

===== DYNAMICS OF ECOSYSTEMS AND THEIR COMPONENTS =====

UDC 550.43

**AEROSOL INFLOW OF INDUSTRIAL POLLUTANTS INTO THE ENVIRONMENTAL COMPONENTS OF THE CENTRAL KOLA IMPACTED REGION**

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The Kola Peninsula is one of the most explored arctic regions of Russia. It has been undergoing an intense industrial development for more than 80 years. The proximity of industrial objects that caused negative changes of different severity in the natural landscapes of the territory, along with the morphological changes of geosystems of various ranks led to formation of impacted regions. One of those regions is the Central Kola, located in the center of the peninsula near Monchegorsk and Kirovsk cities, where the industrial impact is caused by the non-ferrous metals facility “Severonikel”, part of the “Kola Mining and Metallurgical Company” and mining company “Apatit”. Over the past 20 years the negative condition of the local geosystems was partially restored by the “Kola Mining and Metallurgical Company” which took measures for manufacturing modernization and reclamation of the disturbed natural territories. It is necessary to assess these measures as the key ones for the restoration of ecological prosperity of the studied region. For this work we used literary sources, regional reviews of the natural environment condition, our own field materials and some earlier studies carried out by the Department of Environmental Management, Geographical Faculty of the Moscow State University in the central part of the Kola Peninsula. We used a number of methods, such as bioindication of atmospheric pollution (lichen- and bryo-indication), comparative-geographical method, cartographical method, geochemical method and mathematical method. During the study we identified some zones in the central part of the peninsula, where the sources of industrial air pollutants affected the environmental components. Our study showed that natural ecosystems tended to self-restore in the impacted regions due to the decreasing emissions and manufacturing modernization.

*Keywords:* Kola Peninsula, Khibiny Mountains, Monchegorsk, “Severonikel”, “Apatit”, bioindication, heavy metals, strontium, sulfur compounds.

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