



ENSOr – International workshop – Emerging policy challenges on New SOIL contamination

Brussels, 19-20 November, 2018



Flanders
State of
the Art

- ▶ “Setting the scene”
- ▶ Josiane Masson, Principal Administrator
- ▶ European Commission - DG Environment
- ▶ Unit land use and management

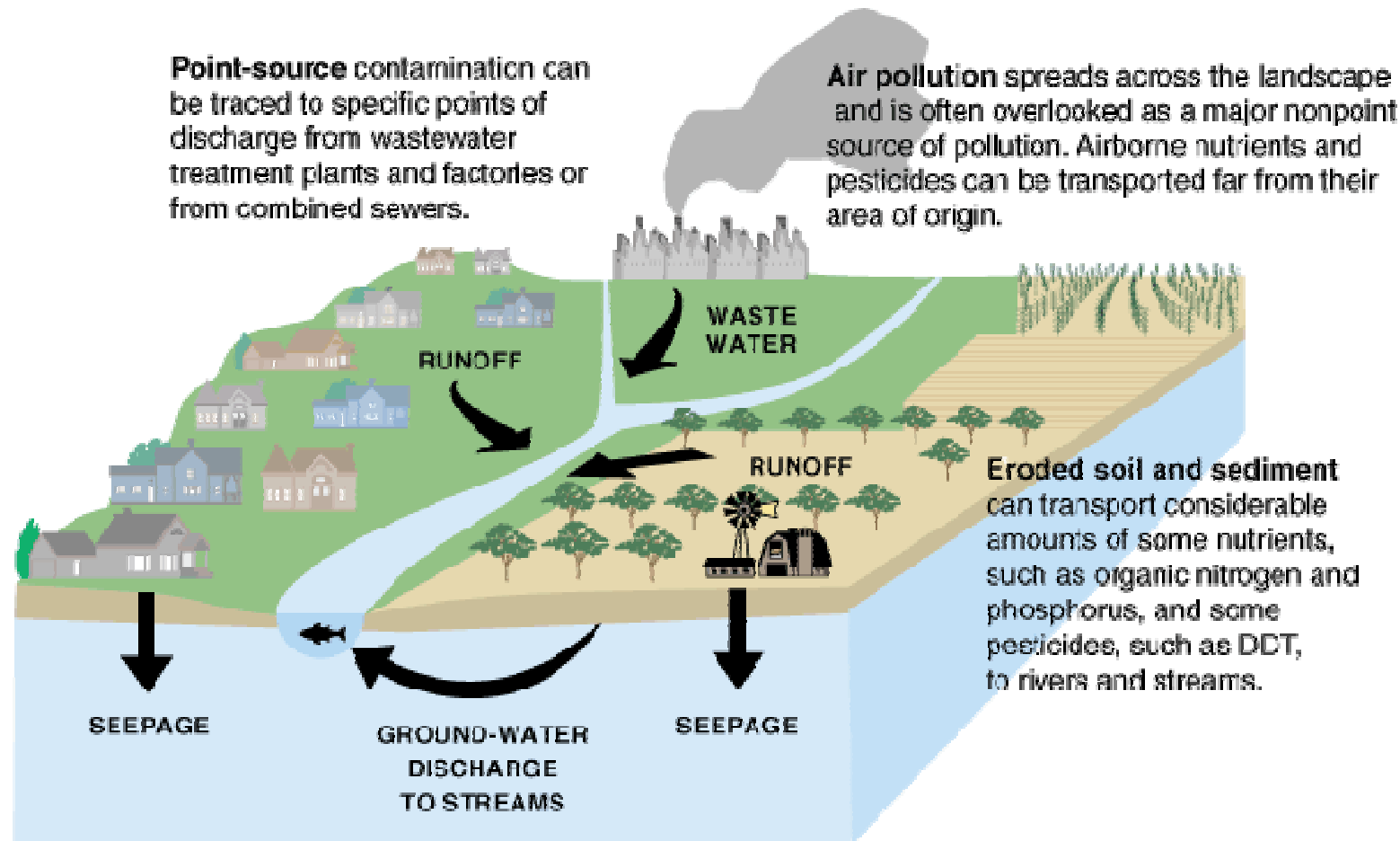
WE MAKE
TOMORROW
BEAUTIFUL

OVAM

Soil pollution: a complex issue...

- **Multiple sources:**
 - Industrial activities
 - Waste disposal
 - Intensive farming – use of agro-chemicals
 - Others: oil drills, accidents, sewage sludge, air pollution, contaminated water etc.
- **Multiple chemicals involved**
 - Petroleum hydrocarbon
 - Solvents
 - Heavy metals
 - Pesticides - Insecticides, Fungicides, herbicides
 - Emerging Contaminants: nanomaterials, endocrine disruptors, pharmaceuticals, microplastics ... Link to Anti-Microbial Resistance (AMR)

Air, water, soil pollutions are interlinked



Global policy context

▶ Growing momentum on soil and land degradation at Global level:

- SDG 3.9 “by 2030 substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water **and soil pollution and contamination**”
- SDG 12.4 “by 2020 achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and **significantly reduce their release to air, water and soil in order to minimize their adverse impact on human health and the environment**”
- SDG 15.3 “by 2030 combat desertification, **restore degraded land and soil**, including land affected by desertification, drought and floods, and strive to achieve a land degradation neutral world

Global policy context

- ▶ Multilateral Environment Agreements dealing with chemicals
 - Multilateral Environmental Conventions (Helsinki, Stockholm, Rotterdam to be checked)
 - New convention of Minamata – one Article dealing with the identification and access to information on contaminated sites
- ▶ Resolution on Soil pollution adopted by Third UN Environment Assembly 2017 (UNEA-3)
- ▶ FAO and the Global Soil Partnership co-organised with UNEP, WHO and BRS conventions a Global Soil Symposium on soil pollution in 2018 <http://www.fao.org/about/meetings/global-symposium-on-soil-pollution/en/>
 - Report « Soil Pollution: a hidden reality » including a section on Emerging pollutants
<http://www.fao.org/3/I9183EN/i9183en.pdf>



European policy context

Positive aspects

- ▶ Environmental protection enshrined in EU Treaties
- ▶ Strong regulation on chemicals (REACH, regulations derived from UN Conventions on POPs, hazardous chemicals etc.)
- ▶ Market regulation on fertilizers (new regulation proposal with limits on Cd and other contaminants), pesticides and biocides (authorization subject to prior assessment of risk on environment and health)
- ▶ Soil Pollution addressed indirectly or directly in many EU policies (environment, agriculture, regional, research ...) to prevent risk and to support remediation and research

Pollution - EU legislative framework

Article 191 of EU Treaty

Preserving, protecting, improving environment - Precautionary principles – Preventing –
Damage rectified at the source – Polluter-Pay principle

Overarching policy framework

7th Environmental Action Programme – Resource Efficiency Roadmap
Soil Thematic Strategy – horizontal instruments SEA, EIA

Common Agriculture Policy
Sustainable Use of Pesticides
Sewage sludge Directive

Multiple sources of chemicals
REACH
POPs regulation, Seveso Directive...

Water Framework Directive
Groundwater Directive
Drinking Water Directive
Nitrates Directive
Floods Directive

Multiple sources of soil
pollution: industry, waste,
agro-chemicals linked to
intensive farming, accidents,
sewage sludge
Air and water pollution

Fertiliser
regulation
Pesticicides
biocides

Waste Framework
Directive – Landfill
Directive
New Mercury Regulation

Industrial Emission Directive
Environmental Liability Directive

National Emission Directive

European policy context

Soil-related legislation

- ▶ No comprehensive EU soil legislation - soil protection is addressed partly by other EU policies
- ▶ Absence of EU standards - MS apply their own risk approach - Some MS have a solid legal basis on soil contamination some others do not have national legislation
- ▶ Inventory of soil-related policies in the EU and gap analysis published in 2017
 - Review of 35 EU and 671 national policy instruments across EU-28 Member States
 - Gap analysis by clusters

http://ec.europa.eu/environment/soil/pdf/Soil_inventory_report.pdf

EU Soil Thematic Strategy

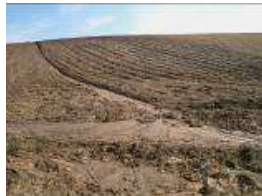
- ▶ Thematic Strategy for Soil Protection (COM(2006)231) adopted in September 2006, incl. proposal for a Soil Framework Directive, COM(2006)232
- ▶ Overall objective: protection of soil functions and sustainable use of soil, based on:
 - ❖ Prevention of soil degradation
 - ❖ Restoration of degraded soils
- ▶ **Four pillars** of which three non-binding
- ▶ To be implemented by MS
- ▶ 2012 Report from the Commission on the implementation of the STS COM(2012)46



Soil threats considered in EU STS



Sealing



Organic matter decline



Salinisation+Acidification



Contamination

Erosion



Compaction



Landslides



SFD proposal – lessons learnt



- ▶ SFD proposal withdrawn by the Commission in May 2014 after 8 years of negotiations and blocking minority of 5 MS in the Council (OJ C 153, 21.5.2014, p.3)
 - The Commission remains fully committed to the objective of soil protection and would examine how to best achieve this. Any further initiative in this respect would however have to be considered by the next college. (OJ C 163, 28.5.2014, p.15)
- ▶ Key issues
 - Subsidiarity principle
 - Soil not recognized as Common good – Private ownership
 - Ambitious - encompassing all soil threats in different contexts
 - Contamination – flexible but perceived as too prescriptive – issue of orphan sites and costs
 - Farmers’ concerns – articulation with CAP

7th Environment Action Programme



Objective

- By 2020: "land is managed sustainably in the Union, soil is adequately protected and **the remediation of contaminated sites is well underway**;"
- This requires, in particular: "increasing efforts to reduce soil erosion and increase soil organic matter, to **remediate contaminated sites** and to enhance the integration of land use aspects into coordinated decision-making involving all relevant levels of government, supported by the adoption of targets on soil and on land as a resource, and land planning objectives;"

Commitments

- "The Union and its Member States should also reflect as soon as possible on how soil quality issues could be addressed using a targeted and proportionate risk-based approach within a binding legal framework. Targets should also be set for sustainable land use and soil."

EU soil policy gaps – general findings

- ▶ In absence of Soil Framework Directive, soil not subject to a comprehensive and coherent set of rules in the Union. No binding targets but some MS have
- ▶ Protection and sustainable use of soil scattered in different Community policies contributing in various degrees to soil protection
- ▶ Lack of common definitions across EU policies
- ▶ No obligation of monitoring soil and soil contaminants
- ▶ Few soil monitoring systems encompass contaminants other than heavy metals – analysis of pesticides residues introduced in EU LUCAS soil survey in 2018. Nothing on emerging contaminants

EU soil policy gaps – soil local contamination

- ▶ No coordinated approach on setting baselines (except IED), references, targets or priorities
- ▶ Historical activities not covered – IPCC 1996, IED and ELD 2007 - IED does not cover small installation
- ▶ No EU approach to orphan sites
- ▶ No harmonised approach to identify (potentially) contaminated sites
- ▶ No coherent set of rules defining liability, responsibilities, thresholds and monitoring
- ▶ Regional funds (ERDF, Cohesion fund) under certain conditions – National funding according to EU state aids guidelines

National soil policy gaps –local contamination

- ▶ Only few MS policy addressing contamination in holistic and systematic way
- ▶ Some MS have very comprehensive legislation, some others have no legislation beyond EU policies
- ▶ No systematic or binding rules for identifying historical contaminated sites
- ▶ Some MS have registers, some do not have or not regularly updated
- ▶ Different approaches to identify, investigate, remediate and priorities sites
- ▶ Standards used to assess risks very variable (screening, guidance, intervention values etc.

EU soil policy gaps – diffuse pollution

- ▶ NEC Directive, WFD, Floods directive, Groundwater Directive, Nitrates Directive addressing soil pollution but not the primary objective
- ▶ Exception: Sewage sludge Directive - clear standards on soil quality but old Directive
- ▶ Pesticides Directive – clear rules for authorizing products but difficult to evaluate in-situ impact on soil (absence of monitoring system)
- ▶ Lack of framework for addressing diffuse pollution in a comprehensive and coherent way

Challenges (1)

- ▶ Chemical production and exposure increasing – risks to ecosystems and humans health
 - Globally chemical production * 50 since 1950
 - Diversity and quantity of synthetic chemicals increased – ca 100,000 substances globally
 - Pollution in Europe accounts for 467,000 premature deaths
- ▶ Water, Air pollution well known - Land/soil pollution likely under-estimated
- ▶ Need to integrated – multidisciplinary approach linking soil science, health, socio-economic science

Challenges (2)

- ▶ « Cocktail » effects largely unknown – exposure to complex mixtures of chemicals
- ▶ Emerging contaminants: microplastics, endocrine disruptors, pharmaceuticals and AMR, nanomaterials...
- ▶ Environmental and societal trends changing exposure patterns
 - climate change impact on extreme weather event (storms, floods, landslides...) remobilising chemicals, drought increasing chemical concentration in water
 - Urbanisation and ageing get increasing vulnerability

**Thanks for
your attention!**

