

Financing water resilience

How to reconcile environmental sustainability, equity, and efficiency in the water sector for the future of Europe



Executive summary

As highlighted in the European Water Resilience Strategy, the water sector is facing a growing investment gap that threatens both its capacity to ensure water resilience and the equitable access to clean water resources for all.

This paper puts forward 6 concrete proposals to help close this investment gap while safeguarding the “3 Es”: economic efficiency, social equity, and environmental sustainability - in line with the analytical framework developed by the *Global Commission on the Economics of Water*.

These proposals reflect the perspectives of Aqua Publica Europea’s members, enriched by exchanges and insights from international experts, some of whom are featured in this document.

Our proposals:

1 Moving towards a smarter tariffing system

The balance between the “fix” and “variable” components of water tariffs should be recalibrated, especially for certain categories of users, to better reflect the relation between the benefits they derive from the access to the service and their financial contribution.

2 Extending...the Extended Producer Responsibility (EPR) scheme

The EPR mechanism, already included in the Urban Wastewater Treatment Directive, should be extended to drinking water. This is essential to ensure a fairer redistribution of depollution costs among users, to incentivise the development of healthier and more environmentally sustainable products and, last but not least, to guarantee the proper functioning of the internal market.

3 Complementing the ‘Polluter-Pays Principle’ with the ‘Beneficiary-Pays Principle’

Water operators can generate environmental benefits through the management of water resources. These benefits should be financially rewarded by beneficiaries. Approaches such as the OECD’s ‘land-value capture’ or economic compensation schemes for water reuse and aquifer recharge should be promoted.

4 Financing the Commons: It Need Not Be a Tragedy

Many of the interventions that operators carry out to strengthen resilience have the characteristics of public goods. At the same time, they often address problems of over-exploitation of the resource, that are typical of the “commons”.

Financing these interventions is notoriously complex, but proven solutions exist:

- Ring-fenced taxes are probably the most effective approach and are being adopted in an increasing number of countries.
- In some circumstances, the tariff structure can be tweaked to finance these interventions while maintaining equity.
- Nature-credits could be a promising mechanism stream to finance such interventions.

5 The good financial companion: strengthening the role of public banks

Water investments are typically low risk, low return, and characterised by long payback periods. This profile limits their appeal to many private investors. In this context, the role of the European Investment Bank and national public banks is essential and must be reinforced. Their 'patient capital' approach aligns closely with the financing needs of the water sector. Moreover, public banks are generally mandated to address market failures and to support the development of critical societal infrastructure - a mission that resonates strongly with that of the public water sector.

6 Ensuring 'water solidarity': a condition for European cohesion

The cost of providing water services and ensuring resilience is highly context-dependent and variable across territories. Beyond social measures to ensure universal access to water, territorial solidarity mechanisms are also needed. These should operate at different geographical scales, primarily regional and national. However, the EU also has an important role to play, in particular through the future *National and Regional Partnership Plans* under the next Multiannual Financial Framework.

EU support will be essential to prevent disparities in water-related risks from becoming an additional factor of uneven territorial development and a source of political tension between Member States around shared water bodies.

Introduction - scope of the document

There is growing political awareness of the challenges affecting our water resources and the extent to which these may threaten the future prosperity of our continent. In June 2025, the European Commission published a comprehensive new *European Water Resilience Strategy* [1] (EWRS), which takes stock of the diverse sources of pressure on water resources. While setting out a broad range of initiatives to address water-related challenges, including through the mobilisation of additional financial resources, the Strategy also recognises that a substantial financing gap for water investment needs remains.

As key actors in the planning and implementation of water investments, water operators are particularly aware of the implications of limited financial resources. This document therefore presents a series of proposals on how to address the growing investment gap in the water sector, taking into account both existing and emerging challenges. It also considers how these challenges are reshaping the responsibilities of water operators.

The proposed measures are assessed based on their ability to reconcile the “3Es” – according to the analytical framework proposed in a recent report by the Global Commission on the Economics of Water [2] – namely: economic Efficiency, social Equity, and Environmental sustainability.

It is important to note that this document focuses solely on financing mechanisms; it does not address measures aimed at reducing costs in the sector or ensuring affordability (these topics are addressed in other works by Aqua Publica Europea). Also, the proposed measures and instruments relate solely to the financing of activities currently managed, or potentially manageable in the future, by water operators; interventions in the water cycle typically undertaken by other public or private entities are not considered.

Finally, the measures discussed in this paper are informed by Aqua Publica’s internal reflections, while also drawing on the outcomes of the seminar Financing Water Resilience, organised by Aqua Publica at the European Parliament in April 2025, and on exchanges with international experts, some of whose contributions are included in this paper [3].

Context: growing investment needs and the new mission of public water operators

Evolving societal needs and the impact of climate change are driving a transformation in the mission of public water operators: **from service providers to water-cycle managers**. While the provision of safe drinking water and the treatment of wastewater remains their core responsibilities, water utilities are increasingly expected to take on new functions to contribute to repairing the “broken water cycle” (the first objective of the EWRS), as well as to maximising the recovery of the multiple resources contained in water. These new functions include among others:

- Investing in grey and green infrastructures to ensure resilience against floods and droughts.
- Risk monitoring and management for catchment areas (upstream protection).
- Reducing water consumption of both domestic and business users, through a range of approaches, including water reuse.
- Contributing to climate mitigation objectives (including by achieving energy neutrality and reducing methane emissions).
- Contributing to the design and implementation of projects related to nature restoration, biodiversity and, more generally, to repairing the “broken water cycle” in line with the EWRS.
- Protecting critical water infrastructure, including against human-induced threats.
- Recovering nutrients and energy from wastewater.

Most of these additional responsibilities are already enshrined in EU legislation and are likely to significantly increase investment needs in the sector, thus widening the financial gap, which the OECD in 2020 estimated at approximately €256 billion over 10 years [4]. In fact, beyond the impact of inflation of recent years, the OECD study could not (or only partially) account for:

- The stricter quality requirements for both drinking water and wastewater introduced in recent legislation and, more generally, the growing costs related to the treatment of emerging pollutants following the growing knowledge of the diffusion and harmfulness of these substances.
- A potential rise in water demand due to the development of industrial sectors highly dependent on high-quality water.
- Heightened security concerns following Russia’s invasion of Ukraine.

Against this backdrop, the traditional financing model of the water sector - primarily based on volumetric tariffing - appears increasingly inadequate. Relying solely on tariff increases to bridge the funding gap would likely exacerbate affordability issues, especially given the rising costs of other essential services.

Additionally, many of the new investments and interventions required of water operators – such as stormwater management and nature restoration – are characterised by a strong public good component and multi-benefit dimension. Recovering the costs of these measures exclusively through water bills, based on individual water consumption, may therefore be ineffective and inequitable.

A revision and integration of the current financing model is thus needed.

Guest contribution

Towards sustainable water supply and sanitation service provision



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Most water utilities in Europe face multipronged pressures on prevailing business models (note: while it is acknowledged, the note does not cover a situation where the costs of service provision are covered by general taxation).

- EU countries still struggle to guarantee access to all, in particular homeless people, urban poor and remote rural communities. Innovative service design and cross-subsidies are required.
- An investment backlog is already affecting the operational efficiency and service quality of several service providers. That backlog will need to be addressed, the sooner the better.
- Unit costs of energy and chemical substances have dramatically risen and are projected to rise further. Operational efficiency can mitigate some of these price hikes, to some extent.
- As analytical capacities improve, more substances are found in water streams, raising regulators' and public opinion's concerns on environmental and health safety. Additional treatments are required, the unit costs of which can be high, especially for small operators.
- Service providers also have to adjust to changing hydrologies. On the one hand, competition to access the resource intensifies, due to economic development and water scarcity. This can/should translate into higher abstraction charges and additional investments to enhance operational efficiency. On the other hand, water service providers' mandate increasingly includes rainwater management, primarily to keep city dwellers' feet dry.

Such a context calls for radical adjustments – if not revisions – of the business model of service provision. One such adjustment is to question what should be covered by water bills.

A common approach is to treat costs associated with compliance with environmental and health regulations as water supply and sanitation (WSS) service provision costs, to be borne by water bills. This is however an approximation, which can be misleading, typically when there is misalignment between those being asked to pay and those who benefit from the environmental regulation.

In practice, misalignment may not be an issue when there is congruence between the geographical scale of service provision and those who benefit from compliance. The issue intensifies where a relatively small service provider is required to install treatment at a very high unit cost.

In such contexts, there is a strong case to cover the costs of environmental and health regulation through other means, at broader geographical scales, and independently from the water bill (e.g., taxes on fertilisers, or Extended Producer Responsibility schemes).

That said, tariff increases cannot be taboo. Service providers need to be provided with the capacity to finance their operational and capital expenditures. This comes along with two accompanying measures.

First, affordability issues need to be addressed. This is best done through targeted social measures, outside the water bill. It is noteworthy that the city of Brussels recently aligned with this recommendation, as it realised that social tariffs were complex, opaque, and socially regressive.

Second, operational efficiency and investment plans need to be checked by an independent economic regulator. In a natural monopoly, an economic regulator can ensure investment and development plans are fit for purpose and benefit users. Reviewing and challenging these plans is a powerful tool to stimulate a reorganisation of the sector. Depending on circumstances, this can lead to a combination of central and decentralised services, or to different arrangements to reach economies of scale and scope.

With state-of-the-art water policies and powerful networks of service providers and water regulators, the European Union is equipped to pave the way towards business and financing models fit for a fair and green future for WSS.

The views expressed herein are the author's alone and do not represent those of the OECD.

1. For a smarter tariffing system

Water pricing and, more specifically billing based on volumetric consumption, is widely regarded as an effective mechanism for signalling scarcity and, consequently, encouraging water saving. However, a significant proportion of the costs associated with water provision and treatment are fixed. As a result, any reduction in water consumption will lead to either:

- An increase in the water tariff, if revenue levels must be maintained to finance operations and infrastructure renewal. This, in turn, could have implications for affordability and public acceptance, assuming all other conditions (e.g., social welfare measures) remain unchanged.
- Underfunding of water operators, if societal or political resistance prevents price increases.

To preserve the incentive for water savings provided by volumetric tariffing without compromising affordability or undermining operators' revenue streams, tariff structures must become more adaptive and responsive to different circumstances.

► Modulating the 'fixed' and 'volumetric' component of the tariff

In general, **the fixed component of water tariffs will need to increase to compensate for revenue losses resulting from declining consumption**. This adjustment should apply to both the drinking water and sanitation components of the tariff, especially in cases where wastewater treatment charges are also based on volumetric consumption. Raising the fixed component for sanitation is even more critical if the use of alternative water sources (e.g., rainwater or recycled greywater) for household appliances or other specific uses is to be encouraged in order to reduce demand for high-quality drinking water.

From an equity perspective, the redistributive effects of such a measure could be neutral or even positive, if we consider that – as in the energy sector – many water-saving solutions may be less affordable for vulnerable households. If the shift towards a higher fixed charge were found to have adverse affordability impacts, targeted social support measures should be introduced to mitigate these effects.

► Adapted tariffing mechanisms for intermittent users

Similarly, **tariffs for intermittent users (e.g., holiday homes, seasonal businesses, etc.) could include a significantly higher fixed component**. These users should contribute more consistently to the cost of maintaining infrastructure and ensuring service availability when needed, since these costs are independent of the frequency of use.

At first approximation, concerns about regressive impacts can be dismissed, as holiday homeowners are unlikely to belong to the lower deciles of income or wealth distribution.

2. Extending...the “Extended Producer Responsibility”

As highlighted by the European Court of Auditors in 2021 [5], the polluter-pays principle (PPP) is inconsistently and insufficiently applied across the EU, including in the water sector. As a result, “while progress had been made in addressing specific pollutants, for many enterprises the price of water does not cover the full costs imposed by the pollutants they release into the water” (p. 21).

A more thorough application of the PPP is therefore key to ensuring a fair redistribution of costs among users (and a proper functioning of the internal market).

One promising application of the PPP is the **Extended Producer Responsibility (EPR)**. The recently revised Urban Wastewater Treatment Directive introduces – for the first time in water-related legislation – an EPR scheme to finance part of the costs (both operational and capital expenditure) related to wastewater treatment. Under this scheme, the pharmaceutical and cosmetic industries will be required to contribute to the deployment of more advanced treatment processes necessary for removing micropollutants deriving from the consumption of the products placed on the market by these industries.

This measure presents several advantages:

- **Reducing the investment gap** in the European water sector, while ensuring territorial equity (as contributions will be based on the level of product consumption in each Member State, rather than the geographical location of production).
- **Mitigating the impact on affordability** for domestic users by redistributing some of the additional costs that treating these pollutants and achieving higher environmental standards will involve.
- **Driving innovation:** although the scheme may have financial implications for the pharmaceutical and cosmetic industries, its overall impact on the competitiveness and innovation of European industries may not be necessarily negative. In fact, it could stimulate the development of new, less environmentally harmful molecules and products, offering a global competitive edge to early innovators (notably, the pharmaceutical sector had already begun developing “green molecules” before the Directive’s approval).

Given these benefits, **it is both appropriate and urgent to extend this mechanism also to address the increasing treatment costs for ensuring drinking water quality** related to pollutants that are particularly persistent and diffuse in the environment, such as PFAS. The persistence and accumulation of these substances in water and soil means that, even if they were banned from the market today, water operators would still need to invest in treatment capacity for years in order to mitigate their harmful effects. And as the EWRS highlights, the health costs related to these pollutants are enormous.

An EPR scheme is therefore needed to ensure that the costs of de-pollution are properly internalised by producers. Again, this is not merely a matter of social fairness (including inter-generational equity), or of securing adequate funding for water utilities, it is also essential for ensuring the proper functioning of the internal market and promoting economic efficiency.

Of course, it is also important that EPR mechanisms are designed in a way that effectively incentivises producers to develop innovative, sustainable solutions so as to prevent the risk that polluters merely “buy” the right to pollute without making meaningful changes.

3. The flip side of the PPP: approaches based on the ‘Beneficiary-Pays Principle’

To provide water services, water operators incur costs that should be recovered in accordance with the provisions of Article 9 of the Water Framework Directive.

However, beyond generating costs – whether operational, environmental, resource-related – certain activities and interventions carried out by water operators to ensure the provision of services may also create value from an environmental or social perspective, or both. Mechanisms that allow for the economic recognition or remuneration of this value would enhance overall efficiency in resource allocation, and enable water operators to mobilise additional financial resources to support investment.

► The land-value capture approach developed by the OECD

The OECD has been exploring innovative approaches to bridge the investment gap in ways that promote both social fairness and economic efficiency. One promising approach is “**land-value capture**” [6]. The basic idea is that when an utility invests in water infrastructure, this can lead to an increase in the value of surrounding land, thereby generating an economic benefit for landowners. A typical example is investments to extend the water network to new areas or developments; similarly, benefits can arise from other forms of infrastructure investments, such as green infrastructure, which delivers multiple co-benefits, including temperature regulation, flood mitigation, and biodiversity enhancement.

The OECD argues that a **part of the land or property value increase resulting from (public) investment can, and should, be captured through appropriate mechanisms**, such as levies or fees, which can then be reinvested in the provision of public goods. The OECD shows that, when well-designed, these instruments are socially fair and do not create market distortions; yet they remain significantly underutilised in the water sector.

While in many contexts water operators charge property owners for new connections, these charges typically reflect only the material cost of the connection. However, a more

comprehensive approach is needed. While the right to access water service must be ensured, connection charges should better reflect the long-term costs – both operational and resource-related – of providing water services to newly developed areas, particularly in regions vulnerable to drought. In this regard, land-value capture instruments could – in coordination with other land-planning policies – help guide land development decisions towards more sustainable models, especially when dealing with large-scale property developers.

► Recovering the costs...but also the benefits

When describing the costs of water services to be recovered, article 9 of the Water Framework Directive clarifies that these should "include environmental and resources costs". In many contexts, this implies that water operators pay an abstraction fee, which is then passed on to users through the water bill.

At the same time, water operators are increasingly implementing practices that return water to the environment or reduce pressures on natural resources, for example through aquifer recharge or water reuse schemes. This water is often of very high quality or, in some cases, even of better quality compared to what was originally abstracted.

Therefore, it can be argued that, through these operations, **water operators are generating an “environmental/resource benefit” (i.e. by reducing the amount of water that would have been abstracted without water reuse systems). This benefit should be recognised economically.**

Possible mechanisms include offsetting part of the abstraction fee, or establishing dedicated funding instruments to compensate operators for the costs of producing and supplying reclaimed water, thus reflecting the reduced demand in natural freshwater resources.

Guest contribution

Redefining the understanding of “water services” under the EU Water Framework Directive



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As a means of addressing water scarcity, water utilities (water services providers) are increasingly being encouraged to broaden their operational portfolio to include the further polishing of treated wastewaters to enable their safe reuse. Reclaimed waters can address a diverse range of water uses including agriculture, urban cleaning, landscaping and potentially even drinking water (potable reuse). In fact, Article 15 of Directive (EU) 2014/3019 on Urban Wastewater Treatment requires Member States to

promote the reuse of treated wastewater for all appropriate purposes, whilst Regulation (EU) 2020/741 defines the standards required for ensuring the safe reuse of treated waters for agricultural irrigation.

From a regulatory perspective, making adequately treated urban wastewater available for adequate use broadens the definition of water services providers beyond that envisaged under Directive 2000/60/EC, the Water Framework Directive (WFD). In fact, Article 2(38) of the Directive defines “water services” as “all services which provide for households, public institutions or any economic activity:

- a.abstraction, impoundment, storage, treatment and distribution of surface water or groundwater,*
- b.waste-water collection and treatment facilities which subsequently discharge into surface water.”*

Therefore, the WFD defines “water services” as those services undertaking the activities defined under both (a) and (b) above.

Article 9 of the WFD, entitled “Recovery of Costs of Water Services” under paragraph 1 then requires that “*Member States shall take account of the principle of recovery of the costs of water services, including environmental and resource costs, having regard to the economic analysis conducted according to Annex III, and in accordance in particular with the polluter pays principle*”. Within this context Member States are required to have ensured (by 2010) that water pricing policies provide adequate incentives for users to use water resources efficiently, and that different water uses provide an adequate contribution to the recovery of the costs of water services.

The provision of reclaimed water (adequately treated wastewater) for use goes beyond the Article 2(38) definition of the WFD which frames the scope of operations of water services providers up to the discharge of treated waters into surface water. This needs to be considered within the framework established by Article 9 of the WFD which requires consideration to resource and environmental costs of water services provision such as the cost of abstracting freshwater from surface and/or groundwaters, the impact of abstraction activities on water quality or the downstream environment as well as carbon emissions related to these activities, in the context of defining recovery of costs.

Within this framework, however, the “creation” of freshwater resources by water services providers through the treatment and further polishing of wastewaters should be considered as generating resource benefits – particularly when the distribution and use of treated wastewaters is undertaken within a regulated context which ensures that the use of this “new” water is undertaken in substitution of threatened natural freshwater resources. Resource benefits can also be considered when treated waters

are provided for activities such as Managed Aquifer Recharge leading to the augmentation of the groundwater reserve. Additionally, environmental benefits such as the making available of “unutilised” water resources (through substitution of supply) for freshwater dependent ecosystems should also be considered. The consideration of resource and environmental benefits should therefore be framed with the context of the particular river basin in which water reuse is applied.

The introduction of water reuse into the operational portfolio of water service providers calls for a broader economic analysis than that envisaged under Article 9 of the WFD. While Article 9 emphasises the recovery of resource and environmental costs in line with the Polluter Pays Principle, a more comprehensive approach should also account for the resource and environmental benefits generated by water reuse. In this context, the concept of a “Remediator Benefits Principle” can be introduced, highlighting the positive economic value of actions that restore or enhance environmental quality. Incorporating both costs and benefits into the economic framework enriches the interpretation of the cost-recovery principle, and allows for the design of incentives that are directly matched to the resource and environmental benefits generated by the activity.

4. Financing the commons: It need not be a tragedy

Water operators are increasingly undertaking activities that go beyond their traditional remit, such as: restoring river morphology, reducing soil sealing in urban areas, creating wetlands, protecting water sources, developing back-up supplies, and increasing storage capacity. Sometimes these interventions are initiated by the water operators themselves, for example as part of drought-risk management plans; at other times, they are mandated by other public authorities, particularly in the context of flood-risk mitigation.

Regardless of who initiates them, many of **these interventions share an important characteristic: they exhibit the features of public goods** (nobody can be excluded from enjoying the benefits of the intervention). Moreover, although the primary goal of these actions is to enhance water resilience, they often yield additional co-benefits, such as improved biodiversity, carbon capture, or enhanced recreational and tourism value. At the same time, many of these interventions are required precisely to address the **consequences of overexploitation** – whether in terms of water quantity or quality – which is a common issue in the management of shared resources.

The dual challenge of avoiding the overexploitation of shared resources and ensuring the financing of public goods is well recognised in economic literature. Nevertheless, there are several examples across EU Member States where different financing mechanisms have been successfully used to fund interventions aimed at protecting or restoring shared water resources, without creating economic distortions or social inequities.

► Financing freshwater ecosystem restoration through the water tariff

As we have seen above, Article 9 of the WFD provides that the cost recovery of water services should also include environmental and resources costs; these costs may be passed on to users through the water tariff.

If adequately calibrated, **financial resources collected through the tariff can finance interventions that aim to restore freshwater ecosystems** – for instance, through nature-based solutions – as a means of compensating for depleted resources or degraded ecosystem functions.

Case study

Financing the restoration of water ecosystems through the water tariff – the case of the Brenta 2030 project

The *Life Brenta 2030* [7] project aims to enhance biodiversity and improve water-related ecosystem in the Nature 2002 site “Grave e Zone Umide del Brenta” in the middle section of the Brenta river, in north-eastern Italy.

The project has involved the creation of various wetlands, floating islands, meadows, and reforestation areas, all aimed at restoring the wetland ecosystem. The expected benefits are manifold: biodiversity restoration, increased water availability (through retention and groundwater recharge), and improved water quality (through natural filtration and buffering).

While the initial implementation was financed through a public grant from the LIFE programme, the maintenance phase of the project is now partially funded by the local water operator, ETRA, through a dedicated funding scheme supported by resources collected via the water tariff.

This funding is considered a form of compensation (ecosystem service payment) for the environmental and resource costs associated with freshwater abstraction, in accordance with the provisions of Ministerial Decree No. 39/2015, which transposes Article 9 of the Water Framework Directive into Italian legislation.



► Financing nature restoration through a ring-fenced tax

If interventions that enhance water resilience have multiple benefits that spill over on large territory, and the value of these benefits cannot be related solely to the amount of water used by beneficiaries, then a **ring-fenced tax may be an appropriate way to finance this kind of interventions**. Such a tax could be calculated using a proxy for household wealth or be linked to an environmental indicator, such as the extent of soil-sealed surfaces associated with a household or business.

Two key elements are essential to ensure the success and public acceptance of such a scheme:

- **The ring-fenced nature of the tax** ensuring that the funds are used exclusively to finance interventions covered by the scope of the tax, thereby enhancing accountability and public trust.
- **Clear governance of the funding stream**, including transparent mechanisms for how the tax is collected, allocated, and spent, and clarity on who is responsible for the planning and implementation of interventions, to guarantee long-term credibility and oversight.

A promising example of this approach is the GEMAPI law in France (see box below).

Case study

Financing nature restoration through a ring-fenced tax – the GEMAPI law in France

Adopted in 2014, the French law on the “Modernisation of public action at local level” (*loi de modernisation de l'action publique territoriale* – Loi 2014-58) introduced a new responsibility for local authorities: the management of aquatic environments and the prevention of floods (*Gestion des Milieux Aquatiques et Prévention des Inondations*, or “GEMAPI [8]” in short).

This new legal competence is intended to ensure the preservation, restoration, and sustainable management of aquatic ecosystems – including rivers, lakes, and wetlands – while also implementing measures to reduce flood risks, protect populations, and mitigate the impacts of flooding.

Since 1 January 2018, responsibility for GEMAPI has been transferred to “Public Establishments for Inter-Municipal Cooperation” (Établissements Publics de Coopération Intercommunale, or EPCI): inter-municipal bodies responsible for the joint provision of public services. These entities have taken over tasks previously managed by individual local authorities.

To finance GEMAPI-related activities, EPCIs are authorised to levy a **dedicated, ring-fenced tax** – the GEMAPI tax. This tax is calculated based on a proxy of the property

tax paid by private property owners and businesses. The exact rate is set by the local authority and can range from €0 to €40 per inhabitant, depending on the required operational and capital expenditures. The total amount raised locally can be supplemented by contributions from the state budget and the water agencies (*agences de l'eau*), if necessary.

The revenue collected is used – either directly by the EPCIs or through delegated implementation by public water operators – to finance a broad range of interventions in line with GEMAPI objectives. These include, in particular, the maintenance of watercourses and the restoration of aquatic ecosystems, wetlands, riparian forests, river morphology, and other nature-based solutions.

► Private funding streams and the potential Nature Credits

Beyond tariffs and taxation, other financing mechanisms could be explored. Nature credits, in particular, represent a promising approach. The recently adopted communication by the European Commission *Roadmap towards Nature Credits* paves the way for establishing a mechanism that could attract financial resources for nature restoration interventions that have a public-good or multiple-benefit character.

The Roadmap outlines a two-step model: certification, followed by crediting. Within this framework, water utilities could obtain nature-positive certificates for interventions such as river morphology restoration, the creation of wetland areas, and similar ecosystem-based measures. These certificates could then be purchased by financial institutions aiming to green their investment portfolios, or by private entities with a direct interest in the beneficial outcomes of the intervention (e.g., insurance companies seeking to reduce flood risk in a specific area).

As noted in the Roadmap, the success of this approach will depend heavily on the credibility of the system, particularly the robustness of the certification mechanism to ensure integrity and prevent greenwashing. Another potential limitation lies in the geographical variability of the value that a “credit” can take: as a market-based instrument, the value of a credit will depend on the strength of demand, which can vary significantly across regions based on local characteristics such as land value or the presence of downstream economic activities with a direct interest in the intervention.

While these caveats will need to be addressed, **nature credits offer clear potential**, particularly as a complementary tool alongside public investment – which will likely remain essential to initiate and support nature restoration and protection measures.

5. Finding good financial companions

In many political fora it is often stated that attracting more private investments to the water sector should be a priority. It should also be clarified, though, what type of private investors may actually be interested, given the financial profile of water-related investments: low risk, low return, long pay-back time.

Some categories of prudent private investors can indeed be identified (most typically, pension funds), whose investment strategies are more aligned with the water sector's characteristics. The establishment of the green finance framework (*EU Taxonomy*) is expected to improve both the quality (i.e. financial conditions) and the quantity of financial flows into the water sector, especially from institutions seeking to increase their green portfolios (although some of the screening criteria in the Taxonomy for water-related investments under the first two delegated acts – on climate mitigation and adaptation – may risk favouring those who are already performing well, thus failing to incentivise a broader scaling-up of investment across the sector).

Nonetheless, it must be acknowledged that a large part of the financial sector may not find water investments particularly attractive, precisely due to factors mentioned above and, in particular, the long pay-back horizon of water investments (or, conversely, water operators may be led to take sub-optimal financial/operational decisions to shorten the payback time and attract this kind of investors).

In this framework, the role of public banks must be emphasised.

Their typical long-term, low-risk financing approach matches very well the needs of the water sector. But their relevance extends beyond that: public banks are typically mandated to finance infrastructure that is essential to the socio-economic development of society – such as water services – which justifies the application of preferential financial conditions.

The European Investment Bank (EIB) has long played an important role not only in financing the water sector but also in supporting improvements in financial management within the sector, thanks to highly specialised expertise offered by the bank. Consequently, the reinforcement of its role proposed by the Commission in the EWRS has to be particularly welcomed.

In addition to the EIB, **national and regional public banks** also play a key role – and could play an even greater one, particularly in partnership with the EIB. A notable reference model in this regard is the **NWB Bank in the Netherlands, known as "the sustainable water bank – a bank of the public for the public sector"**.

Several other good examples exist across Europe [9]. The EU should actively promote the replication and adaptation of such models throughout the continent.

EIB's role in financing water resilience



JAMES HUNT

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The European Investment Bank (EIB, estd. 1958) is the lending arm of the EU. Owned by the 27 Member States, the Bank is not-for-profit, raises money on the capital markets through bond issuance and has long been a strong supporter of the water sector. In the last ten years, EIB invested €40 billion in the water sector globally. However, the evidence presented today makes clear that we cannot simply do “more of the same”.

As highlighted in the European Commission's call for evidence, human activities have resulted in substantial changes to the water cycle. Our interventions have, over hundreds of years, resulted in markedly altered drainage patterns. Combined with the impacts of climate change these alterations are resulting in more prolonged droughts and more severe flood events. Measures to alleviate these pressures are clearly needed.

Under these circumstances we might expect to see very large demands for financing of catchment management measures. We are not. To be clear, the EIB is investing in smarter, more adaptive infrastructure – modernising existing assets, protecting against floods, and supporting nature-based solutions to store and manage water.

We also recognise that the economics of water will only work if we leverage innovation. Europe hosts world class water firms but scaling up breakthrough solutions still requires risk tolerant finance. We are ready to provide such finance for digital monitoring, AI driven optimisation, low energy treatment for contaminants, circular economy models, and frontier desalination technologies.

However, despite these efforts, we are well aware of the need for far greater financial flows to achieve water resilience. We can support, but we cannot drive such flows – we are the lending institution. The need is driven by financial drivers, by the necessity of renewal, by laws, by policy, by the *acquis*...

Recent implementation reports for the Water Framework and Flood Directives make clear that there are large implementation gaps. Motivating Member States to close these gaps, to make the necessary reforms and to achieve greater water resilience is the key rationale of the EWRS. Member States must be motivated to work with all their water management organisations, be they water companies, river basin planners or flood defence authorities to collectively and proactively restore the water cycle for the benefit of us all. At EIB, water remains a key priority with the bank fully committed to support the EWRS.

6. Water-based solidarity: a condition for European cohesion

Ensuring universal access to affordable water services may require the implementation of solidarity measures. These measures can either rely on the state budget (welfare support) or on the tariff (e.g., through tariff-financed water solidarity funds), and normally target specific social groups or are based on economic parameters to support more vulnerable households.

Solidarity between users can also be complemented by solidarity between territories.

The cost of providing safe drinking water is highly context-dependent. It is shaped by geographic and orographic factors (e.g., groundwater vs surface water, use of gravity vs pumping), socio-economic conditions (e.g., population density), and anthropogenic pressures (e.g., pollution from industrial activity, or water demand levels).

Given these spatial disparities, specific solidarity measures can be designed to support those territories that combine two characteristics:

- a. present below-average pro-capita income and
- b. suffer from high environmental vulnerability (e.g., water stressed area, exposed to floods/sea level raise, etc.).

Such territorial solidarity measures may operate at different spatial scales and take various forms:

- **Urban–rural solidarity:** In many cases, rural areas face higher per capita water supply costs. A single water operator serving both urban and rural zones can apply a uniform tariff structure to cross-subsidise services.
- **Solidarity between neighbour regions:** For example, a water-rich region could help finance infrastructure interconnection with a water-stressed neighbouring area. This could be funded through user contributions in both areas, via tariffs or alternative mechanisms.
- **Trans-territorial solidarity:** Investments in low-income, water-stressed regions could be subsidised through funds collected in wealthier areas, either via water tariffs or dedicated ring-fenced schemes.

Although the national level is certainly the most relevant one for designing most of these mechanisms, the EU has also a role to play. As with past EU *Cohesion Policy* efforts, the new **Multiannual Financial Framework (MFF)** should prioritise investments in water resilience under its first pillar. **This would contribute to European cohesion for at least two key reasons:**

- **It would reduce the risk of tensions between countries that share water bodies:** Strengthening downstream water resilience reduces dependence on decisions taken by those managing water bodies upstream, thereby lowering the risk of disputes between countries sharing water bodies.

- **It would foster balanced economic development:** As water becomes increasingly critical for industrial development and investment decisions, supporting water-stressed, low-income regions will help prevent water scarcity from deepening existing economic inequalities across the continent.

Naturally, any form of inter-territorial subsidisation – whether national or European – must be governed by robust regulatory frameworks to ensure efficient use of resources, avoid waste, and prevent unintended rebound effects.

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