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Abundance and occurrence of micro litters in selected beaches of Gulf of Mannar, Southeast Coast, India

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Anthropogenic, non-degradable materials are well-known for fragmentation in the coastal and marine environments which leads to formation of micro litter particles. Due to their buoyant and persistent properties, these micro litters have a potential to become widely dispersed in the coastal marine environment through the hydrodynamic processes and ocean currents. In this study, the distribution and occurrence of micro litters as groups (Hard Plastics-HP, Soft Plastic-SP, Foam-FM, Glass-GL and Cloths-CL) and as size categories (i.e., <1mm, 1.1-2.5mm, 2.6-5mm, 5.1-10mm and >10mm) were observed in 10 selected beaches of Gulf of Mannar, southeast coast of India during August 2012 and February 2013. Based on the micro litter groups, the mean overall occurrences of all five micro litters was higher in Tuticorin beach (16.2%) during Aug. 2012 and in Therkku Pudukudiruppa beach (Periapattinam) (22%) during Feb. 2013. Based on micro litter size categories, >10mm sizes found to be dominated (44%) and the least occurred one was <1.0mm size categories in Aug. 2012. In Feb. 2013, >10mm found to be dominated (28.6%) while 2.6-5.0 mm size categories distributed in lesser percentage i.e., 13.7%. The present study reveals that (1) the abundance and occurrence of micro litters found to be varied between surveys, beaches, litters' group and litters' size; (2) there were no occurrences of some types of micro litters; (3) the micro litters of soft plastics and hard plastics contributed more than 60 to 92% and mostly by fragments of fishing nets, ropes, PVC pipes, plastic buoys etc.

Biography

C M Ramakritinan, Assistant Professor, Department of Marine and Coastal Studies has completed his PhD and Post Doctoral studies from Madurai Kamaraj University in the field of Aquatic Ecotoxicology. Also he is a Course Co-ordinator, UGC sanctioned P.G. Diploma in SCUBA Diving for Marine Biotechnology. He has published more than 45 research papers in international and national peer reviewed and referred journals including books/chapters in books. He has presented more than 35 research papers in conferences / seminars / symposia. He is an Open Water Diver (PADI). He has been servicing as Members in various academic & research committees.

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