

# Periodical reporting of national/regional inventories of contaminated sites

Anna Rita Gentile , European Environment Agency

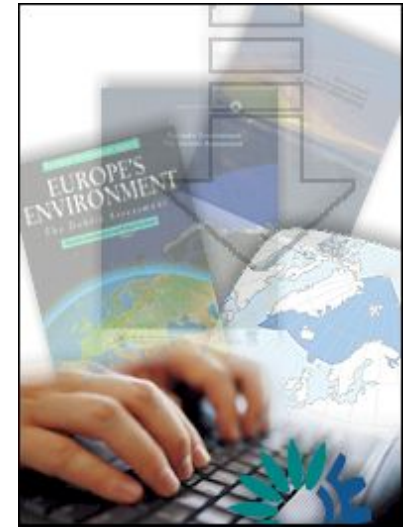
Martin Schamann, Francesca Quercia, European Topic Centre on Terrestrial Environment

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Contaminated Land  
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# Contents

1. Background on EEA assessment and reporting activities
2. EEA work on contaminated land indicators
3. Conclusions

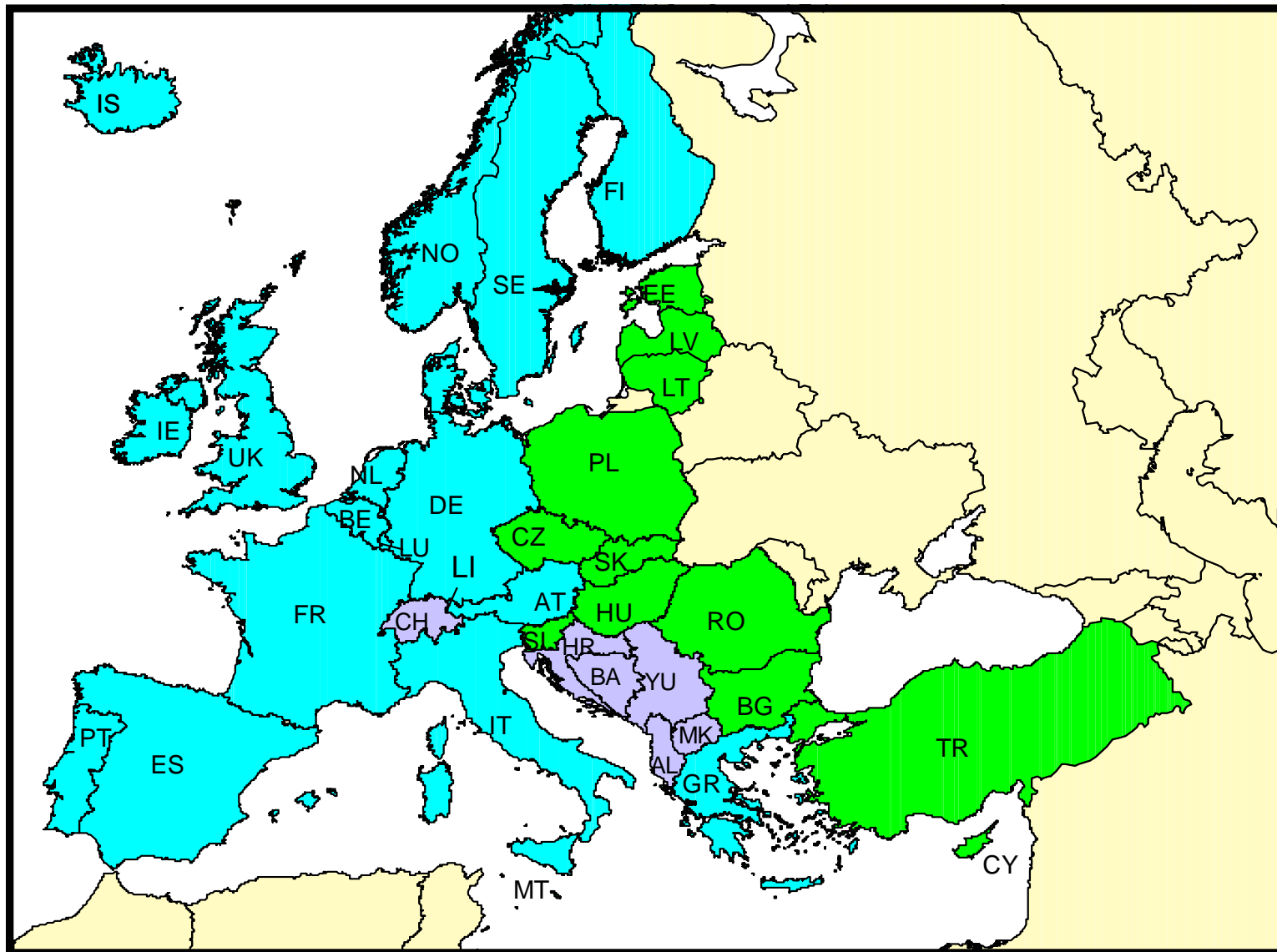





# Objectives of EEA work

- To provide relevant, reliable, targeted and timely information to policy makers and the general public
  - enable the Community and Member States to take measures
  - maintaining and coordinating the EIONET based on shared information



# EEA Member and Participating Countries



-  Original members
-  New members
-  Other countries



# What is the EIONET ?

A network of more than 300 national institutions

- National Focal Points
- European Topic Centres (ETCs)
- National Reference Centres
- Main component elements



# EEA work on contaminated land

- Background: **state of soil** identified as one of the priority areas in the EEA regulation (1990-2003)
  - Since 1996: ETC-Soil (until 1999), ETC-Terrestrial Environment (2001-ongoing)
- EEA current activities on contaminated land
  - Development of specific indicators
  - Identification and assessment of potential problem areas of soil contamination in Europe



# Why do we use indicators?

- to inform policy makers and the public on the state and changes occurring in the environment and their links to economic development
- to measure the extent to which policy objectives are being achieved
- to help summarise and analyse environmental data for an easy communication of key messages



# Why do we need info on contaminated sites at the European level (1)?

- Input to Europe-wide environmental assessments focussed on the soil medium
  - a building block of the overall assessment of the state of and trends in the environment in Europe (EEA regulation)
- Support to policy development (soil policy cycle: awareness raising, framing and preparation of EU policy measures)



# Why we need info on contaminated sites at the European level (2)?

## Environmental assessments:

- Provide an overview of **impacts** of soil contamination on the environment and human health
- Identify the **causes** of soil contamination (specific economic activities)
- Measure **progress of measures** taken to reduce impacts and prevent further contamination
- Provide an indication of what else should be done



# EEA core-set indicator: "Progress in the Management of Contaminated Sites"

## Key assessment:

how is the problem of contaminated land being addressed (clean-up of historical contamination and prevention of new contamination)?

- What are the sectors causing local soil contamination and what is their relative contribution?
- How much is being spent to clean-up contaminated sites and what is the share of public budgets?
- How much progress is being achieved in the management and control of local soil contamination (at the country level)?
- What are the main contaminants that affect soil and groundwater in and around contaminated sites?

There is still more to be answered (e.g. specific impacts; Brownfields .....



## Progress in the management of contaminated sites. Management steps:

- Preliminary study
- Preliminary investigation
- Main site investigation
- Implementation of remediation measures
- Measures completed



# Facts and Figures (1)

## Sources of local contamination

- inadequate municipal and industrial disposal of waste
- losses during industrial activities
- accidents

- mining sites
- former military sites
- pesticide stocks

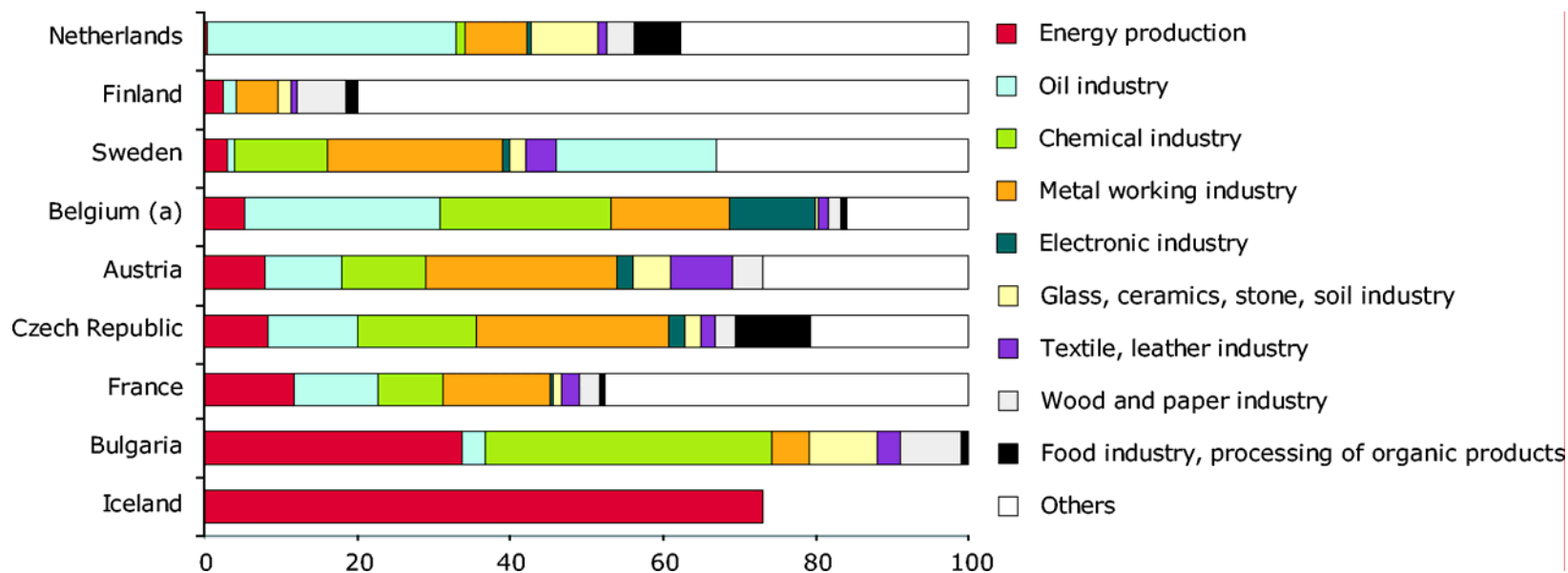
Mainly in Central and Eastern Europe



# Facts and Figures (2)

## Main polluting industrial branches

- energy production
- chemical industry
- metal working industry
- oil industry
- wood industry
- storage of hazardous substances



Contribution of industrial branches in selected countries as % of the total number of sites

# Facts and Figures (3)

## Major pollutants

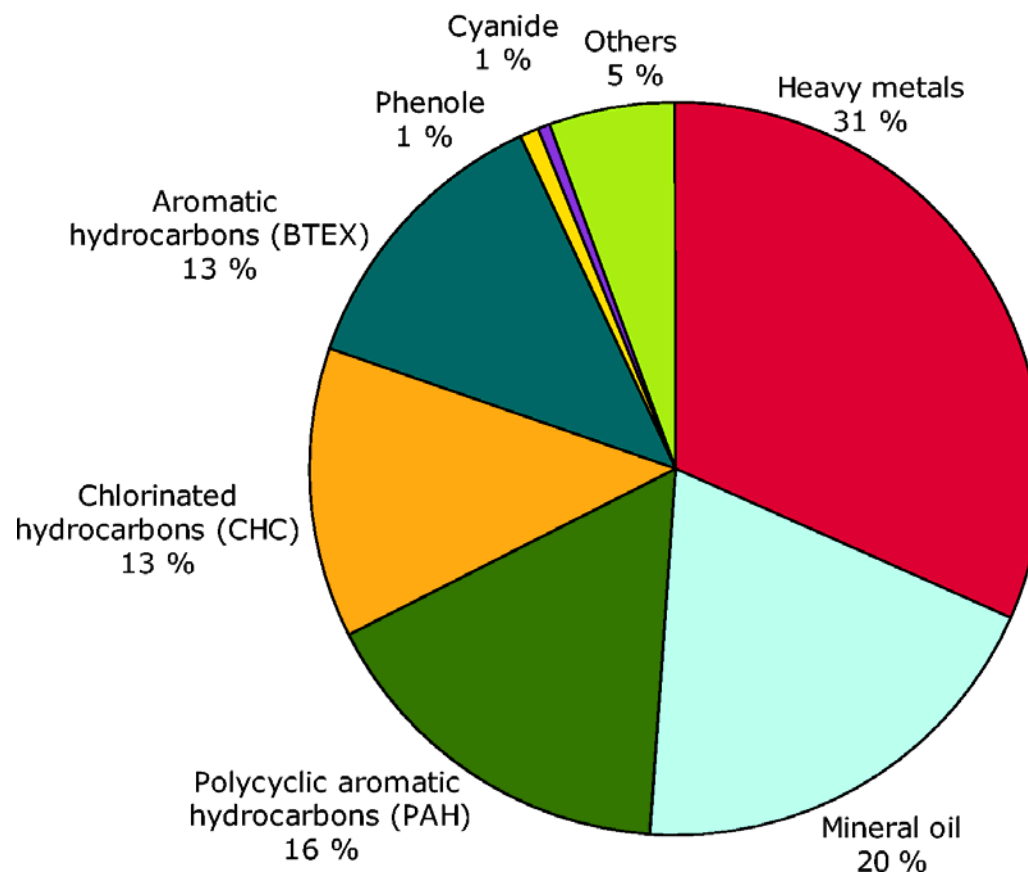
Heavy metals

Mineral oil

PAHs

CHCs

BTEX



Main contaminants at identified contaminated sites (as % of total number of sites)



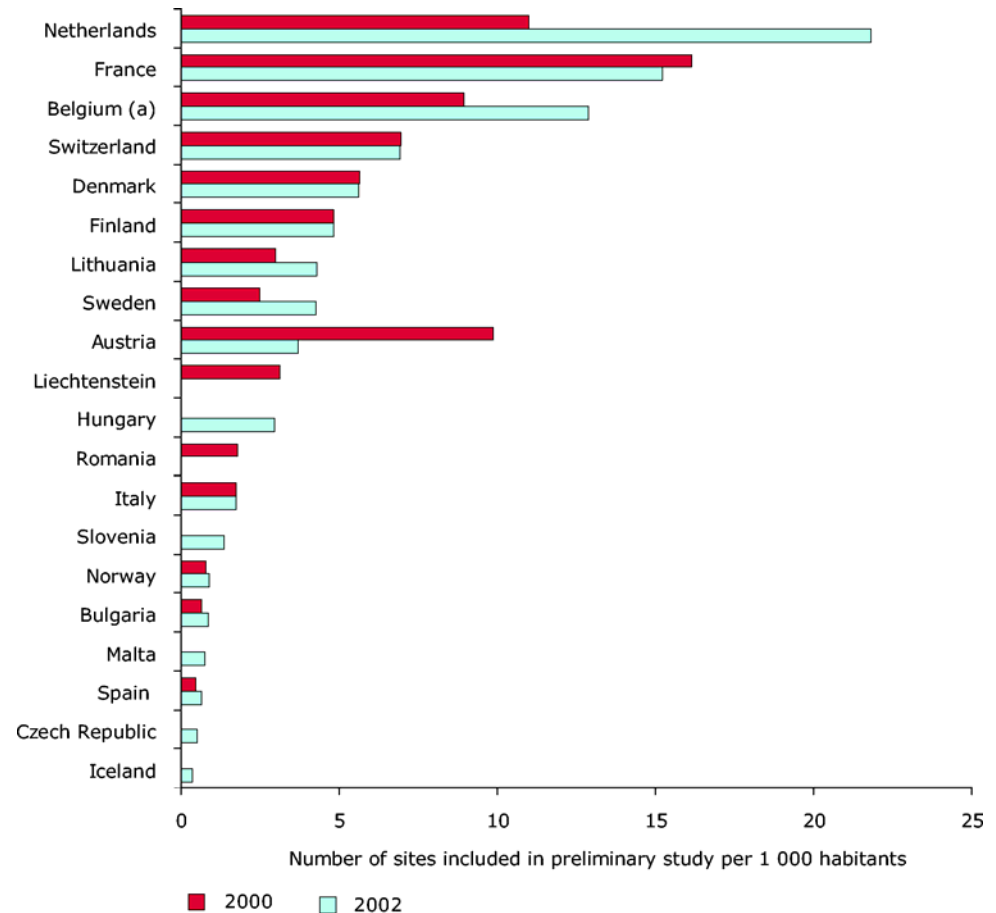
# Facts and Figures (4)

## Extent of the problem

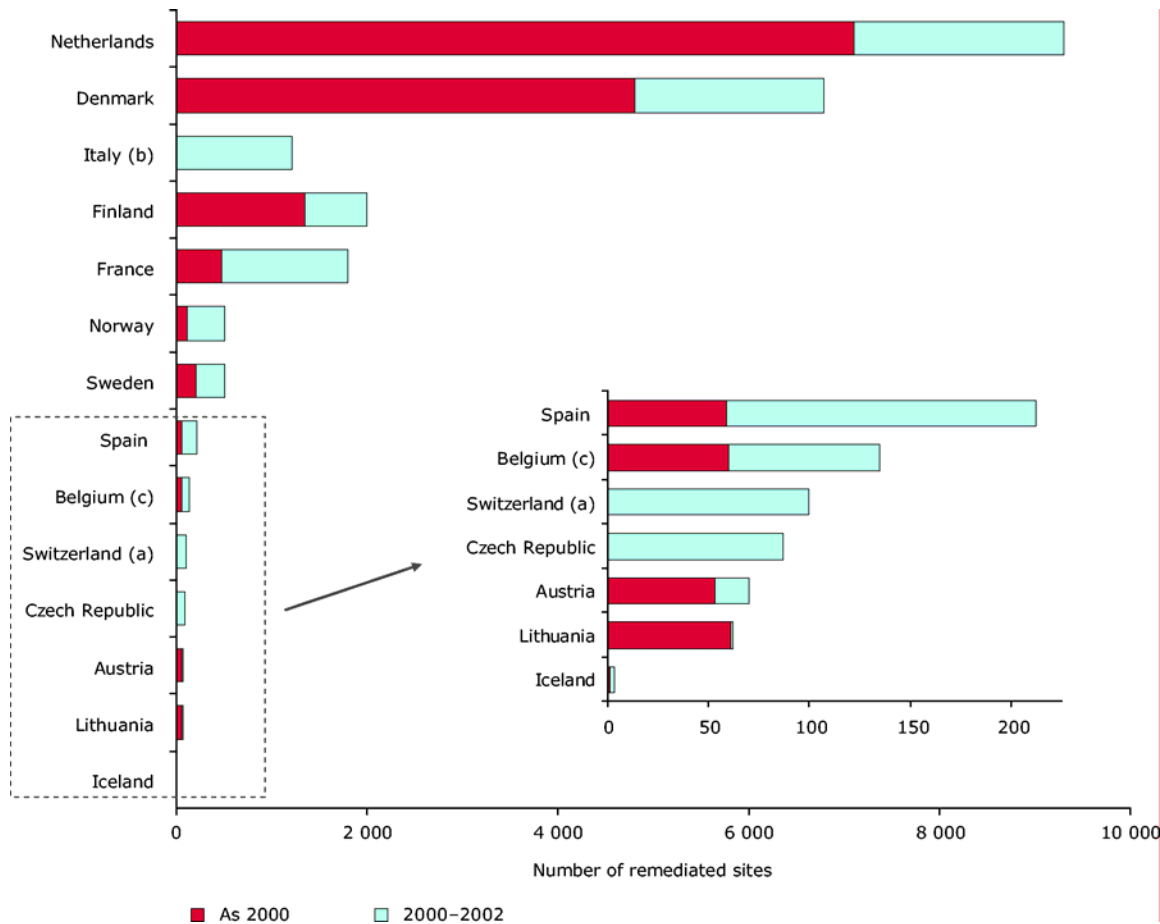
Number of sites identified by preliminary studies per 1000 inhabitants (Potentially contaminated)

- on average: 5 sites per 1,000 inhabitants
- great differences in countries, no direct comparison possible
- partly underestimated

Key message: high number of sites potentially requiring clean-up; setting of priorities and different solutions needed



# Facts and Figures (5)



## Progress in the management

Total number of remediated sites in selected countries (2000-2002)

Management of sites is a tiered and long term process

→ first management steps are far advanced, however detailed steps (investigation, remediation) are progressing slowly

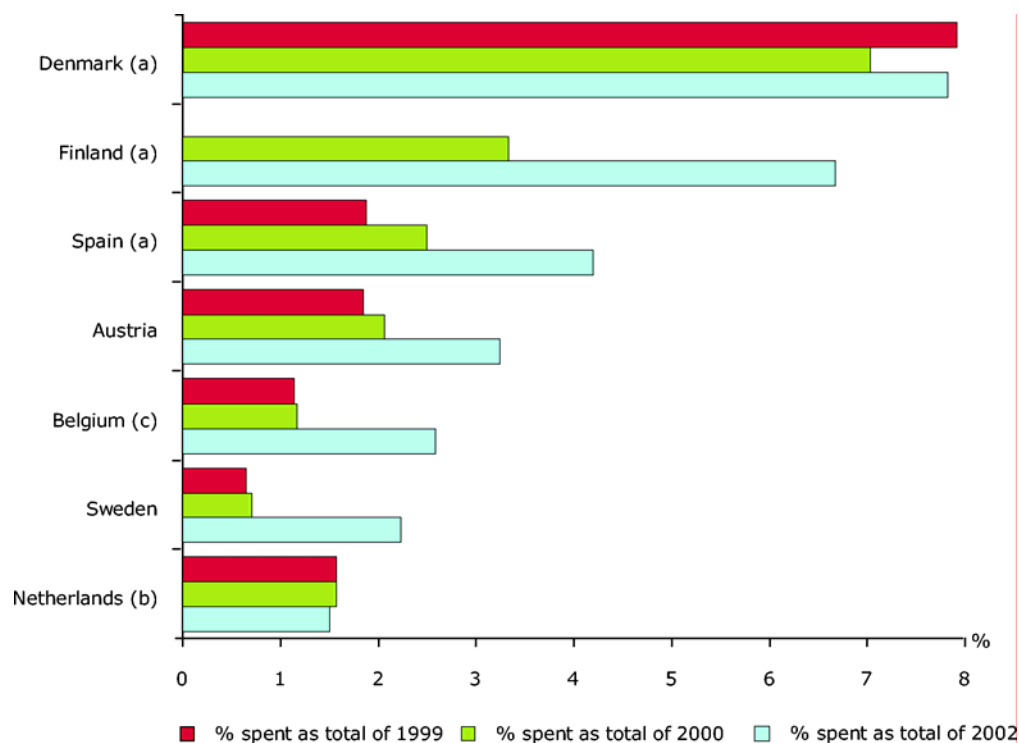
→ Progress in management varies considerably from country to country



# Facts and Figures (6)

## Clean-up expenditures

Annual expenditures for risk reduction activities as % of total estimated remediation costs (1999-2000-2002)



- average annual expenditures are app. 2.5 % of expected total costs
- expenditures are constant in the surveyed years
- large amounts of private and public money needed



# Problems in making European environmental assessments on contaminated sites (1)

- no EU-wide data pool on local contamination, no EU reporting obligation (legal basis):
  - EEA priority data flows (based on voluntary contributions)
- source of info: existing national/regional registers for contaminated sites, which include
  - mainly management information (number of sites per management step; expenditures; etc.)
  - little or no information on impacts on human health and the environment (affected groundwater bodies; impacts of hazardous substances into soil; affected water supply facilities; etc.)

Crucial points:

**data availability - data comparability – data quality control**



## Problems in making European environmental assessments on contaminated sites (2)

- lack of common definitions and methodologies across Europe, which affects data comparability
- some MSs have no centralised (national) registers, and regional data may also be not comparable at the national level
- lack of real data – data provided are partly based on expert estimations
- different stages reached by the different countries in solving/tackling the problem
- different legal backgrounds and legal requirements
- different level of interest/resources available in MSs for providing information to international bodies (confidentiality; political sensitiveness)



# EEA European Environment Agency



<http://www.eea.eu.int>

