



The EU Water Framework Directive

Water supports life. It is a crucial resource for humanity, generating and sustaining economic and social prosperity. It is also at the core of natural ecosystems and climate regulation.

The EU Water Framework Directive (WFD), adopted in 2000, takes a pioneering approach to protecting water based on natural geographical formations: river basins. It sets out a precise timetable, with 2015 as the deadline for getting all European waters into good condition.

Europe's water is under pressure. Economic activities, population growth and urbanisation are increasing pressures on freshwater throughout Europe.

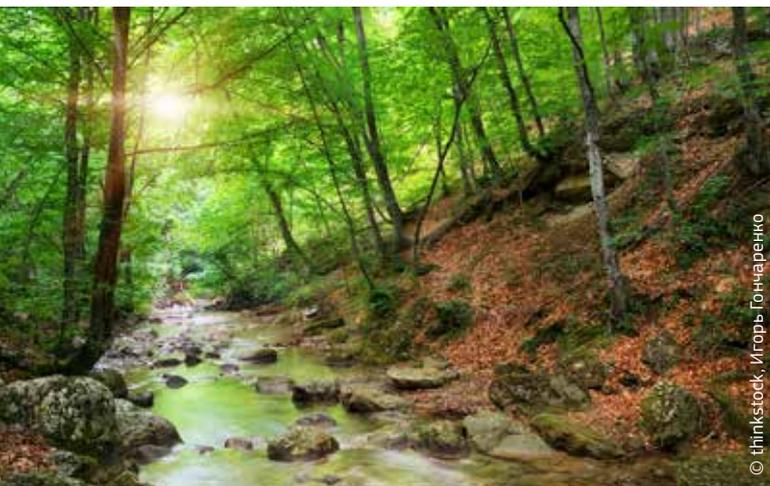
Unless stronger action is taken, 47% of EU surface waters will not have good ecological status by 2015.

About 25% of groundwaters have poor chemical status due to human activities. The chemical status of 40% of surface waters is unknown, showing that monitoring is inadequate in many Member States.

The 2012 Blueprint to Safeguard Europe's Water Resources identifies obstacles to better water management, offers concrete solutions and sets the EU's water policy agenda for years to come.

The WFD is complemented by other, more specific, EU laws:

- The Environmental Quality Standards Directive (2008)
- The Marine Strategy Framework Directive (2008)
- The Floods Directive (2007)
- The Groundwater Directive (2006)
- The Bathing Water Directive (2006)
- The Drinking Water Directive (1998)
- The Urban Wastewater Directive (1991)
- The Nitrates Directive (1991)



Fact 1: Europe's water is under pressure

Everyone needs water – and not just for drinking. Society uses water to generate and sustain economic growth and prosperity, through activities such as farming, commercial fishing, energy production, manufacturing, transport and tourism. Water is at the core of natural ecosystems, and climate regulation. But the pattern of supply is particularly vulnerable to climate change. Scientists warn of increased risk of both droughts and floods in the coming decades. Overall demand for water is growing, putting a strain on available supplies.

At the same time, threats to water quality come from pollution, over-abstraction and hydromorphological changes due to industry, agriculture, urban developments, flood defences, power generation, navigation, recreation, wastewater discharge and more.

Fact 2: EU action is necessary because river basins and pollution cross borders. The river basin approach is the best way to manage water

Rivers do not stop at national frontiers – they flow on through different countries to reach the sea. All EU Member States apart from islands like Cyprus and Malta share waters with neighbouring countries. A river basin or a catchment covers the entire river system, from the sources of small tributaries to the estuary, including its groundwater. The EU and the Member States have divided the river basins and associated coastal areas into 110 river basin districts, 40 of which are international and cross borders, covering about 60% of EU territory.

Integrated river basin management adopts a holistic approach to protecting the whole body of water, its source, tributaries, and river mouth. The river basin approach is the best way to manage water.

The Water Framework Directive obliges Member States to draw up river basin management plans (RBMPs) to safeguard each of the 110 river basin districts.

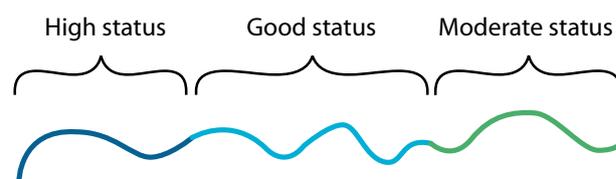
Fact 3: Waters must achieve good ecological and chemical status, to protect human health, water supply, natural ecosystems and biodiversity

The definition of **ecological** status looks at the abundance of aquatic flora and fish fauna, the availability of nutrients, and aspects like salinity, temperature and pollution by chemical pollutants. Morphological features, such as quantity, water flow, water depths and structures of the river beds, are also taken into account.

The WFD classification scheme for surface water ecological status includes five categories: high, good, moderate, poor and bad. 'High status' means no or very low human pressure. 'Good status' means a 'slight' deviation from this condition, 'moderate status' means 'moderate' deviation, and so on.

The EU has more than 100000 surface water bodies: 80% of them are rivers, 15% lakes and 5% coastal and transitional waters. The same river can consist of different water bodies, since the status of the water may change.

The diagram below shows a river with high-quality water at its source, gradually becoming more polluted downstream.



To define good **chemical** status, environmental quality standards have been established for 45 new and eight previously regulated chemical pollutants of high concern across the EU. In this respect, the WFD is backed up by other EU legislation such as the REACH regulation on chemicals, the Industrial Emissions Directive (IED) and EU regulations on pesticides.

The rules for **groundwater** are slightly different and good chemical and quantitative status is the objective set by the WFD. Member States must use geological data to identify distinct volumes of water in underground aquifers and limit abstraction to a portion of the annual recharge. Groundwater should not be polluted at all – any pollution must be detected and stopped.

Fact 4: It is crucial to get people involved

Under the WFD, Member States have to hold extensive consultations with the public and interested parties to identify the problems, the solutions and their costs, to be included in river basin management plans. This requires a broad consultation lasting at least six months on draft river basin management plans in 2015 and every six years thereafter when the plans are updated.

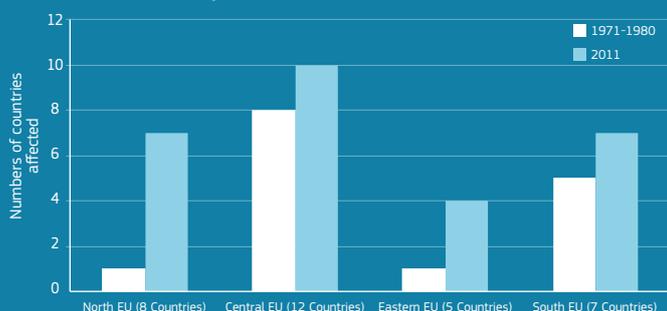
Public support and involvement is a precondition for the protection of waters. Without popular backing, regulatory measures will not succeed. European citizens have a key role to play in the implementation of the WFD, and in helping governments to balance the social, environmental and economic questions to be taken into account.

Water scarcity and drought in the EU

Drought refers to a temporary decrease in water availability, for example, when it does not rain over a long period of time. *Water scarcity*, on the other hand, occurs when demand for water exceeds the available natural resources.

- Water scarcity is an increasingly frequent and worrying phenomenon that affects at least 11% of the European population and 17% of EU territory.
- Since 1980, the number of droughts in Europe has increased, and they have become more severe, costing an estimated €100 billion over the past 30 years.
- Over-abstraction of water for irrigation purposes – including illegal abstraction – is a serious problem in the EU, especially in many Mediterranean river basins where it prevents the achievement of good status.
- Up to 50% of water resources are being lost through leakage in water infrastructures. The water industry must play a major role in setting Sustainable Economic Leakage Levels (SELL).
- Governments need early warning to counter droughts. The Commission's Joint Research Centre has launched a European Drought Observatory for this purpose.

Comparison of observed drought episodes in Europe between 1971-1980 and 2011



Fact 5: Some progress, but more to be done

The Directive is implemented through six-year recurring cycles, the first of which covers the period 2009-2015. After the Directive came into force, Member States had to define their river basin districts geographically, and identify the authorities responsible for water management (2003). The next task was to undertake a joint economic and environmental analysis (2004). By 2006, countries had to launch water-monitoring networks.

2009 was the deadline for Member States to draw up RBMPs and programmes of measures to meet the WFD's objectives, and 2010 for introducing water-pricing policies.

The Commission published its third implementation report in 2012. It found that 43% of surface water bodies were in good status in 2009 and that this is projected to increase to 53% by 2015 on the basis of the measures planned by Member States. Therefore, a 47% shortfall is expected in 2015 if no further action is taken.

The Water Blueprint sets out to tackle the obstacles holding back progress, through its focus on better implementation, more integration of policy objectives and filling in remaining regulatory gaps. It identifies on key themes like land use, water pollution, water efficiency and resilience, and better governance.

Fact 6: Water management is linked to many policies: integration is the only way forward for sustainable water use

Water is involved in a huge range of economic activities, and therefore in the policies applied to regulate them. For example: agriculture, land-use and development, energy production, inland water navigation, manufacturing industry, tourism, and more.

These economic activities depend – like all of us – on healthy aquatic and water-dependent ecosystems, which provide food and water, are essential to maintain human health, and help regulate the climate. For example, wetlands provide services such as water storage, purification and carbon absorption, which in economic terms are worth billions of euro.

Good water management has to be integrated into all these areas, and the WFD takes account of all aspects of water use and consumption.

Fact 7: Climate change creates challenges for the future

In the coming decades, climate change will pose a major challenge for water management across the EU. It is likely to bring:

- Lower rainfall and higher summer temperatures, especially in the south and east, putting stress on scarce resources. The Water Blueprint suggests a number of water-efficiency measures including the calculation of the ecological flow (the water ecosystems need to survive); the building of water accounts to allocate water efficiently; water re-use for irrigation or industry; water metering and pricing; and eco-design criteria for water-related products.

Did you know...?

It takes around 16000 litres of water to produce 1kg of beef, 140 litres of water for 1 cup of coffee, and 900 litres of water for 1kg of maize.

Every year, some 247000 million m³ are extracted from ground and surface water sources (streams, lakes and rivers) in the EU.

The largest proportion of abstracted water (44 %) goes to the energy-production sector for cooling processes. Most is returned to rivers.

Agriculture and food production use 24% of abstracted supplies, but this can rise to 80% in some southern regions. But many high-value farming activities rely on a small amount of irrigated land: in Spain, for example, more than 60% of the total value of the country's agricultural output comes from the 14% of farmland that is irrigated.

17% of abstracted water is used for public water supply (including households, the public sector and small businesses) and 15% for industry. Half of the water used for manufacturing goes to the chemicals sector and petrol refineries, with basic metals, paper and food-processing industries taking up most of the rest.

- More rain and a higher flood risk, especially in the north. Floods are becoming increasingly frequent, from Eastern Europe to the UK and Ireland. According to insurers, the frequency of flood events in Germany and Central Europe has increased by a factor of two since 1980. Floods accounted for 40% of total economic damages in Europe in 1989-2008. The 2007 Floods Directive adopts a proactive approach, requiring Member States to develop flood risk management plans by 2015, in coordination with the next cycle of RBMPs (2016-2021). The Water Blueprint promotes green infrastructures, such as the restoration of floodplains, as a way of working with nature to reduce flood risks.

Useful resources:

EU water policy, the Blueprint and links to river basin management plans: <http://water.europa.eu/policy>

Water notes:

http://ec.europa.eu/environment/water/participation/notes_en.htm

Maps and graphs:

http://ec.europa.eu/environment/water/water-framework/facts_figures/index_en.htm

Common Implementation Strategy:

http://ec.europa.eu/environment/water/water-framework/objectives/implementation_en.htm

European Innovation Partnership on Water (EIP):

http://ec.europa.eu/environment/water/innovationpartnership/index_en.htm

CIRCABC:

<https://circabc.europa.eu/faces/jsp/extension/wai/navigation/container.jsp>

WISE: Water Information System in Europe:

<http://water.europa.eu>

European Environment Agency – water:

www.eea.europa.eu/themes/water

Sources for the “Did you know...” section:

<http://www.waterfootprint.org/?page=files/home>

<http://www.eea.europa.eu/articles/the-water-we-eat>

