

Healthy seal populations

North Sea EcoQO

Taking into account natural population dynamics and trends, there should be no decline in pup production of grey seals of $\geq 10\%$ as represented in a five-year running mean or point estimates (separated by up to five years) within any of a set of defined sub-units of the North Sea.

What is the problem?

Declining seal populations

Photo: © Gail Johnson/Fotolia



What is the Ecological Quality Objective (EcoQO)?

Of the five species of seal that occur in the OSPAR area only the grey seal (*Halichoerus grypus*) and the harbour seal (*Phoca vitulina*) are common in the North Sea. Separate EcoQOs have been adopted for grey seals and harbour seals to account for their differing biological characteristics. Harbour seals breed more widely around the coast than grey seals, which have specific breeding colonies. Changes in population size or pup recruitment may indicate problems in the ecosystem, such as food shortage or pollution. The objective aims to maintain healthy populations of seals by triggering management actions when needed.

Has the EcoQO been met?

Based upon five years up to 2006, the EcoQO was met for grey seals for all significant units of the North Sea population. Over the same period, the harbour seal EcoQO was not met in several areas where declines of seals of more than 10% occurred (Shetland, Orkney, east of Scotland, Greater Wash to Scroby Sands, Limfjorden in Denmark and the west coast of Norway). Of these areas only the Limfjorden area has been affected by an outbreak of the morbillivirus in recent years. In other areas, the cause of the decline is unknown. Data from 2008 suggest that harbour seal populations in the Wadden Sea have been increasing recently.

How does this affect the quality status?

This EcoQO acts as a general ecological indicator, because seals are top predators and their status depends on a wide range of variables. The failure to meet the EcoQO for harbour seals needs to be investigated. Changes in population size or pup recruitment might indicate wider problems in the ecosystem, such as depletion of food stocks through fisheries, pollutants affecting reproductive ability or changes in distribution associated with climate change.

What happens next?

This EcoQO does not reflect a single environmental factor but reflects the general status of seals. A combination of pressures may cause physiological stress and increase susceptibility to disease. If the decline is found to be the result of human activities, then suitable management measures must be implemented.

