

Marine Litter Dispersion in the Southern Shores of the Caspian Sea (Case Study: Mazandaran Province)

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Abstract : One of the major environmental problems in the southern coasts of the Caspian Sea is that the marine and coastal debris is being deposited and accumulated due to industrial, urban and tourism activities. Study, sampling and analysis on the type, size, amount and origin of human-made (anthropogenic) waste in the coastal areas of this sea can be very effective in implementing management, cultural and informative programs to reduce marine environmental pollutants. Investigation on marine litter distribution under impact of seawater dynamics was performed for the first time in this research. The rate of entry and distribution of marine and coastal pollutants and wastes, which are mainly of urban, tourist and hospital origin, has multiplied on the southern shore of the Caspian Sea in the last decade. According to the results, the two most important sources of hospital waste in the coastal areas are Tonekabon and Mahmoudabad. In this case, the effect of dynamic parameters of seawater such as flow (with speeds of up to about 1 m/s) and waves, as well as the flow of rivers leading to the shoreline are also influential factors in the distribution of marine litter in the region. Marine litters in the southern coastal region were transported from west to east by the shallow waters of the southern Caspian Sea. In other words, the marine debris density has been observed more in the eastern part.

Keywords : southern shelf, coastal oceanography, seawater flow, vertical structure, marine environment

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