



Global Peatland Carbon – Challenges and Opportunities

Speaker: **Professor Angela Gallego-Sala,**
Department of Geography, University of Exeter

Chair: **Dr Massimo Lupascu,**
Department of Geography, NUS

Date/Time: Friday, 5 March 2021, 3.30pm

Place: online via Zoom

[Please click here for registration](#)

Abstract

Peatland ecosystems are a small but persistent sink of carbon and currently store more than 600 Pg C globally. Peatlands preserve a stratigraphic record of net carbon accumulation, the net outcome of plant respiration and respiration. The rates of both these processes will increase with warming and an important question is which of these will dominate the overall response of the global peatland carbon sink to future climatic changes. In this talk, I will present the results of a global study of changes in peatland carbon accumulation rates over the last millennium and discuss the possible drivers of the carbon sink. The talk will cover some important remaining questions regarding peatland carbon, including possible expansion of the peatland biome at higher latitudes, the fate of temperate peatlands at the southern end of the current main distribution of northern peatlands and the fate of tropical peatlands. Finally, the concept of peatlands as nature based climate solution will be discussed.

About the Speaker

I am a biogeochemist with expertise in climatic regulation of carbon fluxes in terrestrial ecosystems. My particular ecosystem of interest is peatlands and I have purposely worked on peatlands situated in different climatic zones to have a global perspective on these ecosystems. I work using empirical field/laboratory methods and modelling. Ultimately, I aim to elucidate the unique role of peatlands in the global carbon cycle. I have several ongoing projects, including an European Research Council Consolidator grant application focussed on the tropical peatland sink. This work will complement a NERC grant awarded as PI to study the Arctic peatland sink. I have other projects in Antarctica (Reconstructing Southern Hemisphere Westerly Winds, with the British Antarctic Survey), in the Amazon (Identifying main sources and drivers of fire, with U. of Queensland), in Borneo (Drought and peatland fires in Indonesian Borneo: Understanding drivers and impacts to build resilience through sustainable development, funded by the Global Challenges Research Fund) and in the UK (peatland restoration projects, studying the effect of sphagnum introduction in restoration efforts).

ADMISSION IS FREE – ALL ARE WELCOME

CONVENORS:  [Prof Matthias Roth](#)  [Prof Brenda Yeoh](#)  [Prof Lu Xi Xi](#)  [Prof James D Sidaway](#)

ENQUIRIES: Sakinah – 65163559