

INTERNSHIP REPORT BASED ON COMPARITIVE STUDY OF PLASTIC WASTE GENERATION BETWEEN SELECTED WARDS OF TRIVANDRUM CORPORATION

In Collaboration with

ALL SAINTS COLLEGE, THIRUVANANTHAPURAM

and

COFBA Networks

ABSTRACT

Today's scenario improper solid waste management causes pollution and health risk, which is mainly concerning environmental management in developing countries. In most cities, the use of open dumps is common for the disposal of wastes, resulting in soil and water resource contamination. The internship study report states the current household Solid Waste Management (SWM) with reference of Twenty wards around Trivandrum Corporation, and the data formation done through questionnaire format of different household waste generators. Total 3500 households were interviewed and the results of the data collection were interpreted with the help of SPSS. The survey indicated that the majority of the residents are very much concerned about the poor condition of the environment due to the inappropriate and improper SWM in Trivandrum Corporation. Very few respondents have knowledge about reuse, reprocess, and compost. Some of the residents are not much satisfied with the service of the corporation in regard to SWM.

INTRODUCTION

Municipal Solid Waste dumping and Plastic waste disposal in public places is one of the significant problems faced by society nowadays. The rapid growth of the population is the leading cause of the increase in unwarranted dumping of municipal solid waste. The waste management and handling rules in India introduced by the Ministry of Environment and Forests (MOEF) have a more negligible effect on the community. Municipal Solid Waste dumping in public places may cause significant adverse environmental and health impacts. The decomposition of solid waste causes

methane gas, one of the major contributors to the global warming phenomenon. As Waste Management becomes advanced, solutions are being looked at in an almost Systematic and Holistic way. Integrated solid waste management refers to the selection and use of Appropriate Management programs, Technologies and Techniques to Acquire Waste Management goals and objectives. It is thus essential to stream that effective solid waste management programs and plastic waste Management strategies in major cities which face Municipal Solid Waste Disposal problems.

OBJECTIVES

The main objective is to associate/integrate local needs and academic support programs through Collaborative internship projects that address waste management in the city.

- The study estimated the accurate survey of waste/plastic disposal strategies in selected places of Trivandrum Corporation in association with both the parties.
- Understand the health impacts faced by the people of Trivandrum Corporation due to the disposal of solid waste.
- Study the major governmental projects implemented by Trivandrum Corporation related to Waste Management.
- Based on the studies, a developed outline of most accurate innovative technological concept for Waste Management in Thiruvananthapuram will be achieved

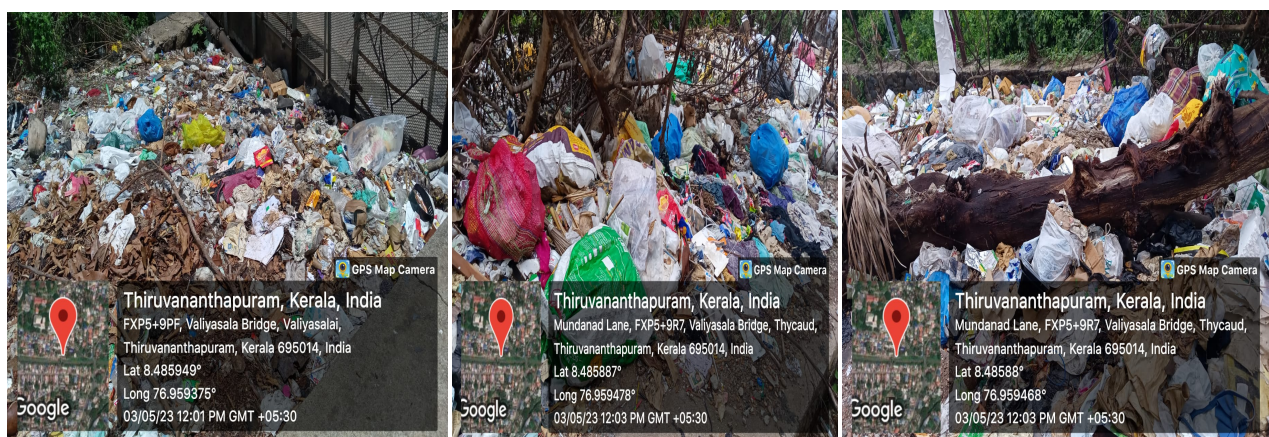
PROJECT DURATION

The total contract period is one year from the date of initiation of the project (3rd April 2023). Under the collaboration with All Saints College and COFBA Networks, shall end on (5th May 2022 and/or after the successful completion of project report by both parties)

MAJOR FINDINGS

- The waste Reduction study questionnaire survey and Field based data collection that was employed with in the interns for the project by providing checklist questionnaires and online survey
- A total of 3500 survey questionnaires were randomly administered among 20 wards around Trivandrum Corporation area.

- Conducted face-face interviews.
- One member of each household who was within the age bracket of 18-80 years was selected to be interviewed.
- The questionnaire design consists of four sections: Current Household solid waste management; Environmental health and Concerns about Solid Waste Management; willingness to participate and Awareness; demography.
- The results are simultaneously presented in tables in the order of the respective sections of
- Likert Scale questionnaire.
- Data collection was interpreted with the help of SPSS.
- Analyzed the health impacts faced by the people of Trivandrum Corporation due to the disposal of solid waste.
- Studied the major governmental projects implemented by Trivandrum Corporation related to Waste Management.
- The survey indicated that the majority of the residents are very much concerned about the poor condition of the environment due to the inappropriate and improper SWM in Trivandrum Corporation.
- Very few respondents have knowledge about reuse, reprocess, and compost. Some of the residents are not much satisfied with the service of the corporation in regard to SWM.
- Based on the findings, the most accurate innovative technological concept is fulfilled for Waste Management in Thiruvananthapuram.

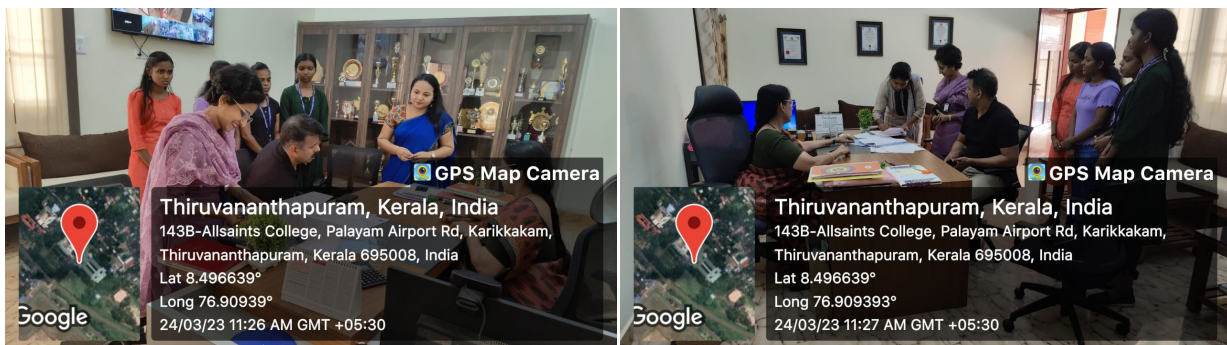


Indiscriminate open dumping of waste in selected wards of Trivandrum Corporation

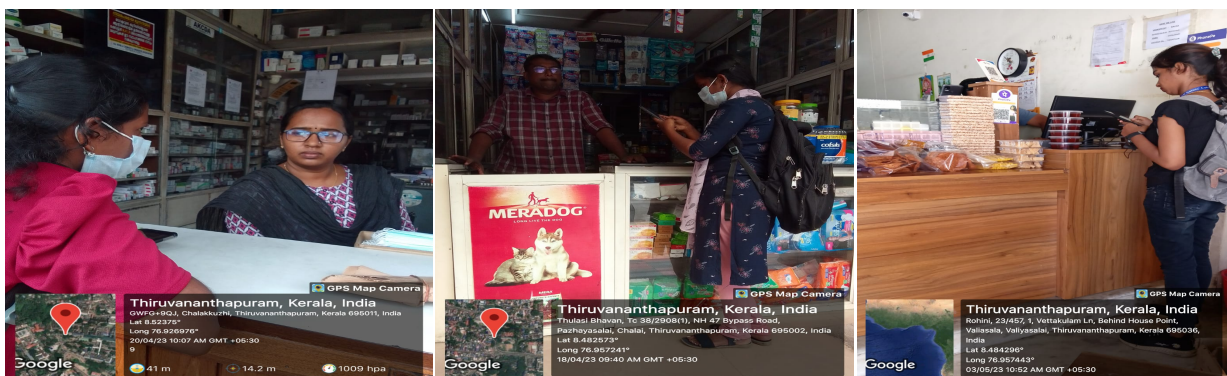
RELEVANCE OF THE STUDY FOR THE SOCIETY

In Kerala, Waste Management is a much-talked-about subject at present. People are slowly becoming increasingly concerned about the adverse effects solid wastes can cause. It is becoming a very sensitive subject in the State for its large vulnerability to the environment and human health. The issues have already become unmanageable, and authorities are groping in darkness for an ultimate solution. In this context,

- The findings of the study would be of significance to the local authority to improve Waste management strategies (both Solid and Plastic) within the city.
- The results of these internship findings could also be used in workshops and seminars on solidwaste management discussion.
- The findings will also contribute to the body of knowledge on solid waste management by health professionals.
- Educating the residents about segregation of waste at the source and not to throw the trash inpublic places



Signing MOU with All Saints College and COFBA Networks



Students conducting face to face interview as part of the internship

RECOMMENDATIONS

- Rather than incineration better disposal method for sanitary pads and napkins can be implemented
- Need to improve the Waste-to-Energy (WTE) plants and technology
- Need to improve in the scope of recycling and dismantling of e-waste, and that implementation of rules framed under the E-Waste Management, 2016 was far from satisfactory.

SUGGESTIONS FOR FURTHER STUDY

It is a very cumbersome task to manage the waste in developing countries because of poor infrastructure and regulations. To manage the solid waste, we need to integrate a huge network of the informal sector with the existing formal sector for better collection, segregation, recycling and final disposal of waste in an environmentally sound way. Moreover, implement EPR in the waste management and handling policies for smooth functioning. The best available practices should be used for recycling and treatment. Finally, the residual left after treatment and recycling is used for waste to energy recovery with the help of incineration and other biotechnological methods in order to avoid maximum landfill disposal and reduce the hazardous impact due to waste contamination with soil and aquatic systems.

CONCLUSION

This internship survey project has being able to provide an indication of the current household solid waste Management in Trivandrum Corporation by focusing on the residents surrounding 20 wards as a study. The residents are generally concerned about the environment but are not doing enough to reduce, recycle and reuse the household garbage they generate. It is clear from their responses that they are ready to help fix the garbage problem if given the appropriate support from the local governments have been identified in this survey report. The natural environment requires protection in order to remain healthy for all of its inhabitants. To protect and bring about a healthy and sustainable environment requires the collective efforts of the public, the environmental health authorities and the private sector. Let us all remember these three big words about 'waste': **REDUCE, RECYCLE, REUSE.**

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