

# Characteristics, distribution area and use potential of soils of the highlands of the Caucasus in Georgia

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In the Caucasus region, after 20 years of independence, Georgia still faces difficult social, economic and ecologic problems. The agricultural sector loses its economic importance in the country more and more and the poverty is growing in the regions every day. Within the interdisciplinary project “Scenario development for sustainable land use in the Greater Caucasus, Georgia”, using the example of the mountainous region, the soil characteristics, distribution area, potential of use and capability have been studied in the surrounding territory of Kazbegi (>1.750 m ü. NN). In 2014 and 2015, within two field campaigns, the soil was mapped and tested in the territory under study. As a result of growing parent materials on the small area and the relief characteristic for the high-mountain area the region is characteristic for the variety of diverse shapes. Soils typical for talus fan of shale of Jurassic period is comparatively depleted, skeleton rich rego soils, which, as a rule, are used as pastures, in certain cases for growing of potatoes and vegetables. On hard rocks the rankers have originated with time, which are used as pastures even at high altitudes. Contrary to that on the Quaternary Pyroklastika (tephra) deep-laying brown earths have been formed, which in the past were partially used as agricultural land, and currently their biggest part is uncultivated, or is used as pasture. Brown earths formed on the glacial sedimentary rocks are used in the same way, which, due to comparatively thinly formed drift, display significantly less soil depth. Calcareous and Vega, as well as gleys and fens abundant in floodplain are used as pastures only. The latter is also abundant on slopes on comparatively small territories, on unconfined coombes of moraines.

Soil use potential is assessed based on SQR and according to physiochemical characteristics of soil.