TAKE AWAYS

Water resilience depends on aligning economic incentives with governance capacity across sectors and scales.

Economic instruments should support both efficiency and equity, including affordability and water quality objectives.

Combining pricing, incentives, risk-management tools and cooperative approaches is more effective than relying on single instruments.

Economic and WEFE-nexus modelling helps policymakers assess trade-offs and distributional impacts before implementation.

Basin-level and landscape-based approaches are essential to bridge urban–rural and upstream–downstream needs, at the same time fostering solidarity and water resource connectivity.

"Water governance is the foundation for resilience." — Vera Eiro, WAREG's President.

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MORE INFORMATIONS

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Realisation

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2.

JOINT POLICY BRIEF

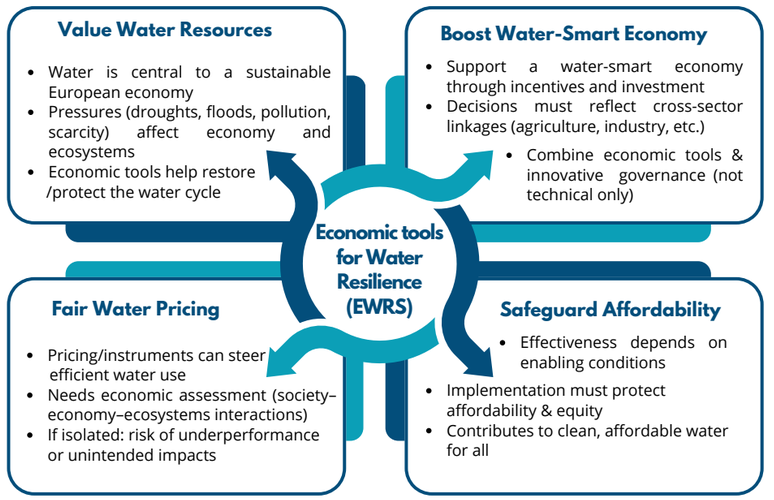
ECONOMIC APPROACHES TO WATER RESILIENCE

Water is central to a sustainable European economy. Increasing pressures from droughts, floods, pollution and water scarcity are already affecting agricultural and industrial activities as well as, ecosystems, and social well-being across Europe. In this context, policy decisions related to water use and management require **economic assessments** that account for inter linkages between sectors and for interactions between society, economy and ecosystems.

The **EU Water Resilience Strategy (EWRS)** highlights three core objectives: restoring and protecting the water cycle, building a water-smart economy, and securing clean and affordable water for all. Achieving these objectives depends on technical solutions, as well as innovative governance and economic tools that promote efficient, equitable and climate-resilient water use.

Economic tools can play a key role in supporting water resilience. However, their effectiveness depends on **enabling conditions**, with implementation that safeguards affordability and equity. When applied in isolation, economic tools risk underperforming or generating unintended social and environmental impacts.

This policy brief focuses on **economic tools and how they link to innovative water governance**. It presents a structured economic toolbox and highlights the role of economic instruments as well as economic and Water-Energy-Food-Ecosystems (WEFE) nexus modelling, including approaches such as Computable General Equilibrium (CGE) and micro-simulation, to support policymakers in designing, testing and implementing water resilience measures across different sectors and at different governance levels.



The overall objective of the Policy Briefs is to highlight how the WaterGovernance2027 solutions can support water related policies implementation and formulate recommendations for their update. This document presents the highlights of the joint Policy Brief #2.

A first joint Policy Brief was release in June 2024, highlighting governance practices and innovative instruments, approaches and arrangements that can support water resilience. This second joint Policy Brief goes a step further by focusing on **economic tools supporting water resilience.**

KEY MESSAGE

1. **Innovative governance is an enabler for effective economic instruments.**
   Economic tools require clear regulatory frameworks, transparency, monitoring and stakeholder trust to avoid negative externalities and to support long-term water resilience objectives.
2. **A diversified economic toolbox is needed to balance efficiency, equity and resilience.**
   Price-based instruments, incentives, risk-management tools and cooperative arrangements should be combined and adapted to local and basin-level contexts, with explicit attention to affordability, access and water quality.
3. **Economic and WEFE-nexus modelling supports informed and legitimate decision-making.**
   Integrated, data-driven modelling, co-designed with stakeholders, helps assess trade-offs, distributional impacts and economy-wide effects, thereby strengthening policy design and implementation.

1 INNOVATIVE GOVERNANCE FOR WATER RESILIENCE

Adaptive governance is essential to ensure that economic instruments contribute to water resilience rather than short-term efficiency gains. Regulatory frameworks should be designed to prevent negative externalities, ensure compliance, and promote transparency and accountability in water use and transactions.

At sub-national level, regional and basin planning should be adapted to the specific hydrological and economic contexts. Basin-level approaches that integrate WEFE perspectives can enhance cross-sectoral coordination and help align water management with broader economic and societal objectives.

At local level, collaboration among citizens, policymakers, researchers and stakeholders, including landowners, farmers and businesses, is crucial to develop a shared understanding of water challenges and to assess feasible solutions. Participatory processes can improve legitimacy, acceptance and long-term sustainability of policy measures.

Water cooperation is required not only across administrative borders, but also across sectors. Coordinated governance of land use, water use, food-production, energy, construction, and other related sectors is necessary to restore productive landscapes and strengthen resilience to climate and hydrological shocks. **Polycentric and multi-level governance arrangements** can support such coordination within basin-level and landscape-based strategies.

The **private sector**, in all its diversity, plays a central role in the economy and water use. Robust water risk and impact assessments should take into consideration the businesses that operate within the catchment and their value chains. Corporate strategies should embrace water issues, with the acknowledgement that the private sector can play a key role in solving water challenges.

Collective action involving public authorities, private actors, research organisations and civil society across governance levels can help move beyond purely efficiency-based towards more resilient and inclusive water governance.

2 ECONOMIC INSTRUMENTS FOR WATER RESILIENCE

A broad range of economic instruments can support water resilience when appropriately designed and combined. Increasing **cost recovery**, for example by converting flat rates into volumetric pricing, can improve efficiency and financial sustainability, provided that affordability and access are safeguarded.

Price-based instruments, including both water and pollution charges, as well as **market-based instruments**, such as water banks, buyback schemes, and related trading or transfer arrangements, can incentivize efficient allocation and resource use. Their effectiveness depends on appropriate pricing levels, regulatory oversight and monitoring, as well as on mechanisms to address potential social and environmental risks.

Subsidies and Payments for Environmental Services (PES) can promote desired behaviours and support ecosystem services, particularly in agriculture and land management. These instruments require careful design to avoid overuse, budget inefficiency or perverse incentives, and are often linked to EU and national public funding frameworks. While PES initiatives are often launched by private sector pr public-private partnerships, their effectiveness and appropriate design are strongly contingent on local institutional and socio-ecological conditions.

Risk-management instruments, such as insurance schemes, can help manage financial risks associated with drought, and other extreme events. Their uptake and effectiveness depend on appropriate targeting, stakeholder willingness to pay and complementary risk-reduction measures.

Shared implementation and governance, including Public-Private Partnerships (PPPs), voluntary agreements and impact, or results-based investments with blended financing, can enhance infrastructure investment, risk-sharing, and stakeholder cooperation. These approaches can complement monetary instruments and help mobilise private investment, including for nature-based solutions (NbS).

Economic instruments should address water quantity as well as water quality. Incentives for private investments in nature-based solutions, combined with public governance frameworks that build trust and enable PPPs, can contribute to improving **water quality and ecosystem resilience**.

Instrument category	Main policy objective	Governance level	Key enabling conditions (from the brief)	Main trade-offs / risks to consider	Link to EWRS
Price-based instruments (abstraction charges, pollution charges, tariffs, water markets)	Improve water-use efficiency, support cost recovery and efficient allocation	National / basin	Clear regulatory framework; metering and monitoring of abstraction and pollution; transparency; enforcement mechanisms	Affordability and access for vulnerable users; social acceptance; risk of environmental impacts if poorly regulated	Building a water-smart economy; sound water pricing policies
Subsidies and incentives (including PES)	Promote desired behaviours, support environmental services and water quality	EU / national / local	Clear eligibility criteria; stable public funding; monitoring of outcomes; alignment with environmental objectives	Risk of overuse or budget inefficiency; potential perverse incentives if poorly designed	Restoring and protecting the water cycle; modernising infrastructure and practices
Trading schemes (tradable water rights, water banks, nutrient trading)	Enable voluntary reallocation of water resources and improve allocative efficiency	Basin / national	Clearly defined rights; robust governance and regulation; monitoring and enforcement; safeguards for social and environmental risks	Risk of concentration of rights; equity concerns; environmental risks without adequate safeguards	Building a water-smart economy through efficient resource allocation
Risk-management instruments (e.g. insurance schemes)	Reduce financial risks associated with droughts and extreme events	National / sectoral	Appropriate targeting; willingness to participate; complementary risk-reduction measures; enabling policy framework	Limited uptake if premiums are high; potential moral hazard if not well designed	Climate resilience and risk preparedness
Shared implementation and voluntary agreements (PPPs, sector agreements)	Support infrastructure investment, risk-sharing and stakeholder cooperation	Local / basin / national	Trust among stakeholders; clear roles and responsibilities; enabling regulatory environment; coordination across sectors	Complexity of coordination; unequal power relations between actors	Innovative governance; investment in water resilience
Impact and blended finance instruments (e.g. green bonds, impact investments)	Mobilise private finance for water resilience and NbS	EU / national	Bankable project pipelines; transparent governance; alignment with public policy objectives	Risk of misalignment with public goals; need for clear accountability	Financing water resilience and nature-based solutions

For concrete examples on the application of the economic instruments, see the publications of the three projects :

- https://www.innwater.eu/results/deliverables
- https://retouch-nexus.eu/results/#factsheets
- https://www.syke.fi/en/projects/govaqua/result

3 ECONOMIC AND WEFE-NEXUS MODELLING

Economic and WEFE-nexus modelling plays a key role in supporting integrated water governance. By linking water, energy, food and ecosystems across sectors and scales, WEFE approaches help move beyond fragmented, water-only planning towards basin-wide and cross-sectoral strategies.

Models such as Computable General Equilibrium (CGE) and micro-simulation can be used to assess economy-wide impacts, distributional effects, affordability and cost recovery, and to inform pricing and policy design. These tools can support decision-making at different geographical levels, depending on data availability and policy needs.

Modelling is most effective when coupled with participatory and inclusive processes. Co-designing scenario and governance pathways with stakeholders, including authorities, utilities, farmers, NGOs, and citizens, enhances legitimacy, transparency and implementation. Participatory platforms, communities of practice and citizen-science tools can further support this process.

Data availability, digital tools and monitoring systems are core enablers of effective modelling. Interoperable data platforms, joint monitoring frameworks and transparent sharing of assumptions and results are essential to support evidence-based decision-making and adaptive management.

Economic instruments are most effective when integrated within governance and modelling frameworks. Combining modelling with economic tools, such as dynamic water pricing, incentives for nature-based solutions or business cases for decentralized systems, allows policymakers to test trade-offs and assess costs and benefits across sectors.