



# The International Committee on Contaminated Land

**24 years of world-wide cooperation**

D. Darmendrail & D. Mueller-Grabherr  
Copenhagen, 6 October 2017



# 1993



ICCL  
international  
committee on  
contaminated  
land

## ◆ European Union becomes reality !!!

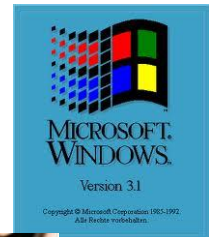
- Single Market created → “Maastrich Treaty” enforced
- Finland, Sweden, Austria started accession procedure



## ◆ Windows 3.1 released

## ◆ Clinton took over from Bush sen

## ◆ Nelson Mandela and Frederik Wilhem de Klerk jointly awarded the Nobel Price for Peace





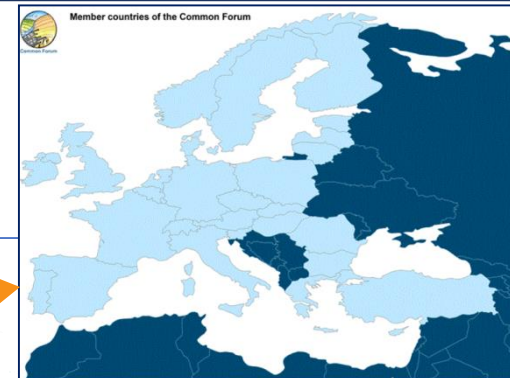
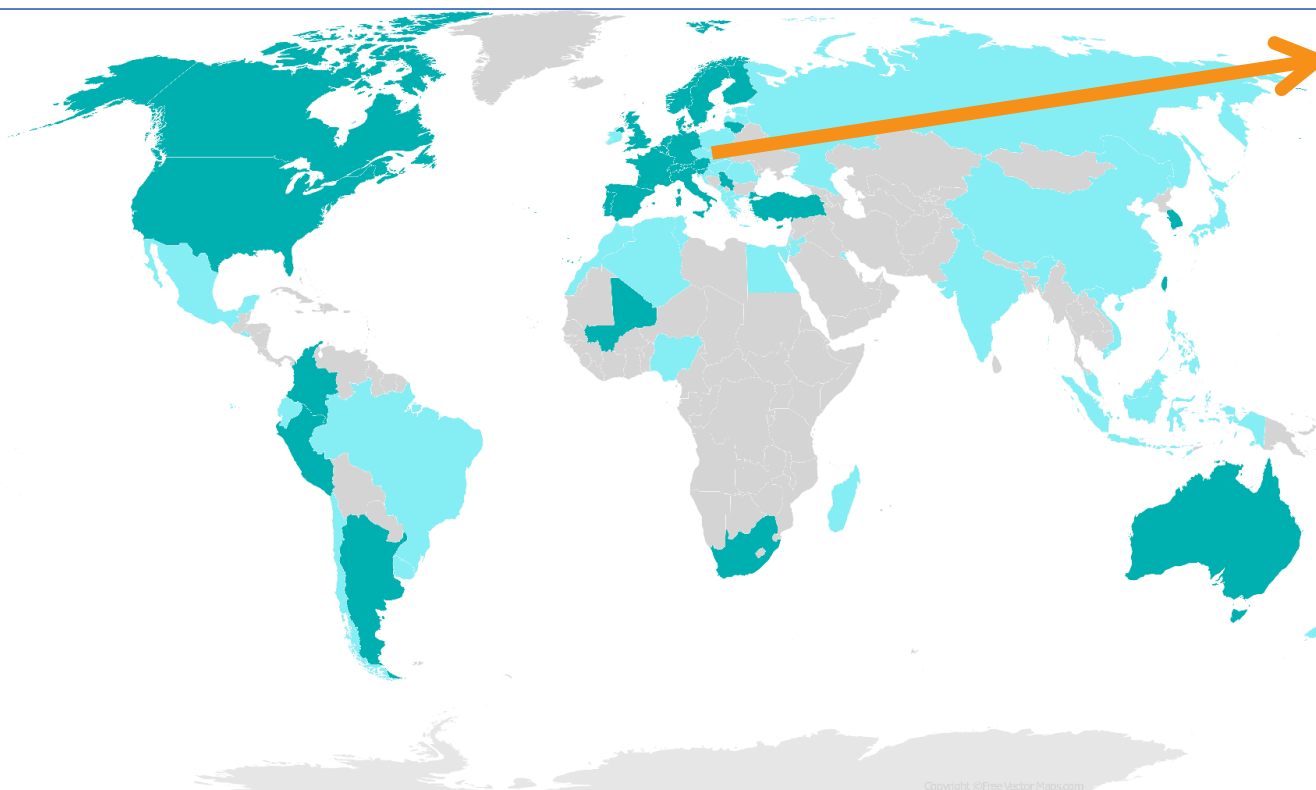
# ICCL Mission



- ◆ Provide a platform, open to any country, in which issues and problems of contaminated land and groundwater can be discussed and information freely exchanged to the benefit of all participants



# 52 countries involved





# Some results within ICCL



- ◆ International review of best practices for CLM
- ◆ Questionnaires:
  - 1995 – Vienna / Policy and Programs
  - 1997 – Amsterdam / update of Vienna Questionnaire
  - 2007 – Stockholm / Remediation strategy
  - 2009 – Helsinki / Excavated cont. soil management
  - 2011 – Washington / Mining site remediation
  - 2013 – Durban / cont. land management policy challenges
  - 2015 – Melbourne / Brownfield redevelopment
  - 2017 – Copenhagen / Groundwater pollution management
- ◆ Central & Eastern Europe Forum: Warsaw, 1999
- ◆ Critical review of the WB document on how to deal with legacy pollution sites (April 2012)



# Some examples of Common Forum actions



- ◆ New concepts for Contaminated land management:
  - Risk based land management (now in place in some EU countries – third generation of legal frameworks)
- ◆ Critical analysis of EU Directives proposals
  - Alternative proposal for a Soil Protection Directive and of technical guidance documents
- ◆ Representing the network and jointly developed concepts
- ◆ Discussions with researchers:
  - i.e. need for harmonisation
- ◆ Ad-hoc review of specific issues:
  - IED: Assessing the different transmissions in the Member States
  - Soil screening values
  - Acid tar recovery etc.



# Typical challenges to be faced

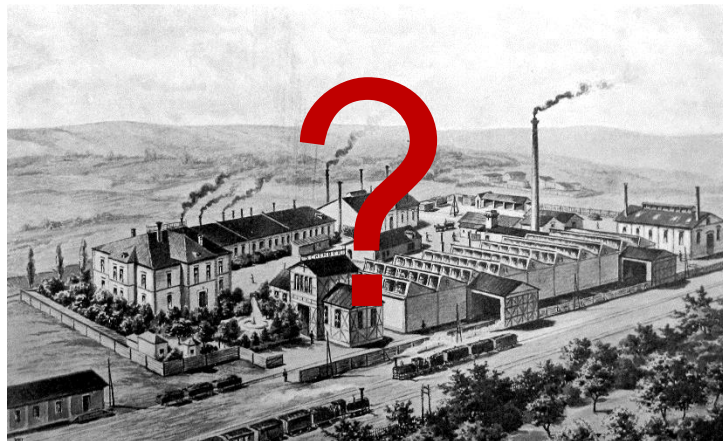


◆ **Historic contamination:**

Is it a problem?  
Is it risky?

◆ **Operating sites:**

Are impacts acceptable?



◆ **Redevelopment:**

Is the envisaged project (land use) suitable on a particular site?

◆ **Site closure:**

What needs to be done for site/land-regeneration?

\* Accidents:  
how to mitigate  
damages?



# Evolution of contaminated land policies at national level



- ◆ **First generation: the early days 1980**
  - Drastic risk control, focus on soil contamination
  - systematic approaches (protocols, national inventories)
- ◆ **Second generation: contaminated land risk assessment 1990**
  - Possibilities for tailor-made approaches with cost effective investigations
  - Landuse becomes very important in assessment and decision making
- ◆ **Third generation: Risk Based Land Management and solution design 2000**
  - Integration with spatial planning, water management, socio-economy
  - Economic development vs. protection of Environment & HH





# Harmonisation or common Ground?



## ◆ Technical level:

- Tool box for Risk Assessment, with several models, different levels of details
- Common protocol for choosing the appropriate models
- Common set of exposure factors, reference doses?
- Recommendations for i.e. use of safety factors? Taking into consideration background levels?
- Smart combination of models and measurements needed!!!

## ◆ Political level:

- Acceptable risk for different land uses?
- Targets to be protected (Human Health, Ecosystems? Ground water, Surface waters, Others?)
- Substances to be covered / excluded
- Risk management tools (e.g. restriction of use)



# Towards a 4<sup>th</sup> generation of policy framework



- ◆ **Risk Assessment:** investigating and understanding environmental impacts and risks taking a tiered approach
- ◆ **Land Management:** designing and implementing actions to reduce negative consequences and **balance benefits**

## WATCH OUT:

- ◆ not trading unacceptable risks against other management objectives & aspects



# Action Scale issues



- ◆ At site scale (if it is isolated, ...),
- ◆ At an impacted area due to site(s) emissions – even when authorised by a operation permit (low punctual incremental on a long term).
- ◆ At community scale, in case of existence of several contaminated sites or in case of redevelopment project leading to land use change,
- ◆ At the scale of a catchment or even an entire river basin, if many contaminated sites are impacting the same water resources.



# Basic Principles



- ◆ **Fitness for use:** to ensure safe use or reuse of contaminated sites by preventing unacceptable risks for citizens and the environment
- ◆ **Stand-still:** no further degradation of natural resources (soil and groundwater)
- ◆ **Supporting sustainable development:** to balance benefits at an appropriate scale and time frame
- ◆ **Transparency and fairness:** to establish well known assessment and decision criteria within appropriate consultation processes facilitating possible consensus of involved stakeholders



## ◆ 3 MAIN ISSUES

- Contaminated Site Remediation / Legal, Technical, Financial and Social Issues
- Water Resources Pollution Management
- Emerging Contaminants



# GW Pollution management



- ◆ From the treatment of a single plume (from a single site) to large mixed plumes
  - In particular in urban areas
  - On mega- sites
  
  - Monitoring:
    - What? When? To which limit?
    - When stopping?
  - Disconnect source and plume remediation?
    - Liability and management?
  
  - Considering the challenge of global change



# Emerging pollutants >> Emerging risks / concerns



## ◆ Some progress:

- Mainly on identification of the « challenge », but still a lot of « unknown »

## ◆ Key questions:

- Accurate detection and analysis
  - analytical methods only available for a small number of compounds
- Better understanding of fate, transport, breakdown / accumulation
- Better understanding of the toxicity and the impact on human health (different kinds of PFASs)
  - Approximate chain length and ~end-point PFASs
  - Toxicity reference values (to be shared?)
- Developing effective remediation methods
  - To acceptable soil and waste reuse criteria



# Future developments within ICCL?



- ◆ Development of the common approach or principles to CLM / CL regeneration (specific study leading to recommendations), and /or related policies
- ◆ Capacity Building for the country / regional representatives
- ◆ Contribution to site remediation project / development of demonstration pilots at the local level
- ◆ Contributions to specific demands (operational cell? Independent experts?)
- ◆ Development of an ICCL cross-sectoral information / knowledge transfer platform on sustainable contaminated land management with associated products
- ◆ Identification of gaps – influencing research and innovation programmes



# WELCOME TO THE Joint Conference



◆ Our Third event in Common!





# Thanks for your attention!



ICCL  
international  
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More information on:  
[www.commonforum.eu](http://www.commonforum.eu)  
[www.iccl.ch](http://www.iccl.ch)