BayCEER Kolloquium

Lectures in Ecology and Environmental Research

Summer 2017

UNIVERSITÄT BAYREUTH

Wednesday
05.07.2017
12:00 in H8, GEO

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More carbon into soil to slow down global warming: A useful attempt?

The global emission of CO2 by fossil fuels and industry amounts to 9.3 Gt C per year. Negative emissions - carbon removal from the atmosphere - seem the only promising way to meet the goal of keeping the global temperature rise below 2 °C. Indeed, recent scenarios form integrated assessment models include large-scale negative emission technologies to keep global warming below 2 °C with 50% probability.

In the absence of technically sound solutions for negative emission technologies, the French government launched the '4 per 1000' initiative under the framework of the Lima–Paris Action Agenda at the COP21, the global climate conference in Paris in 2015. The basic idea is to sequester more carbon in soil – the largest terrestrial reservoir of organic carbon.

Soils contain a large amount of carbon: 1500–1700 Gt C in the first one meter, estimated without permafrost. Thus, any change, even a small one, to this large pool has the potential to influence the carbon cycle. I will briefly review the concepts of stabilisation of organic matter in soil, the feasibility of sequester more carbon with methods suggested by the '4 per 1000' initiative and the link to food security.Thus, any change, even a small one, to this large pool has the potential to influence the carbon cycle. I will briefly review the concepts of stabilisation of organic matter in soil, the feasibility of sequester more carbon with methods suggested by the '4 per 1000' initiative and the link to food security.

Bayreuth Center of Ecology and Environmental Research

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The lectures are an inter-disciplinary platform for students, junior and senior scientists. Abstracts and further information: www.bayceer.uni-bayreuth.de/kolloquium/