INFLUENCE OF THE AMUR RIVER DISCHARGE ON THE HYDROLOGICAL CONDITIONS OF THE AMURSKII LIMAN AND SEA OF OKHOTSK DURING SPRING-SUMMER FLOOD

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In connection with the development of industry and active agriculture in the Amur River water-producing area, anthropogenic load on natural systems of its mouth areas increases. Therefore, it is very important to study the influence of the river discharge on the Amurskii Liman and adjoining water areas of the Japan and Okhotsk Seas which are also under the influence of the river discharge.

Hydrographic and satellite observations were used to characterize the Amur River discharge into the Sea of Okhotsk during spring-summer flood in June, 2007. Salt water from the Japan Sea and fresh water of the Amur River mix in the estuary (Amurskii Liman) to form brackish water, which enters the Sea of Okhotsk. Brackish water is supplied from the Amurskii Liman to Sakhalin Bay as a jet-like flow which forms a recirculating anticyclonic gyre. The coastal current associated with the Amur River discharge flows northward along Sakhalin Island coast. The values of the dynamic parameters for the Amur River outflow (Kelvin number K= 2, Froude number F= 0.4) suggest that rotation and stratification were important factors in the dynamical balance of the Amur River plume during spring-summer flood event.