

## Natural and anthropogenic radionuclides concentration with heavy metals analysis of the sediments collected around Novaya Zemlya

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The Dispersal profile of the radioisotopes (Ra-226, Th-232, U-235, K-40, C-137s) along with potentially toxic elements (Cd, Co, Cr, Cu, Ni, Pb, V, Zn, and Hg) in the sediments around the Novaya Zemlya was determined. The task was fulfilled with the aid of HPGe gamma spectrometry, inductively coupled plasma optical emission spectroscopy, DMA-80 Direct Mercury Analysis System, X-ray diffraction and statistical tools. At most of the locations, the radionuclides activity was higher than the world average activity concentration for the respective nuclei, 40K being the most abundant. From all the potentially toxic elements detected, Cr and Ni were usually observed on higher levels compared to their background values, indicating the probability of the detrimental biological effects. Thus, the present situation at the studied area might be a threat to the neighboring marine life.

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