Current Manner Of Waste Management In Residential Areas

1. Abstract

Garbage and other solid waste pose a great threat in residential areas and are attributed to hazards which cause pollution and health risks. Although, there is provision of dry and wet waste bins, only a handful of us take the time and effort to adhere to the rules and segregate the waste. In total, 20 participants were surveyed and the results of the data were interpreted. The survey showed that majority of the residents are extremely concerned about the awful condition of the environment due to improper waste management. Only a few are aware of the 3Rs-Reduce, Recycle and Reuse and are not satisfied with the service provided by the Corporation of their area in this regard.

2. Introduction

Waste can be categorized based on its contents, for instance: based on materials it is divided as organic and inorganic waste, paper, metal and plastic. Based on its hazard potential as toxic or non-toxic, radioactive, infectious and flammable. Based on origin as domestic, industrial, commercial, construction or demolition. In whatever way the waste is segregated, it should always be ensured that it is does not affect the environment in a negative way.

2.1 Objectives

- To analyze waste management in residential areas.
- To examine the knowledge of residents on Waste management.
- To identify and prioritize the framework of environmental sustainability in compliance with applicable regulations, policies and standards.
- To secure the environment and cut down the threats posed to human health by analyzing the pattern and extent of resource use in residential areas.
- To introduce and create awareness about the real concerns of the environment, its sustainability and to encourage them to develop voluntary decency.

3. Methodology And Approach

3.1. A. Questionnaire Design:

The survey consisted of 12 questions. It included a mixture of different types of questions such as multiple choice, yes/no and open-ended questions. A copy and link of the survey can be found in the Appendix.

3.2. B. Sample Selection And Data Collection:

The questionnaire was created in the form of a Google form and shared with a group of 20 participants. The sampling process used here is a self-selecting sample. While this sampling is cost and time effective than random sampling, there might be a degree of self-selection bias in

the results. This is called a response or social disability bias.

3.3. C. Data Analysis:

Response frequencies and percentages were calculated for each question. Pie charts were developed for all the questions to obtain a clear picture.

4. Results And Discussion

Based on the survey conducted on management of waste in residential areas, certain observations can be made and elaborately discussed as follows:

1. As per the pie chart, it is clear that (95.2%) of the participants are familiar with the term “Waste Management” which makes them eligible for the survey.

2. From the above pie chart we can see that (61.9%) of the respondents use waste bins to dispose waste, followed by the usage of plastic bags by (14.3%) of them. This proves that, though colour-coded waste bins are used by majority of the people, there is still a significant amount that use plastic bags, old buckets and urea bags which are not eco-friendly, which can be improved by proper provision of colour-coded waste bins which should reach all corners of the nation and also provide proper environmental education.

3. Wet and Dry waste are the most commonly generated kinds of waste in households as per (95.2% [47.6+47.6]) of the participants, while the least common waste generated is Electronic waste (E-waste). Though these wastes are collected on a regular basis in certain localities, particularly the apartments due to the stringent actions taken against them for disobeyance, this practice is still not followed in many areas of Bangalore.

4. (47.6%) of the respondents say that the waste container or public bin is emptied once every day, (28.6%) agree that it is emptied once in two days, followed by (19%) saying that it is emptied only once or twice in a week. This proves that the rules initiated by the government are being followed in some places, but it still has not spread to all parts of the country due to lack of complete knowledge regarding the policies among the people. As the bins are rarely cleared by sanitary workers, the people resort to the burning of these wastes or dump them in open spaces and therefore it becomes a breeding site for diseases.

5. (71.4%) of the participants say that they dispose waste in the garbage trucks, while the rest (28.6%) say that they dispose it in the public bins. Public bins are placed in many areas but the most common problem with them is their inadequate size and bad condition which leads to the overflow of waste.

6. (71.4%) of the respondents say that they have public bins in their locality but the problem is that they are either not in a good condition as per (27.8%) of them and have inadequate space as per (22.2%), followed by (22.2%) who say that they are in a good condition and have adequate space. This implies that, the awareness programs conducted have reached and developed in certain places but they still have a long way to go.

7. As per the pie chart, (40%) of the respondents say that the state of waste collection in their

locality is fairly good, (35%) say that it is not as good and finally (25%) say that it is good. This shows that this situation needs to be improved.

8. Recycling is an important aspect of waste management. From the survey, it is clear that the (42.9%) of the respondents always recycle waste, while (28.6%) sometimes recycle, followed by (19%) who never recycle and at last (9.5%) who rarely recycle. This shows that they are slowly becoming aware and care for the environment they live in. One good example would be carrying their own bags to the supermarket- as per the pie chart, (95.2%) of the respondents always carry their own bags to the supermarket

9. (42.9%) of the participants agree that the current disposal method is a problem, while the rest (57.2% [28.6+28.6%]) either disagree or are unsure if the current method is good or not. Some of the problems faced by them with the current method of disposal are: bad condition of the public bins causing people to throw garbage in open spaces, irregular waste collection leading to stockpiling of garbage, lack of complete knowledge among the people and so on.

5. Conclusion

The survey is a great indicator of the current manner of waste management in residential areas. It can be inferred that the residents are extremely concerned about the environment but they are not following the 3Rs (Reduce, Recycle and Reuse) of waste management as often. But, it is clear from the responses that they are ready to solve this problem if they are given enough and proper support by the Local government authorities as identified in this survey report. The environment requires protection for us to lead a hale and hearty life. But, to have a healthy and sustainable environment, it needs the collective efforts of the public, the environmental health authorities and the private sector.

6. Limitations

The survey conducted has certain limitations which are as follows:

- The survey was not limited to a particular locality in Bangalore; rather it was focused on the whole city of Bangalore. Hence, no specific problems in areas could be found.
- Most of the respondents were unwilling to provide certain information and filled the questionnaire in a casual way which might have affected the results and conclusion.
- The results of the survey appeared generalized as it was not conducted in a particular locality or organization.