Structure of and recent changes to Annex I of the Convention

Claudia Kamke, UNECE Industrial Accidents Convention secretariat
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Annex I of the Convention

- “Hazardous activity” means 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 hereto, and which is capable of causing transboundary effects

- Annex I on **Hazardous substances for the purposes of defining hazardous activities**
  - Defines and provides qualifying criteria for hazardous substances
  - Hazard categories and named hazardous substances in the scope of the Convention
  - Threshold (qualifying) quantities
Structure of Annex

- Part I. Categories of substances and mixtures not specifically named in Part II
- Part II. Named substances
  - Substances of high concern, such as TDI, methyl isocyanate, phosgene, chlorine
  - Widely used substances, such as ammonium nitrate, LPG and other petroleum products
- Where a substance or mixture named in Part II also falls within a category in Part I, the threshold quantity set out in Part II shall be used
Changes in Annex I

• In 2012, Conference of the Parties requested the Working Group on the Development to draft a revised annex I to:
  • bring it into line with the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (ST/SG/AC.10/30/Rev.4)
  • to maintain consistency with corresponding EU legislation (Seveso III Directive)
• In 2014, Conference of the Parties adopted the revised annex I
• Entry into force – December 2015
Changes in Annex I

- Changes in the hazard criteria (cut-off values)
- Introduction of new hazard categories (flammable aerosols, organic peroxides)
- Changes in some of the quantity thresholds
- Inclusion of new substances in the list of named substances
## Changes in structure of Annex I

### Part I.

**Categories of substances and preparations not specifically named in Part II**

<table>
<thead>
<tr>
<th>Category</th>
<th>Threshold quantity (metric tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Flammable(^2)</td>
<td>50 000</td>
</tr>
<tr>
<td>2a. Highly flammable(^3)(^{(a),(b)})</td>
<td>200</td>
</tr>
<tr>
<td>2b. Highly flammable(^3)(^{(c)})</td>
<td>50 000</td>
</tr>
<tr>
<td>3. Extremely flammable(^4)</td>
<td>50</td>
</tr>
<tr>
<td>4. Toxic(^5)</td>
<td>200</td>
</tr>
<tr>
<td>5. Very toxic(^6)</td>
<td>20</td>
</tr>
<tr>
<td>6. Oxidizing(^7)</td>
<td>200</td>
</tr>
<tr>
<td>7a. Explosive, where the substance, preparation or article falls under Division 1.4 of the GHS criteria(^8)</td>
<td>200</td>
</tr>
<tr>
<td>7b. Explosive, where the substance, preparation or article falls under Division 1.1, 1.2, 1.3, 1.5 or 1.6 of the GHS criteria(^8)</td>
<td>50</td>
</tr>
<tr>
<td>8a. Dangerous for the environment — “Toxic to aquatic organisms”(^9)</td>
<td>500</td>
</tr>
<tr>
<td>8b. Dangerous to the environment — “Very toxic to aquatic organisms”(^10)</td>
<td>200</td>
</tr>
</tbody>
</table>
# Changes in structure of Annex I

## Part I.
**Categories of substances and mixtures not specifically named in Part II**

<table>
<thead>
<tr>
<th>Category in accordance with the United Nations Globally Harmonized System (GHS) of Classification and Labelling of Chemicals</th>
<th>Threshold quantity (metric tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Acute toxic, Category 1, all exposure routes(^2)</td>
<td>20</td>
</tr>
<tr>
<td>2. Acute toxic:</td>
<td>200</td>
</tr>
<tr>
<td>Category 2, all exposure routes(^3)</td>
<td></td>
</tr>
<tr>
<td>Category 3, inhalation exposure route(^4)</td>
<td></td>
</tr>
<tr>
<td>3. Specific Target Organ Toxicity (STOT) — Single Exposure (SE) STOT, Category 1(^5)</td>
<td>200</td>
</tr>
<tr>
<td>4. Explosives — unstable explosives or explosives, where the substance, mixture or article falls under division 1.1, 1.2, 1.3, 1.5 or 1.6 of chapter 2.1.2 of the GHS criteria or substances or mixtures having explosive properties according to Test series 2 of Part I of the United Nations <em>Recommendations on the Transport of Dangerous Goods: Manual of Tests and Criteria</em> (Manual of Tests and Criteria) and do not belong to the hazard classes Organic peroxides or Self-reactive substances and mixtures(^6,7)</td>
<td>50</td>
</tr>
<tr>
<td>5. Explosives, where the substance, mixture or article falls under division 1.4 of chapter 2.1.2 of the GHS(^7,8)</td>
<td>200</td>
</tr>
</tbody>
</table>
Changes in Annex I

Part I

Previous Annex I

• Toxic and very toxic

• Cut-off values
  – Toxic
    LD50 (oral, mg/kg) 25 < LD50 < 200
    LD50 (dermal, mg/kg) 50 < LD50 < 400
    LC50 (inhalation, mg/l) 0.5 < LC50 < 2
  – Very toxic
    LD50 (oral, mg/kg) LD50 < 25
    LD50 (dermal, mg/kg) LD50 < 50
    LC50 (inhalation, mg/l) LC50 < 0.5

Current Annex I

Acute toxicity, Cat. 1, 2 and 3*
  – ACUTE TOXIC Category 1 – 20 t.
  – ACUTE TOXIC Category 2 and 3* - 200 t.

Cut-off values
  – ACUTE TOXIC Category 1
    LD50 (oral, mg/kg) LD50 < 5
    LD50 (dermal, mg/kg) LD50 < 50
    LC50 (inhalation vapours, mg/l) LC50 < 0.5
    LC50 (inhaltion gases, ppmV) LC50 < 100
    LC50 (dusts and mists, mg/l) LC50 < 0.05
  – ACUTE TOXIC Category 2 and 3*
    LD50 (oral, mg/kg) 5 < LD50 < 50
    LD50 (dermal, mg/kg) 50 < LD50 < 200
    LC50 (inhalation vapours, mg/l) 0.5 < LC50 < 2
    LC50 (inhalation gases, ppmV) 100 < LC50 < 500
    LC50 (dusts and mists, mg/l) 0.05 < LC50 < 0.5

* Inhalation route only
Challenges in implementing revised Annex I

• Adopted revision represents an important change to the Convention
• Expertise on chemicals and GHS usually distributed across several authorities
• To implement the new criteria, competent authorities need to coordinate and cooperate with other authorities
• Network of experts and decision-makers
Questions or comments?