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Coastal and marine monitoring

Oil Pollution Of The Small Rivers Of The Kaliningrad Region

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Monitoring of oil pollution in small rivers of Semba peninsula and in small rivers flowing in the Kaliningradskiy Zaliv (Vistula Lagoon) was conducted in 2004-2012. Oil content of the water and sediments was determined and the main sources of pollution have been identified. Statistically-valid upper confidence bound of possible mean values of oil concentrations, calculated for the most unfavorable hydrological conditions or the most adverse water quality period (season) in the annual cycle (p = 0.95) has been used as water pollution index. The data was received under condition of uniformity of analysis methods, water regime, pollution form etc. In a number of watercourses on the Semba peninsula statistically- valid mean values of oil concentrations have been significantly reduced from 2004 to 2012, at the same time some rivers (Svetlogorka and Medvezhya) can be defined as polluted. Statistically- valid mean values of oil-concentration in these rivers have gone up from 0.8 to 1.0 MAC (Maximum Allowable Concentration, ПДК) and from 0.8 to 3.0 MAC respectively. Oil concentrations in the rivers flowing into the Kaliningradskiy Zaliv amounted to 7.2 -17.4 MAC (Graevka higher up the river and near the mouth respectively) and 1.8 MAC (river Primorskaya) Economical and recreational activities (use of tourist complexes, open car parks, riding a quad bike on the beach, etc.) have greatly contributed to total oil pollution of rivers and coastal waters of Semba peninsula. Main sources of water pollution of the rivers flowing in the Vistula Lagoon have been enterprises (railways, oil terminals) and dacha communities.