Natural carbon storage and use in the upper soil layers.

In how far is this an issue?

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Items to be discussed:

- The carbon balance of the world
- Organic matter in soils: immense variety!
- Changes in organic matter content: land use change, soil management and erosion.
- Importance for not only climate change, but also for water- food security and biodiversity loss. What’s most important?
- Outlook: the knowledge paradox, what to do, true transdisciplinarity required.

Soil forms the top layer of the earth’s crust and is situated between the bedrock and the surface, excluding grondwater (EU definition)
Figure 1. The global carbon cycle showing carbon stocks in reservoirs (in Gt C = 1 Pg C = 10^{15} g C) and carbon flows (in Gt C yr^{-1}) (Source: GLOBE Carbon Cycle 2007)
Organic matter in topsoils: some examples from the Netherlands
Koopveengrond.
Plaseerdgrond ("cat-clay")
Ooivaaggrond
Veldpodzolgrond
Tuineerdgrond