

Increase proportion of large fish in the fish community

North Sea EcoQO

At least 30% of fish (by weight) should be greater than 40 cm in length

What is the problem?

Overfishing

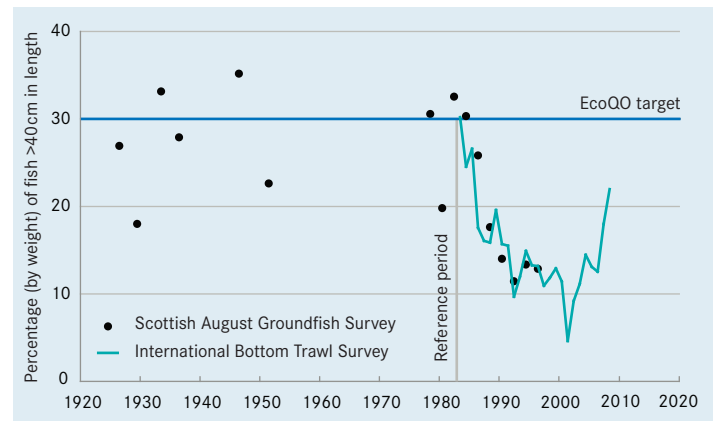
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What is the Ecological Quality Objective (EcoQO)?

The average length of fish can be used to indicate the impact of fishing on the fish community. This is because larger species of fish and larger and older individuals are generally more likely to be caught by fisheries than smaller species and individuals. This means that the relative abundance of small and early maturing fish species increases as result of overfishing. This effect can be monitored through changes in the average length of fish in the catch per year, using species from the International Bottom Trawl Survey (IBTS) coordinated every year by ICES in the North Sea. The reference period for the EcoQO is the early 1980s, a period when stock assessments suggested that stocks were not being overexploited and that fishing was at sustainable levels. Analysis of the Scottish August Groundfish Survey (SAGFS), a long-running survey which ended in 1997, confirmed that 30% of fish at greater than 40 cm in length is an appropriate management target. The EcoQO seeks to halt the decline in the percentage of large fish below the objective and to begin to reverse the negative trend by 2010.

Has the EcoQO been met?

From the early 1980s, the percentage of fish greater than 40 cm declined from around 30% to a low point of less than 5% in 2001, since then it has recovered to around 22% in 2008. This is an improvement, but there is still some way to go to reach the EcoQO.



How does this affect the quality status?

Restoring the percentage of large fish in fish communities would not only mean healthier fish communities, but would also improve fisheries yields. The most relevant human activity to this EcoQO is fishing, but the reproductive success and life cycle of fish may be, less directly, influenced by land-based sources of discharges and emissions of chemicals.

What happens next?

Continued analysis of data from demersal trawl surveys is needed to determine whether current measures continue to move this index towards the objective. If not, further regulation of the spatial and temporal distribution and intensity of fishing effort could be called for. Additional management measures could include the establishment of protected areas.