



Food and Agriculture
Organization of the
United Nations

16th Working Session of the
Intergovernmental
Technical Panel on Soils
(ITPS)

Soil pollution activities

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INTERGOVERNMENTAL
TECHNICAL PANEL ON SOILS

28, 29 and 30 March 2022 | Virtual meeting



1. International Network on Soil Pollution (INSOP)

- To be launched on **April 22, 2022**
- **Aim:** STOP soil pollution and achieve the global goal of Zero Pollution
- **Objectives:**
 1. **Provide** an international forum for the generation and dissemination of knowledge on soil pollution
 2. **Promote and exchange** good practices, practical and scientific knowledge and innovative solutions for managing polluted soils in a sustainable manner
 3. **Establish** links between governments, academia, the private sector, and society to stimulate the development of cleaner and more sustainable solutions and consumption options
 4. **Strengthen** technical and technological capacities through coordination among existing networks

1. International Network on Soil Pollution (INSOP)

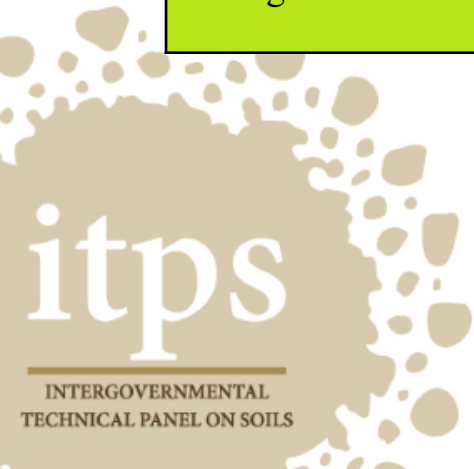
- Areas of work:

1. Assessment of soil pollution
2. Mapping soil pollution
3. Monitoring and regulation of polluted soils
4. Sustainable management and remediation of polluted soils



1. International Network on Soil Pollution (INSOP) Tasks

Timeframe	Task	Outcome
Short-term goals	Finalize the technical manual on soil pollution	Technical Manual on assessing, mapping, monitoring and reporting of polluted soils
	Identify the main soil contaminants and laboratory methodologies in order to develop standard operating procedures (SOPs) in close cooperation with GLOSOLAN	SOPs for contaminants of major concern
	Analyze national soil legislation and identify the most common and minimum requirements addressing soil pollution	Policy brief on soil pollution legislation
	Finalize the Online database on best available techniques for managing and remedying polluted soils, in consultation with NETSOB	Online database on best available techniques for managing and remedying polluted soils
Short to medium-term goal	Gather existing threshold values of soil contaminants	Global database of soil contaminants threshold values
	Contribute to the development of soil pollution indicators to determine soil health	Soil health index



1. International Network on Soil Pollution (INSOP) Tasks

Timeframe	Task	Outcome
Medium-term goals	Develop SOPs for other soil contaminants, including emerging contaminants in cooperation with GLOSOLAN	SOPs for other soil contaminants
	Develop the methodology to map soil pollution/contaminants and identify data gaps in close cooperation with INSII	Global soil pollution map(s)
	Develop indicators and guidelines for assessing the risk/toxicity of soil pollution on human health and the environment	Human-health and environmental monitoring guidelines
	Establish a capacity building program on the full cycle of soil pollution, from assessment to monitoring and the application of SOPs	Soil pollution capacity-building programme in 6 FAO languages disseminated through EduSOILS, the Global Soil Doctors programme, and GLOSOLAN
Long-term goals	Develop a global range of threshold values for soil contaminants (soil guideline values) under different land uses	Global soil guideline values
	Help to establish national legislation on soil pollution prevention, control and remediation, including risk assessment approaches	National legislation on soil pollution developed/strengthened
	Develop national capacities and strengthen technology transfer for the sustainable remediation and management of polluted soils	Sustainable remediation (including NbS) to treat polluted soils and to enhance soil health and biodiversity applied at national level

2. Technical manual for mapping, monitoring, and reporting soil pollution

Chapter	Content	Status
1.	Glossary and Introduction	Available
2.	Defining the Problem	Available
3.	Environmental and Human Health Risk Assessment Framework (ERA and HHRA)	Under development
4.	Sampling strategy and soil analysis	Available
5.	Mapping soil pollution	Under development
6.	Recommendations for sites with mixed pollution	Under development
7.	Monitoring	Under development
8.	Reporting	Available

2. Technical manual: i.e. Data gap identification

Chapter 3

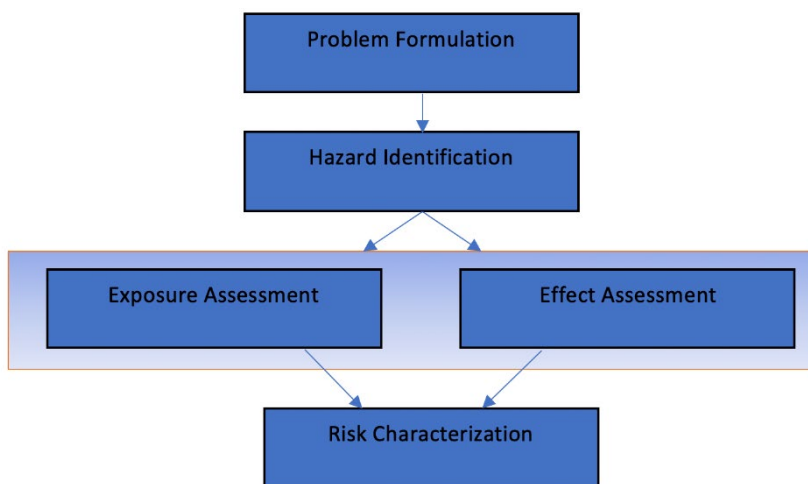


Figure 1 The standard conceptual framework for ERA

Chapter 5

Section	Sub-section	Existing Draft	Proposed Content
Introduction	Defining pathways/sources of pollution	X	X
	Types of soil pollution	X	
	Threshold/background values and their importance	X	
	How to map soil types/Land cover	X	X
Strategy	Soil pollution mapping techniques 1) Interpret image, land cover/use 2) statistical model, which area or land cover applied 3) soil sampling design importance	X	X
	Description and discussion on soil modelling using proximal and remote sensing data with emphasize on machine learning and deep learning algorithms		X
	Description and discussion on digital soil mapping methods with emphasize on remote sensing data for soil toxic elements modelling		X
	Soil spectral features, i.e. XRF for heavy metals and PID for VOC's	X	X
	Laboratory spectral measurement, i.e. VIS-NIR		X
Mapping	Proximal Sensing		X
	Remote Sensing	X	X
Soil pollution inventories	Description of available networks on soil mapping, i.e. GLOSI, HWSD, INSII	X	
	SOTER database, its scope and objectives	X	
Case study	Campania region, Italy, on Al and P soil mapping using IDW interpolation, its results, limitations and conclusion	X	
Conclusion	Advantages and limitations listed		X

Restructuration

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3. Soil pollution management and remediation projects

- Pilot project in agricultural areas affected by cadmium (Cd) pollution in cacao fields from agricultural practices and off-site sources
- Pilot countries:
 - 1) Trinidad and Tobago
 - 2) Ecuador
- Output: List of management and remediation options to propose to farmers and step-by-step risk assessment methodology to be scaled-up



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THANK you!

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