



Water Scarcity Alarm in the European Union: The Effects of Climate Change and Problems in Water Management

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Summary

In this policy brief, as an environmental policy analyst, I examine whether the European Union’s water policies are sufficient in the face of water scarcity. Therefore, the main argument I put forward in this study is that the problem stems not from the EU’s failure to develop policies, but from the level of success achieved through the implementation of existing policies. Water scarcity has become a problem that is spreading rapidly across European countries and carries the risk of becoming permanent. According to my research, the EU has policy instruments concerning water resources, such as the Water Framework Directive and the 2025 European Water Resilience Strategy (European Commission, 2025). This information shows that the EU is sufficiently effective in developing policies, but that implementation produces results that fall short of the intended outcomes. This brings us to the following question: “Will water scarcity become a permanent problem?” There are some shortcomings among EU Member States in the implementation process. These include different approaches to addressing water scarcity, certain fundamental infrastructure deficiencies, and high levels of consumption in sectors that use large amounts of water. In this policy brief, as an environmental policy analyst, I call for the more effective implementation of existing policies to overcome the water threat and regulate water use, the reduction of implementation differences among Member States through the adoption of a single policy, the reduction of consumption and the introduction of quotas in water-intensive sectors, and a more detailed examination of drought risks.

KEY POINTS*

- 1.. Climate change, irregular rainfall and long-term droughts in the European Union are increasing the pressure on water resources and making **water scarcity** a major problem.
- 2.Increasing temperatures and changing precipitation in the region with **climate change** are increasing the impact of drought and water stress in Europe.
- 3. Are the **policies implemented by the European Union** to protect water resources being implemented effectively by EU member states?





1- Increasing Water Tension and Drought in Europe

The water problem in European countries is not caused solely by irregular rainfall and occasional decreases in precipitation. Excessive water consumption by European citizens increases the pressure during periods of drought, while water pollution reduces the amount of clean water and contributes to water scarcity. I have observed that water scarcity is increasing, particularly in Southern Europe. According to data from the European Environment Agency (EEA), approximately 30% of the population living in Southern Europe resides in areas where water stress is permanent. During the summer months, this rate rises to approximately 70%, mainly due to lower levels of rainfall during this period.

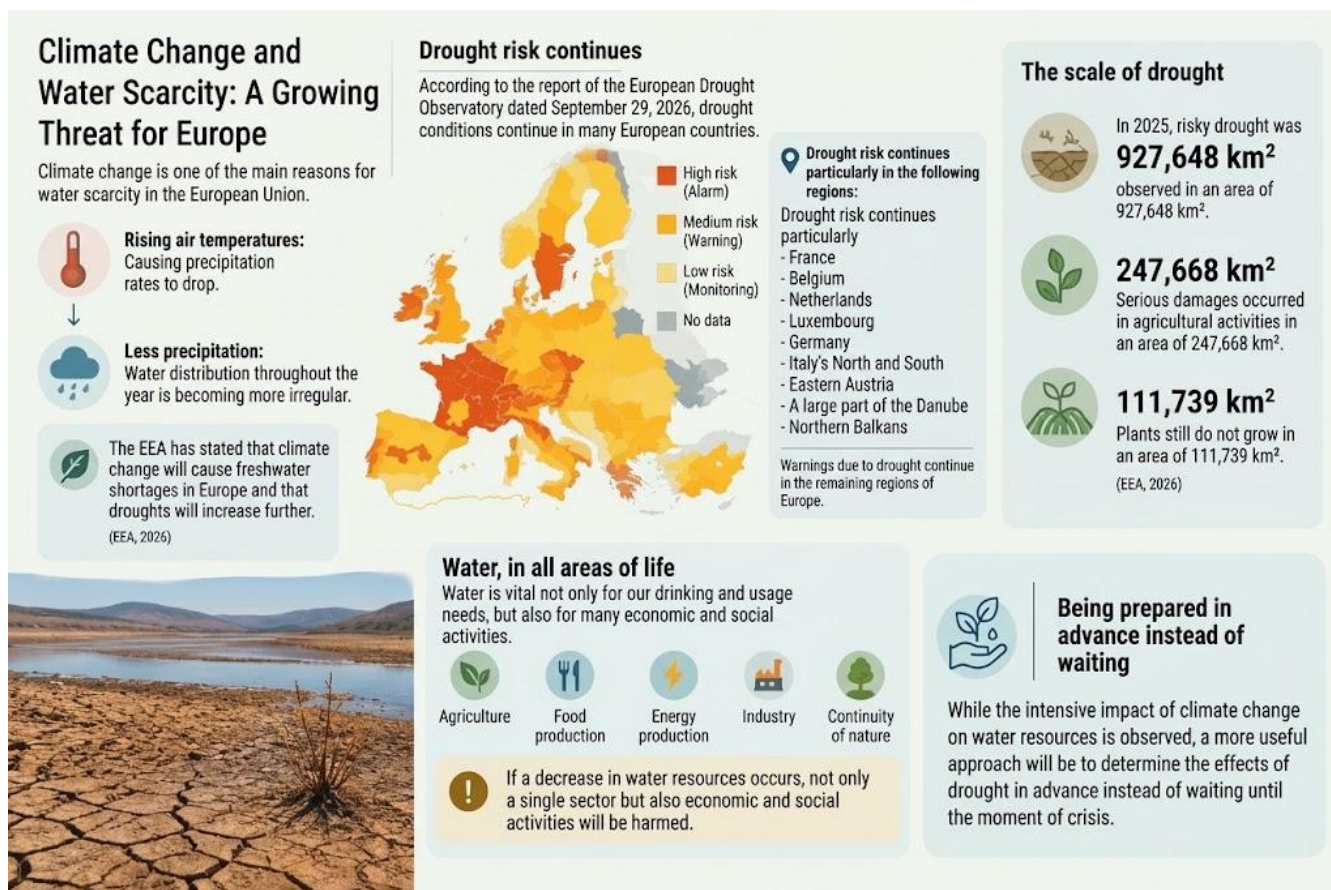
Of course, the water problem is not limited to Southern European countries. Urbanisation resulting from migration from rural areas to cities, energy production, and industrial activities in which water is used inefficiently mean that water scarcity can also be observed in rivers across different EU countries.

Economic activities also contribute to the depletion of water resources. According to a 2025 report by the European Environment Agency (EEA), agricultural activities, water used in industry, and water consumed by the public together account for 98% of total water use in the EU. According to a 2025 report by the European Environment Agency (EEA), agricultural activities, water used in industry, and water consumed by the public together account for 98% of total water use in the EU. Agriculture alone accounts for approximately 29% of the total water used in the European Union. These findings show that water scarcity is not caused solely by environmental factors such as climate change; it is also an important issue because of unnecessary water consumption in economic activities. Increasing drought levels are also making the water problem more serious. The year 2025 was the fourth driest year for the European Union (EU). This shows that the problem in Europe is not simply “having less water”; rather, demand for water resources in economic activities and drought are increasing simultaneously. At this point, my recommendation as an environmental policy analyst is that the European Union (EU) should not only create new water resources but also ensure that existing water resources are used more efficiently.

2- The Impact of Climatic Change on Water Resources

Climate change is one of the main factors contributing to water scarcity in the European Union. Due to rising temperatures caused by climate change, rainfall levels in countries are decreasing, which makes the distribution of water throughout the year more irregular. The EEA has stated that climate change will cause freshwater shortages in Europe and that droughts will increase further as a result of climate change. In addition to our need for water for drinking and daily use, we also actively use water in economic sectors.

For example, water is important for agriculture, food production, energy production, industry, and the continuation of nature. Therefore, if water resources decrease, not only one sector will be affected, but economic and social activities will also suffer. According to official reports I have examined, increasing water scarcity in Europe affects approximately 20% of the continent's land area and around 30% of its population each year. Based on the information I have collected following my research, these figures are expected to increase due to changing climate conditions. The year 2026 provides us with a current example of the risk of drought.



According to the European Drought Observatory's reports dated 29 September 2026, drought conditions continued in many European countries in mid-September. While drought risks continue to raise alarms in areas such as France, Belgium, the Netherlands, Luxembourg, Germany, northern and southern Italy, eastern Austria, a large part of the Danube Basin, and the Northern Balkans, warnings about drought continue to be issued in other parts of Europe as well.

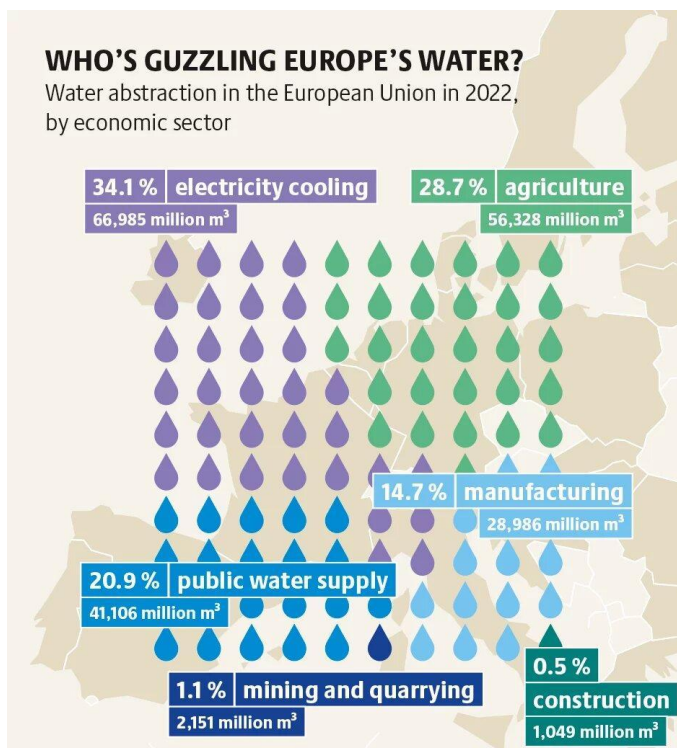
Drought does not only appear as a decrease in the amount of water. According to the EEA's 2026 data, drought conditions posing a risk were observed across approximately 927,648 km² in 2025, and serious damage to agricultural activities occurred across approximately 247,668 km².

The fact that plants are still not growing in approximately 111,739 km² of agricultural land has also increased the seriousness of the decrease in water resources for areas such as food production and consumption. In a situation where the significant impact of climate change on water resources is being observed, identifying the effects of drought on us in advance, rather than waiting until a crisis occurs, would be a more beneficial approach.

3- EU Water Policies: The Difference Between the Implemented Policy and its Consequences

The European Union (EU) is an entity that has various policies in place to address water scarcity and drought. The Water Framework Directive, adopted in 2000, forms the foundation of the European Union's (EU) water policy and specifies how it should be implemented by Member States (European Parliament & Council of the European Union, 2000). The main purpose of this directive is to support the long-term protection of water resources while also promoting their efficient and responsible use.

The EU has also developed other policies concerning areas such as water reuse and infrastructure to address water scarcity. Examples include programmes that promote the reuse of treated water in agricultural irrigation and regulations addressing water losses in drinking-water systems. In addition, in 2025, the European Commission published the European Water Resilience Strategy, introducing a new policy aimed at tackling water scarcity, facilitating citizens' access to clean water, and restoring the water cycle to its former strength. However, the main problem I address here is that the EU's policy objectives do not fully correspond to the results achieved in practice.



My research indicates that no overall improvement in water use has been observed compared with previous reports. In my opinion, the policy gap here arises particularly during implementation. Although the EU has established a common legal framework, a significant part of water management is implemented only at the level of EU Member States and river basins (European Commission, 2024). The European Commission also considers the development of new approaches necessary, stating that almost all river basins may face water scarcity and drought in the long term. Therefore, the main problem addressed in this study is not the EU's failure to develop new policies, but rather the inability of existing policy objectives to keep pace with the rapidly progressing issue of water scarcity in terms of both speed and scale.

In this regard, as an analyst, I would like to emphasise the need for stronger implementation to improve water resilience across Europe.

4- My Suggestions for the European Union (EU) Water Crisis

- We must set clear and measurable goals :
Messages "Let's use water efficiently" are given by EU member states every day, but we need to take action not only with messages, but also with concrete data.
- Economical use should be instilled in the agricultural sector where water is used the most :
The economic sector where water is wasted the most is agricultural areas. The supports given to farmers by the state should be regulated according to the rate of water expenditure. Smart irrigation systems should be expanded and the cultivation of crops that require little water should be supported more.
- We need to move to technology that re-evaluates used water :
Since the pipes located between neighborhoods in many countries, including in our country, are Decrepit, most of the water is wasted and goes to the water expenses between the streets. My suggestion is that leaks can be prevented by renewing old water pipes. Rainwater can be collected and treated and become reusable for cleaning and irrigation.

- We should take precautions before drought increases.

Countries generally do not take action until the last moment. Solutions are sought only when a crisis occurs or the water supply is cut off in my opinion, this is a very late approach. However, if a system is developed to detect and warn about drought at an early stage, precautions can be taken before drought begins.

- Those who do not comply with rules established by governments should be monitored and penalised when necessary :

The European Commission should more strictly monitor and hold accountable countries and institutions that fail to implement established laws, unnecessarily pollute water, or cause excessive water consumption. As an environmental analyst, I believe that if these recommendations are implemented, we can observe more efficient use of water.

FOOTNOTES

1- European Commission. (n.d.). Water scarcity and droughts.

https://environment.ec.europa.eu/topics/water/water-scarcity-and-droughts_en

2-European Commission. (2021). Forging a climate-resilient Europe—The new EU Strategy on Adaptation to Climate Change. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2021:82:FIN>

3-European Commission. (2025a). Commission Recommendation (EU) 2025/1179 of 4 June 2025 on guiding principles of water efficiency first. <https://eur-lex.europa.eu/eli/reco/2025/1179/oj/eng>

4-European Commission. (2025b). European Water Resilience Strategy. https://environment.ec.europa.eu/publications/european-water-resilience-strategy_en

5-European Commission. (2025c). Report from the Commission to the Council and the European Parliament on the implementation of the Water Framework Directive (2000/60/EC) and the Floods Directive (2007/60/EC) : Third River Basin Management Plans and Second Flood Risk Management Plans. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52025DC0002%2801%29>

6- European Environment Agency. (n.d.-a). Water abstraction by source and economic sector in Europe.

<https://www.eea.europa.eu/en/analysis/indicators/water-abstraction-by-source-and>

7- Copernicus Emergency Management Service. (2026). Current drought situation in Europe. European Commission, Joint Research Centre. https://joint-research-centre.ec.europa.eu/european-and-global-drought-observatories/current-drought-situation-europe_en

8- European Environment Agency. (2021). Water resources across Europe—Confronting water stress: An updated assessment (EEA Report No. 12/2021). <https://www.eea.europa.eu/en/analysis/publications/water-resources-across-europe-confronting>

9- European Environment Agency. (2024). Europe's state of water 2024: The need for improved water resilience (EEA Report No. 07/2024). <https://www.eea.europa.eu/en/analysis/publications/europes-state-of-water-2024>

10- Joint Research Centre. (n.d.). European Drought Observatory (EDO). European Commission. Retrieved October 12, 2026, from https://joint-research-centre.ec.europa.eu/european-and-global-drought-observatories_en

11- European Commission. (2000). Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy (Water Framework Directive). Official Journal of the European Communities. https://environment.ec.europa.eu/topics/water/water-framework-directive_en

12- European Commission. (2021). The new Common Agricultural Policy: 2023–27. Directorate-General for Agriculture and Rural Development. https://agriculture.ec.europa.eu/common-agricultural-policy/cap-overview/new-cap-2023-27_en

13- European Environment Agency. (2020). Water and agriculture: Towards sustainable solutions (EEA Report No. 17/2020). Publications Office of the European Union. <https://www.eea.europa.eu/publications/water-and-agriculture-towards-sustainable-solutions>

14- European Environment Agency. (2024). State of European waters 2024 (EEA Report No. 08/2024). Publications Office of the European Union. <https://www.eea.europa.eu/publications/state-of-european-waters-2024>

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This Policy Brief has been prepared as part of the participants / students' assessment in the framework of the EU Politics lecture.

The content of this policy brief lies entirely with the author. It does not reflect the official opinion of Çağ University.