

## **Carbon pool in different land uses in Germany [2011]**

### **ABSTRACT**

The impact of land use on carbon pools were investigated in three different land use types (forestland, arable land and grassland) in Katinger Watt area in Northern Germany. The area was once a sea-floor (tidal flat) that was dyked in 1973. Relevant conditions for carbon turnover in the studied area were similar, thus the differences in carbon pool during soil genesis were attributed to different land use systems. Calculations were based on estimated above ground (ABG) and below ground (BGB) living plant biomass and soil organic carbon (SOC) at depth 0-30 cm. Results showed that the carbon pool, forestland supported 167.98 t C/ha (planted oak forest, 27 year old stand), 145.63 t C/ha (planted alder forest, 27 year old stand), and 75.40 t C/ha (willow forest, natural succession). Grassland supported 44.1 t C/ha, while arable land supported 69.76 t C/ha. The study showed that, based on the German site, carbon pool was highest in the oak forest.