



Food and Agriculture
Organization of the
United Nations

18th Working Session of the Intergovernmental Technical Panel on Soils (ITPS)

21-23 March 2023
FAO Headquarters
Rome, Italy

Soil pollution activities

Ravi Naidu

crcCARE and The University of Newcastle & INSOP Chair

[\(Ravi.Naidu@crccare.com\)](mailto:Ravi.Naidu@crccare.com)

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INTERGOVERNMENTAL
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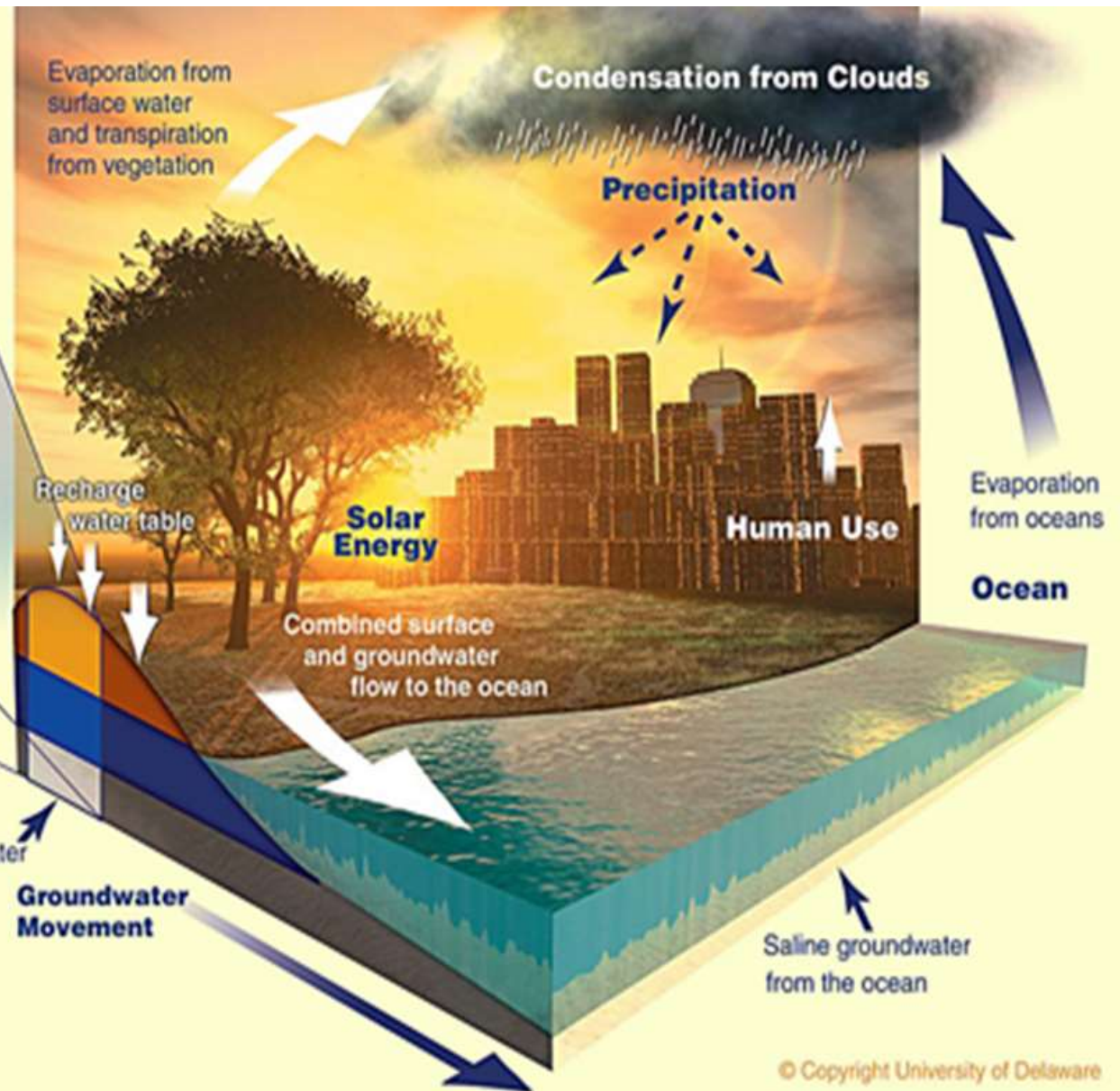
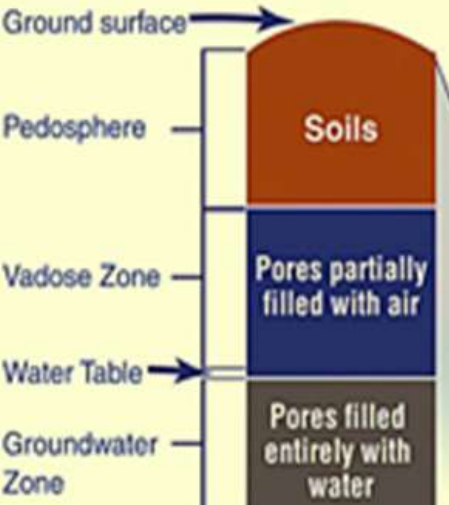


Rise of humanity: Anthropocene

...in the air we breathe, the water we drink, and the land we live on..



The Critical Zone



Impacts the critical zone

These processes support and/or control many ecosystem processes

↓
Supply products that benefit society





Environment International

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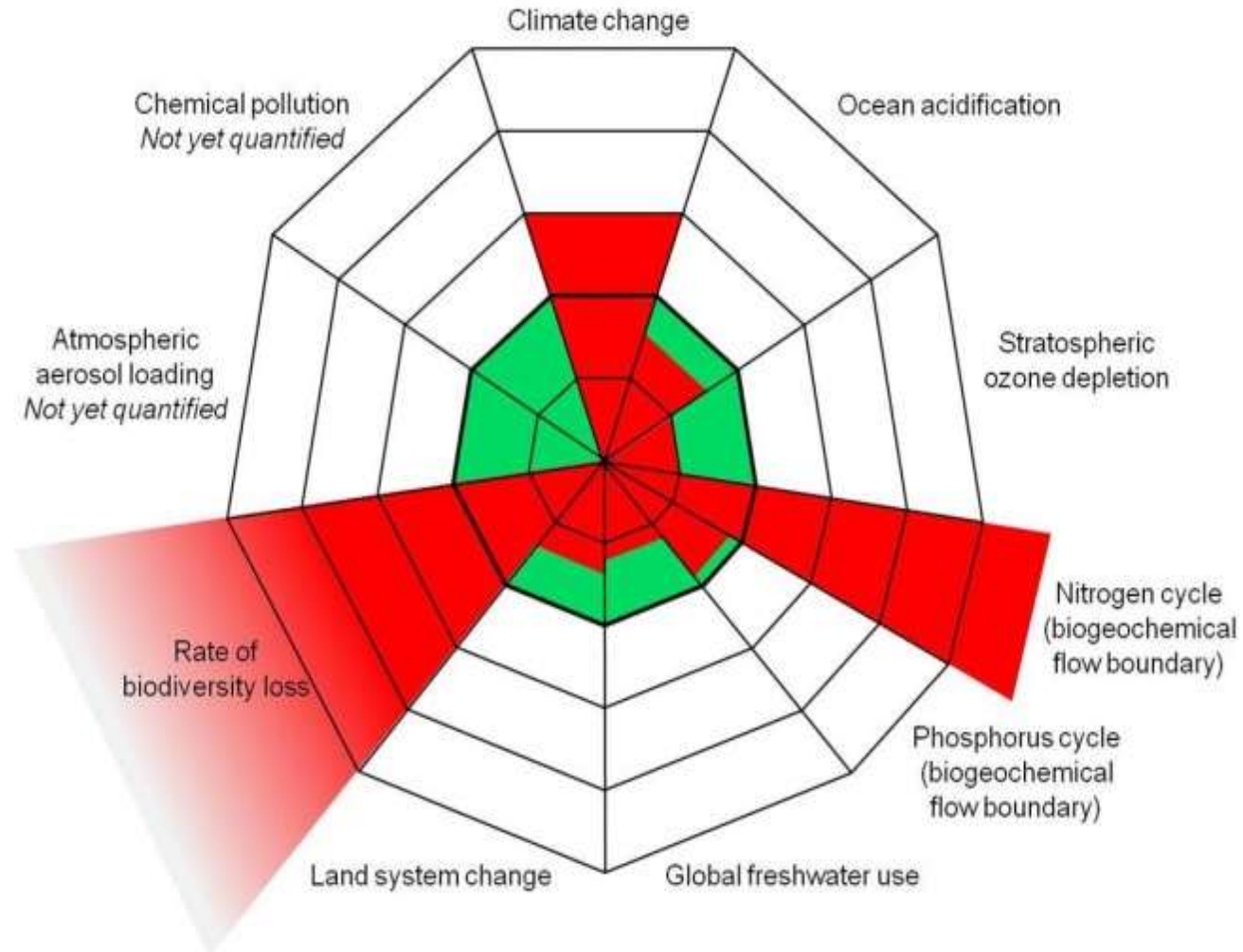


Review article

Chemical pollution: A growing peril and potential catastrophic risk to humanity

Ravi Naidu ^{a, b} ¹ , Bhabananda Biswas ^{b, c, 1, 2}, Ian R. Willett ^d, Julian Cribb ^e, Brajesh Kumar Singh ^f, C. Paul Nathanail ^g, Frederic Coulon ^h, Kirk T. Semple ⁱ, Kevin C. Jones ⁱ, Adam Barclay ^b, Robert John Aitken ^{j, k}

Planetary boundaries



Chemical contamination is:

- One of the ten 'planetary boundaries' which humanity, for its own sake, ought not to transgress
- Of equivalent significance with climate change

(Rockstrom *et al.*, *Nature* 461, 2009)

International Network on Soil Pollution (INSOP)

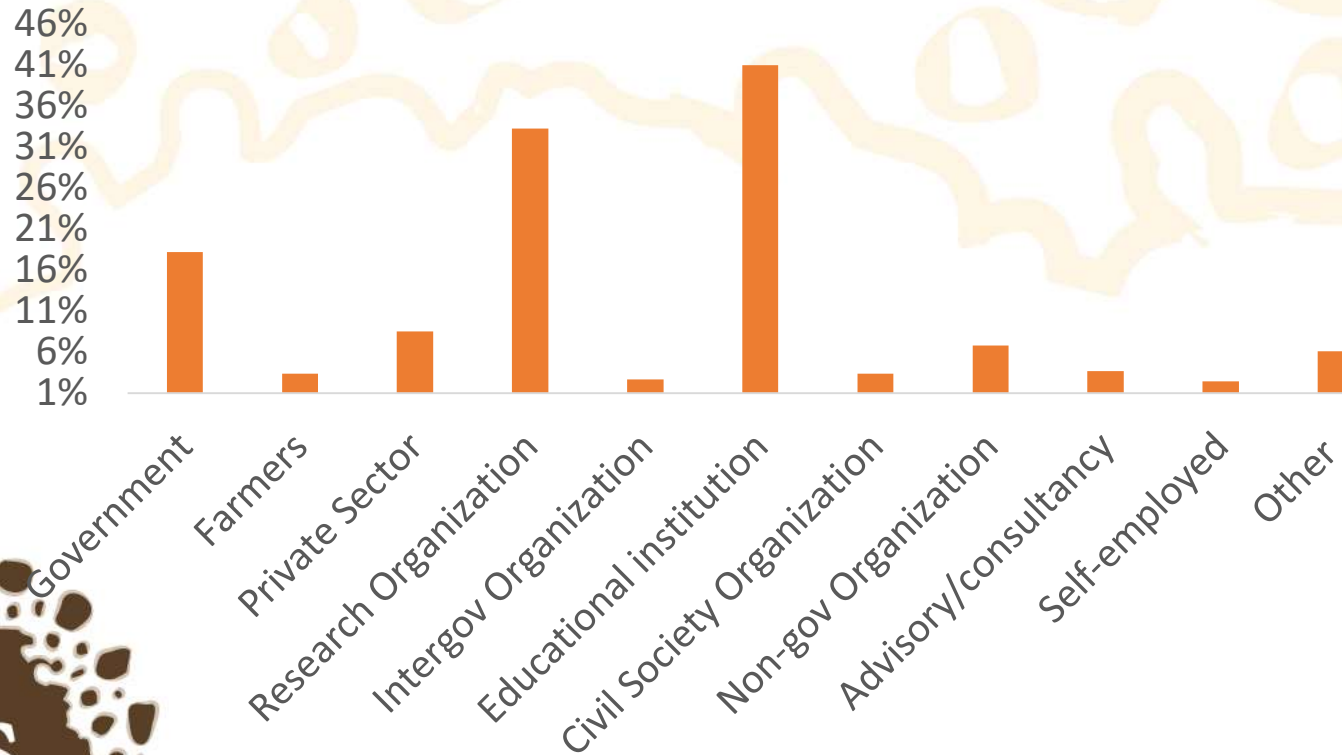
- **Launched in April 2022**
- INSOP focuses on six main areas of work under each of which various tasks will be carried out to achieve the overall goal
- It will work on improving knowledge on the full cycle of soil pollution, from assessment to remediation, as well as on the effect on environmental and human health and the provision of soil ecosystem functions and services



International Network on Soil Pollution (INSOP)

700 members from 90 countries

INSOP members types of organizations



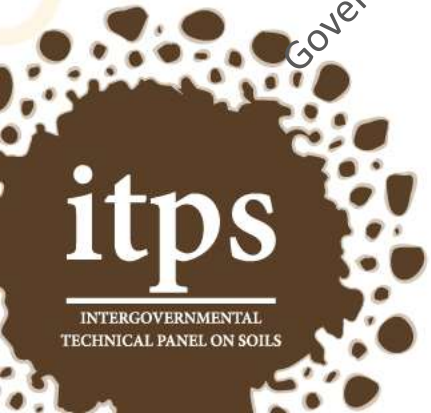
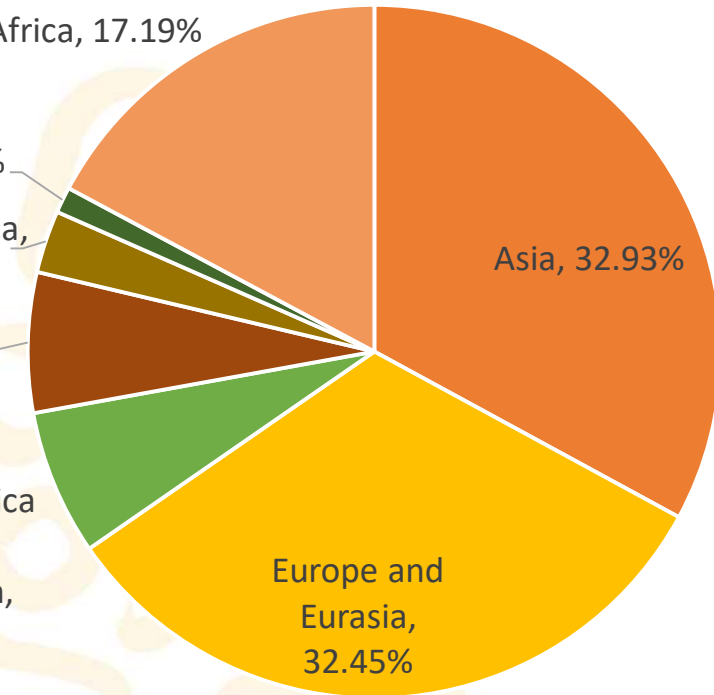
Sub-Saharan Africa, 17.19%

Pacific, 1.21%

North America, 2.91%

North Africa and Near East, 6.54%

Latin America and the Caribbean, 6.78%



Technical Guidelines on soil pollution

- A guidelines to navigate technicians/stakeholders/government representatives in the decision making process to identify and assess the risk and take the best management decision
- Focuses on:
 1. How to build a Conceptual site model
 2. Design of the sampling strategy
 3. Map polluted soils
 4. Carry out environmental risk assessment
 5. Monitor polluted soils
 6. Reporting soil pollution and communicating risks

To be published in 2023

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Technical Guidelines on soil pollution i.e. Chapter 3 risk assessment

- Focuses on environmental risk assessment ONLY-too big to focus on human health
- Examples from Dutch (RIVM), USEPA and Canadian risk assessment guidelines are used
- Both quantitative and qualitative assessment description (exposure and effect assessment, risk characterization)

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Technical Guidelines on soil pollution

No.	Chapter	Status	Next step
1.	Introduction	Completed	Review
2.	Building a Conceptual Model	Completed	Review
3.	Sampling	Completed	Review
4.	Environmental risk assessment	Incomplete	Chapter completion
5.	Mapping	Partially	Chapter completion
6.	Mixed pollution on site	Completed	Review
7.	Monitoring soil pollution	Incomplete	Chapter completion
8.	Communication and reporting soil pollution	Incomplete	Chapter completion

INSOP other activities 2023

- Develop standard operating procedures (SOPs) for pesticides of priority, mineral fertilizers and heavy metals (*bioavailable*)
- Webinars on 1) Pesticides in the soil (*April*) and 2) How soil spectroscopy helps in soil pollution (*May*) 3) Others (*TBC*)
- Launch soil pollution training for farmers in collaboration with Soil Doctors Programme. Case study: Ecuador
- Develop the methodology to map soil pollution/contaminants and identify data gaps in close cooperation with INSII
- Launch projects on
 - Soil pollution due to military activities
 - Soil pollution in Small Island Developing States (SIDS)

INSOP is open for further suggestions and collaborations

INSOP collaboration

INSOP will closely collaborate with other networks in order to achieve its global goal in eliminating soil pollutions. Examples of future collaborations are:

- **GLOSOLAN:** Harmonizing SOP's for soil contaminants. Creating the list of priority contaminants. Lab's capacity and equipment assessment
- **INSII:** Develop the methodology to map soil pollution. Generation of a spatial datasets on the distribution of polluted soils.
- **NETSOB:** Sustainable use and management of soil biodiversity for remediation and management of contaminated soils
- **INFA:** SOPs, sustainability and remediation for mineral and organic fertilizers
- **Soil Doctors Programme:** Training on prevention and mitigation of soil pollution



INFA
International Network
on Fertilizers Analysis



Intergovernmental Panel on Contaminants (IPC)



...a global plan to combat chemical pollution, including the establishment of a chemical pollution body, similar to the Intergovernmental Panel on Climate Change, or IPCC.





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Thank you!

INSOP

Coordinator: Sergejus.Ustinov@fao.org

Chair: Ravi.Naidu@crccare.com

Vice-chair: houdeyi@tsinghua.edu.cn

GSP Secretariat: Natalia.rodriquezeugenio@fao.org

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