



## **Change of soil following felling (middle taiga of Komi Republic, Russia)**

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The Republic of Komi (RK) is one of the regions in the European part of Russia most rich in forest. Forest-covered area equals 28.7 mill ha with total reserve of wood 2.8 billion m<sup>3</sup> (Kozibov G.M., Taskaev A.I, 1999). Most transformation of forest ecosystems by both area and vegetational layers is connected with clear felling widespread in taiga zone. During XX century and especially its second half, large areas of native forests of RK were cut (Pautov Yu. A. and Il'chukov S.V., 2001). Soil is an important component of forest ecosystem which determinates sustainable development and functioning of biogeocenoses (Larin V.B. 1993). Therefore it is necessary to conduct detailed investigations on soils and reveal the mechanisms of soil changes in connection with the corresponding anthropogenic impact.

The aim of the present work was to find out changes in organic carbon pools, morphological and physical-chemical properties of Podzols developed in clear cuts during natural reforestation in the middle taiga. The study objects were clear cuts of 1994, 1983, 1955 and a native forest site (control).

The conducted investigation has shown that the largest transformation took place on a cleared area of 1994. The soil transpiration decrease owing to felling in the middle taiga zone led to an increase of waterlogging. It resulted in statistically reliable increased in litter thickness. The soil of this site was observed for increased gleyzation and content and size of Fe-Mn concretions (ortsteins). The following re-forestation dried back the soil cover. The clear cut of 1983 year was also identified for some increase in forest litter thickness as compared with control soil. However, the felled area of 1955 possessed practically identical morphological soil properties compared to control.