

Seminar on effective management of technological risks of accidents triggered by natural hazards

NATECH, THE FRENCH EXPERIENCE

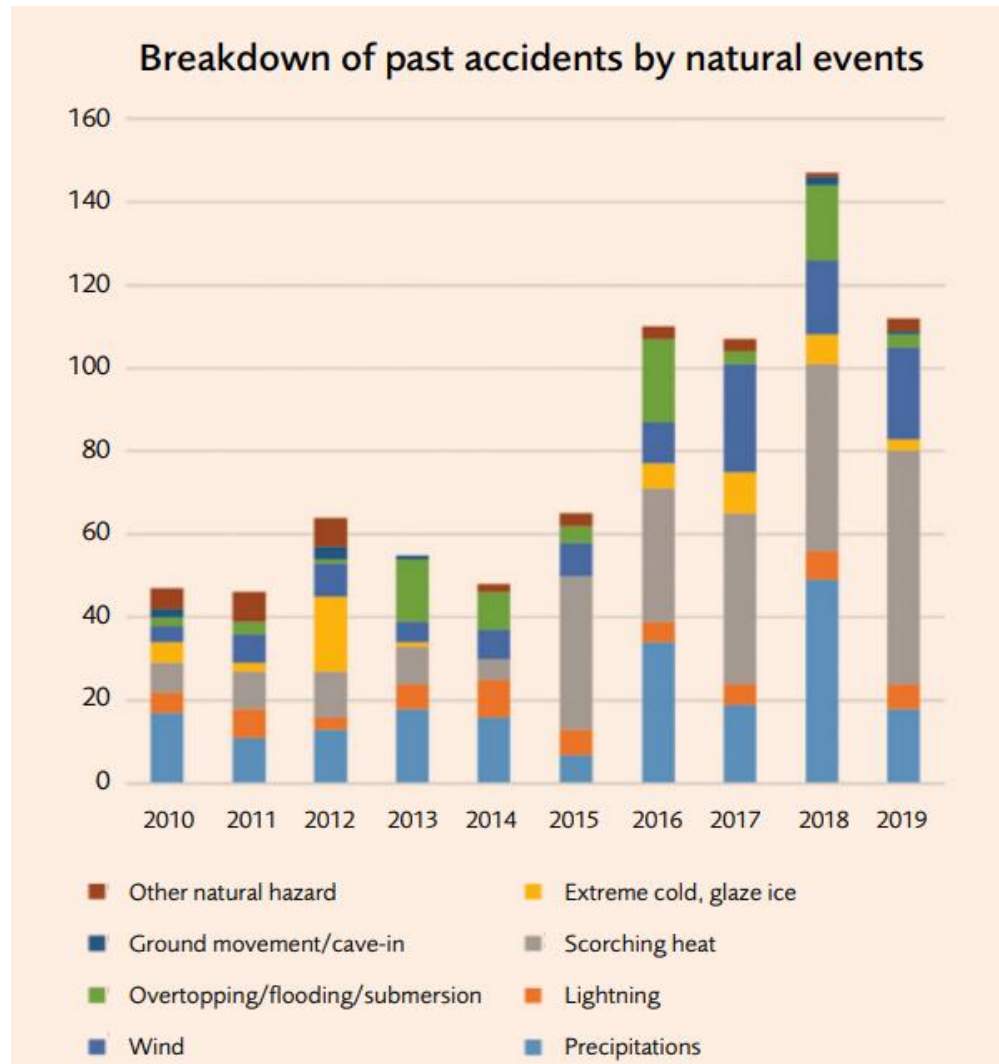
Geneva
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Main natural hazards in France

- Floods and storms
- Thunder and lightening
- Extreme temperatures
- Wildfires
- Avalanche and landslide
- High winds and cyclones
- Drought (disruption of cooling water, availability of waste water treatment)
- Earthquakes and volcanic eruptions (especially in overseas territories)



Natech risks: more than emerging



- Natech incidents and accidents monitored for more than 30 years
- Existing legislation already focusing on Natech risks:
 - **Flood directive** (2007): flood risk management plans taking into account domino effects due to floods
 - **Seveso directive** (2012): description of natural causes of possible major-accident scenarios in the safety report

Natech risk prevention: no major accident (yet ?)

- Natech strategies are regularly put to the test:
 - Wildfires (2022)
 - Important heat wave and drought (2019)
 - Heavy rains and floods (2018 and 2016)



- Up until today, no Natech-related major accident in France, but material damage may result in significant costs (up to several million €)

Requirements for industrial sites (1/2)

- **Identification** of natural hazards in the safety report
- **Safety report** for **Seveso and non-Seveso installations** (around 25 000 establishments)
- **Detection/monitoring, alert and warning** when possible (e.g. flood surveillance and notification, weather agency live alerts and reports)
- **Construction and design** of the installation, e.g. seismic design, flood-/wind-proof construction, dikes, protection against lightning
- **Organisational measures**, e.g. clearing the surroundings of sites presenting fire-hazard, placing storage and parking vehicles above flood level, raising awareness through targeted campaigns before cold or heat waves

Requirements for industrial sites (2/2)

- **Emergency planning preparedness and response:** internal and external emergency plans to limit the consequences and further development of potential accidents
- Employees' **training**
- Regular tests and **exercises**
- **Feedback**, data recording and analysis



Efforts and work on Natech risks to be maintained and continued

- **Increasing** number of extreme climatic events due to climate change
 - **Increasing** likelihood of Natech-caused accidents
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- The work and the efforts need to be **maintained and continued**
 - Possible need for **reviewing and adapting Natech strategies** to the new climatic situation in the coming years

Thank you