THE STATUS OF INTER AND INTRA LEVEL VARIATIONS IN COASTAL DEBRIS OF WESTERN PROVINCE, SRI LANKA

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Marine environment pollution has become a global issue at present, and has become a great challenge due to the increasing accumulation rate of debris along coastal and marine ecosystems. In dealing with the scenario of high anthropogenic pressure on marine and coastal debris in Sri Lanka, Marine Environment Protection Authority (MEPA) conducts coastal cleanups each year aiming both purposes of awareness and survey. The coastline of Sri Lanka extends up to 1,710 km in total, from which 1,017 km are accessible. The coastal belt consists of 14 coastal districts fall in 5 coastal provinces. Western Province of Sri Lanka stretches through 120 km of coastline which accounts for 7.02% of the entire coastal length and consists of Colombo, Kaluthara and Gampaha coastal districts.

In 2015, MEPA conducted its National Coastal Cleanup covering approximately 1000 km of the coastline around Sri Lanka covering almost 98.3% of the total accessible coastline. The total accessible coastline was divided in to 2 kilometer segments and each segment was considered as a site. A debris survey was conducted in some selected sites of each district and the debris collected at each site was separated in to categories, number of pieces collected in each category was counted and their weight was measured separately. In Western Province, the National Coastal Cleanup was conducted in 44 sites along 94.5 km of the coastline and the debris survey was conducted in 20 sites.

Total volume of 102,415 kg of trash was recorded from the 1000 km of coastline cleaned around the country and the "trash to distance ratio" or the "amount of trash collected per one kilometer of cleaned coastline" was highest in the Southern Province (121.66 kg/km). Total trash amount recorded from Western Province was 7.24% of the national total, but it recorded the third highest trash to distance ratio (114.99 kg/km) of all provinces. Within its districts, Gampaha recorded the highest ratio and Kaluthara, the lowest. However, all 3 district values of Western Province were higher than even of some provincial values such as Eastern and Northwestern.

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The most abundant trash type recorded in Western Province was plastic waste and it accounted for 39.93% of total provincial waste. As a whole, metal, plastic, polythene and glass dominated the national waste categorization and they also accounted for more than 65% of the total provincial waste of Western Province. But this abundance patterns changed drastically within its three districts from 31% to 98%. Therefore, a need for a 'district specific' coastal and marine waste minimization strategy coupled with proper detailed analysis of waste generation is proposed to ensure the sustainable conservation of coastal and marine environment within the Western Province of Sri Lanka.

Key words: *Coastal cleanup, Western province, Debris, Plastic*