

**A Study on Establishment of Flora and Fauna along Rocky Shoreline of
Ahangama after Amanath Shah Oil Spill**

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ABSTRACT

Oil spills are potential sources of marine pollution. Amanath Shah Oil Spill (ASOS) is one of the major oil spill disasters experienced by a Sri Lankan coast in the recent past. The merchant vessel Amanath Shah sank nine nautical miles away from the shoreline off Koggala, Sri Lanka, on 8th of September 2006 spilling 160-200 metric tons of furnace oil into the surrounding Indian Ocean. A week after the spill, a study was conducted to estimate the temporal variations of oil content in soil of splash and vegetation zones of the impacted area and to understand the establishment of secondary vegetation and associated fauna along the rocky shoreline at two sites. Total hydrocarbon concentration in soil was measured using a modified version of Bligh and Dyer method. A measure of the Faunal and floral establishment was carried out by quadrat sampling along transects of varying lengths. According to the results, in splash zone, oil disappeared approximately within 166 days (± 6). In vegetation zone, there were residues of oil even after 2 years of the spill. Study revealed that degradation of hydrocarbons occurs faster in splash zone than in vegetation. Shannon Wiener Index for floral and faunal communities declined initially in all three transects in the splash zone but recovered with cyclic oscillations for some species. Sorenson's Similarity Index of rocky shore fauna of the two sites in splash zones was over 0.8 after 7 months of the disaster, indicating that regeneration processes of these impacted sites are proceeding in a similar pattern. The study highlights the importance of post monitoring of oil spill disasters to understand the actual impacts on the environment to implement environmentally sound recovery programmes.
