

450003 SE Topics in Environmental Geosciences and Geoecology

Global wildfires - trends, impacts and their role in the carbon cycle

by

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Every year wildfires burn 3-4.6 Mill. km² of the Earth's vegetated land surface, an area over 50 times the size of Austria. The last few years have seen a series of extreme wildfires in different parts of the world with, in some cases, unprecedented fire behaviour and exceptionally death toll. Their impacts are manifold going beyond vegetation consumption (and rejuvenation), the loss of live and infrastructures, carbon emissions as well as air quality implications. These impacts often make the media headlines and many argue that both the occurrence and impacts of wildfires is increasing worldwide. This seminar aims to (i) give a brief overview of global wildfire trends and some of their main impacts followed by (ii) summarising our research on the role wildfires play in the global carbon cycle. Contrary to what one might expect, through the production of pyrogenic carbon (wildfire charcoal), they can act as a buffer for carbon emission by driving a potential long-term carbon sequestration mechanism. We will also share some personal experiences with the media covering some of this research, which have not always gone the way one might expect.

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