

THE IMPACT OF THE NORTH SEA MARPOL SPECIAL AREA DESIGNATION ON OIL DISCHARGES BY VESSELS: AN ANALYSIS OF 20 YEARS DATA FROM BELGIAN AERIAL SURVEILLANCE

Lagring Ruth, Steven Degraer, Géraldine de Montpellier, Thierry Jacques, Ward Van Roy and Ronny Schallier

Management Unit of the North Sea Mathematical Models (MUMM), Royal Belgian Institute of Natural Sciences (RBINS), Gulledele 100, 1200 Brussels, Belgium
E-mail: r.lagring@mumm.ac.be

Operational oil discharges by vessels is a global environmental problem. Many regulations on different levels were set up as an attempt to diminish chronic oil pollution. Examples are the international MARPOL 73/78 Convention (1983) and the Bonn Agreement (1989), committing North Sea Coastal States to carry out regular surveillance. However, the number of oil discharges remained unacceptably high, leading to chronic oiling of seabirds and sensitive coastlines. In 1999, the North Sea was designated as Special Area under MARPOL 73/78 Annex I, where the most stringent oil discharge regulations apply. The aim of this research is to quantify the impact of the designation of the North Sea as a MARPOL Special Area.

Belgium initiated an aerial surveillance programme in 1991. The Belgian surveillance area (BSA) is adjacent to the Dover Strait, one of the busiest shipping zones of the world. Its marine ecosystem is characterised by shallow waters with many ecologically important sandbanks. The collection of data in the BSA since 1991 provides an excellent opportunity to quantify and analyse annual operational oil discharges. The effectiveness of the regulations following the designation of the North Sea as a Special Area was tested by comparing the periods before and after 1999.

A statistically significant decrease was found for number, surface and volume of oil slicks between 1991 and 2009. This is in agreement with results for the Dutch surveillance area and for oil discharges in the European North Sea region. Furthermore, a significant difference between the periods before and after 1999 was found for number (-55%), surface (-51%) and volume (-64%). These results indicate the effectiveness of increased legislation in the BSA, in particular the designation of the North Sea as a MARPOL Special Area in 1999 and the special measurements that were taken to meet the requirements. However, the problem is not solved and alertness needs to be retained. Vessels are still discharging oil and even the smallest amount of oil can have a large ecological impact.