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The need for greater EU policy coordination

Realising the Water Framework Directive

Summary

Clean water is a prerequisite for ensuring environmental and public health and prosperity. Being the most important common good, water is directly or indirectly a topic in many policy measures and legislative instruments, the most ambitious one being the Water Framework Directive (WFD). As many stakeholders are involved, these often represent diverging wishes and conflicting interests.

The water sector is a crucial stakeholder. The implementation of the WFD is a prerequisite to the availability of appropriate water resources to deliver clean and safe drinking water, whereas adequately treated waste water is one of the conditions for WFD compliance. Water services will largely benefit from integrated solutions resulting from a greater EU policy coherence.

Here we present the major needs we identified both for the implementation of the current WFD and its upcoming review.

Policy coordination as a solution for better implementation

- ~ WFD implementation needs more coherence, better coordination and less silos-thinking with existing 'water', 'water industry' and related legislation, especially in the frame of new concerns like emerging pollutants and climate change.
- ~ Drinking water production has priority over other uses in case of conflicts on water allocation.
- ~ We need coherent obligations in place in the Priority Substances Directive, the WFD, the Registration, Evaluation, Authorisation and Restriction of Chemicals regulation and other chemical legislation to allow for the full implementation of the Polluter Pays Principle and control at source approach, in order to protect the environment from hazardous substances and favour the recycling of nutrients in a true circular economy.
- ~ Specific pressures should be identified at local level and it should be made possible to develop site-specific solutions in an integrated manner, with the aim to achieve the overall objective at the river basin scale.
- ~ Priority should be given to reducing pollution according to its impact on the quality of receiving waters, taking also into account climate change adaptation for long-term compliance.



- ~ Decisions should be taken and enforced at the appropriate level while ensuring coherence and coordination at river basin level.
- ~ The financial and operational responsibilities should be clearer and better allocated so that the Polluter Pays Principle is respected and implemented.
- ~ Climate resilient water management should be mainstreamed in all EU policies and set a clear ambition for both climate mitigation and adaptation within the context of the WFD.
- ~ EurEau is in favour of EU standards for different uses to make water reuse safe and secure for environment and health in compliance with existing EU regulations (WFD, Groundwater Directive, Urban Waste Water Treatment Directive and Drinking Water Directive).
- ~ The Common Agricultural Policy, the Nitrate Directive and the Plant and Protection Product Regulations should be prioritised for immediate review to both properly protect drinking water resources in a coherent and consistent way and achieve the objectives of the WFD.
- ~ We would like to see better coordination between the Bathing Water Directive and the WFD. The BWD should be seen as a means to reach good status of the WFD in tourist areas.
- ~ Water services should be better integrated in long-term urban planning in order to reach the objective of the WFD and improve the mitigation of the effects of climate change.
- ~ We ask for the proper alignment of the River Basin Management Plans, the Bird and Habitat Directives implementation plans and flood management plans to identify the common objectives and optimise the implementation of the solutions.
- ~ We ask for water to be defined as a separate topic in the relevant European financial mechanisms for research and innovation such as Horizon2020 with the specific role of achieving the objectives of the WFD.

Policy coordination in the light of the review of the WFD

- ~ Good governance encompassing both bottom-up and top-down scales of responsibilities should be streamlined in the WFD in line with other environmental considerations.
- ~ The review of the WFD should ensure a sustainable protection of drinking water resources through proper implementation of Article 7 of the WFD.
- ~ We support any mechanism that would help to favour the production of local energy through recovery from waste water.
- ~ We ask for a proper analysis of the connection between the WFD and the Bird and Habitat Directives and the integration of findings in the review of the WFD.





Table of Contents	Page
1. Introduction	4
2. Water policy objectives and water	5
3. Climate and water	6
4. Circular economy and water	8
5. Health, households and water - protection of water resources for drinking water	11
6. Agriculture and water	13
7. Energy and water	14
8. Industry and water	16
9. Tourism and water	17
10. Transport, Spatial planning, Urban development and water	19
11. Biodiversity and water	20
12. Research/innovation and water	21



1. Introduction

Water matters - or as stated in the first recital of the Water Framework Directive: “water is not a commercial product like any other but, rather, a heritage which must be protected, defended and treated as such”.

Since the adoption of the Water Framework Directive 2000/60/EC (WFD) in 2000, the quality of the water environment in our river basins and our water resources has greatly improved.

However, the objective to reach good status of all waters by 2015 was not achieved, and will not be in 2027 either. There are several reasons: many basin authorities may have chosen lower targets; stretching expenses over time may deliver later results; and last but not least, new issues like climate change or emerging pollutants are putting our waters under new pressure, leading to the update of Water Quality Standards.

In order to address these new challenges and maintain the same level of environmental ambition in the protection of water resources, EurEau believes that the WFD’s objectives should be maintained in a post-2027 scenario. The objectives should be met and new policy measures and regulations are needed to reach a good status of all relevant waters as soon as possible during the following two or three cycles.

The Agenda 2030 and the 17 UN Sustainable Development Goals will have to be implemented at EU level and taken into account in the review of the WFD.

In its ‘Council conclusions on sustainable water management’ adopted on 17 October 2016, the Environment Council “**UNDERLINES** the importance of policy coherence [to reach the EU water policy objectives and good status of all EU waters]; and **EMPHASISES** that EU water policy objectives, including the sustainable use and management of water, should be better integrated into other relevant policies such as food, agriculture, fisheries, energy, transport, industry, spatial planning, urban development and tourism at all levels, as well as into relevant EU financial mechanisms”. EurEau supports this vision and wants to contribute in identifying specific aspects where better EU policy coordination, according to water services in Europe, would help to improve the implementation and to reach the objectives of the WFD.

The fundamental role water plays in our society is reflected in the various ‘thematic’ chapters that follow. It should be noted that climate change and the circular economy are also inextricably linked to many of the areas dealt with below.



2. Water policy objectives and water

Introduction and relevant legislation/concerns

EU water legislation, defined through the Water Framework Directive (WFD) and its daughter directives (Groundwater Directive 2006/118/EC and the Priority Substances Directive 2013/39/EU) lays down the legal framework for coordinated policies and actions at EU and national/regional levels to protect water resources, complemented by the Marine Strategy Framework Directive 2008/56/EC (MSFD), the Nitrates Directive 91/676/EEC (ND) and the Floods Directive 2007/60/EC (FD). The so-called 'Water Industry Directives' (Urban Waste Water Treatment Directive 91/271/EEC (UWWTD), Drinking Water Directive 98/83/EC (DWD), and Bathing Water Directive 2006/7/EC) are complementary legislative tools that ensure wholesome and clean drinking water, the safe return of treated waste water to the environment and the protection of all relevant waters.

The objectives of these pieces of legislation that constitute the backbone of water policy, address different aspects of water and water use but are largely interrelated and may mutually impact compliance. For example, the implementation of the UWWTD helps attain the objectives of the WFD by imposing an obligation to treat urban waste water.

If the overall objective of non-deterioration and of reaching the 'good' status for the aquatic environment is pursued under the WFD, EurEau identified certain inconsistencies or lack of coordination and coherence between the different legislative tools of water policy, but also between those and other sectoral legislation such as the Common Agricultural Policy (CAP), the Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and the Industrial Emission Directive 2010/75/EU (IED). The objectives of the WFD should be addressed through an integrated and systemic approach to improve water quality and availability more than addressing each pressure individually. This approach should allow for the prioritisation of investments, with the ultimate goal of protecting water resources in accordance with the local specificities. To sustainably reach its objectives in the spirit of Agenda 2030, the WFD should be more open to coordinate measures for improved water quality with at least measures to reach other environmental objectives but preferably also with other societal objectives.

EurEau position and solutions

- WFD implementation needs more coherence, better coordination and less silo-thinking with existing 'water', 'water industry' and related legislation, especially in the frame of new concerns like emerging pollutants and climate change.
- The Polluter Pays Principle and control at source approach have to be



fully upheld and diffuse pollution should be detected and be a mandatory part of the next economic analysis according Art. 5 and annex III of the WFD.

- Specific pressures should be identified at local level and it should be possible to develop site-specific solutions in an integrated manner, to achieve the overall objective at the river basin scale.
- Priority should be given to reducing pollution according to its impact on the quality of receiving waters, taking also into account climate change adaptation for long-term compliance.
- Good governance encompassing both bottom-up and top-down scales of responsibilities should be streamlined in the WFD in line with other environmental considerations.
- Decisions should be taken and enforced at the appropriate level while ensuring coherence and coordination at river basin level.
- The financial and operational responsibilities should be clearer and better allocated so that the polluter pays principle is respected and incorporated.

3. Climate and water

Introduction and relevant legislation/concerns

The impacts of climate change will be channelled primarily through the water cycle, with consequences that could be large and uneven across the globe. Water-related climate risks cascade through food, energy, urban, and environmental systems. [...] (World Bank Report "High and dry", 2016)

The impact of climate change on water represents one of the most challenging areas for policy coordination. EurEau notes that concerns about changes in climate are not yet matched by practical actions on the ground that will enable communities to withstand its impacts. The response of water services to climate change should encompass both mitigation (reducing water services impact) and adaptation (become resilient to the effects) measures.

Climate change mitigation and water

Regarding the Water Framework Directive (WFD), climate change will have an impact on the possibility of reaching good ecological and chemical status in the waters. Good ecological status is derived from historical and static reference conditions but will be a 'moving target' as climate change hits EU water bodies and species. Due to increasing drought and low flows in rivers, deterioration of water quality will also become a bigger problem, even when there is no decrease in the emission of pollutants in the water. **EurEau therefore calls for policies at the EU-level to be coordinated and/or reviewed to ensure that consistent approaches to climate change**



mitigation are applied. For example, the WFD sets standards for the protection of the aquatic environment, but achieving these standards in the light of climate change impacts may require additional treatment in waste water treatment plants. This in turn may result in high energy consumption that translates to a higher carbon footprint, diluting the mitigation efforts made by water services. Water services used to be an energy-intensive sector but over the past years, the sector has been able to significantly reduce its energy consumption and carbon footprint. This positive trend should not be jeopardised.

Climate change adaptation and water

It is now well understood that patterns of flooding and water scarcity will shift as a result of climate change. **EU level policy coordination must enable cross-sectoral and cross-service cooperation to plan for these changes.** For example, coordination must be ensured between agriculture and water managers, to protect both food production and water resources, ensuring biodiversity and sufficient and good quality drinking water resources.

We call for coordination at EU level across the policy areas of agriculture & food production, energy production, biodiversity and management of natural systems to enable resilience to climate change to become a reality on the ground. Therefore EurEau welcomes the **evaluation of the EU strategy on adaptation to climate change.** **This instrument could be more effective if it were better linked to goals and implications of the WFD.** In the future, Member States should also integrate WFD measures in their national action plans. This is essential if we want to protect water resources for the future and perform an active management of the water cycle through the provision of drinking water and wastewater services for citizens today.

The review of the WFD, expected in 2019, should assess the presence of climate change adaptation measures in the 2nd cycle of River Basin Management Plans (RBMPs) and that objectives are appropriate to a changing climate. For example, local measures in the Programme of Measures are aimed to reach the objectives by counteracting environmental issues caused within the catchment area. However, they cannot be expected also to counteract impacts caused by a global phenomenon like climate change, resulting in large scale changes for the environment and complex irreversible changes to the ecology in waters. The WFD should also prioritise water allocation for drinking water purposes so as to ensure the human right to water. The efficiency of water distribution networks should be increased according to local needs and water reuse should be promoted where necessary.

The review of the WFD and the evaluation of the Urban Waste Water



Treatment Directive are also timely to make waste water infrastructure climate resilient and adapt to varying climate conditions such as heavy rains. Solutions have to be implemented according to a long-term vision in urban planning. This is why coordination between water quality objectives, urban planning and RBMPs is key to delivering resilience.

EurEau position and solutions

Climate resilient water management should be mainstreamed in all EU policies. Water service providers are ready to be ambitious and propose solutions to water-related risks to climate change.

We cannot deliver this on our own, but a holistic, cross-sectoral approach is needed.

There is a need for financing the required investments to deliver solutions that strengthen resilience to climate change. Water services, on the other hand, should remain affordable and the principles of 'cost recovery' and 'polluter-pays' must be implemented, following the 3Ts approach, encompassing Tariffs, Taxes and Transfers.

We wish to see clear policy coordination around climate change to set clear ambitions for both mitigation and adaptation within the context of WFD.

We want greater coordination between the different EU level policy instruments for the water sector, so that approaches to mitigation and adaptation can be implemented effectively and quickly.

4. Circular economy and water

Water Reuse

Introduction and relevant legislation/concerns

Many Member States are increasingly facing a water security crisis, and the only way of addressing this is through integrated water resources management, in which water reuse must be included as a strategic option in water-stressed areas.

In the European Commission's Communication 'Closing the loop: An EU action plan for the Circular Economy'¹, water reuse is one of the main actions providing environmental, social and economic benefits; it is a way to reduce water scarcity and improve water resource management while promoting a sustainable economy and enhancing job creation. Water becomes a paradigm of the circular economy, in view of the fundamental and transversal function that it has in all sectors.

¹ http://eur-lex.europa.eu/resource.html?uri=cellar:8a8ef5e8-99a0-11e5-b3b7-01aa75ed71a1.0012.02/DOC_1&format=PDF.



The transition to a circular economy provides the opportunity to transform the economy and generate new competitive and sustainable advantages, and implies a systemic change, in which:

- ~ public and private sources of financing will require scaling up improved technologies and processes, developing infrastructures and increasing cooperation across actors;
- ~ social dialogue, education and training systems will be needed; and
- ~ innovation will play a key role, not only regarding sustainable technologies, but also new partnerships, new business models, innovative water policies, as well as new forms of governance, which must be integrated and include participation, involvement and commitment of all stakeholders, very especially civil society. In addition, new communication strategies will be necessary, which must be active, deliberate and tailor-made.

Water reuse needs to be considered as a measure within the context of the water policy hierarchy. One of the main barriers identified is the lack of harmonisation in the regulatory framework to manage health and environmental risks related to water reuse at EU level, and thus a lack of confidence in the health and environmental safety of water reuse practices.

The health and environmental safety conditions under which waste water may be reused are not specifically regulated at EU level, but a legislative proposal is expected before the end of 2017. Water reuse is mentioned as one of the possible measures to achieve the Water Framework Directive (WFD) quality goals and the Urban Waste Water Treatment Directive (UWWTD) states that "treated waste water shall be reused whenever appropriate".

It is essential that the quality of surface water and groundwater intended for drinking water production are protected against negative effects. Quality requirements for water reuse should be compliant with the requirements of the WFD, Groundwater Directive, the UWWTD, the Nitrates Directive and the Drinking Water Directive.

EurEau position and solutions

Despite the growing role of water reuse in Europe, the ability to develop reuse projects is being compromised by the lack of an appropriate regulatory framework. Not having an EU-wide regulatory framework that encourages harmonisation of standards is an impediment to encouraging reuse, since it generates uncertainties regarding the rules that each Member State may have and lack of trust in the quality of the available reclaimed water. This is why we are in favour of EU minimum standards for different uses to make water reuse safe and secure for environment and health and food safety. However, this should not lead to an obligation to reuse water. The compliance with the requirements of the WFD, the GWD, the UWWTD, the ND and the DWD should



also be ensured.

Reuse of nutrients

Introduction and relevant legislation/concerns

In addition to the WFD, the 'Water Industry Directives' and the European Commission's Communication on the circular economy mentioned above, the legislative framework for reuse of nutrients also encompasses:

- ~ the Sewage Sludge Directive 86/278/EEC (SSD)
- ~ the Fertiliser Regulation N° 2003/2003
- ~ the Regulation N° 1907/2006 on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- ~ the Biocide Products Regulation N°528/2012 (BPR)
- ~ the Plant Protection Products Regulation N° 1107/2009 (PPPR)
- ~ the Cosmetic Products Regulation N° 1223/2009 (CPR)
- ~ the Waste Directive 2008/98/EC.

Water utilities take care of the basic needs and health of citizens by supplying safe drinking water and collecting waste water, which has to be treated before returning it to the environment. As a result of the treatment process, sewage sludge is produced. Sewage sludge can be a valuable source of nutrients and of organic matter that can be recycled in the environment as organic or mineral fertilisers and soil improvers. This is possible if they have low level of contaminants. Encouraging good practices with fewer chemicals on the one hand, and reuse of nutrient and organic content of sewage sludge, on the other hand, will benefit the quality of soils and ultimately contribute to the improvement and/or non-deterioration of the quality of the receiving waters.

In order to protect water resources pesticides and nutrients such as fertilisers and sewage sludge should not be spread in water safety zones.

EurEau position and solutions

EurEau advocates control at source for pollutants and calls for legislation that allows the safe reuse of nutrients from sewage sludge of good quality and in controlled situations.

Strong chemical legislation and effective source control are instrumental in achieving sustainable nutrient recycling by minimising the input of contaminant in sewers. Chemicals in our society affect the quality of waste water and subsequently the quality of sewage sludge. Thus we need coherent obligations in place in the Priority Substances Directive, WFD, REACH and other chemical legislation.

EurEau calls for European end-of-waste-criteria for organic fertilisers such as composts and digestates especially when good quality



sewage sludge is used as an input material. Also directing resources to the research of sewage sludge risk management could enhance sustainable solutions and facilitate recycling by improving trust in organic fertilisers from recycled materials.

Legislation and incentives at European level are required for developing the Single European market for recovered nutrients competitive with primary raw material-based fertilisers. This can be enhanced by including recovered products such as struvite, biochar and phosphorus recovered from ash to the revised Fertiliser Regulation. EurEau suggests that new European wide mechanisms be created to support phosphorus recovery, though from recovery routes with the most favourable balance between financial viability and total impacts on the environment. These mechanisms can be either incentives or requirements to use recovered phosphorus.

5. Health, households and water - Protection of water resource for drinking water

Introduction and relevant legislation/concerns

Over the past 40 years, EU environmental legislation has striven to protect drinking water resources in order to guarantee wholesome and clean drinking water at the tap. Thanks to the Water Framework Directive (WFD) we see some improvements (or no further deterioration) in source water quality. However much has still to be done in the protection of drinking water resources, especially concerning the pollution originating from nitrates, pesticides and emerging micropollutants.

Protecting water sources from contamination is vital for ensuring the supply of clean and safe drinking water for us now and for our future generations. Water operators strive to provide this, but need robust EU legislation to preserve drinking water resources. The concept of wholesome and clean drinking water includes preventative source protection rather than adding sophisticated treatment steps to ensure the quality of drinking water.

To date, in many regions, WFD implementation has failed to effectively integrate drinking water resource protection in the RBMPs and the Programme of Measures.

Article 7 of the WFD states that Member States shall ensure the necessary protection for the bodies of water identified for the abstraction of water for human consumption or intended for such future use, with the aim of avoiding deterioration in their quality **in order to reduce the level of purification treatment required in the production of drinking water (Art.7.3).**

However, Art.7.3, although essential for a sustainable supply of wholesome and clean drinking water, has not produced tangible results. Clearly, there is a



need for better implementation of the WFD.

Furthermore, there is currently a discrepancy between the Drinking Water Directive (DWD) and the derivation of environmental quality standards under the Priority Substances Directive.

The upcoming revision of the DWD presents an excellent opportunity to improve the coherence between the DWD and the WFD. Firstly, the introduction in the DWD of a Water Safety Plan (WSP) approach from source to tap could be instrumental for the better integration of resource protection in the WFD. Secondly, the implementation of the Precautionary Principle through the adoption of an integrated approach of the chemical legislation will allow to respect environmental quality standards for surface water and groundwater.

In water scarce regions, the exploration of alternative water resources should be reinforced in the RBMPs in order to protect the availability of natural water resources for drinking water purposes (see chapter 4).

We believe that the management of water losses from the distribution system is a very important part of the water suppliers' role. Leakage reduction is just one of the policy tools available to address the issues of water scarcity, water stress and drought. Leakage should be assessed according to international frameworks and methodologies so that comparisons can be made. Leakage reduction should be assessed locally and based on sound judgement taking full account of economic, social and environmental externalities: any one size-fits-all solution should be avoided. Leakage is an important indicator for the quality of water distribution infrastructure and addressing it will bring benefits such as improving the infrastructure and maintaining security of supply.

Finally, households consume commercial products generating various types of pollutants of emerging concern that end up in waste water. Removing these new types of pollutants will require extra treatment as the level of treatment required by the Urban Waste Water Treatment Directive cannot do it. EurEau advocates for the source control approach and extended producer responsibility to avoid these products ultimately ending up in the environment and increase the pressure on aquatic life.

EurEau position and solutions

While striving for the better and sustainable protection of drinking water resources, a number of key conditions have to be met:

- ~ Drinking water production has priority over other uses in case of conflicts on water allocation
- ~ The review of the WFD should ensure the sustainable protection of drinking water resources (application of art. 7)
- ~ Protection of drinking water resources takes precedence over other



- interests
- ~ Strengthen the Precautionary Principle in chemical legislation to allow improving the complementarity between the DWD and WFD
- ~ Implementation of the control at source approach
- ~ Implementation of the Polluter Pays Principle , including liability for costs
- ~ Clear distribution of responsibilities between authorities and stakeholders.

Coordinated policies and actions should better explore the high potential for symbiosis between catchment protection and nature protection, looking also into the concept of green infrastructure.

6. Agriculture and water

Introduction and relevant legislation/concerns

The intensive use of anthropogenic substances in agriculture such as phosphates, nitrates, pesticides, veterinary medicines, as well as their metabolites and transformation products, is increasingly having an impact on the quality of drinking water resources. These substances may occur sooner or later in the water cycle and could reach water resources used for drinking water abstraction, potentially with negative impacts on the ability of water utilities to meet regulatory quality standards for safe drinking water without increasing the level of water treatment.

EU legislation is built on the Precautionary Principle, on the Control at Source Principle and on the Polluter Pays Principle.²

The legislative framework for water resource protection and agricultural practices encompasses the Water Framework Directive (WFD), the Common Agricultural Policy (CAP), the Nitrates Directive (ND) and the Plant Protection Products Regulation (PPPR).

EurEau position and solutions

The existing EU legislation addressing the impacts of agriculture on drinking water resources should be better implemented and even reviewed. The CAP, the ND and the PPPR should be prioritised for immediate review as these do not deliver in terms of protecting drinking water resources in a coherent and consistent way (focusing in particular on water safety zones) nor in achieving the objectives of the WFD.

A proper link should be established between these agricultural sectoral policies and the WFD, the Groundwater Directive (GWD), the Priority Substances Directive and the Drinking Water Directive, especially in the

² Art. 191(2) of the Treaty on the Functioning of the European Union.



context of climate change and over abstraction due to agriculture. Existing silo-thinking (DG Environment, DG Agriculture and DG Sante) has to be overcome. There needs to be a stringent authorisation process of plant protection products to ensure the protection of water resources from these substances in order to minimise or prevent negative impacts in the long-term. When breaches of water quality standards result from agricultural activities, it should lead to mandatory measures to decrease emissions of substances from these activities. WFD water quality standards should be linked to standards for emissions of these substances in agricultural policies. Therefore, it is also important to allocate clear and measurable objectives to agricultural environmental measures.

The introduction of stringent cut-off criteria within the authorisation of active substances reflects the awareness of the European legislator to tackle the impacts of pesticides on the environment. The cut-off criteria, that will only be effective when pesticide producers apply for the authorisation of new active substances, should take the water quality standards of the WFD into account.

Greening measures already present in the CAP should be applied more systematically. At present, the funding available for the implementation of these measures is not delivering the expected results regarding the objectives of the WFD. In the perspective of the review of the CAP, it is important to reinforce and implement these measures to make sure that agriculture reduces its impact on surface and ground waters.

In water-scarce regions, the exploration of new water resources might be an important solution. The development of a unified legislative instrument on water reuse could help to raise awareness of and trust in this resource, as long as it is complementary to, and compliant with, existing regulation, especially the WFD, the GWD, the ND, the DWD, and the Urban Waste Water Treatment Directive.

7. Energy and water

Introduction and relevant legislation/concerns

A lot of energy is needed for achieving the objectives of the Water Framework Directive (WFD) and the complementary 'Water Industry Directives' by building and operating the necessary drinking water and waste water infrastructures. By using energy, the water sector is contributing to climate change and energy also needs to be considered in terms of carbon footprint. When considering a new regulation or environmental quality standard, a balance between better water quality and the risk of increasing the impact on climate change should be considered holistically.

Water services used to be an energy-intensive sector. However, over the past years, we have been able to reduce our energy consumption and carbon



footprint. In many Member States, initiatives are on-going to become energy neutral. At the same time, there is an increasing move to push waste water treatment plants even further and to make them become producers of renewable energy (electricity and heat). Energy recovery from waste water and sludge is estimated to have the ability to produce around 2% of the European total energy demand³, hence the water sector could play a role in energy transition. However, energy recovery is still under-developed and under-utilised and there is a lack of fiscal incentives for the optimal production of renewable energy to overcome long pay-back times for the investments. Also, waste water treatment plants are not considered as energy producers and producing energy for third parties is not always allowed.

On the other hand, the energy sector itself is one of the major water users, which impacts on the water balance (water flows in rivers and abstraction needs for drinking water production). Emissions from the energy sector impact the aquatic environment either through infrastructure (dams) or by modifying the ecosystem (rising temperature near power plants).

These challenges of the so-called 'water-energy nexus' are expected to increase⁴.

- ~ 90% of global power generation is water intensive (UNDESA⁵). By 2035, global energy consumption will increase by 50% prompting an increase in water consumption of 85%.
- ~ This increase in water consumption for energy generation will place additional competing demands on those parts of Europe where the scarcity of water resources is already significant.
- ~ Hydroelectricity constitutes a significant and increasing proportion of total primary energy production of renewable energy (16.6% Eurostat, 2013⁶).
- ~ The diversifying energy sector can create new pressures on the quality and quantity of water available (shale gas, etc.).

EurEau position and solutions

- ~ Drinking water and waste water operators should continuously strive to reduce the energy consumption needed for their services. The waste water sector has a significant and yet unacknowledged potential for producing energy, which can replace fossil fuels. Replacement of fossil fuels by local production of energy will help to reduce the impact on climate change and, in a long-term, help achieve the objectives of the

³ Hoff, H. Understanding the nexus: background paper for the Bonn 2011 Nexus Conference: The Water, Energy and Food Security Nexus. Stockholm Environment Institute (SEI), Stockholm, Sweden.

⁴ International Energy Agency 2016, World Energy Outlook 2016, page 347.

⁵ http://www.un.org/waterforlifedecade/water_and_energy.shtml.

⁶ <http://ec.europa.eu/eurostat/web/environmental-data-centre-on-natural-resources/natural-resources/energy-resources/hydropower>.



- WFD. The EU should make this possible and provide the necessary financial incentives to stimulate a plan for investment in the production of local energy sources, especially from waste water.
- ~ In order to realise the full potential of energy recovery from waste water, all sources of energy should be taken into consideration: electricity, heat and cold from biogas from digestion and/or incineration of sludge and heat from wastewater. Innovation in technology may reveal new sources of energy.
 - ~ It is paramount that the water-energy nexus receives more political attention. Political decisions and new rules are essential parts in facing the challenges posed by the nexus. A precondition is the maintenance of the water quality and retaining the existing water quality of ground water aquifers.
 - ~ Aquifers can be used as stores of thermal energy (heat or cold) as long as this doesn't impact negatively on other aspects (quality of groundwater, quality of surface waters, etc.).

8. Industry and water

Introduction and relevant legislation/concerns

Industry is one of many actors competing for water resources and polluting them as well. The legislative framework encompasses the Water Framework Directive (WFD), the Marine Strategy Framework Directive, the Urban Waste Water Treatment Directive (UWWTD), the Industrial Emission Directive (IED), the Regulation on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and all EU legislation on biocides, pesticides, pharmaceuticals, the content of chemical substances in goods or products and on their design.

Industry needs water for many purposes such as cooling, for processes or for cleaning. Quantitative needs and demands on water quality vary with the purpose and between business sectors.

The food industry's strict hygiene requirements call for special claims. Access to sources of water of sufficient quality to enable water services to produce clean water is crucial when agricultural products are to be processed. The processing chain depends on water at every stage.

EU objectives for water quality are equally ambitious across the EU, as long as no exemptions from the objectives are possible. Industrial plants' water consumption and emissions to water and to waste water treatment plants impact whether the water objectives can be achieved or not. The same applies to the industrial production of consumer goods due to their chemical content and how its design affects water consumption. In order to implement the IED, BREF and BAT documents are produced by the European Commission. Emission limit values for water emissions in the BAT conclusions



can be very high compared to the EQS values. This leads to difficulties in reaching the EQS set in the Priority Substances Directive (PSD).

In many Member States, emissions from industries into sewers are a load on waste water treatment plants (WWTPs). Technology cannot remove all pollutants, which consequently are emitted to the aquatic environment. The load on the environment increases also if the incoming volume of water to the WWTP increases but the emitted concentrations of pollutants remain constant. Emissions to the sewers can contaminate sludge, obstructing a resource-efficient circular economy, e.g. on phosphorus recovery.

Producers, importers and users of chemicals take insufficient account of EU requirements on water quality, especially as the water resources decrease and competition for water is intensifying.

EurEau position and solutions

- ~ Stricter requirements on industry and chemicals are a driver for innovation, substitution and new jobs in the EU.
- ~ Applying source-control for industrial discharges is more effective than downstream measures, is a prerequisite for a circular economy and is also stated in the EU Treaty. Industries need to be transparent about their emissions, including the characteristics of the substances and the volume, at the time of authorisation.
- ~ It is essential to strengthen the EU legislation on chemicals, pesticides, pharmaceuticals and consumer products in coordination with the WFD's and the Marine Strategy Framework Directive's requirements on water quality.
- ~ IED should be developed with a requirement to recycle or otherwise save water if the plant is located in a catchment area with water scarcity or drought or is connected to a WWTP whose environmental impact must be reduced beyond the UWWTD requirements.
- ~ National legislation should ensure that industrial waste water undergoes appropriate treatment and does not obstruct or impede an environmentally acceptable sludge quality.
- ~ During the whole life cycle of products, substances may be emitted ending up partly to waste water. Better links between the PSD and regulation for substances are needed.

9. Tourism and water

Introduction and relevant legislation/concerns

Tourism benefits from good environmental water quality and quantity, but also impacts on drinking water provision and water pollution. On the other hand, tourism is often a driver for the increased restoration of water



infrastructure and quality.

Tourism is estimated to generate over 10% of the European Union's GDP and provides approximately 12% of all jobs. In addition, the European Union remains the world's n° 1 tourist destination. Tourism can markedly increase public water use, particularly during the peak summer holiday months and especially in southern European coastal regions, already subject to considerable water stress. In addition to using water for food, drinks and personal hygiene, tourism is associated with activities such as swimming and golf (because of the requirement to irrigate courses) that significantly increase water use⁷. Furthermore, tourism considerably increases the demand on local water and sanitation infrastructure utilities, putting pressure on its sustainable use. To avoid the adverse consequences of tourism on the environment, sustainable water use should be encouraged through policies adapted to the specific sector.

EU tourism policy has developed in a limited fashion, reflecting the EU's feeble competences in the area. In its 2010 Communication on a new political framework for tourism in Europe⁸, the Commission expressed the need to integrate structural challenges into tourism policy. The Commission underlined that "the supply of tourism services must in future take into account constraints linked to climate change, the scarcity of water resources, pressure on biodiversity and the risks to the cultural heritage posed by mass tourism. Tourism businesses need to reduce their use of drinking water where there is a risk of drought, and reduce their greenhouse gas emissions and environmental footprint"⁹.

Through its communication, the Commission recognised the need to make European tourism more sustainable. The Commission has since introduced tools to facilitate sound environmental management for businesses, such as the EU Eco-label or the Community eco-management and audit scheme (EMAS). The Commission has also made available to Member States documents facilitating the implementation of European environmental legislation, in terms of both individual projects and strategic planning.¹⁰

EurEau position and solutions

Further implementation of the Water Framework Directive (WFD) and notably its objective of achieving good water status in the EU would be beneficial for both the environment and tourism. The 'basic measures' required by Article

⁷ European Environment Agency, 2009. *Water resources across Europe — confronting water scarcity and drought*.

⁸ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Europe, the world's No 1 tourist destination – a new political framework for tourism in Europe /* COM/2010/0352 final */ <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A52010DC0352>.

⁹ *Ibid.*

¹⁰ http://ec.europa.eu/environment/nature/natura2000/index_en.htm.



11 of the WFD include the implementation of provisions required by the Bathing Water Directive for instance. The information provided to citizens on the bathing quality standards has proven to have an impact on tourist destinations. It can therefore be an incentive for Member States to ensure bathing quality standards are put in place.

Good water status delivers multiple economic benefits, which result from the reduced costs for treating water, providing clean water and food, and managing floods and droughts, as well as from recreation and tourism. At river basin level, the benefits of multiple river restorations can add up to a significantly positive impact on the creation of local and stable jobs and economic development. For instance, clean bathing waters are the bottom line of 10-20% of the economy of the Artois-Picardie River Basin in the north of France. 'Opal Coast' tourism creates €1 billion turnover per year, 40% of the river basin's GDP. It is estimated that 30-50% of visitors would cancel their trips if the water quality was not good.¹¹ The potential economic advantages of tourism could be taken into account to stimulate the implementation of the second cycle of RBMPs, which in turn should increase the number of water bodies reaching good status.

Territory attractiveness for tourists can also be influenced through the efficient implementation of flood prevention strategies. The provisions of the Floods Directive have ensured that flood risks have been largely mapped throughout the EU, and plans to manage these risks are progressing. However, Member States could further exploit available EU funding to reduce flood risks by restoring flood plains and wetlands, which are increasingly appreciated as places of leisure and recreation.¹² Incentives to boost investments could be included in the review of the Floods Directive which is coordinated with WFD's implementation cycle.

10. Transport, Spatial planning, Urban development and water

Introduction and relevant legislation/concerns

Urban development is growing and with it the necessity to organise infrastructures such as transportation, water, parks, business and residential areas. The growth of urban areas is usually accompanied by greater impervious areas. Climate change is increasing the frequency of high-intensity rain events which leads to more run-off due to these large impervious areas. The rain water needs to be evacuated to avoid flooding. At the same time, the pollution transported by the run-off needs to be managed to avoid degradation of the receiving waters.

¹¹ European Environment Bureau (EEB) Paper, *2nd river basin management plans healthier rivers less dams, dykes and nitrogen*, 2015.

¹² EU Water Alliance, *Annex 2 Main priorities for water under the Juncker Commission (2014-2019)*.



On the other hand, water in cities have multiple roles and advantages. With the objectives to reduce the carbon footprint of cities, water ways allow transportation of goods and people. Coastal cities developed recreational activities around good quality bathing waters. Finally, restauration or creation of green infrastructure like parks or ponds has an impact on temperatures in cities.

The two dimensions of too much water to be evacuated and increased water in cities as a means to increase services to the population might be seen as contradictory. If correctly planned and anticipated, the necessary infrastructures might be beneficial for both environmental services and urban security.

EurEau position and solutions

- ~ The water sector should be always involved in urban planning decisions at local level.
- ~ There is a need for integrated and **long-term planning** to enable effective investment in blue-green infrastructure. Water assets are long-term investments that have multiple benefits to improve urban quality of life and the quality of the environment.
- ~ Urban plans should be developed in coordination with RBMPs in order to optimise investment and maximise the benefits of the planned infrastructures.

11. Biodiversity and Water

Introduction and concerns

Protection of water resources and resilience to climate change are crucial for securing biodiversity and good quality drinking water. The Marine Strategy Framework Directive (MSFD) and the Birds and the Habitats Directives (BHD) with their aim to restore biodiversity and protect species in the European waters are therefore truly complementary to the Water Framework Directive (WFD). Although the synergy between the WFD, MSFD and BHD contributed to a serious improvement of the good status of water throughout Europe, more effort is required to reach the targets and objectives of these directives.

The overarching policy coordination would benefit from the interaction between the implementation processes. After a thorough evaluation, the Commission concluded in December 2016 that the BHD is still fit for purpose, but that its implementation needs to be improved through a dedicated action plan. We believe that one of the main focus points of such an action plan should be the interconnections between the implementation processes, as well as greater and more efficient involvement of relevant stakeholders. Due to different policy procedures and time schedules, the implementation process



of WFD and BHD measures are not always optimally aligned, or even worse, they sometimes contradict each other. Therefore, more efforts are needed to enhance the cohesion between the RBMPs of the WFD and the BHD Management plans.

Moreover, we believe that the eventual findings and results of the BHD implementation action plan should also be taken into account in the upcoming WFD review. Since the BHD will not be reviewed in the coming years, the WFD review provides a unique opportunity to address the possible legal uncertainties in the legislative texts and therefore to enforce the synergy with the BHD, getting rid of the inconsistency between Article 4(7) of the WFD and Article 6(4) on the interpretation of 'overriding public interest'.

EurEau position and solutions:

- ~ Address the connection between the WFD and the BHD in the BHD implementation action plan and integrate findings into the WFD review.
- ~ Get rid of inconsistencies between the BHD and the WFD, especially on the interpretation of the 'overriding public interest'.
- ~ Consider water bodies' resilience to climate change to improve the objectives of the WFD.
- ~ Improve alignment and coordination of implementation cycles.
- ~ Create more synergies and connections between RBMPS and BHD management plans.
- ~ Improve involvement of stakeholders in the implementation processes.

12. Research/innovation and water

Introduction and relevant legislation/concerns

The water sector is facing significant challenges (climate change adaptation, nutrient recovery, emerging pollutants, renewal of infrastructure), both in terms of water quality and quantity. Innovative, science-based and more effective technologies and management approaches are urgently needed to allow both waste water treatment and drinking water supply to address these challenges.

Horizon 2020, the EU Framework Programme for Research and Innovation, is the financial instrument of the EU Innovation Union. One of the main pillars is the focus on societal challenges such as climate action, environment and resource efficiency. However, water challenges require more attention and focus in the future.

Horizon 2020 emphasises excellent science and industrial leadership while tackling societal challenges. However, there is still a lack of resources for demonstration projects in water utilities leading to real innovation in the sector. Better links between research, policy and practice could be ensured if



stakeholders were part of the projects to a larger extent, allowing for regular reality-checks of the project's developments and results.

The water sector is a capital-intensive industry, investing on a long time horizon. Speeding up innovation would allow water utilities to cope with the challenges faced and provide mature solutions so that investments made today are effective for the next 25-50 years.

At the same time this will increase the competitiveness of European water services.

In order to help solving these specificities of the water sector, the European Commission implemented different tools.

- ~ The European Innovation Partnership on Water (EIP on water) is a forum developed under the Water Framework Directive (WFD) to remove barriers to innovation in the water sector. Action groups discuss specific issues on a larger scope than technology. Innovation conferences and networks supported by EIP Water could be a useful complement to the Water supply and sanitation Technology Platform (WssTP). Without financial resources, this platform cannot deliver as expected.
- ~ The Water Joint Programming Initiative (Water JPI) is a European platform aiming at creating synergies between National research agencies to finance complementary needs to Horizon 2020.
- ~ The WssTP regroups multiple stakeholders to organise the discussions and association of partners to solve innovation issues by creating working groups on specific topics. WssTP focuses on research, development and innovation and strives to enhance the competitiveness of the European water sector. The objective is technology driven.

EurEau is engaged in these fora, but among many other stakeholders, making it difficult to highlight the real focus/problems of the water sector in their agenda's.

EurEau position and solutions

Water should be a separate major topic in the relevant European financial mechanisms such as Horizon 2020 for research and innovation with the specific role of achieving the objectives of the WFD. Moreover, Horizon 2020 projects should specifically target finding solutions for achieving the goals of the WFD in a more efficient and effective manner.

There is a need for more funding for demonstration projects and simpler procedures for water operators to get involved in research projects at European level.



About EurEau

EurEau is the voice of Europe's water sector. We represent drinking and waste water service providers from 29 countries in Europe, from both the private and the public sectors.

Our members are the national associations of water services in Europe. At EurEau, we bring national water professionals together to agree European water industry positions regarding the management of water quality, resource efficiency and access to water for Europe's citizens and businesses. The EurEau secretariat is based in Brussels, from where we coordinate the work of around 200 experts from member organisations and utilities and advocate common positions with EU decision makers.

Our members are fully committed to the continuous supply of clean water and its safe return into the water cycle. We have a role in raising awareness of threats to the water environment. With a direct employment of around 542,000 people, the European water sector makes a significant contribution to the European economy.



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