

## **Fighting water crisis and saving Rivers and Natural Water Bodies From Drought and Mismanagement**

The onset of climate change has disrupted the natural water cycle. Precipitation has become erratic and extended periods of drought are becoming more frequent. Aquatic ecosystems are extremely vulnerable to such fluctuations. Other human activity such as pollution, the construction of dams, excessive use of water for irrigation, mining activity, tourism and nuclear plants are taking a further toll on freshwater habitats. Clean, fresh water is a basic necessity for humans. Any scarcity brought about by flood, drought or pollution will have a severe impact on the health and well-being of communities. All these factors have severe impact on rivers and natural water bodies.

The Mediterranean region is characterised by its ecologically sensitive and major rivers, many of which run across national borders. The 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) and subsequent treaties have promoted international cooperation to safeguard rivers and promote their health. Within the EU, the Water Framework Directive is intended to ensure an ecological flow and the good chemical composition of the waters of European rivers, and the Biodiversity Strategy for 2030 aims at the restoration of at least 25,000 km of free-flowing rivers.

The rivers of Greece are an ecologically sensitive and species rich habitat. They are home to more than 220 species of birds and 34 species of fish. The delta regions of these rivers are fragile habitats, vulnerable to soaring temperatures and a marked tendency towards desertification. The natural flow of these rivers is seriously impeded by the presence of hydroelectric power stations, excessive uptake of water and the construction of dams, often without the necessary planning and environmental impact assessments. In addition, lakes and other wetlands in Greece occupy a vast area. Agriculture in these regions is mostly limited to small scale farming enterprises. Whilst this limited agriculture has been beneficial to the ecosystem there, it has also led in part to a high dependence on food imports, and high rates of inflation further exacerbated by Russia's war on Ukraine.

The infrastructure distributing water to thousands of towns and villages across Greece is old and inadequate and huge amounts of potable water are lost due to leaks in the system. Much of the pipeline network in Greece contains asbestos, which is considered a health hazard. The central Greek Government has enacted a law that shifts the management of water resources to centralised control, away from the local communities.

Slovenia, and other countries in Europe face similar situations of mismanagement. In Ljubljana, the aquifer which supplies drinking water to the capital and around 330,000 people is going to be disrupted with the construction of the C0 canal. This project will construct 130km of sewage network through a protected water catchment that supplies drinking water to the city of Ljubljana.

Italy is traditionally considered to be a water-rich country. However, the last few years proved that this is not always true: in fact, droughts and water mismanagement are serious threats to Italian

water security. Here, as in other Mediterranean countries, water supply policies have aimed at increasing the "regulation capacity" of surface outflows, creating reservoirs accumulating water in the rainy period and use it during the dry season. Nonetheless, the country ended 2022 with a heavy water deficit. The greatest immediate consequences impacted above all the irrigated land and meadow-pastures, which were hit by an intense long-term rain deficit, but the drought also heavily affected agriculture and the hydroelectric energy produced, which suffered a sharp reduction of about 40%. For instance, not only the drought of the Po River is alarming, but also the lowering of the water level in the major lakes of the country. The other cause of drought in Italy is the unsustainable use of water, in addition to the poor condition of the water distribution grid which leads to a dispersion beyond 40%.

In the Iberian Peninsula, Spain and Portugal share five rivers, the major ones being the Duoro (Spanish: Rio Duero, Portuguese: Rio Duoro), the Tagus (Spanish: Tajo, Portuguese: Tejo) and the Guadiana. Since the 1960s, the two countries have entered into agreements, pledging cooperation and joint management of these rivers. The Albufeira convention was signed in 1998, seeking to promote sustainable and fair use of these bodies of water. Notwithstanding this, the flow of water has often been insufficient to maintain the health of the ecosystems, adversely affecting important wetlands in protected areas. This has been particularly critical during periods of drought. It is clear that more effort and commitment are required to adequately manage these rivers and to avoid further ecological damage.

The year 2022 was particularly dry; according to the Global Drought Observatory, Europe is facing its worst drought in at least 500 years. In June 2023, more than a quarter of Europe is in drought, with 25.9% of the EU-27 territory in warning conditions and 8% in alert conditions according to the European Drought Observatory. Countries such as Spain, Portugal, Italy, Greece and Slovenia are particularly effected. 60% of Portugal has experienced severe drought; 40% has been under extreme drought. Three years of very low rainfall and high temperatures have put Spain officially into long-term drought. 2022 was Spain's sixth driest year— and the hottest since records began in 1961. (1)

Notwithstanding these drought conditions, water usage has continued to soar to meet the demands of intensive agriculture. Spain and Portugal have agreed in September 2022 that in these circumstances the minimum flows of the international rivers are not to be kept or respected. (2).

The Albufeira Convention lacks clarity regarding the computation methodology of the minimum flow levels that need to be maintained. In addition, farming corporations particularly in the South of Spain with the support of regional authorities are relentless in their lobbying for favourable apportioning of water resources, without due regard for ecological requirements and water use by the community, including the depletion of groundwater resources which has also severe consequences for certain ecosystems such as the Doñana biosphere reserve. The European Commission puts pressure on member states, including Portugal, to move forward with destructive lithium mining projects to meet industry's high demand despite the recognition of potentially significant environmental impacts, such as ecosystems and biodiversity depletion, water contamination and increased demand in European territories facing drought.

Although the end of the year 2022 saw the inversion in the lack of rain in Portugal, having two days in December with heavy rains and intensive flood situations all over the country, giving some expectation on the climate improvement and water supply of the natural aquifers, 2023 is proving to be even worse. So far until May there hasn't been any significant rain (the south of the country is already under moderate to extreme drought). The same is happening in other regions and countries like Spain and France.

Pollution continues to be a major problem affecting most of the European aquatic ecosystems. One drastic example has been the pollution of the Oder in Germany/Poland last summer 2022, which led to tremendous death of fish. The continued high salt concentration levels triggering the toxic algal bloom are posing ongoing challenges for the upcoming summer all over Europe. Waste water pollution triggers the loss of biodiversity as it damages the health of aquatic ecosystems, harms wildlife and also constitutes a significant risk for human health. Taking the fight against water pollution seriously is therefore a key priority for the Greens.

Malta does not have any rivers. Much of the demand for water is met by desalination of seawater. Illegal extraction of groundwater has led to a severely depleted water table with elevated salinity levels. A supply of offshore groundwater may meet the country's requirements for 75 years, however extracting water from this resource is not easy and presents several technological challenges. Rainwater is also sparsely collected and most of this precious resource is simply channelled to the sea. Moreover, the law requires that residences should have a well to collect rainwater; however this law is infrequently implemented or enforced.

**The European Greens, gathered in Vienna state that:**

- Water is a vital resource and its protection and rational use should be a priority;
- Any strategy for water management needs to take into consideration the wellbeing of ecosystems and water requirements of the community;
- Any strategy for the management of river water and ground water should respect the situation and realities in individual countries, ensuring that minimum ecological and daily human needs are met;
- The Albufeira Convention between Spain and Portugal should be updated in the light of item 3;
- As climate change intensifies, with disruptions to the water cycles becoming more frequent, agriculture needs to transition to less resource intensive practices, giving way to dry land crops and local farming methods better suited to regional climatic conditions;
- Consider temporary measures to rationalise the consumption of electricity in critical periods of drought, when the amount of energy derived from hydrological sources is limited;
- It is essential to enact legislation protecting water resources, especially in drought



ridden countries. Megaprojects that exert a disproportionate demand on water resources need to be controlled and capped. Ground water resources shall be defended through legislation and constant monitoring. European countries should ensure that sectors with high water consumption, such as energy, industry, tourism and agriculture, have mandatory sufficiency plans in place to reduce water consumption in case of crisis;

- Waste water should be seen as a precious resource which can reduce the burden on natural sources. Schemes to recover and better use greywater need to be devised and implemented. Consumers should be supported to better equip themselves to collect rainwater;
- The list of pollutants to be monitored in bodies of water needs to be updated, setting new standards for the control of contaminants, as proposed by the European Commission in October, 2022;
- Desalination of seawater is an energy intensive process and should be seen as a last resort option for the production of drinking water. Rational use and effective management of natural water resources and investing in modern infrastructure to drastically reduce water leakage should be prioritised;
- In view of increased incidence of droughts and strained water resources, a holistic approach that includes both mitigation and adaptation measures needs to be adopted. This also includes risk-mitigation measures such as risk management. Ensure better European coordination on EU water management through enforcing EU water legislation in Member States and adopting new legislation such as the revision of the Urban Waste Water Framework Directive. Establish new collaboration formats to manage risk and crisis and ensure European response to water crisis is addressed through European solidarity and knowledge sharing among Member States;
- The C0 Canal in Slovenia be planned in a way that is consistent with Slovenian legislation and European guidelines in the field of water conservation, and in regard with the above points;
- The construction of new nuclear power plants along rivers such as the Rhone must be banned in order to stop the pumping of water from these rivers and their temperature change which affects the biodiversity of these rivers;
- There is a greater need for educating the population about water conservation. Funding should be made available for communication campaigns to encourage a shift in behaviour. Additional resources are required to fund School programmes for primary and secondary school children to give children an understanding of the importance of water conservation from a young age.

(1) - [https://www.washingtonpost.com/business/2023/04/13/spain-drought-andalusia-agriculture-crops-climate-change/50821b2c-d9e0-11ed-aebd-3fd2ac4c460a\\_story.html](https://www.washingtonpost.com/business/2023/04/13/spain-drought-andalusia-agriculture-crops-climate-change/50821b2c-d9e0-11ed-aebd-3fd2ac4c460a_story.html).

(2) – In September 28, 2022 the Governments of Portugal and Spain made a joint declaration on the Compliance with the Albufeira Convention – (<https://www.portugal.gov.pt/download-ficheiros/ficheiro.aspx?v=%3d%3dBQAAAB%2bLCAAAAAAABAAzNDYyMGIaawW1ugUAAAA%3d>)