



Co-funded by
the European Union

TRAINING SLIDES

OSERIT HNS



1 OVERVIEW OF THE TOOL

PROBLEM STATEMENT

In the event of an HNS spill at sea, understanding the chemical's drift, dissolution, and evaporation is crucial for organizing an appropriate response. Knowing the expected air and water concentrations and the time spent above thresholds is vital for the safety of responders, the population, and the environment.

OBJECTIVE

Assess the drift and fate of an HNS spilled at sea by simulating its movement underwater and in the air, using current and wind predictions, and evaluating phase transfer.

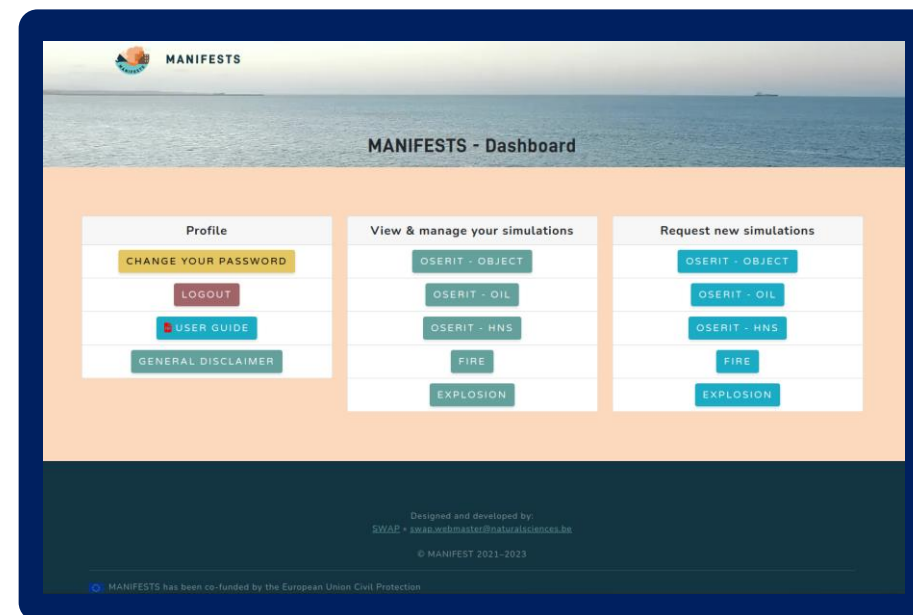
DATA USED

- ✦ Position, radius, quantity and duration of the release.
- ✦ Properties of the chemical (auto filled from the HNS database).
- ✦ The model will use data from [ECMWF](#), [CMEMS](#) and the Belgian Marine Forecasting Center for the current, wind and waves.

HOW IT WORKS

The web interface enables users to perform simulations directly online. By filling out a form with event-related information, users can obtain simulation results within minutes.

Both the form and simulation results are available from a web browser.

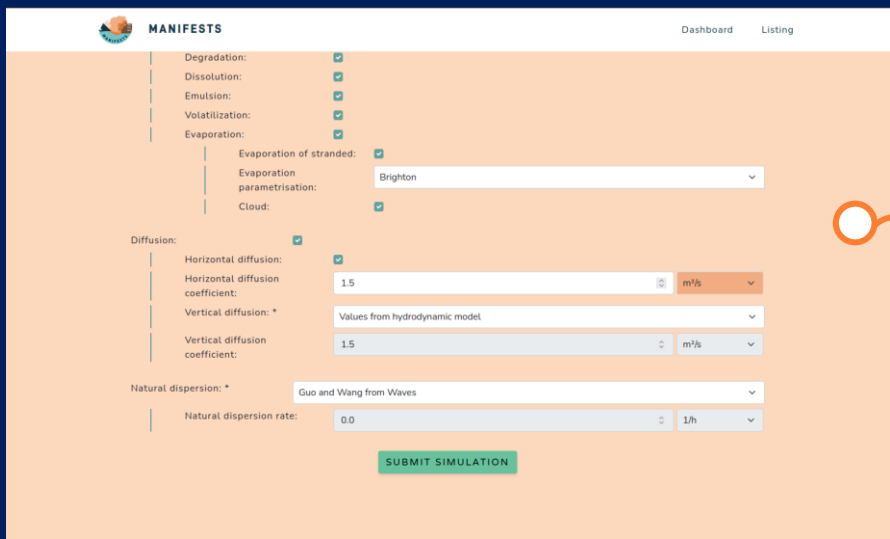


2 HOW IT WORKS & KEY RESULTS

USE CASE

To understand the drift of the slick, dissolved, and gaseous HNS. For instance, to assess the environmental impact or identify coastal areas that will be affected.

OUTPUT EXAMPLE



MANIFESTS Dashboard Listing

Degradation: ☒
Dissolution: ☒
Emulsion: ☒
Volatilization: ☒
Evaporation: ☒
Evaporation of stranded: ☒
Evaporation parametrisation: Brighton
Cloud: ☒
Diffusion: ☒
Horizontal diffusion: ☒
Horizontal diffusion coefficient: 1.5 m/s
Vertical diffusion: * Values from hydrodynamic model
Vertical diffusion coefficient: 1.5 m/s
Natural dispersion: * Guo and Wang from Waves
Natural dispersion rate: 0.0 1/h
SUBMIT SIMULATION

