Natural Mineral Waters Europe
Natural Mineral & Spring Waters

Shaping Sustainable Water Management: EU Policy Perspectives for 2024-2029

A discussion paper by Natural Mineral Waters Europe

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Foreword

Water is a key resource for nature, human subsistence, and a thriving economy alike. However, climate change and pollution are exerting pressure on the quantity and quality of available water. Simultaneously, the world is experiencing a concentration of water needs, as the population grows and continues to urbanise.

Numerous regions of Europe are at risk of being affected by water shortages or flooding in the years to come. Therefore, comprehensive and sustainable groundwater management is crucial to ensuring the protection of natural water sources for future generations.

Natural mineral water and spring water are among the few, if not the only, products entirely shaped by nature. Compromising exploited water sources, whether due to water scarcity, abundance or contamination, may inflict irretrievable damage on the ability of companies in the sector to continue production. And there is another special aspect to consider: the product is tied to its source and specific hydrogeological, chemical, and microbiological properties. With bottling taking place at the source, there is no possibility of carrying out production under more favourable conditions. Therefore, sustainable water management has been the top priority for natural mineral water and spring water producers, who have a long history, in partnership with local stakeholders, of safeguarding catchment areas through which water flows to reach natural sources.

The Ultimate Goal: Sustainable Water Management

Sustainable water management is management of water resources that ensures water fulfils its:

- environmental function – supports healthy ecosystems,
- social function – sustains human life and underpins fundamental social harmony,
- economic function – meets human needs, enables a thriving economy,

within an indefinite time frame, without compromising the needs of future generations. In other words, it is **"clean and abundant water for everybody, now and tomorrow"**.

This is only achievable by maintaining local water balance between (natural) recharge and abstraction, and protection from pollution.

And thus, faced by the consequences of human activity and climate change, our sector is committed to continuously expanding its understanding of the watersheds it depends on and taking corresponding action to abstract water while respecting the local hydrogeological context.

To ensure that action to manage water resources sustainably is effective, collaboration among different players is critical. Our sector abstracts relatively meagre amounts of water: estimated at approximately 0.05% of total water abstraction in the EU.[1] Yet, given the special relation that our sector has with water, it is ready to take a leading role and inspire other industries by sharing best practices and examples.

The present document represents the natural mineral and spring water sector's ("NMW sector") comprehensive vision of achieving sustainable water management via sound policymaking.

It outlines general principles and elaborates on various topical issues that are inextricably linked with sustainable water management. Simultaneously, it positions the sector's production and activities within this multi-stakeholder landscape.

[1] Calculated as the sector's production multiplied by its water usage ratio divided by all water abstracted in the EU, as reported by the EEA for 2022 (Water abstraction by source and economic sector in Europe, www.eea.europa.eu).

Water resources and natural mineral water and spring water companies

Natural mineral and spring water companies abstract groundwater. Why should they care about other water resources?

In 2022, 26% of water abstracted in the EU originated in groundwater, up from 20% in 2000. While overall water abstraction has decreased by 19% and surface water abstraction by 25%, groundwater abstraction increased by 6%. This points to growing pressure on groundwater resources, also partly caused by the seasonal unavailability of surface water.

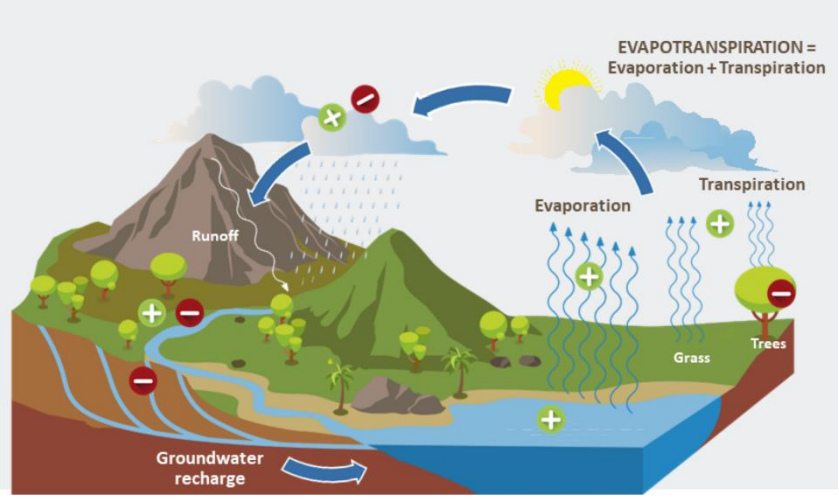
Source: European Environment Agency

Water is ubiquitous in the environment, society, and economy, and it appears in a variety of forms. Defined by its salinity, it can range from freshwater through brackish water to seawater. We can find water on the surface or underneath as groundwater. Groundwater can be shallow or deep with aquifers – groundwater reservoirs – of various characteristics. Water can be locked in snow and ice, or present in the atmosphere, soil or living organisms. In industry, water can be raw or processed, or suitable or unsuitable for human consumption.

One common categorisation of water divides it into blue, green and grey. Blue water exists in rivers, lakes, reservoirs, wetlands or underground aquifers. It is recharged by precipitation, either as rainfall or snowmelt. Green water is stored in soils and biomass, absorbed by plant roots and returned to the atmosphere by evaporation or evapotranspiration. Finally, grey water is wastewater that has been used and may contain impurities.

Since the NMW sector has a special relationship with groundwater, this document places more emphasis on groundwater, while water issues more distant from the sector are addressed more generally, if at all.

However, because the water cycle intertwines all forms of water dynamically, this paper aims to address water resources holistically. The term "water" used throughout this document means "water resources in general". When addressing a specific form of water, it will be noted accordingly.



This approach is in line with so-called Conjunctive Water Management,[2] an approach to water resource management in which surface water, groundwater and other components of the water cycle, such as desalination and treated wastewater, but also water related to regenerative agriculture practices (i.e. soil conservation agriculture, agroecology) such as water retention in soil, should be managed with the strongest possible coordination, in order to maximise the overall benefits of water in the short and long term.

[2] Conjunctive water management: a powerful contribution to achieving the Sustainable Development Goals – UNESCO Digital Library: https://unesdoc.unesco.org/ark:/48223/pf0000375026.locale=en

General recommendations for policymaking in sustainable water management

Prioritise water. Sustainable water management needs to remain a priority for policymakers in the new legislative term.

Focus on implementation. While new legislation might be necessary, there are still shortcomings in implementation of existing policies.[3] Proper implementation of existing water legislation should be a priority. New legislation should be consistent with that already in place and only address areas that are not or cannot be regulated through other EU or national initiatives.

Adopt a long-term approach to water policy-making that considers the time horizon of water cycles. Water takes up to hundreds of years to infiltrate the ground and recharge groundwater aquifers, while certain contamination risks might impact soil, surface and underground water after a delay. Furthermore, interventions to protect and strengthen water resources will require time to be implemented and generate impact, especially if involving nature-based solutions.

Legislate based on evidence. Water management policies should be backed by robust data and sound research to ensure that the actions taken are adequate and effective. Also, legislation must be able to adapt to new discoveries and technologies, ensuring that water management practices remain effective in the context of changing environmental, social, and economic conditions.

Involve all actors. Because water is a shared resource necessary for almost every activity, public discussion and policy decisions should involve all impacted actors. Pursuing a truly multi-stakeholder collaborative approach should become the cornerstone of water policymaking.

Recognise that water is unique. When legislating around water, taking inspiration from other areas (for example energy) comes with risks. Policymakers should always consider the specificity of water resources. For example, water is essential in a way that is incomparable with most other resources. Also, water issues are very local, conditioned by geography and geology. Finally, water is in principle renewable, but local or seasonal needs, and inaccessibility or pollution can render it unavailable.

[3] The EU Commission has referred several countries to the Court of Justice for failing to apply specific water-related policies. See, for example:

- 2024 July infringement package: key decisions (europa.eu)
- 2024 March infringements package: key decisions (europa.eu)
- 2023 February infringements package: key decisions (europa.eu)

Embrace the complexity of the water system. Because water has so many forms, uses, impacts and dependencies, policymaking needs to remain cautious and nuanced. Different stakeholders have different water needs and opportunities to adjust their water-related practices. For example, high-quality water used for hydration has less substitution or reduction potential than many other uses.

Prioritise prevention. Corrective measures are generally more expensive, environmentally demanding and less effective than prevention. Their cost is often shifted to citizens. Therefore, preventive measures are to be prioritised.

Uphold the polluter-pays principle. Actors that pollute or damage the natural environment should bear the costs of managing and mitigating that impact, e.g. through a respective EPR. The financial burden of the damage should not be shifted to society at large.

Maintain the notion of water as a public good and water as a human right. For example, pricing and allocation policies should not compromise access of especially vulnerable communities to safe drinking water and sanitation.

14 relevant concepts and topics for policymaking

1. Locality

The locality of water needs and recharge (demand and supply) must be at the heart of any water legislation. Therefore, general principles should be defined on the EU level, but implementation should allow for specificities of smaller geographic, hydrologic and hydrogeologic units. The basic territorial unit that requires a unique approach is a watershed.

In fact, the need to define legislative solutions on the local level is already enshrined in the Water Framework Directive, with water bodies, watersheds or basins for surface water and aquifers for groundwater.

"Locality of solutions" does not necessarily mean "on a small geographic scale". There are several levels of watershed; on the lower level of granularity their territory often surpasses that of individual countries. It follows that certain challenges can and should be addressed on the level of the regional river basin. The Water Framework Directive mandates that where river basins extend across different countries, coordination takes place with a view to ensuring effective water protection and management of water, taking into account that the responsibility for national transposition of such a directive may lay with different competent authorities across Member States.

A watershed is a basic geographic unit for water resource management. However, there are different levels of granularity, the lowest "level 1" being on a continental scale. Above is a comparison of watershed levels 4, 6, and 8 (left to right). Source: https://resourcewatch.org/.

While a watershed defines the natural movement of water, transfers of water between watersheds are quite common.

Notwithstanding the delineation by watershed borders on the surface, groundwater reserves might be highly interconnected beyond these watersheds. The border region between Germany, Belgium and France is such an example, owing to cross-border sandstone geologic structures. Thus, in certain contexts and locations, policies addressing surface water might not work for groundwater, and vice versa. In fact, tools exist that delineate groundwater spatially, even in 3D.[4]

In summary, any measure for sustainable water management can only be effective if the geographic and hydrogeological reality is properly considered.

[4] E.g. BDLISA in France. https://bdlisa.eaufrance.fr/

2. Water allocation

Water is indispensable for all natural processes as well as almost all economic activities. This means there are an astounding number of ways in which water is needed and used.

When distinguishing or, if necessary, allocating between various uses, legislators should consider that high-quality water needs a special level of protection and prioritise its use for basic human needs such as hydration.

Collective solutions among water users should be found to address potential conflicts over resources. The prioritisation needed for water allocation should follow the principle of "prioritisation based on the use, not the user", with life-sustaining uses such as hydration to be prioritised over other uses. This, however, also implies an obligation that deep groundwater should only be used for the product itself and not for production processes as long as other water options are available.

Last but not least, a sufficient capacity to bottle water also needs to be maintained for cases of emergency relief.

The Spanish Red Cross delivers emergency water supplies during natural disasters such as the wildfires in 2022 and DANA 2024.

3. Water pricing

While water is theoretically a renewable resource, it is not always readily available in the required quality at any given time and location. Therefore, it should not be treated as an infinite resource. While we need to uphold everybody's right to quality water, the **price of water needs to reflect its value based on its scarcity and the cost of its replenishment**. Sound water pricing should play a role in motivating more sustainable water management. However, water pricing should never compromise the basic right of access to safe water and sanitation.

The fact that the price of water remains very low and does not take into consideration the real costs of water are conclusions taken from a recent report issued by Inspectors from the General Council of the Economy (CGE-Bercy) and from the General Inspectorate of Sustainable Development and the Environment (IGEDD) in France.[5]

Policymakers should also consider the principle that revenues generated from water-related pricing should fund investments in the protection of water resources. For example, abstraction fees should also benefit nature restoration and other activities of high ecological value within the relevant catchment areas.

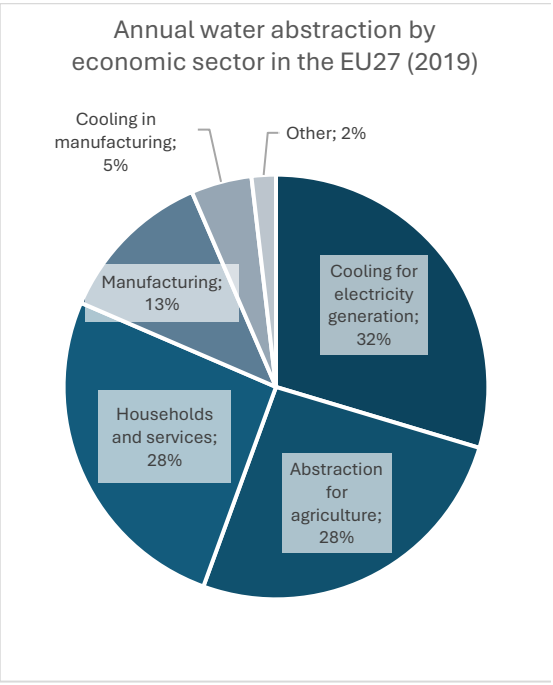
[5] Sobriete_Hydrique_IGEDD_CGE.pdf (economie.gouv.fr)

4. Abstraction reduction

One of the key conditions of sustainable water management is levels of abstraction that allow for (natural) replenishment. As a result, all water users should be encouraged to adopt solutions and practices that lead to maintaining this balance.

Introducing water abstraction or use reduction measures is often among the first measures taken by policymakers when addressing water quantity. Such measures have several advantages: they can be easily quantified, understood and communicated, and the responsibility is clearly attributable to individual stakeholders. Abstraction reduction targets are indeed already present in various countries.[6]

However, when designing reduction targets, policymakers should remain cautious. In line with the "water is unique" principle set out in the first part of this document, any water abstraction reduction measures should also reflect water specificities, especially when inspired by legislation setting reduction targets in other areas (e.g. energy efficiency, material circularity).



Source: EEA 2024 report "Europe's state of water 2024. The need for improved water resilience"

When addressing abstraction reduction, the NMW sector suggests considering the following:

- **Reduction targets as a complementary measure.** Abstraction reduction is not a silver bullet. For example, reduction cannot be indefinite and is limited by objective physical barriers.
- **Water abstraction does not equal water use.** Circularity in water use (reuse, recycling) opens the door for limiting abstraction even without limiting nominal water use. Such water reclaim avoids water abstraction. Therefore, the focus should be on limiting water abstraction rather than use.
- **Prioritise impact.** Policymakers should prioritise measures that will have the most significant reduction impact, even if they result in pressure from interest groups. Similarly, they should ensure political measures are guided by sound data and scientific evidence and avoid focusing on interventions that only target visible water usage.
- **Volume reduction is not the only measure of success.** Adding more nuance to the previous point, the raw amount of abstracted water is not the only metric that matters. The value of water savings from abstraction reduction and water returns depends on spatial, temporal and quality

Note: it is important to recognise that different actors have different possibilities to reduce water abstraction via water reuse, the main limitation being quality requirements and safety. In the NMW sector, water reuse is significantly limited, as most abstracted water ends up in the product and cannot be secondary water.

[6] France aims to reduce water extraction by 10% by 2030. In the Netherlands, there is a national plan for water reduction by all heavy users.

elements. For example, abstraction reduction in water-stressed watersheds or during seasons of high water stress is more important. Also, there should be a distinct approach to abstraction from surface water vs. abstraction from deep waters. To avoid arbitrary decisions, hydrological and hydrogeological data and knowledge is crucial to underpin these decisions.

- **Baseline matters.** At the moment, various water users operate at various water efficiency levels. The efforts undertaken by actors that have effectively led to a reduction of their water abstraction level before any baseline was established should be recognised. In fact, instead of reduction against a temporal baseline, the required reduction should relate to a use-specific best available technique.

- **Process water and product water should be strictly distinguished.** As opposed to "process water", water functionally contained in a product ("product water") should not be addressed by reduction targets. This is particularly important for economic activities where product water represents a significant proportion of the water consumed in production (such as in the food and beverage sector).

5. Alternative approaches to freshwater sourcing

Policymakers should support efforts to substitute abstraction via alternative approaches.

Water reuse is one of these alternative approaches: reusing water after appropriate treatment substitutes for the need to abstract water and thus preserves water resources. While there are some positive examples, and EU Regulation 2020/741 on water reuse[7] entered into force for agricultural irrigation in June 2023, water reuse is currently far from being deployed to its full potential. Therefore, policymakers should:

- Develop a framework for water reuse, and
- Increase awareness about the potential benefits of water reuse.

At the same time, sound water pricing might incentivise water reuse.

Desalination might be another alternative to the abstraction of surface and underground water resources when they are not available or where their abstraction could cause potentially irreversible hydrological imbalance. Besides being an expensive solution, it is necessary to address its potential negative climate and pollution effects, given the high energy needs of desalination and the highly concentrated waste produced in the process.

6. Robust monitoring for effective water management

Understanding the dynamics of water flows, including surface water and groundwater, is essential for effective water resource management. The Water Framework Directive establishes several monitoring and review obligations[8] for Member States. However, as pressure on water increases, more granular and precise data beyond what is currently mandated is required to cope with the rapid and large-scale challenges of water resource management.

On a European as well as national level, there should be a **regular water situation report, water balance modelling connected with climate modelling and real-time groundwater abstraction monitoring**.

[7] Regulation (EU) 2020/741 of the European Parliament and of the Council of 25 May 2020 on minimum requirements for water reuse

[8] Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy

Through the implementation of robust monitoring systems, it is possible to gather detailed data on water quantity and quality, thus helping to predict and mitigate risks such as floods, droughts, and contamination events. Moreover, access to advanced tools and technologies allows for precise assessment and management of water resources.

7. Water stewardship plans

Because water is a shared resource, it cannot be successfully addressed by stakeholders in isolation. Protecting water resources and promoting water recharge requires collective action. Therefore, so-called "water stewardship" is crucial to ensuring sustainable water use. Effective plans should consider the following aspects:

1. **Legislation and local regulations**: Alignment with local laws and licensing practices to support the efforts of local operators.
2. **Collaborative platforms**: Establishment of platforms for joint action within the relevant catchment or watershed boundaries.
3. **Net approaches to local water abstraction**: Recognition of replenishment[9] impacts from stewardship activities in decision-making processes.

> Water stewardship is the use of water that is socially and culturally equitable, environmentally sustainable and economically beneficial, achieved through a stakeholder-inclusive process that includes both site- and catchment-based actions.
>
> *Alliance for Water Stewardship, 2024*

4. **External validation:** Recognition and certification of water stewardship plans through standards and/or guidelines can support the validity, robustness, and acceptance of these plans.

Policymakers need to support water stewardship with frameworks for collaborative action within a watershed. This includes providing enablers such as financial resources, data, platforms, and governance.

8. Promoting water infiltration through nature-based solutions

Water scarcity already affects 20% of European territory and 30% of the population each year.[10] Ongoing climate change is expected to further aggravate the situation. Even in areas where precipitation remains stable, more extreme seasonal water shortages or, on the other hand, flood events are expected to occur with greater frequency. Therefore, water balance should be maintained as naturally as possible by promoting water infiltration and facilitating the buffering capacity of reservoirs.

Infiltration increases the available supply of water. In this context, the relevant metric to be considered is Baseline Water Stress, which is calculated[11] as follows:

$$Baseline\ Water\ Stress = \frac{Total\ Annual\ Water\ Withdrawals}{Total\ Available\ Renewable\ Water\ Supply}$$

[9] Replenishment is defined as the return of water to the water cycle's terrestrial components such as soil, surface water bodies or groundwater aquifers.

[10] State of Water. European Environmental Agency, 2024

[11] WRI Aqueduct tool https://www.wri.org/research/aqueduct-40-updated-decision-relevant-global-water-risk-indicators

Importantly, the key word is “available”. While water scarcity can be calculated using volumetric[12] methodology, the water stress calculation takes into consideration additional elements: the water needed for environmental flows, water accessibility and water quality.

When considering infiltration, nature is a fundamental part of the solution with respect to sustainable water management and adapting to climate change. Intact and restored freshwater ecosystems and the ecological flows supporting them are crucial to supporting the water cycle and many human activities. It is therefore vital to reserve water for nature and keep it in the landscape to mitigate the effects of water scarcity and droughts.

Policymakers should therefore include nature-based solutions in their portfolio of water-resilience actions. Concretely, nature-based solutions can include protection and restoration of wetlands, ensuring free-flowing rivers or the establishment of small water bodies.

At the same time, it is important to assess the impact of nature-based solutions. This can be accomplished through the above-mentioned volumetric method such as VWBA[13] but also using remote sensing via satellites and airborne technologies.

Policy-wise, the Nature Restoration Law[14] outlines major steps towards restoration of the natural environment and we welcome the participatory process among Member States, civil society and relevant sectors that this law foresees to ensure successful implementation of national restoration plans. Such a multi-stakeholder approach is fundamental to identifying opportunities for restoring nature through nature-based solutions and evaluating the need for complementary grey infrastructures, if necessary.

Case study: Rehydrating the Mirosławiec peat bogs

Żywiec Zdrój identified a hydrological issue in the Mirosławiec commune in Poland involving low water flow in wetlands and peat bogs. In response, they partnered with the Wetland Conservation Centre to launch a project focused on rehydrating peat bogs over 14 ha, with input from local stakeholders, scientists, and the community.

> *Find this and other examples at nmwe.org/biodiversity*

9. Resilience to natural disasters

Nature-based solutions for retaining water such as wetlands or well-managed forests should be put in place to prevent natural disasters and mitigate their scale. Where necessary, they should be complemented by “grey” infrastructure. The European Commission’s recommendation of 08/02/2023 on Union disaster resilience goals takes into account nature-based solutions to strengthen disaster resilience in the area of civil protection.

[12] The Volumetric Water Benefit Accounting (VWBA) methodology from WRI is an internationally recognised method that is widely used in the food and drink industry. It is one of the key references for calculating water scarcity and water benefit: https://www.wri.org/research/volumetric-water-benefit-accounting-vwba-method-implementing-and-valuing-water-stewardship.

[13] *Idem*.

[14] Regulation (EU) 2024/1991 of the European Parliament and of the Council of 24 June 2024 on nature restoration and amending Regulation (EU) 2022/869

On a local level, there should be plans to prevent and handle such extreme events. Among these measures, redundancy between the public water supply and the bottled supply of natural mineral water contribute to water supply resilience in the event of a natural disaster.

10. Water infrastructure

While nature-based solutions need to play an essential role in sustainable water management, investments in "grey" infrastructure are also indispensable.

Water infrastructure for water resilience

Nature-based solutions alone will not be sufficient to manage the imbalance between water supply and water demand, especially in regions subject to high water stress, e.g. in highly populated areas. In some cases, it may be necessary to transport water from another watershed, or store water in reservoirs. This should, however, be done with a long-term perspective in mind, not only to temporarily solve ever-aggravating systemic issues.

Investing in the efficiency of water supply

When addressing water management, an important aspect to consider is water loss in the distribution system. Despite a 10% increase in the level of water abstraction for public water supply in the period between 2010 and 2019, available data on leakages in the EU public water infrastructure show that this amounts to around 30% over the same period.[15]

The recast of the EU Drinking Water Directive addresses the issue of water leakages and includes provisions that require Member States to improve and maintain access to drinking water for all, in particular for vulnerable and marginalised groups.[16]

Leakages in distribution networks not only have a negative environmental impact, by wasting precious water resources, generating additional energy losses and emissions of greenhouse gases,[17] but also produce negative financial effects. Production costs and the energy used to produce and distribute the water are wasted.

Repair and replacement of leaky pipes requires Member States to adopt continuous, long-term monitoring of the system, as recommended by the EU Commission in its Good Practices on Leakage Management,[18] especially with pressure on water supply increasing.

Sound pricing measures could also directly impact leakage management as well as water loss prevention and water use (see more in the subchapter on water pricing). Setting an adequate price for the provision of water and sanitation services and the use of water resources can drive changes in social behaviour and attitudes towards water use.

Lastly, good management of water infrastructures also has an impact on preserving groundwater sources by ensuring that these sources are not used to compensate for high leakages of supplied water.

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[15] European Environment Agency: Europe's state of water 2024. The need for improved water resilience.

[16] https://environment.ec.europa.eu/news/improved-quality-and-access-drinking-water-all-europeans-2023-01-12_en

[17] See article "Issues in Implementation of EU Regulations in Terms of Evaluation of Water Losses: Towards Energy Efficiency Optimization in Water Supply Systems" by Agnieszka Ociepa-Kubicka

[18] EU Commission's Good Practices on Leakage Management: https://op.europa.eu/en/publication-detail/-/publication/3ff6a13c-d08a-11e5-a4b5-01aa75ed71a1

Wastewater treatment

Water that is returned to nature must not compromise the quality of water bodies. Concentrate (residues from wastewater treatment) is to be handled accordingly. At an EU level, the revised Urban Waste Water Treatment Directive[19] establishes clear requirements for Member States regarding the management of urban wastewater. It stipulates that municipalities with a population of 1,000 or more must not only collect urban wastewater but also ensure that it undergoes secondary treatment. This process is essential before any wastewater can be safely discharged into the environment, with the aim of protecting public health and improving water quality in our ecosystems.

We welcome the introduction of the polluter-pays principle, which obliges producers generating the products to cover the costs of treatment, and address aspects related to micropollutants such as medicinal products for human use and cosmetics. We also underline that it is vital for Member States to take effective measures to ensure compliance with these principles by the end of 2028 and implement the directive in a timely manner to ensure increased protection of the environment and human health.

11. Agriculture: a key sector for water resilience

Agriculture is a crucial sector for both water quantity and quality. Indeed, according to the EEA, it is the largest net water user in the EU-27, accounting for up to 60% at the EU level.[20] At the same time, 29% of European surface water bodies and 32% of groundwaters are significantly affected by diffuse pollution from agriculture.[21]

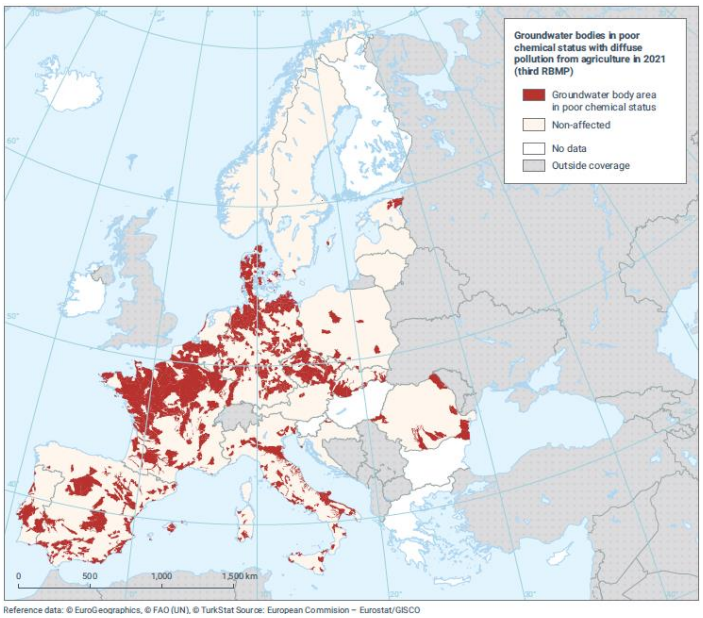
Meanwhile, agriculture depends to a large extent on water availability, especially during the summer months, and is negatively impacted by floods. Therefore, agriculture is both a major cause and victim of water scarcity. We can reasonably say that **there is no water resilience without the robust participation of agriculture**.

More concretely, agricultural sector participation could translate into:

- Increased awareness of the impacts of agriculture on water quantity and quality. For example, in July 2024, the Joint Research Centre (JRC) of the European Commission published a policy brief highlighting which farming practices improve sustainable water management.[22]
- Collaboration and platforms in a European, national and local context involving the farming sector, to develop and implement water management strategies that consider local water availability, quality, and ecosystem needs.
- Innovation in water-saving technologies (drip irrigation), water reuse, avoiding high-quality underground sources or fossil water, low-impact pest-management.
- Implementation of efficient irrigation methods, promotion of water-saving technologies, and adoption of best practices for water conservation.
- Providing farmers with the necessary advisory services.
- Support for practices that are beneficial for water quality and quantity via farming legislation, for example:

[19] Directive (EU) 2024/3019 of the European Parliament and of the Council of 27 November 2024 concerning urban wastewater treatment (recast)
[20] EEA 2021 Report "Water and Agriculture: Towards sustainable solutions" (https://www.eea.europa.eu/publications/water-andagriculture-towards-sustainable-solutions).
[21] European Environment Agency: Europe's state of water 2024. The need for improved water resilience.
[22] Joint Research Centre: Scientific evidence on farming practices that improve sustainable water management in agriculture https://publications.jrc.ec.europa.eu/repository/handle/JRC137742

- the phase-out of harmful substances such as PFAS and TFA in crop protection products (see sections below)
- proper implementation of the Nitrates Directive (see sections below)
- implementation of the Soil Monitoring Law
- using CAP to reward activities that prove beneficial for water quality and quantity
- systematic inclusion of agriculture in any future water-related legislation, e.g. on efficiency and abstraction reduction



12. Preventing contamination at source

Safeguarding water quality is a fundamental aspect of sustainable water management and water resilience. It has a direct link with water quantity: contaminated water cannot fulfil its environmental, social, and economic functions and therefore cannot be counted as available water in a given territory.

At the same time, prevention of contamination is far more feasible than corrective measures – it is more effective, cheaper and has a lower environmental impact. In the case of natural mineral waters, prevention is even more important as **they must be pure at source and may not undergo chemical treatment**.

Therefore, prevention of contamination is the critical function of water legislation. The inclusion of the "polluter-pays" principle in the revised Urban Wastewater Regulation[23] via an extended producer responsibility (EPR) scheme for sectors linked to the release of micropollutants in urban wastewater is an important step in this direction, discouraging pollution and shifting the financial costs of pollution from citizens to the companies responsible for the release of polluting substances.

PFAS (incl. TFA)

Per- and polyfluoroalkyl substances (PFAS), are a complex group of synthetic chemicals commonly used in consumer products. PFAS are also known as "forever chemicals". These molecules do not degrade easily, are persistent and can therefore accumulate in the environment. Their widespread presence poses a serious risk to humans and the environment. Their mobility makes them particularly insidious, as they can easily contaminate drinking water sources.

[23] Urban wastewater: Council adopts new rules for more efficient treatment - Consilium

PFAS are also particularly dangerous because some can generate toxic substances. One such substance is trifluoroacetic acid (TFA), a degradation product from the breakdown of a wide range of PFAS used in pesticides, fluorinated gases and many other applications.

TFA is ubiquitous: it is contaminating the air, soil, surface water and groundwater and has even been detected in the most pristine locations. Most TFA pollution comes from atmospheric pollution[24] and is therefore virtually impossible to control. At the same time, chemical bonds in PFAS, incl. TFA, are so strong that there is no natural way to ensure their decomposition or removal and therefore they continue to accumulate.

Due to this combination of mobility and persistence, effective preventive measures need to be taken to avoid further contamination of groundwaters. NMWE calls for a phase-out of PFAS-based products, particularly those which generate TFA.

In addition, any **parametric value aiming to limit the concentration of TFA in water should address it as a standalone contaminant, separately from the broader PFAS or pesticide family**.

Nitrates

Together with pesticides, nitrates are major pollutants to ecosystems and agriculture is a major contributor. The EU has issued binding rules to protect water quality against pollution by agricultural sources and promote the use of good farming practices. However, Member States have not properly implemented the Nitrates Directive. The European Environment Agency reported that over the period 2000-2021, average concentrations of nitrates in groundwater have not been reduced.[25] This data reveals the urgency of tackling nitrate pollution by ensuring that Member States fully implement the applicable directive.

In addition to the full implementation of the EU framework, the farming community needs to receive adequate funding and support to adopt more sustainable farming practices. Collaboration between stakeholders and water users in a watershed, including by agriculture and the mineral water industry, can also play a key role in tackling shared water challenges effectively.

Protection zones

NMWE supports collaborative protection measures against human and environmental risks that could pose a threat to the quality of natural mineral waters. Applicable EU water legislation implies that protecting all water sources, irrespective of ownership or use, is in the public interest. This is reflected in Directive 2000/60/EC, Directive 2006/118/EC and Directive 2009/54/EC.

13. Soil health

For our sector, the connection between healthy soil and healthy water is crucial. Maintenance of healthy soil is critically important as it provides a range of ecosystem services, including the absorption, storage, and filtration of water, thereby safeguarding groundwater resources.

Nonetheless, intensive land use and historical alterations have led to soil degradation and contamination by various harmful substances. Consequently, these contaminants may infiltrate groundwater or pollute surface water through runoff. In addition to protecting the water cycle, healthy soil serves as a vital buffer against extreme weather events, including intense rainfall, floods, and droughts. It also promotes

[24] https://pubs.acs.org/doi/10.1021/es990855f
[25] European Environment Agency: Europe's state of water 2024. The need for improved water resilience.

biodiversity, facilitates nutrient cycling, supports sustainable plant production, and enables natural pest regulation, carbon sequestration, and erosion control.

The preservation and restoration of soil is therefore critical to the whole water cycle and EU society at large. This is why the EU should provide a clear framework to protect and regenerate healthy soil. NMWE supports the EU Soil Strategy for 2030 and applauds the adoption of the EU Soil Monitoring Law, although greater ambition is needed to protect European soil.

14. Financial tools

The transition to sustainable management brings with it new, significant costs that might have to be cascading down into the product. At the same time, sustainable management of water resources is in the public interest.

Therefore, legislation needs to provide the necessary tools to finance water management. This can be done by unlocking green financing, leveraging financial instruments, attracting private investments and providing public subsidies.