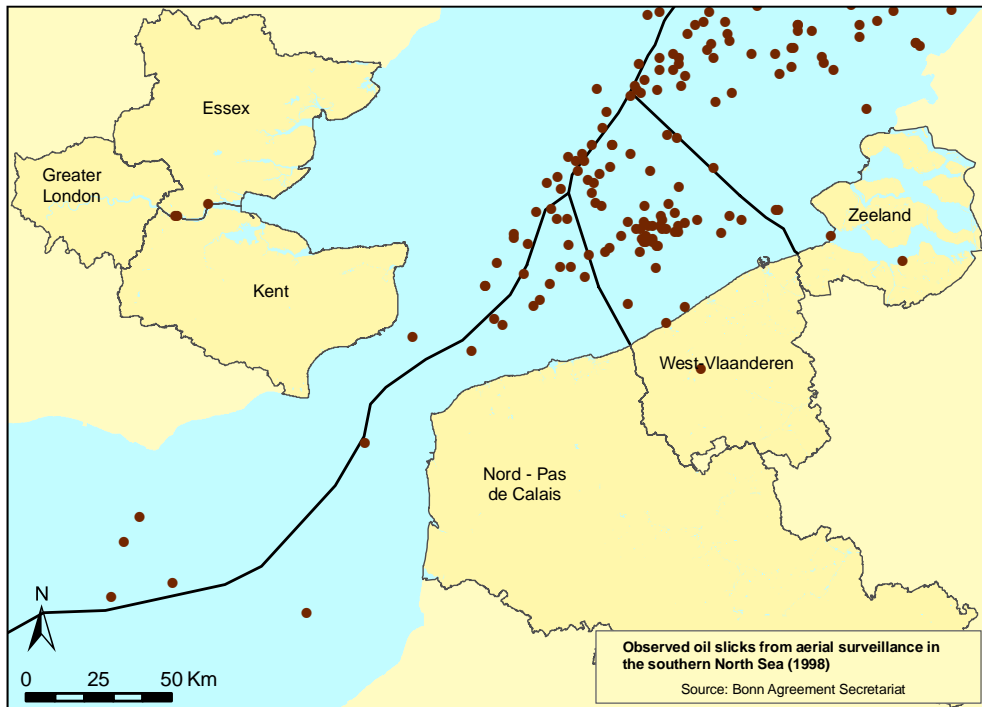
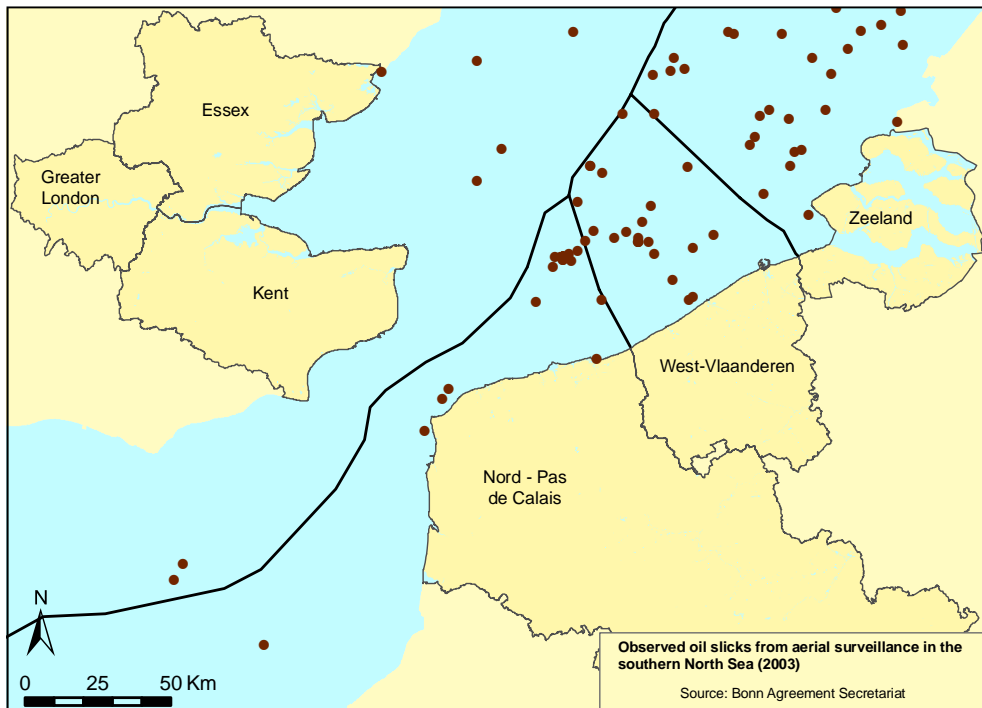
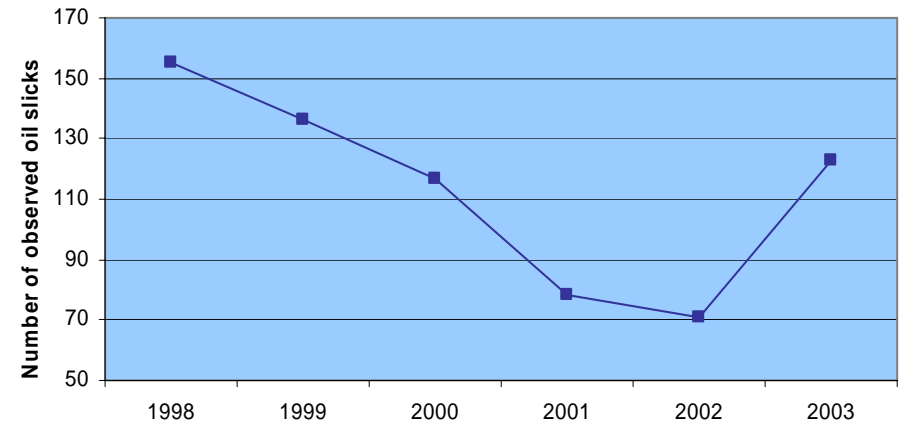


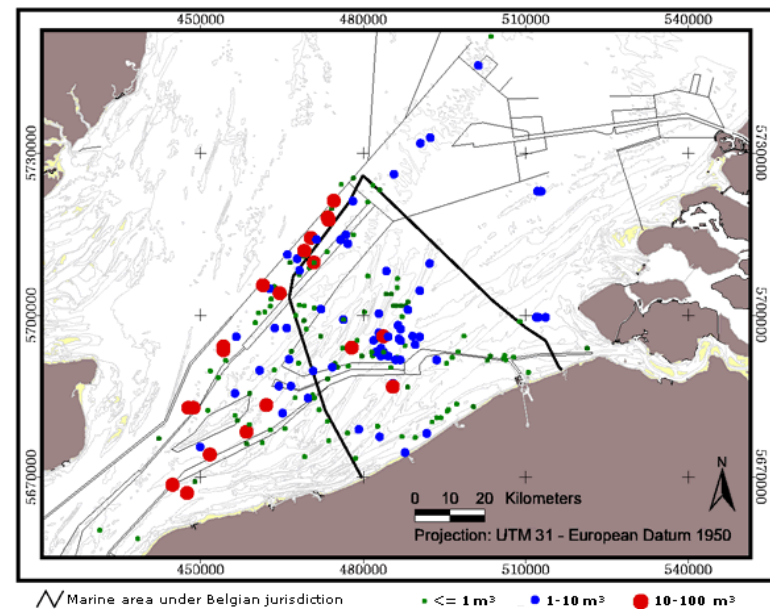
Indicator 16 Amount of oil pollution



Number of observed oil slicks from aerial surveillance in the Southern North Sea (Bonn Agreement 1998-2003)



Location and extent of oil spills from operational oil pollution in the area under Belgian jurisdiction, 1998-2003 (MUMM-BMM)



- *Number of observed oil slicks from aerial surveillance*
- *Percentage of oiled guillemots*

Amount of oil pollution

Key Message

- The number of oil slicks in the Southern North Sea has decreased since 1998. Yet despite increased efficiency in control and improved port reception facilities for oily wastes from ships, chronic oil pollution remains a threat to marine and coastal ecosystems.
- The proportion of oiled sea birds in the Southern North Sea is decreasing, confirming the trend observed in the aerial surveillance of marine pollution. Still, the target for oil pollution impact on seabirds is far from being reached.

Why monitor the amount of oil pollution?

Every day an average of 250 ships pass through the Channel area along one of the most intensely navigated shipping routes in the world, towards large ports like London, Rotterdam and Antwerp. This intense navigation in the Southern North Sea increases the risk of accidental and operational - also termed chronic - oil pollution.

The North Sea has been declared a Special Area under MARPOL Convention Annex I. This means in practice that since August 1999, oil discharges in the North Sea are prohibited and all ships must deliver oily wastes to reception facilities on land. However, illegal discharges from ships, jeopardizing life at sea and in the coastal zone, still occur. Therefore, the eight countries bordering the North Sea cooperate within the Bonn Agreement to detect and prevent marine pollution. Various countries have implemented domestic laws that oblige the polluter to pay, in case of oil spills and oil disasters. This legislation also enters into effect in case of damage to internationally important areas for birds (Ramsar, Habitat Directive) in the North Sea.

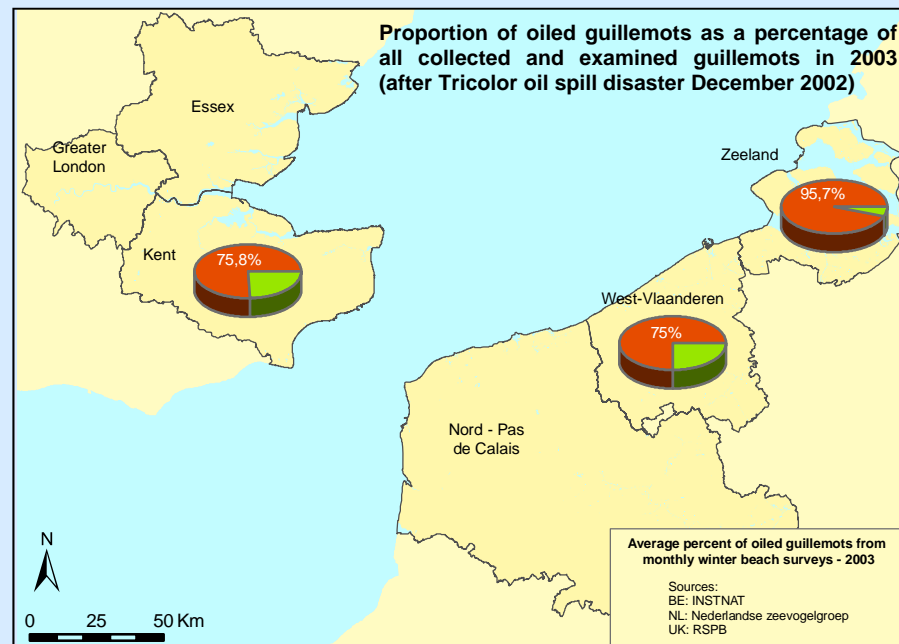
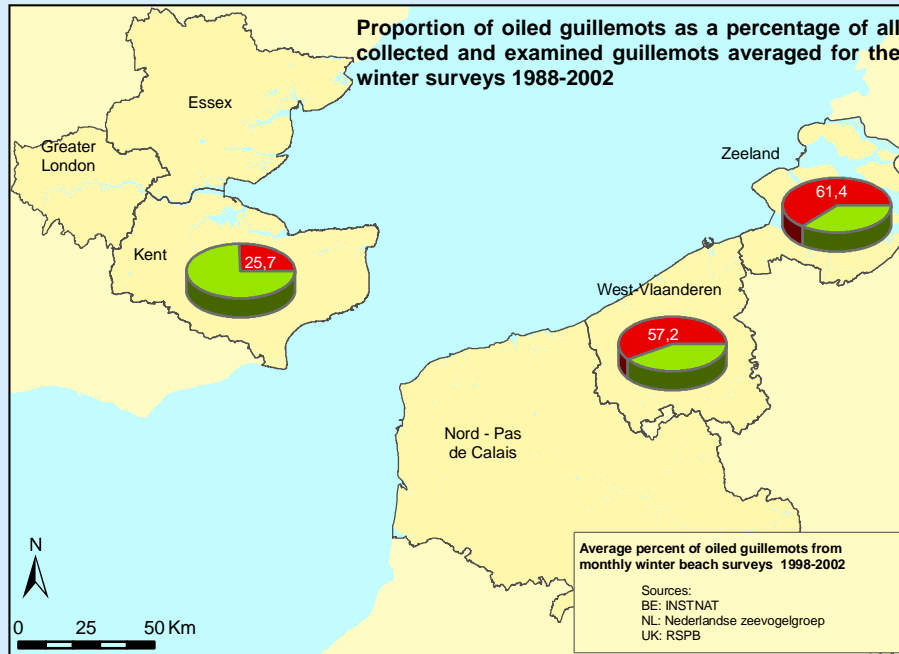
Apart from the aerial surveillance, long-term field research shows that the oil rates of stranded birds (guillemots) provides a good indication of the chronic oil pollution at sea. Data from the monitoring programs on stranded and oiled



birds have shown that even small oil spills can have a negative impact on local concentrations of seabirds, in particular during migration. The indicator has been selected by the OSPAR Biodiversity Committee to develop an Ecological Quality Objective (EQO) for the North Sea.

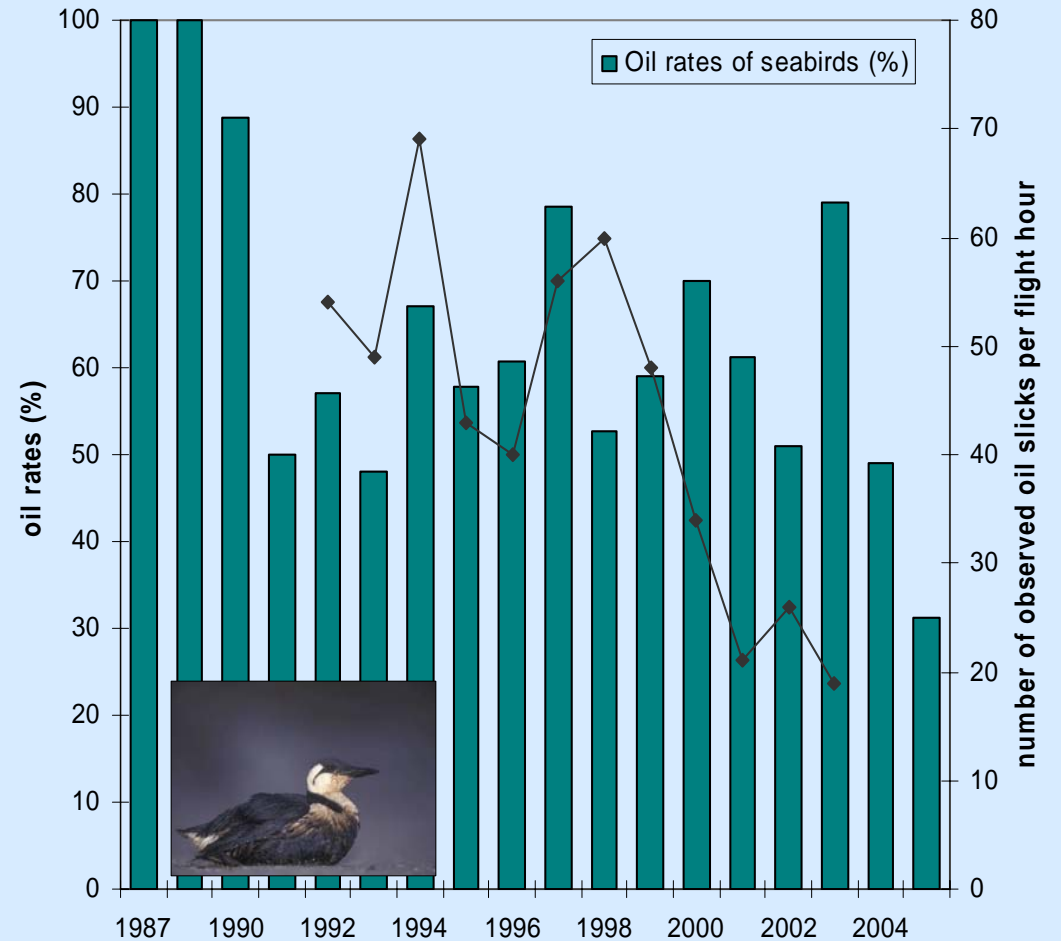
Where do the data come from?

The Bonn Agreement Secretariat reports yearly results of aerial surveillance in - and cooperation among - North Sea countries to detect marine pollution. Data are provided by the national authorities responsible for the surveillance programs: the Maritime and Coastguard Agency - MCA (UK), the Management Unit of the North Sea Mathematical Models - BMM (Belgium), the Netherlands Coast Guard Centre (KUWA) and Rijkswaterstaat – North Sea Directorate of the Ministry of Transport, Public works and Water Management (The Netherlands), and the Customs Coast Guard (France). The percentage of oiled guillemots recorded from monitoring dead birds on beach surveys is reported yearly.



Oil rates of seabirds (%) and observed oil slicks - Belgian Continental Shelf (1987-2005)

contains unpublished data 2005



Note: Oil rate of seabirds refers to the proportion of oiled guillemots as a percentage of all collected and examined guillemots

Numerous volunteers gather field data through the Royal Society for the Protection of Birds (RSPB-UK), the Dutch Group on Seabirds (Nederlandse Zeevogelgroep) in The Netherlands, and the Institute for Nature and Forestry Research (INBO) in Belgium.

What does the indicator show?

The number of observed oil slicks from aerial surveillance indicates that oil pollution has decreased gradually since 1998, with exception of the events observed in 2003.

A concentration of oil slicks is detected along the axis of the navigation route. Data from the national Belgian monitoring program demonstrate that the largest oils slicks (in m³) are also concentrated along this route. The negative trend in the number of observed oil slicks may be due to a number of factors. The presence of the aircraft has a deterrent effect but the improved services and facilities in harbours, and the technical developments in the shipping industry, undoubtedly contribute their share. Finally, detection methods have been improved to harness the increasingly strict legislation in support of national efforts to combat oil pollution.

Monthly surveys are carried out during winter months and the number of oiled birds (Common guillemot, *Uria aalge*) from the total number of stranded sea birds is recorded. These 'oil rates' are gradually decreasing in The Netherlands and Belgium since recording first started. In the South East of England, field records since 1980 also suggest that oil rates are in decline. Oil rates are higher during 2003, probably due to residual oil contamination from the Tricolor disaster in December 2002.

Monitoring of stranded seabirds along the North Sea shores started in the 1960s and it has proven a simple and economical method to obtain complementary data on the effect of oil pollution on marine species.

What are the implications for planning and managing the coast?

Various international agreements and domestic laws are in place related to oil pollution. An important proportion has come into force as a consequence of major oil disasters in the past. Aerial surveillance for the detection and control of pollution at sea is an obligation for the

countries bordering the North Sea, under the Bonn Agreement. Also, joint international exercises take place during the year. MARPOL is the International Convention for the Prevention of Pollution of the Sea by Oil (London, 1973). It is the most important convention for international cooperation in combating accidental and operational pollution. This cooperation has also led to the appointment of specialized Courts in the North Sea countries, where expertise and coordination capacities are centralized for this area.

Other regulations apply to specific safety measures e.g. the prohibition for mono-hulls transporting diesel to enter European ports (European agency for maritime safety). At EU level, a Directive is being prepared to regulate pollution by ships and the corresponding sanctions that can be applied.

In the case of major oil spills such as the Tricolor (December 2002), concerted action on behalf of coastal authorities is crucial for the mitigation of impact on marine species and habitat.

How reliable is the indicator?

Data gathered as part of the obligations under the Bonn Agreement is collected through reliable surveillance programs with internationally calibrated methodologies and standardized "Bonn flight hours". The number of stranded seabirds collected is effort related. The number of stranded birds may further depend on the wind direction and currents, and other factors that are currently under study (climate change, health of the population) . However, it has been proved that the oil rates are not significantly influenced by the total number of collected birds.

