

3rd International Conference on Hydrology & Meteorology

September 15-16, 2014 Hyderabad International Convention Centre, India

Spatial and Temporal Variations in Marine Litter (2013-2014) along the selected beaches of Gulf of Mannar, Southeast coast of India

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Spatial and Temporal Variations in Marine Litter: Stable increase in plastic usage leads to serious litter pollution along the coastal areas that increase global interest on study of sources, distribution and risk assessment. Studies on sources and distribution of marine litter is lacking along the Indian coastal waters. Therefore, a systematic study on sources and distribution of marine litters of Gulf of Mannar was conducted between Dhanuskodi and Tuticorin during August 2013 and February 2014. The data were collected based on the standard protocols developed by IOC/FAO/UNEP, (1989), Cheshire and Westphalen, (2007) and Cheshire et al, (2009). The collected litters were categorized as 10 major groups i.e., Hard Plastics, Soft Plastics, Rubber, Foams, Glass, Cloth, Paper, Metal, Wood and Other Types. During August 2013, in terms of number, Mugundarayar Chadram beach (20%) found to be highly contaminated whereas the beach of Bharathinagar Nagar, Keelakkarai (2%) found to be least contaminated shore. But the most and least contaminated beaches during February 2014 were Bharathi Nagar (23%) and Kundukal (5%) as well as Vembar (5%), respectively. In terms of weight, most and least contaminated beaches during August 2013 are Pudumadam (21%) and Therkku Puthukudieruppu (2%), respectively but, during February 2014, Therkku Puthukudieruppu (15%) and Chinna Ervadi (6%) found to be the most and least polluted beaches. The present study concludes that the dominated categories along the Gulf of Mannar coast are Hard Plastics (HP), Soft Plastics (SP) and Cloths (CL). The major sources of contamination are tourism, domestic waste dumping and fishing and allied activities.

Biography

C.M.Ramakritinan, Assistant Professor, Department of Marine and Coastal Studies has completed his Ph.D. and Postdoctoral studies from Madurai Kamaraj University in Aquatic Ecotoxicology. Also he is a Course Co-ordinator, UGC 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 book. He has presented more than 40 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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