30 years after the Sandoz accident

Lessons learned for preventing transboundary water pollution

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Side Event COP9, 30 November 2016
Agenda

Sandoz accident and its consequences

Swiss Ordinance on Major Accidents – lessons learned

Transboundary cooperation

Fire water retention strategy in Switzerland

Conclusions
The Sandoz accident...
1 November 1986 at Schweizerhalle
...Political debate...

Political debate in the Federal Council and in the United Federal Assembly

2.12.1986: Federal Council appeared before the United Federal Assembly and declared that a major accident ordinance was needed.
... the birth of the major accident ordinance in Switzerland

Verordnung
über den Schutz vor Störfällen
(Störfallverordnung, StFV)

vom 27. Februar 1991 (Stand am 1. Juni 2015)

Der Schweizerische Bundesrat,
gestützt auf die Artikel 10 Absatz 4 und 39 Absatz 1 des Bundesgesetzes
vom 7. Oktober 1983\(^1\) über den Umweltschutz (USG)
und den Artikel 47 Absatz 1 des Gewässerschutzgesetzes vom 24. Januar 1991\(^2,3\)
verordnet:
Ordinance on major accidents
Scope of application

2’400 Chemical establishments
3’600 km railway lines

7’800 km main roads
2’500 km gas and oil pipelines
Deterministic approach: make the holes as small as possible
Probabilistic approach: Additionally close the holes on a line
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Swiss Ordinance on major accidents entered into force in 1991 – about 10 years after the Seveso Directive

Switzerland’s regulations go one step further than the Seveso Directive or the Industrial Accidents Convention

- Lower thresholds for chemicals, broader scope of application
- Transport routes (railway lines, roads, river Rhine), gas and oil pipelines in the scope of application
- Quantitative risk approach
Transboundary cooperation

Notification of hazardous activities to neighbouring countries

Germany (28)

France (24)

Austria (5)

Italy (0)
Transboundary cooperation

Notification of hazardous activities

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Transboundary cooperation
International Warning and Alert Plan Rhine

- Rhine: Drinking water for approximately 22 million consumers
- 1987 it was decided that the International Warning and Alert Plan Rhine should be developed
- Seven alert centres between Basel and the Netherlands can transmit an alert downstream

Monitoring station at Weil am Rhein in Germany, downstream of Basel
Transboundary cooperation
International Warning and Alert Plan Rhine

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Fire water retention strategy in Switzerland

Guideline

• Guideline developed by the cantons
• Objective: Avoid that extinguishing water contaminated with toxic chemicals can be discharged to surface waters
• The operators can save high follow-up costs with preventing measures
• Prevention measures can be:
  ➢ Separate fire compartements which can withstand a fire for sufficient periods
  ➢ Highly flammable substances should be replaced by less harmful ones or smaller quantities
Fire water retention strategy in Switzerland

Fire water retention principles

The retention volume depends on the fire hazard of the substances stored, the fire compartment surface and the fire protection equipment. The guideline includes a formula to calculate the retention volume.
Conclusions

• Prevention is better than response
• The ordinance established the basis for the cooperation between all of the parties involved
• The ordinance makes a crucial contribution to reducing the risks resulting from the handling and transport of dangerous goods
• Switzerland supports the work planned by the JEG to elaborate safety guidelines or best practices for fire-water retention

You will find more information in the following internet dossier elaborated by the Swiss Federal Office for the Environment

Internet dossier 30 years after the Sandoz Accident
Thank you very much for your attention!