

Contaminated sites in the Czech Republic - Generalization of results from trial inventory of pilot areas

Jiří Tylčer - AQD-envitest
Zdeněk Suchánek - CENIA



česká
informační
agentura
životního
prostředí



Importance of the National Database of Polluted sites

- effective management of pollution abatement process
- protection of environmental and public health interests
- city and landscape planning
- environmental information for public
- real estate transfers

Situation in the Czech Republic

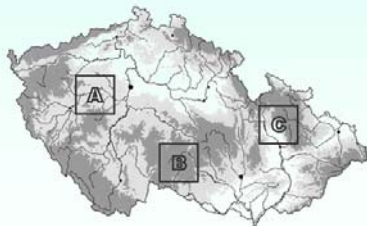
- non-existence of comprehensive information on polluted sites
- the most extensive information source:
MoE database SEKM
- a systematic inventory of polluted sites covering the whole Czech Republic is still only in preparation

Preparation of the National inventory of polluted sites

- 1st stage - development of methodology and tools
- testing - trial inventory campaign in pilot areas

Preparation of the National inventory of polluted sites

Trial inventory campaign - pilot areas 50 x 50 km



CLASSIFICATION OF POLLUTED SITES

- integral and important element of the national inventory
- classification system officially introduced by the Czech Ministry of Environment in 2008

Classification system - Basics 1

- 1) All sites are sorted to several categories according to the qualitative statement specifying:
 - site knowledge level
 - actual or potential impact of the site pollution
- 2) A relevant type of an appropriate further site action is explicitly attached to the each site category

Classification system - Basics 2

Three basic groups of site categories according to the character of further action:

- sites with an actual negative pollution impact - mitigation measure is - urgently necessary
 - necessary
 - desirable
- potentially polluted sites - investigation or further monitoring required
- sites with no or low pollution - no action required

Classification system - Basics 3 - Definitions

- **Mitigation measure necessary:**
 - unacceptable human risk or
 - concentrations exceeding legislation limits
- **Mitigation measure urgently necessary**
- **Mitigation measure desirable:**

general consent on higher environmental requirements but not supported by any official concentration limits or other law requirements
- Mitigation measure - not only remediation

Classification system - Basics 4

A priority of further action is strictly determined by this succession of impact character:

- human health risk
- environmental risk
- risk to other interests

Classification system - Basics 5

- **Sufficiently investigated sites:**

The site pollution impact statement is based on conclusions of the investigation report and risk analysis
- **Insufficiently investigated (suspected) sites:**

A simple scoring system for assessing urgency of their investigation.
Very important because of large number of such sites.

Classification system - Basics 6

Insufficiently investigated (suspected) sites

Crucial factors for their investigation urgency scoring:

- character of pollution receptors, protected interests
- site hydrogeology → site migration potential
- type of polluter → probable pollution character → its toxicity and migration potential

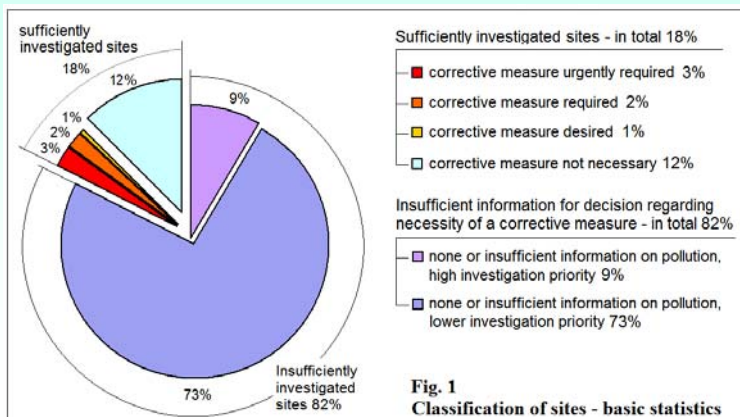
Site classification matrix

Priority Ranking System - Categorisation of Polluted Sites According to Further Action				
Site situation statement: site knowledge level and character of the pollution impact (existing or potential)	site category - character of further action		site action priority code	
	mitigation action is necessary	action required	basic code	3rd position - priority ranking
confirmed pollution causing unacceptable health risk	mitigation action is necessary	action required urgently	A	3
one of these situations: - confirmed pollution exceeding legislation concentration limits, or - confirmed pollution spreading, or - site pollution restrains its exploitation in accordance with the municipal master plan		action required	A	2
pollution confirmed, but none of situations specified above; general discrepancy with environmental or other interests	mitigation action is desirable		A	1
not enough information for a final decision - a need of a future mitigation action can not be excluded presently	no pollution information - suspicious site	pollution investigation required	P	4
		pollution confirmed, insufficient investigation	P	3
pollution confirmed, no information on a plume stability with time; a need of a future mitigation action can not be excluded presently	further pollution plume monitoring required		P	2
existing pollution represents possibility of unacceptable health risk in case of change to more sensitive site-use	further institutional site-use control required		P	1
confirmed pollution above background values, but not unacceptable, no restrictions for multi-purpose site-use	no further action required		N	2
low pollution probability issues from a known site-use history			N	1
no pollution - confirmed by sampling			N	0

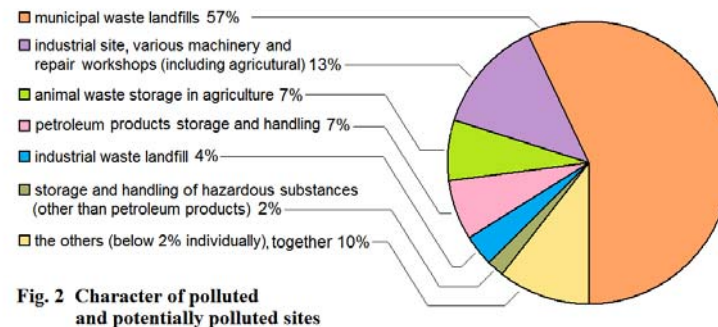
RESULTS FROM TRIAL INVENTORY AND THEIR GENERALIZATION

About 9 thousand of polluted or potentially polluted sites can be expected in the Czech Republic

RESULTS FROM TRIAL INVENTORY AND THEIR GENERALIZATION



RESULTS FROM TRIAL INVENTORY AND THEIR GENERALIZATION



**OFFICIAL STATUS
OF THE DATABASE OF POLLUTED SITES**



**Thank you
for your attention**

**Jiří Tylčer - AQD-envitest
Zdeněk Suchánek - CENIA**

