



Geographic variability in response of tropical soil carbon dynamics to land change and nitrogen enrichment

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Despite the importance of soils of the tropics in the global carbon cycle, there are large uncertainties in their sensitivity to environmental change, which challenges global predictions of land-climate feedbacks. One reason for this is large geographic variability in the importance of different mechanisms regulating soil carbon accumulation and loss and nutrient dynamics. Most of our understanding of factors influencing belowground biogeochemistry comes from research in temperate soils, and even within the tropics the diversity of tropical soil environments is poorly represented. Here we present data on variability in the spatial and temporal response of soil organic matter and nitrogen pools to land change and nitrogen enrichment across different soil orders in the U.S. Caribbean with the aim of identifying regional predictors. We use measurements of changes in the distribution of carbon and nitrogen among different pools and radiocarbon to assess sensitivity to environmental change.