European Water Association

Water Manifesto 2020

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Although currently available scientific evidence indicates that COVID-19 is not spread through drinking water, the current pandemic and struggle for survival is a stark reminder that protection against epidemics and other public health risks is inseparable from the protection of the environment and our water resources.

Water is an essential resource for the functioning of our society. Our economy, our energy and food production, our jobs and health can only contribute to our welfare if there is sufficient availability of good quality water and water-related risks are mitigated. In order to achieve this, will not only depend on man-made technology, but also on the functioning of our natural ecosystems which provide us with the biodiversity and ecosystem services which our society depends on and without which we would compromise attaining the 17 Sustainable Development Goals (SDGs) stipulated by the United Nations. Europe has established a comprehensive legal and governance framework to ensure the sustainable management of its water resources and has made progress in its implementation. However, the economy, land use, demography and the climate are changing at an unprecedented rate exposing us to severe losses of welfare and well-being due to the increasing risks of water scarcity, deteriorating water quality and loss of ecosystem services, as well as to extreme events in the form of floods, stormwater surges and droughts offsetting the progress made in water management.

However, with sufficient political will to make the decisions necessary and allocate the essential resources, we can address all these issues and reduce the risks that these developments pose, and increase the resilience of our social, technical and natural systems to withstand the impact of the risks that we cannot reasonably mitigate. Europe has the tools but needs to allocate resources accordingly and scale up the efforts to implement the legislative framework.

This will require that the potential of the European water governance system is fully exploited and, in particular, that the need to conserve water resources and natural systems is better accounted for in other policy areas (agriculture, energy, chemicals, transport, industry etc.); that legacies of the past are properly addressed; that authorities charged with water management tasks are properly resourced and staffed; and that financial resources are made available for maintenance of water infrastructure and the necessary new investments in order to rise to the challenge. It will also require research and innovation in areas such as the development and improvement of nature-based solutions, resource protection, innovative finance and cost-sharing mechanisms and cost-control systems, infrastructure asset management, joined-up green-grey infrastructure solutions and urban water systems, and the use of alternative sources of water.
The Green Deal, the policy initiatives set by the European Commission, and the political decisions for reanimating the European economy and recovery from the Corona crisis need also to address the other major challenges of our time and ensure that efforts and resources are invested in making Europe resilient to the hazards they represent for wellbeing and welfare, e.g. by ensuring investments in low-carbon infrastructure.

1. Nature-based Solutions to Respond to Climate Change

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The world's climate is changing and the consequences are now clearly felt e.g. by the increased risk of flooding and droughts. Whilst the economic and social consequences of the impact of flooding on critical infrastructure, property and human and natural habitats are immediately obvious, the prolonged droughts equally brings risks e.g. for drinking water production from surface water and, on a longer time scale, from ground water, as well as for food production and ecosystem services, putting biodiversity and jobs at risk.
More frequent and more severe intensity rainfall events can cause substantial urban flooding problems. Cities are increasingly vulnerable to flooding resulting from changing precipitation patterns because of rapid urbanization, impervious surfaces, the presence of complex infrastructure in the cities as well as land use patterns limiting the retention of precipitation upstream of the cities.

Similarly, in regions or periods with decreasing volumetric rainfall trends, there may be severe effects on water availability and thus also on water-dependent human and economic activity, and nature.

Traditionally, water management has depended heavily on classical civil engineering "grey" infrastructure solutions such as dams, canals, levees, pumps, pipes and treatment facilities. With the uncertainties linked to climate change and social and economic development, the inherent flexibility of solutions harnessing nature's ability to retain and store water become interesting as cost-effective options to fully or partially replace classical civil engineering options. Furthermore, it is important to restore ecosystem services where they

have been lost due to human intervention, especially when combined with measures to strengthen resilience to extreme events. The use of such nature-based solutions furthermore often does not entail the loss of important ecosystem services typically associated with traditional civil engineering solutions.

Options for nature-based solutions include new urban drainage approaches, "blue-green" stormwater urban infrastructure, establishment of permeable urban surfaces, green roofs, re-establishment of meadows and floodplains, re-connection of wetlands, and afforestation. These solutions are typically multifunctional and can deliver a multitude of benefits for both water management and flood risk management, in addition to other benefits associated with water use and protection against too much or too little water.

EWA calls for

- ➜ **Systematic compulsory assessment of and preference in water infrastructure, whenever possible, for flexible, multifunctional nature-based solutions combined with measures to strengthen resilience to extreme events (EU role: CIS guidance, capacity building, conditionalities in EU funding instruments).**

- ➜ **Systematic compulsory assessment and, wherever possible, use of nature-based solutions to restore ecosystems and their services to comply with the WFD requirement of Good Ecological Status where these services have been lost (EU role: enforcement, CIS Guidance, capacity building, preference in EU funding instruments).**

2. Financing Water Services Investments

Water and wastewater infrastructures in Europe are ageing and require investments that cannot be delayed to prevent even more expensive and potentially dangerous system failures, loss of resources, water crises, flooding of streets and houses. The requirements of environment, users and consumers have become increasingly demanding. Water services need to plan on a long-term basis when designing, constructing and operating our treatment plants and many millions of kilometres of public pipelines in distribution networks and collection systems which demand 50-100 years of usage.

Adapting water infrastructure to the challenge of climate change is not a one-off task but rather a continuous challenge. In addition to the classical tasks of water infrastructure dealing with drinking water and wastewater collection and disposal, it needs to address heavy rainfall, which is not a drainage problem in the conventional sense. New technical and possibly multifunctional systems are required, which also demands a new definition of responsibilities and financing channels. The Paris Agreement clearly defines the task: „Making finance flows consistent with [...] climate-resilient development."

Significant investments are required with long-term planning horizons now, and in the coming years to upgrade networks and plants. Wherever possible, no-regret choices should be made using flexible, green solutions that do not become obsolete and can be adapted later by future generations in accordance with developments so as not to pass unnecessary costs to future generations. Long-term approaches must be balanced with an appropriate level of flexibility, allowing rigid infrastructure to be responsive and adapt to a fast-changing environment and to integrate innovative solutions.

Water services are currently affordable to almost everyone in the EU, but investments and any tariffs changes need to ensure that they remain affordable to all citizens in the future.

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Cost-effective water services within the EU require effective governance arrangements under the Water Framework Directive. Particularly important areas are:

- Involving all water stakeholders in major decisions on water infrastructure
- Improved harmonisation with other European regulations (agriculture, chemicals, energy, transport etc.) and the phasing out of certain hazardous substances – see ***EWA Position Paper on the Urban Waste Water Treatment Directive***
- Support and incentives for sustainable water infrastructure renewal in Member States which face a difficult socio-economic situation
- Ensuring that water services are affordable for all and that water pricing is fair, while providing a real incentive to sustainable behaviour and technological innovations

EWA calls for :

- **Better communication of the benefits of investments in the water sector, in order to gather public support for governance improvements – with a focus on effectiveness, efficiency and sustainable financing models (EU role: CIS-guidance, capacity building, making financing conditional on good governance, in particular comprehensive stakeholder involvement, policy integration and fair and effective cost-recovery).**
- **Transparent and sustainable decision-making by developing and deploying life cycle cost-based evaluations, reliable indicators building inter alia on European Platform for Life-cycle Thinking and Assessment and developed by the Joint Research Center and effective communication of the value of water.**

3. Asset Management and Digitalisation of the Water Infrastructure

Asset management is essential for ensuring that the water infrastructure is sustainable, including upgrading of the ageing water infrastructure and must include both investment programming, maintenance and efficient operation.
The Water Framework Directive requires Member States' water-pricing policies to follow the 'polluter pays' principle and to take into account the principle of recovery of all costs. However, most water tariffs in the EU cover the costs of everyday operation but are insufficient to provide full coverage for the costs of digitalisation, reconstruction and replacement of existing facilities when reaching the end of their useful lifetime. The cost of providing water services that are not recovered today are necessarily covered through public subsidies or, more likely however, passed on to future generations.

Digitalising the water infrastructure is an essential tool in asset management and is already in progress. It entails tremendous opportunities for efficiency gains by detecting, metering, data processing, modelling, planning, cost optimisation and improving resource and water efficiency. Management systems supported by digital data enable the formulation of proper financing strategies and transparent pricing systems. Digitalisation requires significant investment incompatible with cost recovery levels in most Member States. Building Information Modelling (BIM) is a digitalisation tool which soon will enable water management units to display their processes digitally; from the initial design process up to and including the decommissioning process. This will increase their optimisation potential already at the planning stage.

EWA calls for

- **Improved transparency on tariff systems and financial cost structures of water services with an explicit focus on the real costs related to the reconstruction, renewal and modernisation of ageing water infrastructure (EU role: CIS guidance, capacity building).**
- **Better implementation of the cost recovery principle and adequate tariff systems with social measures to ensure that tariffs are affordable for all (EU role: CIS guidance, capacity building, stricter monitoring and enforcement of the application of the principle and of use by Member States of exemptions under the WFD.**
- **Strong support for small and medium enterprises in the digital transition, knowledge sharing within the water community and an aligned education in the water services sector.**

4. Boosting Water Demand Management

Water management in Europe has so far mainly focused on improving the supply of water. To respond to ever increasing population growth, urbanization, and climate change effects on the water cycle it is becoming urgent to focus also on managing demand for water and integrating water management into the circular economy.

This situation calls for measures targeting the behaviour at individual, institutional, and sector level. Only by changes in the mindset of the users can the demand for water be reduced. This requires new ways of communication and dissemination of the water quality and quantity challenges societies are facing, as well as incentives for the users to save and reuse water and public education to influence the demand. Furthermore, it requires new technologies and measures which enable water efficiency and water saving at different levels such as low-water washing machines and low-flow toilets, new washing enzymes, new water saving irrigation methods, adjustment or replacement of industrial technologies, etc.

Moreover, at regulatory and political level, changes are needed to boost water demand management. First of all, proper metering of the of the water consumption must be in place. Secondly, measures to reduce water use have to be put in place, particularly in areas with permanent or seasonal water scarcity. Last but not least, water pricing has to be adjusted without compromising the concept of water as a common good. Safe water should be available for all, however, it is evident that water which has no price will not be considered a valuable resource. The price level set on water should provide an effective incentive for all to save water in order to save money.

Measures to reduce water use could include e.g. restrictions on the use of drinking water for gardening, washing cars, washing streets, flushing toilets and similar purposes, possibly supplemented with incentives replacement of drinking water for these purposes with other sources of water. Furthermore, other measures such as assessment of water needs and water quality needs and direct or indirect impact on other water users by licensing authorities before authorising abstractions of ground or surface water for industrial or agricultural purposes are necessary.

In water demand management, incentives and technologies for increased water efficiency go hand in hand with new knowledge, education of citizens and regulatory restrictions of water use. Water will be saved by changing the behaviour of people. Moreover, focus created on water reuse and diversification of the water supply to produce water with a quality fit for the purpose are just as important. Part of this scheme is the use of other alternative water sources for water supply.

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EWA calls for

- **Increased focus on public education on water challenges at all levels and on developing new technologies which enable the realization of peoples' and society's ambitions to save and reuse water, and of increased water efficiency in the water consuming sectors.**
- **Reducing water consumption e.g. through restrictions on the use of drinking water for gardening, washing cars, washing streets, flushing toilets and similar purposes, supplemented with incentives to replace the use of drinking water for these purposes with other sources of water.**
- **Assessment by licensing authorities of water needs and water quality needs and direct or indirect impacts on other water users before authorising abstractions of ground or surface water for industrial or agricultural purposes.**
- **Diversifying the water supply and the efforts to introduce new water sources such as rainwater, storm water, and reclaimed wastewater in the water supply, at the same time ensuring that water is produced with a quality fit for purpose (EU role: CIS-guidance, capacity building, priority in EU funding instruments).**

The EWA Water Manifesto

With this Water Manifesto, the European Water Association draws attention to current challenges in European water management and makes proposals for sustainable solutions to meet these challenges. EWA calls upon civil society and all relevant stakeholders to contribute to implementation of such solutions. EWA encourages the permanent dialogue between the decision makers and the national and regional authorities.

The EWA is ready and prepared to accept the public appeal by the MEP Water Group "to link the EU-level with the local level" and provide better information to all participants in the European Water Cycle.

European Water Association (EWA)

The European Water Association (EWA) is the pan-European, non-governmental, non-profit-making, technical and scientific umbrella organization of and for national, corporate and research member associations bringing together all professionals involved in the water cycle. Simply, it is the voice of water in Europe. It is the platform and turntable for discussion, exchange and transfer of information and know-how in the European Water landscape on technical and scientific level, not only between the national member associations and with the corporate members, but also for distribution of information from the EU to the members and from the members to EU. EWA's national members and all their working groups and specialized members will build a real task-force to analyse, discuss, translate and communicate the European Agenda to their national, regional and local authorities, the involved consultants, the industry, the contractors and even the general public.

EUROPEAN WATER ASSOCIATION

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