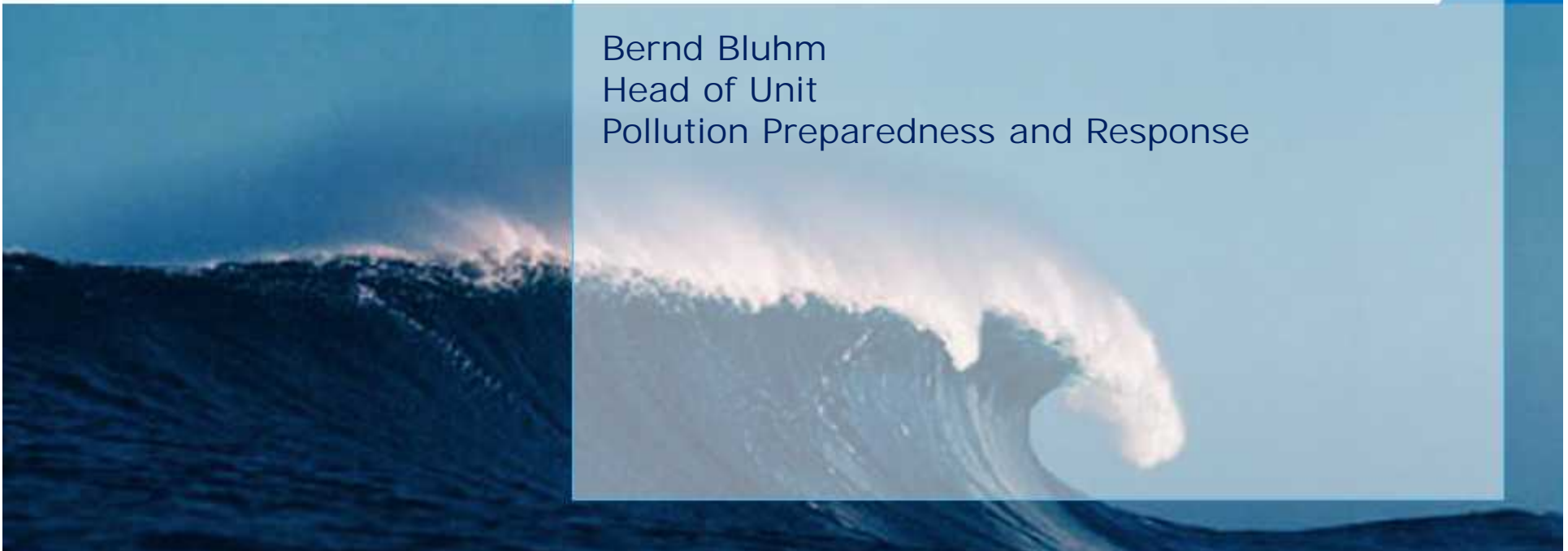


Information Meeting  
EMSA NEG/1/2013 – Stand-by Oil Spill  
Recovery Vessels

## Introduction to EMSA's At-sea Oil Recovery Service

19 February 2013, Zagreb

Bernd Bluhm  
Head of Unit  
Pollution Preparedness and Response



# European Maritime Safety Agency

## Background:

- Post Erika (2002: EMSA established)
- Post Prestige (2004: new task Marine Pollution Preparedness & Response)

## Decentralised Agency of the European Community

- Own legal identity
- No legislative role
- Technical and operational support

## Legal basis

Regulation 1406/2002 as amended



## Framework for Service Network of Stand-by Oil Spill Response Vessels

- “Top-up” Member States pollution response capabilities
- “European Tier” of resources
- Mobilisation by EMSA at request of MS/EFTA/CC or Commission
- Channelled through “EU Community Mechanism”
- Monitoring and Information Centre (MIC) managed by DG ECHO
- Under “operational control” of the affected coastal State

## Scope of the work

Main Objective:  
Stand-by At-sea Oil Recovery Service

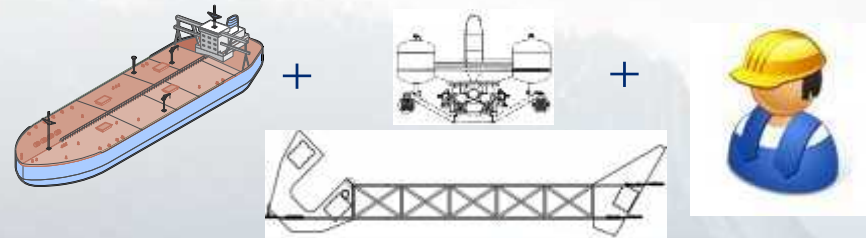
Contractor to ensure that:

- Vessel undertakes normal commercial activities; and
- At request, transformed & mobilised at short notice for at-sea oil recovery services

## Dual Contract Structure



## At-sea Oil Recovery Service





- Between EMSA and the Contractor
  - 4 Years + Renewable once = Maximum 8 years total
- It secures:
  - Requirements for vessel(s), equipment and crew
  - Stand-by / availability
  - Drills and participation in exercises
  - Mobilisation time
  - Mandatory use of the Incident Response Contract



Pre-fixed contract with pre-set conditions & tariffs:

- Between the requesting coastal State and contractor
- Avoid unnecessary high tariffs vs. vessel of opportunity
- 1 Model Contract for 20+ different legal systems



## I RC: Some key provisions

- Clear allocation of responsibilities during operation
  - Under operational command of the MS (SOSC)
  - National officer on board
  - Safety responsibility: Master (Final)
- Period: 21 Days: “window of opportunity” / economic commitments of operator
- Costs
  - 2 daily rates (operation/stand-by)
  - Operational costs (fuel)
  - Cleaning
- Renewal possible under same conditions



Tankers



Icebreaker



Type of vessels

9

Supply Vessels



Dredgers



## Tankers - Advantages

- Large storage capacity – (EMSA largest is 7,400m<sup>3</sup>)
- Prepared to deal with oil (heating, filling, discharging)
- Flexibility for decanting
- Flashpoint
- Unrestricted sea-going service



## Tankers - Disadvantages

- Space on deck
- Speed
- Low speed
- Manoeuvrability
- Crew number
- Accommodation





## Offshore Supply Vessels - Advantages

- Deck Space
- Equipment Deployment
- Less pre-fitting for installing equipment
- Manoeuvrability and Low Speed
- Speed
- Visibility
- Accommodation for EMSA, liaison officers



## Offshore Supply Vessels - Disadvantages

- Storage capacity limited to 1,000 – 1,500m<sup>3</sup>
- Bad weather – swell washes the aft with oil (slippery)
- Good weather – dirty equipment – oil spreads quickly
- Flashpoint
- Significant pre-fitting (e.g. piping and heating)





Type of equipment





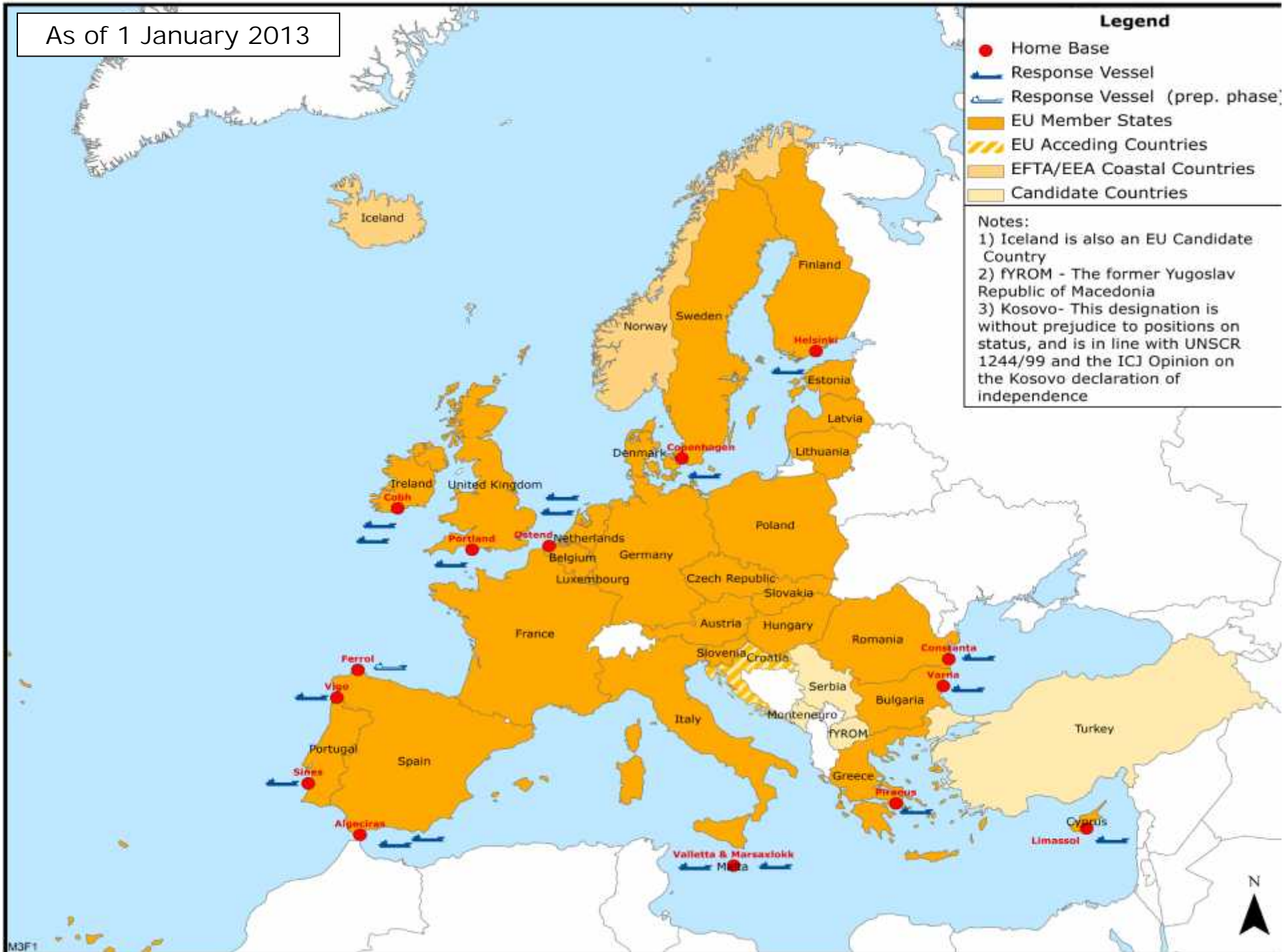
As of 1 January 2013

### Legend

- Home Base
- ← Response Vessel
- ← Response Vessel (prep. phase)
- EU Member States
- ▨ EU Acceding Countries
- EFTA/EEA Coastal Countries
- Candidate Countries

### Notes:

- 1) Iceland is also an EU Candidate Country
- 2) FYROM - The former Yugoslav Republic of Macedonia
- 3) Kosovo - This designation is without prejudice to positions on status, and is in line with UNSCR 1244/99 and the ICJ Opinion on the Kosovo declaration of independence





## Setting-up the Service

### Preparatory Phase

- Purchase of oil spill response equipment
- Pre-fitting the vessel for equipment installation
- Crew Training

### Stand-by phase

- Vessel available to respond
- Drills and Exercises
- Mobilisation (24 hrs.)

## Preparatory Phase: Challenges

- Pre-fitting, conversion works
- Purchase and installation of OPR equipment
- Mobilisation Plan, Operational Procedures
- Crew Training
- Certification by Classification Society (Class Notation)
- Acceptance Test



## Stand-by Phase: Drills

Quarterly - 4 times a year

Scope:

- To verify the level of readiness of vessels, crews and response equipment
- To train crews in oil pollution response: equipment operation, co-operation with other units at sea etc.



## Stand-by Phase: Exercises

### Type:

- Notification
- Operational (10 days/year)

### Scope:

- Integration of EMSA vessels in Command and Control Structures
- Co-operation with participant Units
- Internal and External level of Coordination



## Financial Elements

- ❑ Preparatory Phase - Pre-financing available from EMSA
  - 1) Oil Spill Response Equipment
    - Purchasing - Pre-financing up to 100 %
  - 2) Pre-fitting Vessels (e.g. for equipment installation)
    - Pre-financing up to 80 %
    - Remaining 20% paid when vessel operational/stand-by phase
  
- ❑ Stand-by phase
  - 3) Vessel Availability Fee (covers drills)
  
- ❑ Additional Payments
  - 4) At-sea Exercises: Daily rate + Fuel
  - 5) Pollution Response Incident: Daily rate + Fuel



AEGEAN SEA

NETWORK OF STAND-BY OIL SPILL RESPONSE VESSELS - INFO SHEET

**CONTRACTOR**  
Environmental Protection Engineering (EPE)

**CONTRACTED VESSELS:**  
Aktea OSRV, Aegis I

**AREA OF ECONOMIC OPERATION**  
Aegean sea/Greek Islands

**STOCKPILE LOCATION**  
Piraeus, Greece

**NUMBER OF VESSELS TO BE MOBILISED**  
1

**MOBILISATION TIME**  
Within 20 hours



**ABOUT THE SERVICE**

The arrangement includes a tanker, Aktea OSRV, trading in Greek waters and a stockpile permanently installed onboard. The second vessel, Aegis I, is a back-up vessel equipped with a boom and a skimmer.

Environmental Protection Engineering is one of the major companies in the field of environmental protection in Greece and the wider area of the Eastern Mediterranean, with a variety of activities: marine pollution response, wreck removal, waste management, remediation and handling of polluted or destroyed cargoes.

**EQUIPMENT STOCKPILE**

Sweeping arms  
Two Koseq rigid sweeping arms (15 m) with weir skimmer Boom  
Markleen single point inflation, 2x250 m (Uniboom X-1900)  
Desmi heavy duty boom, 2x250 m (Ro-Boom 2000)  
Skimmer  
Foiles weir skimmer (TDS 250)  
High-capacity Offshore Multiskimmer (Normar 250 TT)  
Desmi weir/brush/disc skimmer (Tarantula)  
Slick detection  
Sondaq oil slick detection system  
Additional equipment: Gas detector, Mini Lab, etc.



Sweeping arm



Foiles skimmer



Markleen boom



Normar Multiskimmer

**ABOUT THE VESSEL - Aktea OSRV**



The Aktea OSRV's commercial activity is oil trading.



IMO Number: 8801321  
Flag State: Greece  
Port of Registry: Piraeus  
Type: Oil Tanker  
Built: 1989  
Length: 78.50 m  
Breadth: 12.60 m  
Max Draft: 6.20 m  
DWT: 2500 Ton  
Gross Tonnage: 1646 Ton  
Storage capacity: 3000 m<sup>3</sup>  
Heating capacity: 3000 kW  
Pumping capacity: 1000 m<sup>3</sup>  
Flash Point: < 50°C  
Propeller: Controllable Pitch Propeller  
Bow Thruster: Yes  
Max. speed: 12.6 knots  
Classification Society: Lloyds Register

NETWORK OF STAND-BY OIL SPILL RECOVERY VESSELS - INFO SHEET

**ABOUT THE VESSEL - Aegis I**



The Aegis I is an offshore supply vessel



IMO Number: 7392857  
Flag State: Greece  
Built: 1985  
Type: Supply Vessel  
Length: 61.50 m  
Breadth: 11.50 m  
Max. Draft: 3.50 m  
DWT: 1023 Tons  
Gross Tonnage: 1274 Tons  
Storage capacity: 997 m<sup>3</sup>  
Flash Point: > 60°C  
Propeller: 2 x Controllable Pitch Propeller  
Bow Thruster: Yes  
Max. speed: 12.7 knots  
Classification Society: DNV

**ADVANTAGES OF RESPONSE SYSTEMS**

- State of the art equipment which provides good effectiveness for pollution response
- Flexibility of the response systems allows different operational configurations
- Sweeping arms tailored for recovery of heavy viscous oil



EMSA's vessel network provides a service across the European coastline. For more information, visit the EMSA web site and consult the related brochure: 'Supporting Coastal States: Service Network of Stand-by Oil Spill Response Vessels', or watch the video 'Oil Spill Response Services, Video 2009'

Name	Type	Base of Operation / Operational Area	Year of Delivery
Aegis I	Supply vessel	Greece (Aegean Sea)	1985
AKA	Supply vessel	Greece (Aegean Sea)	1985
AKB	Supply vessel	Greece (Aegean Sea)	1985
AKC	Supply vessel	Greece (Aegean Sea)	1985
AKD	Supply vessel	Greece (Aegean Sea)	1985
AKE	Supply vessel	Greece (Aegean Sea)	1985
AKF	Supply vessel	Greece (Aegean Sea)	1985
AKG	Supply vessel	Greece (Aegean Sea)	1985
AKH	Supply vessel	Greece (Aegean Sea)	1985
AKI	Supply vessel	Greece (Aegean Sea)	1985
AKJ	Supply vessel	Greece (Aegean Sea)	1985
AKK	Supply vessel	Greece (Aegean Sea)	1985
AKL	Supply vessel	Greece (Aegean Sea)	1985
AKM	Supply vessel	Greece (Aegean Sea)	1985
AKN	Supply vessel	Greece (Aegean Sea)	1985
AKO	Supply vessel	Greece (Aegean Sea)	1985
AKP	Supply vessel	Greece (Aegean Sea)	1985
AKQ	Supply vessel	Greece (Aegean Sea)	1985
AKR	Supply vessel	Greece (Aegean Sea)	1985
AKS	Supply vessel	Greece (Aegean Sea)	1985
AKT	Supply vessel	Greece (Aegean Sea)	1985
AKU	Supply vessel	Greece (Aegean Sea)	1985
AKV	Supply vessel	Greece (Aegean Sea)	1985
AKW	Supply vessel	Greece (Aegean Sea)	1985
AKX	Supply vessel	Greece (Aegean Sea)	1985
AKY	Supply vessel	Greece (Aegean Sea)	1985
AKZ	Supply vessel	Greece (Aegean Sea)	1985

EMSA is a part of the European Union's maritime safety services. See [www.emsa.europa.eu](http://www.emsa.europa.eu) for more information.  
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## KOSEQ SWEEPING ARM SYSTEM

Remark: The information is based on the manufacturer's documentation

### GENERAL DESCRIPTION

The Kosëq rigid sweeping arm system consists of a sweeping arm structure with foldable ends, oil transfer pumps, ancillaries, control panel, oil and hydraulic hoses, crane and hydraulic power pack.



The sweeping arm system is supplied with an integrated weir skimmer and centrifugal pump with screw impeller, Marflex MSP150-63, pre-installed with a hot water current radial system to facilitate pumping of high viscosity oil. A brush cassette with a movable debris screen can also be used for the recovery of high viscosity oil. The system is equipped with a remotely controlled self-cleaning grating to prevent debris to obstruct the skimmer and the pump.

The oil collecting system consists of two sweeping arms, with a total length of either 12 or 15 meters. The sweeping arm is launched by means of a crane or davit on the vessel. Two Lagendijk cranes specially designed for this purpose, are most commonly used to operate the sweeping arms.



The oil/water mixture is guided along the bulkheads of the sweeping arm and the side of the vessel via an adjustable debris screen to the oil collecting chamber of the inner pontoon, from which it is removed by a hydraulically driven portable submersible cargo oil pump and discharged into the oil collecting tanks via a flexible hose.

The vessel equipped with the sweeping arms is capable to remove oil from the sea up to Beaufort 5. The current between vessel and oil slick must be up to 2 knots and the forward speed of the vessel should be maximum 4 knots.

### KEY CHARACTERISTICS:

- Rigid sweeping arm with length of 12/15 m with a foldable end
- Lifting crane/davit
- Weir skimmer module with a centrifugal pump using a hot water radial system
- Brush skimmer module with a PDAG pump
- Remotely controlled debris screen

### TECHNICAL SPECIFICATIONS - 12 /15 METER SWEEPING ARM

Overall Length	12074/15115 mm	Operational temperature	-20°C to 60°C
Overall Width	3412/3330 mm	Operational window	up to Beaufort 5
Overall Height	1900/3335 mm	Recovery speed	up to 4 knots
Weight	4300/4800 kg	Deployment time	approx. 10 min, each arm

FOR MORE INFORMATION: [www.emsa.europa.eu](http://www.emsa.europa.eu)

## KOSEQ SWEEPING ARM SYSTEM

Remark: The information is based on the manufacturer's documentation

### WEIR SKIMMER MODULE

The weir module consist of an oil collection chamber fitted with a pump. The height of the oil collecting chamber can be adjusted in order to optimise the flow to the pump. The optimal height depends on oil viscosity, thickness of the layer etc.



For the operation with the weir skimmer module each sweeping arm is fit with a centrifugal screw impeller pump MSP 150/63 which has a discharging capacity of 300 m³ per hour.

### BRUSH SKIMMER MODULE

This skimmer consists of an aluminium oil collection chamber, brush belt and a pump. The height of the collection chamber can be adjusted.



For the operation with the brush skimmer module, each sweeping arm is fit with a Desmi DOP 250 pump which has a discharging capacity of 125 m³ per hour.

### POWER PACK

The Marflex type DHP-120 Explosion proof Zone 2 power pack is a compact diesel engine driven hydraulic unit.



### TECHNICAL SPECIFICATIONS:

Length:	2200 mm
Width:	1200 mm
Height:	2025 mm
Weight:	2200 kg
Rated power:	76.5 kW at 2400 rpm
Max. pressure:	320 bar
Hydraulic oil flow :	120 l/min
Fuel tank:	400 l
Fuel consumption:	0.26 l/kWh

This system is available on board the EMSA Contracted Vessels in following variations:

Name	Length	Skimmer	Crane (2x)	Power pack (2x)	Flash point* Ex Class
Forth Fisher	15 m	Weir/brush	Lagendijk	Marflex DHP-120	Zone 2
Galway Fisher	15 m	Weir		Marflex DHP-120	Zone 2
Mersey Fisher	15 m	Weir	Lagendijk	Hydraulic power provided by the vessel	N.A.
Sara	15 m	Weir/brush		Hydraulic power provided by the vessel	N.A.
DC Vlaanderen	12 m	Weir	Veegarmen	Hydraulic power provided by the vessel	N.A.
Interballast III	12 m	Weir	Veegarmen	Hydraulic power provided by the vessel	N.A.
Salina Bay	12 m	Weir	Lagendijk	Marflex DHP-120	Zone 2
Balluta Bay	12 m	Weir	Lagendijk	Marflex DHP-120	Zone 2
Santa Maria	15 m	Weir	Lagendijk	Marflex DHP-120	Zone 2
Aktea OSRV	15 m	Weir	Lagendijk	Marflex DHP-120	Zone 2

\* Depending on the location of the equipment on board, the vessel may be classified with a flashpoint above or below 60°C.

FOR MORE INFORMATION: [www.emsa.europa.eu](http://www.emsa.europa.eu)



Operational Tasks > Stand-by Oil Spill Response Vessels

### Stand-by Oil Spill Response Vessels

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- ▶ [Background](#)
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- ▶ [Vessel Inventory](#)
- ▶ [Vessel Technical Specifications](#)
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- ▶ [Inventories](#)
- ▶ [Manual & Guidelines](#)
- ▶ [Reports](#)
- ▶ [Services](#)

### Related Documents

- [Network of Stand-by Oil Spill Response Vessels and Equipment \(Handbook 2012\)](#)
- [Network of Stand-by Oil Spill Response Vessels; Drills and Exercises. Annual Reports](#)
- [Network of Stand-by Oil Network of Stand-by Oil Handbooks](#)
- [Effective At-Sea Pollution Response \[leaflet\]](#)

### Related Videos

## Network of Stand-by Oil Spill Response Vessels and Equipment (Handbook 2012)

★★★★★ (0 votes)

Tags [OPR](#)

Published 17.04.2012



[Handbook EMSA Vessels Network & Equipment \(2012\)](#)

- Satellite oil spill monitoring (CleanSeaNet)
- Vessel tracking globally (LRIT)
- Vessel traffic monitoring in EU waters (SafeSeaNet)
- **Stand-by Oil Spill Response Vessels**
- Technical cooperation in pollution preparedness and response
- Hazardous and Noxious Substances
- Combined maritime data

### Network of Response Vessels: Quick facts

- Number of vessels which can be mobilised simultaneously: 17
- Average storage capacity per vessel for recovered oil: 3.674 m<sup>3</sup>
- Network storage capacity, if 17 vessels are mobilised >62.467 m<sup>3</sup>
- Number of related equipment stockpiles: 15
- Mobilisation time (vessel ready to sail to site) after signature of [Incident Response Contract](#): 24 hours
- Mobilisation procedure:
  - Member States request assistance via the [MIC](#)
  - Member States have operational control of the vessel during the incident
- Number of regional or national at-sea exercises in which EMSA vessels were involved (2011): 11

 Ask EMSA

[Advanced Search](#)

**Thank you  
for your attention**

**Further information:**

<http://www.emsa.europa.eu/operations/marine-pollution/network-of-stand-by-oil-spill-response-vessels>

