Climate crisis and human security: saving our soils

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- > Summary of IPCC report on need to draw carbon out of atmosphere
- Soil and carbon
- Agroforestry
- Estimates of potential capture
- Molly's work
- Progress already made/policy tools

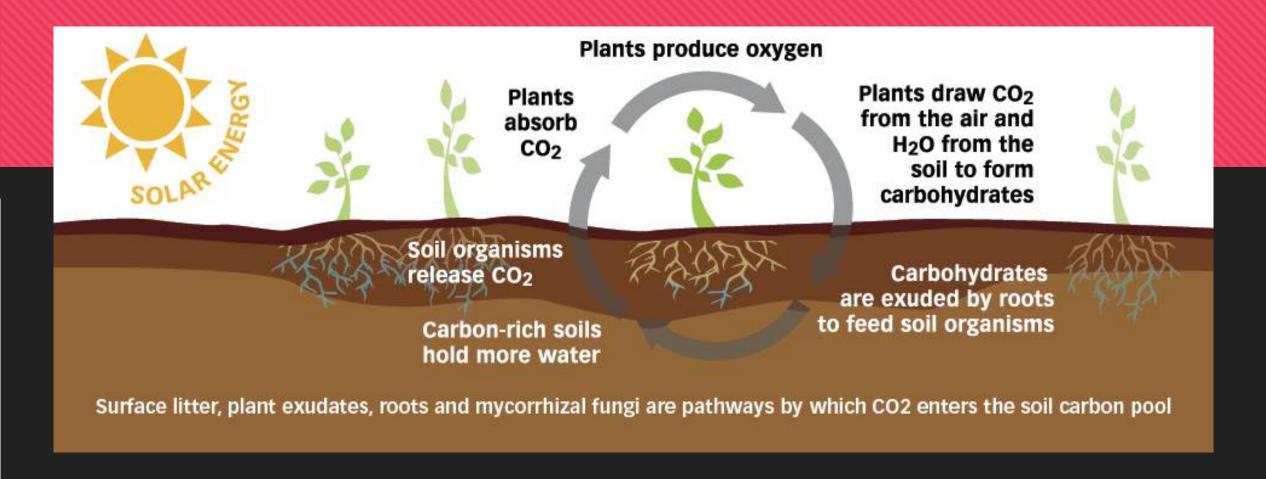
IPCC report on land use

"[we must] limit demand for greenhouse-gas intensive foods through shifts to healthier and more sustainable diets"

- Gives different scenarios which could keep us below
 1.5 degrees, all with negative emissions
- Shows clearly that agriculture, forestry and other land use are essential for negative emissions and much more effective than bioenergy (BECCS)
- Diet change and agriculture central part of report



- ➤ UK in top four biggests stores of soil carbon. 10 billion tonnes
- UK loses around 2.2 million tonnes of topsoil each year, reducing ablity to absorb and store carbon



With correct management, could sequester up to 100% anthropogenic emissions

https://soilsolution.org/watch-the-film/

Soil and carbon capture

- Soil holds up to 50% of world's organic carbon
- 45% of the soils of Europe have a low or very low organic matter content (0-2% organic carbon)
- Sustainable soil management could produce up to 58% more food
- Conservation tillage without herbicides

HOW CAN SOILS STORE MORE CARBON?

The more soil is covered, the richer it will be in organic material and therefore in carbon.

Until now, the combat against global warming has largely focused on the protection and restoration of forests.

In addition to forests, we must encourage more plant cover in all its forms.



Never leave soil bare and work it less, for example by sing no-till methods



Introduce more intermediate crops, more row intercropping and more grass strips



Add to the hedges at field boundaries and develop agroforestry



Optimize
pasture management
– with longer
grazing periods,
for example



Restore land in poor condition e.g. the world's arid and semi-arid regions



Improve water and fertiliz management and organic fertilizer and compost

Agroforestry

- Irrigate preventing run-off and reduces exposure
- Draw nutrients and water from deep underground
- Foster biodiversity



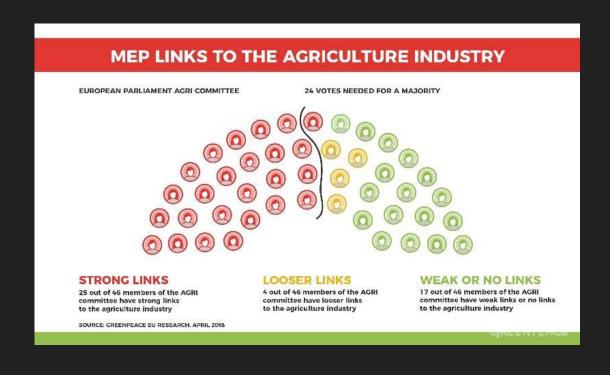
Green Party policies

- Extensive policies to promote soil health and carbon sequestration
- Preserving topsoil
- Recognises fair transition for farmers
- EU level focus, until now...



Molly's work: soil and carbon farming at centre of tackling climate change

- Research study: data on agroecological practices, soils and climate change mitigation with aim of tackling greenwashing and flimsy solutions
- Sustainable use of pesticides + Plant protection products
- Two reports: post-Brexit agriculture
- Trade paper



Progress and next steps



4 per 1000 initiative French government

EU level

- European Soil Framework Directive blocked
- Cross compliance and greening under CAP
- Horizon 2020
- Soil Service project

UK

- Soil security programme DEFRA et al.
- Agriculture Bill: of the 36 clauses in the bill, 28 were noncommittal
- Will funds be ringfenced?
- What about trade? Need cooperation

Thank you