



European Maritime Safety Agency

Mechanical recovery Oil Spill Response equipment

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**SAFEMED III
Seminar on EMSA's pollution response services**

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European Maritime Safety Agency

What do we understand by Mechanical Recovery at EMSA?

We consider the use of physical barriers to contain and collect, and mechanical devices to redirect and remove heavy/medium oil from the surface of the marine environment at open sea.

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- Open sea
- Heavy/medium oil
- Mechanical techniques

Why Mechanical Recovery?

- It is clean
 - Spilled oil is removed from the environment to be recycled or disposed of at appropriate facilities
 - No further pollution is added to the environment
- It has an extended time window
- It has a limited weather window
- It is a difficult and highly specialised task

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EMSA Equipment for Mechanical Recovery

Booms

Skimmers and High Capacity Skimmers

Sweeping Arms

Weir-Booms

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EMSA Equipment for Mechanical Recovery

Boom

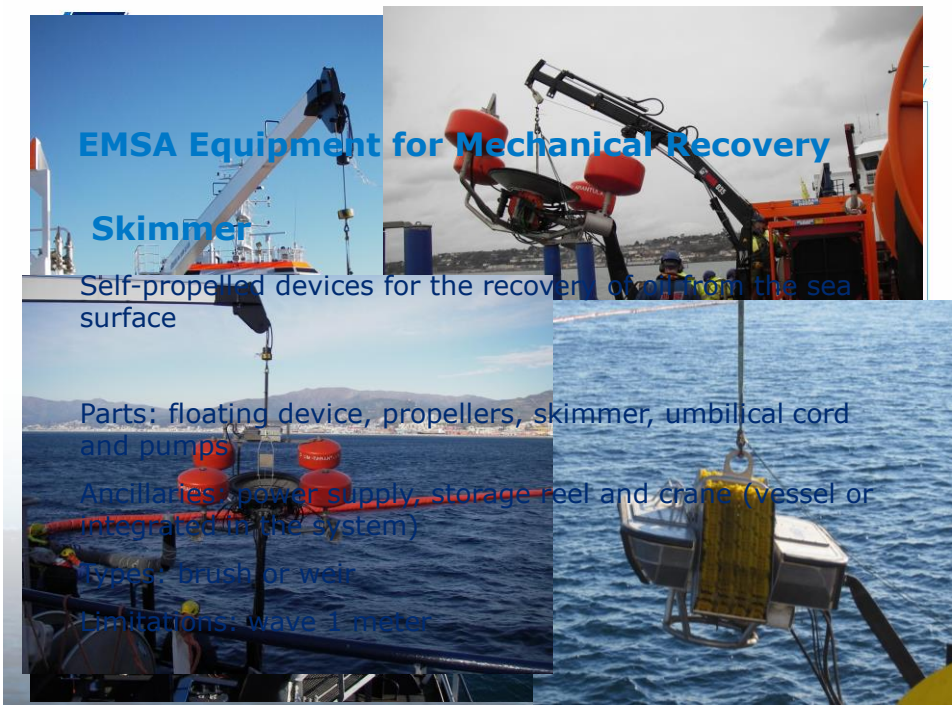
Booms are temporary floating, physical barriers which slow the spread, contain and accumulate the spilled oil to facilitate the recovery.

Parts: Floating chamber, freeboard, skirt, ballast and towing lines

Ancillaries: power supply, storage reel

Types: depending on material (PVC/Neoprene) and operation (SPI, segmented, both)

Limitations: wind 20 knots, wave 3 meters



EMSA Equipment for Mechanical Recovery

Skimmer

Self-propelled devices for the recovery of oil from the sea surface

Parts: floating device, propellers, skimmer, umbilical cord and pumps

Ancillaries: power supply, storage reel and crane (vessel or integrated in the system)

Types: brush or weir

Limitations: wave 1 meter



EMSA Equipment for Mechanical Recovery

Sweeping Arms

Rigid floating device that deployed from the side of a vessel can recover the spilled oil contained between itself and the vessel hull

Parts: Collecting panel, skimmer, pump and towing lines

Ancillaries: power supply and crane

Types: brush or weir

Limitations: wind 20 knots, waves 2 meters



EMSA Equipment for Mechanical Recovery

Weyl Boom

Boom especially designed for mass oil recovery which includes a floating tube, a ballast tube and a transfer tube with integrated skimmers and pumps. It can simultaneously contain and recover.

Parts: boom, integrated recovery skimmers and pumps, water ballast pump and towing lines

Ancillaries: power supply, storage reel and container

Limitations: wind 10 knots, wave 2 meters

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Mechanical Recovery Formations

Boom & Skimmer

Consists of a support vessel towing a boom in a "J" configuration, concentrating the spilled oil for recovery into the back of the pocket formed by the boom. The EMSA vessel towing at the rear is outfitted with an skimmer for vessel side where the apex of the

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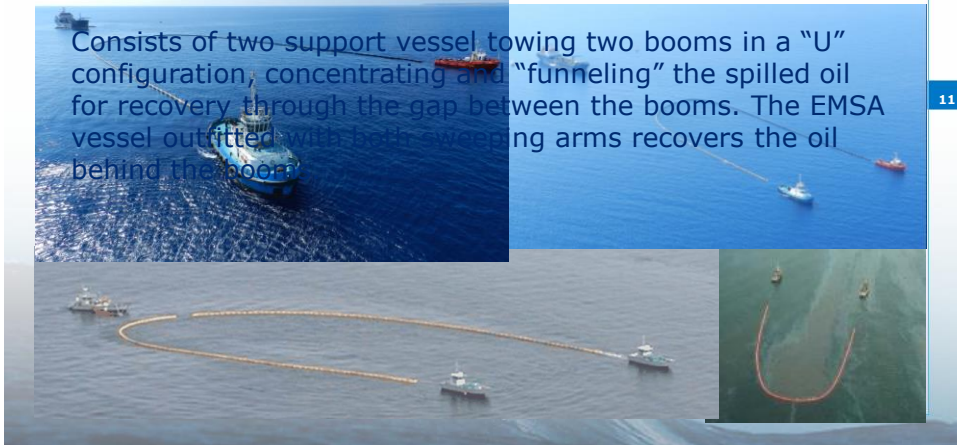


Mechanical Recovery Formations

Boom & Sweeping Arms in open-U configuration

Consists of two support vessel towing two booms in a "U" configuration, concentrating and "funneling" the spilled oil for recovery through the gap between the booms. The EMSA vessel outfitted with both sweeping arms recovers the oil behind the booms.

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Do you have any questions?

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