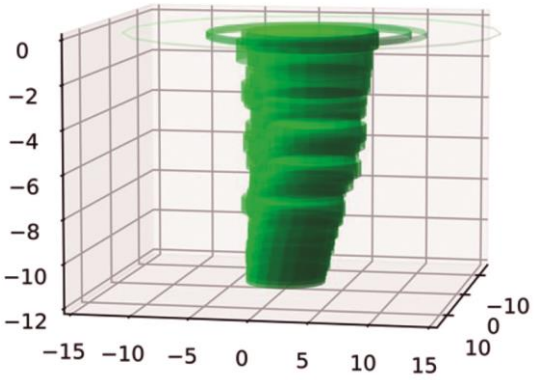
RISING UNDERWATER GAS PLUME MODEL

AUTHORS

Ludovic Lepers (RBINS), Samuël Orsi (RBINS), Chistophe Bastin (RBINS)

ACCESS/DOWNLOAD AT

https://odnature.naturalsciences.be/oserit/



APPLICATION AND USE

Purpose/objective of the tool

Model the rise of a gas plume from an underwater release to the water surface.

Applications of this tool

- Contingency planning and guidance
- Operational response
- Modelling
- Risk assessment

How to use it

The user fills out an online form with simulation metadata, event location and time, environmental data, and HNS properties (can be auto-filled from the HNS database). After waiting for the computations to be done, the simulation results are displayed in the online web interface.

Key features and functionalities

The model estimates the flow rate of gas reaching the surface and the amount dissolving in the water column.

Practical examples where this tool can be used

Assess the impact of a gas leak from an underwater pipeline or a sunken vessel carrying gaseous HNS. Users can estimate the quantity of gas reaching the surface.

Results or outputs produced

A map showing where the gas is expected to reach the surface, along with plots comparing the quantity released into the atmosphere versus dissolved in the water column.

Co-funded by the European Union

RISING UNDERWATER GAS PLUME MODEL

TECHNICAL REQUIREMENTS

Operating system required

- Apple macOS
- Microsoft Windows
- Linux OS

Devices the tool can run on

- PC

Hardware requirements

An internet connection and a computer capable of running a recent version of a modern web browser.

Integration with other software / systems / project tools

The output flow rate can be used as initial conditions for consequence models.

TARGET AUDIENCE

Target audience

- Authorities and companies with legal responsibility of implementing contingency plans
- Port and maritime authorities
- Emergency responders (Civil protection, firefighters, army, police officers, etc.)

Type of knowledge background required to use this tool

Users should have completed a training session on the tool.

ACCESS

Permissions required

This tool requires a login and is not open to the public.

Obtain permissions

https://odnature.naturalsciences.be/oserit/

FEEDBACK

Support email

marine-forecasting-officer@naturalsciences.be

Co-funded by the European Union