



EU Adaptive governance in Water Law and Policy in view of Climate Change

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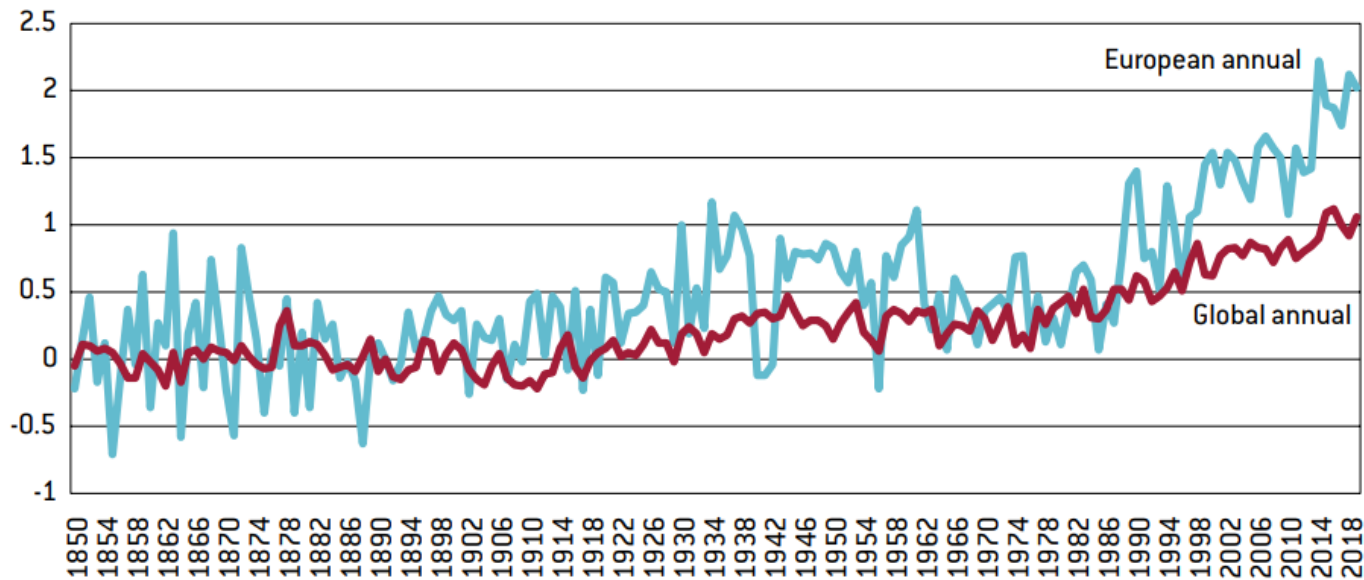


Climate change's impact on Europe

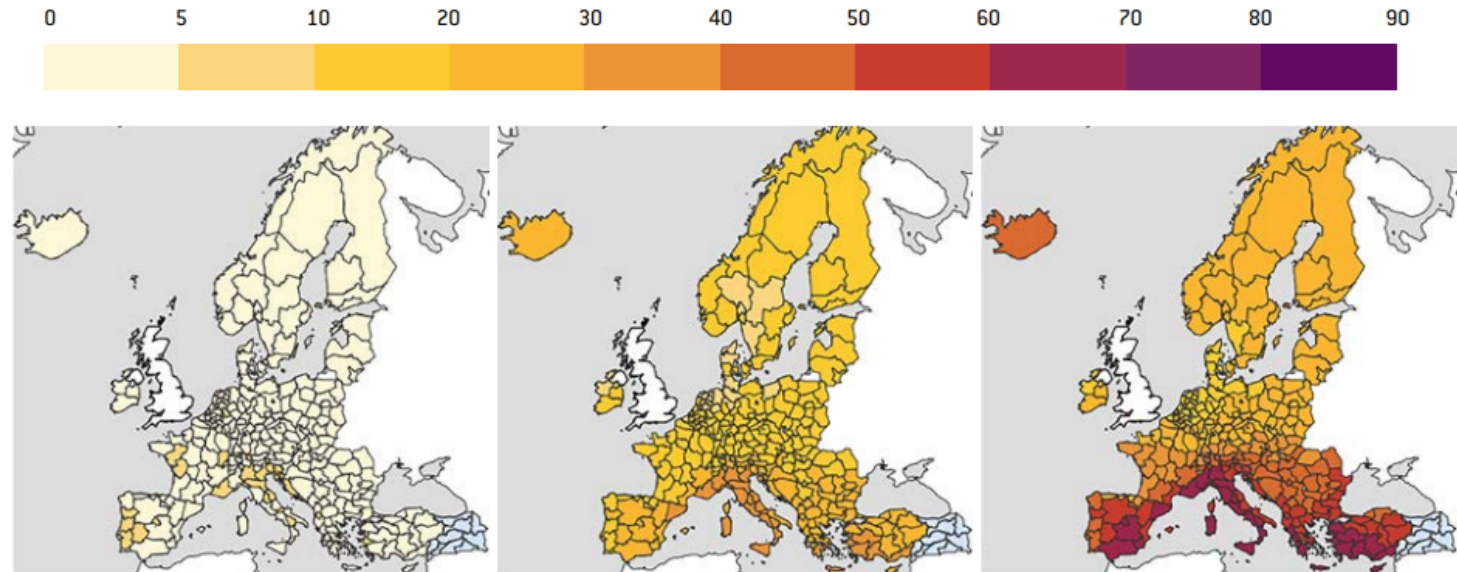
► **Physical effects:**

1. Global average surface temperatures risen by **1.1 °C** since pre-industrial times (IPCC, 2021).
2. Land temperatures in Europe have been rising much faster, to about **2 °C above** pre-industrial levels.
3. Europe is warming faster than some other regions (EEA, 2021a).
4. Europe is experiencing more summer heat waves, heavy precipitation and droughts, as well as rising sea levels (IPCC, 2021).

Figure 1: Global and European average near-surface temperatures relative to pre-industrial period (°C)



Source: Bruegel based on HadCRUT4 (mean) estimates reported by the European Environmental Agency (2021a).



Source: Climate-ADAPT (2022b), based on Copernicus Climate Change Service data.

Annual number of health-affecting heatwave days between 1981-2010 (left) and between 2070-2099 under 3 °C global warming scenario (middle) and a >4 °C global warming scenario (right)



More environmental impacts

- ▶ Even the frequency of extreme sea levels and coastal floods is expected to increase much more in the south than in the north.
- ▶ Adaptation to climate change is **inextricably linked to water management**, as variations in temperature, precipitation and extreme weather events increase the risks of floods and droughts and higher water temperatures impacts on water quality (SEC (2009) 386)

Water management and its impact



Water quality and quantity management is also important to protect the aquatic ecosystem.



Adaptive water management is important as climate change may affect the safety of EU citizens and may have an adverse impact on the availability of sufficient and clean water for all users, including (aquatic) ecosystems.



Adaptation can be defined as anticipating the adverse effects of climate change and taking appropriate action to prevent or minimize the damage it may cause (<http://ec.europa.eu/dgs/clima>)

Adaptation efforts in the EU

In this sense, adaptation reduces vulnerability. As can be seen in various national adaptation strategies from western and northern Europe, climate change can also result in opportunities for tourism and agriculture, e.g. an increase in the growing season and the yields.

In line with the approach taken in the Cancun Adaptation Framework⁶ and the EU White Paper on Adapting to Climate Change, adaptation should be directed towards reducing vulnerability and increasing the resilience of the social-ecological system. Resilience is originally an ecological concept.

Why must the EU act?

- ▶ As the basis for action on **climate change adaptation**, the European Commission invokes the EU treaties, by force of article 191 and 192(1) TFEU.
- ▶ These state that the EU's environmental policy should, apart from protecting the environment, contribute to the **protection of human health** and the **prudent and rational use of natural resources**.
- ▶ Environment policy should be based on the **precautionary principle** and on **preventive action**.

The key elements of adaptive governance in EU water law and policy include:

Flexibility and Adaptiveness of Rules

Openness, Public Participation and Access to Information

Coordination and Integration Across Sectors and Levels of Governance

Monitoring, Evaluation and Adjustment

Promoting Nature-based Solutions and Ecosystem-based Adaptation

Background on the EU Water Framework Directive

The 2021 European Climate Law (Regulation (EU) 2021/1119) also calls explicitly for the EU and member states to make progress on adaptation, and contains provisions about mandatory adaptation strategies, assessments of progress, consistency of adaptation measures and adaptation mainstreaming (articles 5, 6 and 7 TFEU).



The responsibility for adapting to climate change is thus **shared** by member states and the EU.



According to the **subsidiarity principle**, the EU should therefore intervene where member state action is not sufficient to achieve the desired objectives, while leaving other decisions as close as possible to citizens.

EU Water Framework Directive



This legal order of *acquis communautaire*, the EU body of law, attempts to achieve regulatory harmony across member states through required adoption of EU rules and has been framed as a more passive form of reterritorialization than outright border redelineation (Johnson 2012).



As in other environmental policies, the preferred legal instrument in water policy is the directive. Directives must be implemented in the national legal orders of member states in a way that guarantees the objectives of the legislation are fully attained, while the choice of the means to realize them is to a large extent left to member states

Early EU attempts on regulating water

The earliest EU water legislation only contained standards for water bodies used as drinking water sources.

Only five years later, in 1980, EU water legislation **expanded** to include binding quality standards for the protection of drinking water, fisheries, shellfish beds, bathing waters, and groundwater. In addition, directives were created to reduce water pollution from municipal, industrial, and agricultural sources by setting emission, i.e., effluent, standards for discharges



EU's WFD



This **sector-specific approach** was abandoned in 2000 in favor of an integrated, **river basin-specific approach** that would be better able to deal with regional variation and uncertainty and changing environmental, economic, and societal need.



The WFD marked a **new beginning** by prescribing river basin management, expanding the scope of water protection to all water bodies, promoting sustainable use of water, tentatively linking water management with other policies, allowing for regional and multilevel goal setting, improving public participation, introducing ecological standards, and facilitating adaption to climate change.



EU's WFD

- ▶ **Article 4** of the Directive sets the environmental objectives with separate goals and standards for **surface waters** and **groundwater**.
- ▶ Chemical goals are set at the EU level for the most hazardous substances and at the national level for less hazardous substances.
- ▶ Ecological goals are established at the sub-basin level.

EU's WFD

The Directive is characterized by its cyclical planning process, based on a programmatic approach to protect and improve the status of river basins.

The results of the assessment of the physical status and human impacts on a water system are part of the river basin management plans that have to be reviewed and updated every six years.

This program of measures is based on a combined approach for point and diffuse sources and combines environmental quality standards with effluent control measures.

It integrates the mandatory measures from other EU water legislation, such as discharge controls based on best available technologies, effluent limit values, and in the case of diffuse impacts, best environmental management practices.

Information, participation and access to the courts

EU water management contains mandatory disclosure provisions and encourages public participation, which is supposed to improve decision-making and legitimacy.

This requires transparency and a clear explanation of the proposed measures.

These requirements also apply to drought risk management plans and measures if a Member State has integrated drought risk management in its WFD plans and programmes of measures.

Public participation



Article 14 obliges MS to inform and consult the **public** when defining goals, making plans, and adopting measures. This requires transparency and a clear explanation of the proposed measures.



Similar disclosure and participation requirements apply to the results of risk assessment and the proposed measures for dealing with flooding risk as follows from the directive on the management of flood risks.

Access to justice

- ▶ If disputes over water management arise, access to justice should be available to stakeholders to **ensure that the public administration** remains within legal bounds.
- ▶ They should therefore be able to enforce their right to **public participation** and to challenge acts, administrative decisions and omissions in the implementation of the water plans and programmes of measures.
- ▶ This right is firmly established by the **Aarhus Convention**, ratified by both the EU and its Member States.

Access to justice



The European Commission is not the sole enforcer of compliance; private citizens can also bring cases before the national courts of member states.



This approach grants EU law at least the same footing as national law (the principle of equivalence) and in some circumstance even higher (the principle of effectiveness), and it makes EU law more powerful and effective than international law

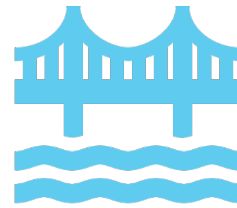
Monitoring and system feedback

Proper reaction to disturbance is especially challenging if the causes and ecological or societal effects are uncertain.

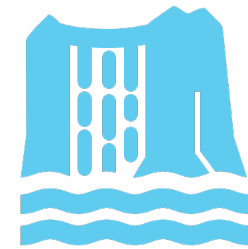


Therefore, Article 5 of the Directive requires member states to assess the physical characteristics, impacts of human activities on surface waters and groundwater, and of the economics of water use for each river basin district or for the portion of an international river basin district falling within its territory.

Monitoring and system feedback



As such, analysis of the physical condition of river basins and the impact of human activities is combined with an **obligation** to establish programs for the monitoring of water status to establish a coherent and comprehensive overview of the qualitative and quantitative water status within each river basin district.




The monitoring data are used to update the river basin management plans in a six-year planning cycle.

In addition, Article 11 (5) provides that monitoring and additional data must be used to **evaluate** whether the objectives for the current planning period will be achieved.



Monitoring and EU Commission

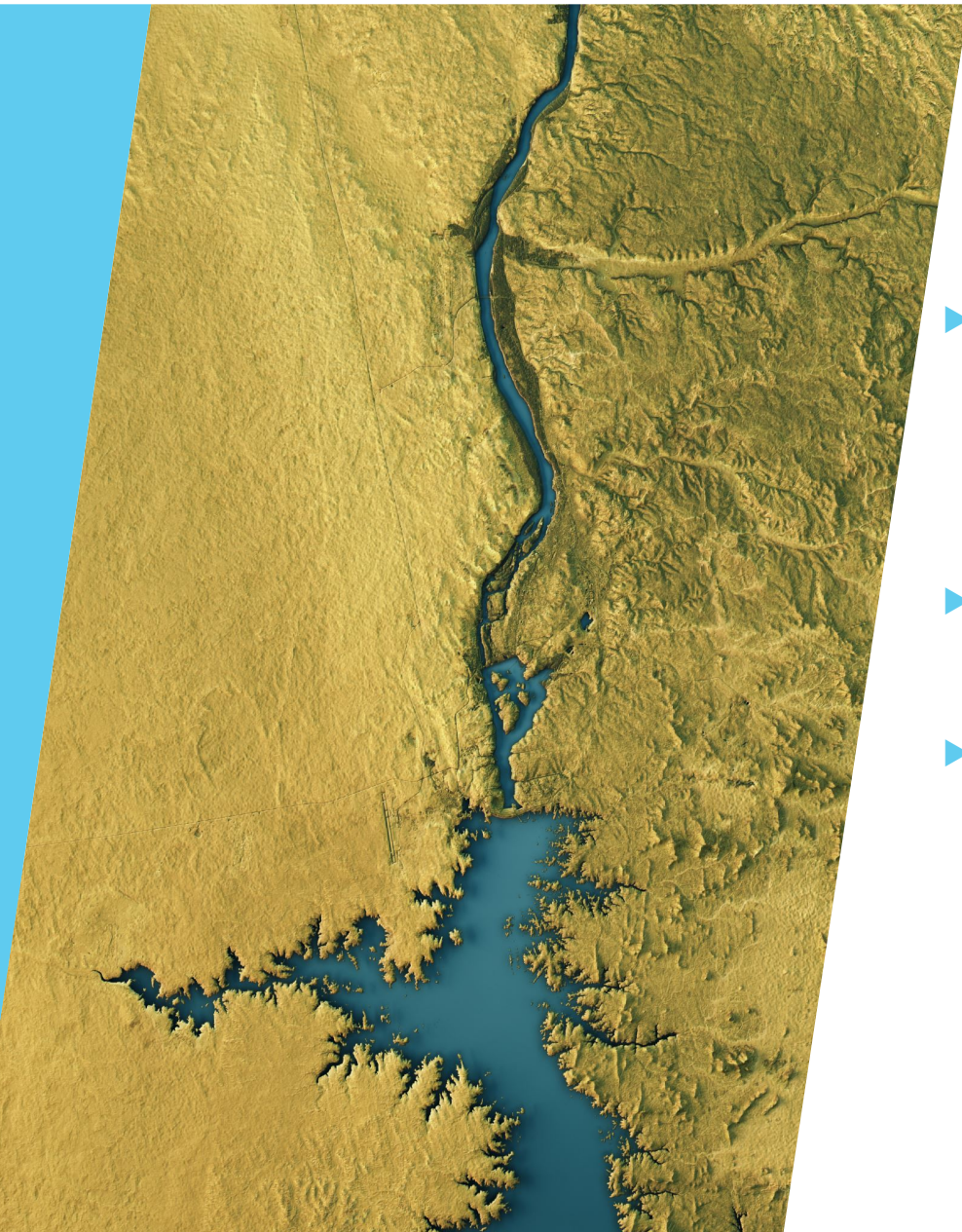
- ▶ To enable commission supervision, the monitoring data must be **reported to the Commission three years** after the publication of each river basin management plan or update (Article 11 and 15 (3)).
 - ▶ The Commission uses the national reports to analyze the status of WFD implementation for the whole European Union.
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Synthesis

- ▶ Meeting the WFD objectives





Synthesis

- ▶ The first commission report on the implementation of the Directive revealed that the percentage of water bodies actually meeting all objectives is **very low**, in some MS as dismally low as 1% (EC 2007).
- ▶ Many high-risk water bodies are located in densely populated areas and regions of intensive, often unsustainable, water use.
- ▶ Another factor is whether a MS had made the necessary investments to comply with previous EU water law, which addressed pollution by domestic wastewater discharges, nutrients from agriculture, and industrial discharges.

To what extent is the European water legislation and policy enhancing resilience in adaptation to climate change?

The background of the slide features abstract, overlapping geometric shapes in various shades of blue, ranging from light sky blue to deep navy blue. These shapes are primarily located on the right side of the slide, with some extending towards the center. The overall aesthetic is clean and modern.

The principle of resilience

- ▶ Does not occur in the EU Treaties or secondary EU legislation.
- ▶ Resilience is mentioned in the White Paper on Adapting to Climate Change (yet not defined).
 - ▶ Which makes a difference!
 - ▶ Two definitions of resilience exist.



Definition of resilience

1. **Engineering approach** - defines resilience as return time after disturbance.
2. **Dynamic approach** - defines resilience as the capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity and feedbacks.



EU's approach on the resilience principle


- ▶ The EU White Paper Adapting to climate change appears to take a **dynamic approach** to resilience, as its four pillars of action adhere to elements considered important in resilience theory:
 - ▶ building a knowledge base;
 - ▶ integrating adaptation into EU key policy areas;
 - ▶ employing a combination of policy instruments (market-based instruments, guidelines, public-private partnerships) to ensure the effective delivery of adaptation, and
 - ▶ promoting international coordination on adaptation.

The White Paper

- ▶ explicitly aims to develop a framework to reduce the EU's vulnerability to the impact of climate change
- ▶ mentions the importance of resilience to the impacts of climate change in various sectors so many times that building resilience appears to be an aim as well.
- ▶ The resilience literature promotes adaptive governance and adaptive management to increase social-ecological resilience and to deal with the long-term horizon and unpredictability of climate change



More on the resilience principle


- ▶ Promoting resilience through the legal system requires finding a mode of rendering adaptive governance elements compatible with the requirements of the rule of law. These requirements boil down to adding two procedural aspects: respect for **legal certainty** and **ensuring access to the courts**.
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Resilience in European water governance

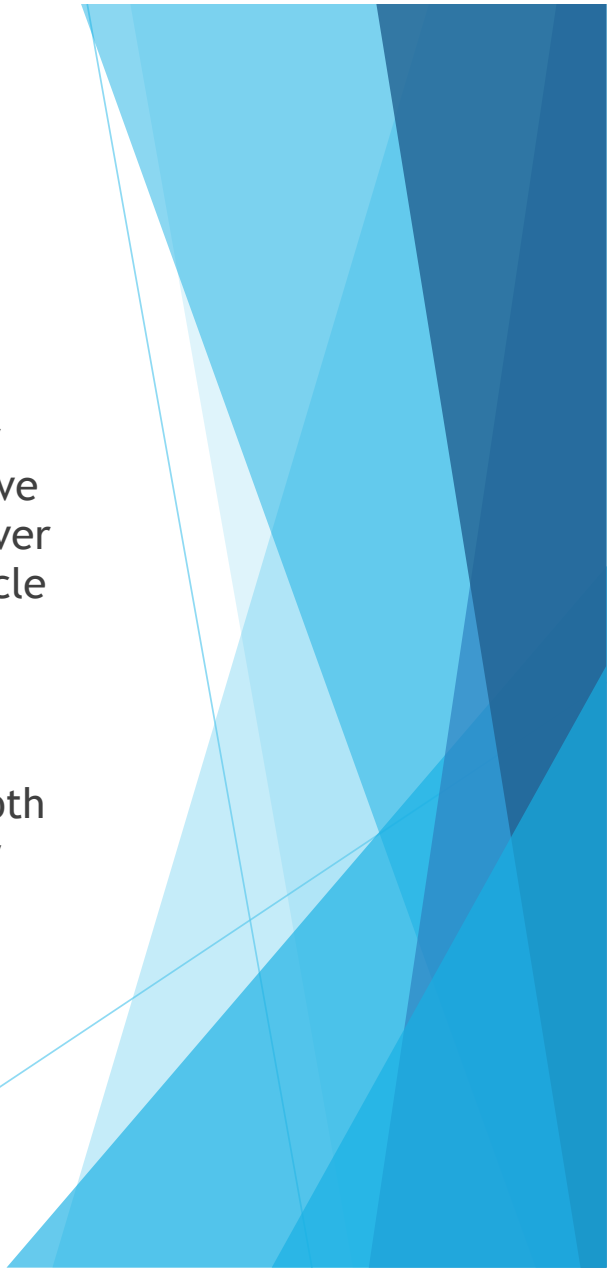
- ▶ Prior to the WFD, the FD and the WSDS, European water legislation mainly contained environmental quality standards and emission values which the Member States had to implement in a cyclic way through plans and programmes of measures.
 - ▶ It is common in European law to leave the administration of European law primarily in the hands of the Member States, because EU law does not offer a general legal basis for the harmonization of institutional and procedural administrative law.
 - ▶ This is generally referred to as the institutional and procedural autonomy of the Member States.
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- ▶ The introduction of river basin management authorities in the WFD shows that the EU considered that purely national water management would hinder the achievement of the chemical and ecological objectives of this directive. This institutional set-up has been taken over by the FD and the WSDS, as this approach is also well suited to setting up a system based on assessing flood and drought risks and providing for emergency response and preparedness.



Multilevel governance on a bioregional scale

- ▶ The European water legislation and policy takes a river basin approach. This means that the Member States have to identify river basins and assign them to individual river basin districts responsible for water management (Article 3 WFD and Article 3 FD, WSDS p. 3).
 - ▶ Each Member State has to ensure appropriate administrative arrangements, which include the identification of appropriate competent authorities, both on the national and the international level, since many river basins in Europe are transboundary.
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Multilevel governance on a bioregional scale

The institutional set-up of the WFD, the FD and the WSDS is reflected in the multilevel approach to goal and standard setting taken by these directives and policy document. The directives and communication allow the Member States to have discretion in developing water policy, directed at meeting the open and flexible goals.



In international river basins, the Member States that share a river basin have to cooperate by way of shared goal setting, planning and risk assessments.



However, the Member States are only obliged to discuss their plans and measures in international river basin committee meetings to try to achieve a coordinated overarching management plan and programme of measures.

Multilevel governance on a bioregional scale

- ▶ The available instruments to realize this cooperation are the traditional international treaties between riparian states, which do not offer a proper legal system to enforce shared responsibilities.³³ Administrative cooperation between the various authorities and states involved therefore only proceeds on a weak legal or voluntary basis

Final remarks

Conclusion

