

# **Risk Management System for Affected Areas**

Bertil Grundfelt  
Kemakta Konsult AB

[bertil@kemakta.se](mailto:bertil@kemakta.se)

# Outline

## Background

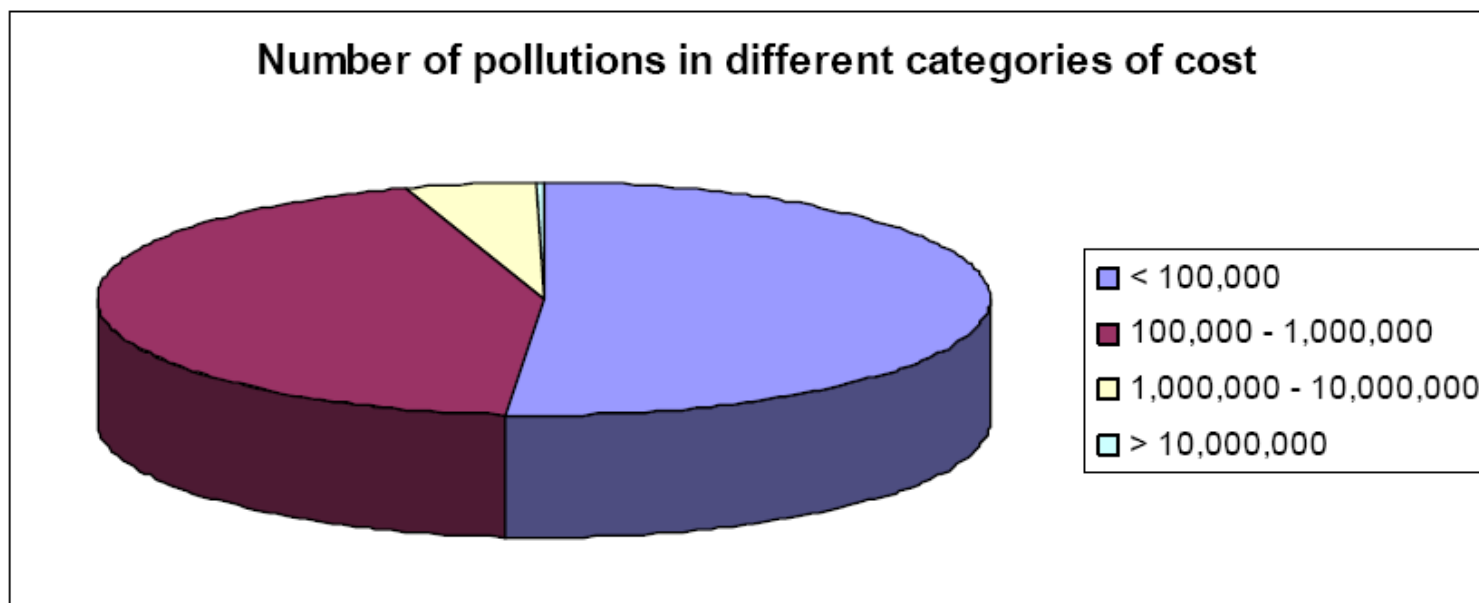
- Remediation costs in the railway system

## Management system

- Chain of activities for contaminated land
  - Responsibilities and driving forces
  - IAS 37 - Standard for financial reporting
  - Examples of practical ways of working
- 
- NICOLE – Network for Industrially Contaminated Land in Europe

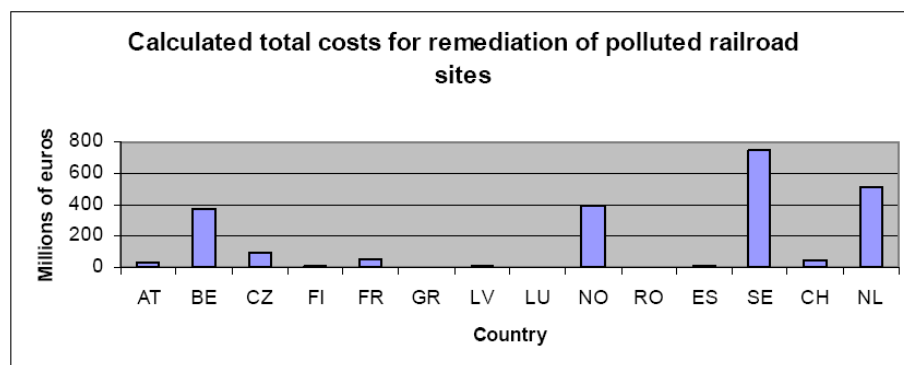
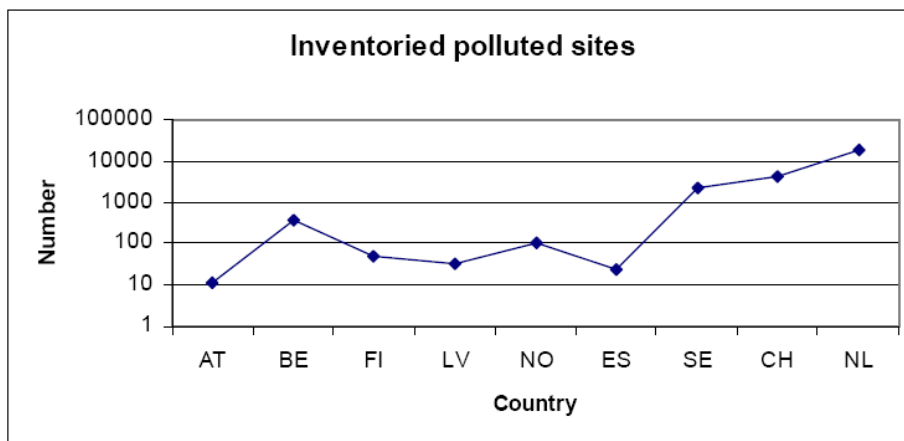
## Remediation cost per object

Most sites in the cost class <100,000 € followed by the cost class 100,000 – 1,000,000 €.

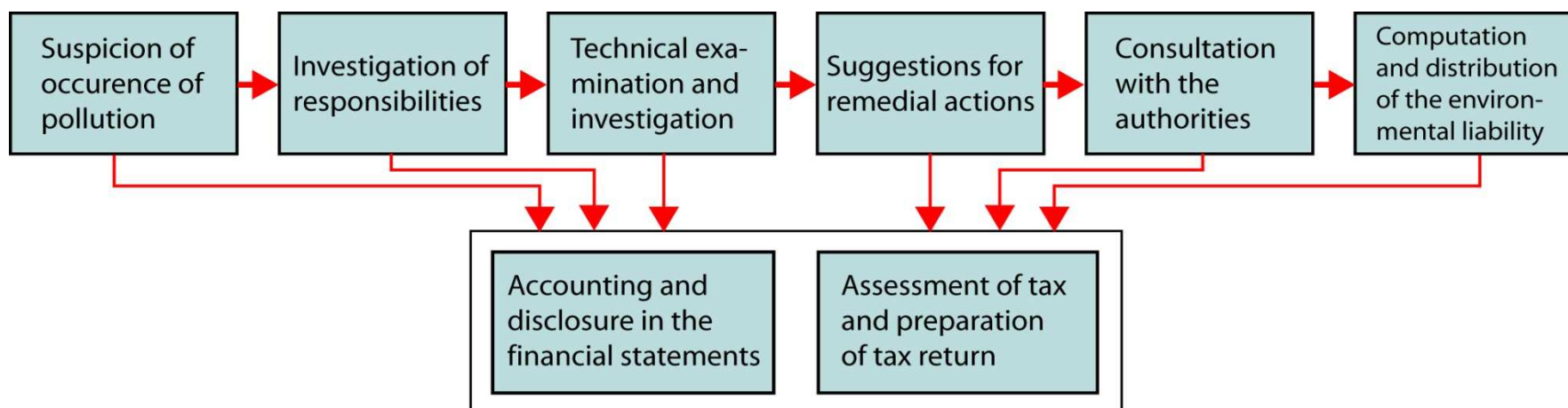


# Total remediation costs

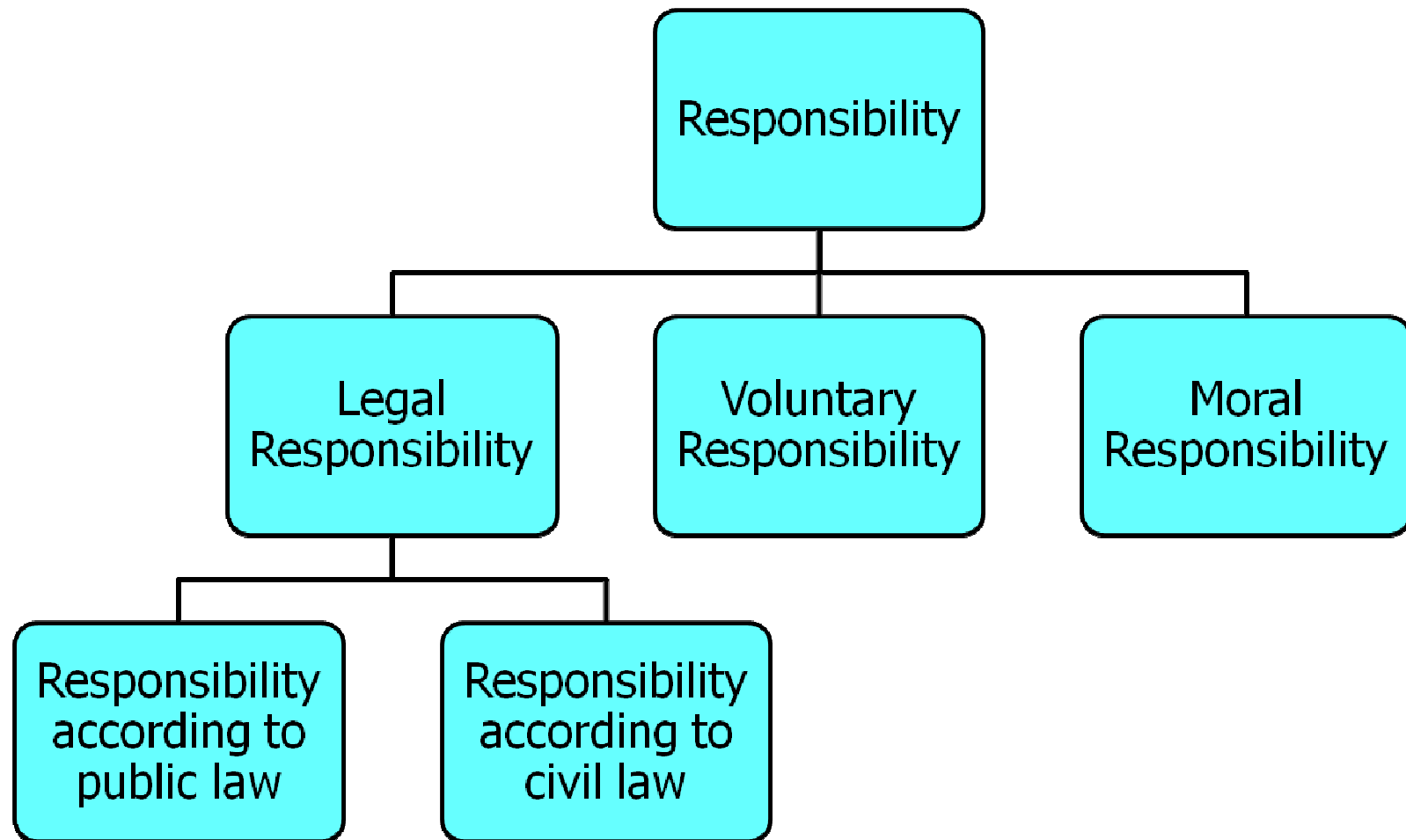
The calculation of the total costs vary strongly between the different railway companies: **from € 0.1 million to about € 750 million** with an average of about € 165 million.



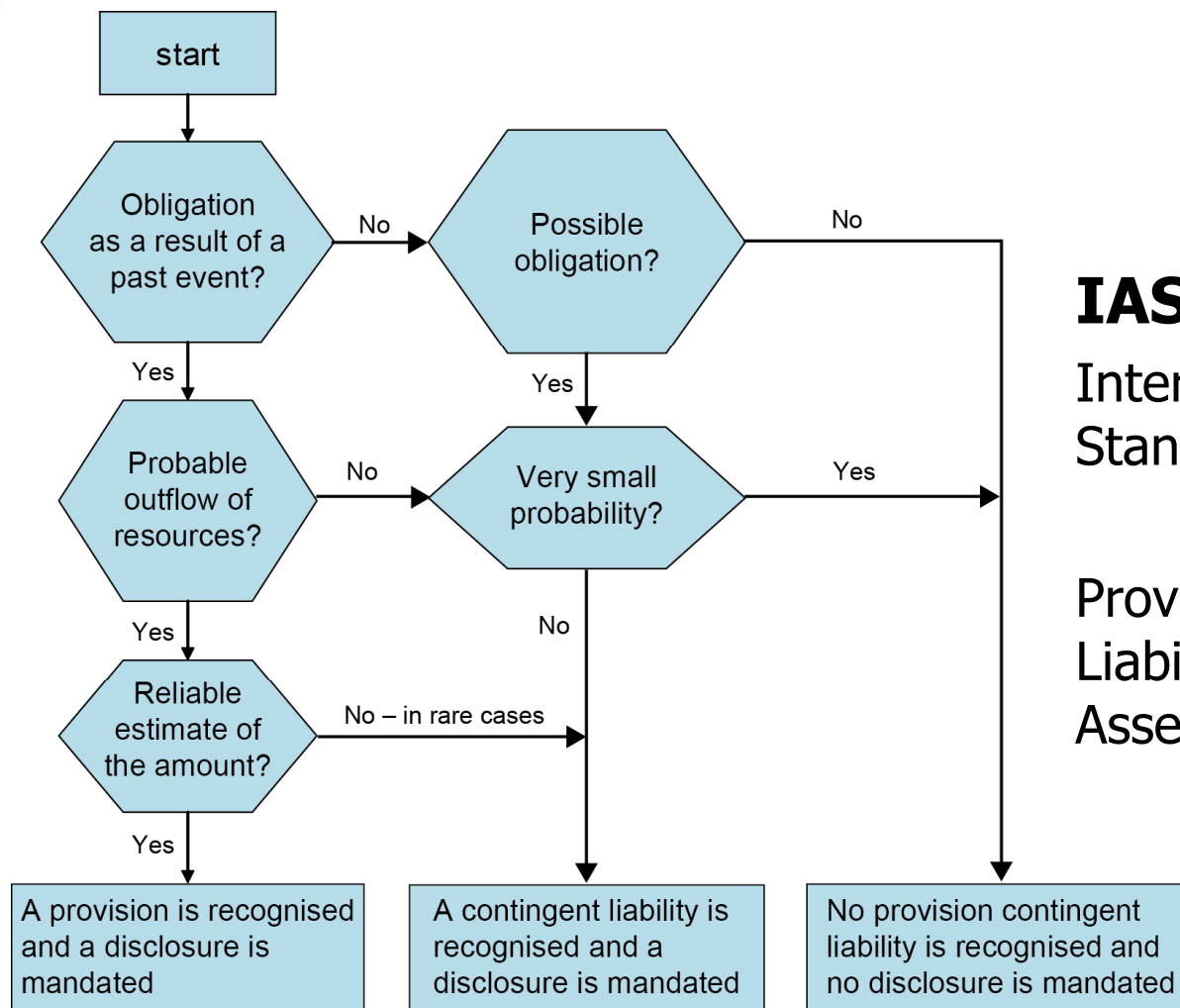
# Chain of activities



# Responsibilities and driving forces



# Decision scheme in IAS 37



## IAS 37

International Accounting Standard:

Provisions, Contingent Liabilities and Contingent Assets

## Need to assess:

- Is there an obligation?
- Probability of outflow
  - >50 % → Provision and disclosure
  - <50 % → Contingent liability and disclosure
  - Remote probability → No need to report
- Estimate the amount of the obligation
  - Reliable estimate → Provision
  - No reliable estimate → Contingent liability  
(Only very rare cases)





# Practical handling 1

- Many facilities for fuelling and washing of vehicles
- Time-planned target for “all facilities remediated”
- Large similarities between the facilities
- Standard sequence for each facility:
  - Mapping
  - Investigation
  - Remediation
- Spreadsheet with the status for each facility
  - Stage in the sequence
  - Updated estimate of outflow probability
  - Updated estimate of the cost
  - Costs weighted by probability and summed



## Practical handling 2

- Major industrial group with about 20 business units some of which are companies
- Activities at about 30 sites
- Risk of land contamination reported to the environmental manager
- Report always prompts responsibility investigation
- Standardised report for each site for which there is an established responsibility
- Site reports updated each year and submitted to the audit committee



## Overall conclusions of the study

- Suspected and identified pollution not always reported as required by regulations
  - Education of company management important
- Reporting avoided due to uncertain responsibility, uncertain amount, uncertain taxation routines
- "Environmental economy" has little effect on companies
  - Ongoing academic research on methods for companies to report also positive environmental values
  - Liabilities for environmental damage according to the environmental liability directive
- Land pollution very rarely an important environmental aspect in environmental management systems
  - Should be included in the initial environmental review of the organisation's environmental aspects



# NICOLE

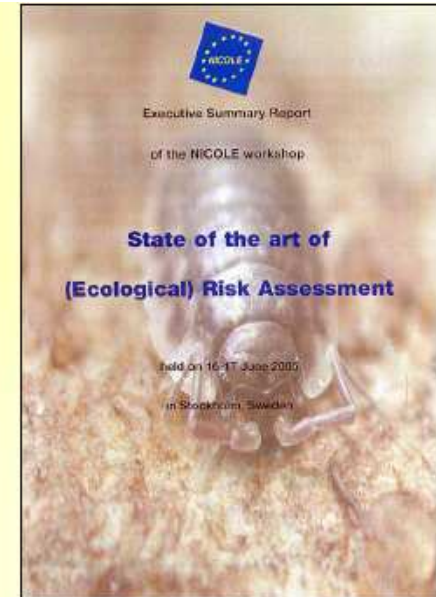
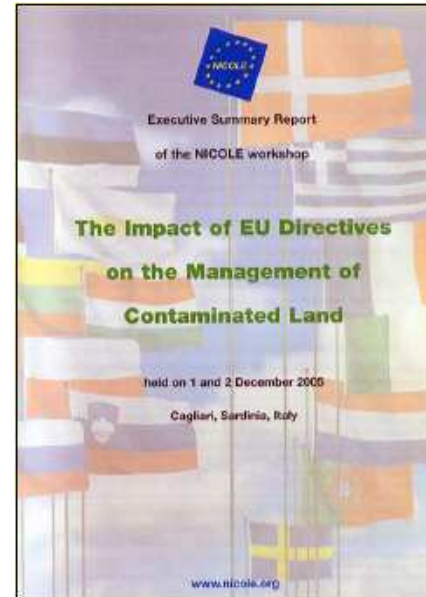
Network for Industrially Contaminated Land in Europe



- NICOLE is the principal forum that European business uses to develop and influence the state of the art in contaminated land management in Europe
- Missions:
  - Provide a European forum for exchange of knowledge and ideas about contaminated land management (share best practice)
  - Communicate with stakeholders inside and outside Europe to promote its views
  - Identify research needs and promote collaborative research that will enable European industry to identify, assess and manage contaminated sites more efficiently and cost-effectively and within a framework of sustainability



- Workshops on Contaminated Land Management
- Meetings of the Industry and Service Provider Subgroups
- Topical working groups



- Contributing technically to EU working groups and maintaining contacts with the European Commission on policy and research related issues
- Maintaining contacts with colleague networks
- Publication of papers and workshop proceedings
- Project development
- NICOLE works in partnership – it does not lobby!



## For more information:



NICOLE Secretariat:  
Marjan Euser  
Deltares, the Netherlands  
Phone: +31 88 3357843  
Email: [marjan.euser@deltares.nl](mailto:marjan.euser@deltares.nl)  
Internet: [www.nicole.org](http://www.nicole.org)



### Next event:

Technical meeting 4-5 November 2010 in Brussels, Belgium

**Emerging and persistent contaminants: PFOs, CFCs and  
Dioxane**

**Treatment technologies for large quantities of  
oil contaminated soils**



- Groundwater
- Soil
- Waste
- Brownfields
- Sustainable Remediation

