

Social and environment impacts: A case study of mid canal in Kandy

Extended Abstract

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Background

Kandy is recognized as a world heritage city by the United Nations educational scientific and cultural organization on account of its long and venerable history and its many cultural treasures. The mid canal originates from the overflow sluice of the Kandy Lake. The length of the canal is about 8km and the width varies from 10km to 15km along it cause from the lake sluice to the confluence with the Mahaweli river at Getambe (Kumara, Perera, 2015). Mid canal is considered the most polluted surface water body in the Kandy district (Jinadasa, Wijewardhena 2012). Because there is no proper waste water disposal system in Kandy district, mainly untreated domestic sewage release directly into the mid-canal. Water quality in mid canal is mostly diminishing due to wastewater discharge in various sources. Mid canal is mostly important to people who are living in proximity to mid canal. Nearly 350 houses are located along the mid-canal bank. Therefore it is important to study the social and environmental impacts of mid canal.

Objectives

The general objective of this study was to examine the social and environment impacts of mid canal water pollution. Specific objectives were to study the causes of water pollution in medicinal and to study the mitigation strategies to control water pollution in mid canal.

Methodology

This study was carried out based on primary and secondary data. Primary data were collected from Kandy and Suduhumpola areas. A questionnaire survey was conducted with a random sample of 30 households to collect primary data. The secondary data was from books, magazines, newspapers, articles, leaflets and internet. graphs, charts, and tables in Excel were used to analyze the data.

Results

By this research, the researcher was able to identify the social and environmental impacts due to mid canal water pollution. It was mainly affected to the residents of mid canal bank. The identified social impacts were the conflict among dwellers due to the limited space, narrow roads, bad odor, flash flood and a massive amount of mosquito breeding places. Environmental impacts were mass mortality of fish, pollution of Mahaweli River water, a decrease of aquatic plant and animals, air pollution and the reduction of water quality. The researcher could identified sources of mid canal water pollution, such as markets, hospitals, bus interchanges, hostels and restaurants, banks, laundries, resident houses, prison, slaughterhouses etc. Identified mitigation methods to control the water pollution in the canal were, to develop wastewater treatment facilities, to treat both black water and gray water and to cover the mid-canal by concert slab.

Conclusion and Recommendations

Mid canal was rapidly polluted due to direct disposal of solid waste, untreated waste water. It affects to pollute the Mahaweli River which is the largest river basin in Sri Lanka (Abeygunawardane, 2011). It also causes to diminish the cultural value of Gatembe area. According to the objective of the study, there were a massive amount of environmental and social problems. It is one of the major problems in Kandy Municipality. Cleaning the mid-canal is a responsibility of Kandy Municipal Council. They are implementing various projects to reduce the water pollution of mid canal. The researcher recommends awareness programs to change people attitude, implementation of appropriate solid waste management projects, introducing and implementing new rules and regulations to control water pollution in mid canal and elimination of unauthorized construction etc.

Keywords: mid canal, pollution, environment, social, impact

References

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