

German Environment Agency

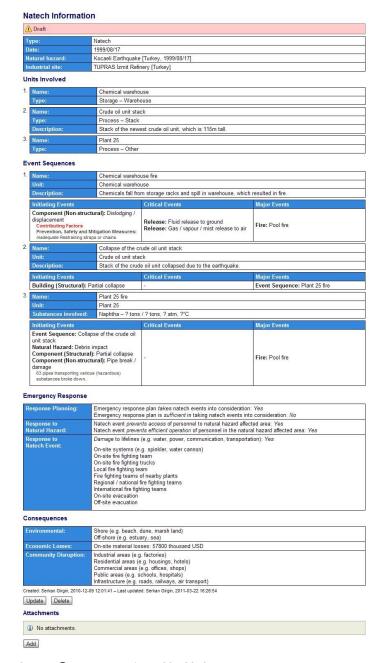
10. September 2019 Results of the UN/OECD Project on Natech Risk Management

9.1 Natech Accident Database: eNatech (European Union)

OECD GP Activity	UN SF Activity	UN SD Goals / Targets
9. Natech risk in enforcement and in follow up to Natechs9. Natech risk in enforcement and in follow up to Natechs	1. Understanding disaster risk	Non-specific targets relevant for Natech Risk Management (3.8, 6.3, 9.4, 11.5, 11.B, 12.4)

Classification according to OECD Guiding Principles, UN Sendai Framework Priorities/Activities, and UN SDGs and Targets

Figure 1: Example eNatech natural hazard, industrial site, and Natech accident records



Source: © European Union, 1995-2019

Short Facts:	Natural Hazard(s) Considered:
Governance approach: Risk Communication Source: Joint Research Centre, European Commission Entry into force: 2012 Targeted Stakeholders: Authorities, operators Scope of applicability: International	All Climate change: not considered

Description

eNatech is a web-based, open and collaborative database that systematically collects information on Natech accidents around the world. It enables the search for and analysis of Natech accident reports in order to learn lessons from past problems. It was developed by the European Commission Joint Research Centre (JRC) and has been publicly available since 2012 at http://enatech.jrc.ec.europa.eu. Currently, eNatech is the only dedicated Natech accident database in the world and covers a wide range of natural hazards and industrial activities (e.g. industrial installations, pipeline systems, and offshore platforms).

Specifically designed to capture the characteristics of Natech events, the database allows the recording of the natural and technological components of Natech accidents and their interaction. The modern and mobile-friendly user interface of eNatech facilitates accident data entry and lets the users easily search and list available natural hazard, industrial site, and Natech accident records. Multiple natural hazard or industrial site records can be linked to multiple accident records. In this way, Natechs triggered by natural disasters affecting large areas (e.g. multiple countries) or sites where Natech accidents periodically occur can be identified and studied systematically. For each accident, the following information can be specified:

- Information on the triggering natural-hazard event,
- Information on the industrial site where the accident occurred,
- Process equipment and storage units involved in the accident,
- Hazardous substances involved,
- Sequence of events (e.g. initiating, critical, major) that led to the Natech accident,
- Contributing factors,
- Modes of physical and functional damage,
- Extent and severity of the consequences on human health, environment, economy, and community services,
- Emergency response, recovery, and remediation activities,
- Lessons learned on various aspects (e.g. equipment, organizational factors, mitigation measures)

Natech-specific aspects are explicitly considered at each section and the users are encouraged and, moreover, directed to provide the basic information that is necessary to capture the essence of the Natech event. The database also allows reconstruction of the complex accident dynamics by using multiple event sequences, which can be linked to each other. Bibliographic references and other documents related to natural hazard events, industrial sites, or Natech accidents can be uploaded. Part of the information can be made anonymous or confidential if necessary. The database also features stage-wise data entry through which the users can work on draft versions of the records before reaching a final version, which is then validated and made public by the database administrators. The high data quality and the high level of detail also allows to define natural-hazard specific lessons learned and to formulate associated recommendations for Natech risk reduction. Work on populating the database continues in order to provide to the users a

repository of information for accident analysis, lessons learning, and the development of equipment vulnerability models and scenarios for use in Natech risk assessment.

Link/Contact:

http://enatech.jrc.ec.europa.eu/

Comments by the UN/OECD Natech-Steering Group:

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