The oil pollution from the "Baltic Carrier" incident
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Cross-body evaluation and report of experience

Danish Emergency Management Agency
Development Unit
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0. Pretext

In the English summary, only chapters 1 and 13 along with appendix 12 from the original report are included. Hereby a summary of events and the general conclusions and recommendations from the evaluation are presented.

1. Summary

At 00.15 A.M. on 29 March 2001 the freight ship *Tern* and the oil tanker *Baltic Carrier* collided east of the Danish island Falster. Due to the collision, *Baltic Carrier* sprang a leak, and out of a total cargo of 33 000 tons of heavy fuel oil, 2350 tons ran into the sea. The oil, which had the viscosity of floating asphalt, drifted towards the islands of Moen and Falster.

Danish law on protection of the marine environment specifies the legal framework regarding the control of oil- and chemical pollution at open sea, in shallow waters near the coats and on the shores. The law lays down that the Minister of Environment and Energy, in co-operation with the military defence, the preparedness services and other authorities, is responsible for pollution control operations at sea and in shallow waters. From 1 January 2000 the task has been transferred to the Ministry of Defence. From this date, the obligations regarding marine pollution has been vested in the Defence Command, and presently the Naval Operative Command conducts the responses at sea and in shallow waters near the coasts. The municipalities carry out the response at shore and in harbours.

At 00:20 AM on 29 March, the Naval Operative Command was notified about the collision from Lyngby Radio. The Command contacted the collided ships and international partners in Germany and Sweden. A control operation was launched, as soon as it became apparent that an oil spill had taken place.

Initial attempts to gather or contain the oil at open sea were futile due to severe weather conditions, and late in the afternoon of 29 March the oil drifted into Groensund - a narrow belt between the islands of Falster and Moen. Along the coasts, barrages were established so as to prevent the oil from drifting onto sensitive coastal areas and into harbors.

On 30 March in the morning, large oil slicks were recorded along the northern and northeastern coast of Falster. Along the southern coast of the islands Moen, Bogoe and Faroe severe pollution was detected. A large oil slick was situated at Kirkegrund south of Vordingborg, and scattered occurrences of oil were found in Groensund and Hjelm Bugt.

On 30 March, an operation was launched aiming at gathering the oil at sea and in the shallow waters near the coasts. Likewise on shore, the affected municipalities started the gathering of oil and polluted items. To lead and coordinate the operations from land, a command center was established. Represented in the center were the 5 affected municipalities, the county, the forest district, the Police, the Danish Emergency Management Agency and the Naval Operative Command.

Until April 11, 3950 tons of oil and polluted material were gathered. In the time hereafter, the municipalities and the county have co-operated in gathering oil and polluted material from the shores, whereby additionally 6800 tons of polluted material have been gathered. (Status by end of July 2001).

Many different organisations, private companies and volunteers participated in the response to the pollution.

The specific type of heavy fuel oil in question proved a distinct challenge due to its high viscosity, since it could neither be pumped nor drawn up. The equipment for gathering oil, owned by in the maritime preparedness today, is largely designed for types of oil that can be pumped, and was therefore of no or little use in the situation. Instead, heavy machinery for grabbing the oil had to be rented. Where these could not be used due to the terrain, the gathering had to be performed manually with shovels and forks.

Another difficult aspect was the deposition of the oil and polluted material. The current maritime preparedness has a deposition capacity of 2000 tons distributed on ships and barges. No depots on land were planned for. By chartering private barges and renting 2 large industrial beet barrels the need for extra deposition capacity was met.

Generally, the response to the oil pollution is evaluated as satisfactory. The response called for extensive cross-organisational co-operation and understanding, and for improvisation regarding the gathering and deposition of oil and polluted material. A significant element in the response was the will and the commitment of the personnel and the volunteers, who for days carried out heavy and dirty work. Well-functioning co-operation with Swedish and German environmental units, who partook in the response and provided material, likewise needs mentioning.

The pollution is not estimated to have caused irreversible damage to neither the wildlife nor environment. The county has launched a monitoring program regarding selected areas of the coastlines.

Along certain coasts, the occurrence of new minor oil slicks is to be expected for a while, since oil, which has been pressed into the ground/seabed, as a result of the use of heavy machinery, will resurface due to current and tide.

The response to the oil pollution in Groensund is the most challenging task the Danish maritime preparedness has dealt with to this date. The response revealed a number of problems and technical defects, the nature of which is described and elaborated on in the specific chapters of the report. Hereunder a number of general conclusions can be found.

13. General conclusions and recommendations

The response to the oil pollution was satisfactory, and all parties saw the co-operation between the many different organisations involved as well functioning and effective. As it turned out, however, the prerequisites for handling the task were less than optimal. Considerable commitment and the availability of many manual resources were central elements, contributing greatly to the satisfactory result.

Particularly the equipment turned out not to match the task of gathering the heavy and high viscosity oil. During the entire response the finding of alternative solutions was therefore a considerable and central task. The optimising of the conditions for future responses of this nature thus calls for a thorough revaluation of the materiel provisions.

Another general lesson learnt is that exercises and education regarding the co-ordination of tasks in a command centre during complex and/or longer lasting responses should be prioritised higher.

The lessons learnt from the pollution in Groensund have, furthermore, highlighted a need for cross-organisational planning with regards to the response at sea. It seems rational that a general plan is drafted at national level, describing the various tasks and phases in control operations of this magnitude. On the basis of this broad plan a co-ordination of plans on municipal, county and national (regional) level may take place.

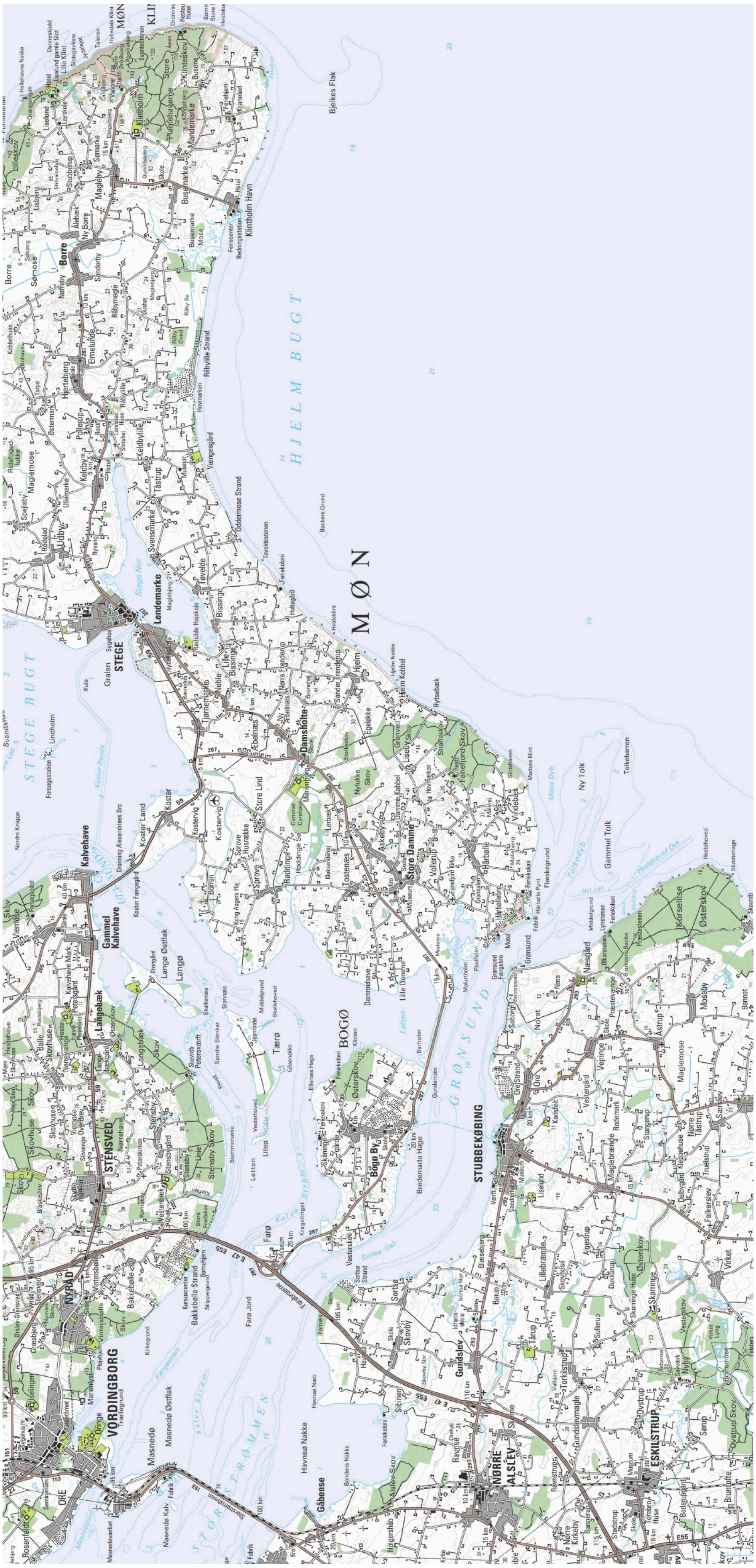
Owing to the experiences from the operation in Groensund and with the aim of strengthening the Danish maritime preparedness, the parties behind this report have formulated the following general recommendations:

- A general plan or an outline is made, describing the tasks and the various operational phases in a control operation after a severe pollution at sea.
  On the basis of this plan/outline The Danish Environmental Protection Agency's advisory guidelines from 1987 regarding municipal preparedness planning and the instruction from 1982 on methods for preventing, handling and disposal of oil on shores are revised.
  On the basis of the revised guidelines/instructions and the general plan a co-ordination of plans on all levels should be carried out. An overview of the total provision of specialised equipment should be included.

- A separate risk analysis regarding the waters around Denmark, not least the Baltic Sea, is carried out, with a view to the expected development in the traffic coming from the planned disembarkation harbour in Primorsk near St. Petersburg, Russia.
  On the basis of the analysis, an assessment regarding the equipment presently owned by the national maritime preparedness is made, with a view to the technical suitability as well as the quantity and stationing of the equipment. The analysis should trigger parallel assessments at municipal and county level.

- Exercises and education in the handling of larger and/or longer lasting mishaps and disasters should be given higher priority with all operational authorities.

Appendix. Maps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Store Damme
Kalvehave
STENSVED
NYRÅD
VORDINGBORG
STUBBEKØBING
NØRRE ALSLEV
ESKILSTRUP
Bogø By
Masnedø
Farø
Tærø
Langø
Koster
Bjelkes Flak
Ny Tolk
Gammel Tolk
Tolkebarren