiency and risk management

**MAP SHOWING THE LEVEL OF IMPLEMENTATION**

Legend: High, Medium, Low, Not implemented

### Water governance economic instrument - Subsidies

**DESCRIPTION OF THE INSTRUMENT**

Subsidies are financial contributions from the state to support economic activities. They can be direct or indirect.

**CONTRIBUTION TO GOVERNANCE**

- Support for economic activities

**EXAMPLES OF SUBSIDIES**

- Direct payments
- Indirect payments

**MAP SHOWING THE LEVEL OF IMPLEMENTATION**

Legend: High, Medium, Low, Not implemented

### Water governance economic instrument - Water Markets

**DESCRIPTION OF THE INSTRUMENT**

Water markets are systems where water is traded between different parties. They allow for more efficient allocation of water resources.

**CONTRIBUTION TO GOVERNANCE**

- Efficient allocation of water resources

**MAP SHOWING THE LEVEL OF IMPLEMENTATION**

Legend: High, Medium, Low, Not implemented

### Water governance economic instrument - Water charges

**DESCRIPTION OF THE INSTRUMENT**

Water charges are fees levied on water users to cover the costs of water supply and treatment. They are a key economic instrument for water governance.

**CONTRIBUTION TO GOVERNANCE**

- Cost recovery and investment in infrastructure

**MAP SHOWING THE LEVEL OF IMPLEMENTATION**

Legend: High, Medium, Low, Not implemented

### Water governance economic instrument - Non-monetary voluntary agreements

**DESCRIPTION OF THE INSTRUMENT**

Non-monetary voluntary agreements are arrangements between parties to solve water allocation issues. They are often used in drought situations.

**CONTRIBUTION TO GOVERNANCE**

- Efficient water allocation during droughts

**MAP SHOWING THE LEVEL OF IMPLEMENTATION**

Legend: High, Medium, Low, Not implemented

### Water governance economic instrument - Water charges

**CONTRIBUTION TO GOVERNANCE**

- Investment leverage
- Reallocation of water resources

**PATHWAYS FOR IMPLEMENTATION**

- Expanding evidence base
- Building institutional and legal security
- Public monitoring
- Clear, predefined rules

### Water governance economic instrument - Payments for Environmental Services (PES)

**DESCRIPTION OF THE INSTRUMENT**

Payments for Environmental Services (PES) are payments made to landowners or other stakeholders to encourage them to provide ecosystem services. They are a key economic instrument for water governance.

**CONTRIBUTION TO GOVERNANCE**

- Investment leverage
- Reallocation of water resources

**MAP SHOWING THE LEVEL OF IMPLEMENTATION**

Legend: High, Medium, Low, Not implemented

### Water governance economic instrument - Payments for Environmental Services (PES)

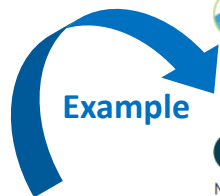
**CONTRIBUTION TO GOVERNANCE**

- Investment leverage
- Reallocation of water resources

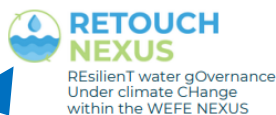
**PATHWAYS FOR IMPLEMENTATION**

- Establishing a well-defined legal framework
- Establishment of payment mechanisms
- Establishment of contracts and agreements defining property rights, with a clear understanding of who is selling and buying
- Understanding the objectives and financial capabilities of buyers and sellers
- Establishment of a robust system for monitoring and evaluation
- Identification of adequate funding and payment mechanisms based on performance
- Stakeholder engagement

# Economic instruments: Factsheet



Example



## -Water governance economic instrument- Payments for Environmental Services (PES)

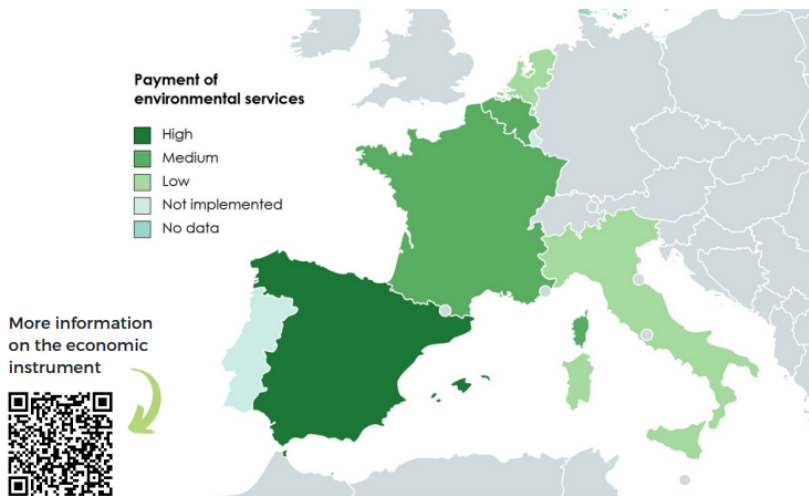
Ref. Ares(2023)6182417 - 12/09/2023



### DESCRIPTION OF THE INSTRUMENT

Mechanism designed to encourage the contributions of natural ecosystems in providing benefits to human societies. In PES schemes, **conditional payments** are offered to those who **actively contribute to the provision and maintenance of ecosystem services (ES)**. For instance, **water users** may be incentivized to adopt sustainable practices that protect water sources and enhance water quality. These payments **can originate from diverse sources**, such as government funding, private entities, or utilities.

### MAP SHOWING THE LEVEL OF IMPLEMENTATION



### CONTRIBUTION TO GOVERNANCE

- **Investment leverage:** Promote sustainable practices through economic opportunities and incentives.
- **Sustainability of water systems**
- **equitable water governance support:** Facilitates stakeholder negotiations and agreements on ecosystem service utilisation and compensation

### BARRIERS OR CHALLENGES FOR IMPLEMENTATION

- Inadequate funding (budgetary constraints)
- Unclear property rights
- Limited technical capacity to implement these programs
- Transaction costs: Fees and costs associated with buying & selling ES
- Lack of political support
- Resistance from landowners
- Willingness to pay among potential buyers (fairness)
- Crowding-out of intrinsic motivations to protect ecosystems
- Infringement of the polluter-pays principle: Insufficient pricing mechanisms that fail to accurately reflect the true cost of environmental damage

### PATHWAYS FOR IMPLEMENTATION

- Establishment a well-defined legal framework
- Establishment of payment mechanisms
- Establishment of contracts and agreements defining property rights, with a clear understanding of who is selling and buying
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# National strategies for alignment with EU policies



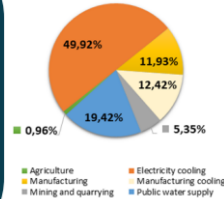
REsilient water gOVERnance  
Under climate CHange  
within the WEFE NEXUS

National water governance strategies and institutional settings: A WEFE nexus perspective

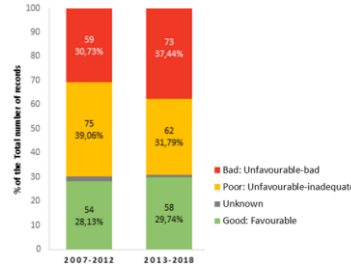
## -Germany-



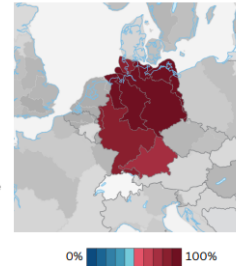
# of inhabitants	83.2 million
Surface area	353 296 km <sup>2</sup>
GDP per capita	117 pps [1]
Significant bodies of water (RBDs)	Elbe; Rhine; Weser; et al
Polity	federal state
Layers of government	central government; 16 federal states (Länder); 401 counties (294 Landkreise, 107 kreisfreie Städte); 11,054 municipalities
Legislative powers at the sub-national level	Yes
Decentralisation index	2.5 (1 out of 27) [2]
Water Exploitation Index plus (WEI)	5.46 % (2017) [3]



Water abstraction per sector in Germany - Source: EEA (2022)



Conservation status for habitats in 2007-2012 and 2013-2018 in Germany - Source: EEA (2021)



Water bodies with less than good ecological status in Germany - Source: EEA (2021)

27 factsheets & comparative analysis

### Main actors responsible for WEFE nexus relevant governance

#### NEXUS PILLARS

#### POLICY MAKING

#### POLICY EXECUTION

Nexus Pillar	Policy Making	Policy Execution
<b>Water</b>	Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB)	federal states; municipalities
<b>Energy</b>	Federal Ministry for Economic Affairs and Energy (BMWi)	federal states; municipalities
<b>Food</b>	Federal Ministry for Food and Agriculture (BMEL)	federal states; municipalities
<b>Ecosystems</b>	Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB)	federal states; municipalities



More information on WEFE nexus governance in the EU

- [1] EU purchasing power standard
- [2] <https://portal.cor.europa.eu/divisionpowers/Pages/Decentralization-Index.aspx>
- [3] The threshold for water scarcity is set at > 20%
- [4] <https://www.bmuv.de/en/download/national-water-strategy-2023>
- [5] <https://www.bmuv.de/en/download/federal-action-plan-on-nature-based-solutions-for-climate-and-biodiversity>

### WEFE NEXUS PERSPECTIVE

#### CHALLENGES

- Establish conservation objectives and measures for all nature protection sites
- Develop a reporting system to inform policy makers on the ecological and economic effects of policy decisions
- Ensure compliance with the Nitrates Directive, especially in intensive farming areas
- Inform stakeholders about the advantages of natural capital accounting

#### OPPORTUNITIES

- A National Water Strategy[4] was launched by the Federal Ministry of Environment in 2023, aiming to modernize water infrastructure
- A Federal Action Plan on Nature Based Solutions for Climate and Biodiversity[5] was published in 2022, to create synergies between nature and climate protection
- Investment priorities in Germany have shifted towards greater support to policies aimed at stimulating sustainability transitions in a wide set of economic sectors.
- In the 2014-2020 period, Germany received EU support for 37 LIFE projects (for nature and environment)

Example



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# RETOUCH NEXUS



<https://www.retouch-nexus.eu>

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München



adelphi



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AMSTERDAM



WaterClimateHub



Euroquality



hoogheemraadschap  
Hollands  
Noorderkwartier



GREENING  
THE ISLANDS



MINISTRY  
OF AGRICULTURE  
AND RURAL DEVELOPMENT  
OF THE SLOVAK REPUBLIC



De Watergroep  
WATER. VANDAAG EN MORGEN.

Regierung  
von Oberfranken

