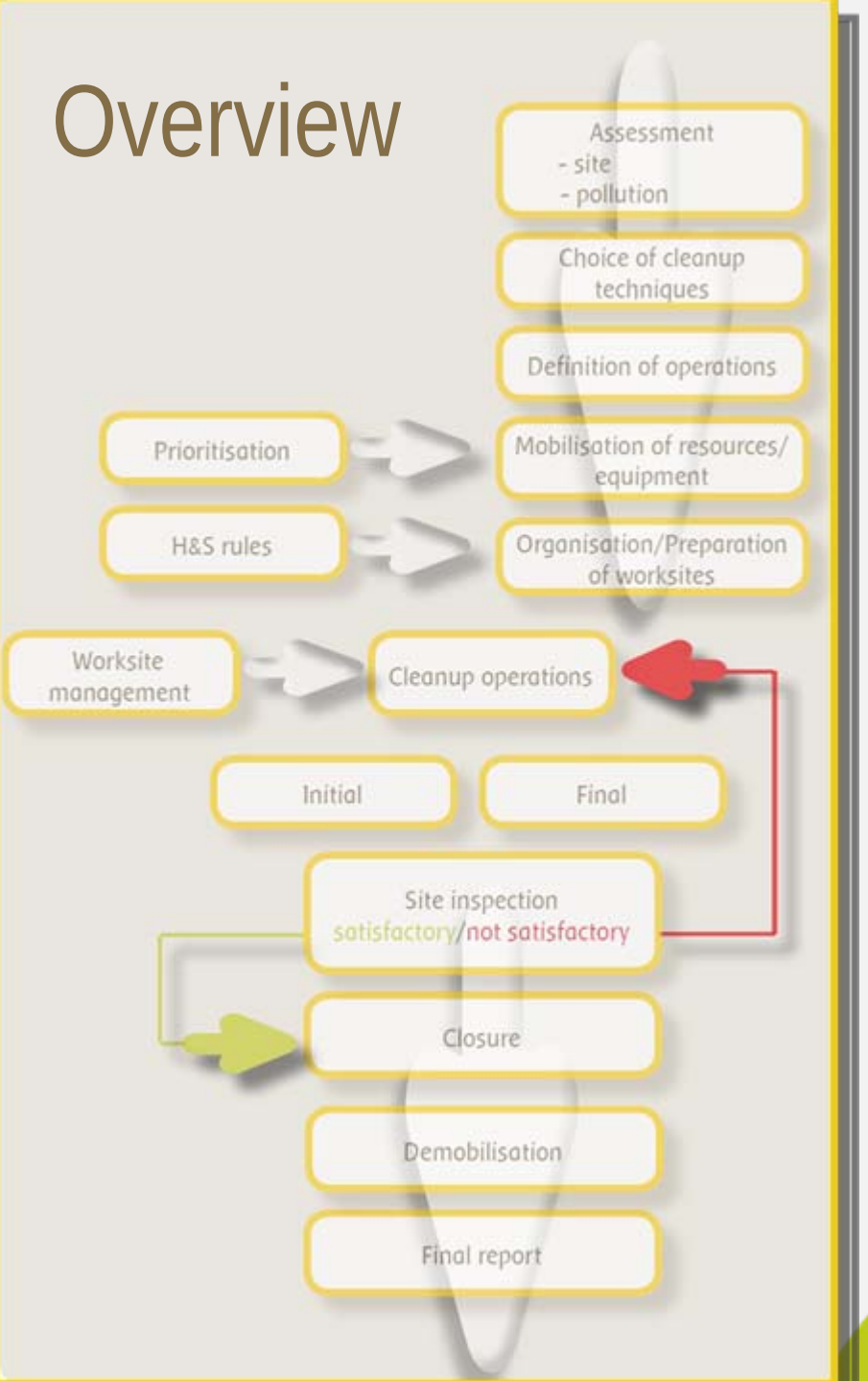
POSOW

Preparedness for Oil-polluted Shoreline cleanup and Oiled Wildlife interventions

General principles of cleanup

POSOW is a project co-financed by EU under the Civil Protection Financial Instrument developed in cooperation with ISPRA, *Cedre*, Sea Alarm and CPMR and coordinated By REMPEC a regional Centre of the Barcelona Convention

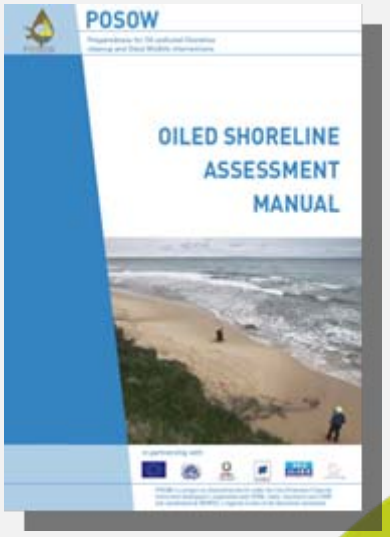
Overview


Assessment
- site
- pollution
Choice of cleanup techniques
Definition of operations
Prioritisation
Mobilisation of resources/ equipment
H&S rules
Organisation/Preparation of worksites
Worksite management
Cleanup operations
Initial
Final
Site inspection
satisfactory/not satisfactory
Closure
Demobilisation
Final report

Assessment of site and pollution

- Define high priority sites
- Distribute and proportion the response effort
- Organise future worksites rationally
- Use suitable response techniques and means

Refer to the manual



As an example…

Heavy oiling

Medium oiling

Choice of cleanup techniques

- Characteristics of the pollution
  - Nature of the oil
  - Quantity of oil / Type of deposits
  - Extent of the pollution
- Characteristics of the sites
  - Accessibility
  - Exposure
  - Nature of the substrates
  - Presence of debris
- Uses and sensitivities of the sites

Photo A

Photo B

Definition of operations

- Who will carry out the cleanup?
- What kind of equipment will be needed?
- How the worksites will be organised?
- Which level of “cleanliness” to reach?
- How to control “cleanliness”?

Because of economic and ecological sensitivities, the season, local specificities or the quantity of stranded oil, some areas will be given priority for cleanup!

Mobilisation of means/equipment

- Equipment (specialised or not) may come from:
  - National or local (i.e. harbours) stockpiles
  - Stockpiles belonging to industry (i.e. refinery)
  - Municipalities
  - Army
  - Private companies
  - Manufacturers and providers

Photo D

Photo C

Mobilisation of means/equipment

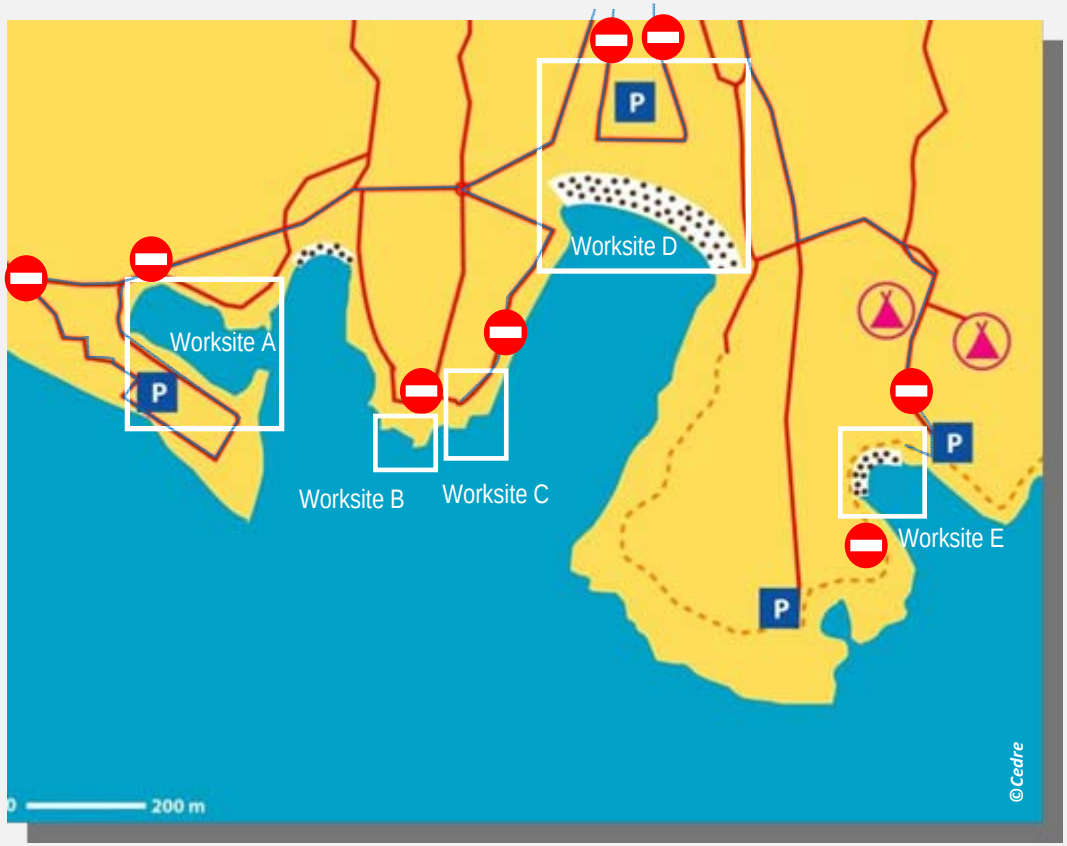
- Personnel involved may come from:
  - Administrations
  - Fire brigades
  - Municipalities
  - Army
  - NGOs
  - Private contractors (i.e. specialised cleanup companies)
  - Volunteers

Photo E

Some techniques must be implemented
by specialised cleanup companies!

Organisation and preparation of the worksites

- Delineate routes and access to the worksites
- Restrict access for public

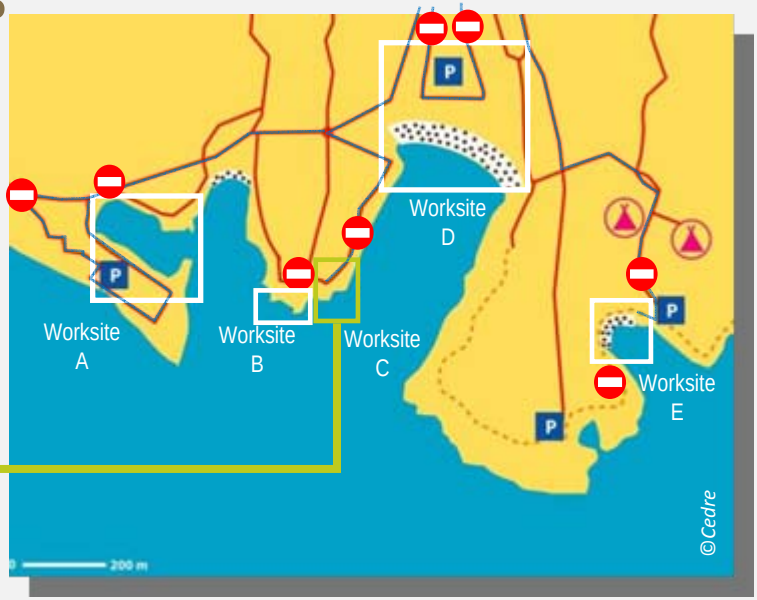


Access authorized only for operators

Routes to the worksites

Organisation and preparation of the worksites

- Prepare and signpost the different areas
  - the polluted area
  - the waste storage area
  - the decontamination area
  - the rest area
  - the storage area for tools and equipment
- Protect the ground where necessary



Cleanup operations

- Two phases:
  - Initial cleanup
    - To prioritise the removal of accumulations of oil and various heavily polluted materials

Photo F

  - Final cleanup
    - To return sites to their previous uses
    - To allow the affected environment to resume normal ecological functioning

Photo G

Human safety must be the priority!

Example of cleanup techniques decision matrix for initial cleanup

Sites		Expo-sure	Leave alone		Skimming Pumping		Mechanical collection		Manual recovery		Mechanical screening		Flushing		Flooding		Nets	
Harbour facilities	Quay	+	😐	😐	😐	☹	⊗	☹	☹	☹	⊗	⊗	🙂	☹	⊗	⊗	⊗	⊗
		−	☹	☹	🙂	🙂	⊗	☹	🙂	🙂	⊗	⊗	😐	😐	⊗	⊗	⊗	⊗
	Riprap	+	🙂	🙂	😐	😐	⊗	☹	☹	☹	⊗	⊗	☹	😐	😐	☹	⊗	⊗
		−	☹	☹	🙂	🙂	⊗	😐	🙂	🙂	⊗	⊗	☹	🙂	🙂	😐	⊗	⊗
Rocks	Cliff	+	🙂	🙂	⊗	⊗	⊗	⊗	☹	☹	⊗	⊗	😐	☹	⊗	⊗	⊗	⊗
		−	☹	☹	⊗	⊗	⊗	⊗	🙂	🙂	⊗	⊗	😐	😐	⊗	⊗	⊗	⊗
	Reef flat	+	☹	☹	🙂	😐	⊗	⊗	🙂	🙂	⊗	⊗	🙂	😐	⊗	⊗	⊗	⊗
		−	☹	☹	🙂	🙂	⊗	⊗	🙂	🙂	⊗	⊗	🙂	😐	⊗	⊗	☹	☹
	Boulders	+	☹	☹	🙂	😐	⊗	⊗	🙂	🙂	⊗	⊗	🙂	😐	⊗	⊗	⊗	⊗
		−	☹	☹	🙂	😐	⊗	⊗	🙂	🙂	⊗	⊗	🙂	😐	⊗	⊗	☹	☹
Beach	Shingle	+	☹	☹	🙂	🙂	⊗	⊗	🙂	🙂	⊗	⊗	🙂	😐	🙂	😐	⊗	⊗
		−	☹	☹	🙂	🙂	⊗	⊗	🙂	🙂	⊗	⊗	🙂	😐	🙂	😐	☹	☹
	Coarse sand	+	☹	☹	🙂	🙂	⊗	⊗	🙂	🙂	⊗	☹	😐	☹	🙂	⊗	⊗	☹
		−	☹	☹	🙂	🙂	⊗	😐	🙂	🙂	⊗	☹	😐	☹	🙂	⊗	☹	☹
	Fine sand	+	☹	☹	🙂	🙂	☹	😐	🙂	🙂	⊗	😐	😐	☹	⊗	⊗	⊗	☹
		−	☹	☹	🙂	🙂	☹	😐	🙂	🙂	⊗	😐	😐	☹	⊗	⊗	☹	☹
Marsh		−	🙂	🙂	☹	☹	⊗	⊗	☹	☹	⊗	⊗	🙂	🙂	⊗	⊗	☹	☹

🙂 to be given priority consideration
😐 may be useful
☹ to be considered under certain conditions
⊗ inappropriate
fluid to slightly viscous oil
viscous to highly viscous oil

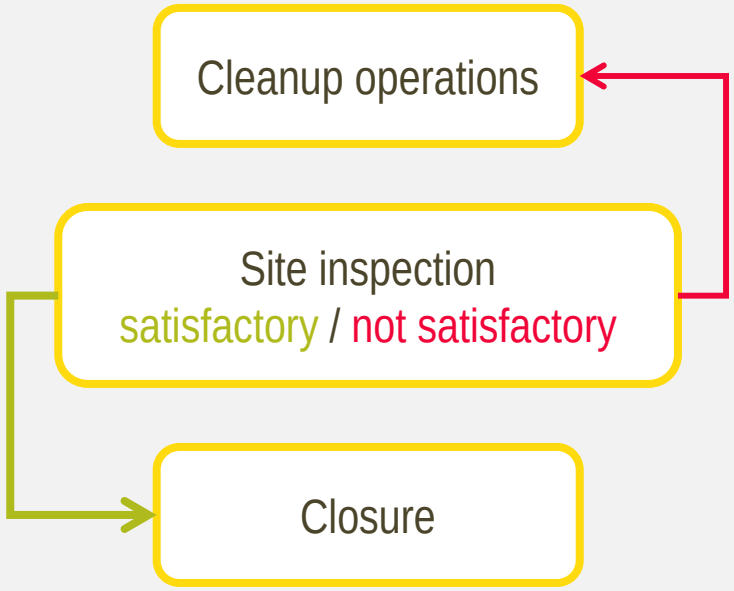
Site inspection

- To declare the end of operations, it is necessary to check that:
  - the level of cleanliness required is achieved
  - the site is safe from a sanitary point of view
  - environmental recommendations were complied with.

Photo H

Photo I

Photo J



Closure

- Once the site inspection is satisfied:
  - equipment and tools must be demobilised
  - all the waste must be removed from the primary storage
  - the site must be summarily restored if necessary
  - the site must be secured whenever operations contributed to making it hazardous

Photo K

Organise regular surveys if there is still oil at sea or on nearby sites.

Demobilisation

- Equipment should be:
  - cleaned
  - repaired
  - repacked

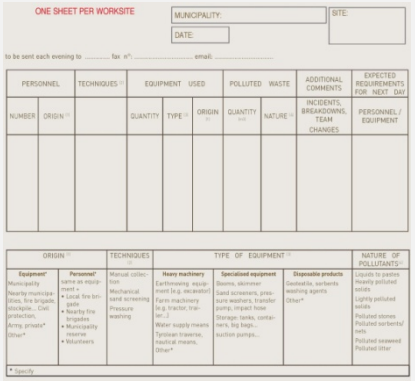
  to be shipped back to its original stockpile.

Photo L

Once demobilised, volunteers should be provided with a certificate.

Final report

- The final report must be drafted by the beachmaster
- This report must include:
  - whole daily worksite forms
  - the list and origin of personnel involved
  - incident reports if any
  - the site inspection report.
- This report will be used:
  - to prepare documents needed to claim compensation
  - to make feedback
  - in case of legal proceedings.


ONE SHEET PER WORKSITE

MUNICIPALITY:

SITE:

DATE:

to be sent each evening to ..... fax n°: ..... email: .....

PERSONNEL		TECHNIQUES	EQUIPMENT USED			POLLUTED WASTE		ADDITIONAL COMMENTS	EXPECTED REQUIREMENTS FOR NEXT DAY
NUMBER	ORIGIN		QUANTITY	TYPE	ORIGIN	QUANTITY	NATURE	INCIDENTS, BREAKDOWNS, TEAM CHANGES	PERSONNEL / EQUIPMENT

ORIGIN		TECHNIQUES	TYPE OF EQUIPMENT			NATURE OF POLLUTANTS
Equipment*	Personnel*		Heavy machinery	Specialised equipment	Disposable products	
Municipality Nearby municipalities, fire brigade, stockpile... Civil protection, Army, private* Other*	same as equipment + • Local fire brigade • Nearby fire brigades • Municipality reserve • Volunteers	Manual collection Mechanical sand screening Pressure washing	Earthmoving equipment (e.g. excavator) Farm machinery (e.g. tractor, trailer...) Water supply means Tyrolean traverse, nautical means... Other*	Booms, skimmer Sand screeners, pressure washers, transfer pump, impact hose Storage: tanks, containers, big bags... suction pumps...	Geotextile, sorbents washing agents Other*	Liquids to pastes Heavily polluted solids Lightly polluted solids Polluted stones Polluted sorbents/ nets Polluted seaweed Polluted litter

* Specify

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