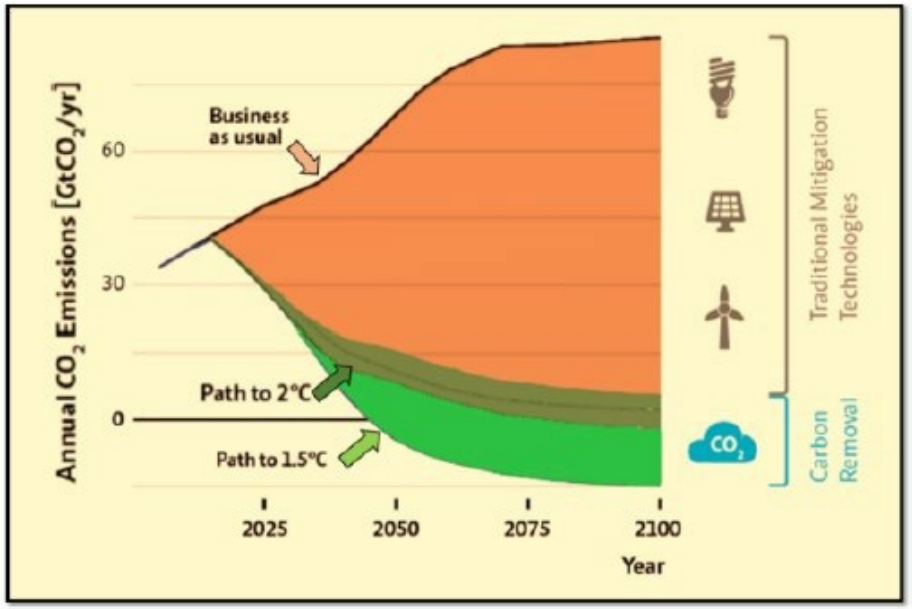
Problem

- global warming < 2°C
- 2 things will be needed:

1) Reduce our emissions

2) Remove CO2 from the atmosphere

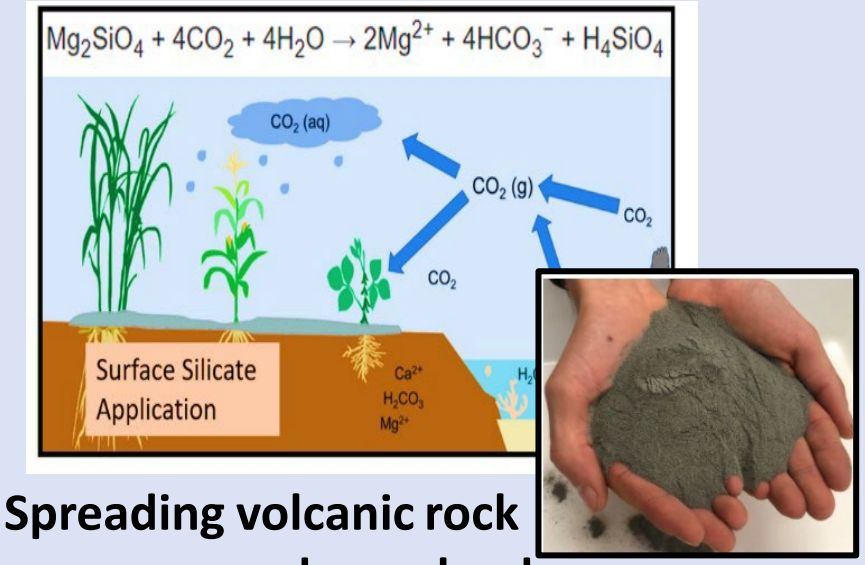


Master's thesis topic: Combining Enhanced Weathering (EW) and biochar as carbon dioxide removal technologies:

Goal: Quantify carbon removal with basalt, steel slags and biochar in agriculture - a mesocosm experiment

Carbon dioxide removal?

Enhanced weathering



Spreading volcanic rock powder on land

Biochar

Thermochemical conversion of biomass under anoxic conditions → **highly stable forms of carbon → no decay to CO2**

+ Potential co-benefits in agriculture

? #CO2 uptake/hectare

Thesis topic:

- Mesocosm experiment with natural silicates, waste material (steel slag) and biochar
- Agricultural setting
- Field and lab work
- Location: ILVO, Merelbeke (near Ghent)

Goals of thesis:

1) Measure inorganic CO_2 uptake by rocks
2) Study potential interactions between EW and biochar (new!)
3) Investigate effects on soil organic carbon

Last but not least:
***Unique chance to contribute to delivering urgently needed data for carbon dioxide removal (ipcc)** ☺
***Applicability in agriculture** ☺
***Fun research group** ☺

Interested/questions?
→ Jasper.roussard@uantwerpen.be
/ sara.vicca@uantwerpen.be