

Loss of Land and Land Uses due to Misuse of Clay and Sand Mining – A Case Study of Ma Oya Left Bank

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This paper presents a research case study carried out in the lower Ma Oya river basin to identify the land use issues in relation to sand mining and clay mining. The main objective of the study was to assess the loss of lands and land uses due to misuse of sand and clay mining in left side of Ma Oya river basin. Geographically, environmentally and socio-economically the Ma Oya river basin is a very unique among other river basins in Sri Lanka. During last few decades, due to sand and clay mining both left and right river banks of lower Ma Oya river basin has been highly degraded. Primary and the secondary data were used for the analysis. The total river basin consists of an area of 1528 Sq. km. The land Use maps of 1956, 1984, and 2018 and recent google satellite images were used and spatial and attributes analysis were undertaken using Q GIS 3.6 and Arc GIS 10.1 and MS Office applications. The Inverse Distance Weighting (IDW) analysis was carried out to determine multivariable interpolations. The Participatory Rural Appraisal (PRA) techniques was applied to get the people involved.

The study revealed that Ma Oya river basin has been identified for its critical natural resource use issues. Especially clay has been excavated up to 835 meter distance from the river bank. As a result considerable amount of lands and land uses have been lost. A total of 119 hectare of land area was lost and according to the present value of lands in the area it was Rs. 2,728,774,720. The results also indicate that 53% of coconut lands, 35% of home gardens, 8% of paddy lands, 3% of scrubs, and 1% of crop lands have been converted into water bodies or bare lands.

Key Words: Land Degradation, Clay and Sand Mining, Land and Land Use Losses