

The role of soil management and biomass treatment

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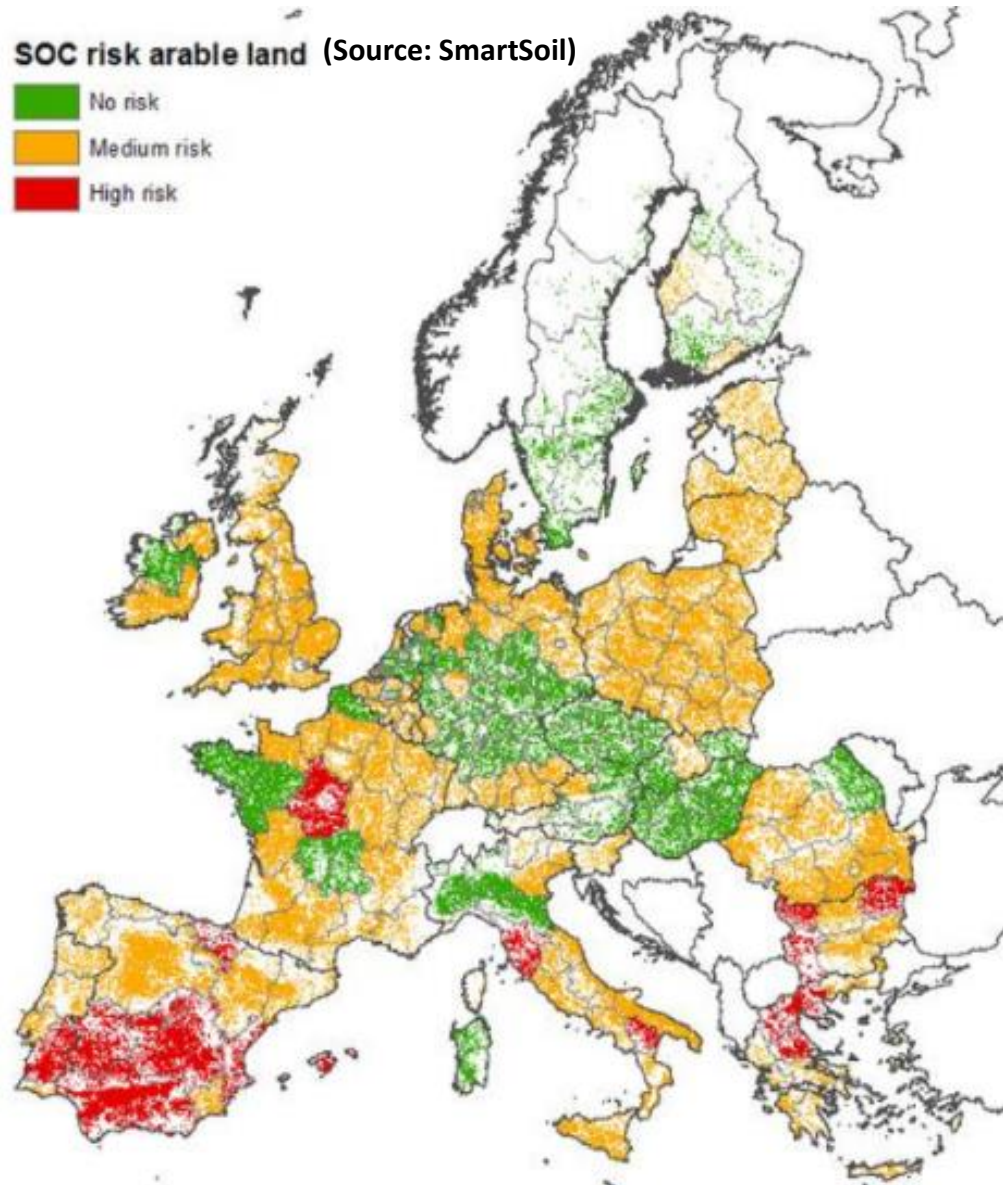
Some facts and figures:

- Soils are the second largest terrestrial carbon pool (3.1 times atmospheric carbon)
- Organic soil carbon contains around 3 times the carbon of living plants and animals together
- Soil carbon sequestration is necessarily plant-mediated:
 - The more biomass produced the higher the CO₂ removal from the atmosphere
 - Soil carbon only accumulates if mineralization of this biomass is lower than its addition
- In general, Agriculture continues mining soil organic carbon instead of its sequestration
- Each ton of soil organic carbon lost corresponds to around 1200 litres of fuel burnt

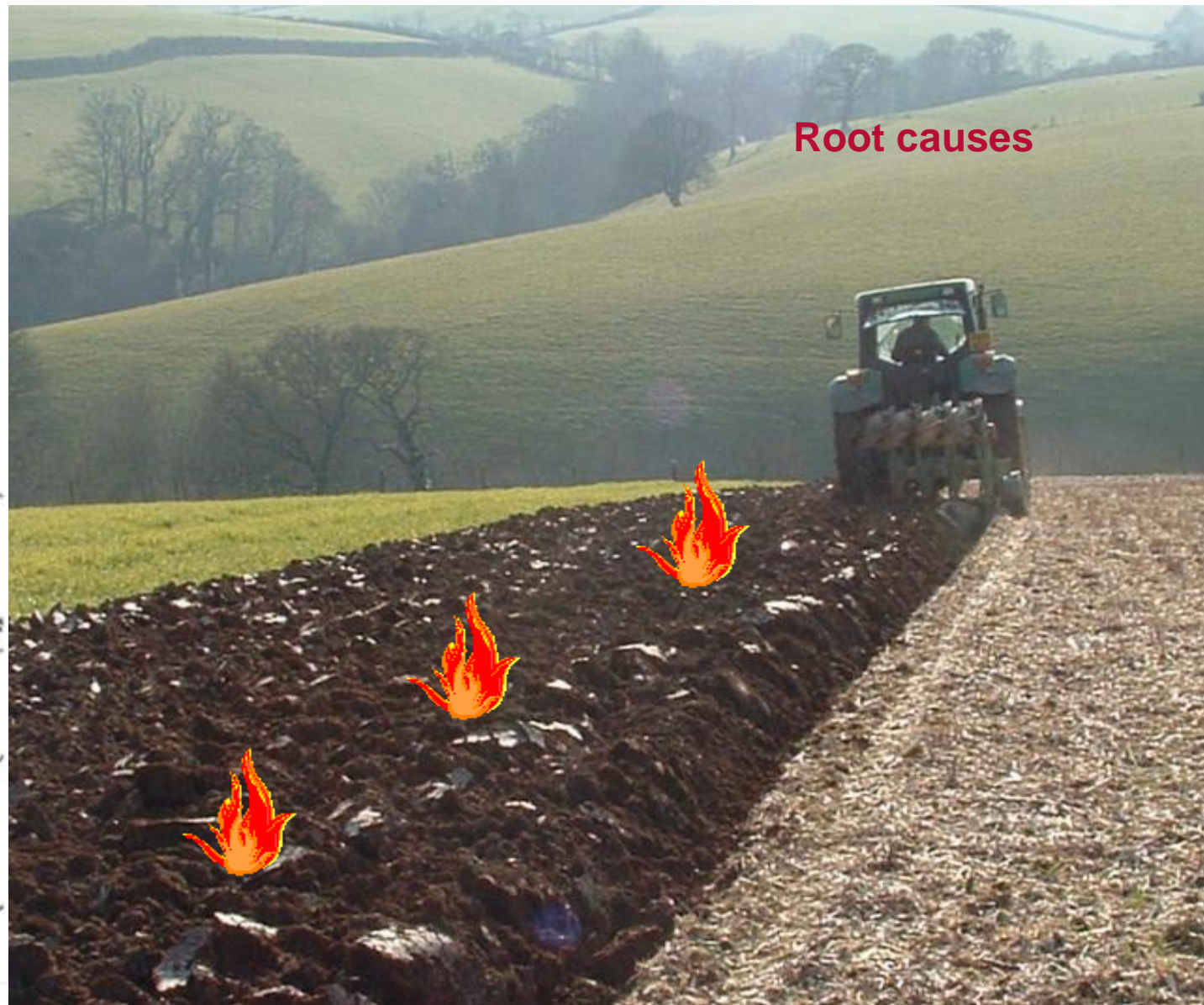
GHG emissions from Agriculture and Soil organic carbon depletion

SOC risk arable land (Source: SmartSoil)

-  No risk
-  Medium risk
-  High risk



Soils at risk (low SOC and negative balance)



Root causes

EIP Focus Group: Good practices and recommendations

- Keeping the soil covered: cover crops, winter crops and intercropping
- Return of locally produced biomass: organic amendments
- Conservation agriculture: *reduced tillage*
 - Minimum soil disturbance
 - Permanent organic soil cover (crop (pruning) residues, cover crops, etc.)
 - Plant/species diversity and crop rotation
- Raising awareness on benefits of soil carbon in agriculture & ecosystem services
- Local adaptation strategies to increase or maintain the content of C in soils

