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Terrestrial biogeochemical cycles-climate feedbacks - more than chickenfeed?

A. Arneth and et al.

Lund University, Centre for GeoBiosphere Science, Department of Physical Geography and Ecosystems Analysis (INES),
Lund, Sweden (almut.arneth@nateko.lu.se, +46-(0)46-2220321)

Numerous exchange processes take place between the terrestrial biota and the atmosphere that contribute to the regulation of atmospheric composition and weather/climate on timescales from hours to millennia. Recent studies have highlighted the importance of the exchange at the land surface for simulation of the pre-industrial and present atmosphere, and potential for large vegetation-climate-chemistry feedbacks in the coming century. We will provide an overview over the key processes involved, and an assessment on their relevance for radiative forcing calculations based on an emerging number of studies that attempt to isolate and quantify terrestrial biota's contribution.