



Impact of biogenic emissions on feedbacks in the climate system

Olaf Krüger
(olaf.kruger@helsinki.fi)

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Bio-geophysical feedback between marine or continental ecosystems and the atmosphere potentially can alter climate change. A prominent feedback loop which is under discussion since 1983 bases on the emission of biologically produced gases - molecular oxygen, sulphur containing compounds and possibly isoprene, supersaturated in oceanic waters - into the marine troposphere. These by-products of phytoplankton metabolism lead to aerosol production and procure sustained influence on climate via modulation of cloud optical properties. In this contribution some findings related to the above mentioned climate processes are presented with special emphasis on marine ecosystems. A comparison of marine and continental ecosystems is made and different processes with major impact on feedbacks in the climate system are discussed.