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Preliminary synthesis of carbon balance and GHG fluxes
in managed German peatlands

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This presentation will give a preliminary synthesis of the results of the German cooperative project of vTI project "Organic Soils" (www.organische-boeden.de). Carbon and GHG fluxes have been measured at more than 60 locations spread across 13 different peatland complexes in Germany. The sites encompassed in each of the complexes the full range of regionally typical land uses from intensive cropland and grassland to near natural and restored situations. We will show carbon and GHG budgets as influenced by land use, water table and peatland characteristics. For the first time, GHG budgets of peaty soils were directly compared with those in neighbouring real peat soils. There is indication that peaty soils may emit as high GHGs as real peat soils when drained and intensively managed. However, further data analysis is necessary to consolidate this indication. Peatland restoration quickly reduces GHG emissions. Depending on restoration management and peat type, the GHG budget returns partly or fully to near-natural levels.

By the end of 2012, the project aims to derive national emission factors for GHGs for all major land use types to improve the GHG reporting under the United Nations Framework Convention on Climate Change, to update the geographical information of organic soils, and the German GHG budget of organic soils.