Workshop report

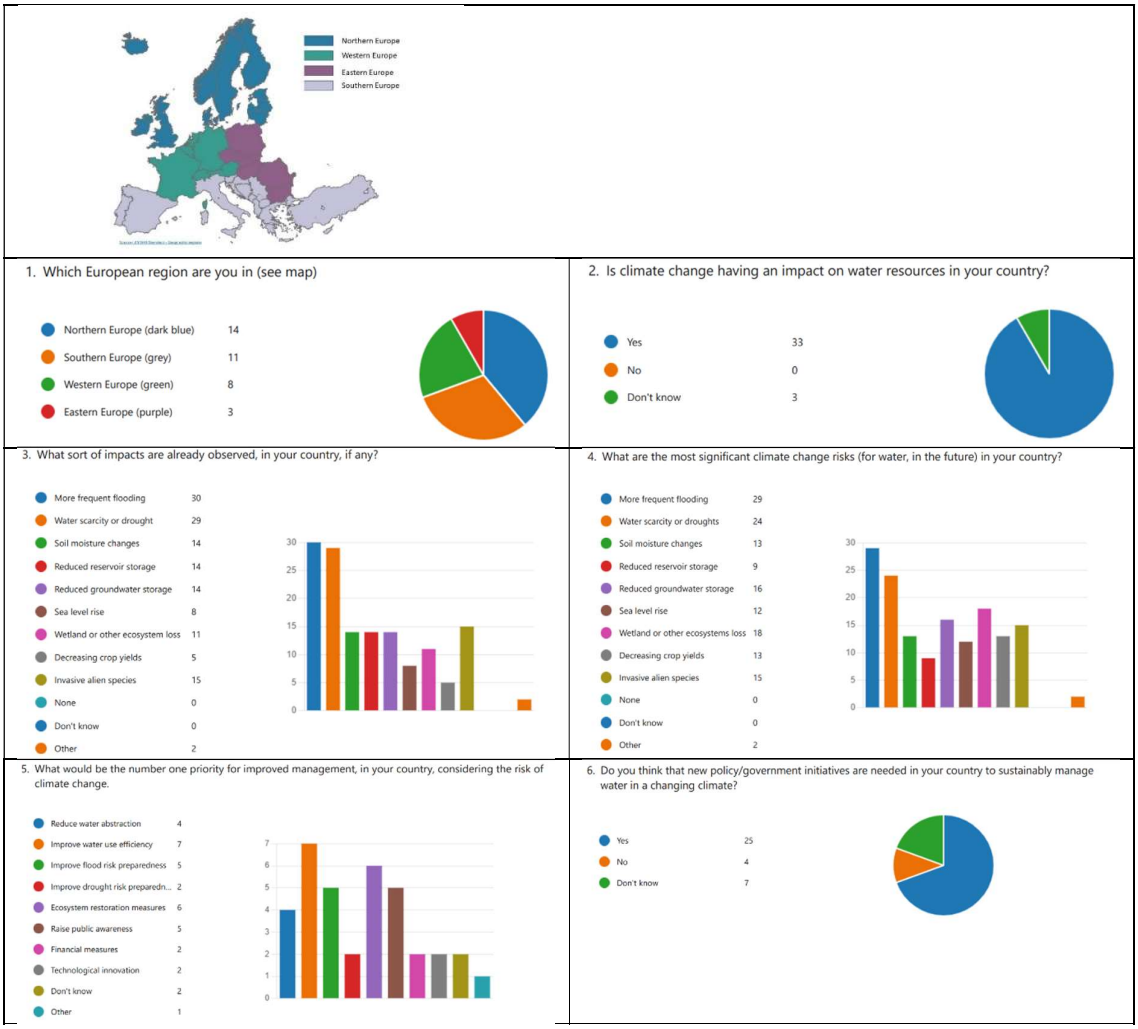
Integrated water management in the context of climate change -

Sustainably managing biodiversity, pollution, and water resources

Led by EEA (Trine Christiansen, Nihat Zal, Caroline Whalley, Celine Bout and Francesco Mundo)

EEA is developing a report on the State of Water, expected to be published in 2024. This workshop was aimed at gathering views from participants about the current and future impacts of climate change on water resources. We are looking to understand the impacts and what they could mean for sustainable pathways to water management in future.

As part of the workshop, participants answered a number of questions about current impacts on and future risks of climate change to water resources. Only about half of the number of registered participants joined the workshop, so the results were less representative of the meeting than anticipated. Below, the survey results based on 36 respondents are shown.



In question 7, respondents were given the opportunity to name new policy/government initiatives needed to sustainably manage water in a changing climate. Received responses are reported in the table below.

Eastern Europe	Northern Europe	Southern Europe	Western Europe
Implementation management and monitoring actions including support in financial sector. Education/awareness raising campaigns	Strategies exist but implementation lags Flood management plans to be accelerated Financial incentives Secure natural land-water interaction and connectivity. Measures that monitor and limit water use per sector/household/industry etc	We have a new Ministry of Climate Crisis action (climate change adaptation) We need a law reform. Too many administrative bodies on water management More flood adaptation measures Reuse water front rain	Abstraction is not well monitored Restore wetlands Bring more coherence between nature and biodiversity policies and sectoral policies (e.g. agriculture, energy production) Many small rivers have been directed to flush the canals which ends in catastrophic foods under the streets putting people at risks. Other important activities would increase substances cleaned in sewage treatment such as pharmaceuticals and PFAS plus nitrate etc, we call this the 4th xlearning step. In addition, renaturation of river basis would be necessary... Measures to adapt the agricultural sector Floodplain and soil restoration " Better or more transparent usage or allocation of water resources. Improved reuse.

The survey was designed to collect perceptions on future climate related risks on water resources from workshop participants. The survey results show that climate change impacts on water are a concern across Europe. Impacts linked to both water scarcity and droughts (too little water), and floods (too much water) are both already observed, and are also seen as a significant future risk.

Impacts on wetlands and ecosystems, groundwater storage, sea level rise, and economic losses such as declining crop yields were also mentioned by the participants as future risks associated with climate change. I The workshop participants focused on improved water use efficiency, ecosystem restoration, improved flood risk preparedness and public awareness raising as the most important measures, but also point to a wide range of policy initiatives that could be picked up to improve the situation.

Over-all, the workshop participants perceive that the impact of climate change on water is already serious, that the impacts are associated with significant risks, and that further policy actions are needed to better manage these risks.

Discussion in the room touched a number of topics. The loss of wetlands was flagged as significant – at EEA, this topic is being further explored as part of our ecosystem assessment files, and as a cross-cutting topic between water and biodiversity. The need for water for ecosystems, such as the Montreal targets to protect marine and terrestrial areas, was rseen as important..The issue of whether infrastructure was part of “technological innovation” was raised – it is an important aspect, with infrastructure both affected by climate change e.g. where a minimum level of flow is required to keep wastewater systems functioning; and representing possible solutions such as in investments to improve wastewater treatment which minimise embedded carbon, reduce greenhouse gas emissions etc.

Another participant noted that the immediate response to local impacts of climate change can be to announce hard infrastructure, such as new dams or reservoirs. This kind of action does not address the drivers nor pressures.

Flooding and the impact of pollution was described as an indirect or secondary climate change impact upon water resources.

We are grateful to the participants who joined this meeting. If you have case studies on climate change impacts upon water resources, please contact trine.christiansen@eea.europa.eu