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Artificial small lakes in Amudarya delta

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In 2003, the International Aral Salvation Foundation initiated a project entitled “Creation of small local lakes in Amudarya delta down to the present shore of the Aral Sea”. The main goal of the project is to create man-made lacustrine ecosystems and landscapes on the territory of Amudarya delta and adjacent portion of the former bed of the Aral Sea. It is expected that the new and rehabilitated water bodies along the delta and major irrigation canals will serve to improve the ecological situation in the region. It is also hoped that such water bodies will help the local farmers to sustain irrigated agriculture. Accordingly, it is important to investigate the hydrochemical regime of the collector-drainage waters in the lakes of the Southern Priaralie. In this work, we report chemical data collected from the lakes and irrigation canals of the southwestern low reaches of Amudarya in 1998-2005. It is shown that as the water masses move from the river to the lakes and canals, its mineralization increases from 0.5-1.2 g/l characteristic for Amudarya to 3.3-14.3 g/l, and its ionic composition changes from Ca-Mg-Na type to SO₄-Cl-Na-Mg type, i.e., water quality deteriorates. Nonetheless, this water is usable for irrigation of some crops, such as cotton, and watering pastries.