



***The Bulgarian approach to  
the identification of  
hazardous activities on  
industrial facilities***

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# History

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- **Pre-1990**

- No classification

- **1990**

- First identification of hazardous activities
- Named substances list
- Different thresholds



# History

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## ○ 1999

- Preparation for the transposition of the Convention
- Classification of chemicals – easier than working with endpoints
- Identification of hazardous activities
- Based on the hazardous substances onsite
- Data from inspections, customs, other authorities



# History

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- **2002**

- First legislation

*Classification is a duty of the operator!*

- Criteria for classification

- Thresholds

- Chemicals legislation

- Criteria for potential for transboundary impact

- Location criteria

- Criteria for assessing potential impacts



# Identification of hazardous activities

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- Checking whether the establishment is in the Scope of the Convention
- Assessment whether the hazardous chemicals meet the criteria of Annex I
- Determination of the maximum amounts of the hazardous substances
- Determination of the consequences of a possible industrial accident and the probability of transboundary effects



# Scope of the Convention

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- List of all establishments with hazardous substances onsite
- Exclusion criteria (Art. 2.2.)
  - Nuclear accidents or radiological emergencies;
  - Military installations;
  - Dam failures, with the exception of the effects of industrial accidents caused by such failures;
  - Land-based transport accidents with the exception of:
    - Emergency response to such accidents;
    - Transportation on the site of the hazardous activity;
  - Accidental release of genetically modified organisms;
  - Accidents caused by activities in the marine environment, including seabed exploration or exploitation;
  - Spills of oil or other harmful substances at sea



# Hazardous chemicals meeting the criteria of Annex I

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- Named substances (Annex I, Part II)
- Generic hazardous properties (Annex I, Part I)
  - Classification and labeling
  - Mixtures and preparations
  - Sources of information
- Thresholds



# Hazardous chemicals meeting the criteria of Annex I

## Classification and labeling

- EU classification system
  - Classlab
- GHS classification system
  - C & L Regulation
  - Downstream effects
- National classification systems
- Classification of mixtures





# Hazardous chemicals meeting the criteria of Annex I

## Sources of information

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- EU classification system
  - Classlab
  - ESIS
- REACH
  - Public information from substances dossiers
  - C&L dossiers
- ILO MSDS database
- ADR (GHS) Classification of the chemicals -  
[http://www.unece.org/trans/danger/publi/ghs/ghs\\_welcome\\_e.html](http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html)
- Other sources of information
  - ***Mostly responsibility of the industry!***



# Transboundary effects

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- Properties of the chemicals
  - Explosives
  - Flammables
  - Toxic
  - Toxic for the environment/water hazard class
- Accident scenarios
  - Possible consequences
    - Thermal radiation
    - Toxic cloud
    - Water and soil pollution
  - Amounts of substances involved
- Location of the establishment
  - Location criteria



# Transboundary effects

## Possible consequences

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- Properties of the chemicals
  - Explosives
  - Flammables
  - Toxic
  - Toxic for the environment
- Accident scenarios
  - Possible consequences
    - Thermal radiation
    - Toxic cloud
    - Water and soil pollution
  - Amounts of substances involved
- Deterministic/probabilistic Approach



# Transboundary effects

## Location criteria

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- Location of the establishment
  - 15 km for air path
  - flowing period of two days of average flow velocity
    - If significant differences between winter and summer period flow rates exist, the accident scenarios should reflect this



# Follow-up

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- Permitting
- Public register
- Inspections
- Information to the public
- Review and update