



Bonn Agreement
Accord de Bonn

Meeting Report: Bonn Agreement BE-AWARE II Project Seminar

Trondheim (Norway): 26-28 January 2015

1. Introduction

1.1 The meeting was opened by Mr Ole Kristian Bjerkemo, Norwegian Coastal Administration, who welcomed all the participants to Trondheim outlining the history of the city and the practical arrangements for the meeting. Mr John Mouat, Bonn Agreement Secretariat, outlined the seminar programme (Annex 1) for the two days and invited the participants (Annex 2) to introduce themselves.

1.2 Mr Jon-Arve Røyset, Norwegian Coastal Administration gave a presentation outlining the Norwegian Havbase, a database for systematic monitoring of ship activity and discharge of pollution from shipping. The database was developed in relation to the Norwegian system of integrated management plans for all Norwegian Sea areas. The next stage of development was to include a probabilistic risk assessment module that would allow changing risk in any area to be identified automatically.

1.3 Mr John Mouat, Bonn Agreement Secretariat, gave an introductory presentation on BE-AWARE I and II highlighting that the projects were actually part of the same process. The presentation outlined the project background, DG ECHO co-financing, partners, project tasks and timeline. The Secretariat also explained the overall aims of the project seminar: to receive stakeholder input on progress on the methodology, data collection, spill and response modelling and the vulnerability assessment and to consider the upcoming tasks to undertake the impact analysis and develop risk management conclusions.

2. BE-AWARE I Results

2.1 Mr Anders Madsen, COWI, gave a presentation on the results of the BE-AWARE I project outlining how the accident risk and potential outflow of oil was calculated. The presentation outlined the overall picture in terms of tonnes of oil spilt per year from different sources, such as ship-ship collisions, ship-windfarm collisions and ship-offshore installations for the whole Bonn Agreement region. The results were also presented broken down into the contribution from different sources per project sub-region. COWI highlighted that the BE-AWARE I results were the key input to the BE-AWARE II project.

2.2 The following points were highlighted during the presentation:

- The presentation of risk bubbles in tonnes per year did not allow the reader to differentiate between small regular spills and rarer larger spills, which could be misleading especially for the offshore industry, and therefore needed to be carefully explained;
- It was questioned why FPSO were modelled separately from offshore installations, which was due to their characteristics being more like a double hulled tanker than a platform for modelling purposes;
- It was questioned why seasonal risk was not included in BE-AWARE I when it would be considered in the vulnerability analysis in BE-AWARE II, however it was explained that this was included in the accident statistics and casualty calculations.

3. Task C: Methodology

3.1 Mr Carsten Jürgensen, COWI, introduced the methodology for BE-AWARE II, highlighting that the aim of the project was to undertake a strategic analysis to allow us to identify the most effective risk reducing and response measures for the various project sub-regions. The presentation focused mostly on the methodology for the oil spill and response modelling as the methodology for the environmental and socioeconomic vulnerability analysis was developed in BE-AWARE I. The presentation also outlined the risk reduction scenarios that the project partner had agreed to model and compare as the final outputs of the project.

3.2 The seminar discussed the methodology in detail and the following points were raised during the discussions:

- It was highlighted that the ETV's were actually both a response and risk reducing measure as they could prevent accidents but also could be involved in the recovery of oil following a spill.
- It was highlighted that given that the risk reduction measures could lead to a reduction in the number of accidents and the current financial situation within Bonn Agreement Contracting Parties perhaps the final scenario should be a 50% reduction in response capacity rather than an increase. It was explained that the 50% increase in equipment scenario was considered in the BRISK project and had been included in BE-AWARE II for comparison and also that the scenarios had now been agreed and finalised by the project partners.
- The circular representation of the spills due to spreading was questioned as in reality spills were elongated with a concentration of oil in the downwind edge. However it was explained that including an ellipsoid in the modelling would double the required computing time but would not add significantly to the accuracy as the total swept area, and not just the final position of the spill, would be included in the model.
- It was highlighted that for modelling purposes a deep-sea blow-out would be considered to be completely dispersed in the water column either through natural or chemical dispersion. However the seminar questioned whether this was an accurate representation and highlighted that mechanical recovery would also be used.
- The effectiveness of dispersants was also discussed by the seminar as the initial proposal to include dispersants in the model was to have 100% effectiveness. However it was mentioned that in operational situations chemical dispersants have been reported to result in a reduction of only about 30% of the mass of the spill.
- Another point raised was whether natural dispersion of oil was included in the model and it was confirmed that it was included for each oil type as a reduction in the mass of the slick over time.

- The final point raised was whether the results of the model would be accurate enough to undertake the analysis due to the necessary simplification to reduce the model run time. It was explained that the simple model results would be verified with multiple runs of the MUMM OSERIT advanced 3D oil spill model for individual spill scenarios, covering all project sub-regions.

3.3 COWI highlighted that they had also received a number of comments from the Project Partners on the method note, which was currently under development. These would be taken into consideration in the further development of the methodology along with the main points from the seminar discussion, particularly the inclusion of deep-water blowouts in the modelling and the effectiveness of dispersants.

4. Task D: Project Resource Database

4.1 Mr Chris Moulton, Bonn Agreement Secretariat, introduced the development of the Project Resource Database and the collection of the data on scenarios, response capabilities and sensitive features that was required for the project. The information had been collected through a data request note and the main challenge was ensuring the data was consistent and comparable across the whole Bonn Agreement area, therefore as much of the data as possible was collected centrally from regional databases.

4.2 The Bonn Agreement Secretariat highlighted that COWI would now compile the data into the layers required for environmental and socioeconomic vulnerability analysis, which would then be double checked with the submitted data. The seminar noted that this was a valuable resource and inquired if it would be available outside the project. The Secretariat explained that this depended upon the data licence for each individual dataset, however they would investigate the possibility.

5. Task E: Oil Spill and Response Modelling

5.1 Mr Anders Madsen, COWI, introduced the progress so far in modelling the outflow of oil from the accidents identified in BE-AWARE I and the response to those accidents, including the scenarios identified in the methodology. The presentation outlined the process of identifying a smaller number (476) of representative spills that would be modelled before the results would be superpositioned for the calculated spills. The response modelling was also outlined based upon the information provided by Bonn Agreement Contracting Parties on vessel, pump and boom capacities. One of the areas where further development was required was the response model for dispersants, particularly the requirements for application of dispersants and the cut offs for response.

5.2 The Seminar considered the presentation and the following points were discussed:

- It was confirmed that booms would only be modelled for oil recovery and not for coastal protection.
- The storage capacity for recovered oil was noted as a restriction on response operations and it was asked how this would be incorporated. COWI explained that the capacities supplied by Contracting Parties would be included in the model.
- It was highlighted that the pumps would be modelled at 100% their rated pumping capacity as the information on the exact operational efficiency was not available. Some participants however mentioned that in operational situations the real effectiveness of mechanical recovery means, as for chemical dispersants, will be lower than the 100% 'nominal' pump capacity given by the manufacturers.

6. Task F: Environmental and Socioeconomic Vulnerability Analysis

6.1 Mr Carsten Jürgensen, COWI, outlined the progress on the implementation of Task F: Environmental and Socioeconomic Vulnerability Analysis. A workshop had been held in Brussels in September 2014 to rank the sensitivity of all the different features and these scores were outlined both for surface and dispersed oil. The data collected under Task D: Project Resource Database was being compiled into vulnerability maps for each of the features. Some examples were highlighted where either there was good data for the features (e.g. protected areas) or where the data was less coherent across the region and that may need to be considered by the project team (e.g. marine mammals).

6.2 The Seminar discussed the example maps of the features and the following points were raised:

- A cut off value of 50,000 inhabitants could be used to make the coastal communities feature more representative.
- It was noted that for the bird maps the occurrence and distribution of bird species was not entirely accurate as the waters surrounding the breeding areas also had a higher environmental sensitivity due to the feeding requirements during the breeding season and this should be taken into consideration.
- It was asked why oil installations had not been included as a vulnerable feature, particularly as hub installations for gas pipelines could have a large socioeconomic impact if they needed to be shut down or evacuated for a spill. MUMM informed that in the development of the sensitivity methodology the workshop had considered oil installations a source of accidental pollution rather than a vulnerable feature.

6.3 COWI and the project team would reconsider whether there was a possibility to include offshore installations as a feature in the socioeconomic analysis at this late stage.

7. Task B: Publicity

7.1 Mr John Mouat, Bonn Agreement Secretariat, gave an introduction to Task B: Publicity, which was a compulsory project task which covered all communications actions. The project had adopted a communication plan that outlined all communication aims, key stakeholders and major products. Several of these had already been completed such as the incorporation of a BE-AWARE mini-site in the redevelopment of the Bonn Agreement website, the development of a project leaflet and a BE-AWARE I and II banner stand. The major communication actions for the remainder of the project were a conference paper and exhibition stand at Interspill 2015 and the Final Project Conference.

7.2 The meeting seminar discussed the communication aims of the project and the following points were made:

- The project should target specific maritime newspapers (e.g. Lloyds List) before the final conference to increase coverage of the project results.
- Publicity could also be raised through using Bonn Agreement Contracting Parties' press officers to publicise the final conference and project results.
- The final conference should focus on the oil spill impact and effectiveness of measures in order to trigger a process of good cooperation on implementation.
- The Bonn Agreement should consider moving forward the Ministerial Meeting from 2019 so that the project results and follow up to the Dublin Declaration could be discussed at ministerial level.

8. Task H: Oil Spill Impact Assessment

8.1 Mr Carsten Jürgensen, COWI, introduced Task H: Oil Spill Impact Assessment, which outlined how the results of the oil spill modelling for each of the scenarios would be combined with the environmental and socioeconomic vulnerability analysis when both were complete. There were five aspects included in the impact analysis: spilled oil, oil on the coast, environmental damage, socioeconomic damage and the combined damage. For the impact analysis (i.e. the kg oil/m²/year per 2 x 2 km sq.) and the vulnerability analysis (an index) to be compared a normalisation must be undertaken and the resulting figures combined into an environmental impact index.

8.2 The following points were raised during the presentation:

- It was very important to make the results easy to understand particularly to avoid misunderstanding in areas where the end users do not have detailed knowledge.
- The oil spill impact and damage would be compared in 50:50 ratio however further consideration was needed on how the environmental and socioeconomic analysis should be combined.
- It was highlighted that the EU Environmental Liability Directive 2004/35/EC also required an assessment for environmental damage and that there could be a potential conflict if the BE-AWARE environmental assessment had a significantly different outcome.

9. Task I: Risk Management Conclusions

9.1 Mr Carsten Jürgensen, COWI, presented how the final risk management conclusions for the project would be identified for the various project sub regions. Two factors would be calculated for each of the risk reducing or response scenarios considered by the project: the efficiency and the effectiveness. The efficiency was the number of less tonnes of oil spilt per year and the effectiveness of the number of less tonnes spilt per cost (t/€). These would then be plotted against each other in a logarithmic scatter plot to highlight the best scenarios for each sub-region, allowing the project partners to develop the risk management conclusions.

9.2 During the presentation the following points were raised:

- It was asked whether or not existing planned measures would be included in the plots and it was confirmed by COWI that this would be included in the calculations.
- It could be useful to present the response and risk reducing scenarios separately as for some administrations they were the responsibility of different organisations.
- The Bonn Agreement Secretariat confirmed that there would be a workshop on 22 September 2015 for the Project Partners to agree on the risk management conclusions for each sub-region.
- The Netherlands specifically asked for the inclusion of analysis for a 50% reduction, because through this it could be shown also that the results of risk reducing measures have an effect. However other Contracting Parties highlighted that the scenarios had been agreed for some time and were not in favour of changing them.
- Also the Netherlands asked, supported by representatives of the offshore oil and gas industry regulator to assess the socio-economic impact on the offshore industry following an incident.

10. Project Seminar Conclusions

10.1 Mr John Mouat, Bonn Agreement Secretariat, thanked all the seminar participants for the active participation and constructive input, highlighting that the Project Partners and COWI would give further consideration to the questions raised. These included the modelling of deep-sea releases of oil, modelling of dispersants and the inclusion of offshore platforms in the socioeconomic sensitivity analysis.

10.2 The Project Method Note was also close to finalisation and would include relevant discussions from the seminar and comments already submitted by project partners. However although this would be published it would remain a living document until the end of the project, as the methodology would continue to evolve and be improved.



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Trondheim (Norway): 26-28 January 2015

Programme

Monday 26 January 2015

19:00 – 20:30 Tour and Lecture at SINTEF Laboratory

20:30 – 22:00 Informal supper at local restaurant

Tuesday 27 January 2015

09:00 – 09:30 Registration

09:30 – 09:40 Welcome from Norwegian Coastal Administration

09:40 – 10:00 Risk assessment developments in Norway: Havbase Norway

10:00 – 10:30 Introduction to BE-AWARE BONN

10:30 – 11:00 *comfort break (coffee/tea)*

11:00 – 11:30 Results of BE-AWARE I BONN/COWI

11:30 – 12:30 BE-AWARE II Task C: Methodology: COWI

- Model Modifications and Methodology Note

12:30 – 13:30 *Lunch*

13:30 – 14:00	BE-AWARE II Task D: Project Resource Database - Project Data Request Note and Data Sources	BONN
14:00 – 15:15	BE-AWARE II Task E: Oil Spill and Response Modelling - Preliminary results and planned outcomes	COWI
15:15 – 15:45	<i>comfort break (coffee/tea)</i>	
15:45 – 17:00	BE-AWARE Task F: Sensitivity Analysis - Preliminary results and planned outcomes	COWI
17:30 - 18:30	<i>Guided tour in Nidarosdomen (Cathedral of Nidaros)</i>	
20:00 – 22:00	<i>Dinner offered by Hosts</i>	

Wednesday 28 January 2015

09:00 – 09:10	Catch Up from Day 1	BONN
09:10 – 09:30	BE-AWARE II Task B: Publicity	BONN
09:30 – 10:30	BE-AWARE II Task H: Oil Risk Impact Assessment - Proposed assessment and expected outcomes	COWI
10:30 – 11:00	<i>comfort break (coffee/tea)</i>	
11:00 – 11:30	BE-AWARE II Task I: Risk Management Conclusions	COWI
11:30 – 12:00	Seminar Conclusions	BONN/COWI
12:00 – 13:00	<i>Lunch</i>	
	<i>Close of meeting</i>	

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