

Review Paper on Design of Garbage Removal Machine from Water Surfaces

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Abstract— Water is the basic need for the existence of life on earth. In spite of 70% water on earth majority of water is not suitable for drinking purpose. There is a huge demand of clean water as it is used for a variety of purpose such as drinking, bathing, cleaning, cooking etc. Impurities present in water can cause serious health issues that can damage the life of human beings. The main objective of doing this project is to clean the garbage present in small and big lake. To reduce the cost of river cleaning by use of river surface cleaning 4 machine. To tackle the problems about wastage, food material, plastics present in the lake. To clean the polluted water reservoirs to save the life of aquatic animals. To reduce the human efforts by automation in machine. To make ecofriendly and cost efficient machine without use of liquors like petrol or diesel.

Keywords: Garbage Removal Machine

I. INTRODUCTION

Waste management (or waste disposal) are the activities and actions required to manage waste from its inception to its final disposal. This includes the collection, transport, treatment and disposal of waste, together with monitoring and regulation of the waste management process. Waste can be solid, liquid, or gaseous and each type has different methods of disposal and management. Waste management deals with all types of waste, including industrial, biological and household. In some cases waste can pose a threat to human health. Waste is produced by human activity, for example the extraction and processing of raw materials. Waste management is intended to reduce adverse effects of waste on human health, the environment or aesthetics. Waste management practices are not uniform among countries (developed and developing nations); regions (urban and rural areas), and residential and industrial sectors can all take different approaches. The various government-owned garbage treatment plants remains closed most of the time thanks to improper style or poor maintenance or lack of reliable electricity offer to control the plants, together with absentee employees and poor management. The waste water generated in these areas commonly mixes into the soil or evaporates. The uncollected waste accumulates within the urban areas causes unsanitary conditions and cathartic pollutants that leach into surface and groundwater.

More than 500 million people live along the Ganges River. An estimated 2,000,000 persons ritually bathe daily in the river, which is considered holy by Hindus. Ganges river pollution is a major health risk. Minister of Environment, B. Kambuaya, and discovered waste production of thirtythree cities across state by the Central Bureau of Statistics records in 2007 reached 132,192 cubic meters per day. Not all the waste disposed and transported in landfill, such as a lot of

garbage that have not been handled properly such as burned and thronged in the river. This phenomenon that causes environment problems. Rivers turn into domestic landfill. Kambuaya states 80 percent of river polluted by local waste. River scheme that gets besieged of high pollution load than different rivers in Java is Ciliwung watercourse.

II. LITERATURE REVIEW

- 1) S A Karande, In this project review the proposal concept is to reduce the human effort in garbage cleaning in sea ways by automated system. The machine is placed in the drain, so that the solid waste like bottle, clothes which floats on water gets lifted by teeth connected to the chain. The waste materials are stored in the collector.
- 2) According to Prof. Ketan V. Dhande invented a River Cleanup Machine which is used in those places where there is waste debris in the water body. In this machine waterwheel driven conveyer mechanism and belt drive mechanism which lifts the debris from the water. According to the article from "The Times of India" newspaper entitled with "Nagpur Municipal Corporation begins Nag- Pilli rivers campaign", The Nagpur Municipal Corporation has set the project for cleaning the Nag and Pilli River in West Nagpur. The aim of the project is to rejuvenate and beautify the river. The machineries are used for the collection of floating weeds and debris. As the world moving towards creation of smart cities due to enormous growth in the population and advancement the technology it becomes most important to control water cleaning through efficient method. As the world is moving towards smart cities still the way celebrating festivals remains the same. Automation is required is order to manage the things.
- 3) M. Mohamed Idhris Design and Fabrication of Remote Controlled Sewage Cleaning Machine the motive of the project is to automate the sewage cleaning process in drainage, to reduce the spreading of diseases to human. The black water cleaning process helps to prevent pest infestations by reducing the residues that can attract and support pests. It also improves the shelf life and sensory quality of food products. In the proposed system, the machine is operated with remote control to clean the sewage. Hence, this system avoids the impacts from the sewage waste and its harmful gases. This helps to prevent the mosquito generation from the wastage.
- 4) Mr. Abhijeet Design & Fabrication of river cleaning system India is holy country & during lots of festival like Ganesh visarjan, navratri durga puja & mainly Siahnsth kumbhmela there is lots of water pollution of Godavari River at 6 Nashik. The water pollution is very important

problem in rivers, ponds and water bodies near Godavari River at Nashik.

- 5) S D Rahul Bharadwaj, proposed with the automatic cleaning of waste water in order to reduce global warming & wastage of power to treat waste water management.
- 6) Nitin Sall, here using waste water technology that removes, rather than destroys, a pollutant in a drainage system. flow of used water from homes, business industries, commercial activities is called waste water.

III. GARBAGE COLLECTING MACHINE MODULE

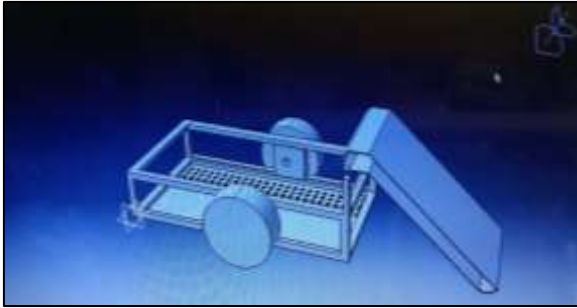


Fig. 1: Proposed Design Of Garbage Removal Machine

IV. PROBLEM STATEMENT

Nowadays, the environment problems arise in many towns in the Philippines. These problems come along by developing activities such as construction of houses, offices, and other business areas. The environment problems occur due to several reasons; low budget allocation on environment management and lack of discipline in garbage disposal. The environment issue which comes up from year to year and still cannot be solved is about garbage and waste from various places dispose into rivers. The garbage could clog water flow becoming dirty, smelly, and often over flow causing 7 floods. Not all the waste disposed were transported in landfill, for example in Figure 1 (Moore, 2016) most are dumped in the river. River ecosystem that gets most pollution in Dumaguete is the Banica River.

This river passes through many villages which have poor sanitary conditions in general. During the rainy season this river often overflows and causes floods. Our main motive is to clean the rivers and for that purpose we are making efficient waterwheel garbage collector. We are using wheel operated boat which operates by using the current of the water. The conveyor collects the waste present and then collects it in the box present at the back part of the boat. This is really a good solution for the aquatic garbage management. We are trying to collect floating garbage like polythene, food material, and the waste occurs due to human negligence in disposing such materials

V. PROPOSED WORK

Floods are natural events and even more, a natural occurrence in the Philippines every after typhoon. Floods can cause various diseases that come from rats and harmful things that go with it. Floods are then worsened by clogged drains and creeks caused by trash that blocks the drainage systems of the river bodies. The rainwater does not drain fast enough thus

resulting to prolonged flooding in lowlying areas near rivers and lakes. This machine float on river and lakes and collect floating garbage while filtering out the water.

VI. CONCLUSION

This project Design of Garbage Removal Machine from Water Surface is designed on the basis of literature and research on different journal and paper relevantly available and designed in accordance so it can provide flexibility in operation. This innovation is easy and less costly and has lot of room to grow more economical. This project "Design of Garbage Removal Machine from Water Surface" is designed with the hope that it is very much economical and helpful to river and Pond cleaning. On the basis of it design and estimating cost and availability it is very cheap and very useful for the society.

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