



National Institute for Public Health  
and the Environment  
*Ministry of Health, Welfare and Sport*

# Preparing for Cross-border Chemical Incidents: findings of the CERACI project

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CoP Convention on Transboundary Effects of Industrial  
Accidents

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**Pro-action**

**Prevention**

**Preparation**

**Response**

**Aftercare**





## Bridging the gap



- Within a country
  - Between national and local/regional levels
- Between countries (transboundary incidents)
  - Between national levels
  - Between local/regional levels



## How well do we know our neighbours?

Scenario: A large chemical incident on our border

- How do our neighbours assess exposure for health risk assessment?
  - do they need help or do we?
- Who should we approach for information?
  - will they share it with us?
- Are our public health messages aligned?



**Can we answer these questions?**  
**Possibly not!**





## Cross-border Exposure characterisation for Risk Assessment in Chemical Incidents

Main objective:

- To strengthen public health risk assessment for the acute phase of a chemical incident by improving exposure assessment, **with a special focus on cross-border incidents**

Beneficiaries:

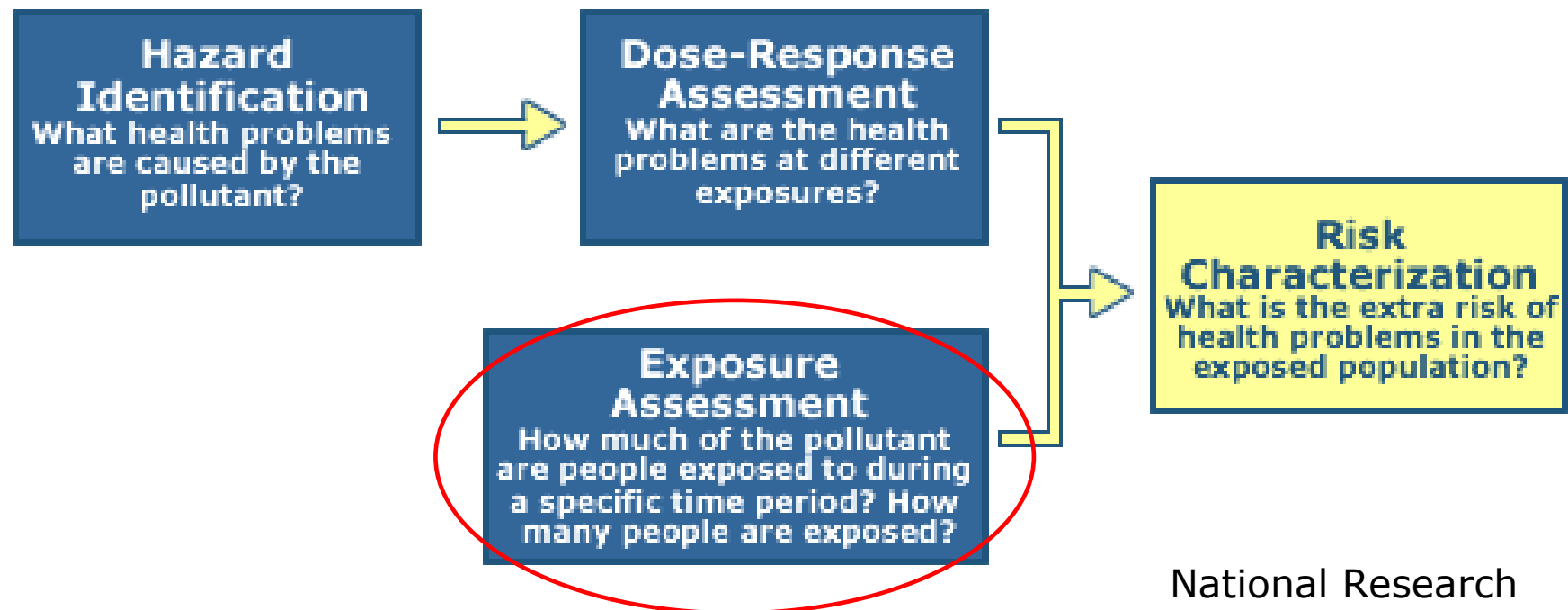
- RIVM: National Institute for Public Health and the Environment
- HPA: Health Protection Agency, UK
- NIOM: Nofer Institute for Occupational Medicine, Poland

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## Focus on Exposure Assessment

### The 4 Step Risk Assessment Process



National Research  
Council; NRC, 1996



# Industrial Accidents Convention and CERACI

## *Article 8. Emergency Preparedness*

1. The Parties shall take appropriate measures to establish and maintain **adequate emergency preparedness** to respond to industrial accidents. The Parties shall ensure that preparedness measures are taken to **mitigate transboundary effects** of such accidents, [...]. In particular, the Parties concerned shall **inform each other** of their contingency plans.

## *Article 11. Response*

1. The Parties shall ensure that, in the event of an industrial accident, or imminent threat thereof, **adequate response measures** are taken, as soon as possible and using the most efficient practices, to contain and minimize effects.
2. In the event of an industrial accident, or imminent threat thereof, which causes or is capable of causing transboundary effects, the Parties concerned shall ensure that the **effects are assessed** - where appropriate, jointly for the purpose of taking adequate response measures. The Parties concerned shall endeavour to **coordinate their response measures**.



## CERACI Key Questions

- How have Member States (MS) organised exposure assessment for health risk assessment during acute chemical incidents?
- Which MS have organised collaboration and interoperability on exposure assessment nationally and across borders?
- Which good practices - technical or organisational – are there and how can these be (further) developed?
- Will harmonisation and collaboration improve MS capabilities and capacities to respond to acute chemical incidents?





## Key CERACI Outputs

- Summarised response structures across MS
- Identified treaties and agreements for collaboration, cross-border working and mutual aid
- Identified and engaged experts
- Compiled, categorised and verified good practices in exposure assessment across MS
- Developed guidelines for exposure assessment organisation and practice
- Developed a self-assessment methodology to identify gaps in capability



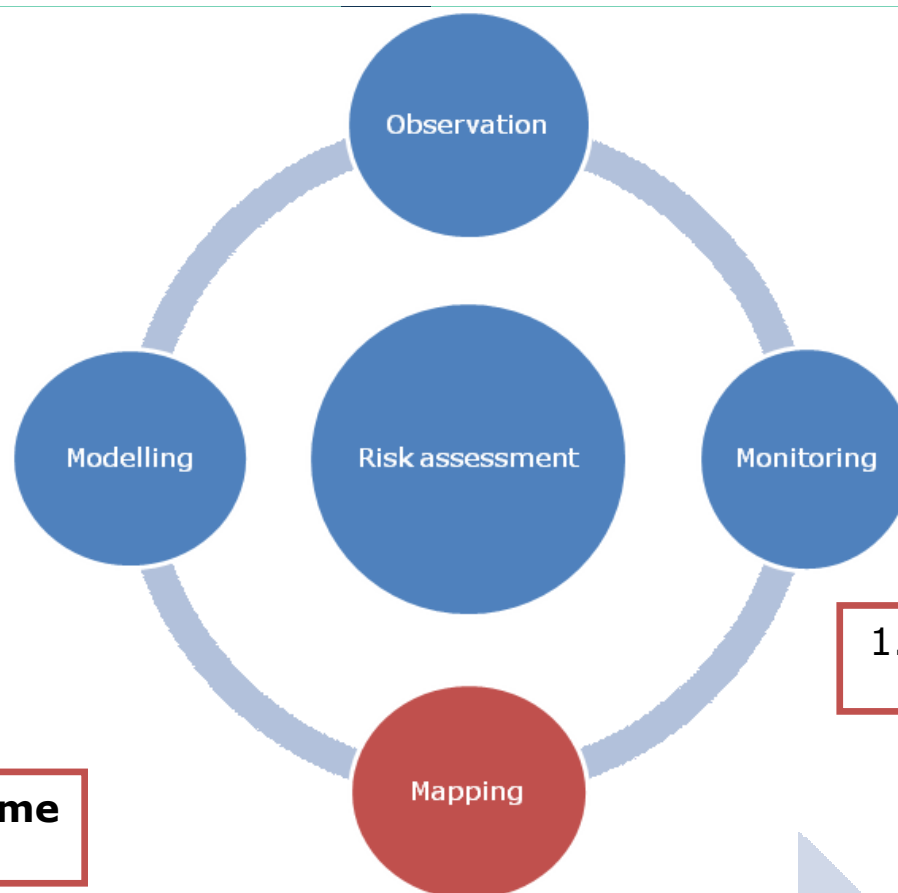
# Example

Emergency preparedness

Cross-border

2. Select **outcome** of interest

1. Select **function** of interest



Input

Function

Output

3. If assessed as not "timely and adequate"

Mapping input good practices	Practice used?	Resolved issue?
Mappers use central sources of data (e.g. Czech central data warehouse)	Yes/No	Yes/No
Mappers have access to multiple receptor layers (e.g. land use, population size, population type, vulnerable zones)	Yes/No	Yes/No
Data layers are shared between responding organisations	Yes/No	Yes/No

[Click](#) to assess generic emergency preparedness good practices

[Click](#) to assess generic emergency response good practices



## Good practices in Cross-border Emergency preparedness

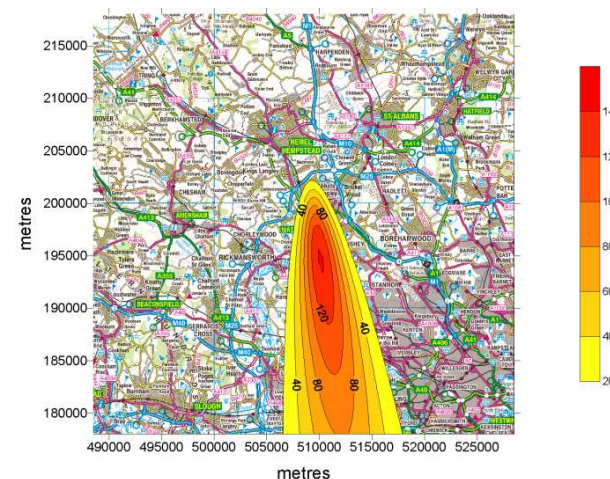
- Interagency training and exercising across borders (including Public Health)
- Shared preparedness materials and response plans
- Focal points and defined points of contact
- Bilateral or multilateral agreements, underpinned by detailed local and regional arrangements
- Harmonised procedures and resources to facilitate collaboration
- Agree consistent approaches for risk management and communication
- Debriefing after incidents and sharing of databases and information





## Good practices in Cross-border Emergency response

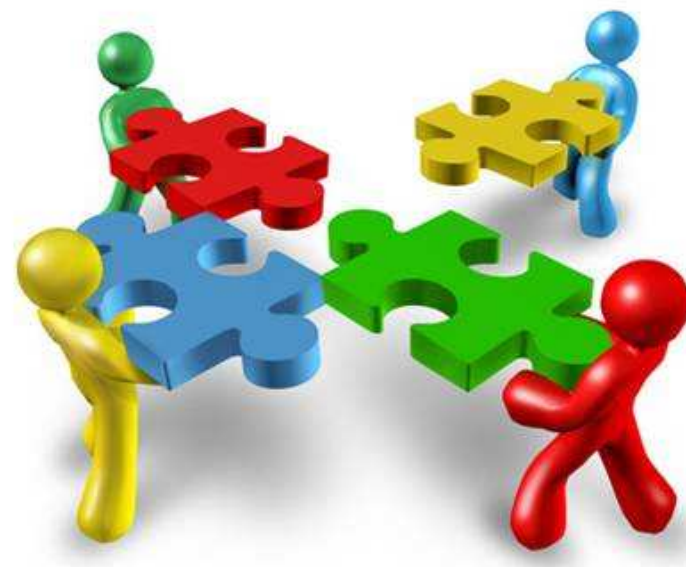
- International alerting and communication channels
- Cross-border links at both national and responder level
- Use of checklists, pre-prepared material, and common approaches
- Resources that cross borders to provide assistance, where requested
- Sharing of exposure assessment information between counterparts
- 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





## Adopt a holistic approach to emergency preparedness for chemical incidents

- Adopt a common multidisciplinary, multisectorial European and national approach to preparedness and response for chemical incidents
- Use and develop legal and institutional frameworks that help MS and responders deal with public health threats
- Develop and implement national and local programmes to improve emergency preparedness and response, using self-assessment to prioritise and target work







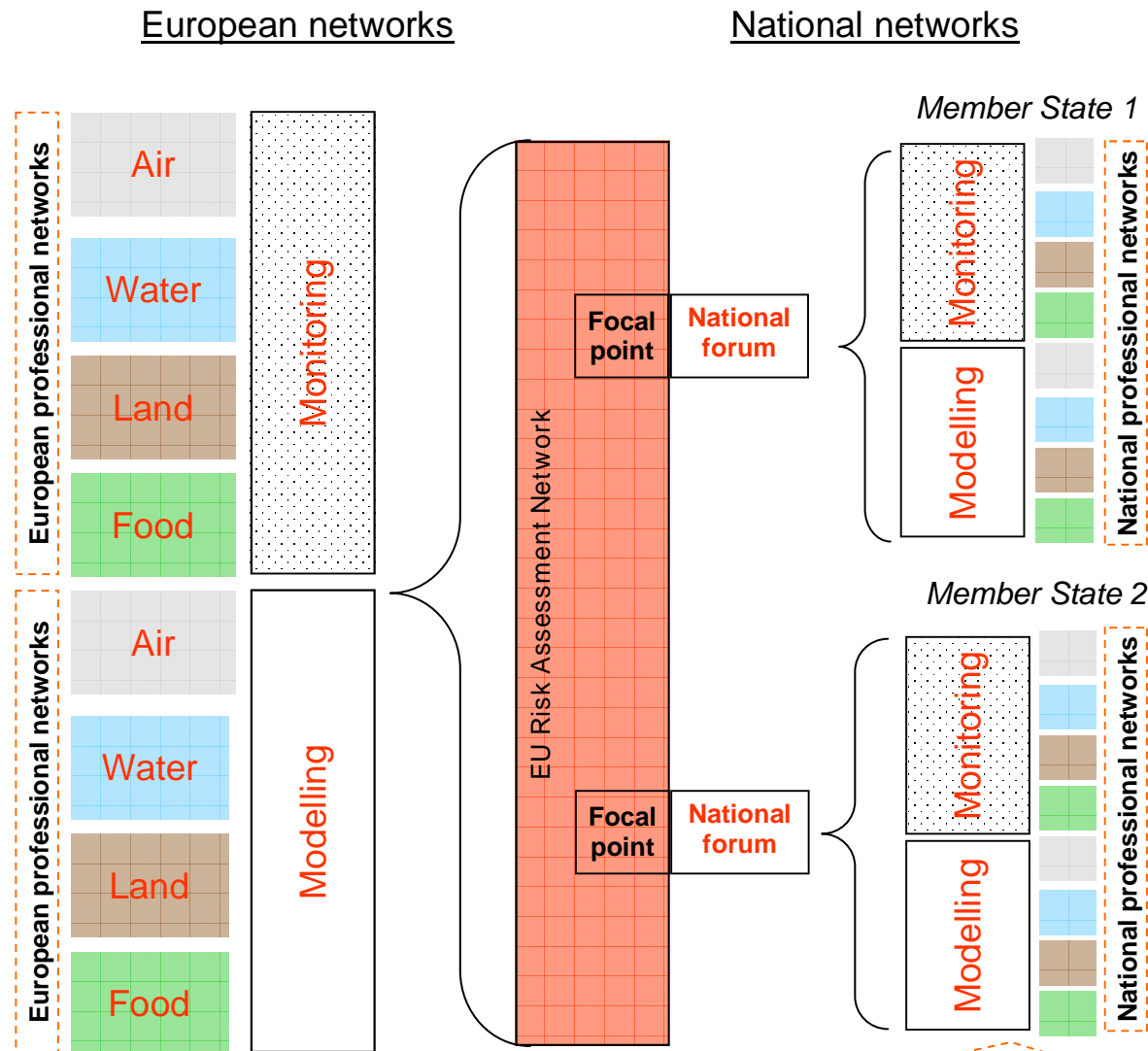
## Coordinate and drive chemical incident emergency preparedness at EU and national level

through a multidisciplinary, multisectorial European forum of exposure and risk assessors, linking to national forums and networks of experts

- Develop, propagate and coordinate self-assessment using the methodology developed by CERACI
- Support and implement shared harmonisation and cross-border initiatives, training, exercising and research
- Facilitate exchange of good practices and lessons learnt from cross-border chemical incidents and joint training and exercising events
- Collate and signpost relevant international and MS resources, guidance and training materials



# Linking European & national exposure assessment networks

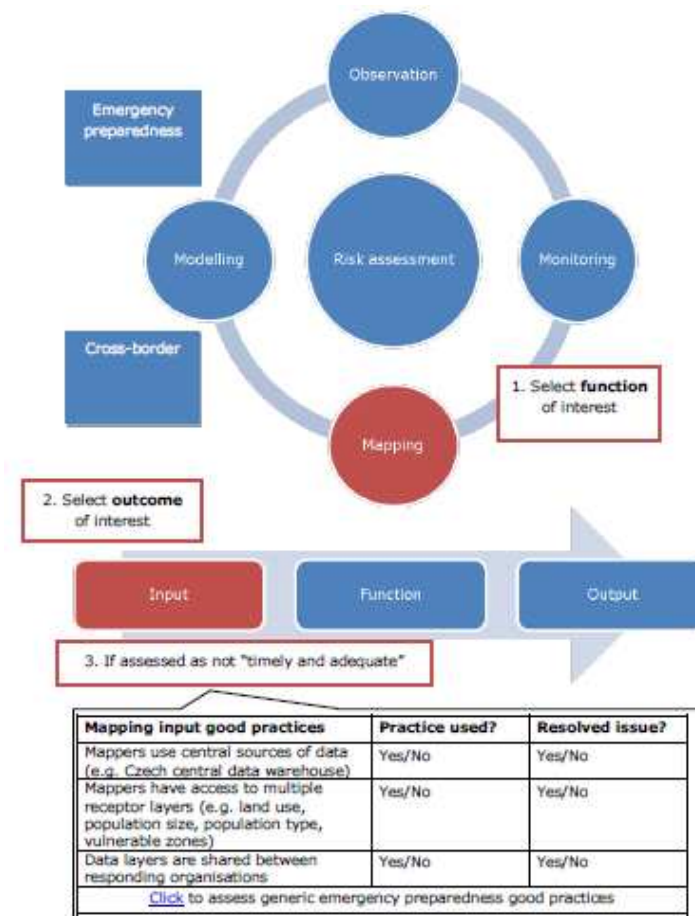


# RECOMMENDATIONS



## Provide resources to support chemical incident emergency preparedness

- Develop the CERACI self-assessment methodology and coordinate assessment via a central web-tool
- Use self-assessment to generate a living directory of good practices in exposure and risk assessment and of contact details for specialists
- Collate and signpost resources in exposure and risk assessment



# RECOMMENDATIONS



## Facilitate emergency preparedness in border areas

- Use and develop legal and institutional frameworks that help responders deal with cross-border chemical incidents
- Work with neighbouring countries to identify shared risks, and prepare and exercise a collaborative response to cross-border incidents
- Develop a European database of cross-border incidents and exercises
- Support applications for funding for cross-border work
- Collaborate beyond EU borders with non-EU neighbours and international bodies



# RECOMMENDATIONS



## Facilitate mutual aid

- Raise awareness of existing support mechanisms for mutual aid in exposure assessment
- Provide information systems for sharing of exposure and risk assessment outputs between both MS focal points and between local responders and counterparts in neighbouring MS
- Develop dedicated resources for cross-border response
- Drive multi-country legal agreements for mutual aid that address exposure and risk assessment





## Relevance for non-EU countries?

- Is there awareness of neighbouring countries' response structures?
- Are there differences in exposure assessment capabilities and organisation between and within countries?
- Is there willingness to share and adopt good practices?
- Is there a need for a network of experts?



## Follow-up in non-EU countries

- Assistance programme UNECE Convention on the Transboundary Effects of Industrial Accidents
  - Proposal for CERACI-derived project for non-EU signatories in work plan 2013-2014
    - › Investigate exposure and risk assessment capabilities, organisation and good practices
    - › Tailor-made guidelines and recommendations







# ceraci

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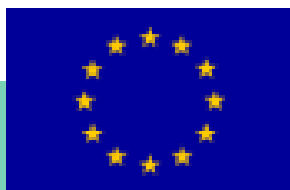
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