ABSTRACT

Negombo lagoon is a shallow basin estuary located on the west coast of Sri Lanka, serving important functions including fishing and tourism. It drains water carrying nutrients and organic matter from heavily populated catchment areas and has faced the threat of the degradation of water quality. The lagoon is rich in bio diversity and also in fishing gear diversity. Fishing is the most important economic activity in the lagoon with over 20,000 people directly and indirectly depends on fishing for their livelihood.

Due to the rapid urbanization and development of area, the lagoon system has been heavily contaminated with pollutants. Current study was aimed to reduce the pressure to the lagoon resources which are used by the inhabitants of the study area.

In this research 03 Grama Sewa Divisions were selected namely Pitipana North, Pitipana Central and South Pitipana East due to the high population density, close vicinity to the lagoon and diverse livelihoods. With the help of a questionnaire and discussions, information was gathered from the 03 Grama Sewa Officers about the environmental impact to the lagoon by the inhabitants. Secondly, discussions were done with officers of the Divisional Secretariat-Negombo, Mangrove Park (NARA)-Negombo, Department of Fisheries and Aquatic Resources-Negombo and Coastal Conservation Department-Negombo and information was obtained. Next a questionnaire survey was prepared and carried out for 75 randomly selected families in the study area. Finally, features of the Google Earth were used to identify the present catchment area and the water spread area of the lagoon.

Illegal encroachment and filling of the lagoon water spread area due to ineffective law enforcement, non existence of clear boundaries, dumping of untreated pollutants and

effluents, abuse of mangrove, high population density, use of illegal fishing gears, faecal contamination of lagoon water were the main issues identified.

Work force of the study area is high because, 40% of the male population is in the 25-49 age group. More school drop outs can be seen after Grade 05 education, this cause more males engage in fishing and fishery related activities. Higher education level among the inhabitants of the study area is in very poor situation. 41% of the females are self employed such as fish vendors, wrapping cigars, poultry and rare pigs. 20% of the families are living in temporary houses without main facilities like clean water and proper toilet facilities. 9% of the land owners are encroachers. 60% of inhabitants use lagoon as a solid waste dumping site. 24% of the inhabitants do not have acceptable latrine facilities.

Challenges are considered as high population density, the fast growing city of Negombo, concentration of industries, tourism, fishing and fishery related activities, use of mangroves, easy to dispose waste have combined to make a heavy demand on the 3,110 ha lagoon and its environment.

Fishers use different fishing gears and one use more than one fishing gear. 17% of the fishing gears used by the fishermen are illegal which are banned by the Fisheries and Aquatic Resources Act No 02 of 1996, which includes trammel net, push net, trawling and digging of polychaetes. One awareness programme was done through household base and other was through a street drama, in collaboration with Regional Fishery Livelihood Programme, which was executed by Food and Agriculture Organization.

Finally, a post tested questionnaire was given to the inhabitants, collected and analyzed. After the awareness programme, they used more than one method to dispose their waste, only 05 families still use the lagoon and others use environment friendly methods to dispose their waste.

Water spread area of Negombo lagoon was estimated to be 3100.2 ha (Google Earth 2012), indicating a further reduction of 64 ha in recent years (1981-2012).

Using alternative livelihoods, enforcing effective laws, preparation of clear boundaries, reforestation of mangroves and educating the younger generation for the well being of the lagoon are some solutions to reduce pressure to the lagoon resources which are used by the inhabitants.