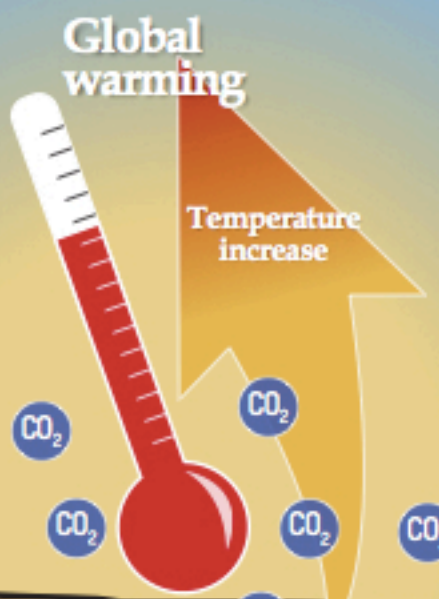


# Soils | key to unlocking the potential of mitigating and adapting to a changing climate



Emissions

**Unsustainable soil management** leads to soil degradation and CO<sub>2</sub> emission into the atmosphere

**Sustainable soil management** fosters CO<sub>2</sub> sequestration to boost soil health and contribute to achieving SDGs

- Overuse of agro-chemicals
- Removal of vegetation cover
- Urbanization / soil sealing
- Wetland / peatland drainage
- Monocropping
- Loss of soil structure
- Reduction of organic matter inputs
- Soil compaction
- Soil erosion / disturbance

Intensive tillage

750 Pg C\* in the ATMOSPHERE  
 500 Pg C\* in VEGETATION  
 1417 Pg C\* in the 1<sup>st</sup> meter of SOIL  
 2500 Pg C\* at 2 meters SOIL depth



Crop/plant residues = Soil Organic Matter

Litter fall = Soil Organic Matter

Secretions = Soil Organic Matter

Plant photosynthesis

Conserving / increasing soil biodiversity

Implementation of the VGSSM\*

\*Voluntary Guidelines for Sustainable Soil Management

Increasing soil organic matter inputs

Reduced tillage

Crop rotation / diversification

Preserving wetlands / peatlands

Monitoring soil organic carbon stocks

Better soil surface coverage

Reduce soil contamination

There is more Organic Carbon in our Soil than in vegetation and the atmosphere combined

\*Pg C = Petagram of Carbon - 1Pg = 10<sup>15</sup>g = 1 Gigatons