



Marine Pollution Response Assistance

Frequently Asked Questions



What marine pollution response assistance can EMSA provide?

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1. Introduction

These Frequently Asked Questions (FAQ) contain useful information on the assistance that the European Maritime Safety Agency (EMSA) can provide with respect to responding to a marine pollution incident. The FAQ cover the types of assistance available, the associated procedures, as well as who is eligible to request assistance from the Agency.

The European Maritime Safety Agency was set up in the aftermath of the *Erika* for the purpose of ensuring a high, uniform and effective level of maritime safety and maritime security¹. Following the *Prestige*, the Agency was tasked to address the field of preparedness for and response to pollution from ships.

EMSA therefore provides Member States and the Commission with technical and scientific assistance in the field of accidental or deliberate pollution by ships and supports on request, through the Community Mechanism², the pollution response mechanisms of Member States.

The Member State has the primary responsibility to respond to an incident and the co-ordination of the response. EMSA support is therefore to "top-up" the efforts of coastal states by focusing on spills beyond the national response capacity of individual Member States. The Agency is able to provide, upon request, the following pollution response assistance:

- Pollution response vessels for at-sea recovery of oil.
- Satellite imagery service for monitoring of spills (operational as of March 2007).
- Pollution response experts to give operational and technical assistance.

2. EMSA's Objectives in the Field of Pollution Response

2.1. WHAT ARE EMSA'S MAIN OBJECTIVES IN THE FIELD OF MARINE POLLUTION RESPONSE AND WHAT IS THE LEGAL BASIS FOR THIS?

The amended EMSA Regulation³ introduces two legal obligations for the Agency in the field of pollution response:

- "To provide Member States and the Commission with technical and scientific assistance in the field of accidental or deliberate pollution by ships."
- "To support upon request with additional means in a cost efficient way the pollution response mechanisms of Member States."

¹ Regulation (EC) N°1406/2002 of the European Parliament and of the Council of 27 June 2002 establishing a European Maritime Safety Agency (OJ L 208, 5.8.2002, p.1).

² Council Decision (EC) N°2001/792 of 23 October 2001 establishing a Community mechanism to facilitate reinforced cooperation in civil protection assistance interventions (OJ L 297 15.11.2001, p.7).

³ Regulation (EC) N° 724/2004 of the European Parliament and of the Council of 31 March 2004 amending Regulation (EC) N° 1406/2002 establishing a European Maritime Safety Agency (OJ L 129, 29/4/2004, p.1).

EMSA's Administrative Board is legally responsible for defining a detailed plan with regard to the Agency's preparedness and response activities. In doing this, the Administrative Board is obliged to take into account the existing pollution response activities and means of each EU Member State and also to optimise the financial means of the Agency. Consequently, in October 2004 the Administrative Board adopted EMSA's Action Plan for Oil Pollution Preparedness and Response. The framework for the Agency's activities in this field is described in this plan. The 2006 Work Programme and subsequent versions approved by the Agency's Administrative Board update the Action Plan. According to the Action Plan, EMSA's pollution response actions relate to activities in the fields of:

- operational support,
- co-operation and co-ordination,
- information.

Operational support includes assistance to Member States by providing on request, additional at-sea oil recovery vessels to assist in pollution response operations.

From March 2007, the satellite service will be operational and the Agency will be able to provide Member States with a pan-European operational system for marine oil slick detection and surveillance. This will improve the response to accidental spills.

The Agency's work in the field of pollution response must take into account the existing **co-operation and co-ordination** between Member States in the context of the Regional Agreements for assistance in the event of an oil spill. Of primary importance is to enhance the existing co-operation between Member States. For this purpose, EMSA acts in support of the technical and operational activities of the Regional Agreements.

The European Union Member States and the European Community are Contracting Parties to the Regional Agreements. The Agency's mandate includes scientific and technical assistance to the European Commission, EMSA is therefore in a key position to facilitate dissemination of information and knowledge and to help optimise different activities.

The **Information** area includes assembling, analysing and disseminating best practices, information and innovation in the field of pollution response. The Agency has carried out a number of activities in the information field including:

- the development of decision support software tools for oil pollution response equipment and for oil spill dispersants, intended to assist EU Member States in determining the most appropriate response to an oil spill;
- conducting workshops on pollution response related issues;
- producing various publications including an "Inventory of EU Member States Oil Pollution Response Capacity" (updated in 2006), an "Inventory of national policies regarding the use of oil spill dispersants in the EU Member States" and an "Overview of EU-funded R&D projects in the field of marine pollution response";
- developing a dedicated Pollution Response area on the Agency's website.



Tug with deployed boom

3. Types of Pollution Response Assistance

3.1. WHAT POLLUTION RESPONSE ASSISTANCE CAN EMSA OFFER DURING AN EMERGENCY?

As indicated in the Action Plan for Oil Pollution Preparedness and Response, EMSA's operational task should be a "logical part" of the oil pollution response mechanism of coastal states requesting support and should "top-up" the efforts of coastal states by focusing on spills beyond the national response capacity of individual Member States.

The Agency fulfils this operational role in the field of pollution response by providing the following assistance:

- Making available at-sea oil recovery vessels for pollution response operations.
- Providing a satellite imagery service for monitoring spills to complement surveillance and monitoring activities currently undertaken by aircraft (to be operational in 2007).
- Making available pollution response experts to assist national authorities in charge of pollution response operations. They can provide operational and technical support.

4. Terms of Assistance

4.1. WHO IS ENTITLED TO REQUEST POLLUTION RESPONSE ASSISTANCE FROM EMSA?

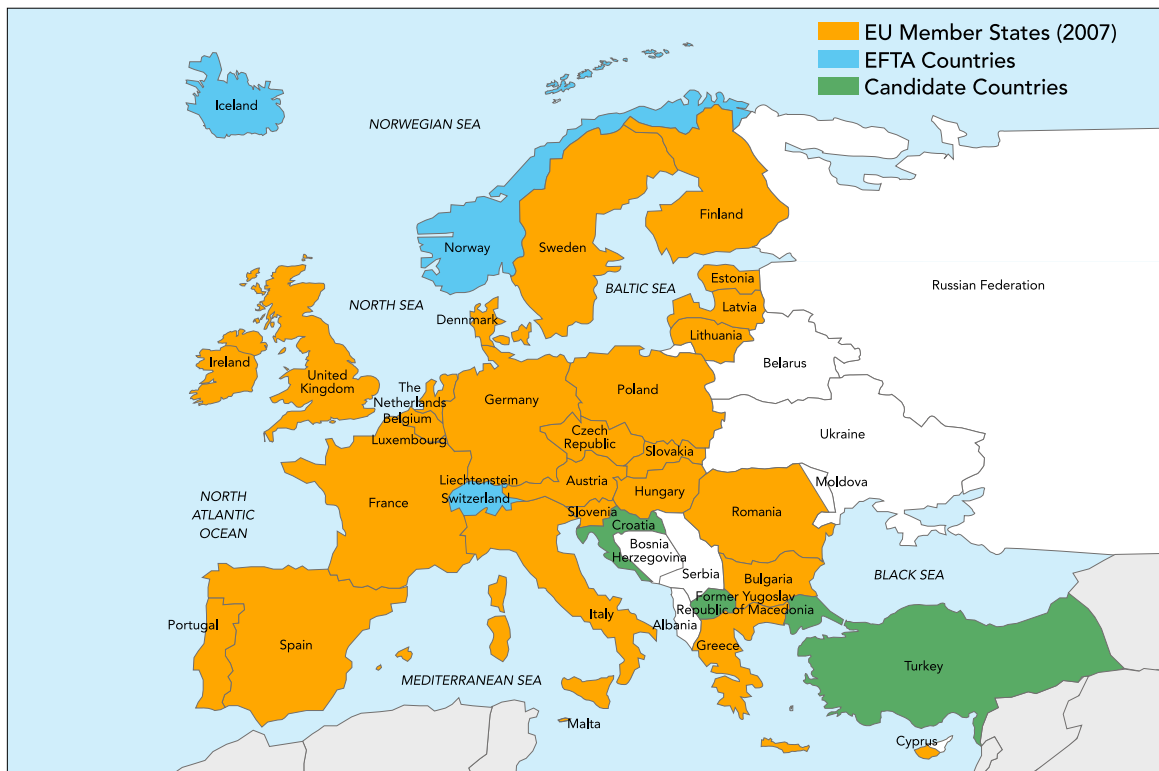
According to the amended EMSA Regulation, the Agency is tasked to assist the following countries and institution:

- European Union (EU) Member States
- European Free Trade Agreement (EFTA) Contracting Parties
- European Union Candidate Countries
- European Commission

The following relevant states and institution can request pollution response assistance from EMSA:

Country	Category	Country	Category
Austria	EU Member State	Latvia	EU Member State
Belgium	EU Member State	Liechtenstein	EFTA
Bulgaria	EU Member State (1 st January 2007)	Lithuania	EU Member State
Croatia	Candidate country	Luxembourg	EU Member State
Cyprus	EU Member State	Malta	EU Member State
Czech Republic	EU Member State	Norway	EFTA
Denmark	EU Member State	Poland	EU Member State
Estonia	EU Member State	Portugal	EU Member State
Finland	EU Member State	Romania	EU Member State (1 st January 2007)
Former Yugoslav Republic of Macedonia	Candidate Country	Slovakia	EU Member State
France	EU Member State	Slovenia	EU Member State
Germany	EU Member State	Spain	EU Member State
Greece	EU Member State	Sweden	EU Member State
Hungary	EU Member State	The Netherlands	EU Member State
Iceland	EFTA	Turkey	Candidate Country
Ireland	EU Member State	United Kingdom	EU Member State
Italy	EU Member State	European Commission	EU Institution

Requests for assistance from other bodies or organisations, for example the Regional Agreements, are dealt with on a “case by case” basis. The figure below provides a geographical overview of those relevant states that can request assistance.



4.2. WHAT IS THE APPROPRIATE CHANNEL AND PROCESS TO REQUEST EMSA POLLUTION RESPONSE ASSISTANCE?

Under Article 2 of the amended EMSA Regulation, the Agency’s additional oil recovery capacity should be channelled to the requesting Member State through the existing Community Mechanism in the field of civil protection.

Accordingly, a Member State will have to channel its request through the Commission’s Monitoring and Information Centre (MIC). The MIC is accessible 24 hours a day and managed by the Directorate General for Environment of the European Commission in Brussels, Belgium.

From an operational point of view, when receiving a request for assistance, the MIC immediately forwards the request to a network of contacts including the National Administrations and EMSA. These participating bodies inform the MIC whether they are in a position to offer assistance. The MIC compiles the responses and informs the requesting State of the available assistance. The affected country then selects the assistance it needs and establishes direct contact with the assisting countries or organisations.

5. EMSA At-sea Oil Recovery Vessels

5.1. WHAT ARE THE TERMS AND CONDITIONS FOR USING THE EMSA AT-SEA OIL RECOVERY VESSELS?

The Agency has established at-sea oil recovery capacity through three year contracts with ship operators and spill response companies. Oil recovery vessels are available via EMSA to work under the command and control of the affected Member State. For this purpose, the Agency has developed a two contract system as described below.

A “Vessel Availability Contract”: Contract concluded between the Agency and the ship operator, it ensures the availability of the vessels at any time. In particular, under this Contract, the ship operator is obliged to respond positively to a request for assistance transmitted by EMSA. In addition, it addresses technical modifications made to the vessels with respect to pumping, heating and any oil recovery equipment as well as organising drills and participating in exercises.

An “Incident Response Contract”: Contract to be concluded between the ship operator and the affected State. This pre-established model contract covers the actual oil recovery operations and includes the associated hire rates.

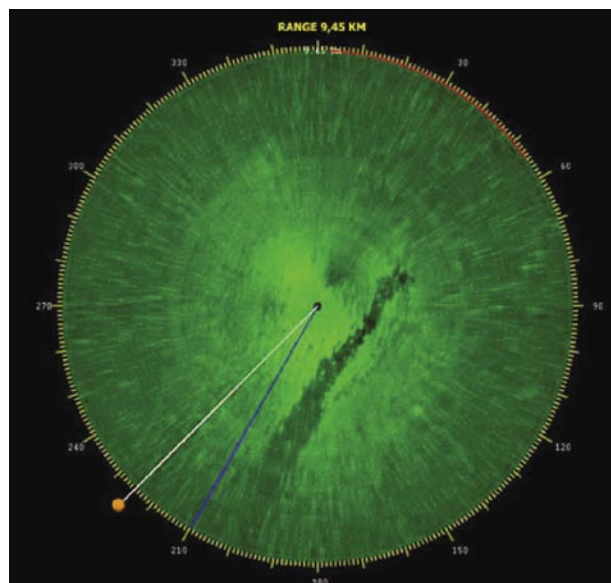
It should be stated that the ships operate commercial services and are available for oil pollution response operations when needed. Following a request for assistance, EMSA will activate or even pre-mobilise the vessel to facilitate the operation. The command and control during an incident rests with the Member State using the vessel.

5.2. WHAT ARE THE MAIN CHARACTERISTICS OF THE EMSA CONTRACTED OIL RECOVERY VESSELS?

The EMSA contracted oil recovery vessels are commercial vessels that can be adapted for oil pollution response activities. The main purpose is to carry out at-sea oil recovery services.

The contracted vessels all have large recovered oil storage capacities and a choice of oil recovery systems (sweeping arms or boom & skimmer system). In order to improve the efficiency of at-sea operations, each vessel is:

- Equipped with a local radar based oil slick detection system;
- Able to decant excess water so maximising the utilisation of the onboard storage capacity;
- Able to heat the recovered cargo and utilise high capacity screw pumps in order to facilitate the discharging of heavy viscous oil;
- Equipped with specialised oil spill response equipment which has been selected according to regional factors such as the weather conditions in the stand-by areas. All of the specialised oil spill response and associated equipment is containerised in order to facilitate rapid installation onboard the vessels.



Screen shot from an oil slick detection system as onboard EMSA contracted vessels

More information on the EMSA contracted oil recovery vessels is available from the Agency's website www.emsa.europa.eu under the "Pollution Response" section. Particular documentation includes:

- An "Information Note on Stand-by Oil Recovery Vessels for Europe"
- "EMSA Contracted Oil Recovery Vessels - Community Information System (CIS)".



EMSA contracted vessel *Breeze* with sweeping arms deployed during the HELCOM BALEX Exercise 2006.



EMSA contracted vessel *Ile de Bréhat* during an exercise in 2006.

5.3. WHEN DOES THE REQUESTING MEMBER STATE SELECT THE MOST SUITABLE OIL POLLUTION RESPONSE EQUIPMENT FOR THE GIVEN INCIDENT?

Each of the contracted vessels will carry two types of oil recovery systems on board. One is based on the sweeping arm concept, the other on an ocean going boom and skimmer system. The State requesting assistance will select the most suitable equipment for the given incident depending on various factors such as oil type, weather conditions, spill location or use both systems. The requesting State charters the equipped vessel and will pay a fixed rate for the vessel (including equipment) except for the costs for bunker fuel for which the actual market prices apply.



Oil pollution response equipment drill on board the EMSA contracted vessel *Ile de Bréhat*

5.4. CAN A MEMBER STATE ACTIVATE THE EMSA OIL RECOVERY VESSELS BY CONTACTING THE CONTRACTOR DIRECTLY?

Under the contractual arrangements in place, EMSA oil recovery vessels can only be activated by the Agency. As described earlier in Section 4: “Terms of Assistance”, from a legal point of view and as clearly stated in the amended EMSA Regulation, the Agency will make its means available to the “affected Member State under which the cleaning operations are conducted” only after a specific request is sent via the Community Mechanism. The request to activate the EMSA additional means will therefore be channelled through the Monitoring and Information Centre (MIC).

Under the terms of the Vessel Availability Contract, the vessel will only respond once the Contractor has received a Notice of Pollution Response from the Agency. In case of an emergency EMSA can be contacted directly at any time of the day (24/7).

5.5. CAN AN EMSA OIL RECOVERY VESSEL BE USED FOR LIGHTERING OPERATIONS, SHIP TO SHIP TRANSFER, OR TO STORE RECOVERED OIL?

Through implementing the Action Plan for Oil Pollution Preparedness and Response and the Work Programme 2006, the Agency has established contracts for “state of the art” oil spill response arrangements with shipping companies and response equipment manufacturers. Under the agreements, the EMSA Oil Recovery Vessels are tasked to specifically offer at-sea oil recovery services. EMSA has financed specialised oil spill response equipment which can be installed rapidly on board the vessel and operated safely by the crew. In principle, these EMSA contracted oil recovery vessels are not meant to be used for storage of oil recovered at-sea or at-sea lightering operations or receiving oil recovered by other pollution response vessels, although this is not formally excluded. In all cases the standard terms and conditions, including hire rates, apply.

6. EMSA Satellite Monitoring and Surveillance Service

6.1 HOW DOES THE EMSA SATELLITE SERVICE WORK?

The EMSA satellite service offers extensive surveillance of European waters for oil spills by using radar images acquired by Synthetic Aperture Radar (SAR) sensors on polar orbiting satellites. SAR sensors have the capability to detect oil slicks on the sea surface in darkness as well as daylight hours and to see through clouds.

These sensors send out short bursts of microwave energy and then record the strength and origin of the returning reflections. SAR sensors can estimate the roughness of a target surface which is captured in the radar reflection patterns of an image. An oil slick at sea “smooths” the water surface and thus reduces the radar backscatter to the sensor. This creates a darker signature in the image which, after automatic processing, experienced analysts can then interpret as a possible oil slick. Many other factors affect the interpretation of an image such as wind, the presence of sea ice or naturally occurring algae blooms and these need to be taken into account at the time of analysis. Such analysis can be provided by or via the Agency. The final verification of the possible slick needs to be done by *in-situ* means such as vessel or aerial surveillance.

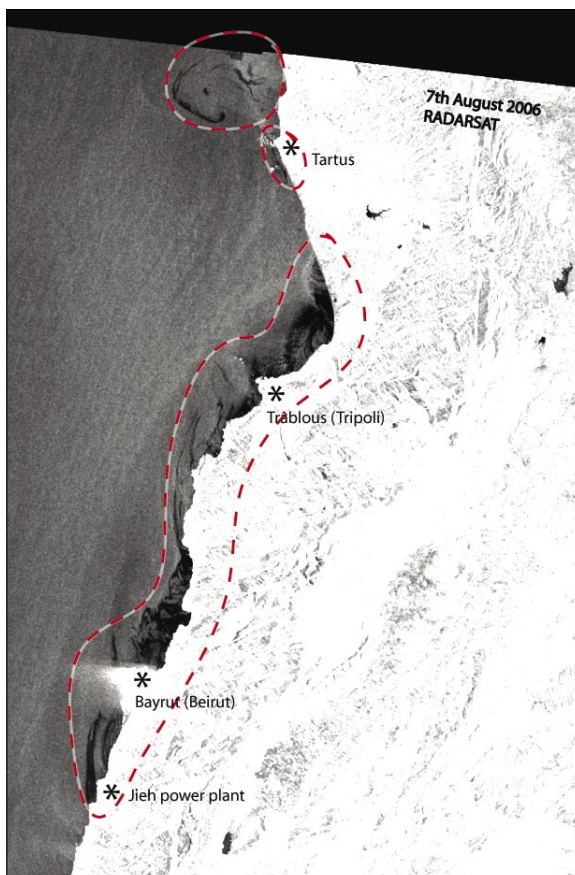
These SAR images are rapidly transmitted to the nearest ground station, where they are processed and interpreted by experienced image analysts. If an oil spill is detected the image and alert information will be sent to the pollution control authorities of Member States in “near real time” of satellite overpass of the area of interest. National aerial and vessel surveillance patrols can then target this area to verify the spill and if possible identify the polluter. By complementing national aerial and vessel surveillance with satellite images, a more cost effective use of these expensive resources is achieved. Wide area surveillance coverage using satellite images (up to 405 km x 405 km for one image) will lead to a stronger deterrence of potential polluters.

6.2. WHAT INFORMATION CAN THE EMSA SATELLITE SERVICE PROVIDE?

The service will provide a range of information including:

- Oil spill alerts to Member States and rapid delivery of all available satellite images over the area of interest,
- Slick position/extent/pattern/shape,
- Assimilated meteorological wind and wave data,
- Local wind and wave data derived from the SAR image.

Alerts to Member States will be delivered by email or phone SMS. Delivery of the satellite images and reporting of information will be available through the EMSA web interface directly to the operational pollution control authorities in Member States and the Commission. Support for image interpretation is available from experienced image analysts. In addition, extended monitoring of the area of interest by satellite images for the duration of the spill event can also be set-up.



The satellite images do not provide information on:

- Thickness of the slick /volume of oil on the sea surface.
- Oil under the sea surface.

Certain environmental conditions can interfere with the detection of slicks however they are well characterised by image analysts. Such conditions, which will be taken into account during the interpretation of the SAR images, include very high or very low wind speed (slicks can be detected with a wind between 2-12 m/sec) and/or the presence of sea ice or algae blooms.

EMSA will continue to develop other integrated information sources into the EMSA service beyond the 2007 time frame.

Radarsat image from 7th August 2006 along the coast of Lebanon showing a slick extending from the pollution source at Jieh (Lebanon) for a distance of 150 km.

6.3. WHAT IS THE ADDED VALUE OF A PAN-EUROPEAN OPERATIONAL SYSTEM FOR MARINE OIL SLICK DETECTION AND SURVEILLANCE?

While some Member States already use satellite data to support marine surveillance activities on a national or regional level, other Member States have not taken action in this field so far. To develop a common sustainable European system, EMSA would like to transfer expertise from regions with experience in satellite surveillance to regions with no operational experience in this field.

It has been demonstrated, through examples from both HELCOM and the Bonn Agreement, that satellite services operated at a regional level allow co-ordination of surveillance resources and an improvement in cost efficiency for aerial and vessel surveillance. In addition, the purchase of a large volume of imagery creates a cost reduction due to economies of scale.

A common approach to oil spill surveillance at European level using compatible data standards and methodologies will support the development of robust statistics for oil pollution monitoring and create baseline measurements that may be extended in the future.

For the detection of polluters, a European level system combining spill information with vessel traffic data should become operational in 2008.

6.4. CAN EMSA SATELLITE MONITORING SERVICES SUPPORT MEMBER STATES EFFORTS TO DETER DELIBERATE DISCHARGES?

One of the purposes of Directive 2005/35/EC is to ensure that persons responsible for illicit discharges are subject to adequate penalties. EMSA is tasked to co-operate with the Member States and the Commission for the implementation of the Directive. Although the needs for routine operational surveillance and emergency situations are different, satellite imagery complements other remote sensing resources such as dedicated aircraft. A common information infrastructure between EMSA and the Member States' pollution control authorities, eventually integrating Automatic Identification System (AIS) information and numerical modelling for drift forecast and hindcast, will improve information sharing and operational means for tracing polluters and supporting further prosecution, fully organised and executed by the Member States themselves.

6.5. HOW CAN EMSA ASSIST IN SATELLITE MONITORING AND SURVEILLANCE DURING AN ACCIDENTAL OIL SPILL?

In case of an accidental spill, Member States and/or the European Commission will normally activate the International Charter "Space and Major Disasters". During 2007 EMSA will be ready to offer additional services upon request. The Agency may be asked to assist in analysing satellite imagery, to help coordinate and order all possible satellite imagery to continuously monitor the evolution of an accidental spill as well as to assist in applying forecasting computer models. Such imagery would be delivered free of charge on a "near real time" basis to Member States, EFTA Contracting Parties, Acceding Countries and the European Commission.

7. EMSA Pollution Response Expertise

7.1. WHAT IS THE PROCEDURE TO CALL UPON EMSA EXPERTS?

EMSA provides Member States and the Commission with technical and scientific assistance in the field of accidental or deliberate pollution from ships and supports on request, through the Community Mechanism, the pollution response mechanisms of Member States.

The provision of expertise by the Agency can be characterised on the following basis:

- On-site personnel providing support across a range of issues including equipment selection and response co-ordination,
- Personnel providing support as part of the central response co-ordination of the Member State.

A request for assistance from a state affected by an at-sea pollution incident may include requesting personnel with specialist expertise. The Agency is able to provide experts to go to the site of the incident to assist the requesting state. An example of such support relates to the recent Lebanon spill. On request of the European Commission, an EMSA staff member assisted the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) in co-ordinating the international response assistance to the oil spill in Lebanon.

7.2. WHICH TYPE OF SUPPORT CAN EMSA EXPERTS PROVIDE?

The state affected by a major spill can request the secondment of one or several EMSA experts. The types of secondment will be established on a case by case basis depending of the kind of assistance needed. EMSA experts will provide technical support to the affected State(s) either on site or from EMSA's premises in Lisbon. Experts may also act as "liaison officers" to arrange, if necessary, for additional assistance to be provided by EMSA i.e. vessels or satellite imagery.

Any country affected by a major disaster, inside or outside the European Union, can launch a request for assistance through the MIC. Consequently EMSA's pollution response experts could be deployed outside of the EU.

8. Decision Support Information and Tools

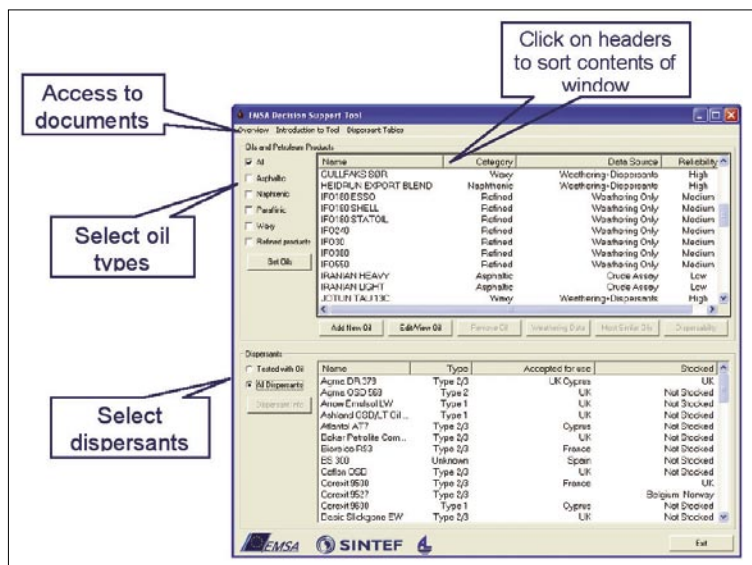
8.1. CAN EMSA ASSIST THE RESPONDERS IN TAKING DECISIONS RELATED TO POLLUTION RESPONSE MEANS?

The Agency has developed decision support tools with a view to assisting the activities related to response to marine pollution emergencies. The initial target for these tools was to act as resources for the EMSA response experts. In 2005, the Agency presented to Member states experts two decision support software tools.

A manual on the classification of pollution response equipment has been distributed to Member States. The main goal of this manual is to establish a rating system per category of available national oil spill response capacities in order to help the affected Member State to select the most suitable equipment for a specific type of oil under specified conditions. Based on this manual, a computerised decision-support system has been developed. Following feedback from Member State experts, it is intended that the manual and associated software are updated and available in 2007.

In December 2005, a manual, consisting of an overview and a decision-support software tool, on the applicability of oil spill dispersants was presented to national pollution response experts.

- The "Overview" provides valuable and concise information regarding the state of knowledge of dispersant use, including the basic characteristics, the applicability and operational use of different types of oil spill dispersants;
- The "Decision Support Software Tool on the Applicability of Oil Spill Dispersants" contains a software programme that allows the user to compare information about a specific oil, its "weathering" characteristics and its dispersability. The Tool assists in the selection of the most appropriate dispersant relative to the type of oil spilled at sea and supplies information regarding dispersant effectiveness, application and availability.



Screen shot from the Decision Support Software Tool on the Applicability of Oil Spill Dispersants

Following their request for further development of the software tool, an updated version will be made available to the Member States in 2007.

The Agency has also compiled, in close co-operation with the Member States, a number of publications which could also be relevant during an incident, namely:

- An inventory on "Member States pollution response capacities" (updated in 2006). This provides an overview of all the at-sea response resources available in EU and EFTA countries. In particular, there is available information regarding the availability, distribution, costs and model contracts relating to multi-purpose oil recovery vessels.
- An inventory of "National policies regarding the use of oil spill dispersants in the EU Member States". This provides information, for each Member State, on the usage of oil spill dispersants as an oil spill response strategy, the testing and approval procedures for chemical dispersants and the available means and equipment for dispersant application.

9. How to Contact EMSA for Further Information?

Further information on EMSA and its marine pollution activities can be accessed as described below:

- For general information about EMSA activities visit the Agency website: www.emsa.europa.eu
- All marine pollution publications are available from the dedicated "Pollution Response" area of the website, accessible from the website "homepage".
- For any other general enquiries related to marine pollution response, contact EMSA: Pollution Response Unit via email: pollution-response@emsa.eu.int.



Abbreviations

AIS	Automatic Identification System	IRC	Incident Response Contract
EC	European Community	MIC	Monitoring and Information Centre
EFTA	European Free Trade Agreement	MS	Member State
EMSA	European Maritime Safety Agency	REMPEC	Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea
EU	European Union	SAR	Synthetic Aperture Radar
HELCOM	Helsinki Commission	VAC	Vessel Availability Contract
HNS	Hazardous and Noxious Substances		



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