Methane soil-vegetation-atmosphere fluxes in tropical ecosystems

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Recently, a surprising discovery indicated that, by an unknown process, vegetation emits methane to the atmosphere. This finding could have serious implications in atmospheric chemistry, climate, and mitigation of global change. In order to evaluate the magnitude of the tropical vegetation source, a re-evaluation of results obtained at various Venezuelan ecosystems is made. CH 4 fluxes from the soil-grass system in savanna ecosystems indicate that grasses produce CH 4 at ?10ng·m -2·s -1. Furthermore, CH 4 accumulation within the nocturnal mixing layer at the Guri site, which is affected by savanna and forest emissions, was used to make a rough upper limit estimation of <70ng·m -2·s -1 for CH 4 emission from forest vegetation. These estimates are likely to be somewhat low as they do not take into account the light-induced production of CH 4 by the vegetation. Global extrapolation of these fluxes indicates that, ignoring the possible stimulating effects of solar radiation, savanna and fo