



ANNUAL SYMPOSIUM 2010

Sharing Knowledge for Sustainable Peace

Extended Abstracts

20 August 2010

General Sir John Kotelawala Defence University
Ratmalana
Sri Lanka

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² IFAPA, Junta de Andalucia, CIFA Alameda del Obispo	
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Current Environmental Issues of Solid Waste Dumping in the Kattankudy Divisional Secretariat Division

Fareena Ruzaik
Department of Geography, University of Colombo

Abstract

The Batticaloa District occupies the central part of the Eastern Province, consisting a land area of 3.8% (2,633.1 km²) of the island and an internal waterway of 229 km². It is a flat land, not exceeding 7.62 meters in height above the mean sea level. The district is divided into fourteen Divisional Secretariat Divisions (DSD). The Kattankudy is a highly populated DSD among them and the population density of the area is approximately 21,000 persons/km².

Kattankudy is a tiny coastal village, which covers a land area of approximately 2.56 km². Its annual rainfall varies from 864 mm to 3,081 mm. Most of the rain is received during the months of October to January due to the inter-monsoon and North East monsoon. The annual average temperature is 25 °C -35.4 °C.

Kattankudy is predominantly a Muslim locality, with a population of approximately 56,000. The male/female ratio is approximately 1:1, while 1/3 of total population are below 18 years. It has nearly 12,601 families. Kattankudy DSD has drawn world attention for its highest density of population in Asia. The source of income of 75% of the households is small and medium-scale businesses and the rest are employed at Government and non-government institutions. The average income per day is Rs: 600/=. The inhabitants use their private wells (8,350) and tube wells (925) to obtain drinking water.

The post-tsunami development activities, post war resettlements and internal migrations have created various environmental issues in the area. Currently, unplanned and improper way of dumping of solid waste has become the most significant environmental issue, affecting the environment and human lives. In addition, breeding of mosquitoes in stagnant water bodies creates numerous health related issues in the area. At least, one person from every two houses has been affected by the dengue fever (a finding of this study). It is an urgent requirement to draw the attention of policy makers towards this serious issue. This study identified the needs of proper solid waste management plan to resolve the problems and manage the surrounding environment in a healthy manner.

Urban council dumps 40 tons of solid wastes per day, collected from this small area. The open dumping and open burning of solid are the present disposal methods which are not an acceptable in the environmental point of view. These methods create numerous environmental problems such as land and surface water pollution, spreading of vector borne and communicable diseases, emission of toxic gases and leachate, odor, blocking of drainage system and damaging the aesthetic beauty of the area. Further, it creates social disparity among the community.

Considering the above, the study was designed with the prime objectives of identifying the environmental and health issues of the area and to recommend managerial measures to the relevant authorities. The data was collected through a questionnaire survey.

The random sampling technique was used to select the households. In addition, observations, formal interviews and discussions were held with individuals and officials of the area. The secondary data also were used for the study.

Results obtained from the study indicated that at least one person from every two households had been affected by dengue fever. Further, the study revealed that nearly 70-75% of the inhabitants have