

Features of Soil Formation in the North of Western Siberia in Cryogenic Conditions

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Abstract : A large part of Russia is located in permafrost areas. These areas are widely used because there are concentrated valuable natural resources. Therefore to explore of cryosols it is important due to the significant increase of anthropogenic stress as well as the problem of global climate change. In the north of Western Siberia permafrost phenomena is widespread. Permafrost as a factor of soil formation and cryogenesis as a process have a great impact on the soil formation of these areas. Based on the research results of permafrost-affected soils tundra landscapes formed in the central part of the Tazovskiy Peninsula in cryogenic conditions, data were obtained which characterize the morphological features of soils. The specificity of soil cover distribution and manifestation of soil-forming processes within the study area are noted. Permafrost features such as frost cracking, cryoturbation, thixotropy, movement of humus are formed. The formation of these features is increased with the development of the territory. As a consequence, there is a change in the components of the environment and the destruction of the soil cover.

Keywords : gleyed and nongleyed soils, permafrost, soil cryogenesis (pedocryogenesis), soil-forming macroprocesses

Conference Title : ICEEESD 2014 : International Conference on Energy, Environment, Ecosystems and Sustainable Development

Conference Location : Montreal, Canada

Conference Dates : May 12-13, 2014