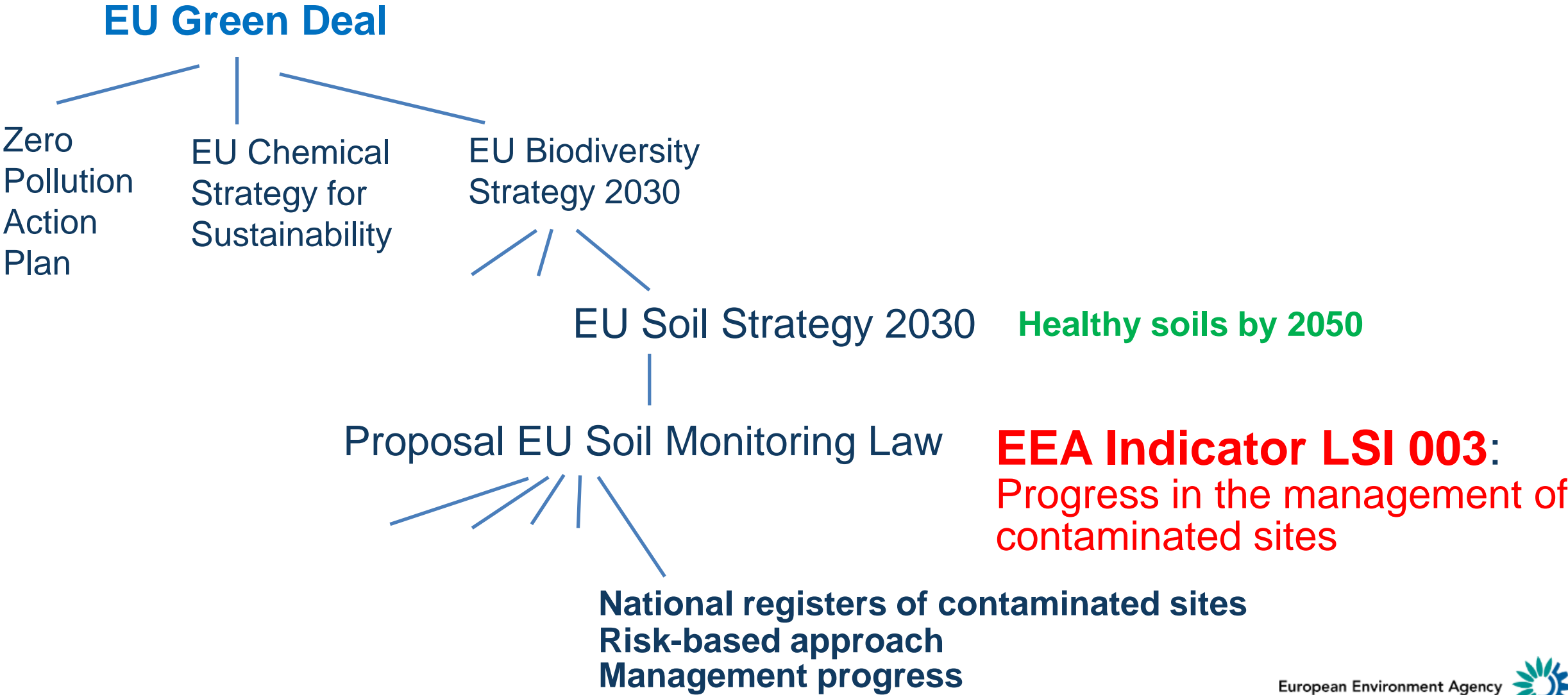

The revision of the indicator “Progress in management of contaminated sites”

Rainer Baritz (EEA)

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17 October 2023

Contaminated sites: policy context



Other policies requiring contaminated site inventories

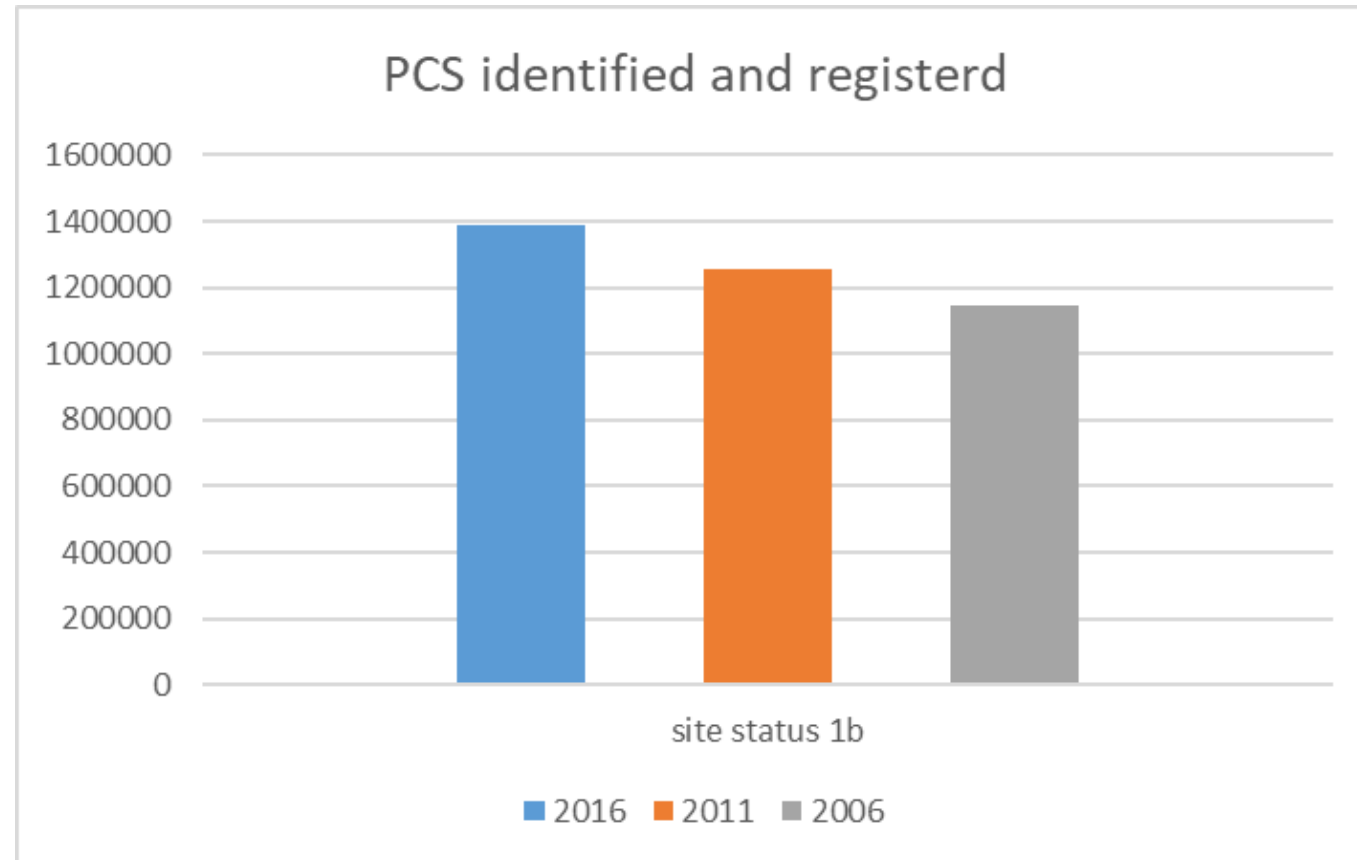
Policy	Contamination	Content	Medium
WFD/ Ground-water	Diffuse (local)	lists pollutants and thresholds; water monitoring; local sources if polluting water bodies	state, water bodies
Sewage sludge	diffuse	limits for heavy metals in sludge	applied material
IED/IPPC	local	Inventories of industrial operations (emitting SO ₂ , NO _x , dust); monitoring	critical limits of soils, remediation
NEC	diffuse	Emission ceilings for acidifying substances Select representative (soil) sites, monitoring	acidification, eutrophication of ecosystems
Resource efficiency	local / diffuse	inventory of contaminated sites;	remediate; reduce erosion, increase SOC
Mercury	local	Facilities which emit Mercury (on soils); inventory	remediate

EEA indicator “Progress in the management of contaminated sites”

Content: statistics about 6 site categories,

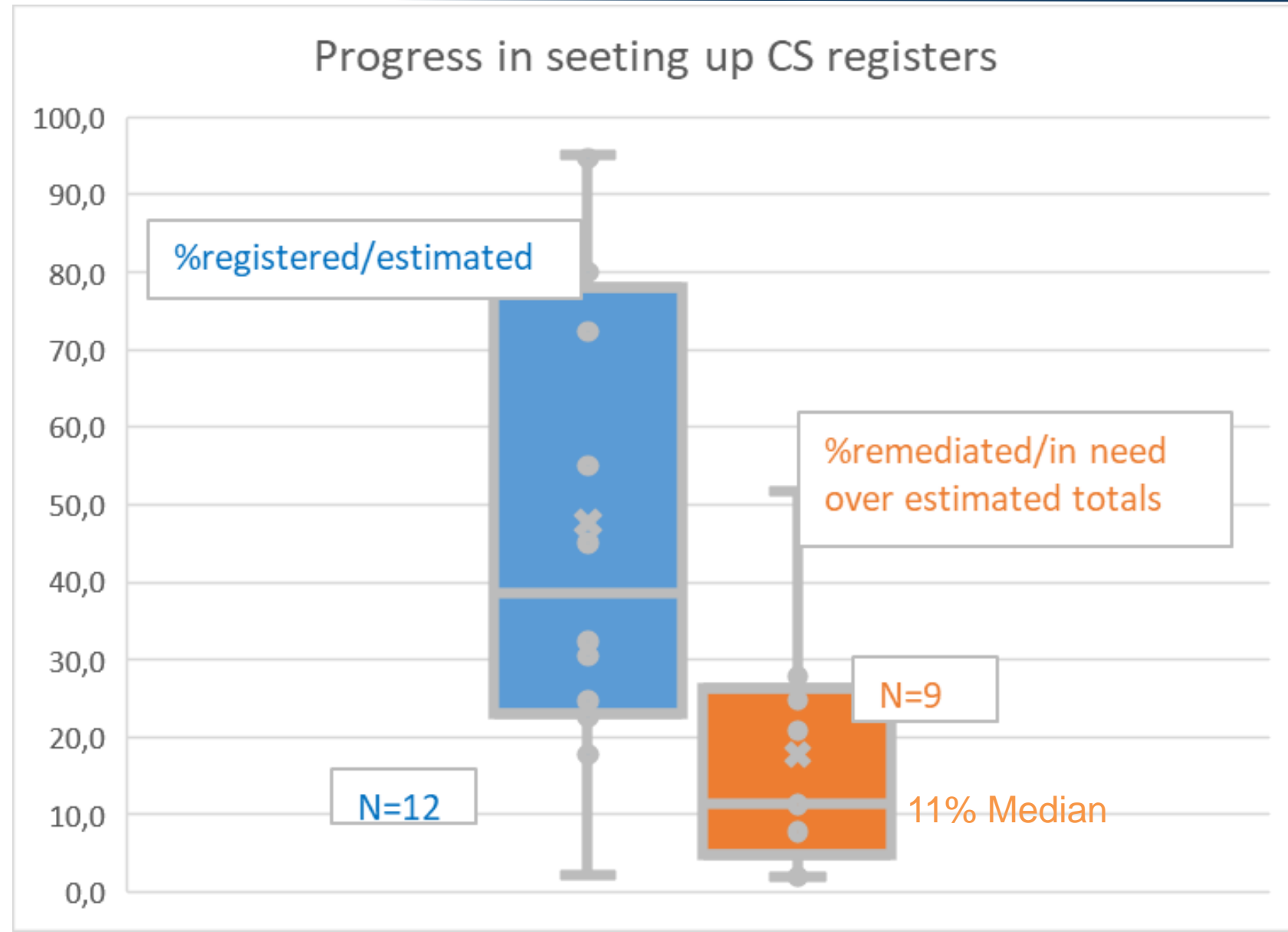
Data sources: 3 questionnaires (2006, 2011, 2016), published indicators 2014, 2021/22

- EU-28: 2.8 Mio *estimated* contaminated sites
 - > 1.39 Mio registered sites (*EU27 - 4*)
 - 115385 sites remediated (8.3% of registered)
 - 10548 sites under remediation
- Comprehensive inventories exist in 12 EU countries; 11 countries have recent registers (with limited sets of polluting activities); 3 EU countries lack, or are building, initial registers



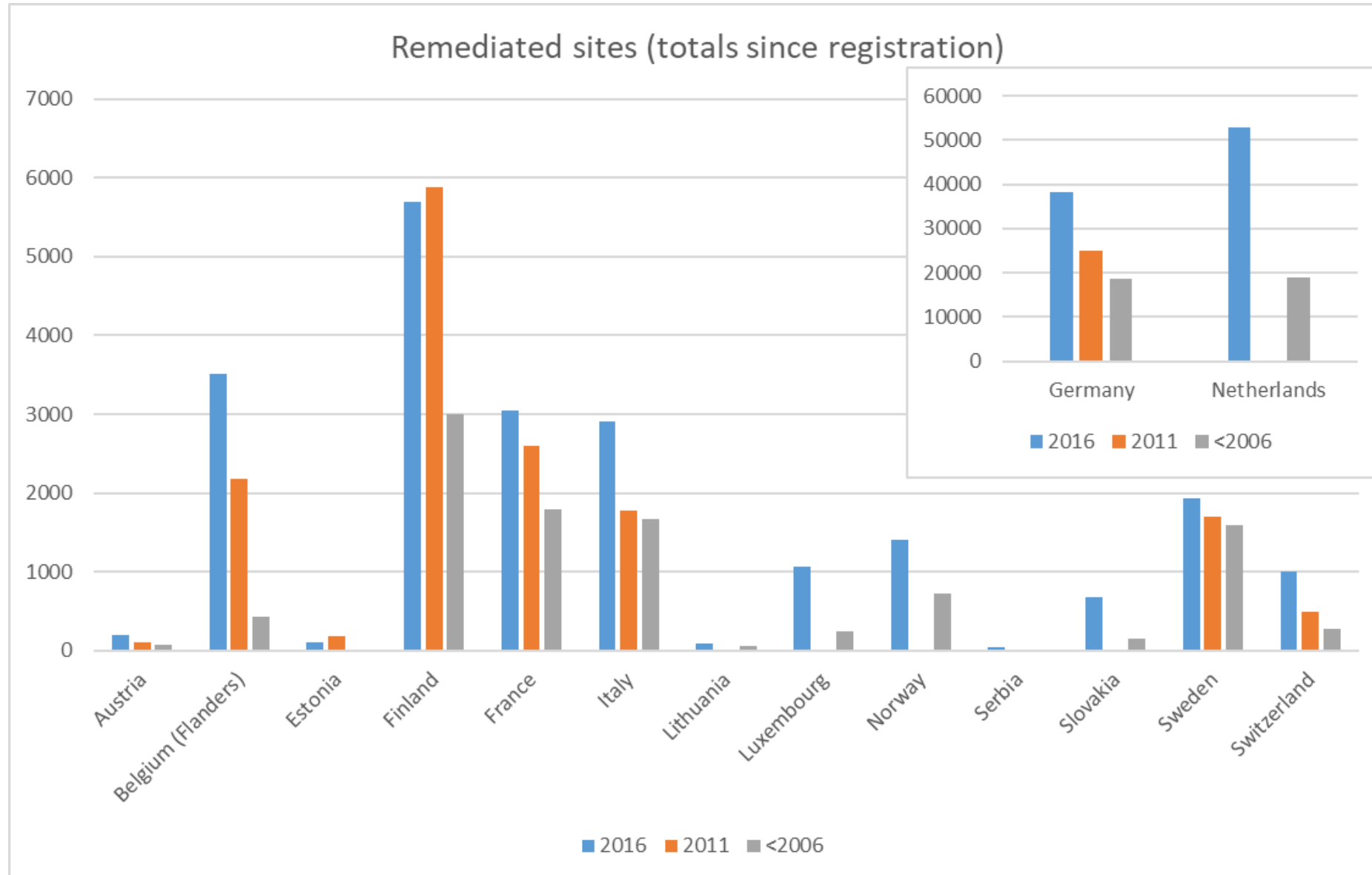
EEA indicator “Progress in the management of contaminated sites”

- National registers are not internationally standardized: policy context, polluting activity, creation date, updates
- With a 11% rate of remediation, >300000 sites would face remediation in the EU, while so far, 115385 are remediated



EEA indicator “Progress in the management of contaminated sites”

- Not for all countries, progress, can be determined
- Trend: significant efforts in several countries (*data must be normalized, by capita, urban area*)

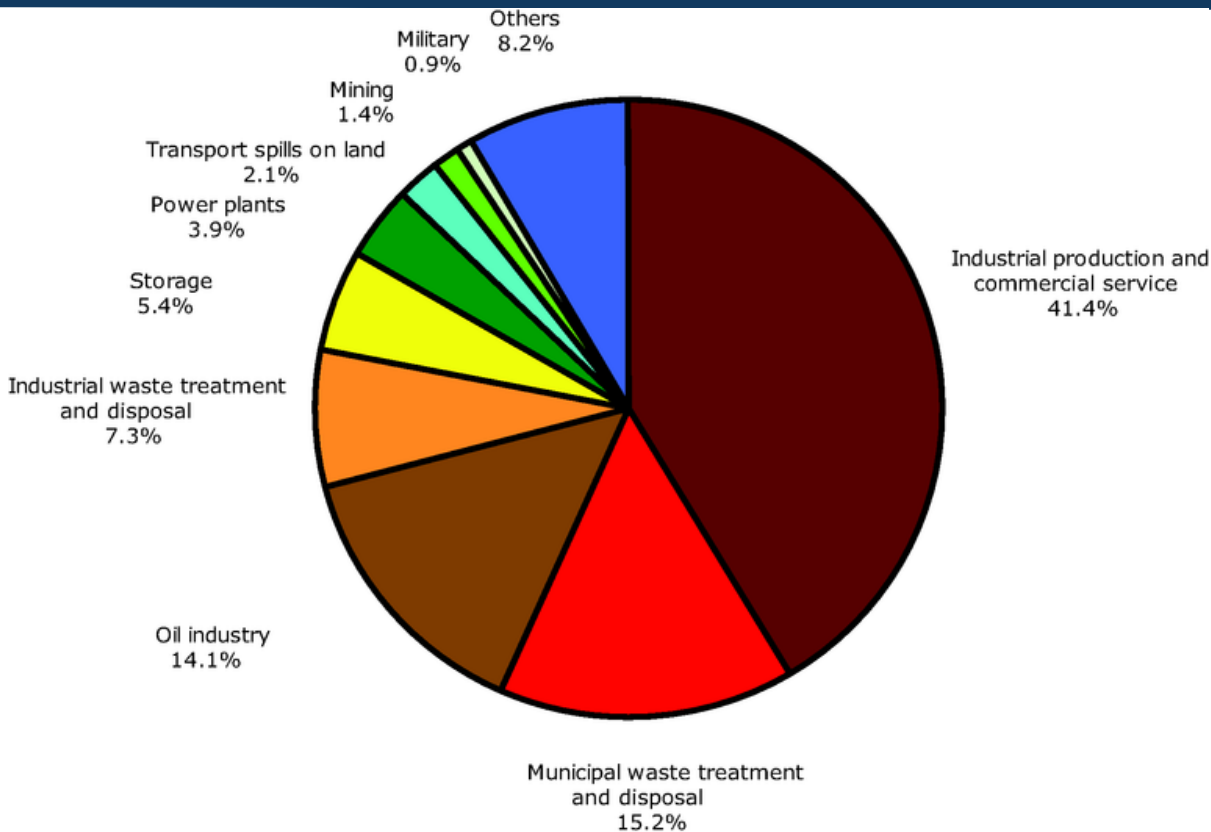


Observations from the 2022 update of 2016 reporting

- Many statistics need to be interpreted on a country-by-country basis; EU-“site status” often slightly deviates from national terminology
- It essential to know the polluting activities (and, at best, knowledge of main substances in exceedance of screening values), so that policy-specific links can be created (active and historic contamination, Seveso, waste, IED, brownfields)
- The impact of CS on health and ecosystems must be known. Development of additional impact indicators is currently in discussion.

Which sites are included in a national register?

Potentially soil polluting activities¹⁾ Annex II



1. Establishments, dangerous substances \geq “Seveso” (96/82/EC²⁾).
2. Activities listed in 96/61/EC, Annex I (IPPC)
3. Airports
4. Ports
5. Former military sites
6. Petrol and filling stations
7. Dry cleaners
8. Mining installations not covered by 96/82/EC, incl. extractive waste facilities (see 2006/21/EC³⁾)
9. Landfills of waste as defined in Council Directive 1999/31/EC¹⁸ (on the landfill of waste)
10. Waste water treatment installations
11. Pipelines for the transport of dangerous substances

¹⁾ COM/2006/0232 final: draft directive establishing a framework for the protection of soil

²⁾ Control of major-accident hazards involving dangerous substances, Annex I

³⁾ 2006/21/EC management of waste from extractive industries (nuclear and fossil fuels, metals, construction materials)

Potentially soil polluting activities: proposal SML 2023

(a) active or inactive potentially contaminating risk activity

MS shall lay down a list of potentially contaminating risk activities

(b) activity referred to in Annex I to Directive 2010/75/EU; (IED)

(c) establishment referred to in Directive 2012/18/EU (SEVESO)

(d) activity referred to Annex III to Directive 2004/35/CE (ELD)

(e) occurrence of a potentially contaminating accident, calamity, disaster, incident or spill;

(f) any other event liable to cause soil contamination;

(g) any information resulting from the soil health monitoring carried out in accordance with Articles 6, 7 and 8 (i.e. soil health monitoring incl. diffuse pollution)

Which substances are considered?

Soil contaminants in the proposed soil monitoring law (2023)

Heavy metal concentrations: As, Sb, Cd, Co, Cr (total), Cr (VI), Cu, Hg, Pb, Ni, Tl, V, Zn (μg per kg)

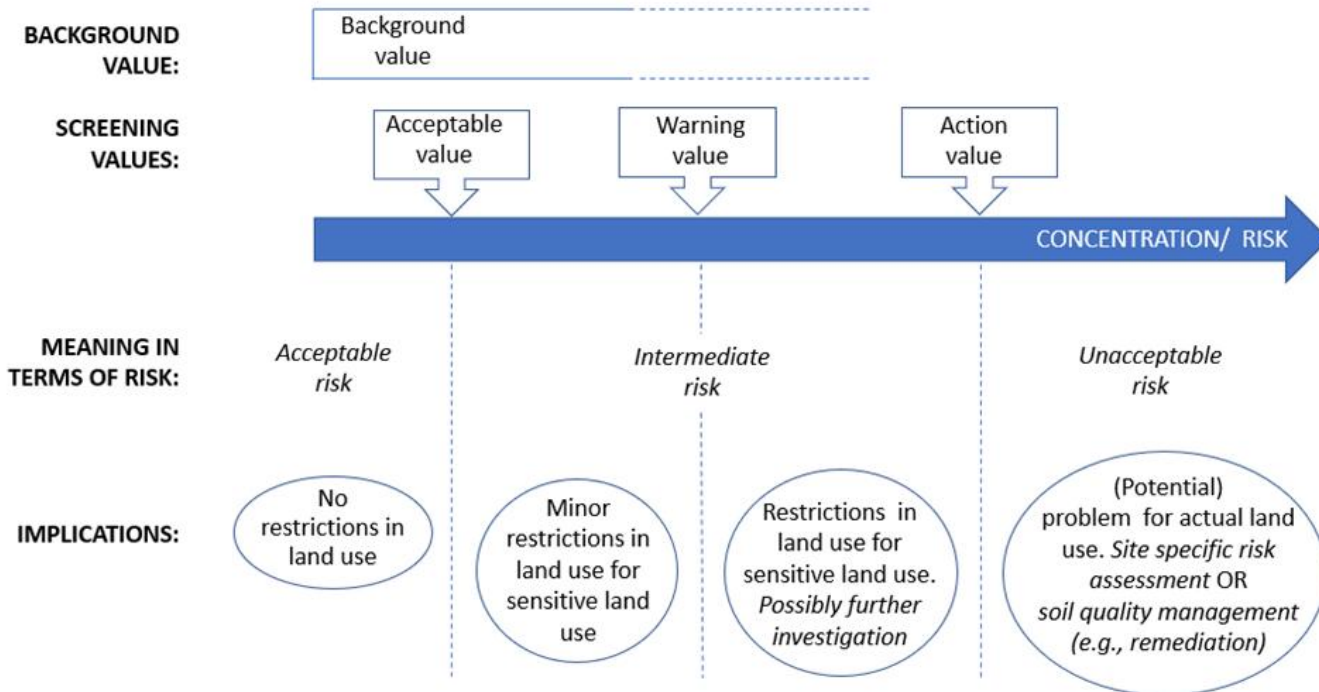
Organic pollutants

Potential environmental available content of heavy metals in soils based on ISO 17586:2016 using dilute nitric acid

Determined by Member State

On which basis are sites selected for investigations and eventually remediation?

Risk assessment: soil screening values



EU proposal Soil Monitoring Law:

MS shall lay down the specific methodology for determining the site-specific risks of contaminated sites

MS define what constitutes an unacceptable risk for human health and the environment

MS conduct site-specific assessments

MS apply RRM (indicative list see Annex V)

Geographical region	Cadmium (Cd)				Copper (Cu)			
	Intermediate risk		Critical risk		Intermediate risk		Critical risk	
	Stratification	SV	Stratification	SV	Stratification	SV	Stratification	SV
Albania_Tirana		0,7				36,3		
Austria	Land use	1 - 40		10	Land use	100-1500		600
Belgium_Brus		1	Land use	2-30		40	Land use	145-800
Belgium_Fland			Land use	2-30			Land use	200-800
Brussels_Wall.	Land use	1-10	Land use	10-50	Land use	40-120	Land use	80-500
Bulgaria	pH	0.04 - 3			pH	15-280		
Czech Republic		10	Land use and Texture	0.4-30		500	Land use and Texture	60-1500
Denmark		5		5		500		1000
Finland		1	Land use	10-20		100	Land use	150-200
Germany		20						
Hungary		1		10		75		1000
Ireland				1				
Italy			Land use	1.5-15			Land use	100-600
Lithuania				3				100
Netherlands	Land use and Texture	1-10	Land use	12-13	Land use and Texture	40-200		190
Poland			Land use, Saturated hydraulic conductivity and Soil depth	1-20			Land use, Saturated hydraulic conductivity and Soil depth	30-1000
Slovakia	Land use	0.1 - 5		20	Land use	1-100		500
Slovenia		2		12		100		300
Sweden	Land use	0.4 - 12		4	Land use	100-300		1000
United Kingdom			Land use	2-1400				500

Geographical region	Lead (Pb)				Zinc (Zn)			
	Intermediate risk		Critical risk		Intermediate risk		Critical risk	
	Stratification	SV	Stratification	SV	Stratification	SV	Stratification	SV
Albania_Tirana		85,5				151		
Austria	Land use	100-300		500		300		
Belgium_Brus		120	Land use	200-2500		120	Land use	300-3000
Belgium_Fland			Land use	200-2500			Land use	600-3000
Brussels_Wall.	Land use	80-385	Land use	170-360	Land use	120-320	Land use	215-1300
Bulgaria	pH	20-80			pH	20-370		
Czech Republic		250	Land use and Texture	100-800		1500	Land use and Texture	130-5000
Denmark		40		400		500		1000
Finland		60	Land use	200-750		200	Land use	250-400
Germany		400						
Hungary		100		750		200		2500
Ireland								
Italy			Land use	100-1000			Land use	150-1500
Lithuania				100				300
Netherlands	Land use and Texture	15-590		530	Land use and Texture	150-720		720
Poland			Land use, Saturated hydraulic conductivity and Soil depth	50-1000			Land use, Saturated hydraulic conductivity and Soil depth	100-3000
Slovakia		150		600	Land use	2-500		3000
Slovenia		100		530		300		720
Sweden	Land use	80-300		800	Land use	350-1050		3500
United Kingdom			Land use	450-750				

Updating the indicator on contaminated sites

- Indicator *LS1003* is the only EU-wide (+neighbors, EEA-38) repository of information about contaminated sites
- The current indicator (last update 2022 based on 2016 EIONET questionnaire) needs updating for the developments since 2016
- Expanded policy needs under **ZPA and CSS**: regular and systematic sharing of national statistics needed; high value for soil pollution and health
- Proposed EU Soil Monitoring Law suggests the development of national contaminated site registers (Art 13 for specifications), and expects progress in the remediation of contaminated sites
- An expansion of indicator statistics is needed, by polluting activity, substance (in exceedance), and a spatial reference.