

SCOPE

Substrates: all types
Pollution: light to heavy
Pollutant: viscous to highly viscous
Sea: with or without tides



EQUIPMENT NEEDED

Basic equipment:

- Nets
- Big-bags, boulders or concrete blocks

Extra equipment:

- Power shovel (to bury mooring points)

DESCRIPTION/PRINCIPLE

This technique relies on the capacity of fine mesh nets to capture clusters of heavy fuel oil. Each net is anchored at one end and follows the water movements to recover all the tar balls it meets as it sweeps through the water. The nets are generally 10 to 20 m long and 1 to 5 m wide (but the size depends on the efficiency of the net – closely linked to the rigidity of the structure of the material – and should be suited to the site). They are set up above the half tide line (which varies according to the height of the current tide), so that they partially emerge at high tide. They should be anchored at low tide using a makeshift mooring (net wrapped around stones or, even better, using a big-bag filled with sand) that is buried using a power shovel for instance.

This technique can be used in two ways:

- (case 1) as a remedial solution, to recover large clusters of oil freed during surfwashing operations: the nets, positioned upstream of deposited piles of sediments, are removed after the following tide; this use of mop nets is the most effective.
- (case 2) as a preventative solution, to trap any potential arrivals of oil. In this case, their onsite maintenance is more time-consuming and involves: checking the solidity of moorings, repositioning the nets according to the tide, replacing oiled nets etc. This effort may be disproportionate in view of the volume of pollutant collected. It can very quickly become difficult to manage when such a system is used for a long period of time on a large scale, on very scattered pollution (the efficiency of the system is not permanently guaranteed: nets are unsuitably positioned most of the time due to variations in the height of tides, nets can become buried under sand or torn away by the sea, oiled nets that have not been replaced in time are washed by the sea, the system may be completely abandoned...)

CONDITIONS OF USE

Pollution: viscous pollutant, heavy fuel oil.

Substrate: all

Site: all (but can be difficult to manage along vast straight dunes).

IMPACT ON THE ENVIRONMENT

Physical: none

Biological: none

PERFORMANCE

Yield: variable according to the mode of use and the type of pollutant (low output for light oil).

Implementation: at least 2 to 3 people (same goes for maintenance).

Waste: very lightly to very heavy polluted nets.

OBSERVATIONS

- Very effective on sticky, viscous pollutant such as fuel oil.
- Significantly less effective on light pollutants (lack of adherence, and also self-adherence, of this type of pollutant), or even completely ineffective on relatively exposed sites.
- Can be considered for infrequent use, as a preventative measure, on Mediterranean coasts (coves) at the water's edge with shorter nets or in the water (anchoring/retrieving system will need to be assessed).