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THE IMPACT OF NITROGEN DEPOSITION ON CARBON SEQUESTRATION BY EUROPEAN FORESTS - SCHEDULE FOR MONDAY 23

W. de Vries[1], G.J. Reinds[1], P. Gundersen[2]
[1]*Alterra, Wagingen UR, Wageningen, The Netherlands*
[2]*Danish Landscape and Forest Research Institute, Hoersholm, Denmark*

An estimate of net carbon pool changes was made at more than 600 Intensively Monitoring plots. Carbon pool changes in trees were based on repeated forest growth surveys. Carbon pool changes in the soil were based on calculated nitrogen retention (N deposition minus N leaching) rates in soils minus N uptake and multiplied by the C/N ratio of the forest soils. Results were scale up to Europe based on data for more than 6000 plots in a systematic 16km x 16 km grid. The carbon pool changes in the tree are generally 5-10 times as high as the estimated carbon pool changes in the soil. The changes in the carbon pool in tree due to forest growth increased from Northern to Central Europe, whereas the changes in the carbon pool in soil are high in Central Europe and low in Northern and Southern Europe. Net increases in the carbon pool by forests in Europe (both trees and soil) are in the range of 0.1-0.15 Gton.yr-1, being an important part (about 50%) of the terrestrial carbon sink in Europe, derived from atmospheric inversion models. The contribution of N deposition to the increase in carbon in standing biomass is approximately estimated to be less than 10%.