

Short Facts:

Governance approach: Regulation

Source: Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, Germany

Entry into force: 2012

Targeted Stakeholders: Operators, authorities, assessors/safety experts

Scope of applicability: National, enterprises, sites

Natural Hazard(s) Considered:

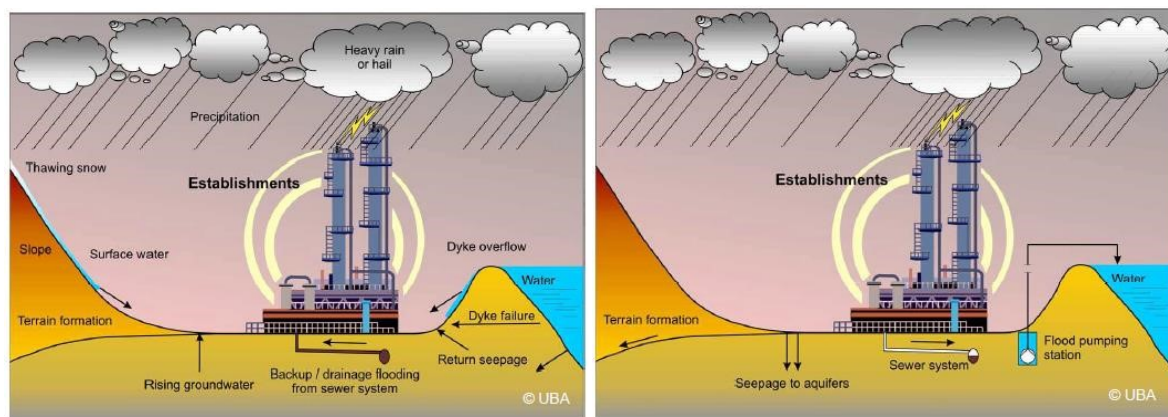
- Flood
- Heavy Rainfall

Climate change: TRAS 310 includes a climate adaption factor for risk analysis

Description

As a matter of principle, a site may be subject to flooding if the inflow of water significantly exceeds the runoff of water. As a result, operators are advised to examine both the potential inflow- and runoff routes of their site.

Figure 2: Potential inflow (left) and run-off (right) routes of water at a site



Source: © UBA

A detailed hazard source analysis should be based on three different options of assumptions:

1. Events that statistically occur at least every 100 years (medium probability).
2. Events that less likely to occur (recurrence interval of more than 100 years). This depends on the local design of the public flood protection measures.
3. Penetration of water into installations and establishments.

The following regulations have been introduced to the TRAS 310 for the purpose of enabling adaptation to climate change:

1. The intensity of a trigger event (basis 2010) must be multiplied with a climate adaption factor of 1.2, in order to depict changes that may occur in the time up to 2050.
2. For new plants, which are supposed to be in operation beyond the year 2050, protection measures against flood and heavy precipitation must consider the increasing intensities by application of the climate adaption factor.
3. If operation of an installation is planned to be terminated before 2050, the climate adaption factor need not be taken into account.
4. From 2050 onwards, the climate adaptation factor must be taken into account for all installations' lay-outs.

5. In some justified cases it is possible that the climate adaption factor can vary. This may be the case if climate change has already been taken into account in the (flood) hazard maps or if the relevant authority has already determined the climate change related changes to the runoff from high water flooding.
6. If new findings on climate change are identified in the period up to 2050, these should be taken into account in the revision of the Technical Rule on Process Safety.

Link/Contact:

http://www.kas-bmu.de/publikationen/tras/TRAS_310_GB_shortversion.pdf

<https://www.umweltbundesamt.de/sites/default/files/medien/461/publikationen/4447.pdf>

Comments by the UN/OECD Natech-Steering Group:

Approach for flood risk management is basing on the obligations of the EU Seveso-directive but not limited to their scope. The adaptation to climate change is mandatory and related obligations are defined by an exact factor.

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