

Water pollution of Kelani River and how it affects to the Yatiyantota area

Extended Abstract

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Background

Water pollution is one of the major global problems and contamination of water bodies (e.g.; lakes, rivers, oceans, aquifers and ground water) can be defined as any physical, biological or chemical change in water quality that adversely affects living organisms or makes water unsuitable for desired uses. Sri Lanka is a tropical country and it is evident that most of the water has been polluted due to man-made activities. Since last few decades, Kelani River is the largest recipient of the industrial effluent among all the other rivers in Sri Lanka (Mahagama, 2014). This is mainly due to the deterioration of water quality and the higher pollutant loads resulting from various point and non-point sources of pollution (Athukorala, 2013). Apart from that, it polluted due to carelessness of the people and lack of strict rules & regulation for prevent water pollution of Kelani River.

Objectives

This paper attempts to identify existing situation of the water pollution of Kelani River and how it affects to the Yatiyantota area. Furthermore to identify sources of water pollution of river & the water quality of Kelani River and also this study focus on to examine the scenic beauty of the river side & propose the prevention measures of water pollution.

Methodology

Most of areas in Sri Lanka have faced serious problems of water pollution. In yatiyantota area is also becoming impacts of Kelani river water pollution. The study area was comprises 26 km from Kirigohothenna to Yatiyantota area. In this research information based on primary data & secondary data based on the random sampling method, 30 respondents were selected and data were collected based on the questionnaire has been

used to collect primary data. These thirty samples were distributed to different stakeholders. Furthermore, primary data collected via observation, interviews of relevant government authorities & departments. Some primary data collected from Disaster Management Office, Municipal Council & Water Board in Yatiyantota area. Secondary data has been collected from leaflets, books, newspapers & reports. The collected data was analyzed in Excel & Represented by graphs, chats & percentage values.

Results

The research findings revealed that 87% of respondents are getting water from pipe line. Pipe water is supplied by the water board. The Water Board gets water from Kelani River for supply to people who live in there. The river is contaminated by so many things. The main source is the land based sources. There are treated & untreated industrial waste, agricultural runoff, domestic & municipal waste. According to the data polythen, plastic, paper, sewage, chemical & silt waste are consist in river side. From them polythen waste is the major waste type in this area. It is 40% from waste collection. Water rafting, sand mining, rubber land removing, soil erosion, tourism industry, Board-land water plantation project activities and waste of vehicle service centers are cause to this situation. Above reasons generate lack of water problem in Theligama hospital & paddy fields, reduce the fish rate, destroy biodiversity, damage to agriculture activities & change the water quality. There are 19 bathing places in Kithulgala to Karawanalla. Most polluted places are Kabulumulla bathing port, Kithulgala north rest house, Yatiyantota main bathing port. Most of fauna species live in river side. They are becoming extinct from environment. There are Thola rathu veligowuwa, Ashoka pethiya, Bulath hapaya, magpies, palm civet, bat, butterflies, and prawns. This dangerous situation is most affect to fish rate of Thola rathu veligowuwa, Ashoka pethiya. Some endemic flora species are face to the critical situation. (*Garoinia Quesita*, *Coscinum Fenestratum*, *Gordonia Speciosa*, *Cinnsmoun Dubilm*, *Arocarpus Nobili*)

Conclusion & recommendations

According to the case study there is a huge water & environmental pollution in kelani river area. It creates a critical situation. It can be damaged to

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environmental, economic & historical value of Yatiyantota area. As an environmental friendly community should be continued the proper waste management system and awareness program for changing public attitudes and strict legal actions should be taken for protect the Kelani River.

Keywords : Water, Pollution, Kelani River, Contamination

References

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