RETOUCH NEXUS

REsilienT water gOvernance Under climate CHange within the WEFE NEXUS

# Economic and Financial Instruments

07.10.2024

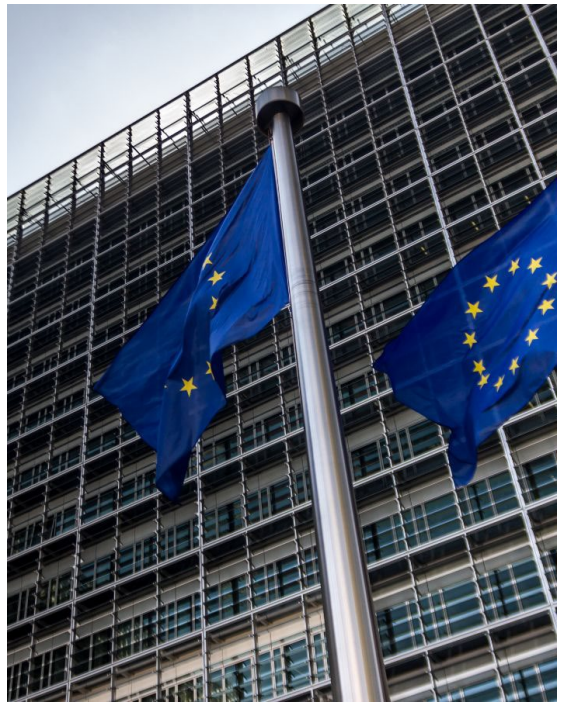
Adria Rubio-Martin (Universitat Politècnica de València) *adrumar@upv.es*

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or REA. Neither the European Union nor the granting authority can be held responsible for them.

# Why Economic and Financial Instruments?

## THE EU WATER FRAMEWORK DIRECTIVE (2000/60/EC)

- **Polluter Pays Principle:** Those who pollute water resources should bear the costs of managing and mitigating the pollution.
- **Water Pricing Policies:** Setting prices to promote efficient water use. This implies prices that reflect the true cost of water services, including environmental and resource costs.
- **Cost Recovery:** Cost of water services, including environmental and resource costs, must be recovered through pricing. This helps to incentivize efficient water use and fund necessary infrastructure and maintenance.
- **Economic Analysis:** Economic analysis to understand the trade-offs and impacts of different water management measures. This includes assessing the economic impacts of proposed measures and identifying cost-effective solutions.



# Yes… but why Economic and Financial Instruments?

1. Encouraging efficient use
2. Promoting Socially Relevant Allocation
3. Funding Infrastructure and Maintenance
4. Incentivizing Innovation
5. Reflecting negative externalities

# What is failing?

WFD objectives have not yet been fully reached **“largely due to insufficient funding, insufficient implementation [...] and insufficient integration of environmental objectives in sectoral policies”.**

European Commission (2019). Commission Staff Working Document: Executive summary of the Fitness Check of the Water Framework Directive, Groundwater Directive, Environmental Quality Standards Directive and Floods Directive. SWD(2019) 440 final.

Member States have not used the economic instruments that the WFD offers, despite the obligations for Member States to make available the necessary means for their implementation. **Instead of action**, there has been **a continuous reliance on exemptions**, such as time extensions, from achieving the objectives.

Pellegrini E, Dalmazzone S, Fasolino NG, Frontuto V, Gizzi P, Luppi F, Moroni F, Raggi M, Zanni G, Viaggi D. Economic Analysis under the Water Framework Directive: The State of the Art and Way forward. *Water*. **2023**; 15(23):4128. https://doi.org/10.3390/w15234128

Berbel, J., & Expósito, A. (2017). Economic challenges for the EU Water Framework Directive reform and implementation. European Planning Studies, 26(1), 20–34. https://doi.org/10.1080/09654313.2017.1364353

**2023**. The Water Framework Directive, the forgotten tool to fix Europe’s water crisis: State of play on implementation and enforcement of EU's main water law. EEB

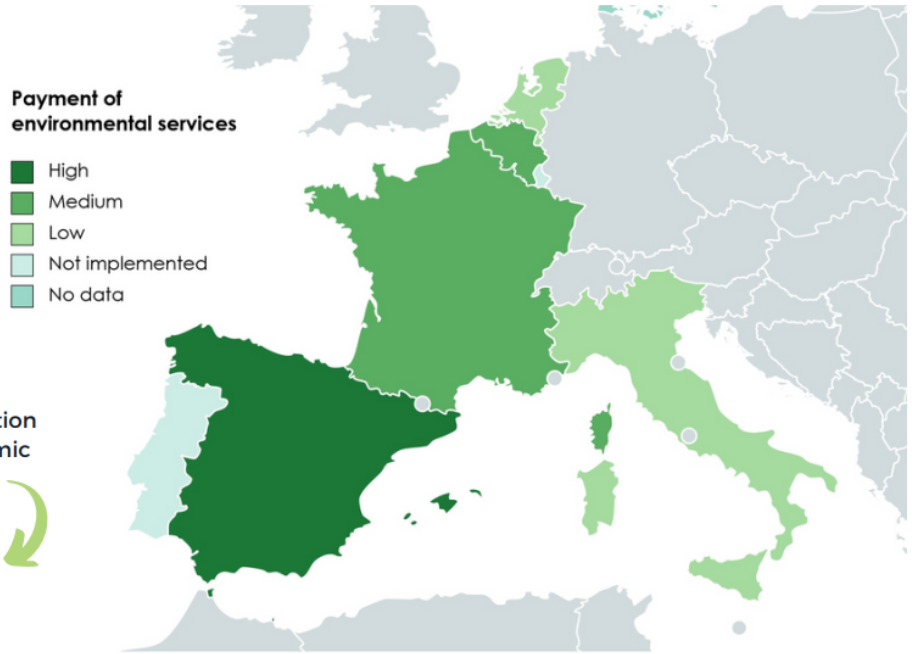
RETOUCH NEXUS
REsilienT water gOvernance Under climate CHange within the WEFE NEXUS

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

## 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




More information on the economic instrument

## 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
- Understanding the objectives and financial capabilities of buyers & sellers
- Establishment of a robust system for monitoring and evaluation
- Identification of adequate funding and payment mechanisms based on performance
- Stakeholder engagement

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or REA. Neither the European Union nor the granting authority can be held responsible for them.

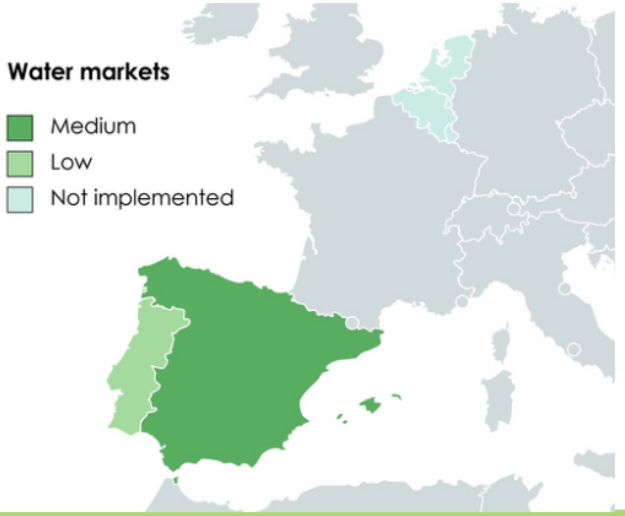
RETOUCH NEXUS
REsilienT water gOvernance Under climate CHange within the WEFE NEXUS

# -Water governance economic instrument-
# Water Markets

## DESCRIPTION OF THE INSTRUMENT

Set of different mechanisms that permit water rights holders to **voluntarily transfer their water rights** to other economic agents or users in exchange for financial compensation.
Water markets encompass various **exchange mechanisms**, which may be subject to varying degrees of **public intervention**, allowing the voluntary exchange of water resources between different parties. Through these mechanisms, the responsibility of **reassigning water resources** from the Administration to the users themselves will be abandoned, but without making changes in the distribution of property rights and/or concessions. The users would receive **signals of the scarcity of the resource** through the **market price** and, seeking their private benefit, they would use it optimally, resulting in the transfer of water to those uses of more value and an efficient destination of the resource.
**Water markets** serve as effective tools for managing water demand, especially in water scarcity. Additionally, these markets increase the **value of water** by reallocating it from uses that generate low economic value to more valuable ones without altering the overall availability of water. The resulting **welfare gains** can be significant. This effect is particularly beneficial during **drought situations**, as water markets contribute to **mitigating their economic impact**.

## MAP SHOWING THE LEVEL OF IMPLEMENTATION




More information on the economic instrument

## CONTRIBUTION TO GOVERNANCE

- **Effective valuation of water:** Can help reveal the value of water by providing an economic valuation based on supply and demand, value added form productive use.
- **Sustainability of water systems:** Create effective incentives to motivate users to use water resources in an efficient manner
- **Reduction of the economic impacts of drought**
- **Reallocation of water resources**

## BARRIERS OR CHALLENGES FOR IMPLEMENTATION

- **Administrative barriers:** Many restrictions and pre-requisites before a water exchange is approved.
- **Environmental concerns:** Water scarcity can cause negative externalities such as water pollution, groundwater salinization, loss of biodiversity and loss of ecosystem services.
- **Social Impacts:** Water markets can lead to adverse social consequences, such as reduced employment in areas involved in water selling.
- **Market Failures:** The presence of market failures can result in an inequitable distribution of market benefits.
- **Lack of Regulatory Framework:** Inadequate or unclear regulatory frameworks can hinder the proper functioning of water markets.
- **Infrastructure and Transaction Costs:** High infrastructure and transaction costs can limit the practicality of water markets.
- **Water Rights and Ownership Issues:** Complex water rights and ownership arrangements

## PATHWAYS FOR IMPLEMENTATION

- Transparency
- Environmental and social impact assessment
- Public consultation
- Third-party protection and administrative authorization
- Identification of water rights
- Legal framework that allows for the implementation of water markets

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or REA. Neither the European Union nor the granting authority can be held responsible for them.

RETOUCH NEXUS
REsilienT water gOvernance Under climate CHange within the WEFE NEXUS

# -Water governance economic instrument-
# Water charges

## DESCRIPTION OF THE INSTRUMENT

Water charges refer to **fees imposed on the utilisation of water**, encompassing expenses associated with the transportation and storage of water, as well as the economic value of the resource. These charges can take the form of **earmarked tariffs**, where the fees are directly allocated for specific purposes, or they can be in the form of **taxes**, where the revenue is not specifically designated for any particular use.

In Europe, water charges are **not determined through a market system**. Instead, an administrative procedure is followed. This procedure often does not include the **costs of maintaining the water infrastructure** needed to provide the service, nor does it consider the environmental and resource costs. This is especially noticeable in the **irrigation sector**, where there are widespread implicit subsidies due to **inadequate cost recovery**. As a result, the **charges imposed on water use** are not enough to cover the costs of the negative effects on the environment and resources. In cases where the cost recovery is higher, it usually reflects the ability of users to pay rather than the **impact on water withdrawals**.

## EXAMPLE OF CHARGES

- Payments and fees for the abstraction/discharge of (ground)water
- Water tariffs on water usage, with the aim of increasing the rates of cost recovery
- Charges for wastewater discharges
- Taxes on drinking water and sanitation
- Fines to discourage individuals, businesses, or industries from engaging in activities that lead to water pollution, wastage, or unauthorized water use

More information on the economic instrument

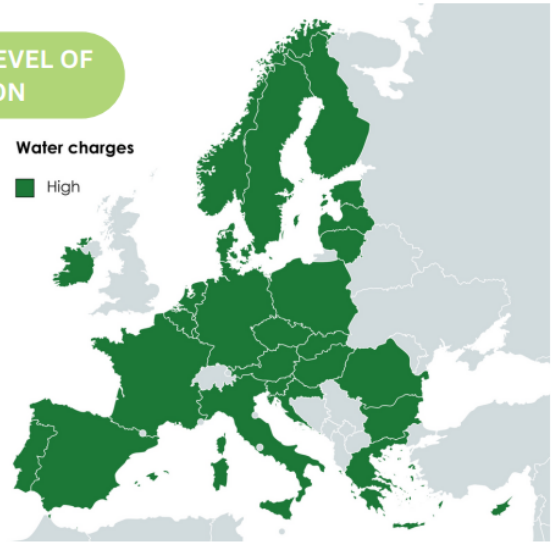
## CONTRIBUTION TO GOVERNANCE

- **Sustainability of water systems:** Water charges provide economic incentives for efficient water use.
- **Financial sustainability and cost recovery:** Water charges help ensure the financial sustainability of water management systems. By charging users for water services, the costs of water supply, treatment, distribution, and infrastructure maintenance can be recovered.

## BARRIERS OR CHALLENGES FOR IMPLEMENTATION

- Resistance from groups of interest and related transaction costs
- Willingness and ability to pay
- Unintended consequences can arise, including:
  - **Adverse impacts on agricultural income**
  - Widespread effects throughout the economy
  - **Redistribution of resources**, potentially affecting different sectors or social groups.

## MAP SHOWING THE LEVEL OF IMPLEMENTATION




## PATHWAYS FOR IMPLEMENTATION

- Enhancement of institutional capacities
- Ensuring effective enforcement of regulations and metering systems
- Supplement with decoupled subsidies to provide compensation for users who may experience negative effects

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or REA. Neither the European Union nor the granting authority can be held responsible for them.

https://retouch-nexus.eu/

More information on the economic instrument



| Degree of success | Low | Medium | High |
|---|---|---|---|
| | Not known | | |
| | | | |

| **Country:** Spain | | | | | | |
|---|---|---|---|---|---|---|
| **Type of instrument** | **Financial** | | **Business** | | **Economic** | **X** |
| **Subtype:** Water markets | | | | | | |

**Implementation:**

In the explanatory statement of Law 46/1999 it is stated that the reform law by which the water markets were introduced into the Spanish legal system intended to «promote efficiency in the use of water, to what is necessary to make the current regime more flexible through the new contract for the assignment of rights, which allows for the social optimization of the uses of such a scarce resource. In Spain there are two typologies:

1. **Temporary transfer of water rights:** Signed between users, implies the temporary transaction of water rights if both parts have already rights to use water and with some clearly defined limitations (not allowed transactions from non-consumptive to consumptive uses, no environmental harm, etc.)
2. **Water use rights clearinghouse:** Under declaration of aquifer overexploitation), the water use rights clearinghouses in the basin carry out public offers of acquisition and tra The acquisition of water use rights can be te can acquire rights over public waters, but al

| **Contribution to go** | | |
|---|---|---|
| **Effective valuation of water** | **X** | Water markets ca providing an econ demand, value ad |
| **Sustainability of water systems** | **X** | The objective of i to socially optimiz a scarce resource |
| **Pathways for imple** | | |
| **Requirements to implement the instrument** | | • Transparency<br>• Environmental and<br>• Public consultation |
| **Challenges to implement the instrument** | | 1. Low trading activity: Wat drought periods, and even t total water use.<br>2. Administrative barriers: N water exchange is approvec consultation, third-party pr add transaction costs and re |

| **Country:** France | | | | | | |
|---|---|---|---|---|---|---|
| **Type of instrument** | **Financial** | | **Business** | | **Economic** | **X** |
| **Subtype:** Payment for environmental services | | | | | | |

**Implementation:**

In France, PES programs are primarily implemented through agri-environmental schemes and other conservation initiatives. The most notable PES program in the country is the "Paiements pour Services Environnementaux" (PSE) scheme, which translates to Payments for Environmental Services. PSE is a voluntary program incentivizes farmers and landowners to adopt sustainable agricultural practices, protect natural resources, and enhance biodiversity. Under the PSE scheme, farmers and land managers can receive financial support from various sources, including government funds, European Union subsidies, and private organizations. The payments are typically provided in exchange for implementing specific environmental actions or maintaining land in an environmentally friendly manner. These actions may involve reducing chemical pesticide and fertilizer use, implementing wildlife-friendly practices, preserving wetlands, or creating buffer zones along watercourses. The specific payment amounts and eligibility criteria vary depending on the region, the environmental objectives, and the available funding. Payments may be based on the area of land enrolled, the level of environmental commitment, or the delivery of measurable outcomes. The funds for PES programs in France are primarily allocated through regional or national agri-environmental policies and programs.

RETOUCH NEXUS
REsilienT water gOvernance Under climate CHange within the WEFE NEXUS

# ECONOMIC INSTRUMENTS

## PAYMENTS FOR ENVIRONMENTAL SERVICES

### 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
- Understanding the objectives and financial capabilities of buyers & sellers
- Establishment of a robust system for monitoring and evaluation
- Identification of adequate funding and payment mechanisms based on performance
- Stakeholder engagement

## SUBSIDIES

### DESCRIPTION OF THE INSTRUMENT

**Financial tools to promote positive outcomes related to water resources**. Their goal is to encourage **responsible water usage**, **improve access to water**, and **support positive externalities** such as ecological flows. There are two main types of subsidies: Explicit and implicit subsidies. **Explicit subsidies** are more easily recognizable, including price support, direct payments, and subsidized loans. These are direct forms of financial aid aimed at helping individuals or organizations afford water-related expenses. **Implicit subsidies**, on the other hand, are less obvious and involve **indirect forms of support**. They can take the form of **reduced regulations**, **tax relief**, and **not fully recovering the costs of water services**.

Subsidies can **enhance positive outcomes**, **lower production costs**, and **increase the availability of water-related goods and services**. This can lead to a decrease in prices and other positive impacts. However, allocating too much water through subsidies can negatively affect the environment during water shortages. **Subsidies remain Europe's most commonly used economic tool for managing water**. Subsidies are **closely connected to funds provided by the European Union** (EU). However, specific water projects also require co-financing from national budgets and the beneficiaries' financial resources.

### MAP SHOWING THE LEVEL OF IMPLEMENTATION


### EXAMPLE OF SUBSIDIES

- Subsidized loans for irrigation modernization programs
- Structural Funds of the EU to support infrastructure building
- Subsidies to revitalize and renature water bodies (e.g. Slovak Recovery and Resilience Plan)
- Subsidies from Common Agricultural Policy to reduce the use of pollutants, increase water retention measures, land ownership consolidation etc.
- Rainwater collection subsidy in Luxemburg

### CONTRIBUTION TO GOVERNANCE

- Investment leverage
- Sustainability of water systems
- Management of water-related risks

### BARRIERS OR CHALLENGES FOR IMPLEMENTATION

- Failure to hold polluters responsible for the costs of pollution they cause
- Budgetary constraints
- If not well designed, leding to an increase in withdrawals.
- Issues with low effectiveness and cost-effectiveness.
- Complicated administration and bureaucracy
- Land ownership issues hinder investments
- Subsidies offering short-term fixes rather than long-term systemic solutions

### PATHWAYS FOR IMPLEMENTATION

- Cost-benefit analysis
- Design of complementary tools such as charges to limit water usage
- Clear conditions for applicants and transparent selection processes

## INSURANCE

### DESCRIPTION OF THE INSTRUMENT

**Insurance** involves paying a premium to ensure protection in case of a loss. Insurance is a widely used tool for **mitigating financial losses** that may result from unexpected events. In this system, the policyholder or insured individual pays a premium to the insurer in exchange for potential monetary compensation in case of a loss. By doing so, the insurer takes on and **spreads the risks** from multiple policyholders, making them easier to evaluate and handle. While **crop insurance** may not be a direct economic tool for water management, it could significantly address the motivations behind the **over-pumping** of aquifers during drought.

### CONTRIBUTION TO GOVERNANCE

- Management of water-related risks

### BARRIERS OR CHALLENGES FOR IMPLEMENTATION

- Willingness and ability to pay
- If subsidized: Budgetary constraints
- Infringement of polluter-pays principle

### MAP SHOWING THE LEVEL OF IMPLEMENTATION


### PATHWAYS FOR IMPLEMENTATION

- Assessement of willingness to pay and risk
- Target subsidies

## NON-MONETARY VOLUNTARY AGREEMENTS

### DESCRIPTION OF THE INSTRUMENT

**Voluntary agreements** are often negotiated between parties to solve water allocation issues. These agreements rely on truly voluntary participation, without using rewards, penalties, or other forms of regulated obligations, and on non-monetary incentives, unlike Payments for Ecosystem Services (PES).
**Voluntary and participatory methods** for reallocating water can be a more economical approach to meet the needs of temporary or permanent water reallocation. These methods are becoming more popular at local levels, like users' associations, and on a larger scale, such as drought steering committees.
**Innovative solutions** like green infrastructure offer opportunities for individual benefits and can be chosen voluntarily without involving financial transactions, especially when everyone involved ends up better off compared to other possible scenarios.
**In Europe**, where markets are uncommon, and monetary compensation is impractical in most cases, voluntary agreements are a popular approach to follow the polluter-pays principle.

### CONTRIBUTION TO GOVERNANCE

- Investment leverage
- Reallocation of water resources

### BARRIERS OR CHALLENGES FOR IMPLEMENTATION

- Low performance if incentives not properly defined
- Limited to win-win situations
- Technological, institutional and/or legal barriers

### MAP SHOWING THE LEVEL OF IMPLEMENTATION


### PATHWAYS FOR IMPLEMENTATION

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

## WATER MARKETS

### DESCRIPTION OF THE INSTRUMENT

Set of different mechanisms that permit water rights holders to **voluntarily transfer their water rights** to other economic agents or users in exchange for financial compensation.
Water markets encompass various **exchange mechanisms**, which may be subject to varying degrees of **public intervention**, allowing the voluntary exchange of water resources between different parties. Through these mechanisms, the responsibility of **reassigning water resources** from the Administration to the users themselves will be abandoned, but without making changes in the distribution of property rights and/or concessions. The users would receive **signals of the scarcity of the resource** through the **market price** and, seeking their private benefit, they would use it optimally, resulting in the transfer of water to those uses of more value and an efficient destination of the resource.
**Water markets** serve as effective tools for managing water demand, especially in water scarcity. Additionally, these markets increase the **value of water** by reallocating it from uses that generate low economic value to more valuable ones without altering the overall availability of water. The resulting **welfare gains** can be significant. This effect is particularly beneficial during **drought situations**, as water markets contribute to **mitigating their economic impact**.

### MAP SHOWING THE LEVEL OF IMPLEMENTATION


### CONTRIBUTION TO GOVERNANCE

- **Effective valuation of water:** Can help reveal the value of water by providing an economic valuation based on supply and demand, value added form productive use.
- **Sustainability of water systems:** Create effective incentives to motivate users to use water resources in an efficient manner
- **Reduction of the economic impacts of drought**
- **Reallocation of water resources**

### BARRIERS OR CHALLENGES FOR IMPLEMENTATION

- **Administrative barriers:** Many restrictions and pre-requisites before a water exchange is approved.
- **Environmental concerns:** Water scarcity can cause negative externalities such as water pollution, groundwater salinization, loss of biodiversity and loss of ecosystem services.
- **Social Impacts:** Water markets can lead to adverse social consequences, such as reduced employment in areas involved in water selling.
- **Market Failures:** The presence of market failures can result in an inequitable distribution of market benefits.
- **Lack of Regulatory Framework:** Inadequate or unclear regulatory frameworks can hinder the proper functioning of water markets.
- **Infrastructure and Transaction Costs:** High infrastructure and transaction costs can limit the practicality of water markets.
- **Water Rights and Ownership Issues:** Complex water rights and ownership arrangements

### PATHWAYS FOR IMPLEMENTATION

- Transparency
- Environmental and social impact assessment
- Public consultation
- Third-party protection and administrative authorization
- Identification of water rights
- Legal framework that allows for the implementation of water markets

## WATER CHARGES

### DESCRIPTION OF THE INSTRUMENT

Water charges refer to **fees imposed on the utilisation of water**, encompassing expenses associated with the transportation and storage of water, as well as the economic value of the resource. These charges can take the form of **earmarked tariffs**, where the fees are directly allocated for specific purposes, or they can be in the form of **taxes**, where the revenue is not specifically designated for any particular use.

In Europe, water charges are **not determined through a market system**. Instead, an administrative procedure is followed. This procedure often does not include the **costs of maintaining the water infrastructure** needed to provide the service, nor does it consider the environmental and resource costs. This is especially noticeable in the **irrigation sector**, where there are widespread implicit subsidies due to **inadequate cost recovery**. As a result, the **charges imposed on water use** are not enough to cover the costs of the negative effects on the environment and resources. In cases where the cost recovery is higher, it usually reflects the ability of users to pay rather than the **impact on water withdrawals**.

### EXAMPLE OF CHARGES

- Payments and fees for the abstraction/discharge of (ground)water
- Water tariffs on water usage, with the aim of increasing the rates of cost recovery
- Charges for wastewater discharges
- Taxes on drinking water and sanitation
- Fines to discourage individuals, businesses, or industries from engaging in activities that lead to water pollution, wastage, or unauthorized water use

### CONTRIBUTION TO GOVERNANCE

- **Sustainability of water systems:** Water charges provide economic incentives for efficient water use.
- **Financial sustainability and cost recovery:** Water charges help ensure the financial sustainability of water management systems. By charging users for water services, the costs of water supply, treatment, distribution, and infrastructure maintenance can be recovered.

### BARRIERS OR CHALLENGES FOR IMPLEMENTATION

- Resistance from groups of interest and related transaction costs
- Willingness and ability to pay
- Unintended consequences can arise, including:
  - **Adverse impacts on agricultural income**
  - Widespread effects throughout the economy
  - **Redistribution of resources**, potentially affecting different sectors or social groups.

### MAP SHOWING THE LEVEL OF IMPLEMENTATION


### PATHWAYS FOR IMPLEMENTATION

- Enhancement of institutional capacities
- Ensuring effective enforcement of regulations and metering systems
- Supplement with decoupled subsidies to provide compensation for users who may experience negative effects

## PUBLIC-PRIVATE PARTNERSHIPS (PPPS)

### DESCRIPTION OF THE INSTRUMENT

Public-private partnerships (PPPs) can be an effective means for governments to achieve better value for money and fund infrastructure investments and public service management.

These strategic alliances are typically characterized by **long-term contracts between public and private partners, with the private partner taking on responsibilities such as design, financing, construction, and operation of the infrastructure or service**. PPPs can enhance efficiency and risk management by combining competitive tendering and negotiation processes, making them particularly suited for large and complex infrastructure projects.

PPPs offer a **unique opportunity to attract investment for public infrastructure**, with the financial burden mainly assumed by the private sponsor, and public expenses spread out over the project's lifespan. By leveraging PPP's whole-life cost management and payment linked to service delivery, not asset provision, authorities can overcome short-term budget constraints.

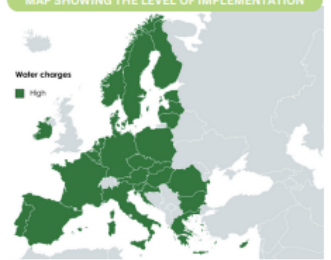
### CONTRIBUTION TO GOVERNANCE

- **Investment leverage:** Provide a distinctive chance to draw in investment for public infrastructure, where the primary financial responsibility rests with the private sponsor, and public costs are distributed over the duration of the project

### BARRIERS OR CHALLENGES FOR IMPLEMENTATION

- **Political and institutional factors:** Changes in political power, public opinion, and institutional capacity.
- **Funding and financing challenges**
- **Complex contractual arrangements and coordination** between public and private sector entities, which can be difficult to manage.
- **Risk allocation between the public and private sector partners** can be a contentious issue, as different parties have different risk preferences, which can lead to difficulties in determining the allocation of risk.
- **Management and monitoring of the performance of PPP** projects can be challenging, particularly in areas with weak institutional capacity or limited regulatory oversight.
- **Public resistance to PPP projects** can occur due to concerns over potential private sector profit motives, increased costs for users, and a lack of transparency and accountability in project management.

### MAP SHOWING THE LEVEL OF IMPLEMENTATION




### PATHWAYS FOR IMPLEMENTATION

- Establishment of regulatory frameworks that specifies the roles and responsibilities of the public and private partners, as well as the relevant procurement and contract management processes.
- Strong political support and institutional capacity
- Clear lines of authority and communication channels between public and private sector partners.
- Stakeholder engagement and participation
- Effective contractual arrangements to ensure that the rights and obligations of each partner are clearly defined.

RETOUCH NEXUS

# Any questions?

Thank you!

**Adria Rubio-Martin**
adrumar@upv.es

www.retouch-nexus.eu
LinkedIn: @RETOUCH NEXUS HEU
X: @RETOUCH NEXUS HEU