



# POSOW

Preparedness for oil-polluted

Shoreline cleanup and

Oiled Wildlife interventions

# Fishermen's support in oil spill response

## General Principles



POSOW II is a project co-funded by the European Union under the Union Civil Protection Mechanism in cooperation with REMPEC, ISPRA, DG-MARINWA, FEPORIS and AASTMT and coordinated by Cedre

# Objectives

To provide fishermen and other sea professionals with guidance on how their expertise, fishing vessels and gear can be used in order to respond to oil pollution events affecting the coast and nearby waters.

Information presented can be found in details in the **POSOW manual « Fishermen's support in oil spill response »**



# Contents of the presentation (I)

## 1. Framework of the involvement of local fishermen

- Definitions
- Fishermen in the chain of command

## 2. Response operations

- Alert, surveying and sampling
  - Chemical dispersion, agitation
  - Containment, recovery
  - Protection of the shoreline
  - Waste storage and transportation
  - Wildlife survey and rescue
  - Logistical support
  - Decontamination
- 

# Contents of the presentation (II)

## 3. Response equipment

- Characterisation of fishing vessels and other available vessels
- Definition, adaptation and use of response tools

## 4. Response Preparedness

- Training of fishermen
- Exercises



# 1-Framework of the involvement of local fishermen

- **Fishermen:** are those sea professionals dedicated to the business of capturing fish, gathering shellfish or to aquaculture.
- **Small vessels:** are those vessels used by fishermen, generally 10-15 meters in length overall, which are used to operate near the coast.



# 1-Framework of the involvement of local fishermen

- In the manual, the word “fishermen” includes not only professional and recreational fishermen but all the sea professionals potentially involved by local, regional or national authorities in an oil spill response on the water near the shoreline.



# 1-Framework of the involvement of local fishermen

- **Fishing professionals' roles**
  - **Fishermen:** Containment and recovery
  - **Fish farmers:** recovery, transport, protection
  - **Shellfish farmers:** surveys, transport, protection
  - **Kelp harvesters:** recover thick viscuous oil
- **Other professionals' roles**
  - **Divers:** submerged oil recovery, set up boom mooring
  - **Pleasure boat managers:** transport operators/observers
  - **Sand ship owners:** logistical support
  - **Pilot boat skippers:** set up containment systems / logistical support
  - **Marine mineral extractors:** recover pollutant / conduct sounding
  - **Professional pilots:** Surveys



# 1-Framework of the involvement of local fishermen

## Fishermen in the chain of command



### KEY ELEMENTS

- Integration of fishermen within the chain of command
- Institution to which fishermen must refer
- Communication system among operators for unambiguous flow of information
- Definition of roles and responsibilities of fishermen
- Delivery of on-the-spot training courses
- Daily updates
- Payment and compensation

# 1-Framework of the involvement of local fishermen

## Fishermen in the chain of command SPAIN

- Fishermen → “Basic Unit of Direct Intervention”



- Cleanup of shoreline areas affected by a pollution episode
- Provide support activities to the other intervention units, like collection and transport of floating waste.

# 1-Framework of the involvement of local fishermen

## Fishermen in the chain of command FRANCE

- At sea → Fishermen in the “second row”:
  - Recovery using specialised surface trawl nets
  - Recovery through improvised means
- Shoreline → Transportation of:
  - Response means to islands
  - Waste from islands/coastal areas without road access

# 1-Framework of the involvement of local fishermen

## Fishermen in the chain of command EGYPT

- National Oil Spill Contingency Plan- Fishermen roles:
  - Notification of oil spills
  - Assisting in identifying the pollution sources
  - Assistance through their boats in shallow areas
  - Provide EEAA with the required data concerning the fish production



# 1-Framework of the involvement of local fishermen

## Fishermen in the chain of command TURKEY

- No specific roles for fishermen but:  
“In pollution caused by ships or shore facilities, the ships which are parties to the incident, and ships nearby the incident (**could be fishing boats**) and shore facilities nearby the incident, give the first limited response with their staff, equipment and materials they have, and comply with the instructions of the authorised emergency response team after the team’s response to the incident”.

## 2-Response Operations

### Tasks that can be assigned to fishermen

- Alert, surveying and sampling
- Response operations:
  - Chemical dispersion, agitation
  - Containment
  - Recovery
  - Protection of the shoreline
- Waste storage and transportation
- Wildlife survey and rescue
- Logistical support



# 2-Response Operations

- Alert, surveying and sampling



WITNESS OF THE SPILL



- MRCC or Maritime Affairs
- Port Authority
- Maritime and Navigation Services



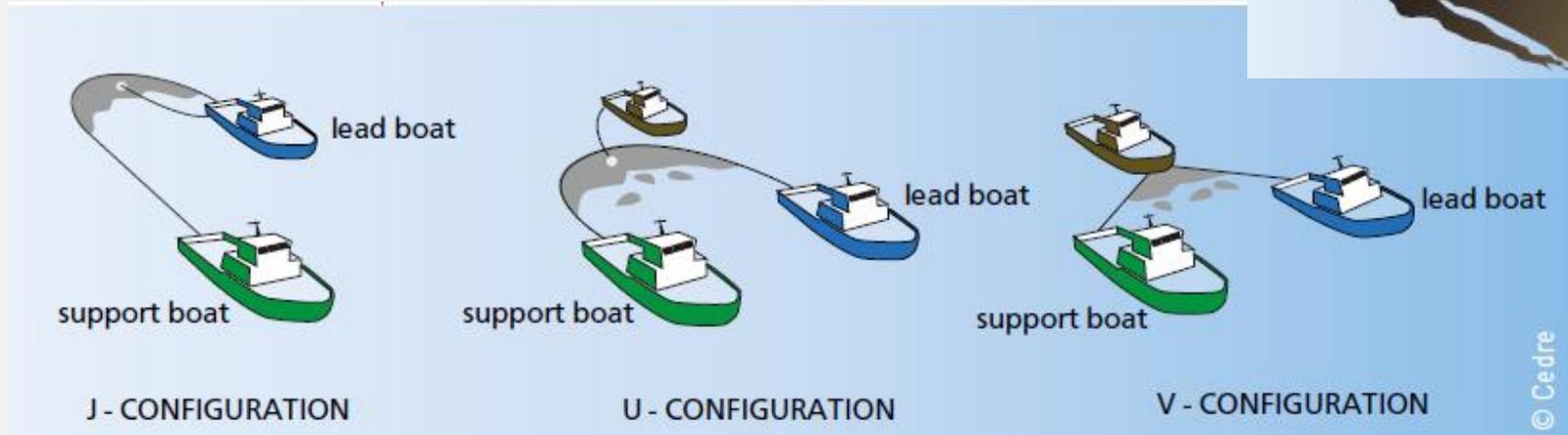
- Location
- Type of pollution if possible
- Possible source

## 2-Response Operations

- **Chemical dispersion:**  
Chemical dispersion fragments the oil into micro-droplets to promote the biodegradation and prevent emulsification. [video](#)
- **Agitation**  
Agitation consists of accelerating the natural dispersion process of oil in the water column by artificially agitating the surface.

# 2-Response Operations

- Containment and recovery  
Dynamic recovery



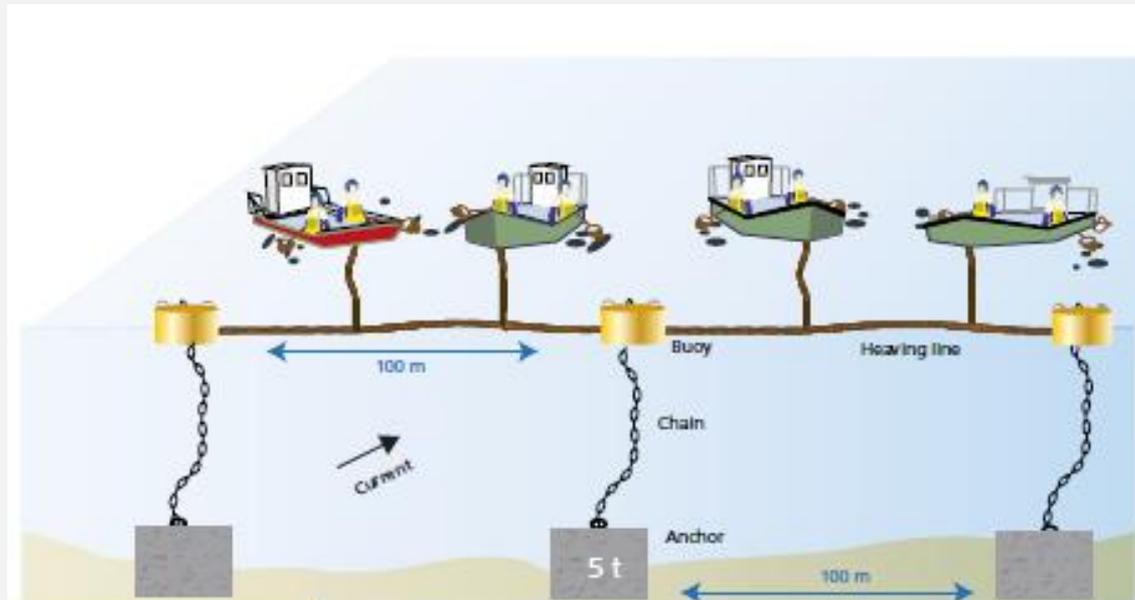
## 2-Response Operations

- Containment and recovery  
Dynamic recovery



# 2-Response Operations

- Containment and recovery  
Static recovery



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# 2-Response Operations

- Containment and recovery  
Manual recovery



## 2-Response Operations

- Containment and recovery  
Mechanical recovery



# 2-Response Operations

- Protection of the shoreline



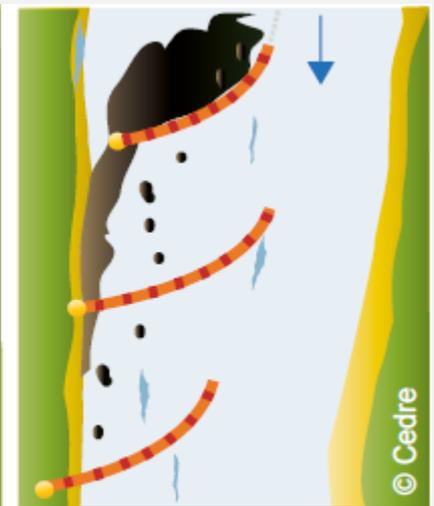
Oblique configuration in series



Chevron configuration



Herringbone configuration  
(on each side of the river)



Cascade configuration



# 2-Response Operations

- Protection of the shoreline



## 2-Response Operations

- Waste storage and transportation



# 2-Response Operations

- Wildlife survey and rescue



	<b>LIVE BIRD</b>	
Date of discovery: ____ / ____ / ____	Time: ____ : ____	Phone: _____
Place of discovery (place name): _____		
Bird sent by (full name or team reference): _____		
Address (street - post code - area): _____		
_____		
SPECIES (if known): _____	Number of birds in box: _____	
Section reserved for Rescue Centre		
Registration number: _____		
Initial care and/or feeding: _____		
_____		
<b>HANDLE WITH CARE</b>		

# 2-Response Operations

- Logistical support



# 2-Response Operations

- Decontamination



## 2-Response Equipment

### Characterisation of fishing vessels

#### Limitations for response:

- Draught → for working in shallow waters
- Classification → boat's capacity to work at a certain distance from the coast
- Others:

- Length
  - Width
  - Power
  - Storage capacity
  - Payload and deck area
  - Freeboard height
  - Capacity and/or offset of mast crane
  - Hull shape
  - Propulsion type
  - Fuel type....
- 

## 2-Response Equipment

- **Trawlers**



Due to capacity to trawl in shallow waters and their power, suitable for:

- surveying and monitoring,
- logistical support,
- containment and recovery
- waste transportation
- Etc...

**Their trawls can be used for deploying booms or for collecting (oiled or unoled) waste from the water.**



## 2-Response Equipment

- **Seiners**



Comprise a large group appearing in all sizes, ranging from open vessels, usually at least 10 meters in length, to ocean-going vessels

**This kind of vessels is ideal for deploying booms, surveying, monitoring and picking up oiled wildlife.**

## 2-Response Equipment

- **Dredgers**



Very useful for:

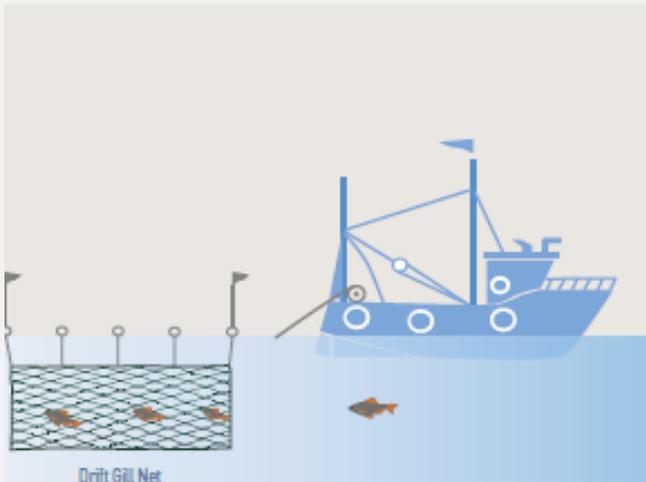
- Sounding/ coring tasks
- Monitoring
- Transport of waste
- Booms deployment
- Seabirds collection

In case of sunken oil, dredgers could be used for its recovery.



## 2-Response Equipment

- **Gillnetters**



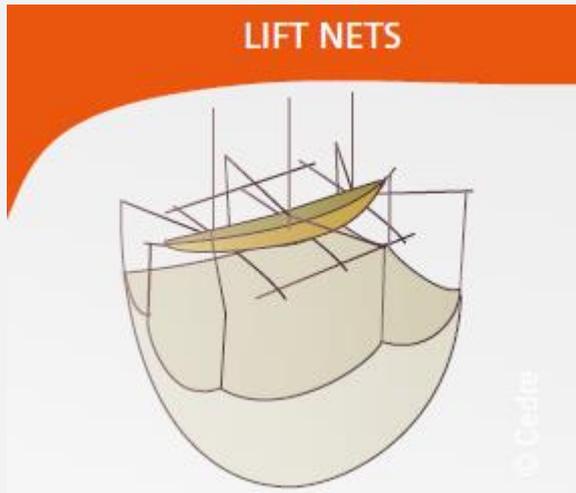
Gillnets can be operated from vessels and canoes on inland waters and inshore, decked small vessels in coastal waters and medium sized vessels fishing offshore.

They are very useful for oil recovery operations in shallow waters near the shoreline, using manual or mechanical methods (using their gillnets).



## 2-Response Equipment

- **Lift netters**



Equipped to operate lift nets, which are held from the ship's side, raised and lowered by means of outriggers.

**These vessels are suitable for operations near the shoreline in coastal waters. Their gear to raise and lower nets can be useful during response operations to set up containment systems or as logistical support for cleanup operations.**

## 2-Response Equipment

- **Trap setters**



These vessels are used for setting pots or traps to catch fish, lobsters, crabs, crayfishes and other similar species.

**Oyster, crab, lobster, and other traps and/or pots can be adapted to conduct mechanical recovery of very viscous oil/waste. These vessels can also perform other tasks depending on their specific features.**

## 2-Response Equipment

- **Handliners**



Handliners are normally undecked vessels comprising canoes and other small or medium sized vessels without any special features for gear handling.

**Due to their smaller size and capacity to work in very shallow waters, these vessels can access difficult-to-access coastal areas for performing assessment and monitoring tasks or even conducting manual oil recovery operations.**



# 2-Response Equipment

- Type of fishing vessels and tasks

		Surveying sampling	Dynamic recovery	Static recovery	Manual recovery	Mechanical recovery	Protection of the shoreline	Waste storage and transportation	Wildlife survey and rescue	Logistical support
TYPE OF FISHING VESSEL	Trawlers	😊	😊	😊	😊	😊	😊	😊	😊	😊
	Seiners	😊	😞	😊	😊	😊	😊	😊	😊	😞
	Dredgers	😊	😞	😊	😊	😊	😊	😊	😊	😊
	Gillnetters	😊	😊	😞	😊	😊	😊	😞	😞	😞
	Lift netters	😊	😞	😞	😊	😊	😊	😞	😞	😊
	Trap setters	😊	😞	😊	😊	😊	😊	😊	😞	😊
	Handliners	😊	😞	😞	😊	😞	😞	😞	😞	😞

😊 Vessel ideal for the purpose 😞 Vessel suitable for the purpose 😞 Vessel not recommended for the purpose

When possible, due to the vessel's characteristics as well as the training of the crew, sea professionals may be provided with specialised spill response mechanical recovery means.

## 2-Response Equipment

- Definition, adaptation and use of response tools
  - Manual
  - Mechanical
  - Specific to daily activities
  - Adapted to spill response operations



## 2-Response Equipment

- Definition, adaptation and use of response tools
  - Forks



## 2-Response Equipment

- Definition, adaptation and use of response tools
  - Scoop nets



## 2-Response Equipment

- Definition, adaptation and use of response tools
  - Lift nets



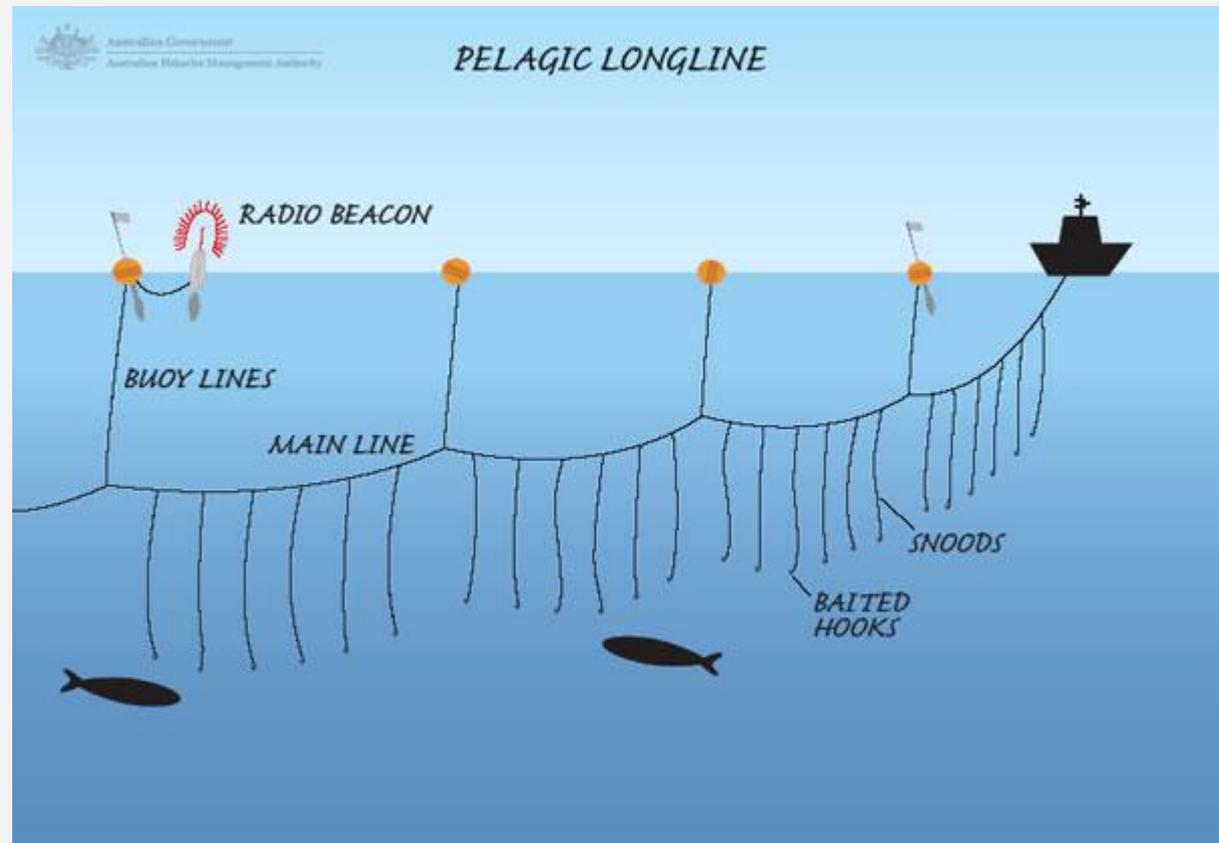
## 2-Response Equipment

- Definition, adaptation and use of response tools
  - Gillnets



## 2-Response Equipment

- Definition, adaptation and use of response tools
  - Longlines
  - Hooks



## 2-Response Equipment

- Definition, adaptation and use of response tools
  - Seine nets



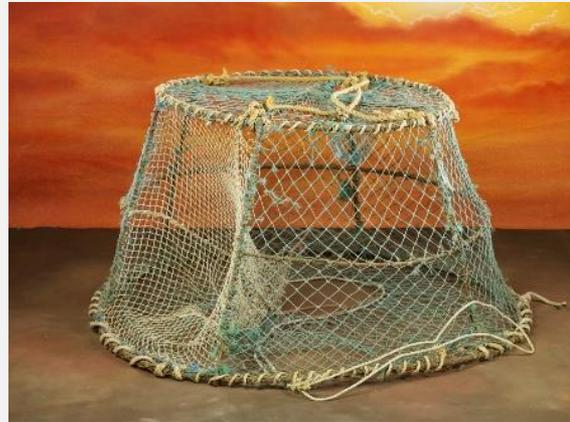
## 2-Response Equipment

- Definition, adaptation and use of response tools
  - Brailers



## 2-Response Equipment

- Definition, adaptation and use of response tools
  - Traps



## 3-Response Preparedness

- **Training of fishermen**
  - **Delivered before a spill occurs**
    - Theory module:
      - ✓ Behaviour and hazards of the pollutant
      - ✓ Response organization
      - ✓ Techniques and means used
    - Practical module
  - **Delivered in the field in the event of a spill**
    - Problems and precautions to be considered
    - Outline the procedures
    - Organise workforces

# 3-Response Preparedness

- **Exercises**

- to organise the rotation of personnel involved
- to vary the vessels mobilised to assess their response capacities
- to deploy various types of equipment
- to test all actions described in the contingency plans





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