12.085 Seminar in Environmental Science
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Week 11

So this week I am continuing to look at the IPCC methodology report about calculating the carbon emissions or sequestration from land use. I noticed that the worksheets are actually included as an annex to the report, so I had a look at those. Despite the fact that these are just an annex, these strike me as the meat of the report (and probably the only thing that anyone reads). The first few pages are as superfluous as much of the earlier part of the report, they area mostly just charts about whether a worksheet exists for a specific calculation or not. The rest of the section actually seems useful though, although there are many (somewhere around 50) different worksheets for each change in the situation. The worksheet has a column for each value, and tells how to calculate the value if it is a calculation, and what table to find a constant if it is a constant.

I looked at some of the tables of constants to try and discern where the constants came from. The table of default carbon stocks for mineral soils with native vegetation is based largely on a paper by Jabbagy and Jackson (2002) entitled "The Vertical Distribution of Soil Organic Carbon and its Relation to Climate and Vegetation". In that article they try to characterize soil carbon in the top 3 m of soil based on more than 2700 profiles in three global databases, paying attention to variables such as vegetation type, climate, and land use. They found that the plant

type affected soil carbon significantly, and had more of an affect than the direct effects of precipitation.

REFERENCES:

2006 IPCC Guidelines for National Greenhouse Gas Inventories. Ed. by Simon Eggelston, Leandro Buendia, Kyoko Miwa, Todd Ngara, Kiyoto Tanabe. Institute for Global Environmental Strategies (IGES). http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.htm. Accessed 27 April 2008.

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