



SEMINAR INNOVATIVE WATER GOVERNANCE PRACTICES - INSIGHTS FROM HORIZON EUROPE PROJECTS

7 October, 2024



9:30 AM - 12:00 PM

With the support of:



Inviting authorities:



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Innovative water governance practices Insights from Horizon Europe projects

Seminar

INBO General Assembly 2024 October 7th 2024 Bordeaux



Co-funded by
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and Innovation



Seminar aims

Part of event series organised jointly with GOVAQUA and EUROPE-INBO, with contributions from InnWater and RETOUCH NEXUS Horizon Europe projects

Active engagement with the INBO river basin management community to advance sustainable and equitable water governance in Europe

2023: Workshop in Valencia identifying innovative water governance practice

2024: Seminar in Bordeaux on first findings of innovative water governance practices and assessing water governance

2025: Workshop on transition pathways to sustainable and equitable water governance in Europe, final good practices presentations

2026: Seminar on lessons learned from Living Labs of water governance innovations, final recommendations

Agenda

9.30 – 9.40 Welcome and seminar aims

Suvi Sojamo, Project Manager, GOVAQUA

9.40 – 9.50 Reflections from previous session in Valencia 2023 and online survey

Francois-Xavier Imbert and Yannick Pochon, GOVAQUA

09.50-10.55 Innovative water governance practices

Setting the scene in EU context: Water resilience is built with better water governance, Suvi Sojamo, GOVAQUA

- Water-allocation and eflows, Josselin Rouillard, GOVAQUA
- Economic and financial instruments, Adria Martin, RETOUCH NEXUS
- Social innovation, Julie Magnier, InnWater
- Citizen engagement, Alice Jaraiseh, InnWater
- Digital solutions, Virginie Keller, GOVAQUA

10.55 – 11.10 Coffee break

11.10 – 11.50 Assessing water governance – introducing the GOVAQUA Assessment tool

Joanne Vinke-de Kruijf & Suvi Sojamo, GOVAQUA

11.55 – 12.00 Closing remarks and next steps

Suvi Sojamo

Three Horizon Europe projects tackling water governance



- 1 February 2023- 31 January 2027
- 12 Partners
- 3 million €
- Multi-method case-study analysis
- 6 Living Labs

Main objective: GOVAQUA identifies, further develops and validates innovative governance approaches to accelerate the transition toward sustainable and equitable water use in Europe



- 1 March 2023- 28 February 2026
- 13 Partners
- 2,8 million €
- 5 Pilot Sites
- 14 replication assessment sites

Main objective: Promoting social INNOvation to renew multi-level and cross sector WATER governance



- 1 January 2023- 31 December 2026
- 13 Partners
- 3 million €
- 6 pilot case studies
- WEF Nexus

Main objective:

Building on the WEF Nexus, RETOUCH NEXUS aims to promote robust, integrated, sustainable, inclusive and upscalable water governance practices.

GOVAQUA 2024 Seminar: Innovative water governance practices - Insights from Horizon Europe projects

Number of participants: 70

Wooclap session I

 I. What country are you from?

29 respondents



 2. Which organization are you from?

39 respondents



Government and public agencies (e.g. national, regional, local; water and river basin managers, EU institutions)



21 votes

Private sector (e.g. agriculture, forestry, tourism, water energy and transport; finance and investment; Insurance, consultants)



1 vote

Civil society (e.g. citizens and communities, NGOs, educational institutes, water and nature associations, landowners)



6 votes

Research and academia (e.g. international, national, regional, local;



9 votes

Communities of practice (e.g. governance implementing actors, water and river basin managers, researchers, water associations, citizens)



2 votes



3. What type of innovative water governance practices are you interested in?

3 correct answers
out of 32 respondents



Legal or regulatory



6 votes

Participatory or collaborative



15 votes

Economic or financial



3 votes

Digital solutions



5 votes



Open answer



3 votes

Legal or regulatory - Comments **2**

Legal

Despite I am working in legal and policy direction, I am interested in economic mechanisms and digital solutions

Participatory or collaborative - Comments 9

- We are working i'm forestinga binacional
- To find partners for future projects
- We look into organizational Innovation and change of RBOs.
- Communication and awareness tools
- Indigenous citizens ngo participation
- Water user and community level engagement
- Transboundary ecosystem collaboration
- Transboundary collaboration
- My field of expertise

Economic or financial - Comments **1**

Water users must pay to the use and pollution of water

Digital solutions - Comments **3**

Satellite and remote-sensing data, data sharing

New observations, new data, new applications!

Numeric twins

Open answer - Comments **1**

Legal and regulatory and also economic financial and digital solutions

Reflections from previous session in EUROPE-INBO Conference in Valencia 2023

- A joint GOVAQUA & WaterGovernance2027 Synergy Group event
- Workshop in Valencia identifying innovative water governance practice, enabling the conditions for effective dialogue, knowledge sharing and collaboration among researchers and river basin management community, advancing innovative water governance in Europe
- 70 participants engaged in peer-to-peer feedback and discussions, utilizing EU maps to record water governance challenges and solutions
- This interactive "post-it" session enabled participants to identify key areas for innovative governance approaches such as legal frameworks, participatory approaches, economic instruments and digital water data systems.
- The ongoing online survey continues to collect good practices of innovative water governance



Survey highlights (15 full descriptions, 40 examples recorded)

Themes most frequently represented in forms during first round of case study collection:

1. **Integration of data and tools:** successful water governance relies on integrating diverse data sources and using advanced tools like AI and geospatial data.
2. **Stakeholder engagement:** effective governance depends on collaboration among government, local communities, and private investors.
3. **Knowledge-based management:** promoting knowledge-based decision-making and active participation is key.
4. **Economic and environmental balance:** Projects must balance economic growth with environmental sustainability and fair distribution of costs and benefits.
5. **Adaptive regulations:** Combining existing regulations with new adaptive measures enhances effectiveness.
6. **Continuous engagement and transparency:** ongoing stakeholder collaboration and transparent communication are essential for success.

Setting the scene for innovative water governance in the EU context

Europe is increasingly experiencing severe droughts and floods due to climate change, and despite decades of efforts to curb pollution, the health of water ecosystems continues to decline

- **Water resilience is rising on the EU agenda**

Water resilience consists of the capacity of our socio-ecological systems to manage with change—either by resisting, adapting, or transforming in response to it

Water governance is a critical enabling factor for water resilience, i.e., regulatory and policy frameworks and their implementation, collaboration among different sectors and actors, information sharing, and monitoring and evaluation, across sectors, and at multiple levels from local to national to regional and international

Policy brief: Water resilience is built with better water governance

- The existing water governance instruments, approaches, and arrangements in place in Europe need to be carefully evaluated, whether they serve the purpose of enhancing water resilience
- The three projects of the WaterGovernance2027 Synergy group have identified cutting-edge governance practices that can support water resilience, with EU-wide scaling



WATERGOVERNANCE2027 SYNERGY GROUP | WATER RESILIENCE IS BUILT WITH BETTER WATER GOVERNANCE | 24.6.2024

Water resilience is built with better water governance

Europe is increasingly experiencing severe droughts and floods due to climate change, and despite decades of efforts to curb pollution, the health of water ecosystems continues to decline. Addressing water resilience should be a priority for the new European Parliament, the new Commission, and the Member States. Water resilience consists of the capacity of our socio-ecological systems, especially aquatic ecosystems and the communities that rely on high-quality and sufficient water supplies, to manage change—either by resisting, adapting, or transforming in response to it.

Strengthening of Europe's water resilience requires improved water governance. The institutional frameworks of today and the interaction between different sectors and actors have to be enhanced as the use, development and protection of waters demand our careful consideration. Recent research has identified governance practices and innovative instruments, approaches and arrangements that can support water resilience, with EU-wide scaling up potential.

Key messages

- Water resilience is critical for the core aims of the EU. Water should be a strategic priority in the work of the new European Parliament, the Commission, and the Member States.
- Water resilience requires a cross-sectoral regulatory approach. More attention should be paid to water use and impacts in the agriculture, industry and energy production sectors and their water-intensive value chains to reach the Water Framework Directive's water status objectives and to advance systemic adaptation to climate change. Regulation should be able to impose requirements not only on new but also on existing activities impacting waters.
- Water resilience is founded on collaboration between the public sector, private sector, civil society and research and education. Participatory and collaborative approaches support vertical integration across multiple levels of governance and horizontal coherence and coordination across policy sectors. Power and capacity of actors, diversity of knowledge systems and coordination across jurisdictional and geographical boundaries are critical factors in their effectiveness. Social innovation and digital solutions facilitate data exchange, streamline decision-making, and promote inclusive participation from all stakeholders.
- Water resilience is best financed with a diversity of funding sources, consolidating water charges and tariffs that incentivise efficient water use, and leveraging private finance through public-private partnerships or blended finance solutions.
- Increasing Europe's water resilience requires reflective approaches, such as greater use of monitoring and evaluation of policies and their implementation. Incorporating the trade-offs and synergies among water, food, energy and ecosystems in monitoring and evaluation enable better understanding of the impacts of management decisions. Commonly agreed indicators, supporting data, and the use of open and accessible digital platforms can improve the flow of information to a wide range of decision-making actors including the wider public. It can also help holding decision makers accountable, and raise awareness, acceptance, and uptake of more sustainable water use and management practices.

Key messages I

Water resilience requires a cross-sectoral regulatory approach

- Attention needed to water use and impacts in the agriculture, industry and energy production sectors and their water-intensive value chains to reach WFD objectives and to advance systemic adaptation to climate change
- Regulation should be able to impose requirements not only on new but also on existing activities impacting waters

Water resilience requires new economic and financing instruments

- It is best financed with a diversity of funding sources, consolidating water charges and tariffs that incentivize efficient water use, and leveraging private finance through public-private partnerships or blended finance solutions

Key messages II

Water resilience is founded on collaboration between the public sector, private sector, civil society and research and education

- Participatory and collaborative approaches support vertical integration across multiple levels of governance and horizontal coherence and coordination across policy sectors

Key messages III

Water resilience requires reflective approaches, such as greater use of monitoring and evaluation of policies and their implementation

- Incorporating the trade-offs and synergies among water, food, energy and ecosystems in monitoring and evaluation enable better understanding of the impacts of management decisions
- Commonly agreed indicators, supporting data, and the use of open and accessible digital platforms can improve the flow of information to a wide range of decision-making actors including the wider public
- Accessible digital platforms help holding decision makers accountable, and raising awareness, acceptance, and uptake of more sustainable water use and management practices

Policy brief: Building water resilience : Towards better implementation of ecological flows and water allocation in Europe



Building water resilience: towards better implementation of ecological flows and water allocation in Europe

The importance of building water resilience is becoming more and more clear to politicians and citizens as Europe is facing another summer of severe droughts leading to disruptions of water supply, damages to crop production and severe water stress in vulnerable aquatic ecosystems.

Strengthening Europe's water resilience requires better strategies to tackle water scarcity and droughts, which are being intensified by climate change. The EU Biodiversity Strategy 2030 and the EU Climate Adaptation Strategy under the European Green Deal have set priorities to urge Member States to take action. These EU strategies ask EU Member States to strengthen the implementation of ecological flows and to improve water allocation systems.

European research delivers key insights on the design and implementation of regulations being used for water allocation and ecological flows in different countries and highlights areas where actions need to be strengthened.

Key messages

- Regulatory frameworks for ecological flows should be fully elaborated and implemented, incorporating provisions for defining, implementing and monitoring ecological flows in national water policy and river basin management plans.
- A common understanding of the role of water allocation in the Water Framework Directive should be developed and regulatory barriers for reallocating water addressed. Lessons can be learned from European countries with more advanced water allocation decision-making frameworks, such as Spain, France and England.
- Comprehensive strategies are needed to address trade-offs with sectors when implementing ecological flows and planning water allocation. More attention should be paid to stakeholder engagement in planning and implementation, to coordination with sectoral planning processes and compensation mechanisms for water users.
- Knowledge and information systems must be strengthened to improve the definition and implementation of ecological flows and decision making for water allocation.
- Resources of authorities for monitoring and enforcement and legal and financial deterrents on non-compliance with water permit conditions must increase.



Building water resilience: towards better implementation of ecological flows and water allocation in Europe

Josselin Rouillard, Eleftheria Kampa, Jack Tarpey - Ecologic Institute

Penttilä, O., Belinskij, A., Junjan, V. - SYKE

Díaz, E., Berbel, J. – Uni. Cordoba

Molle, F. - IRD

Ionescu, C. – WWF Romania



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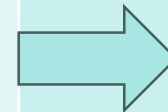
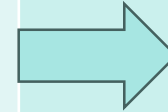
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Ecological flows and water allocation: Two building blocks for water resilience

Technical concept

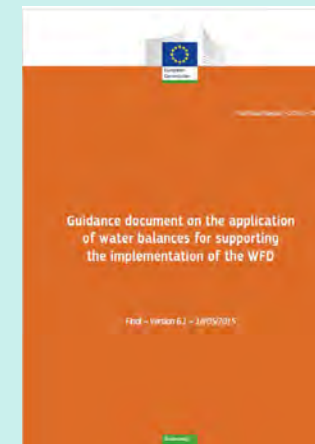
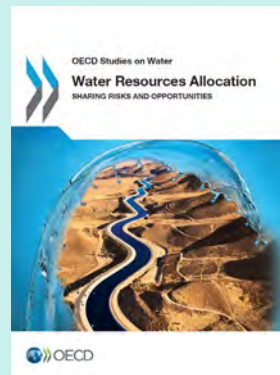
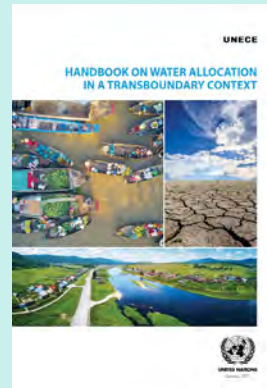
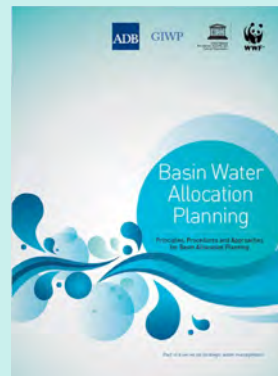
- **Ecological flow (eflow)** is the amount of water required for the aquatic ecosystem to continue to thrive and provide the services we rely upon.
- **Water allocation** mechanisms define who is allowed to access water, how much may be taken and when, how it must be returned, and the conditions attached to the use of the water.



Policy context

- The **EU Biodiversity Strategy 2030** calls on Member States to review water abstraction and impoundment permits to implement ecological flows in order to achieve good water status as required by the **Water Framework Directive**
- The **EU Climate Adaptation Strategy** specifically points towards the need to improve the use of water-permitting and allocation systems to mitigate climate-driven water scarcity and drought impacts
- Upcoming non-legislative **Water Resilience** initiative

An increasing level of interest

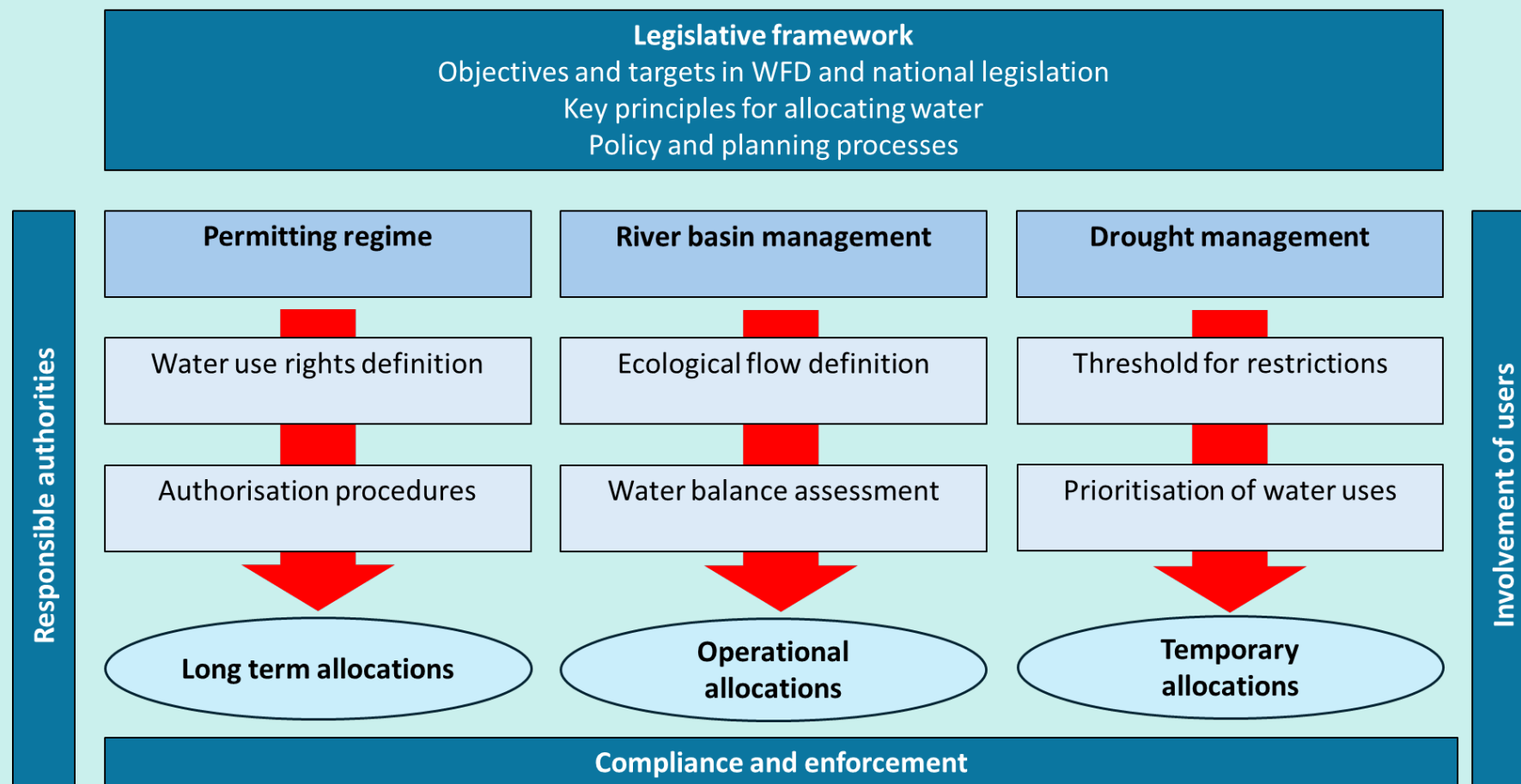


GOVAQUA research on legal and regulatory approaches

- Reviews how legal and regulatory regimes for water allocation and ecological flows are designed and implemented in six European countries, identifying **implementation challenges** and **innovative practices**
- So far, national review of **six European countries**



Legal and regulatory framework for water allocation and eflows



Some observations

- In several EU countries, the **legal and policy basis for defining and implementing eflows is still not sufficiently elaborated**, with a lack of eflows provisions under national water acts and RBMPs, and a lack of regulatory mechanisms to revise the environmental conditions of water use permits
- **A common understanding of the role of water allocation in the Water Framework Directive (river basin management) should be developed** and regulatory barriers for reallocating water addressed.
- **Stakeholder engagement especially should be further institutionalised** in different steps of the regulatory framework for permitting, planning and enforcing eflows and water allocations.
- **Knowledge and information systems must be strengthened**: link between eflows and ecological response, surface water – groundwater interaction, increasing impact of climate change, robust water balances, etc.
- **Much stronger focus is needed on enforcement and deterrents on non-compliance**

GVOAQUA: state of play and next steps

- Summer 2024: Policy brief and deliverables presenting national reviews



- 2025: reviews of good practice

Good practice cases on ecological flows

Case 1.1 Priorisation of ecological minimum flows (Austria)

Case 1.2 Hands-off flows (England)

Case 1.3 Public access on ecological flow system (Spain)

Good practice cases on water allocation

Case 2.1 User based allocation in agriculture (France)

Case 2.2 Quantitative water management (PTGE/PGRE) (France)

Case 2.3 Conjunctive management of surface water and groundwater

**Any other
suggestions
welcome!**

Thank you for your attention

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Figure 3 Instruments identified in the reviewed countries that are relevant for water allocation

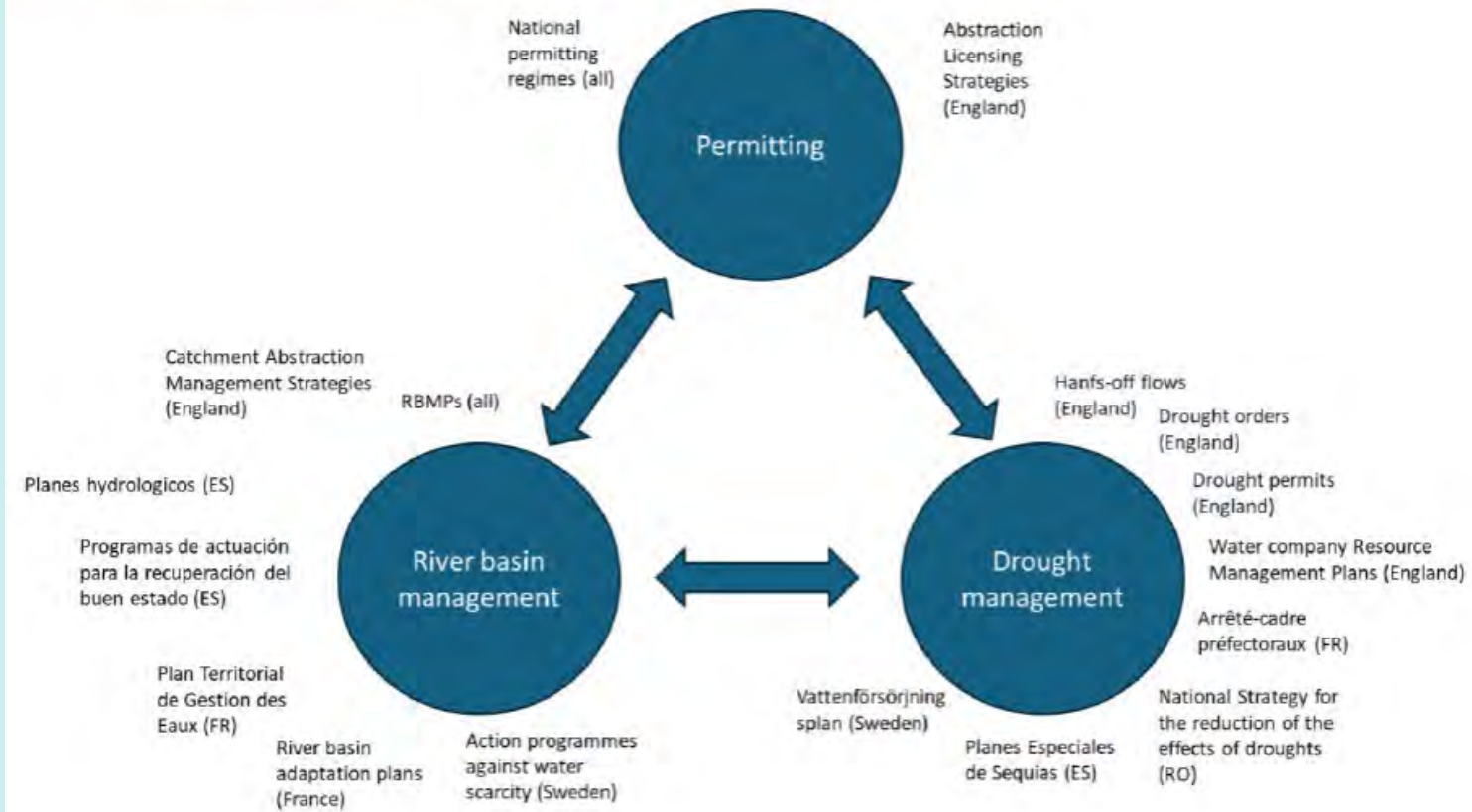
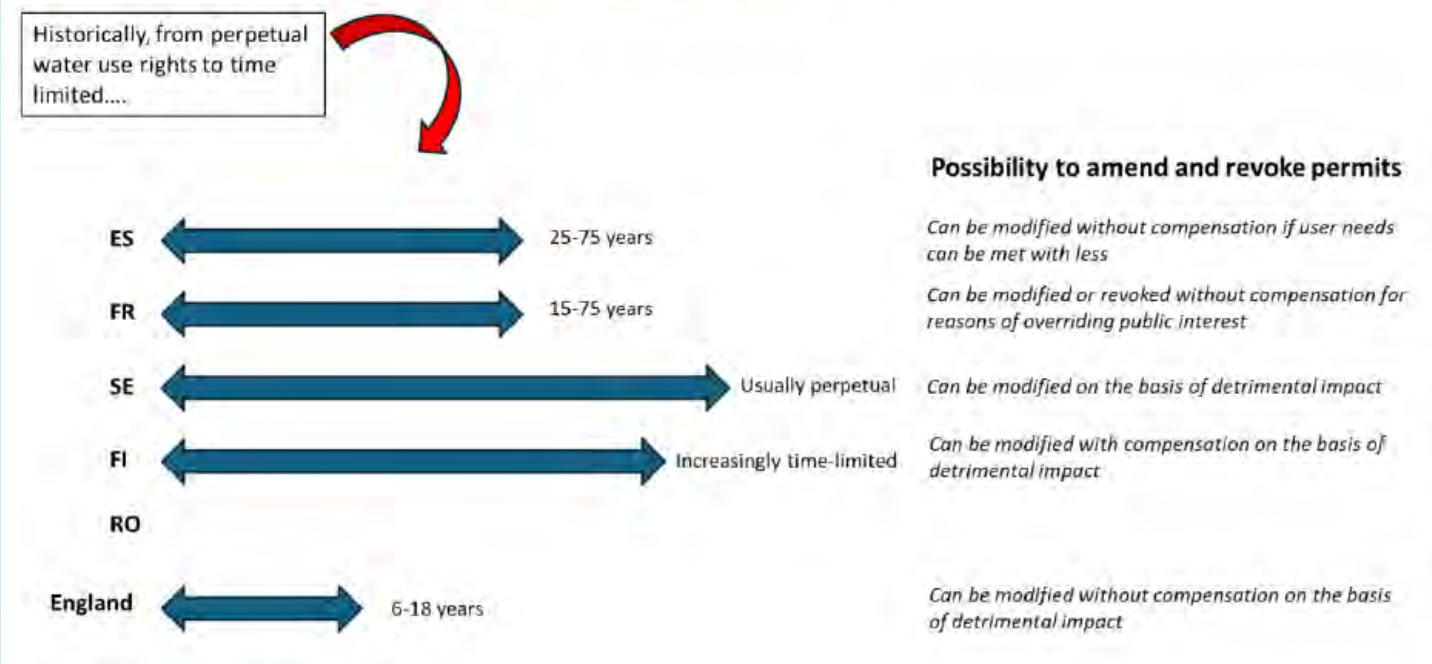


Figure 4 Duration of permits and conditions attached to their modification





RETOUCH NEXUS

REsilienT water gOvernance Under climate
CHange within the WEFE NEXUS

Economic and Financial Instruments

07.10.2024

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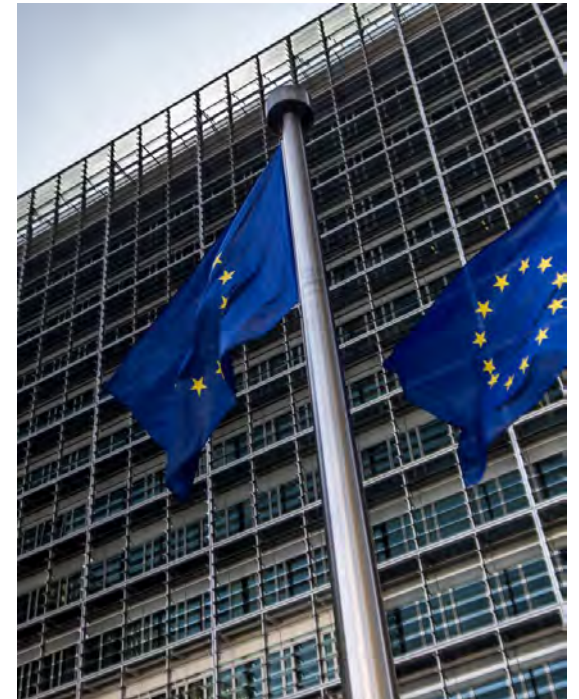
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Why Economic and Financial Instruments?

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>



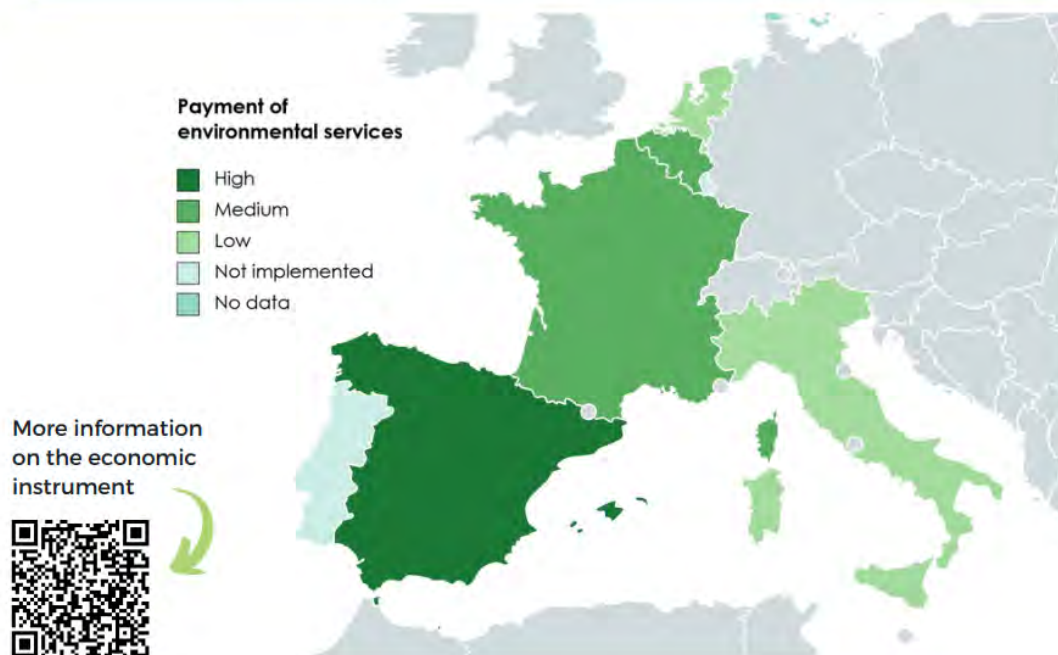
2023. The Water Framework Directive, **the forgotten tool to fix Europe's water crisis**: State of play on implementation and enforcement of EU's main water law. EEB



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



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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

Water markets

- Medium
- Low
- Not implemented



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 from 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



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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



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<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, 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 transfer. The acquisition of water use rights can be transferred. Users can acquire rights over public waters, but also over private waters.					
Contribution to goals					
Effective valuation of water	X				
Sustainability of water systems	X				
Pathways for implementation					
Requirements to implement the instrument	• Transparency • Environmental and • Public consultation				
Challenges to implement the instrument	1. Low trading activity: Water markets are only active during drought periods, and even then only for a small part of total water use. 2. Administrative barriers: The water exchange is approved after a long consultation, third-party participation, and it adds transaction costs and reduces the number of transactions.				

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.					



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, leading 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

- Assessment 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 from 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 prerequisites 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 PPPs' 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.



**Any
questions?**

Thank you!

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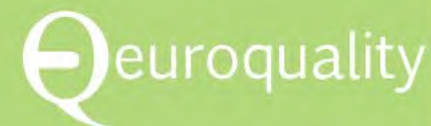
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Q&A



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GOVAQUA 2024 Seminar

Social Innovation

7 October 2024 – Bordeaux (France)

- Julie Magnier (OiEau)



INN WATER

Promoting social innovation to renew
multi-level and cross sector water governance



InnWater : in a nutshell



3 Million €	13 Partners	1st March 2023 Starting date
5 Pilot Sites		OiEau Coordinator
3 Years	6 Countries	



- ❖ **Funded by the European Commission** under the Horizon Europe Research & Innovation programme
- ❖ **A partnership** made of **stakeholders** with complementary profiles (Research and Technology Organisations (UR, URN, EUI, EUT), SMEs (ETIFOR, REKK), end users (CBB, FIGUERES, WRT, KÖTIVIZIG), associations with EU (WAREG) and international (SIWI, OiEau) coverages).



Funded by
the European Union



Objectives

Project objective



Support multi-level and cross-sectoral **water governance** for a transition to **sustainable** water systems



By developing a set of digital **tools and services** embedded in a single **platform**



Tools and methods will be **tested and co-developed** in 5 Pilot Sites.

Relying on several approaches

- **Social innovation:** combining technological and non-technological dimensions (governance, capacity building, economics) of innovative products, process or services.
- **Multi-level:** involving stakeholders from different scales (local, regional, national...)
- **Cross sectoral:** considering a wider focus than only water - including food, energy, ecosystem, health

- **Key challenges** in the 21st century: Climate change impact, maintaining the access to water (both in quality and quantity)...
- The emergence of these societal challenges has increased the importance of finding solutions which can **reconcile both**
 - **economic growth and social outcomes** on one hand,
 - their **technological, capacity building, governance** and **economic** dimensions on the other hand.

➔ This is where **social innovation** comes into place.

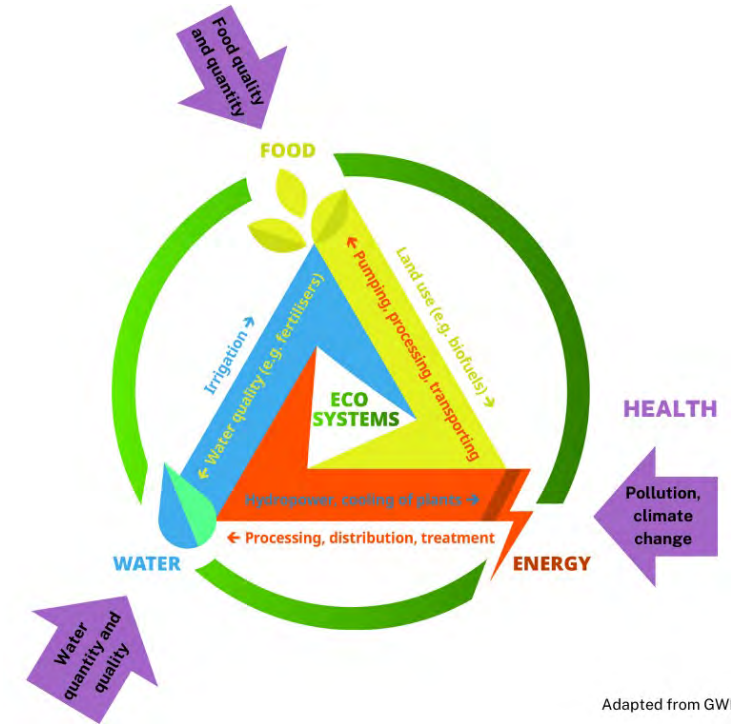
Social innovation - Definition

- Social innovation: design & implementation of innovative solutions which ultimately aim to improve the **welfare and wellbeing** of individuals and communities.
- It means tackling societal, water-related challenges by combining the **technological & non-technological** dimensions (governance, capacity building and economic) of innovation.
- **New combinations** (or hybrids of existing and new) of products, processes and services.
- Aim: to involve the **stakeholders** (final users) and give them a clear **role** to co-develop and experience governance solutions that they will use in an autonomous manner in the end



A collaborative approach

- Social innovation also implies new patterns of **stakeholders' involvement** and learning fully aligned with the **innovative** and **cross sector** governance challenges.
- A **complementary approach** to technological innovation, with the potential to address the complex, societal and environmental challenges by encouraging:
 - novel approaches, collaboration and cross-sector partnerships
 - from all stakeholders including local communities, as well as from different expertise and skills.



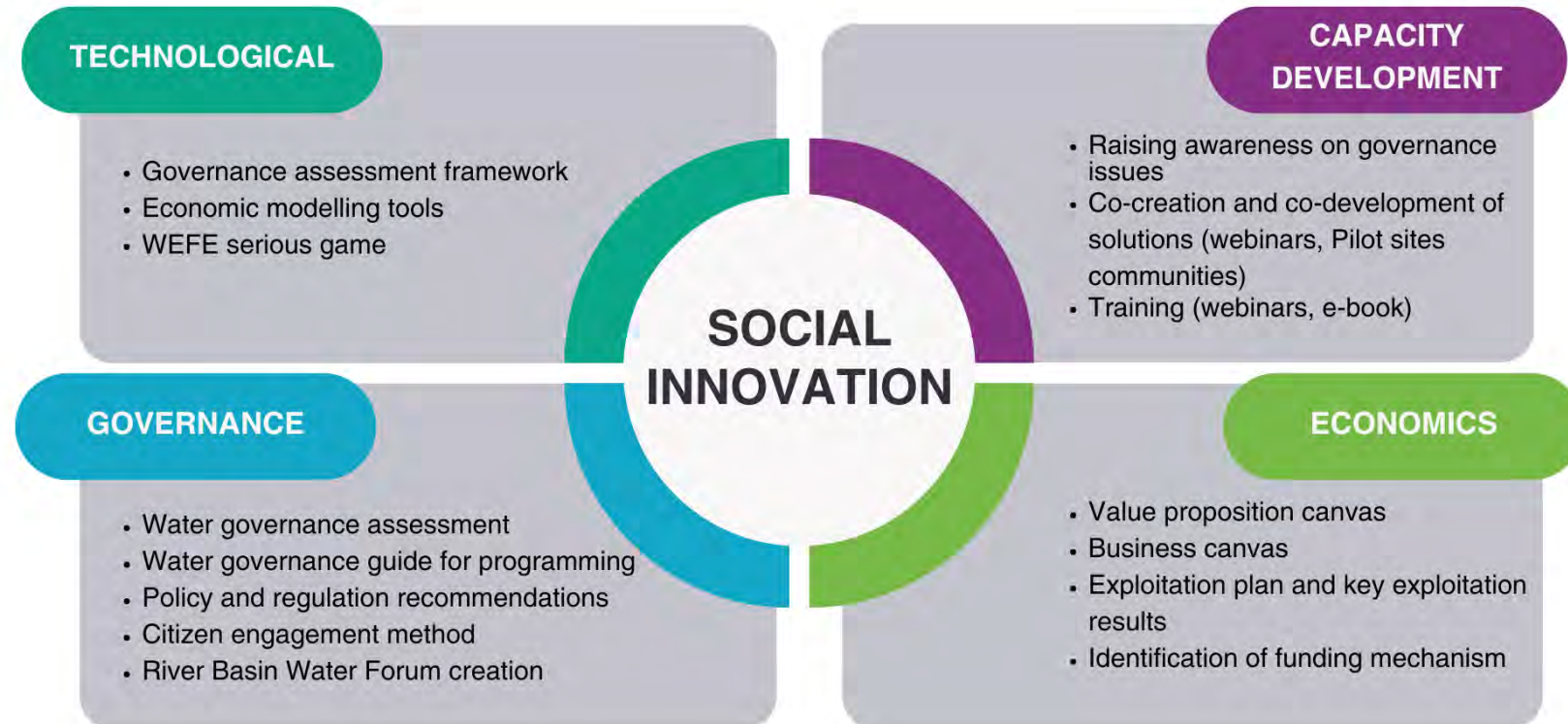
Adapted from GWP

*The WEFE+H
Nexus. Adapted
from GWP*

Social Innovation in InnWater

InnWater's approach is embedded in social innovation. The project will:

- ❖ Develop a digital platform (**technological** dimension), composed of different tools
- ❖ Develop a series of **capacity development** activities, to ensure these tools are used by stakeholders
- ❖ The **governance** dimension refers to the feedbacks and recommendations that will be delivered from the PS & tools like water governance assessment
- ❖ The **economic** dimension envisages the sustainability of InnWater solutions through an exploitation plan





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UK Research
and Innovation

Thank you for your attention !

- j.magnier@oieau.fr



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CITIZEN ENGAGEMENT ROADMAPS



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Innovative water governance practices - Insights from Horizon Europe projects
INBO General Assembly 2024



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governance

CITIZEN ENGAGEMENT

CONCEPTUAL FRAMEWORK



WHY CITIZEN ENGAGEMENT?

- Social accountability
- Citizen empowerment
- Long-term solutions
- Build trust

WHAT IS CITIZEN ENGAGEMENT FOR?

- ☐ Improving effectiveness of service delivery
- ☐ Serving public interest
- ☐ Enhancing legitimacy
- ☐ Strengthening accountability

WHO TO INVOLVE?

- Society-Culture sector of the QH
- Notion of RBWF
- Power / Interest
- Civil society
- Context, preferences and attitudes, influence, communication, expectations.

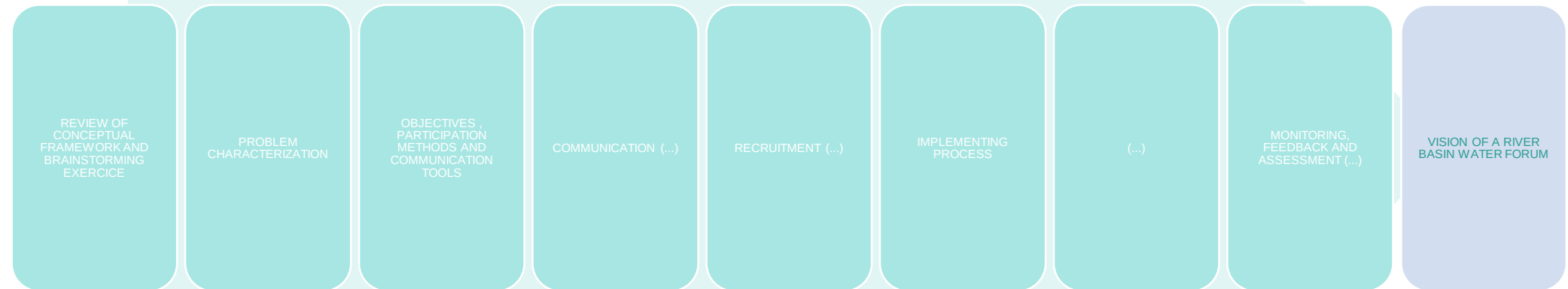
HOW TO ENGAGE CITIZENS?

- Principles of good practice
- Ladder of participation
- Existing tested resources

INN WATER'S CITIZEN ENGAGEMENT GUIDANCE FORM



INTEGRATE IN A CITIZEN ENGAGEMENT ROADMAP FOR THE DURATION OF THE PROJECT, AND BEYOND



METHODOLOGICAL GUIDELINES TO SET A CITIZEN ENGAGEMENT ROADMAP



INN WATER'S CITIZEN ENGAGEMENT GUIDANCE FORM



STEP 1. PILOT SITE INTERNAL ASSESSMENT

PROBLEM: what is citizen engagement for?	<i>E.g. water pricing, education, awareness</i>
EXPERIENCE: What activities are you already conducting with/for local communities in relation to water? How do they relate/respond to the problem?	<i>E.g. neighbourhood meetings to inform/raise awareness, citizen science in connection to water quality and quantity.</i>
RIVER BASIN WATER FORUM: Is constituting a RBWF an objective? What are the expected outcomes of this RBWF? How do they relate to citizen engagement?	<i>E.g. creating a RBWF as a long term objective to trigger citizen engagement and consolidate the participation of all actors in the Quintuple Helix</i>
TIMELINE: What is the timeline for citizen engagement?	<i>E.g. starting implementation within InnWater's timeline</i>
RESOURCES: Do you have capacity to support citizen engagement activities?	<i>E.g. additional financial support will be necessary to complete the roadmap</i>

INN WATER'S CITIZEN ENGAGEMENT GUIDANCE FORM



STEP 2. LOCAL COMMUNITY ENGAGEMENT ASSESSMENT

DEMOGRAPHICS: What are the demographics of the basin affected area? Population, age, gender, ethnic diversity, religion, income, economic activity, vulnerable groups.	<i>E.g. link to local</i>
CONNECTEDNESS AND REPRESENTATIVENESS: how connected/networked is the local community? Number of associations/local action groups, type, number of members they have.	<i>E.g. x civic associations with a total of y members, 1 local newspaper with r readers, 1 local facebook group with m followers, other</i>
ACTIVITY: how active are community members and associations? Type, number AND frequency of activities, communication, events, meetings.	<i>E.g. annual meetings, local bulletins, festivities</i>
GOVERNANCE AND DECISIONMAKING: What is the relationship of the local community with key water management actors? What formal or informal (institutionalised or not) entities, networks or initiatives are there in place for citizens to be involved in decision-making about water?	<i>E.g. local water committee meeting monthly with members of...</i>
COMMUNICATION: What are the current channels of communication with the local community within the existing water governance structure? E.g. social media, local newspapers, mailbox ...	<i>E.g. municipal newsletter</i>
LOCAL SPOKESPERSON/OPINION LEADER: Are there key individuals that can speak for larger groups of the local community?	<i>E.g. president of the commerce and tourism association</i>

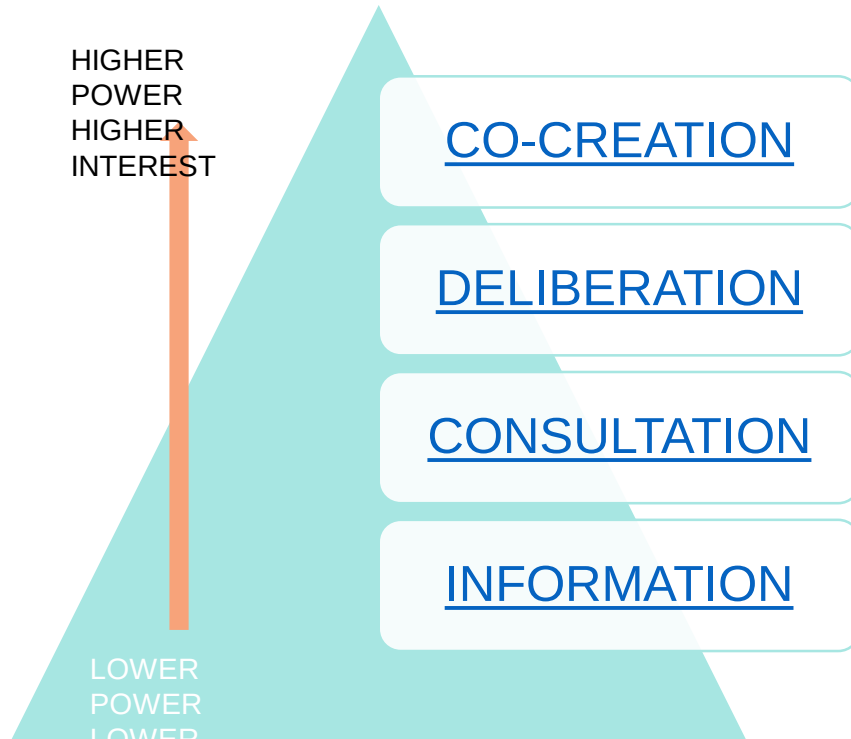
INN WATER'S CITIZEN ENGAGEMENT GUIDANCE FORM

STEP 3. CITIZEN ENGAGEMENT ROADMAP

POSITION IN THE LADDER OF CITIZEN PARTICIPATION. How consolidated are the ongoing engagement tools and activities in each rung of the ladder?	<i>Set a position for each rung of the ladder.</i> <table border="1"> <thead> <tr> <th></th> <th colspan="5">NO ACTIVITIES</th> <th colspan="5">CONSOLIDATED ACTIVITIES</th> </tr> <tr> <th></th> <th>0</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th> </tr> </thead> <tbody> <tr> <td>Information</td> <td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td> </tr> <tr> <td>Consultation</td> <td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td> </tr> <tr> <td>Deliberation</td> <td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td> </tr> <tr> <td>Co-creation</td> <td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td> </tr> </tbody> </table>		NO ACTIVITIES					CONSOLIDATED ACTIVITIES						0	1	2	3	4	5	6	7	8	9	10	Information	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Consultation	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Deliberation	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Co-creation	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
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SELECTING TOOLS Which Approaches and feedback provision mechanisms constitute the citizen engagement strategy?	<i>See TABLE 1 for supporting resources.</i>																																																																							
ASSESSING CITIZEN ENGAGEMENT SOLUTIONS. What indicators will you use to assess the progress in objective achievement, engagement, resources, timeline.	<i>E.g list a set of indicators</i>																																																																							

LADDER OF ENGAGEMENT

- How to engage?



- *Different citizen groups – based on “who to engage” – can be engaged in different parallel processes depending on level of commitment*

CITIZEN ENGAGEMENT ROADMAPS



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CITIZEN ENGAGEMENT

Digital Solutions - Background

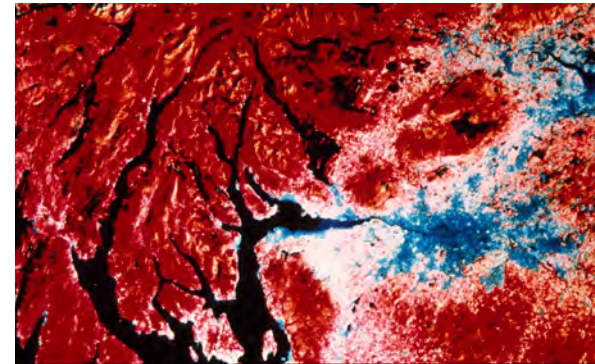
Aim: generating, updating and sharing data and information relevant for supporting sustainable water governance.

Challenges with respect to sharing:

- Diversity of data: in-situ, space-based and citizen environmental observations, modelled data.
- Diversity of data and information sources/providers.
- Diversity of stakeholder needs: multi-stakeholder participation:
 - experts from river basin authorities,
 - policy makers
 - researchers
 - water users from economic sectors
 - public



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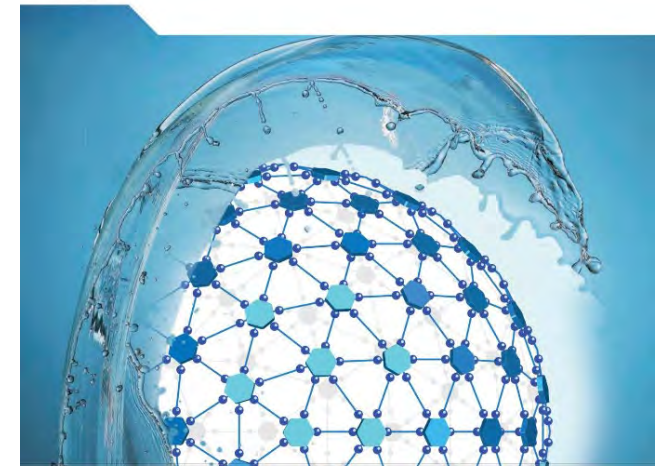
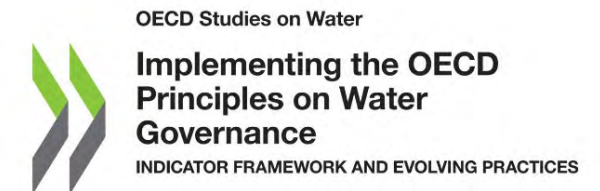
Digital Solutions – A set of assessment criteria (1)

Assessment tool for digital solutions based on existing:

- data management principles (e.g. FAIR),
- policy recommendations (e.g. OECD recommendations, 2023) ,
- data standards (e.g. PPSR Core for public participation in Scientific Research)
- Frameworks/tools (e.g. STEER conceptual framework)



Source: Paulus & Biskup (2022) doi:10.26434/chemrxiv-2022-jsjnd



Digital Solutions – A set of assessment criteria (2)

Assessment tool based on four key criteria:

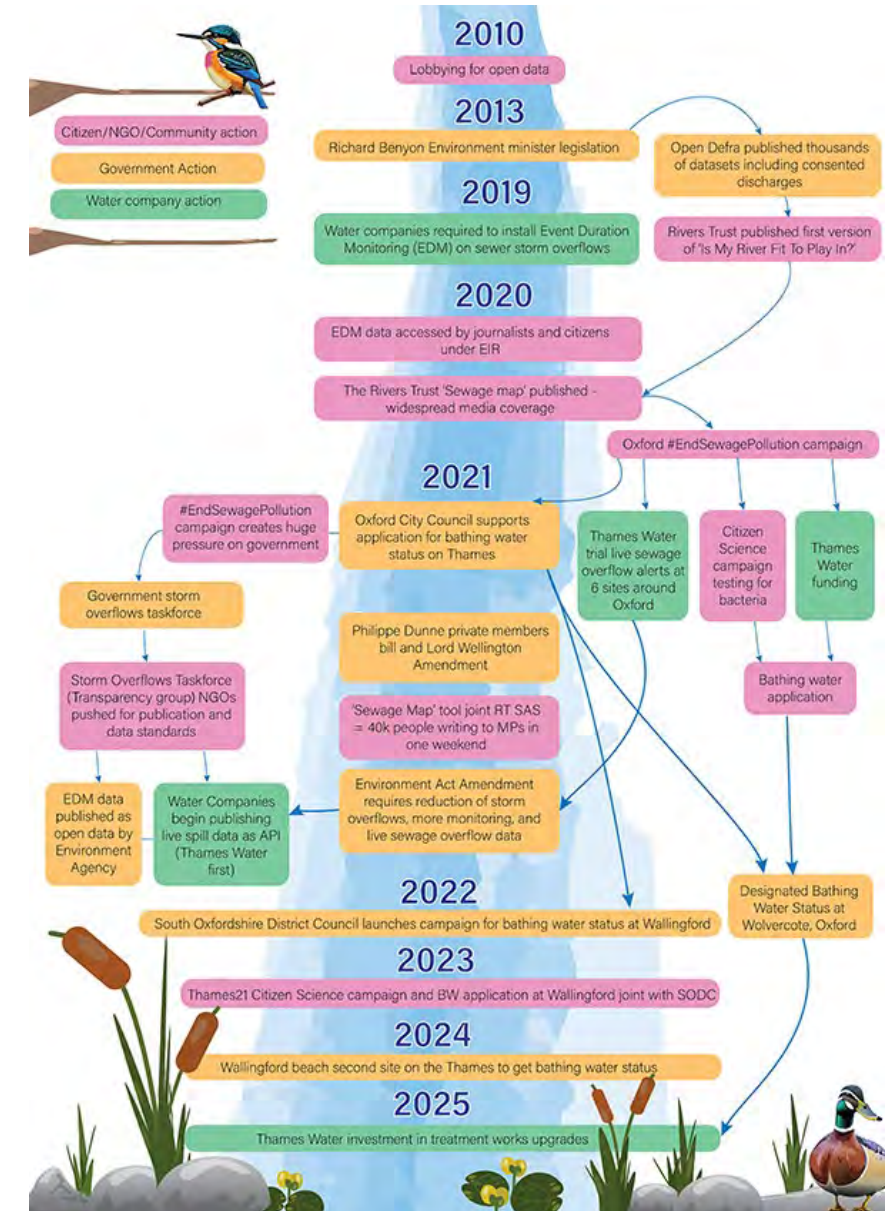
1. **Transparency and Accountability:** focuses on adherence to FAIR principles to ensure transparency and accountability in governance practices.
2. **Serving the Purpose of Water Governance:** evaluates how well the tool aligns with water governance principles.
3. **Contextual information:** assesses the comprehensiveness and relevance of the tool's content, including its aim, description, and information provided.
4. **Inclusivity:** considers factors such as gender equality, language accessibility, and target audience diversity to ensure inclusivity in tool design and implementation.

Flexible tool, that can be used to assess existing tools, or at design stage to ensure efficiency and effectiveness of digital solutions

Assessment criteria	Sub criteria	Score levels and scores	Weight (1-5 scale)
Transparency and accountability	S1 Whether the data have a detailed background or initiative? Standardised Metadata - 3; All the information- 2; Some of the information - 1; None - 0		3
	S2 Whether it supports Findable data? With DOI/ data repository - 1; Otherwise - 0		4
	S3 Whether it supports Accessible data? S3.1. Whether it is downloadable via API With API - 2; With API partially-1; Without API - 0 S3.2. Whether it is downloadable via CSV Yes - 1; No - 0		4
	S4 Whether it meets/supports interoperable data ? S4.1. Whether the method/survey protocol used is mentioned? S4.2. Whether it has a consistent data format across datasets? Yes - 1; No - 0		4
	S5 Whether it supports the Reuse of data S5.1. Is it findable, accessible, interoperable? S5.2. Whether it supports simple or clear data licensing? Yes - 1; No - 0		4
	S6 Whether it supports public participation S6.1. Whether there is possibility of citizen science data? S6.2. Whether there is any mechanism of reporting for users? Yes - 1; No - 0		3
	S7 Whether it has a clear GDPR and data privacy notice? Yes - 1; No - 0		4
	S8 Whether it supports cross-sectoral water governance? Yes - 1; No - 0		3
	S9 Whether the tool supports understanding or application of policies? Yes - 1; No - 0		5
	S10 Whether the webpage has detailed background or initiative? All the information- 2; Some of the information -1; None - 0		3
Contextual information	S11 Whether the data have trustworthiness with proper quality control and data custodian? Yes - 1; No - 0		5
	S12 Whether it provides or supports open data? Open data in whatever format - 1; Structured data (e.g., Excel) - 2; Non-proprietary open format (e.g., CSV) -3; URIs to denote things- 4; link data to other data to provide context- 5		3
	S13 Whether it is free to use or even at least with minimal cost? Yes - 1; No - 0		4
	S14 Whether it have a start date? With start date - 1; Without start date - 0		2
	S15 Are they still active? Not active -0; Still active but less than 5 years data -1; Still active and more than 5 years data -2		3
	S16 Whether there is different means of user guidance/support? More than one- 2; Only one- 1; None- 0		3
	S17 Whether it supports inclusivity? S17.1. Gender equality Yes - 1; No - 0 S17.2. Language Multiple languages including English- 4; Multiple languages but not English -3; Only English -2; Only other language-1		3
Inclusivity	S14 Who are the target audiences (Practitioners, regulators, academics, local people, etc?) One - 1; More than one -2		2

GOVAQUA – Oxford Rivers Data Portal

- Enhance knowledge & collaboration between the organisations and citizens working to improve river health of the Oxfordshire Thames.
- Developed by UKCEH in collaboration with Rivers Trust and Thames21
- Local stakeholders (policy makers, politicians, local community, water industry, ...) involved from inception

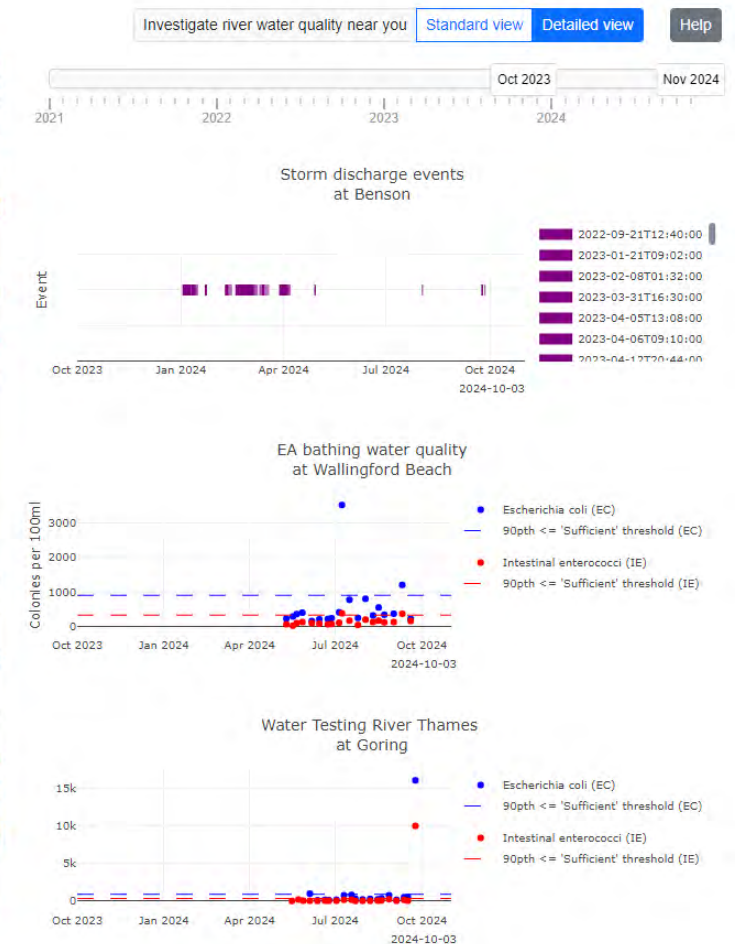
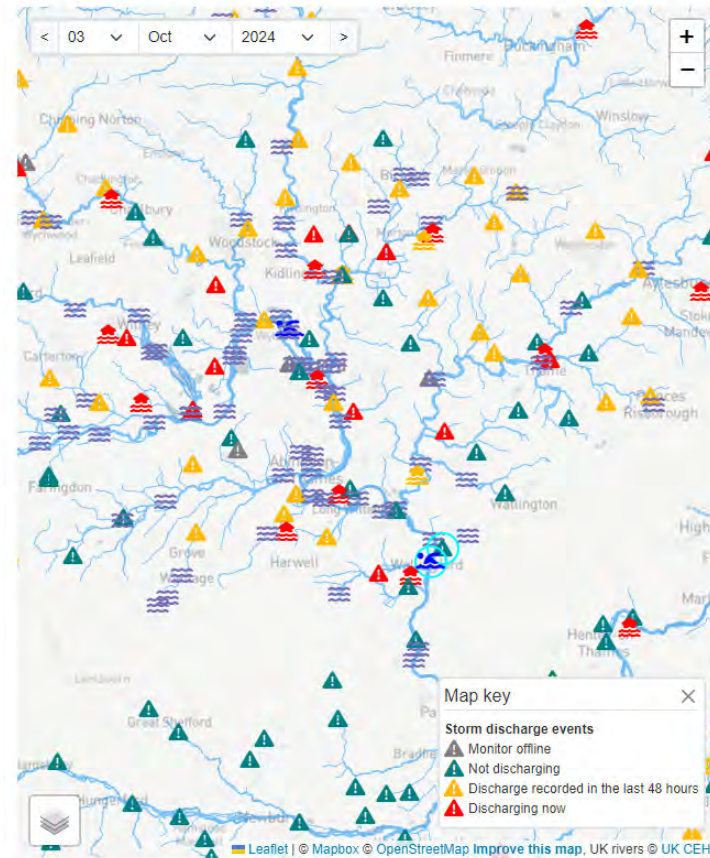


GOVAQUA – Oxford Rivers Data Portal (2)

- Increase transparency & understanding of sewage treatment and sewerage network overflows to build trust between water company & local communities.

Importance of identifying all stakeholders needs and co-designing digital tools to foster transparency and build trust

Oxford Rivers Data Portal



Q&A

Coffee break



Assessing water governance: introducing the GOVAQUA Assessment tool

Gül Özerol, Jyri Mustajoki, César Casiano Flores, Ulf Stein, Joanne Vinke-de Kruijf, Suvi Sojamo, Antti Belinskij

GOVAQUA assessment tool in a nutshell

Scope	Multi-dimensional and cross-sectoral criteria and indicators Based on existing assessment approaches and the GOVAQUA thematic innovations
Purpose	To assess how the water governance regime at the catchment/basin level impacts the implementation of a specific innovation and its contribution to sustainable and equitable water use
Application	By Living Labs in two iterations: 2024 to assess current situation and set ambitions for a desired water future 2026 to assess progress, reflect on lessons learned, and reconsider ambitions
End-users	Water managers and other relevant stakeholders at the basin or catchment level

Note: governance assessment is also included in our “sister projects”

A note on innovation & instruments

- “the use of new ideas, products or methods where they have not been used before” (EUROSTAT, n.d.)
- Can be related to both the process of innovating and the product of that process.
- In GOVAQUA: water governance innovations are instruments, approaches and arrangements that have the potential to accelerate a **transition to sustainable and equitable water use in Europe** (EC, 2019; EEA, 2019).
- **Regulatory** - enforcement by means of law and regulation.
- **Economic** - influencing costs, benefits or markets.
- **Information and communication** - providing information in the form of, for example, facts, options or norms and communication.
- **Collaborative** - reaching public-private agreements and the development of certification or labels.
- **Service and infrastructure** - allowing or enabling others to take desirable action or hindering or inhibiting undesirable action

Adapted from Kaufman et al., 2001

How the tool was developed

1

- Adapted version of existing Governance Assessment Tool
- Baseline understanding of current governance regime

2

- Review existing approaches and policy targets
- Review of existing scoring methods, e.g. OECD

3

- Draft criteria and indicators – discussed during online sessions and workshop with a focus on relevance, understandability, scalability, transferability and acceptability
- Choice for four-point scale

4

- V1.0: tested in Living Labs (Spring 2024)
- V2.0: currently applied in Living Labs

Baseline assessment

- Purpose:
 - understand the water governance challenges and problems to be addressed,
 - if known, consider challenges from the perspective of a specific governance innovation.
- Description of 5 dimensions, i.e. elements that make up a governance context
 - E.g. Which strategies or policy instruments are already in place to address the problem at hand? If known, which strategies or instruments does the innovation adopt?
- Optional: assessment of completeness
 - E.g. Is any important problem perspective missing or overlooked in the context that should be considered in the Living Lab?

**Problem
perspectives
and goal
ambitions**

**Strategies and
instruments**

**Levels and
scales**

**Actors and
networks**

**Responsibilities
and resources**

The GOVAQUA assessment tool

- Inspired by OECD framework consisting of 12 principles, with attention for efficiency, effectiveness, and trust and engagement.
 - Limited attention for systematic transition
 - Focus on role of governments
 - Applicability at non-national level unclear
- Indicators for each criteria, e.g. related to
 - Completeness of information
 - Access to safe water
 - Recognition of water users
 - Transparency of decision-making
 - Ownership of problems
 - Etc.

1. State of the
freshwater
environment

2. Fair sharing
of data and
information

3.
Distributional
justice

4.
Recognitional
justice

5. Procedural
justice

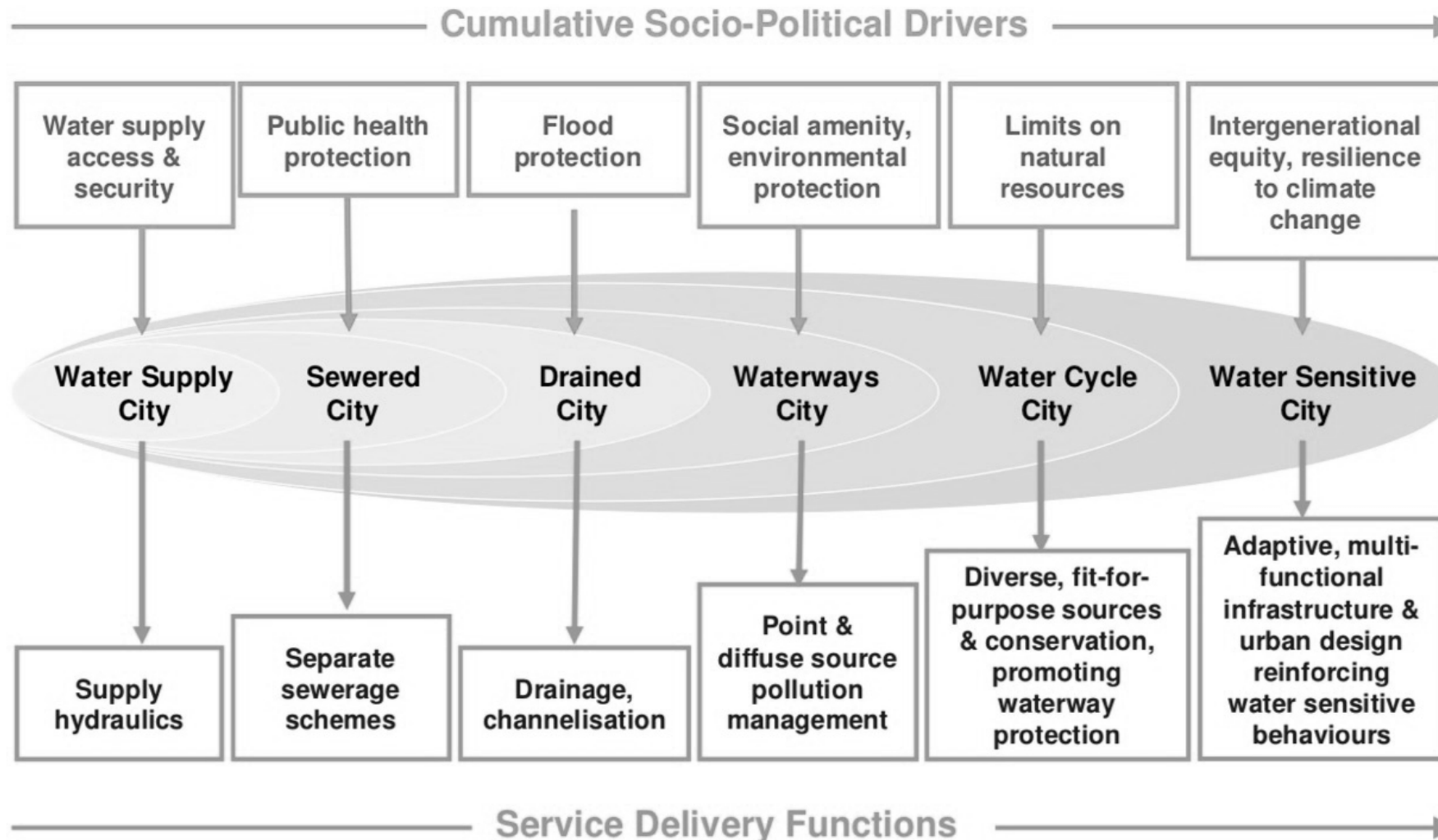
6. Financial
efficiency and
effectiveness

7. Institutional
capacity

8. Horizontal
and vertical
coordination

9. Enabling
policy mix

Urban water management transitions



Urban Water
Management Transitions
Framework (Source:
Brown et al., 2008)

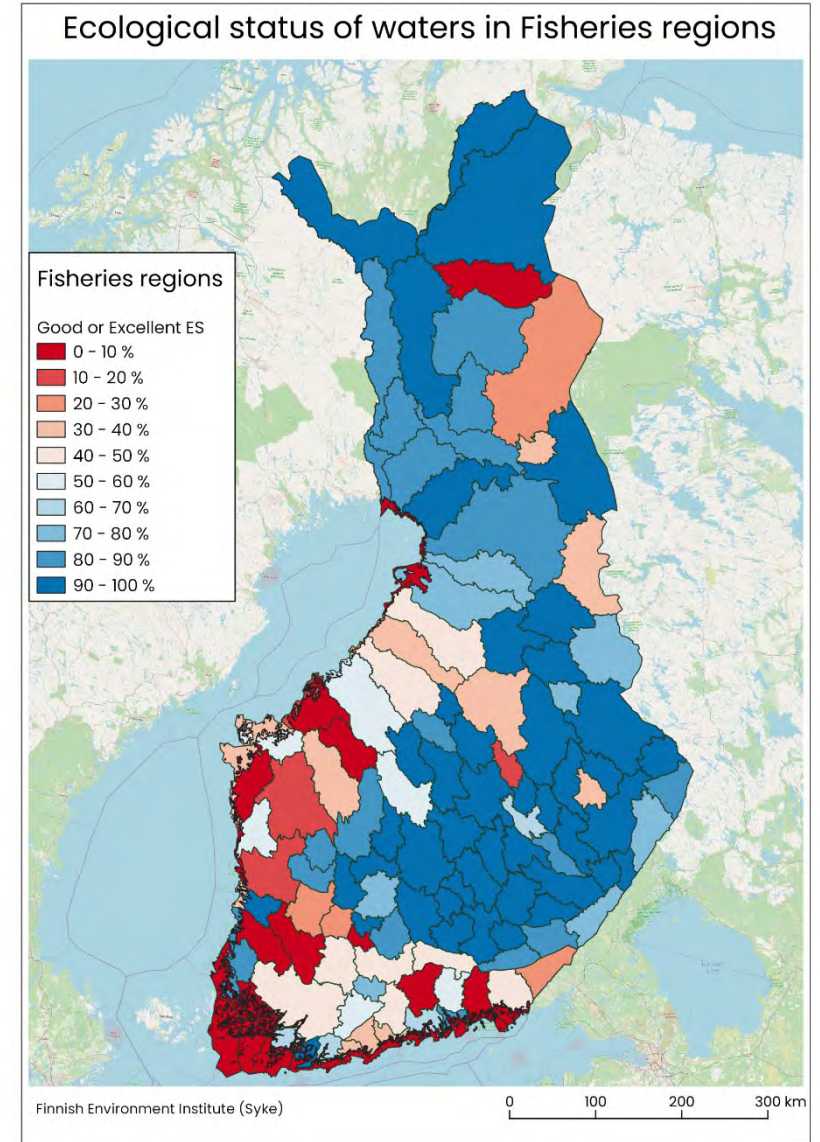
To conclude the introduction

- For a transition to occur towards more sustainable and equitable water use, governance challenges need to be considered
- GOVAQUA developed an assessment tool that helps to
 - Understand the governance regime (baseline)
 - Identify key governance challenges, including missing knowledge and information, using a set of nine criteria and related indicators
- Our questions to you (we will use an interaction tool):
 - Are you familiar with such tools? Do you find them useful? What elements are most relevant?
 - Would you benefit and, if yes, how?
 - What difficulties would you encounter using such tool

Reflections from the first application of the tool with Archipelago Sea Programme stakeholders I

Part of GOVAQUA Archipelago Sea Catchment Living Lab work 2023-2026

- Tool tailored to the context of Archipelago Sea catchment
- Archipelago Sea Programme 2021-: focus on curbing diffuse pollution, removing Archipelago Sea from the HELCOM hot spot list by 2027
- Close collaboration with the Archipelago Sea Programme coordinator and RBO VAR-ELY



Reflections from the first application of the tool with Archipelago Sea Programme stakeholders I

Testing the tool for the Programme monitoring and assessment purposes in a workshop with 25 participants representing various stakeholder groups

- Rich discussions, focus on equity aspects new and needed
- Agreement on scores in groups, but differences between groups
- Suitable for river basin or programme level, not project level requiring more specific targets
- Main challenges easy to identify with the tool: cross-sectoral steering difficulties, lack of capacity
- Second application in 2026 zooming into progress with innovative approaches: corporate water stewardship and impact investment blending public and private funding



GOVAQUA 2024 Seminar: Innovative water governance practices - Insights from Horizon Europe projects

Number of participants: 39

Wooclap session II

1. What type of innovative water governance practices are you interested in?

2 correct answers
out of 38 respondents



Legal or regulatory



9 votes

Participatory or collaborative



17 votes

Economic or financial



2 votes

Digital solutions



8 votes



Open answer



2 votes

Legal or regulatory - Comments 2

I am interested in economic mechanisms and digital solutions ad well, but I work in water governance

It is important to avoid overlapping

Participatory or collaborative - Comments 5

We are involved with cooperative collaboration involving four Member States in transboundary water cooperation

We are working in the built of a democratic model of binacional water bassins gobernance

Water user and communit level inclusion

For sustainability

Bla

Economic or financial - Comments 1

Practices?

Digital solutions - Comments 0

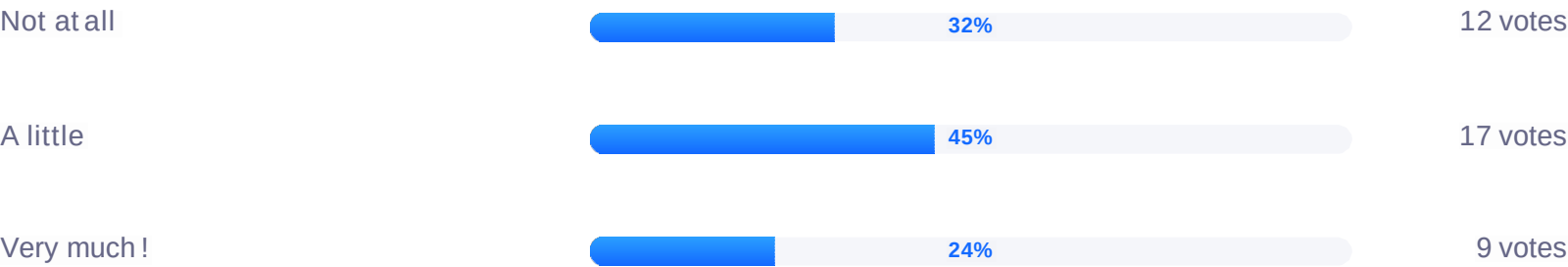
No comments for this answer

Open answer - Comments 1

Gobernanza en lago Atiitlán

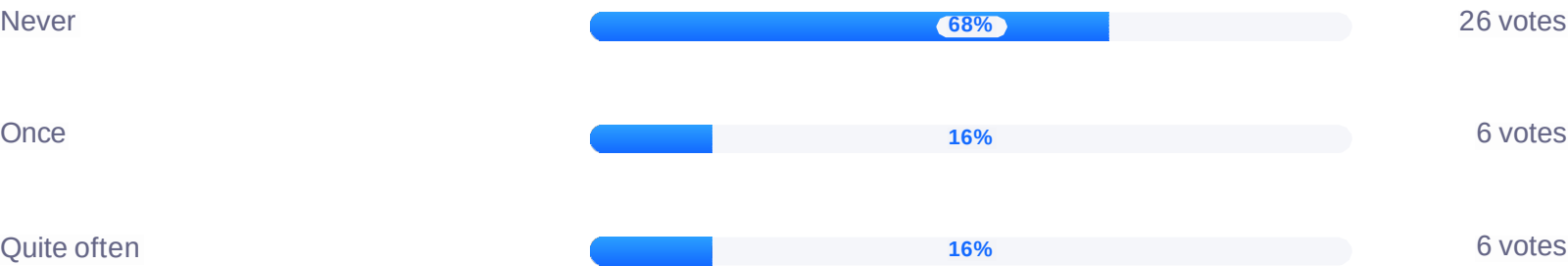
2. **Were you already familiar with tools that help to reflect on the governance context of an innovation project or process?**

38 respondents



3. **Did you ever use a tool to reflect on the governance context of an innovation project or process?**

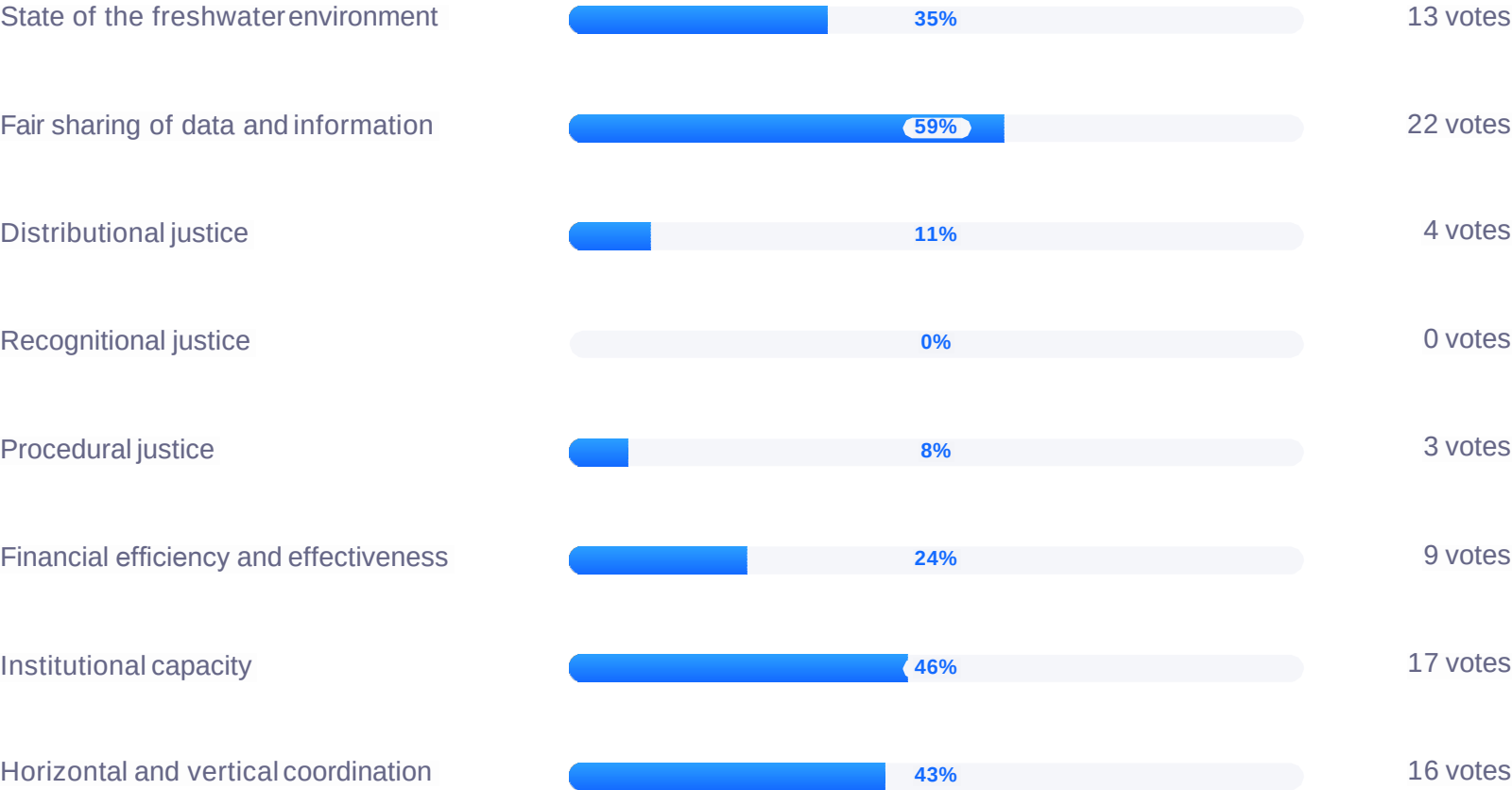
38 respondents





Which three elements of the assessment do you consider most influential for an innovation to contribute to more sustainable and equitable water governance system?

37 respondents



Enabling policy mix



9 votes



5. To what extent would you be able to apply the presented assessment tool in a participatory manner?

36 respondents

Not at all



6 votes

A little



24 votes

Without problems



6 votes



6. **How would you or your organization benefit from using the presented assessment tool?**

35 respondents

Not at all



1 vote

A little



20 votes

Veru much !



14 votes



8. What difficulties would you encounter when you want to use such tool in the context of your work?

21 respondents

- Active participation
- Confidence in information shared
- Once, we'll understood, it should be ok. Identifying key governance actors would pose a challenge as thry may tend to be many and across sectors
- Insuficiente implementación
- Active participation
- Answering regarding some criteria
- Data
- No idea

I find not a link between them wich could be the model of gobernance

Financial , human ressources

Participation of important stakeholders

Human Resources

Capacity

it should include wide range of parties which is kind of problematic

Different approaches tô the scope of the public policy of water management in my country

Multicriteria analysis

No idea

A

capacity

Next steps

All three projects continue with their analysis, experimentation and assessment with innovative water governance practices

Reporting on additional good practices welcome via online survey



Forthcoming GOVAQUA INBO sessions

- 2025: Workshop on transition pathways to sustainable and equitable water governance in Europe, final good practices presentations
- 2026: Seminar on lessons learned from Living Labs of water governance innovations, final recommendations

Thank you!

Follow us on X: @GOVAQUA_project LinkedIn: govaqua-project
Syke.fi/projects/GOVAQUA

Feel free to contact Gül Özerol in case you would like to receive a copy of our deliverable report or further information (g.ozerol@utwente.nl)



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