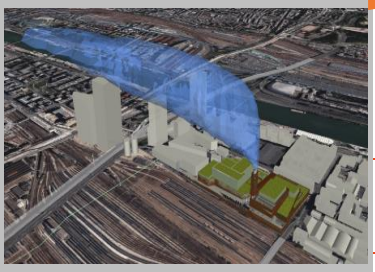
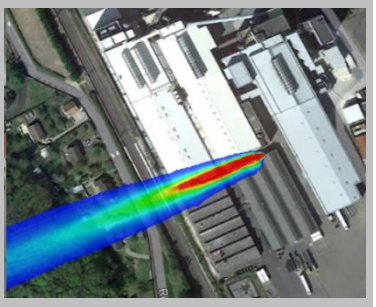
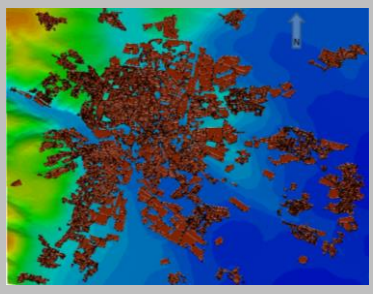
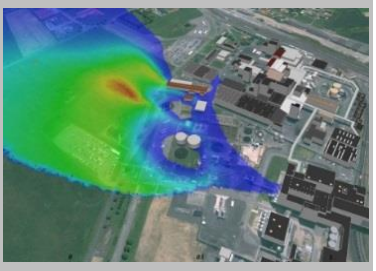
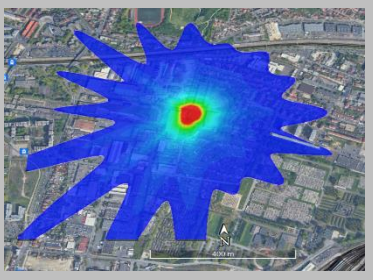










FLUIDYN-PANEPR

Accidental Atmospheric Dispersion

Emergency Planning and Response

User friendly integrated tool for consultancy firms and industries

- 3D CFD modelling on complex terrain
- Gas (light, dense, liquefied), particle, and aerosol dispersion
- Real time leak source detection, prediction of cloud motion
- Transient evolution of toxic / explosive clouds
- Radioactive particle decay, progeny dispersion
- Smoke dispersion from fires, pool fires, exhaust, stacks…
- Pipe / tank rupture: gas, liquid, or two-phase flows
- Pool evaporation, cooling tower plume visibility
- Inverse model / source localisation
- Dose calculation of toxic gases

3D simulations of accidental atmospheric dispersion

FLUIDYN-PANEPR integrates all features of **FLUIDYN-PANACHE,** the 3D-CFD atmospheric dispersion software**,** and considers the following elements to simulate the pollutant dispersion:

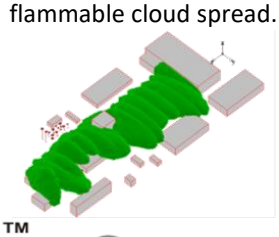
- All kinds of obstacles and architectures,
- The surrounding topography,
- The influence of terrain and vegetation,
- The effects of solar radiation and ambient atmospheric.

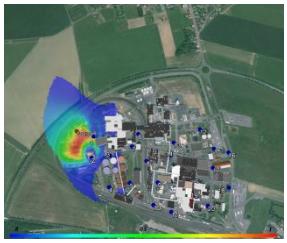
This module is used for **emergency planning and management of accidental scenarios** in situ and off site. It can be used to plan anticipatory measures to prevent the consequences of industrial accidental toxic and flammable releases, such as the rupture or leaks in pressurized or non-pressurized tanks, pipes, valves, joints etc. and combustion due to fires.

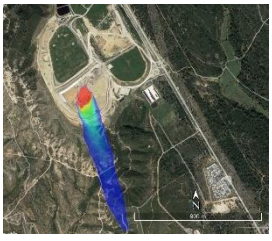
FLUIDYN-PANEPR was one of the tools used during the establishment of the best *practices guide of* INERIS. The software is used to conduct toxic risk analysis from INERIS database (calculation for threshold of reversible / irreversible, lethal effects and highly lethal effects) for HAZOP studies. It has been validated by several specific cases: EMU project, Kincaid, Copenhagen, Desert Tortoise, Goldfish…

The user may define the site interactively, by positioning the buildings and the processes, by describing the terrain nature, and by setting up the surrounding topography.

The advanced post-processing tool available in the software helps to plot 3D concentration or toxic doses graphs, to define the hazardous zones and to evaluate flammable cloud spread.







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