

# BLUE PLANET

## Smart water for resilient cities

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Keynote – Dr. Claudia Castell-Exner, EurEau

Good afternoon ladies and gentlemen, dear colleagues,

Thank you very much for the invitation to address Blue Planet this year and share EurEau's views on "Smart water for resilient cities". It is a topic that is of key interest to us in EurEau.

Let me start with a brief look at European water services and its European association, EurEau.

EurEau is the European Federation of National Associations of Water services. It was founded in 1975.

Our 34 members represent water operators that supply drinking water to consumers and return treated waste water safely to the environment.

If water is a public good, it is also true that providing water services is an activity with important technical, economic, managerial and regulatory aspects - whether carried out by public or private operators.

Water is essential for life and water services are essential services.

Water services support the sustainable development of our societies and are fundamental to realising the ambition of the EU Green Deal and the UN Sustainable Development Goals, but little is known about them.

This is because the infrastructure is mainly underground, accessible only to a few technicians and also because it is sometimes situated far from urban areas and protected for obvious security reasons.

What appears to be a simple day-to-day service is in reality the result of complex processes and advanced technologies. Each solution is adapted to the specific local circumstances. They depend on factors such as population density, the type and available quantity of water resources, required treatment levels, local topography and many other elements.

Over the last decades, water services have improved significantly in terms of quality and accessibility.

Our sector has substantially increased the levels of health and environmental protection



as well as the level of resilience while reducing energy demand and embracing circular economy principles.

Today, 95% of European citizens have access to high quality drinking water while 86% of people are connected to waste water services.

The European drinking and waste water pipe network is over 7 million kilometres long which will get you to the Moon and back almost 20 times!

Our assets have long-life cycles - at least 30 years for facilities and around a century for drinking water networks and waste water collection systems.

It is vital that we plan and consistently invest in our systems on that long term basis, including the maintenance of existing assets.

Innovation has been a key enabling factor in this ongoing process.

Or, in a nutshell: Innovation is crucial to help the water sector meet the challenges of the United Nation's Sustainable Development Goals, adapt to climate change, become more efficient, robust, comply with legislation at all levels and deliver on the European Green Deal ambitions.

There is a tremendous set of legal files relevant for the water sector under evaluation, revision or approval at EU level. For example, the EU Drinking Water Directive was recently reviewed in a long process. The directive establishes the legal framework for drinking water operators for decades to come. The requirements are high - for example, the comprehensive risk analysis and risk management now to be applied to all drinking water production processes from source to tap as well as stringent limits for new substances like PFAS, although their treatment is rather challenging and new for operators.

Besides this, there is another important legislative file, which is vital to waste water operators under revision at the moment: the Urban Waste Water Treatment Directive. We know that the European Commission is very keen to push for advanced treatment to eliminate contaminants of emerging concern, to challenge operators to reduce GHG emissions, to increase energy efficiency and the use of renewable energy, and to deliver on the circular economy by nitrogen and phosphorous recovery and reuse.

At the same time, there are a number of security-related directives under revision, like the Security of Network and Information Systems (the NIS – Directive) and the Resilience for Critical Entities Directive.

All of these directives have a direct impact on how we become more resilient, more robust and smart to the challenges we face now and in the near future.

In this context research and innovation are crucial.

Too often, we see funds invested in research and innovation that does not really respond to the needs of water operators.

With this in mind we set up in 2019 a Joint Working Group and asked our members for



input. We received more than 350 proposals.

In order to present them all, we regrouped them by topics and presented the outcome in spring 2020 at the General Assembly meeting of EurEau under the headline “Innovating for a greener future: European water service priorities”.

Here, I show you on two slides the spectrum of innovation needs drinking water and waste water operators from all over Europe reported back.

You see the big topics like climate change, emerging pollutants, analytical methods, energy efficiency, business models, digitalisation, asset management, security etc.

Although EurEau had approached the topic from a more technological perspective for a number of years, we see today that water utilities in nearly all Member States continue to face problems in accessing and implementing inventive solutions.

It seems that this is not primarily caused by the lack of technological developments or solutions available but rather by the policy side which regulates the capacity of water utilities to invest (time and money) in innovation.

The fact that utilities in a number of countries find it difficult to even maintain the infrastructure in place demonstrates how difficult for some of them the situation is.

Additionally, implementing innovative solutions needs to be accompanied with human resource management to adapt to the chosen solutions. Attracting bright people with vision and creativity will be key to realising our future.

Significant amounts of mainly European but also national public funds are invested in the early stages of the innovation cycle. This opportunity can easily be lost if the research results do not reach the European water sector at an economically viable scale, or do not respond to their real-life needs. Innovation is therefore much more than an appendix to research. It is an integral part of the whole cycle and should be treated as such.

A number of barriers may slow down innovation in the water sector. They include:

- ~ inflexible and prescriptive legislation
- ~ missing life cycle assessment (LCA) data showing that new solutions do not only address one particular issue, but provide wider sustainability benefits
- ~ a lack of knowledge on innovative solutions
- ~ a lack of innovative financing solutions
- ~ technological solutions not adapted to the needs of water service providers
- ~ a lack of public support.

Let me come to an end and thank you very much for this opportunity to address the Blue Planet Berlin Water Dialogues.

Now I am very much excited to listen to you and learn about the latest developments in asset management and water utilities in smart cities.

Thank you very much for your attention.



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## About EurEau

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

Our members are 34 national associations of water services. At EurEau, we bring national water professionals together to agree European water sector 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.



EurEau

With a direct employment of around 476,000 people, the European water sector makes a significant contribution to the European economy.