

SUITMA 10

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Soils of Urban, Industrial, Traffic, Mining and Military Areas

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| Abstract No. | A-010 |
| Abstract Title | Urban Soils of Yamalo-Nenents Autonomous Region, North-West Part of Siberia, Russia |
| Abstract | <p>Introduction : Soil formation in urbanized territories for northern polar territories of Russia investigated. Few data published previously regarding the soil morphology and exotoxicology for polar cities of European Russia and Yakutsk. Such a huge region as Yamalo-Nenents has not been investigated in details in context of soil formation in urbanized areas.</p> <p>Material & Methods : Field surveys were conducted in Salekhard, Labytnangi, Novy Urengoy, Nadym, Stary Nadym cities and in more than 15 settlements of Yamalo-Nenets Autonomous Okrug. Soils were described, classified according Russian classification and WRB system and some further ecotoxicological analyses. The contents of principal organic and inorganic contaminants were determined in soil fine earth.</p> <p>Results : Soils of the Salekhard and Labytnangi cities are presented mainly by the sand profiles with features of podsolization and stagnification. This is connected to that fact that landscapes watersheds of the Ob river were chosen for foundation of these settlements. Drained and more suitable for building activity. All urbanized areas of Salekhard agglomeration are surrounded by clayey textured Cryosols and Gleysols, which are completely different from Podzols of urbanized territories. The indexes of soil pollution are relatively low in the topsoil investigated. This could be caused by redistribution of the contaminant from the superficial more deep ones due to illuviation and cryogenic mass exchange. Urban soils of south Yamal region are identified Urbic Podzols and Agric Podzols, surrounded by natural, un-matured Podzols. Sandy textured parent materials here are dominated both in urban and tundra territories.</p> <p>Conclusions : So, maximal deepness of mechanical soil transformation in investigated soils is about 60 cm in suburban's of Novy Urengoy, while the average thickness of anthropogenic soil horizon in urbanized areas was 15 cm. This work was supported by grant of Saint Petersburg State University "Urbanized ecosystems of the Russian Arctic: dynamics, state and development" and RFBR, project No 18-44-890003</p> |
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