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### Macro debris pollution of sea turtle nesting beaches along the southern coast of Sri Lanka

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#### Abstract

The southern coastal area of Sri Lanka provides ideal habitats for nesting of Green sea turtle (*Chelonia mydas*), Olive ridley (*Lepidochelys olivacea*), Hawksbill (*Eretmochelys imbricate*), Loggerhead (*Caretta caretta*) and Leatherback (*Dermochelys coriacea*) sea turtles. The increase of coastal macro debris is negatively affecting a wide range of marine organisms including sea turtles. Any type of natural or synthesized solid waste materials that remain in the coastal area are referred to as coastal debris. Entanglement, ingestion, reduction of crawling speed and release of chemical contaminants are some of the negative effects of coastal macro debris on the health of sea turtles. Therefore, this study was carried out to investigate the presence of coastal macro debris at selected turtle nesting beaches along the Southern coast of Sri Lanka during the period from February to May 2022. Random plot sampling method was employed at Palatupana, Godawaya, Ussangoda, Kalametiya, Rekawa, Mirissa, Habaraduwa and Kosgoda and the macro debris were classified under the categories, wood, glass, macro plastic, styrofoam, metal, rubber, fishing material and cloth. Five plots (100m×30m) were surveyed for each selected beach and macro-debris densities (g/m<sup>2</sup>) were calculated. Habaraduwa was identified as the highest polluted beach (9.05g/m<sup>2</sup>) among the beaches studied and the least polluted beach was Mirissa (0.43g/m<sup>2</sup>). The Friedman test recorded no significant difference (P<0.05) between the types of debris found and the debris density of the nesting sites. The questionnaire survey indicated that the beach cleaning programmes could be the prominent reason for non-significant difference of the debris densities between the nesting sites. According to the survey, the lack of significant difference between debris types of various nesting sites was due to common anthropogenic activities, prominently garbage dumping.

**Keywords:** Anthropogenic activities, Macro debris, Pollution, Turtle nesting

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