Estimating Changes in Soil Carbon Resulting from Changes in Land Use in Australia. (S05-skjemstad173137-Oral)

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Abstract:

Australia's greenhouse emissions are unique among developed countries in that emission's from land-based activities such as land use change and forestry account for about 30% of net CO2 emissions. Compared to other sources of greenhouse gases, those associated with land use change (LUC) are difficult to quantify and current estimates are highly uncertain. In response to the Kyoto Protocol, the Australian government through the Australian Greenhouse Office launched the National Carbon Accounting System (NCAS) to provide robust estimates of greenhouse emissions associated with LUC and F. After considerable debate and consultation within the scientific community, a number of large projects where initiated for the purposes of consolidating current information, where available, and targeting areas for new measurement where recent LUC was most prevalent. As well, calibrated and verified models were developed and tested. On the basis of these projects, a spatially explicit model based methodology was developed that has a complete accounting and forecasting capability for anthropogenic derived sources and sinks of CO2. This presentation will specifically highlight the development of the modeling based NCAS methodology for estimating CO2 emissions from soil following LUC.

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