

Status of Europe's water

Overall picture

The protection and quality of Europe's water is improving. As set out in more detail below, nearly 30 years of EU legislation together with national and international action to protect and improve the aquatic environment are bearing fruit in many areas. However there are certain issues, especially linked to agriculture, where progress is not being made. Furthermore, where progress is being achieved there can still be outstanding problems and specific geographical 'hot spots'. It must also be stressed that there are large data gaps on some issues where the conclusions reached must be treated with some caution.

Given the significant influence of agriculture, it will be important to monitor the effect of EU enlargement on the sector and on water resources in the new Member States. Economic restructuring in the 1990s generally led to reduced pressures on the aquatic environment; any widespread intensification of agriculture after enlargement is likely to reverse this trend.

Areas of progress

Ecological quality of rivers

Ecological quality reflects the effects of all chemical and physical pressures on the biological system. Information on rivers in 14 countries indicates mostly improving river quality. However, there is a lack of comparable data on the European scale. This situation will improve as implementation of the water framework directive (2000/60/EC) progresses.

Pollution by oxygen-consuming substances and phosphorus

Control of point-source pollution from urban areas and industry has led to significant improvements in the quality of many water bodies across Europe. Notable is the reduction of phosphorus and organic matter in rivers and lakes resulting from improved treatment of urban waste water, as well as through the introduction of phosphate-free detergents and a reduction in the use of phosphate fertilisers in agriculture.

There have also been associated decreases in riverine and direct discharges of nutrients to seas (particularly the North Sea and Baltic Sea), though for a variety of possible reasons (complex physical and chemical relationships, data gaps) these have not always been reflected in reductions in marine concentrations of nutrients.

Better waste water treatment has also led to an improvement in coastal and inland bathing water quality. Compliance rates with the mandatory EU standards are over 90 %.

Pollution by hazardous substances

Pollution of rivers by heavy metals and some other heavily regulated chemicals listed in the dangerous substances directive (76/464/EEC) is generally decreasing. Data availability for many other pollutants is too weak to make assessments.

An associated reduction has occurred in the loads of heavy metals and of certain organic substances discharged to the marine environment. There is also evidence that these falls are leading to decreases in the concentrations of these substances in marine biota in Europe's seas, though concentrations above limits deemed safe for human consumption are still found in mussels and fish from estuaries of major rivers, near industrial point discharges and in harbours.



In the present EU countries, the reduction in emissions of hazardous substances has largely been achieved through the application of cleaner processes and technology in industry. Discharges of oil from refineries and offshore installations have decreased. In the accession countries, reductions in emissions have come about mainly from closure of uneconomic installations.

An emerging issue is the presence of endocrine disrupting substances in surface waters, with sexual disruption of aquatic animals being reported in several European countries.

Water abstraction

Total water abstractions have decreased over the last decade apart from in western southern Europe. Most sectors have cut their water use through measures such as greater water re-use and improved appliance efficiency. Higher water prices have also played a role.

Oil spills

Though there are large variations from year to year, the total amount of oil spilt from vessels dropped during the 1990s. This was probably due to the introduction of more twin-hulled vessels and improvements in navigation.

Information

Over the past eight years, implementation of Eurowaternet (water data and information gathering network coordinated by EEA) has led to significant improvements in information about Europe's water.

Areas of no progress

Nitrate pollution

Nitrogen pollution, particularly from agriculture, has remained constant. As point source releases have been reduced, contributions from agriculture have become relatively more significant.

Concentrations in rivers remained relatively stable throughout the 1990s and are highest in those western European countries where agriculture is most intensive. Nutrient concentrations in seas have also generally remained stable.

There is no evidence of changes in nitrate levels in groundwater. Limit values for nitrate in drinking water are exceeded in around one-third of groundwater bodies for which information is available. Nitrate in drinking water is a common problem across Europe, particularly in water from shallow wells.

Water abstraction for irrigation, energy use and tourism

There has been a slightly increasing trend in agricultural water use, such as for irrigation, in western southern Europe as well as in water abstracted for energy production in non-Mediterranean accession countries. Tourism puts a significant and in all probability growing load on water resources in many areas of southern Europe.

Over-abstraction remains a major concern in areas such as the coast and islands of the Mediterranean where drinking water sources have become contaminated with seawater.

Pesticides

Pesticides from agriculture occur in surface, groundwater and drinking water at levels of concern. Data on the many substances involved do not allow the identification of trends.

References:

Europe's water: An indicator-based assessment. Summary, EEA, Copenhagen

Europe's water: An indicator-based assessment, topic report No 1/2003, EEA, Copenhagen

