

Large-scale mortalities of Eider ducks in the Dutch Wadden Sea have been recorded several times. About 40,000 birds, mostly Common scoters and Eider ducks, were killed by oil pollution in the Dutch Wadden Sea in 1969. In the period 1989–1991 Eider duck mortality in the Dutch Wadden Sea was clearly raised because of almost complete removal of mussel beds and strong reduction of cockle stocks due to a combination of lack of shellfish recruitment and continuing fisheries.

In the present volume of the Wadden Sea Newsletter it is shown that some 21,000 Eiders died in the Dutch Wadden Sea in the winter of 1999–2000, whereas in the same winter some 10,000 ducks died in the German Wadden Sea. This means that in the Dutch Wadden Sea mortality was about 8.5 times higher than the long-term average, in Lower Saxony about 5 times, and in Schleswig-Holstein about 3 times.

This major mortality ought to have been the subject of a detailed analysis while the Eiders were dying, but in reality only the registration of dead Eiders along the shores of the Wadden Sea was carried out in a professional manner. A few other dedicated studies were based on limited numbers of samples taken during the mortality, but many conclusions resulted from later analysis of data from investigations carried out for other reasons. Nevertheless, it is impressive how much material the research community around the Wadden Sea is able to produce when there is a compelling reason to do so. This volume of the Wadden Sea Newsletter illustrates how collaboration between Wadden Sea scientists is able to draw a picture of an exceptional bird mortality with international ramifications.

The combined papers show clearly the size and the distribution of the mortality. They also exclude

oil and other pollutants as well as diseases as causes of the mortality. All researchers share the conclusion that the birds starved, but here the agreement ends. The views on the role of the abundantly present parasites in the Eiders differ widely. Some scientists are inclined to see the parasites as the primary problem, others tend to view the food supply as insufficient and consider that the parasites play only a minor role. Those conferring a major role to the food supply in many cases also suggest that the fisheries on a number of shellfish species is to be blamed.

	Netherlands	Lower Saxony	Schleswig-Holstein	Denmark
Mortality Eider ducks 1999/2000 compared to long-term average	8.5 x	5 x	3 x	1 x
Area Wadden Sea (km ²)	2,500	2,100	2,500	850
Number of vessels for mussel fishery / culture	85?	4	8	5
Mussel harvest 1990–96 (tons)	> 37,000	4,000	23,000	4,000
Number of vessels for cockle fishery	22	1	0	1
Number of vessels for <i>Spisula</i> fishery	8	0	6	1

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Table: Comparison of Eider duck mortality in four regions of the Wadden Sea with the average mussel harvest and number of vessels employed in different kind of fisheries according to the Quality Status Report for the Wadden Sea.

Indeed, it is hard to believe that the shellfish industry has no effect at all. Those scientists supporting the hypothesis of a negative role of the shellfish industry have a plausible argumentation. On the other hand combining the observed mortality rates with some data from the 1999 Quality Status Report for the Wadden Sea (see Table) suggest that the mortality cannot be attributed solely to the fishermen. However, the final conclusion has to be that, on the basis of scientific evidence, we cannot yet decide what has been the role of the fishing industry in this Eider duck mortality.

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