

IMAROS

Report on workshop held in Copenhagen February 4th-5th 2020.

This report summarises the workshop held in Copenhagen February 4th-5th 2020 as part of IMAROS project.

IMAROS is an acronym for **I**mproving response capacities and understanding the environmental impacts of new generation low sulphur **MAR**ine fuel **Oil Spills**

The workshop initiated the Work Package (WP) 2 efforts. The objectives for WP2 as stated in Grant Agreement (GA):

- to gather an overview over new generation marine fuel products (ECA compliant fuels) that are frequently encountered in European waters, supplied from European refineries or through European bunker suppliers.
- acquire small volume samples from the prevailing, and hence most relevant products for WP 3, as well as identify possible access points for acquiring larger samples for WP4.
- acquire large volume samples of the most relevant products for testing in WP4.

The agenda for workshop is enclosed with this report.

The first block of activities was aimed at gaining insight into the commercial aspects and inspiration for the dialogue with industry. The keynote speakers who presented the respective perspectives included shipowners, the bunker traders and BIMCO (who has huge maritime insight but no prevailing interests). The key points from this block were:

- The scale of economy linked to oil production and bunker trade is enormous so we have to rely on cooperation from industry.
- Sulphur limits will change the market share between Heavy Fuel Oil for ships with scrubbers and Low Sulphur fuels for ships without scrubbers are uncertain¹.
- Shipping is not aware of the full palette of characteristics of their bunker fuel. They just need fuel that – with reference to ISO standards - will be within the Sulphur emission limits and does not spoil their engines. Thus, both deliverers and receivers focus on the very few characteristics that are regulated by legislation (Sulphur content) or affect the usability in the ships' engines.

¹ Editorial note. Oil prices have varied significantly and unexpectedly after the workshop. This may influence the market and delay shipowners' decisions on which fuel to choose.

- It may be challenging to identify representative products. Bunker products are often blends of several oils. Blending may take place in large quantities in oil terminals but blending on board the bunker-boat is also common. Potentially, challenges with respect to response operations may link to unblended products from refineries while the most common blended products only have limited percentage of this particular ingredient fuel. Thus it may be challenging to link representative bunker products with the oil that has the characteristics that cause concern with respect to pollution response.

Of note, the speakers indicated some extent of uncertainty about what will prevail as future bunker. This uncertainty was partly based on the issue that shipowners allegedly lacked recognition of the rationales that had led to producing new generation low Sulphur fuels when the ships in many cases could solve the need with blends of already existing products.

After having gained insight by the speakers the focus shifted towards the collection of data and the dialogue with industry. To facilitate, a number of thematic discussions on representativeness, legislative aspects and data collection were conducted. The discussions were aimed at identifying opportunities for data collection and common inspiration for the upcoming dialogue with industry

- Representativeness discussions aimed at getting a common foothold for discussions that will be inevitable at a later stage:
 - Representativeness in a geographical perspective. We represent only six member states and hope for additional data from EMSA (via the fleet of stand-by vessels outside IMAROS member states) as well as other nations that would offer their information.
 - Representativeness in the perspective of selecting oils for further analysis. The majority of oils that are sold on the market are blended products if the statements by industry at the workshop are valid. On the other hand refineries produce the ingredient oils and among those ingredient oils the oils that pose challenges to response may be identified.
- It was decided to include both 0,1% and 0,5 % sulphur fuel oils in the further data collection.
- Legislative aspects were discussed to learn from each partner nations' vision on how national legislation may be used as a facilitator for cooperation with industry
- Data collection focused on identifying which industrial levels we should approach and the documents that were needed for the dialogue to ensure the proper information was collected. It was decided to focus on refineries and bunker deliverers² operators, while companies in between would not have our focus.
 - It was identified four documents were needed:
 - An introduction to the IMAROS project and the questions we ask industry.
 - A Statement of Intent to underline our motives for our dialogue.
 - A set of general questions to provide understanding of the market.
 - A datasheet to collect data on product characteristics.

² Delivery to end user by boat, barge, truck, pipeline etc.

- First drafts of the documents to be used for the dialogue were created³.
- The size and practicalities of handling oil samples were discussed at the final part of the meeting.

Perspectives for future work

A cornerstone to a positive outcome is the understanding – and cooperation - by commercial companies that information sharing with the Project is a win-win situation.

The member states involved in the project must get in contact with the industry stakeholders and collect their information – based on the data collected, the Project must decide which and from whom samples should be collected.

We will be transparent, and share the results with the deliverers: reports, pictures and video footage.

PS! (as of March 24th):

Concerns:

The COVID-19 situation has already a delaying impact – It is at the moment not possible to meet the stakeholders and provide them with the understanding and information necessary to gain their trust. This could delay WP2.

The oil prices and the market in generally are in turmoil and that could have an impact on the project as well.

Enclosures:

- Appendix 1: Agenda for Work Package 2 Workshop in Copenhagen 4-5 February 2020
- Appendix 2: Statement of Intent
- Appendix 3: Introduction to IMAROS Questionnaire
- Appendix 4: Questionnaire and Data Collection
- Appendix 5: Productscheme

³ The work on the documents continued after the Workshop. Final versions are attached to this report. Project partners are free to adjust the text as they deem suitable for their national dialogue. Partners would also sign the "Statement of Intent" document before presented to the industry.

Appendix 1

	Day 1	Day 2	Day 3	
0900-0915	<ul style="list-style-type: none"> Welcome - Administrative remarks - Introduction to IMAROS (Norway) 	Catch up on Day 1	<ul style="list-style-type: none"> Core Planning Team (CPT) meeting in accordance with Project Managers agenda 	
0915-0930		<ul style="list-style-type: none"> Thematic discussion 4 Data collection continued Denmark will present our way to collect data. 		
0930-0945				
0945-1000	<ul style="list-style-type: none"> Presentation of the participants and the competences in the group (All) 			
1000-1015	Coffee Break			
1015-1030	<ul style="list-style-type: none"> Keynote Speeches - Perspective of the user: Kaj S. Pilemand, Chief Technical Officer, Ultraship. 			Coffee Break
1030-1045				
1045-1100				
1100-1115	<ul style="list-style-type: none"> - Perspective of the deliverer: Steffen Volder Kortegaard, Technical Manager, Bunkerone 			<ul style="list-style-type: none"> National clarification Nations can pre plan for a national phone/skype consultation before sharing plan for data collection
1115-1130	<ul style="list-style-type: none"> - The freedom to speak from an alternative angle: Lars Robert Pedersen, Deputy Secretary General, BIMCO 			
1130-1145				
1145-1200	<ul style="list-style-type: none"> Objectives of WP2 Objectives for the seminar - Agenda for the seminar (Denmark) 			
1200-1215				
1215-1230	Lunch	Lunch	Lunch	
1230-1245				
1245-1300				
1300-1315				
1315-1330	<ul style="list-style-type: none"> Thematic discussion 1: Representativeness 	<ul style="list-style-type: none"> Thematic discussion 5: Data Collection (continued) Nations present their plan for data collection. Discussions on whether our presented plans will be representative for EU area or we need to appoint liaison functions. 		
1330-1345				
1345-1400				
1400-1415				
1415-1430	Coffee Break			
1430-1445	<ul style="list-style-type: none"> Thematic discussion 2: Legislation 			
1445-1500				
1500-1515	<ul style="list-style-type: none"> Thematic discussion 3 Data Collection: 	Coffee Break		
1515-1530		<ul style="list-style-type: none"> Plan for information sharing and process management during WP2 and into WP3. 		
1530-1545				
1545-1600				
1600-1615				
1615-1630				
1630-1645				
1645-1700	Day 1 Wrap up	Seminar Wrap up		



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Statement of intent – The IMAROS project

PURPOSE

The purpose of this letter of intent is to clarify the conditions of the use of data and ensure our sincere and honest intention of using the data solely with the purpose of gaining a better understanding of the environmental impacts of spills of low sulphur fuels, and how to respond to such spills.

SELECTION

The European refineries and bunker boat operators involved are selected by the national competent authorities within environmental protection and/or within response to oil spills in the marine environment of the partner countries.

RESPONSIBILITY OF THE IMAROS PROJECT

The data given in the questionnaire and in the project in general will only be used to achieve the objectives of the project.

Companies that have contributed to the project will be credited in an annex to the report. Specific test results of company products will be shared with the company providing samples, as well as the general report at the end of the project period.

CONTRIBUTION OF THE PROVIDER

Delivery of data free of charge and sale of quantities to the project within the agreed deadline. Oil samples as well as transportation costs are covered by the project.

Torben Iversen
Head of Environmental Response Branch
Royal Danish Navy Command
Partner in IMAROS project.



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Introduction to the IMAROS project and questionnaire

The aim of this document is to provide you with information about the IMAROS project and an understanding of the questionnaire you receive as part of the project.

IMAROS is an EU funded project¹. Norwegian Coastal Administration leads the project with partner agencies within Belgium, Denmark, France, Malta and Sweden. Additionally a number of other EFTA countries and European Maritime Safety Agency (EMSA) have indicated their support to the project.

Next phase of the low-sulphur era

The regulations to reduce sulphur oxide emissions from ships have led to a changeover in the use of fuels. A part of the global fleet now uses new generation fuels (low-sulphur fuels) for operations within Emission Control Areas (0.1% sulphur limit) and globally (0.5% sulphur limit).

The new generation fuel oils represent both distillates and residual based blends. They are to some extent manufacturer-specific products. They represent different distillation processes and potentially additives to reach the desired characteristics for use in ship's engines while complying with the sulphur emission regulations. Oil spill response testing and accidental spills have indicated significant and unforeseen variation between products in which response methods are effective. However, experience is scarce and based on a few case studies only.

The IMAROS project

To be better prepared to respond to potential accidents, the environmental and pollution response authorities have taken on the IMAROS project. IMAROS is an acronym for **I**mproving response capacities and understanding the environmental impacts of new generation low sulphur **MAR**ine fuel **O**il **S**pills.

IMAROS will address some of the challenges caused by the use of new generation low-sulphur fuels. The aims are:

- To identify which new generation low-sulphur fuel products are used in the European waters
- To identify chemical characteristics for selected products in order to identify viable response options for each of the selected products, such as mechanical recovery, chemical dispersants, in-situ burning and shoreline clean-up.

IMAROS will solely focus on environmental aspects and how to respond to potential spills. If responders are prepared and ready to respond accordingly in given situations it will lead to a win-win situation for all involved parties.

The project ends in 2021 and results from the project will be available through databases and decision support tools for oil spill responders.

¹ DG ECHO, Prevention and Preparedness Projects for Civil Protection and Marine Pollution, project number 874387

Your role in IMAROS

We hope you will contribute to IMAROS by answering the questionnaire (annex 1), the spreadsheet (annex 2) and give us the opportunity to get samples of relevant products. Every contribution is highly appreciated. The project consortium will purchase the oil samples and cover the costs for transportation to the test facilities at CEDRE² and the Belgian Institute of Sciences.

Your contribution will be highly valued and will help in understanding new generation low-sulphur fuel characteristics and behaviour under different spill conditions for optimization of response options.

Companies that have contributed to the project will be credited in an annex to the report.

All data and oil samples received will be treated accordingly to our statement of intent in annex 3.

² Center for Documentation, Research and Experimentation on Accidental Water Pollution



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Questionnaire and Data Collection

IMAROS

Please see the short introduction to the IMAROS project and the questionnaire.

The purpose of the questionnaire is to map and identify which marine fuel oils are delivered in European waters and prepare for subsequent phase of tests.

The questionnaire consists of the general questions below and an excel file for more specific data input.

1. What types of new generation Ultra Low (0.1%) Sulphur Fuel Oils (ULSFO) and Very Low (0.5%) Sulphur Fuel Oils (VLSFO) do you sell / trade / produce?
2. Have some of your old products been replaced by or lost market shares to new ULSFO / VLSFO products?

(If yes, which products have been replaced?)
3. What are your thoughts on how the market will develop? (Do you foresee ULSFO could potentially be faced out due to lack of demand as some surveys indicate?)
4. Would your company be willing to provide product data sheets?
5. Would your company be willing to provide samples for testing?
 - For initial laboratory tests of all selected products we need 2 litres.
 - For deeper laboratory tests of some of the products we will require 100 litres
 - For recovery tests we need 6 cubic metres.We will select which products to be tested and the expenses for the oil and transportation are paid by IMAROS project.
6. Do you have knowledge about tests or accidents where your normal gear or procedure has failed due to new products or their new characteristics?

Your reply to the questions above could be delivered as free text. For replies within the excel sheet please meet the explanations to each field as much as possible.

Thank you for your contribution.

Appendix 5 - Productscheme

Common information	Name (sales)*		
	Technical Name*		
	Producer*		
	Type* (Please use dropdown)		
	The product makes up X % of your total sales		
	Is the product a blended product? (Please use dropdown)		
	Do you blend the product yourself? (Please use dropdown)		
	Has this product been tested/reported to other projects? (Please use dropdown)		
	Do you have a recovery test certificate or similar information		
	When did you start to produce the product		
	Sulfur content in %*		
	Trace and heavy metal contents in %		
Information to be used by the Lab & Recovery tests	Viscosity/50 °C		
	Density/15 °C*		
	Flashpoint*		
	Pour point in °C*		
	Saturated in %		
	Aromatics in %		
	Resin in %		
Information to be used by Recovery Tests	Asphaltene in %		
	Cloud Point °C		
	Paraphine/waxes in %*		

Data marked with a * are not mandatory but very important for the project - to be considered as NEED and the rest as NICE to have