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# TOWARDS ZERO POLLUTION

4 June 2021

Launch of the  
Global Assessment  
of Soil Pollution Report



INTERGOVERNMENTAL  
TECHNICAL PANEL ON SOILS

UN   
environment  
programme



# Status of soil pollution, a regional perspective: Europe

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# Europe

42 countries

27 European Union member states (EU-27)

Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden

15 non-EU member states

Albania, Andorra, Bosnia and Herzegovina, Greenland, Iceland, Israel, Kosovo, Liechtenstein, Montenegro, North Macedonia, Norway, Serbia, Switzerland, Turkey and United Kingdom



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# Europe

Total Area      about 5 million square kilometer

Population      EU-42: 638 million people

GDP              EU-27: 13.9 trillion USD

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# The main sources of soil pollution in Europe



## Long industrial history:

main contaminants: mineral oils, trace elements, organic contaminants such as halogenated and non-halogenated compounds; 2.8 million sites are suspected to be potentially contaminated.

## Agriculture:

25 % of Europe's land cover, about 80 % of agricultural soils contain pesticide residues, 45 % of nitrogen inputs come from synthetic fertilisers and 38 % from manure



# The main sources of soil pollution in Europe



## Urban housing and transport:

73 % of Europe's population lives in cities, causing car exhaust emissions, improper waste disposal and household contaminants.

**Mining activities** are common and widely distributed. Key contaminants: antimony, cobalt, copper, gallium, lead, rare-earth elements, zinc and asbestos. Long-lasting problems by contaminated sites, abandoned and orphan sites.

**Military activities and arms manufacturing industries** causing legacy of pollution left over from the First and Second World Wars and recent local conflicts.



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# Mapping and monitoring

What do we know about soil pollution in Europe?

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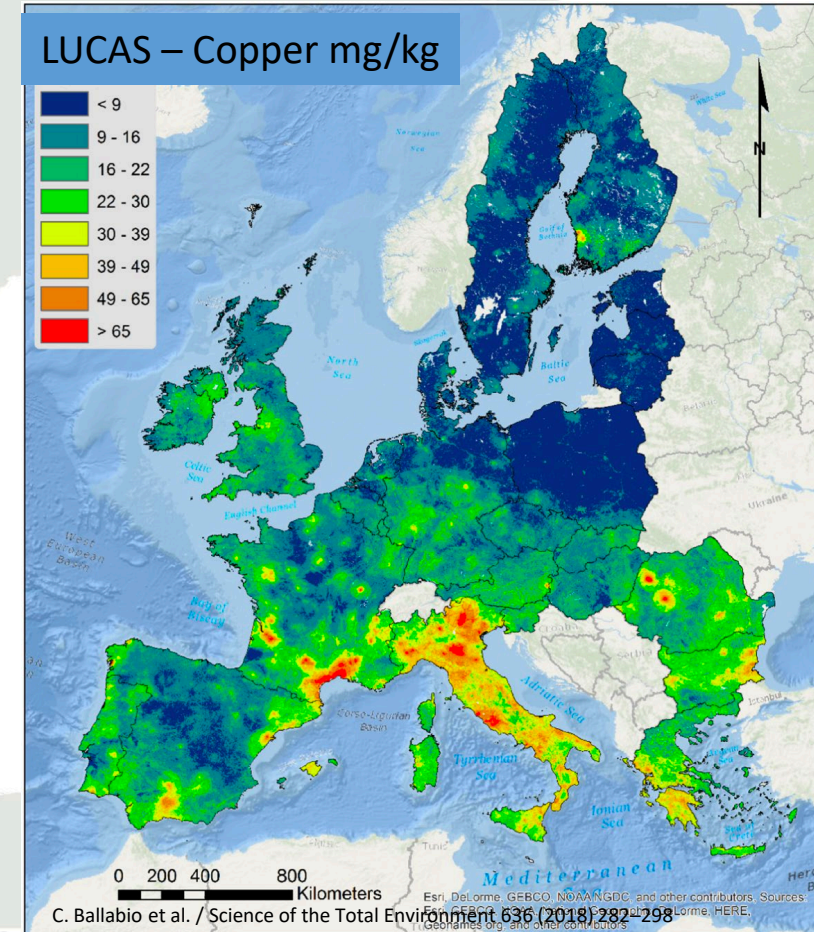
# Mapping and monitoring

Geochemical background

- FOREGS - Forum of European Geological Surveys  
 < 1000 sampling locations

Background and contamination by human activities

- GEMAS - Geochemical Mapping of Agricultural and Grazing Land Soil  
 2211 / 2118 sampling locations in agricultural land / permanent grasslands
- LUCAS - Land Use and Coverage Area frame Survey  
 21.682 sampling locations of different land uses







# Mapping and monitoring

## Good news

- Accurate data to determine the geochemical background for elements
- Satisfying data to priority areas for detailed assessment and polluted sites

## Bad news

- European-wide data for non-metal pollutants do not exist  
lacking information about organic pollutants, pesticides, emerging compounds, personal care products, plastics

Develop and strengthen the inventory and monitoring of point-source and diffuse soil pollution !!!



# Soil protection policy – 70 years review

- 1952 First meeting of European Soil Survey Organizations, Ghent, Belgium
- 1972 European Soil Charter adopted by Council of Europe
- 1986 Digital version of the EC Soil Map
- 1996 Creation of the European Soil Bureau at the JRC
- 1998 Workshop “Soil Protection Policies within the EU”, Bonn, Germany
- 1999 First European Soil Forum, Berlin, Germany
- ...
- 2006 Soil Thematic Strategy adopted by the European Commission
- 28.04.2021 Public consultation on the New Soil Strategy closed

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# EU-27: Soil protection policy instruments

At present (status of 2015)

- 35 EU-level policies Including 13 EU Directives influencing directly national policies
- 671 national policies
- No common soil legislation

# EU-27: Soil protection policy instruments

The way forward

→ Soil Thematic Strategy



Brussels, 11.12.2019  
COM(2019) 640 final

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN  
PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN  
ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE  
REGIONS

The European Green Deal

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The screenshot shows the European Commission website page for the Soil Thematic Strategy. The page title is "Soil" and the main heading is "Report on the implementation of the Soil Thematic Strategy and ongoing activities". The page content includes a navigation menu with "Soil and land", "EU Soil policy", "EU activities related to soil and land", "International activities", and "Knowledge and data". The main text states: "Some five years after the adoption of the Soil Thematic Strategy, on 13 February 2012 the European Commission published a policy report on the implementation of the Strategy and ongoing activities (COM(2012) 46). The report provides an overview of the actions undertaken by the European Commission to implement the four pillars of the Strategy, namely awareness raising, research, integration, and legislation. It underlines that at the March 2010 Environment

← Green Deal



# EU-27: The Green Deal and related soil issues

## ***Strategy 2.1.6. From 'Farm to Fork': designing a fair, healthy and environmentally-friendly food system***

**European food is famous for being safe, nutritious and of high quality.** It should now also become **the global standard for sustainability.** Although the transition to more sustainable systems has started, feeding a fast-growing world population remains a challenge with current production patterns. Food production still results in air, water and soil pollution, contributes to the loss of biodiversity and climate change, and consumes excessive amounts of natural resources, while an important part of food is wasted. At the same time, low quality diets contribute to obesity and diseases such as cancer.



# EU-27: The Green Deal and related soil issues

## **Strategy 2.1.7. Preserving and restoring ecosystems and biodiversity**

**Ecosystems provide essential services such as food, fresh water and clean air, and shelter.** They mitigate natural disasters, pests and diseases and help regulate the climate. However, the EU is not meeting some of its most important environmental objectives for 2020, such as the Aichi targets under the Convention on Biological Diversity. The EU and its global partners need to halt biodiversity loss. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services' 2019 Global Assessment Report<sup>21</sup> showed worldwide erosion of biodiversity, caused primarily by changes in how land and sea are used, direct exploitation of natural resources, and with climate change as the third most important driver of biodiversity loss.



# EU-27: The Green Deal and related soil issues

## ***Strategy 2.1.8. A zero pollution ambition for a toxic-free environment***

**Creating a toxic-free environment requires more action to prevent pollution from being generated as well as measures to clean and remedy it.** To protect Europe's citizens and ecosystems, the EU needs to better monitor, report, prevent and remedy pollution from air, water, soil, and consumer products. To achieve this, the EU and Member States will need to look more systematically at all policies and regulations. **To address these interlinked challenges, the Commission will adopt in 2021 a zero pollution action plan for air, water and soil.**

**The natural functions of ground and surface water must be restored.** This is essential to preserve and restore biodiversity in lakes, rivers, wetlands and estuaries, and to prevent and limit damage from floods. Implementing the 'Farm to Fork' strategy will reduce pollution from excess nutrients. In addition, the Commission will propose measures to address pollution from urban runoff and from new or particularly harmful sources of pollution such as micro plastics and chemicals, including pharmaceuticals. There is also a need to address the combined effects of different pollutants.



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Many thanks for your audience!

