International Survey on Distribution of Submerged and Stranded Debris on Beaches along the Sea of Japan

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The distribution and abundance of marine debris on 26 beaches along the Sea of Japan were investigated from September 2000 to November 2000. On each beach, the survey was conducted under authority of the local government officials with the help of volunteer, which amounted about 831 people. The total survey area in Japan and Russia was 8, 878 m² and 3,369m², respectively. The mean concentration of stranded debris in Japan and Russia was 2,144 and 1,344 g/100m², respectively. The mean number of stranded debris in Japan and Russia was 341 and 20.7/100m², respectively. The most abundant stranded debris was plastic that accounted for 40% to 80 % of total items in terms of weight and number. The mean concentration of submerged debris in Japan and Russia was 9.03 and 2.70 g/m² respectively. Of the submerged debris, fragments of plastic products were the most abundant item in terms of weight, and styrofoam pieces numerically. The average ratio of submerged debris to stranded debris in whole samples was 0.65, suggesting the significance of submerged debris for evaluating the status of debris on beaches. Plastic pellets that are the raw material of plastic industry were found only on 12 Japanese beaches, suggesting that the sources of release might exist around Japan.