



Improving Exposure Assessment during Cross-border Chemical Incidents

Cross-border chemical incidents

A chemical incident doesn't recognise borders and can strike at any time, affecting public health in more than one country. The Ajka alumina sludge spill in Hungary is a recent example of a large-scale chemical incident affecting neighbouring countries. The EU funded CERACI project (Cross-border Exposure characterisation for Risk Assessment in Chemical Incidents) seeks to improve chemical incident preparedness and response by strengthening the exposure assessment step of chemical incident response. A raft of **good practices**, a **self-assessment methodology** and a proposal for a **network of experts** are among the project outcomes.



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Good practices in chemical incident preparedness and response

The project has identified many good practices specifically for the main functions of exposure assessment (e.g. modelling & monitoring) as well as a number of good practices particularly relevant to **cross-border** preparedness and response. The full list of good practices will be published in the forthcoming project report. Adopting these good practices, and customising them to meet a country or organisation's needs, can help deliver a timely and adequate response to chemical incidents across borders.

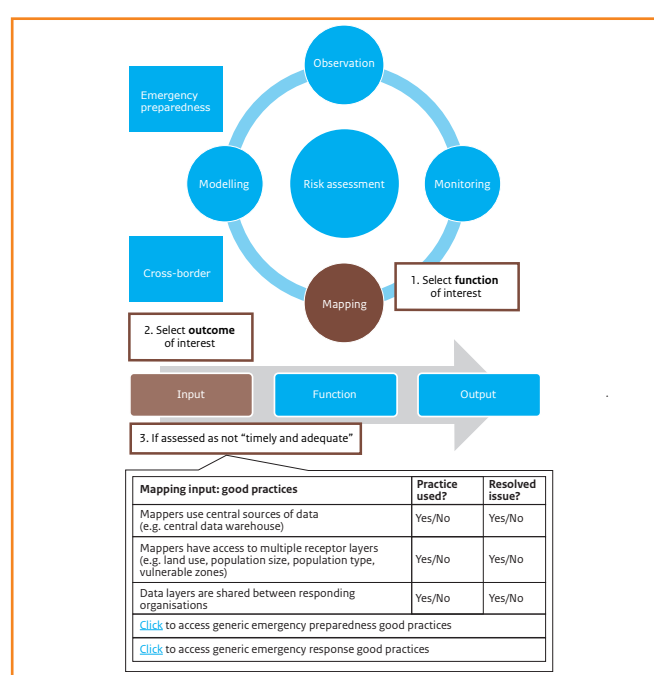
Self-assessment methodology

This methodology can be used to assess and visualise:

- Exposure assessment at local, regional, national and international levels
- Exposure assessment capabilities of individual organisations
- Cross-border exposure assessment within and between Member States (MS)
- Functions of exposure assessment at an overview level (e.g. monitoring) or further broken down by media (e.g. monitoring of air)

This approach is for use in the emergency preparedness phase to improve response. Organisations (and MS) using the methodology can identify areas of exposure assessment where communication or functions can be improved and then select and implement applicable good practices gathered by CERACI. **Figure 1** illustrates how the methodology could be developed into an online tool.

Figure 1 An illustration of online self-assessment



Good practices in cross-border preparedness and response:

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| <p>Preparedness</p> <ul style="list-style-type: none"> • Interagency training and exercising across borders • Shared preparedness materials and response plans • Focal points and defined points of contact • Bilateral or multilateral agreements, underpinned by detailed local and regional arrangements • Harmonised procedures and resources • Preparedness programmes focussing on common cross-border risks • Debriefing after incidents and sharing of databases and information | <p>Response</p> <ul style="list-style-type: none"> • International alerting and communication channels • Cross-border links at both national and responder level • Use of checklists, pre-prepared material, and common approaches • Resources that cross borders to provide assistance, where requested • Sharing of exposure assessment information between counterparts • Outputs that are useable on both sides of a border • Common approaches to risk assessment and communication, with sustained dialogue between incident managers across borders |
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Network of experts

Through discussions with experts in exposure assessment, CERACI identified a need for a European network of experts. We suggest a network structure that connects public health risk assessors with exposure assessors' networks, see **Figure 2**. This is required to translate risk assessors' information needs for risk assessment into technical requirements, standards, and working practices for exposure assessment. The final project report explores how such a network might fit with existing international civil protection and health structures and which organisations may be best placed to host and support it.

Proposed objectives for the Network of experts:

- Improve exposure assessment as part of a programme of chemical incident emergency preparedness via national forums led by risk assessors
- Develop, propagate and coordinate self-assessment using the methodology developed by CERACI
- Map international and national networks of experts in exposure and risk assessment
- Collate and signpost relevant international and MS resources, guidance and training materials
- Collate and provide lessons learned from cross-border chemical incidents and joint training and exercising events
- Support and implement shared harmonisation and cross-border initiatives, training, exercising and research

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Key Recommendations for the EU and Member States

- **Adopt a holistic approach to emergency preparedness for chemical incidents**
 - Agree a common approach to chemical incident emergency preparedness and response between European and (inter)national bodies with overlapping interests in this field
- **Coordinate and drive chemical incident emergency preparedness at EU and national level**
 - Through a multidisciplinary, multisectorial cross-European forum of exposure and risk assessors, linking to national forums and networks of experts within MS
- **Provide resources to support chemical incident emergency preparedness**
 - Develop the CERACI self-assessment methodology and coordinate assessment via a central web-tool, generating a living directory of good practices and contact details for specialists
- **Facilitate emergency preparedness in border areas**
 - Develop a Seveso-style approach to planning and exercising for cross-border chemical incident response, driven by identification and prioritisation of cross-border threats
- **Facilitate mutual aid**
 - Provide information systems for the cross-border sharing of exposure and risk assessment outputs between both MS focal points and between local responders and their counterparts in neighbouring MS

Figure 2 Linking European & national exposure assessment networks

