

R SEAS, OCEANS AND COASTS

Main messages

Between 1990 and 1997 the overall quality of UK estuarine waters improved and contaminant inputs generally decreased. Bathing water quality improved between 1988 and 1999. However, about a half of fish stocks in marine waters around the UK were thought to be under threat from over-fishing in 1997. Globally, the proportion of fish resources considered to be fully or over-exploited steadily increased between 1951 and 1994.

Relevance

Seas and oceans are a major part of the planet; they support life and drive the climate. Coastal areas are a focus for tourism and leisure and may be affected by fishing, shipping and the offshore oil and gas industry. Landbased activities result in aquatic and atmospheric inputs of pollutants into the sea. In recent decades there have been pressures from over-fishing and pollution.

The extent to which the key objectives identified in the Strategy are being achieved, as reflected by the indicators, is illustrated in the following table.

Key strategies

- *A better quality of life. A strategy for sustainable development for the UK. (8.32-8.48)*

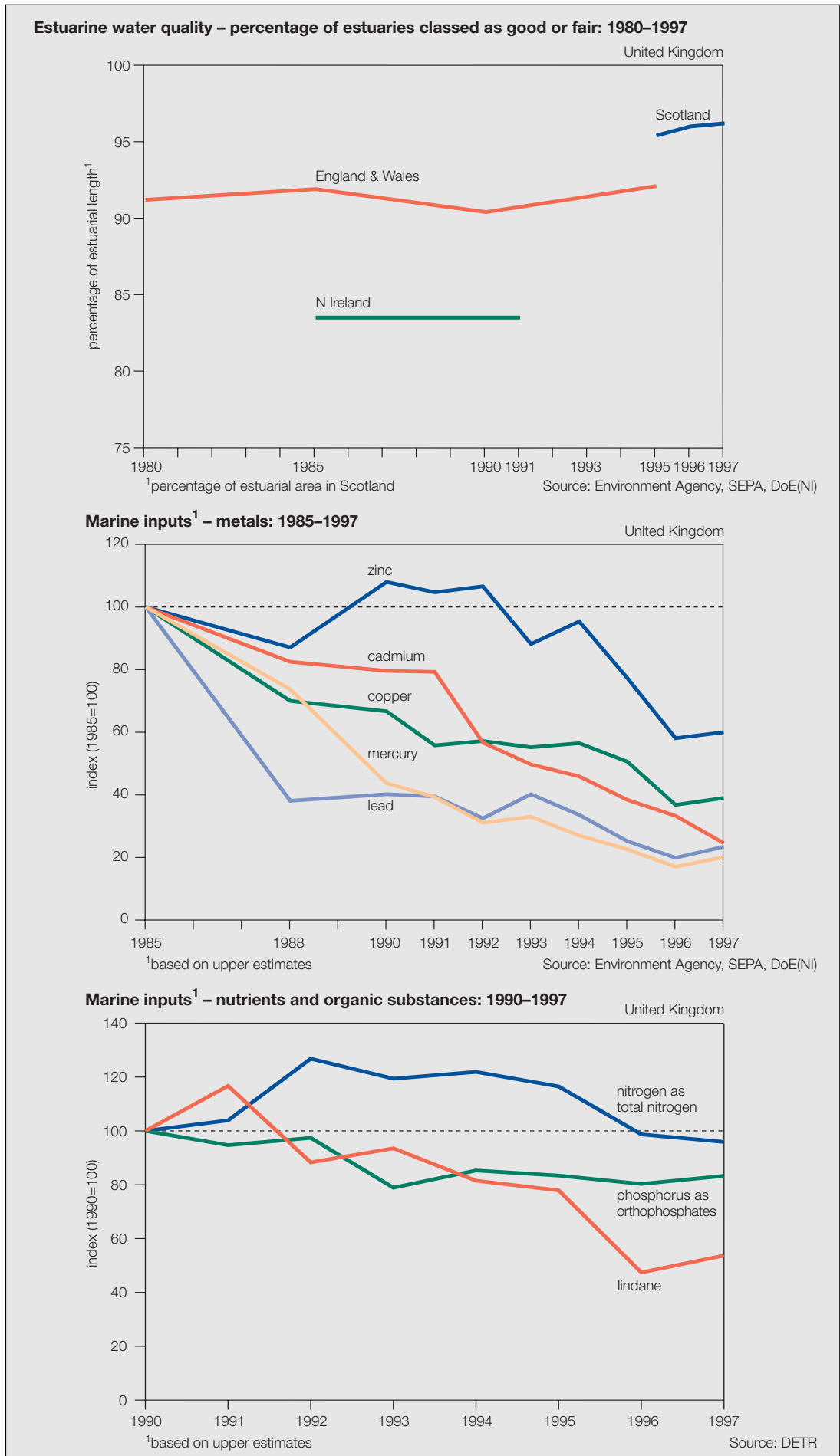
Some other related indicators:

Rivers of good or fair quality (H12); Dangerous substances in water (M2); Discharges from the nuclear industry (M4); Sulphur dioxide and nitrogen oxide emissions (P3); UK public expenditure of global environment protection (U4); Implementation of multilateral environmental agreements (U5)

Objective	Ref no.	Indicator	Data used	Change since		Specific targets/goals
				1970	1990	
Reduce or eliminate inputs of hazardous and radioactive substances of most concern	R1	Estuarine water quality, marine inputs	1980-1997	...	✓	To prevent the pollution of marine waters by working towards the elimination by 2020 of UK discharges, emissions and losses of hazardous substances
Aim to raise consistent compliance with the European Bathing Water Directive	R2	Compliance with Bathing Water Directive	1988-1999	...	✓	Compliance with EU Bathing Water Directive to reach 97% by 2005 in England and Wales
Protection of marine habitats and species	R3	Biodiversity in coastal/marine areas	To be developed	
Improve the management and conservation of fish stocks	R4	Fish stocks around the UK fished within safe limits	1989-1997	✗	≈	
Work with other countries to achieve effective management and conservation of fish stocks	R5	State of the world's fisheries	1951-1994	✗	✗	

Key	
✓ significant change, in direction of meeting objective	✗ significant change, in direction away from meeting objective
≈ no significant change	••• trend is uncertain or no quantitative data available
na not applicable, in cases where the indicator is for contextual purposes	

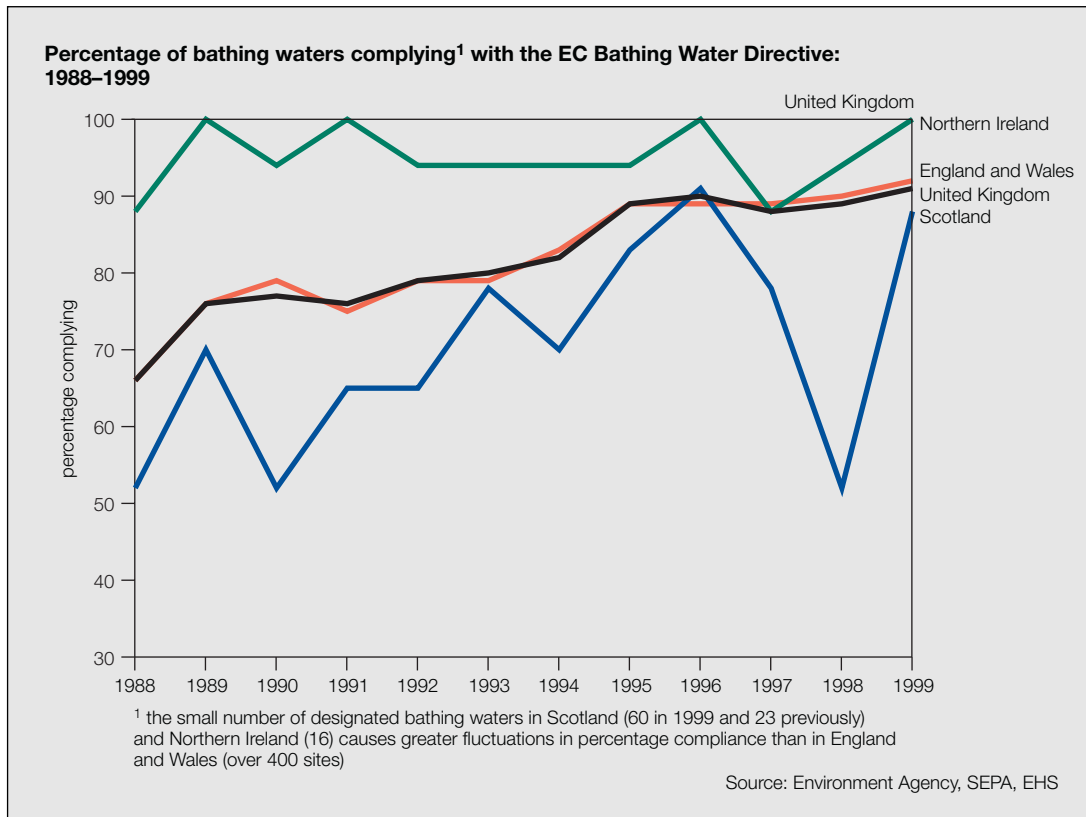
Objective	Reduce or eliminate inputs of hazardous and radioactive substances of most concern	
Indicator	Estuarine water quality, marine inputs	R1
	Graph overleaf	
	Over 90 per cent of UK estuaries are classified as good or fair. Inputs of most hazardous substances have declined in the ten to fifteen year period up to 1997.	
<i>Relevance</i>	The sea is an important natural resource which needs to be protected to avoid damage to marine ecosystems, the food chain, and ultimately human health.	
<i>Targets and goals</i>	To prevent the pollution of marine waters by working towards the elimination by 2020 of UK discharges, emissions and losses of hazardous substances.	
<i>Trends</i>	Over the last decade there have been substantial declines in marine inputs via rivers and direct coastal discharges of substances such as metals, lindane and the nutrient phosphorus. Overall nitrogen inputs, which tend to reflect the volume of river flow, are currently about the same as 1990 but direct inputs of nitrogen, via effluents discharged directly to marine waters, have been reduced by 30 per cent.	
<i>Background</i>	<p>Overall quality of estuaries is categorised into four classes based on biological, aesthetic and chemical qualities of the water. The categories included in the indicator refer to satisfactory estuarial quality, or better. The current approach has its limitations since the classification has a subjective element and the system is thought not to be sensitive enough to register all changes in water quality. Consideration will be given to developing a new indicator.</p> <p>Longer-term trends in inputs are more important rather than year to year changes, which can vary considerably because of natural variations such as rainfall. Inputs may result in high local concentrations ("hotspots") eg in industrialised estuaries or where river catchment areas are large and populations high. These concentrations, however, are generally well below environmental quality standards.</p> <p>There are also inputs to the sea from the atmosphere which, although widely dispersed, account for a significant proportion of overall inputs of substances such as heavy metals and nitrogen compounds.</p>	



Objective Aim to raise consistent compliance with the European Bathing Water Directive

Indicator Compliance with Bathing Water Directive

R2



Compliance with the European Bathing Water Directive in the UK was 91 per cent in 1999 compared with 66 per cent in 1988. Compliance in Northern Ireland was generally higher than for the rest of the UK, and that for Scotland was lower.

Relevance A key sustainable issue for the coastal environment is to prevent contamination of coastal waters with pollution from human activities.

Targets and goals The aim is to raise consistent compliance with mandatory coliform standards of the European Bathing Water Directive, to at least 97 per cent by 2005 in England and Wales, and to achieve a significant improvement in compliance with its guideline standards.

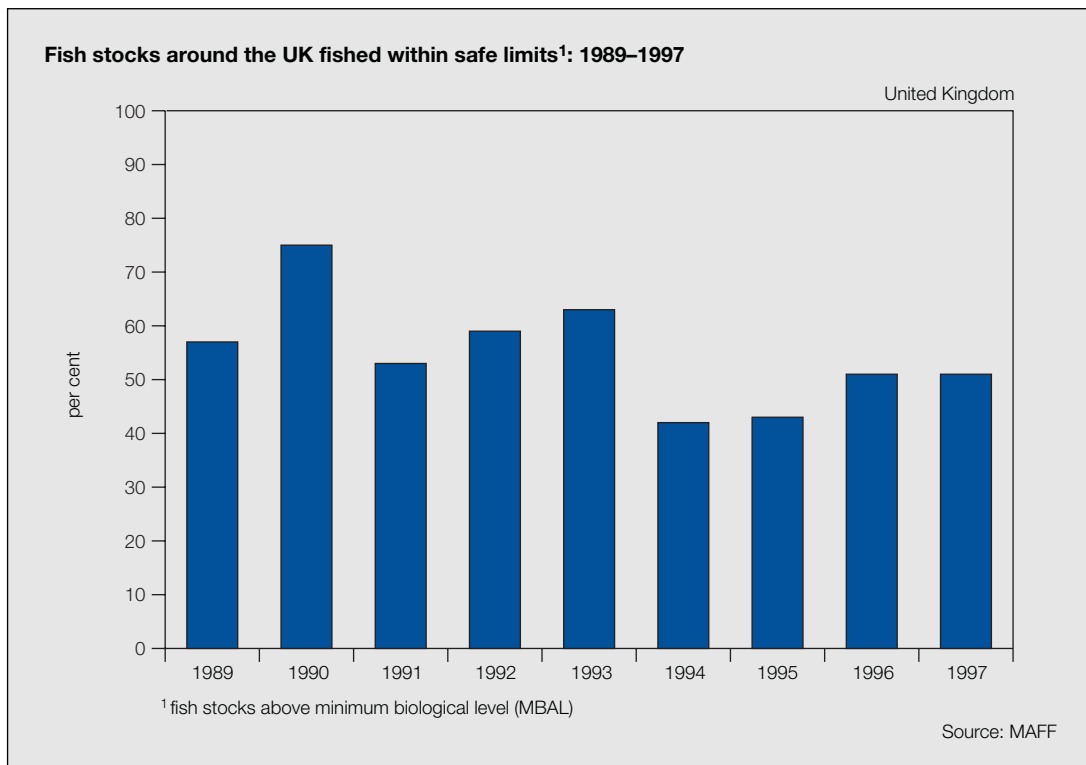
Trends Overall, bathing water quality has improved in the United Kingdom. This trend is expected to continue as further improvements are made to discharges from the sewerage infrastructure which affects coastal waters.

Background Bathing water quality may be affected by discharges from sewage treatment works and storm overflows, rivers, agriculture and diffuse sources. The main concern is to avoid contamination of bathing waters by human or animal sewage.

Objective	Protection of marine habitats and species	
Indicator	Biodiversity in UK coastal/marine areas (to be developed)	R3
<i>Relevance</i>	In recent decades, global pressures on the marine environment have increased dramatically. Urgent international action to stop further degradation, and where necessary and feasible to reverse existing damage, is a priority.	
<i>Background</i>	The UK coastline manifests rich and varied biodiversity much of which remains largely undeveloped, including sites of international importance. However, the UK's marine and coastal systems are subject to pressures such as industrial activities, urbanisation, recreation, agriculture and fisheries. Current isostatic earth movements exacerbated by sea level rise due to climate change are already noticeable and will be a further factor in the future.	

Objective Improve the management and conservation of fish stocks

Indicator Fish stocks around the UK fished within safe limits **R4**



In 1997, 51 per cent of fish stocks around the UK were fished within safe limits. 49 per cent of stocks had spawning levels which were insufficient to guarantee stock replenishment.

Relevance It is important to protect this natural resource and to provide a secure future for the UK fishing industry.

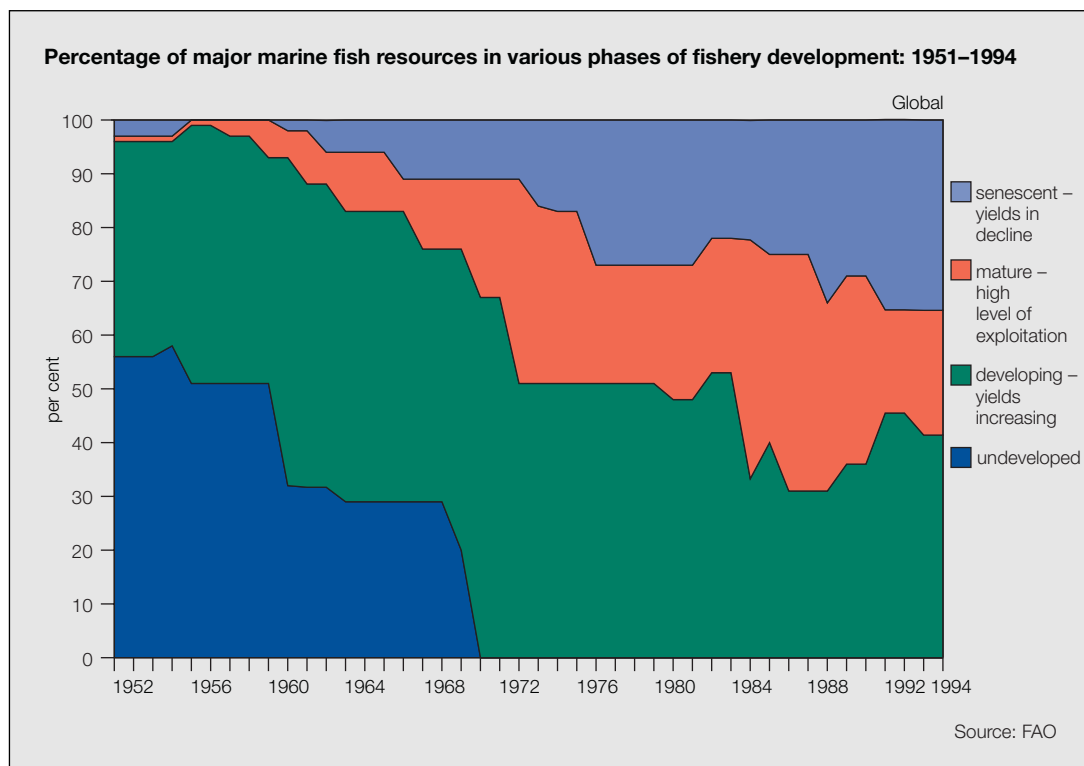
Trends There has been some improvement in the proportion of fish stocks fished within safe limits in 1996 and 1997 compared with the previous two years. Taking the decade as a whole, there has been no significant change since 1990.

Background The International Council for the Exploration of the Sea (ICES), define MBAL as the Minimum Biological Level of fish necessary to ensure stock replenishment. The mix of species used by ICES in the calculation is not consistent from stock to stock or from year to year. From 1999 onwards, MBAL will no longer be used. Instead, ICES will be categorising stocks to be within or outside safe biological limits based on two measures – one, like MBAL, relating to spawning stock size, the other to the fishing rate.

Objective Work with other countries to achieve effective management and conservation of fish stocks

Indicator State of the world's fisheries

R5



By 1994 about 60 per cent of the major world fish resources were considered to be in urgent need of management action (mature or senescent) to halt increases in fishing capacity or to allow resources to recover.

Relevance Protection of the global environment and the world's natural resources. Fishing is carried out by many countries throughout the world. To achieve sustainable fisheries there needs to be international agreement and action.

Trends The proportion of fish resources considered to be fully-or over-exploited has steadily increased over the last fifty years to the point where the majority of resources are considered to be in need of urgent management action.

Background Fisheries development can be classified as a sequence of phases; undeveloped, where there is no major fishing activity; developing, where yields are increasing; mature, where there is a high level of exploitation and stocks are fished to beyond their maximum capacity; and senescent, where stocks are over-fished and yields are in decline.