EXPLOSION MODEL

AUTHORS

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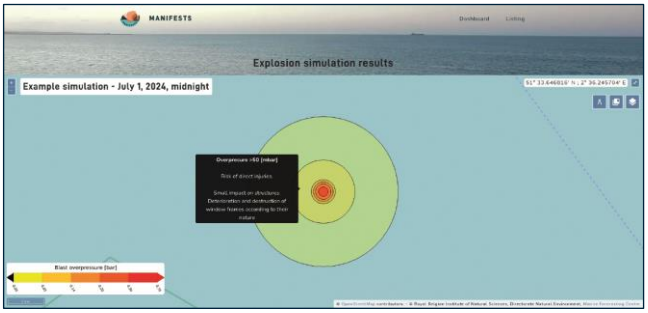
ACCESS/DOWNLOAD AT

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



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APPLICATION AND USE

Purpose/objective of the tool

Estimate the effects at various distances in the event of an explosion of an HNS gas cloud in an open environment.

Applications of this tool

- Contingency planning and guidance
- 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 a few seconds, the simulation results are displayed in the online web interface.

Key features and functionalities

The model estimates overpressure as a function of distance in case of the explosion of an HNS gas cloud and assesses its impact on humans and buildings.

Practical examples where this tool can be used

In the event of a vessel transporting explosive HNS in distress, the tool can provide a safety radius for coastguard operations following the vessel.

Results or outputs produced

The interface provides a map with ellipses indicating the expected impact on responders or structures within the ellipses.

Co-funded by the European Union

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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.

TARGET AUDIENCE

Target audience

- Authorities and companies with legal responsibility of implementing contingency plans
- Port and maritime authorities
- Coastguards
- 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

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

Obtain permissions

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

USER GUIDANCE

User guides or manuals available

MANIFESTS DSS User guides: https://manifests-project.eu/documents/27/D5.3_-_MANIFESTS_DSS_-_User_guides.pdf

Support documentation

A PowerPoint presentation is provided during the training session.

UPDATES AND NEW FUNCTIONALITIES

Update planned for this tool in the framework of the MANIFESTS Genius project.

The multi-energy model for explosions will improve overpressure predictions in environments other than open sea.

FEEDBACK

Support email

marine-forecasting-officer@naturalsciences.be

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