

Admiral Danish Fleet HQ,
National Operations, Maritime Environment

Sub-regional risk of spill of oil and hazardous substances in the Baltic Sea (BRISK)

Model modifications upon Partner requests

January 2012



Part-financed by the European Union
(European Regional Development Fund)



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Document no. P-70618-3.1.3.7
Version 2.0
Date of issue 24 January 2012

Prepared CRJ
Checked MORH
Approved CRJ

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1 Introduction

1.1 BRISK Project setup

The project is defined in response to an increased concern about accidents and environmental damage in the Baltic Sea due to the significant increase of ship traffic, particularly the oil tanker traffic. Major oil spills can affect the economy of several countries and are hence a trans-national problem. The increased risk of oil spills is of great concern in the whole Baltic Sea region.

The objective of the project is to identify specific proposals for increased co-operation. The project will result in increased preparedness of authorities to respond to medium size oil spills and enhanced sub-regional co-operation. The network of responsible persons will be further developed. The project will promote building partnerships and co-operations among trans-national, national and regional authorities that are responsible for emergency and response operations in the Baltic Sea.

The BRISK project is partly financed by EU's Baltic Sea Regional Programme 2007-2011 with 3.3 million EUR for the period 2009 to 2012. The co-financing varies between 15 % and 25 %, depending on the home country of Project Partner.

The project partnership consists of the national authorities responsible for oil spill preparedness around the Baltic Sea together with HELCOM. The countries involved are: DK, SE, FI, EE, LT, LV, PL, DE, plus HELCOM. Russia is involved indirectly through the BRISK-RU project, which is financed by the Nordic Council of Ministers with 200.000 EUR. A list of the contracting authorities and the contact persons involved is given in the appendix.

The project activities are divided into the following 6 Work Packages (WP):
WP1: Management, responsible: LP (Lead Partner, Denmark)

WP2: Communication and information, responsible HELCOM

WP3: Risk assessment: Common methodology, unified data collection, common risk model, common assessment of risk of pollution and impact, Identification of additional response resources needed, resp. LP

WP4: Agreements: Development of proposals to remove administrative obstacles to the efficient response, resp.: LP

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The structure of the project reports is given in below

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70618-3.1.3.6	Model Note,6- Numerical calculations
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70618-3.2.1	Model scenarios
70618-3.2.2	Model results
70618-3.3	Response Resources
70618-4	Agreements
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2 Scope

The present technical note is prepared as a working document that shall act as a tool for the COWI project team to document the actions carried out by the team to meet the requests brought forward by the Project Partners and agreed upon by the Project Management.

The list of document illustrates towards the Project Partners and other stakeholders that, how, where and when the requests from the partners have been included in the analysis.

The document also serves to document the successive process of project development based on communication between the Project Partners and the technical team of the Project Consultant.

3 Request list

The requests leading to specific action are decided upon at the Partner Meetings, Project Meetings and other communication. All action, however, where approved by the Project Management. The full description of the requests is given in the appendix 1. The numbers in the table correspond to the numbers in the description in appendix 1.

The list given in the table below gives the topic for each request, the person that is responsible for answering the requests, the form how this is achieved (e.g. reference) and the date when this is achieved. This way, all requests given during the different meetings can be followed and documented in the final set of documents.

Table 3-1 List of requests, responsible persons and reference for answer. The request number refers to the corresponding number for the detailed description in appendix 1.

Re-quest No	Topic	Responsible	Reference
1.1 (see 2.5)	ToR for env WG	CRJ	Sent
1.2	ToR for scenario WG	CRJ	Sent
1.3	St.Pete & Kalin Ports out of study	ALBL	New Section 3.4 added to Method note
2.1	Åland traffic separation	ALBL	Section 2.8.5 of the Model Report, part 4.
2.2.1	Ships are moving, not only in port	HEGL	On average they are at the port location
2.2.2	Pumping -> Recovery	HEGL	Pumping rate is limited by boom coverage and slick thickness
2.2.3	Limited storage capacity	HEGL	Recovery rate is on 50% after 1 day of operation
2.3	EMSA vessels	HEGL	Included

Re-quest No	Topic	Responsible	Reference
2.4	Oilrigs, offshore terminals	ALBL	Included
2.5 (see 1.1)	Env WG ToR	CRJ	Sent
2.6	PowerPoint distribution	CRJ	Done and Emailed to PP by HELCOM
2.7	New Agreement map	CRJ	Placed on Meeting portal
2.8	EMSA / Fi mob 24 h	HEGL	Done
2.9	DEN ships to Frederikshavn	HEGL	Done
2.10	Planned vessels	HEGL	Done
2.11	Higher Hs limit	CRJ	Not done after discussion with Peter Poulsen. The steep wind waves are the critical, not long swell
2.12	D6, POL platforms, Windmill	ALBL	Done
3.1	Total cap (not dedicated)	HEGL	Done
3.2	Oil in ice	SRD	Done (based on working group results and SeaTrack Web

ALBL Albrecht Lentz (COWI)
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4 Summary and Conclusion

In summary it is seen that a long list of specific requests were articulated by the Project Partners and included in the Project analysis.

The character and the amount of requests illustrate the engaged co-operation of the Project Partners as well as their highly valued professional expertise.

Considerable effort was given on the method development for the environmental sensitivity. The method as well as the different mappings were discussed in great detail and considerable discussion where carried out, including extraordinary meetings in Helsinki. The detailed issues and discussions are not reflected in this document since the methodology not was changed significantly and the maps where gradually accepted by the partners.

Some of them represented extraordinary analytical challenge and comprised significant modelling effort. This way, the existing analysis system prepared during the project for the Danish Defence in 2006-8 was significantly enhanced, refined and tuned to meet the re broader requirements of the entire Baltic Sea Area.

Appendix 1 Detailed description of requests

1 Project Partner Meeting, 5-6/10-2010 in Aarhus, Denmark

List of decision

- 1.1 COWI prepares Terms of Reference for environmental group work (CRJ, HEGL)
- 1.2 Establishment of working group for scenarios (CRJ, PSP)
 - a) Relocation of existing capacities (**HELCOM**, all)
 - b) Additional booms and skimmers (**POL**, all)
 - c) Night visibility (**SWE**, DEN)
 - d) Recovery of oil in ice (**FIN**, RUS, EST)
- 1.3 Risk and Sensitivity without St Petersburg and Kaliningrad Port. How to deal with it? (ALBL)

2 HELCOM Response Meeting, 12-14 October 2010 in St. Petersburg, Russia

List of decision:

- 2.1 The Meeting requested the BRISK Project to reflect in the risk assessment the changed traffic pattern in the area between Åland Islands and the Swedish coast due to the changes in the traffic separation scheme and deep water route that had taken effect on 1 January 2010 (ALBL)
- 2.2 Response maps:
The Meeting made the following comments to the maps:
 - a) in some countries ships sail along the coastline while performing their tasks and are rarely in home port, therefore in practice they are able to promptly reach also areas which are more distant from their home ports (HEGL)
 - b) the skimming capacity, which is smaller than the pumping capacity, would better reflect the actual situation (HEGL)
 - c) in real life situation storage capacity is a limiting factor when dealing with large spills (HEGL).

The Meeting requested the Project to take the above considerations into account when further developing the “response” part of the assessment, and also to have them properly reflected when presenting the final results of the risk analysis.

- 2.3 The Meeting noted that only dedicated response capacities, including EMSA chartered vessels, as reported to HELCOM, are currently included in the assessment. However, additional resources available in the countries will be taken into account when capacity analysis will be done (HEGL).
- 2.4 The Meeting requested the Project to confirm whether oil rigs and the offshore oil terminals are included in the analysis (ALBL).
- 2.5 The Meeting took note that a correspondence group led by Finland has been established to do some further, alternative weighting of the environmental sensitivity indicators needed for modelling environmental damage of spills, and welcomed the offer of Estonia and Latvia to take part in the work of the CG, in addition to Finland, Sweden, Russia and Poland, and invited these countries to provide information about the names of the nominated experts to Carsten Jürgensen (email: crj@cowi.dk) by **31 October 2010-(CRJ)**
- 2.6 The Meeting requested the Project Manager to distribute the BRISK PowerPoint presentation together with a brief report to the BRISK project partners for further consideration (CRJ)
- 2.7 The Meeting requested the BRISK Project to update the map of the sub-regions accordingly and with these amendments, agreed on the proposed division of the sub-regions for the purpose of the BRISK risk assessment. The Meeting requested the Project to distribute the updated map to the Contracting Parties (CRJ).

Additional notes:

- 2.8 EMSA vessel in Helsinki: 24 Hours mobilisation (HEGL)
- 2.9 Gunnar Thorson & Mette Miljø to be moved to Frederikshavn! (HEGL)
- 2.10 New vessels (for future scenario)
- a) EST: New vessel is ordered, LoA=60m
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2011: Multi function vessel

2012-15: 3 new vessels
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2.11 Lech (from EMSA) proposes to apply skimmers for $H_s > 1.3\text{m}$! This may be a good response scenario! (HEGL)

2.12 Include D6, 2 Polish platforms and windmills (existing + planned) in the risk analysis (ALBL)

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3.1 Dedicated capacity / total capacity (incl EMSA) (HEGL)

3.2 Model period of oil in ice (SRD)



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