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## **ENVIRONMENTAL MONITORING OF THE CASPIAN SEA OFFSHORE AND COASTAL AREAS WITHIN THE SUBURBS OF AKTAU CITY**

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### **Abstract**

Growth of city population and migration of communities lead to higher accumulation of heavy metals in coastal areas of the Caspian Sea suburbs. In the present study there are represented geographical and ecological locations and environmental monitoring results of the Caspian Sea offshore and coastal area near Akshukyr (Aktau suburbs). The shallow offshore near Aktau city and adjacent areas were monitored in cooperation with the Institute of Ocean Sciences. Sea water analysis carried out special measurements as Expert-003 Photoelectric Colorimeter, Fluid Analyzer, pH-meters 1 and 5 ml LABMATE syringes. Near Aktau city it was selected four hydrologic stations (HS) for analysis of water and soil surface. Pollution of the Caspian Sea with heavy metals has been observed, since greater portion of metals comes from river flow. The content of heavy metals in the Northern Caspian is 2-7 times higher than in the Volga River, which may be attributed to an increased levels of dissolved forms of metals in comparison to the suspended form as a result of mixing of river and sea waters. Soils are not contaminated with heavy metals as the distance from the testing site, TS-2. The highest rank amounts of copper and cadmium content are characterized by TS-2 (33.5) and (29.0) series accordingly.

*Key words:* coastal area, heavy metals, hydrocarbons, monitoring, sea area, soils

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