

## **First analytical results of the EC-project "Oiled Seabirds": Comparative investigations on oiled seabirds and oiled beaches in the Netherlands, Denmark, and the Federal Republic of Germany.**

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The analytical results of the samples from the first half year of the project (finding dates January to July 1990) are discussed. The overall results indicate (as expected) "normal" shipping operations as being the main source of oil pollution in the investigated area but there are regional differences: whereas in the Netherlands no single crude oil was found, there is a considerable pollution by crude oils in Denmark. Not only birds at sea are affected, but even lumps of crude oil reach the Danish coast in many cases. A second striking feature is the difference in the contribution of biogenic compounds (e.g. vegetable or animal oils) in the three countries involved. Reasons for these differences may be the different shipping traffic, differences in the practice of oil discharge, and the different exposure of the coastlines. The possibilities of prosecuting single ships are discussed.

*Samenvatting 'Eerste resultaten van olie analyse binnen het EEG-project "Oiled Seabirds": Vergelijkend onderzoek aan olie op zeevogels en op de kust in Nederland, Denemarken en Duitsland)*

*De resultaten van de analyse van monsters uit het eerste half jaar van het project (jan-jul 1990) worden besproken. 'Normale' scheepslozingen zijn de belangrijkste bron van olie vervuiling in het onderzochte gebied. Er zijn regionale verschillen aanwijsbaar: terwijl in Nederland geen enkele keer ruwe olie in de monsters werd aangetroffen kwam dat in Denemarken veel voor. Een tweede opvallend verschil bestaat in het voorkomen van 'biogenic compounds' (bv. plantaardige of dierlijke oliën) tussen de drie landen.*

*De redenen voor de gevonden verschillen worden gezocht in verschillen in het scheepvaartverkeer, verschillen in olielozingen en de verschillende expositie van de kust. De mogelijkheden voor vervolging van schepen worden besproken. ■*

	Bunker oil	Crude oil	Lubricating oil	Biogenic compounds
Denmark n= 111	77.5 %	17.1 %	0.0 %	5.4 %
Germany n= 61	95.1 %	1.6 %	0.0 %	3.3 %
Netherlands n= 110	94.5 %	0.0 %	5.5 %	0.0 %
All samples n= 282	87.9 %	7.1 %	2.1 %	2.8 %

table 1. Oil types found in 282 samples taken from beached birds and beaches in the Netherlands, Germany and Denmark, Jan-Jul 1990 (from diagrams submitted by G. Dahlmann).

	Bunker oil	Crude oil	Lubricating oil	Biogenic compounds
on the beach n= 27	44.4 %	55.6 %	0.0 %	0.0 %
on birds n= 84	88.1 %	4.8 %	0.0 %	7.1 %
Total Denmark n= 111	77.5 %	17.1 %	0.0 %	5.4 %

table 2. Oil types found in 111 samples taken from beached birds and beaches in Denmark, Jan-Jul 1990 (from diagrams submitted by G. Dahlmann).

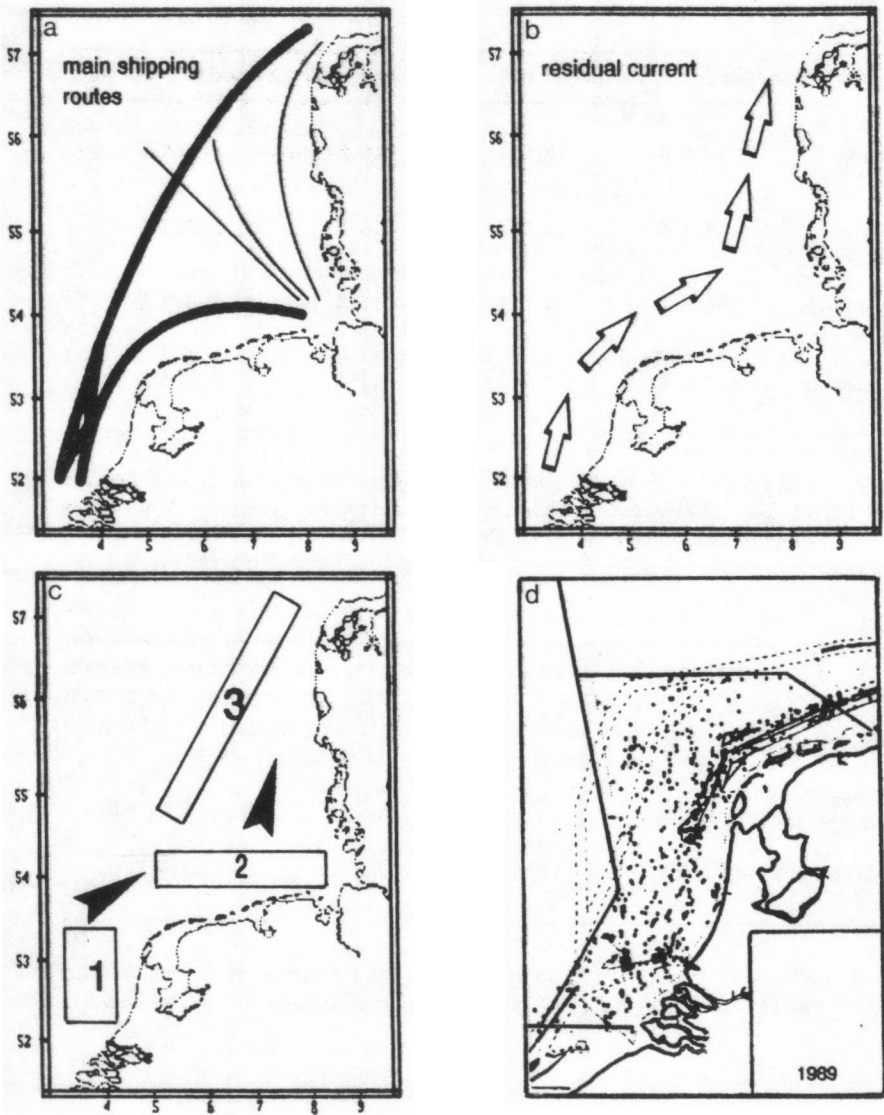


figure 1. (a) main shipping routes, (b) residual current, (c) areas of higher numbers of oil spills (suspected for area 3), and (d) example: observed spills in the Dutch sector in 1989.