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Anthropogenic influence of settlements on the heavy metal content in the water of Don and Kuban River deltas.

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Present time river deltas underwent huge anthropogenic influence that modified natural processes of deltaic ecosystem self-regulation. Deltaic landscapes occupy the lowermost parts of the geochemical chain therefore receive great amounts of pollutants. A significant impact on the water pollution is exerted by human settlements located in the deltas themselves. Heavy metals content is one of the most important factors affecting the state of communities and environments in the river deltas. This paper is based on the data on heavy metal (Cu, Ni, Cr, Co, Cd, Pb) content in water and suspended matter obtained from the field studies of the Don and Kuban River deltas. Heavy metal content was determined by the method of inductively coupled plasma mass spectrometry (ICP-MS). The analysis of the results obtained allows us to conclude that the most important natural factors of the heavy metal content are the hydrodynamic activity of the water streams and the presence of geochemical barriers on the flow path. Anthropogenic influence predominantly expressed in the impact of large settlements located in river mouths (Rostov-on-Don, Azov, Temryuk). Downstream from these cities concentrations of heavy metals increase significantly.