MEQ Paper Session Poster Presentations

MEQ-P1

Assessment of marine environment quality in Peter the Great Bay (the Sea of Japan)

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Three areas with different pollution load were detected in the Peter the Great Bay in 2001. Golden Horn and Dyomid Inlets were considered to be as extremely highly polluted. Eastern part of Amursky Bay was characterized by high and moderate levels of sediment pollution. These are semi-closed areas with slow circulation and transport of silty sediments and high concentration of organic carbon (up to 127.4 mg/g), petroleum hydrocarbons (up to 2.83 mg/g) and trace metals. Benthic communities are characterized by low values of species diversity, richness, and biomass. Species more tolerant to pollution are dominated in numerically abundance by the polychaetes *Tharyx pacifica, Capitella capitata, Schistomeringos japonica, Cirratulus cirratus.*

Low pollution of bottom sediments registered in the inner parts of Amursky and Ussuryisky Bays. The polychaetes *Lumbrineris longifolia*, *Sigambra bassi, Maldane sarsi* were the most numerically abundant. The total biomass was formed by the large *Scapharca broughtoni, Dosinia angulosa*, *Callithaca adamsi*, *Macoma tokyoensis* in the inner bays. In this paper, we relate quantitative and structural parameters of benthic communities to the different pollution pressure. The strongest correlations between pollution loads and community structure were observed in extremely high and high polluted areas - Golden Horn and Dyomid Inlets, and in the eastern part of Amursky Bay.

MEQ-P2

Marine environmental impacts of the Japanese nuclear power plant “Fukushima-1” accident in the Far Eastern seas

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The potential impacts of radionuclide pollution following the accident at the nuclear power plant “Fukushima -1” in 2011 to Sea of Japan, Sea of Okhotsk, and northwestern Pacific Ocean are of great environmental concern. Survey data collected during 2011-2012 are used to evaluate this concern by comparisons with similar observations obtained in 2010. Data collection was conducted by Russian and Japanese scientists at sampling locations in the Sea of Japan, Sea of Okhotsk, along the Kuril Islands, and the northern boundary of Kuroshio Current near “Fukushima-1”. In 2011 marine contamination of the Sea of Japan was negligible and was related to the atmospheric deposition of radioactive elements. It posed no hazard to the Russian coast. No radionuclide contamination from the power plant accident was detected in the northern part of the Sea of Okhotsk near Sakhalin Island. Observed concentrations of radionuclides in marine waters near the Kuril Islands also were negligible. Survey results indicate that contamination was greatest in the latitudinal zone between 35°30’N and38°30’N.