



The Bulgarian approach to

the identification of
hazardous activities on
industrial facilities



History

- **Pre-1990**

- No classification

- **1990**

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



History

○ 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

- **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

- 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

- 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

- 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

- 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
- Other sources of information
 - ***Mostly responsibility of the industry!***



Transboundary effects

- 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

- 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

- 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

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