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Federal department of  
environment, transport, energy and communications ETEC  
Federal Office for the Environment FOEN  
Hazard Prevention Division

# UNECE Convention on the Transboundary Effects of Industrial Accidents

## Training on identification of hazardous activities

### Location Criteria for Water Path

21 - 22 October 2008, Minsk, Republic of Belarus



## Hazardous Activities (Art. 1 b, c TEIA)

### Reminder

Any activity in which one or more **hazardous substances** are present or **may be** present in **quantities at or in excess of the threshold quantities** listed in Annex I

**and which is capable of causing transboundary effects, i. e. direct or indirect, immediate or delayed adverse consequences** on, inter alia:

....

(ii) Soil, **water**, air and landscape;

....



## “Buzz words” for the identification for the water path

- Hazardous substances capable of causing effects on water → Insight into Annex I
- Quantities → Insight into Annex I
- Activities **capable** of causing **transboundary effects**, direct or indirect, immediate or delayed → location criteria
- You may consider activities with quantities lower than thresholds if transboundary effects can be **expected** (recommended for consultation)
- **Guidelines on location criteria to facilitate the identification have been produced**



## Guidelines to facilitate the identification of hazardous activities – broad location

**Q. In which locations should we look for hazardous activities ?**

A. Within catchment areas\* of transboundary or international rivers, lakes and groundwaters

*\* catchment area of a transboundary river or lake: the whole drainage area of this river or lake with a common outlet*



## Illustration: Catchment areas in Switzerland



## Kind of activities to consider for use of location criteria

**Q. What kinds of activities should we have in mind ?**

**A. Activities involving substances that**

fall under category 3, 4, 5 or 8 of part I of annex I to the Convention (→ **insight into Annex I**) and

**may be** released into water in the event of an accident (→ path from activity to water course)



## Principle for use of location criteria

Whether or not an activity is capable of causing a transboundary effect in such an event should be **decided by the Party of origin**, preferably **in consultation** with any bilateral or multilateral body for cooperation between concerned Parties.

- Application of simple criteria (incl. existence of river warning and alarm systems as well as distance to the border) as elements for consultation and decision
- If necessary, risk assessment



## General distance criteria

- JEG-recommendation: distance between the location of the hazardous activity and the border corresponding approximately to a flowing period of **two days** of average flow velocity  
The recommendation needs interpretation !
- In fact, the distance is made up of three components:
  - path from the activity to a water course (“may be released into water in the event of an accident”)
  - path from the water course to an international/transboundary water course
  - path from the international/transboundary water course to the border



## Path from activity to water course I

- Look at the way substances could **in a “worst case”** enter the water path
  - directly, i. e. flowing at the surface or into groundwater
  - indirectly, e. g. via drainage system
- Look at the quantity of substances that could enter the water path **in a “worst case”**
- To look adequately at these elements you should have in mind a few → possible scenarios
- To this effect you must have a **sound knowledge of the activity**



## Path from activity to water course II

- Think a few scenarios through
- Retention systems that are not absolutely “fail safe” **should not be taken into account !**
- On the basis of these reflexions
- Estimate the time between leak and entry into water (again, **“worst case”**)
- Estimate whether relevant or not for the Convention and document your findings for later consultation

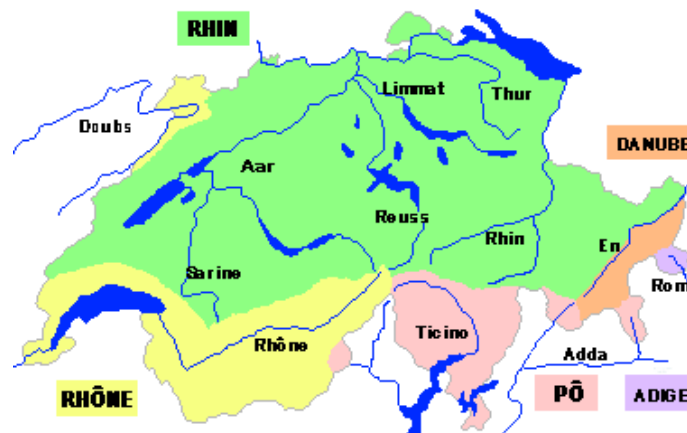


## Path from the water course to an international/transboundary water course

- Look at the **distance** between water course and international/transboundary water course
- Look at **natural retentions** between water course and international/transboundary water course



## Illustration: Catchment areas in Switzerland





## Path from the water course to an international/transboundary water course

- Look at the **existing national river warning and alarm** systems **AND contingency plans** to be **enacted** in case of alarm
- Estimate the time between entry into water and entry into international/transboundary water course



## Path from the international/transboundary water course to the border

- Look at the **distance** between international / transboundary water course and the border
- Look at the **existing international river warning and alarm** systems **AND contingency plans** to be **enacted** in case of alarm
- **Estimate the time** between entry into international/transboundary water course and border
- **Estimate the total time** between accident and effects at the border
- **Look at the possible effects**



## Summary

- **Look at**
  - catchment areas
  - activities with substances/quantities  $\geq$  Annex 1
  - the **possibilities** of industrial accidents
  - the distances involved, at natural retentions, etc.
- **Estimate** the times involved and possible effects
- **Identify** the hazardous installations
- **Consult** concerned Parties, adequate bodies
- **Improve** your identification on the basis of the consultation



## But ....

**You have complied with your obligation only  
after you have**

**NOTIFIED THE CONCERNED PARTIES !**

**PLEASE NOTE**