



## **2050 – Challenges for Environmental Law: Land Degradation**

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*'A nation that destroys its soils destroys itself.'*

Franklin D. Roosevelt

Letter to all State Governors on a Uniform Soil Conservation Law, 1937

# Introduction

- Land/soil is extremely important:
  - It underpins 90% of all human food, fiber, and fuel
  - It is essential for water and ecosystem health
    - Only 3% fresh water
      - 2% is ice
      - Of the remaining 1%, 90% is in the soil
  - It is a reservoir for genes and maintains landscapes and biodiversity
    - Soils host a quarter of our planet's biodiversity
    - Nowhere in nature are species so densely packed as in soil communities

# Introduction

- It is a carbon sink (second largest after oceans)
  - Europe's soils contain around 75 billion tonnes of carbon (loss of 0,1% of carbon = carbon emission of 100 million cars)
  - Peatlands cover only 3% of our planet's land, but they store twice as much carbon as all the world's forests. About 15% of the world's peatlands have been drained.

# Land/Soil threats

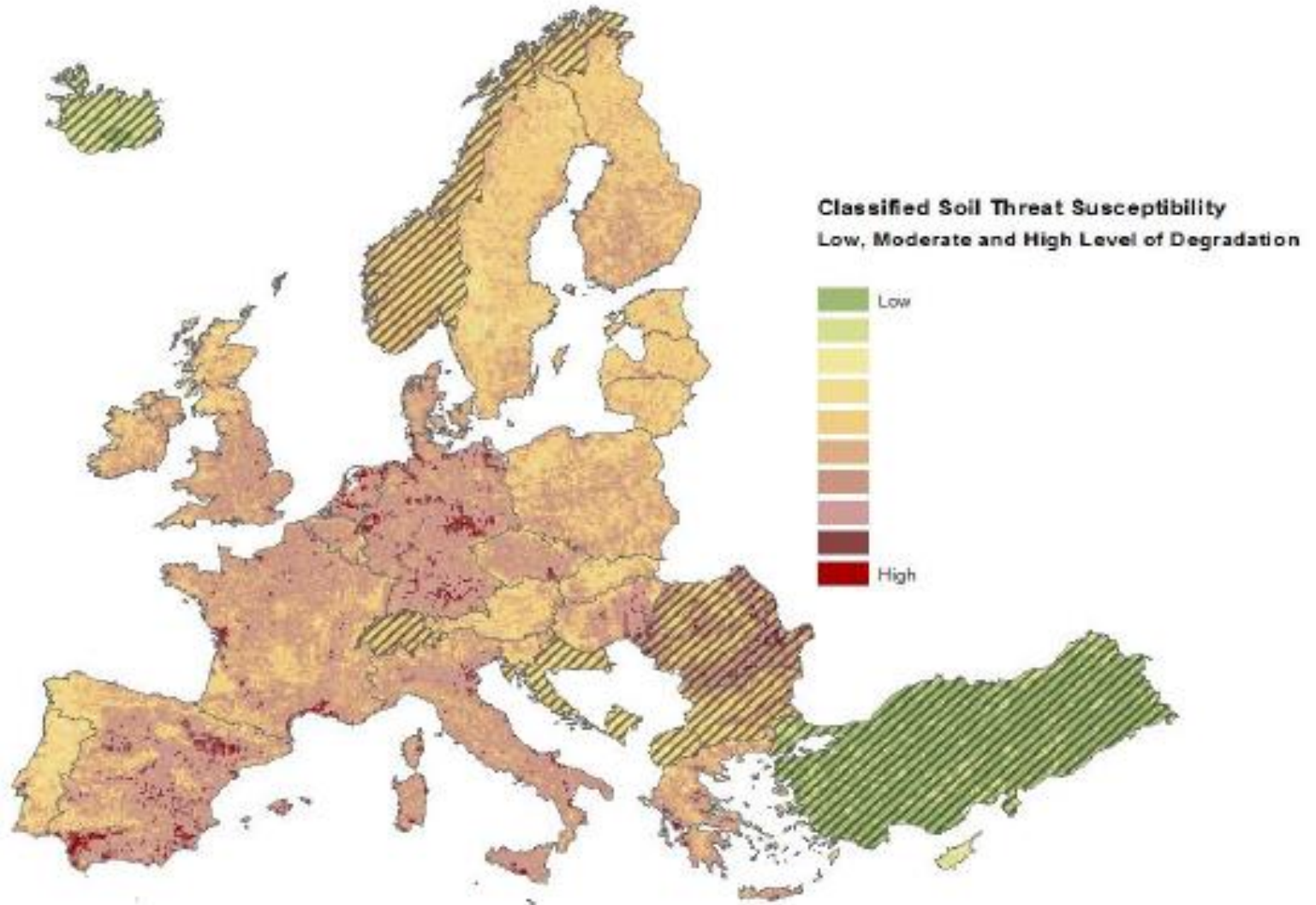
- However: land/soil is under increasing pressure → mainly driven by human activity
- Land/Soil threats
  - Soil erosion
  - Decline in soil organic matter
  - Soil compaction
  - Soil sealing
  - Soil contamination
  - Soil salinization
  - Desertification
  - Flooding & land slides
  - Decline in soil biodiversity



## Land/Soil threats

- 22% of European land affected by water and wind erosion
- 45% of the mineral soils in Europe have low or very low organic carbon content
- Soil contamination is affecting up to three million sites
- 32-36% of European subsoils are classified as having high or very high susceptibility to compaction

# Soil threat map of Europe



# Land/Soil threats

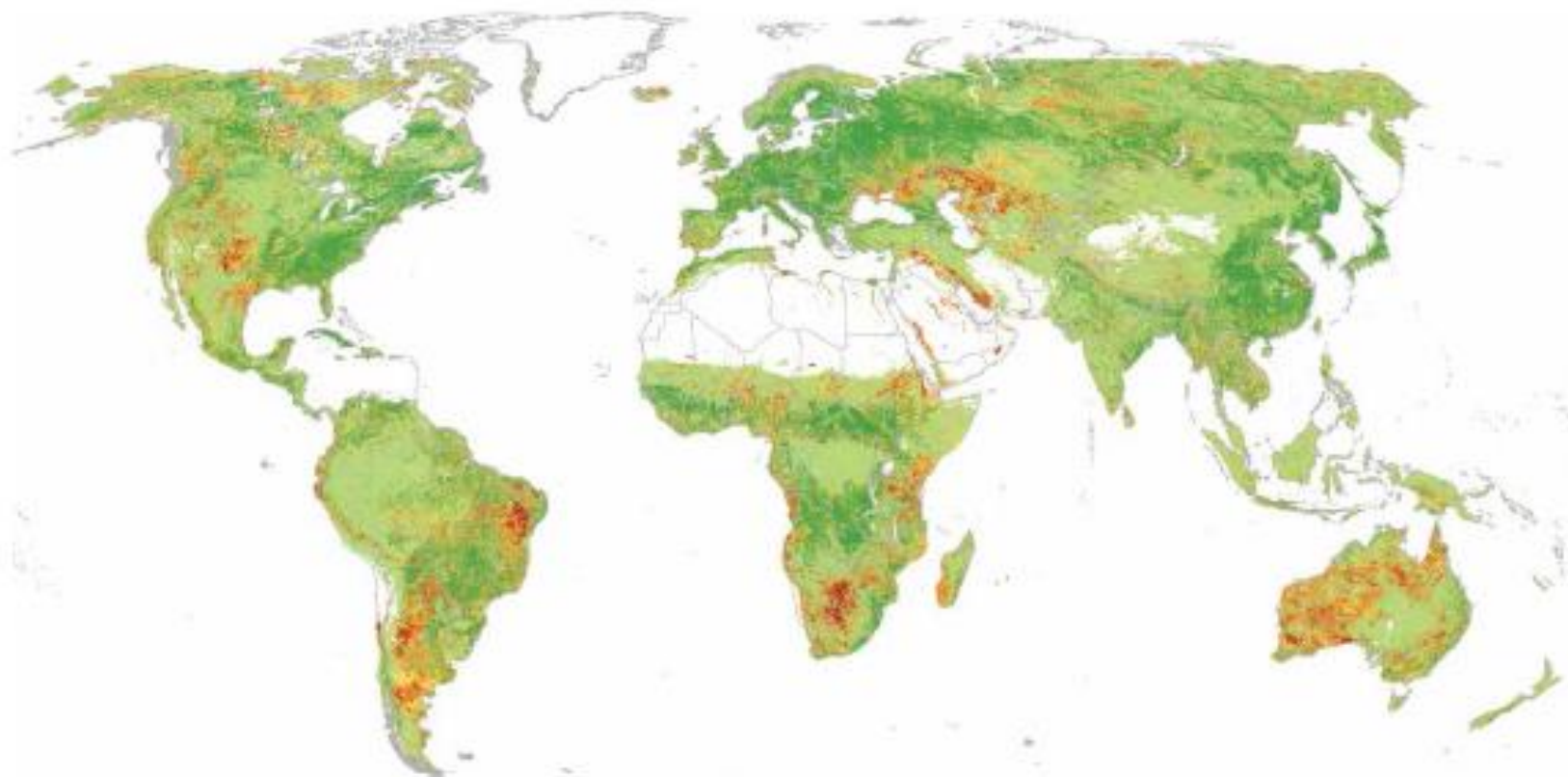
- **SDG Report 2018**

- Earth's forest areas continue to shrink
  - 4.1 billion hectares in 2000 → 4 billion hectares in 2015
- About one fifth of the Earth's land surface covered by vegetation showed persistent and declining trends in productivity from 1999 to 2013, threatening the livelihoods of over one billion people
  - South America and Africa are most affected



# Land/Soil threats

Global map of land productivity, 1999-2013



● Declining   ● Moderate decline   ● Stressed   ● Stable   ● Increasing   ○ No data

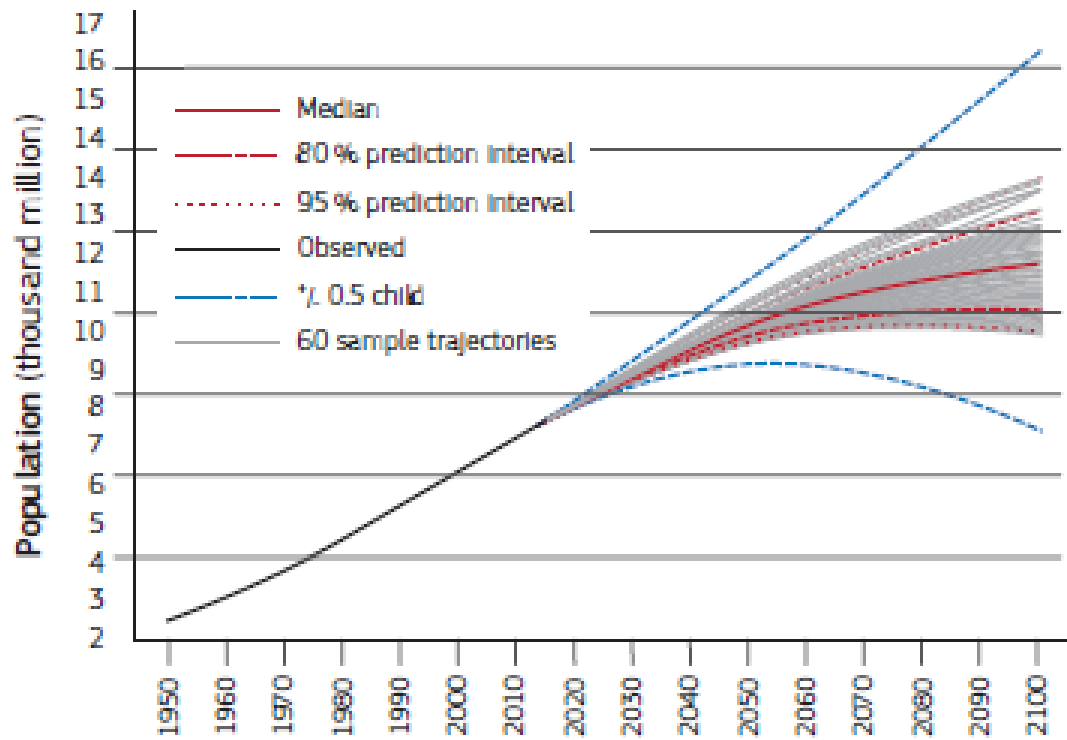


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# Land/Soil threats

- And pressure will continue: global population is expected to reach between 8.3 and 10.9 billion by 2050



Global Soil Biodiversity Atlas, 2016

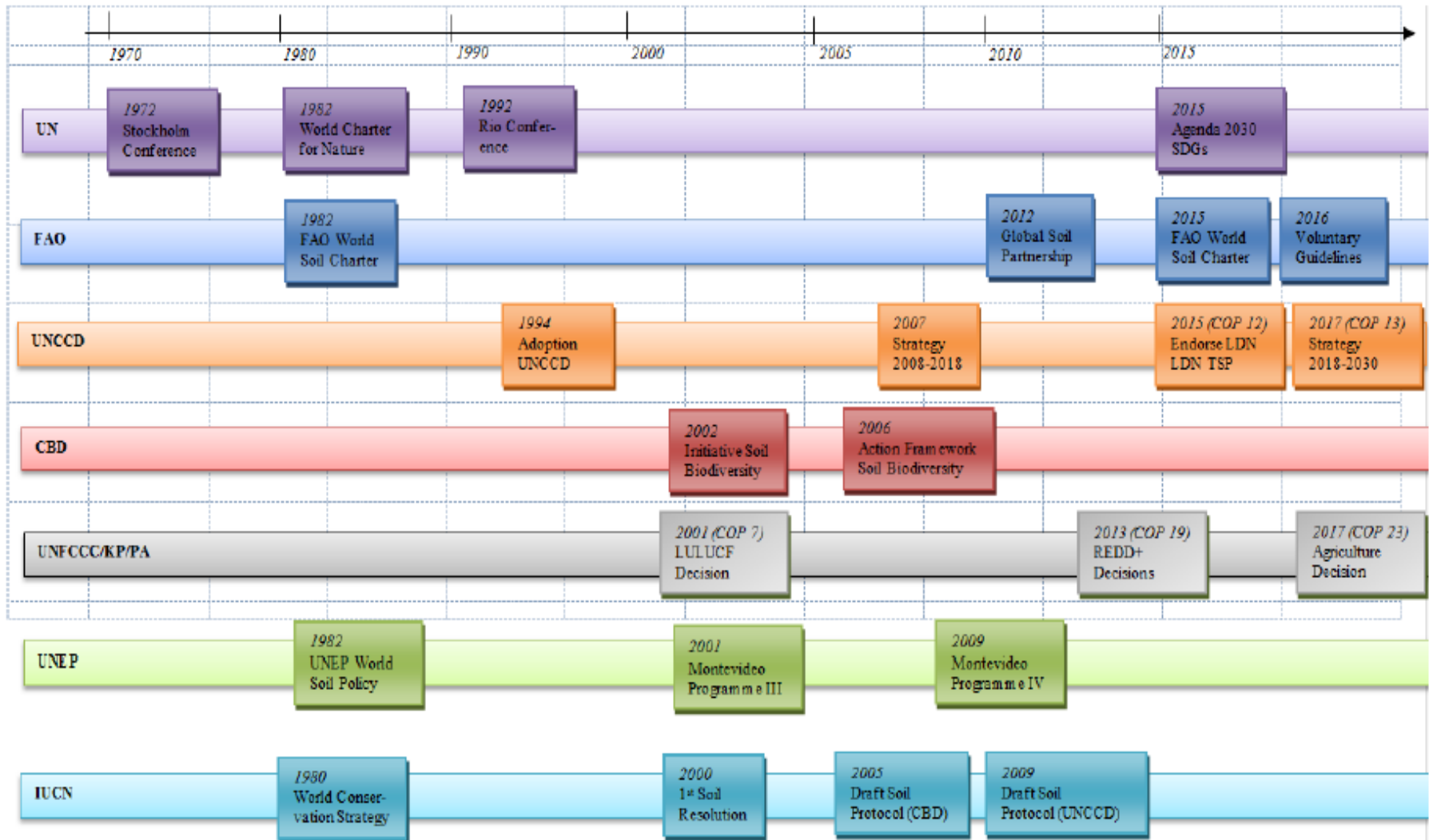
# Sustainable Development Goals (SDGs)



# SDGs

- Global point of reference
- Land/soil plays key role for number of SDGs (1, 2, 3, 6, 7, 11, 13, 15, 16, 17)
- Specific target 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".*
  - Includes all soil threats and drivers of land degradation
  - However, not a comprehensive land/soil policy

# International land/soil policy



## International land/soil policy

- A lot of initiatives, but scattered + significant overlap of mandates/activities, while at the same time each of them has limitations
  - UNCCD: claims leadership for implementing LDN, but limited to drylands
  - UNCBD: relates to soil mostly indirectly and weak practice
  - UNFCCC: link to land use mainly via accounting for emissions
  - FAO: 'Lead UN agency working on soils', but limited to agricultural soils & production
  - UNEP: not a major priority; thematic focus on soil pollution (UNEA-3 Resolution 2017)



# International land/soil policy

- Very few binding obligations
  - UNCCD: only treaty specifically on land-related issues
  - Maputo Convention (African Union, 2003): hardly noticed, only 16 parties
  - Soil Protocol to Alpine Convention (1998): limited to Alpine region
- IUCN initiatives for new treaty
  - CBD Protocol (2005), CCD Protocol (2009), other options (technical annex, UNFCCC, joint)

## Recommendations

- Create consensus that land/soil calls for international policy and governance efforts
- Recognize that land/soil is not a purely domestic matter
- Support SDG process (notwithstanding its shortcomings) as a political reference point
- Improve policy coherence
  - More robust Inter-Agency Advisory Group
  - Global Soil Partnership with broader institutional participation



## Recommendations

- Push for identifying land/soil as a legal gap (e.g. in Global Pact for the Environment)
- Consider new binding soil instrument
  - For which governance functions?
  - Added value of legal form?
  - Current UNGA process?
  - Relation to and coordination with existing governance –such as CCD?
- Strengthen soil-related norms and guidance in existing treaties
  - E.g. integrate an explicit soil biodiversity target into the CBD's Strategic Plan from 2020