



Soil pollution: a hidden threat to soil health

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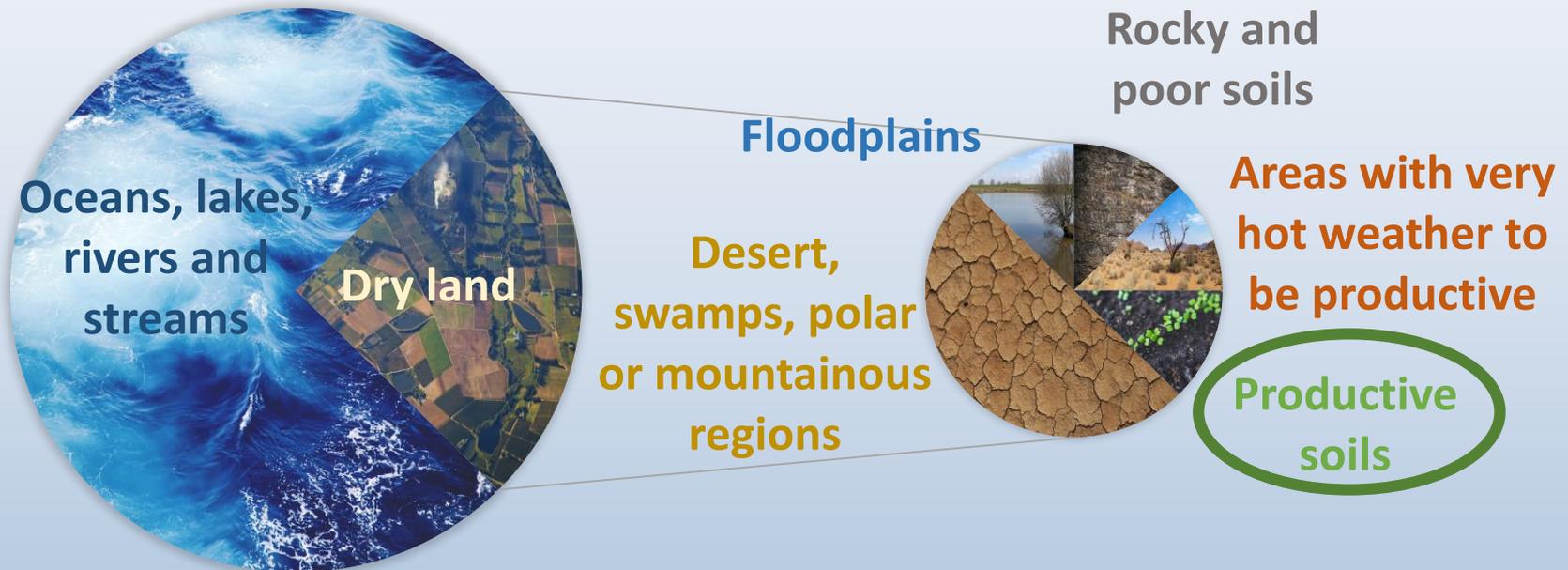
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Soils: the foundation for life

Only 3% of the Earth surface is sustaining all human activities!

EARTH'S SURFACE



Healthy soils to achieve food security and sustainable development

The current world population of 7.3 billion is expected to reach 8.5 billion by 2030, 9.7 billion in 2050 and 11.2 billion in 2100

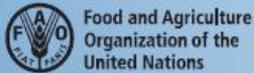
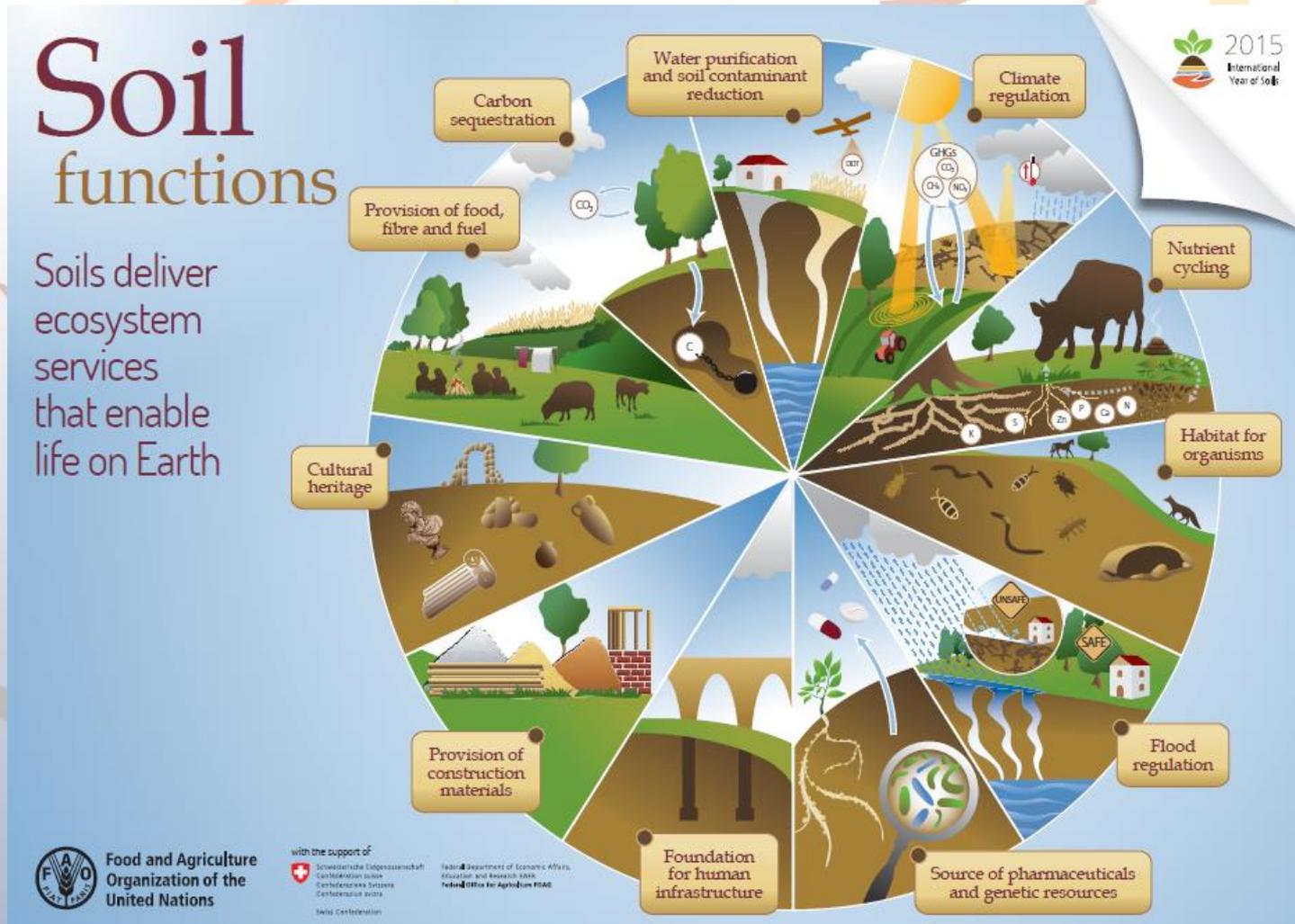


To meet growing food demand, it is necessary to develop more **productive and sustainable** farming systems

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Soils provide multiple ecosystem services



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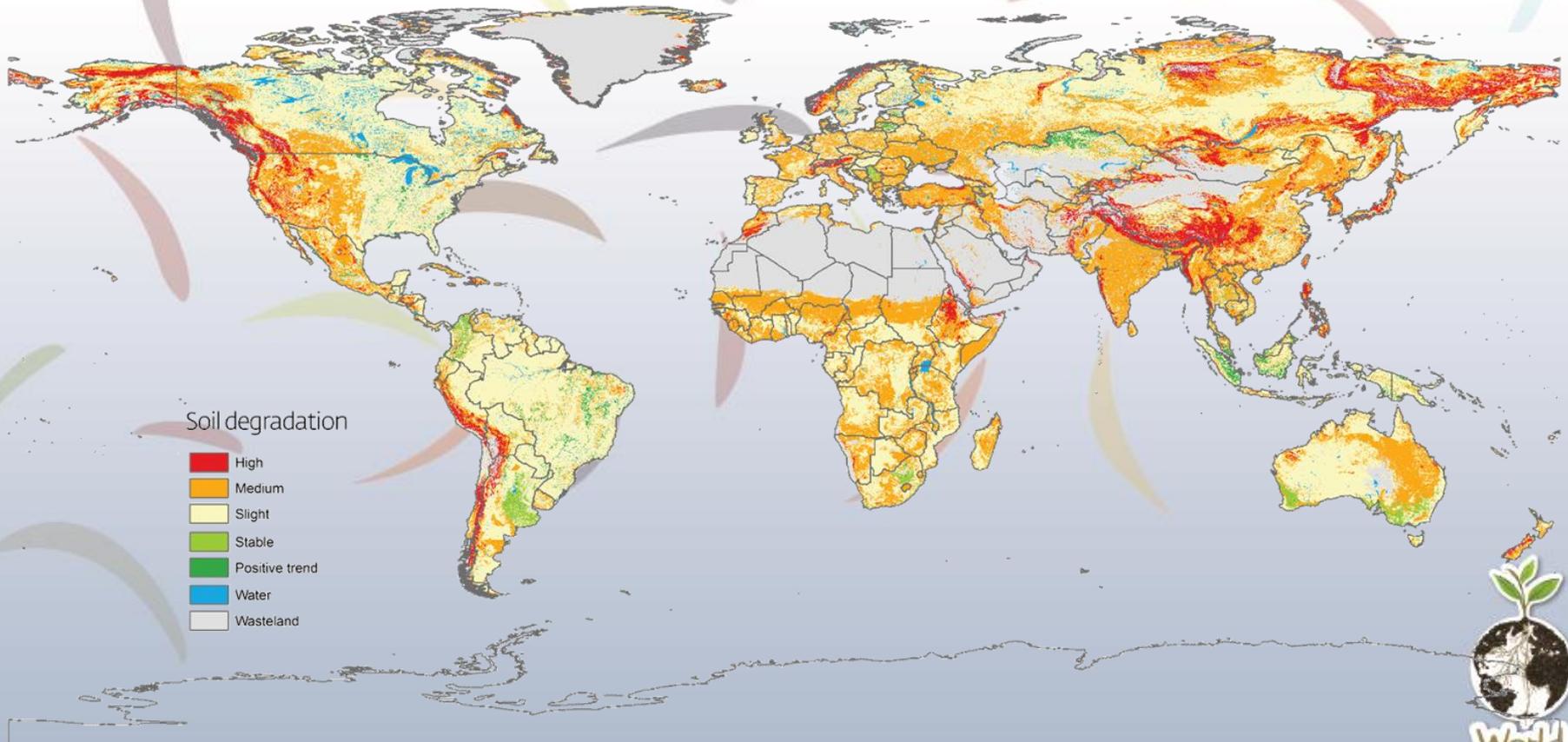
Federal Department of Economic Affairs
Education and Research DARE
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Today, 33% of land is moderately to highly degraded mainly because of erosion, loss of SOC, salinization, compaction, acidification and chemical pollution



Soil degradation

- High
- Medium
- Slight
- Stable
- Positive trend
- Water
- Wasteland

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The Global Soil Partnership

The GSP promotes Sustainable Soil Management to improve soil governance at all levels to support/ enhance the provision of essential ecosystem services



GLOBAL SOIL
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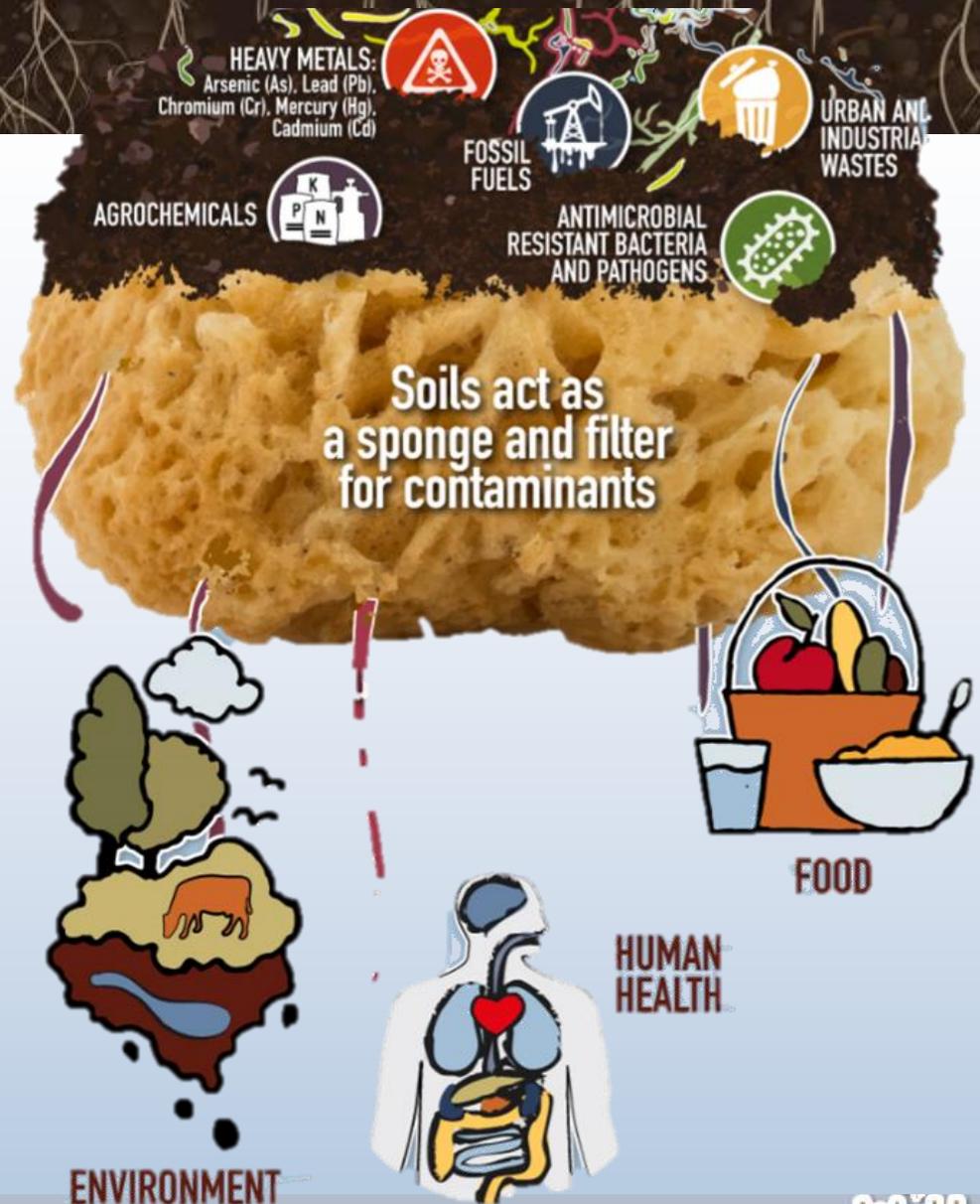


Substantial progress of the GSP since 2011



Soil pollution

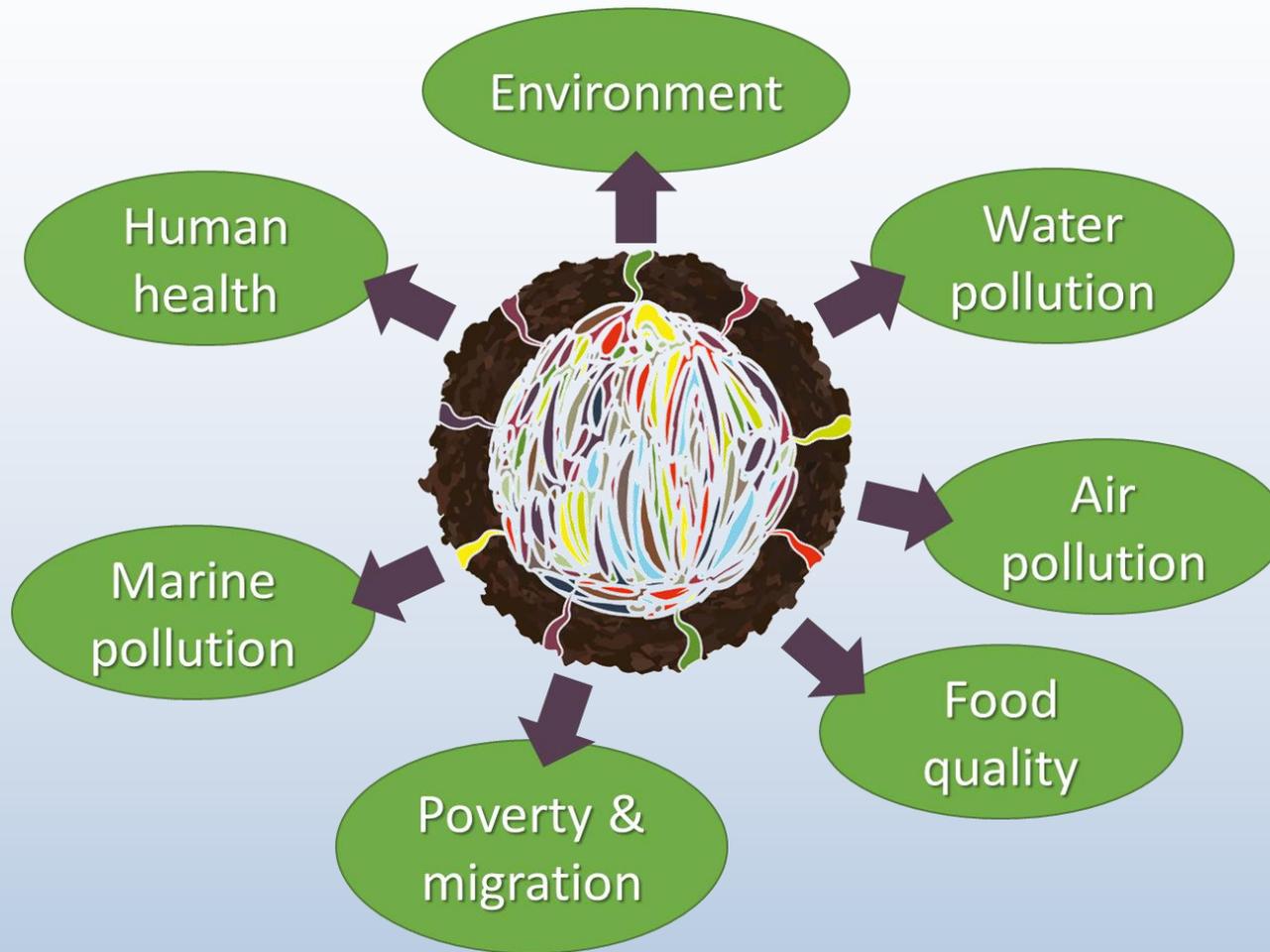
The potential of soils to cope with pollution is limited



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World
Soil Day

Soil pollution: a hidden reality

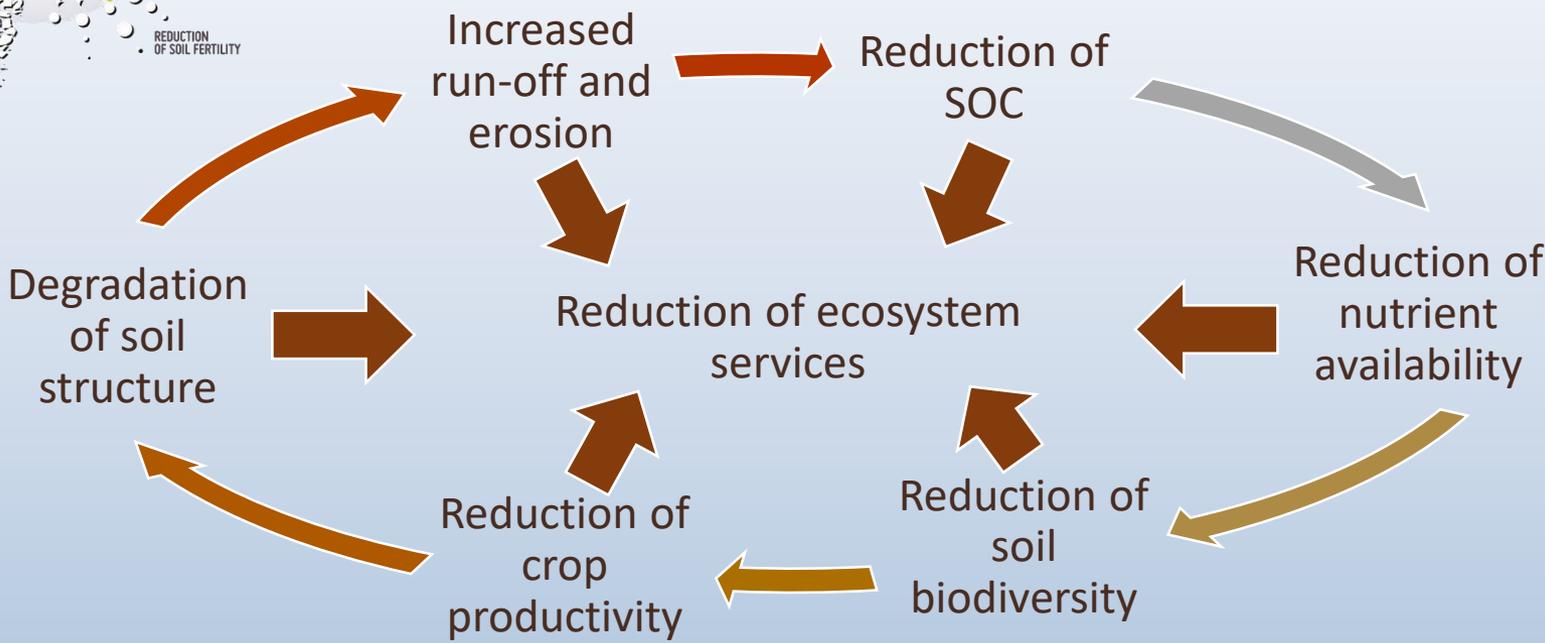
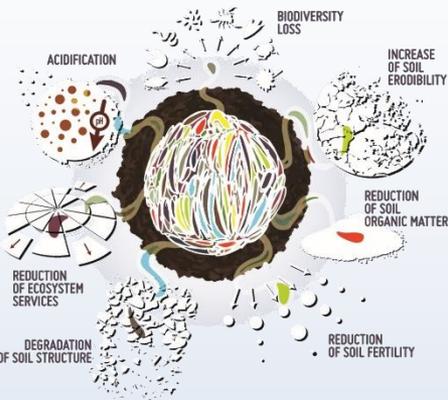


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Soil pollution vs soil health

Pollution causes a chain of **degradation processes** in soil, jeopardizing soil's ability of providing key ecosystem services



Soil pollution and human activities



Over thousands of years of human activities have left a legacy of polluted soils worldwide

Soil pollution and human activities



**80% of our waste
is not being recycled
and ends up in
landfills**

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Food and Agriculture Organization of the United Nations

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GLOBAL SOIL PARTNERSHIP

Agrochemicals
benefits and hazards

While agrochemicals are crucial to meeting the increasing demand for food by a growing world population, they leave a legacy of soil pollution and degraded agroecosystems. 50% of the top agricultural aggroecosystems in 11 European countries contain residues of multiple persistent pesticides.

Meet the twin challenges
of food security and environmental protection by reducing the excessive use of agrochemicals, promoting the responsible use and management of agrochemicals and sustainable soil management.

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More & More
chemicals every day

Thousands of chemicals are new part of our lives, with about 1000 new chemicals being released each year. However, this information exists on how these new chemicals interact with each other and the impacts they have on the soil, the environment or even on our own bodies.

Stricter environmental regulations
that compel the realization of ecotoxicological studies, innovation to develop environmentally friendly chemicals and awareness raising to reduce the use of chemicals should be promoted.

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E-waste
an emerging threat

50 million tons of electronic waste are generated every year making e-waste one of the world's fastest growing pollution problems affecting our soils.

One man's trash is another man's treasure!
Think before throwing away your old devices! you can donate them or recycle them.

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Plastics in soils
where our food grows

Plastic particles are polluting our soils, entering the food chain and the environment. One third of the plastic produced globally ends up in our soils.

Policies are needed
to prevent the use of excessive packaging by the industry. But YOU can also take action: carry a reusable bottle and grocery bag, and buy products with reduced or recycled packaging. Contributing to the awareness-raising campaign for reducing the use of plastics! #BePlasticPollution.

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Non-treated wastewater
source of soil pollution

Irrigating with wastewater and applying sludge to your soils are great ways to recycle nutrients and organic matter but they can also become a source of soil pollution.

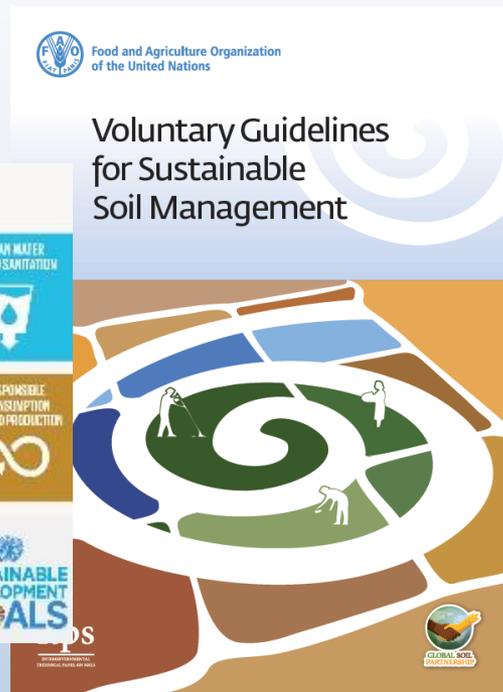
Governments, collaborating with relevant stakeholders, should ensure that wastewater treatment plants have the available infrastructure and technology for the removal of heavy metals, pathogens and other organic pollutants from these recycled inputs.

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Soil pollution: Challenges and opportunities



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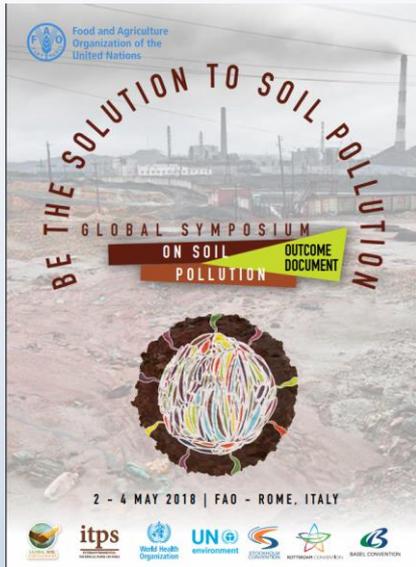
Soil pollution: Challenges and opportunities

! Raise awareness on the threat posed by soil pollution to: human health, the environment, and ecosystem services

! How to assess and monitor soil pollution at national and global scales

! Restore, remedy or adapt to soil pollution

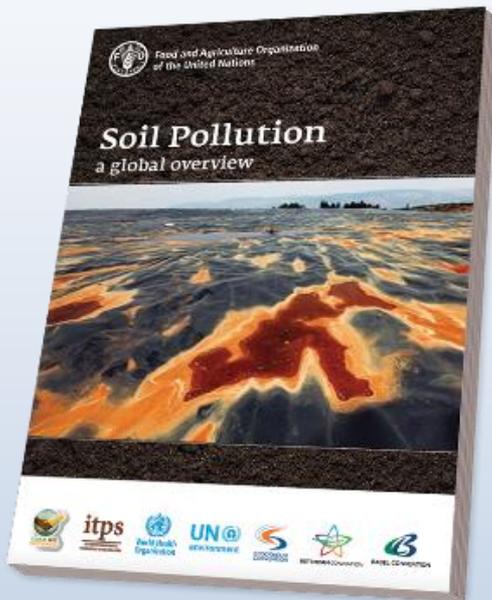
! Additional research and policy needs



Global assessment of soil pollution

WHAT is the global status and regional trends?

- Legislation
- Main polluting activities
- Extent of soil pollution
- Existence of monitoring systems
- Risks to human health and the environment
- Main remediation techniques used
- National capacities available to deal with soil pollution



Thank you for your attention

Happy World Soil Day!

#[WorldSoilDay](#) #StopSoilPollution



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