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Clean to Green Society by using Environment Friendly Technology and its Impact on Health

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Abstract: *Environmental technology or clean technology is the application of ecology, chemistry, environmental compliance and automated strategies; to observe, model and conserve the natural environment and resources and to curb the negative impact of human involvement. The new wants of society symbolizes a lot of comprehensive information, understanding and technologies for the society to move towards a healthy atmosphere. Currently use and disposal of plastic by residents through waste management activities in complicated not only creates environmental issues, however conjointly reinforces the notion of a careless society. The paper proposes the issues faced by residents in society and addresses these issues by innovative techniques. New technologies involve human on a larger scale than standard technologies and there by authorizes them by giving them responsibilities and avenue to realize, learn and progress. The study was carried out to set up a healthy society by setting up waste disposal management within the society. Survey was carried out to find out the quantity of waste disposed and electricity used based on different parameters like number of people living in the house, electricity bills etc. Awareness was created among the residents in the society and organic waste processors were installed as a part of waste management programme.*

Keywords: *Green technology, environment, organic waste processor, waste management, electricity, health and hygiene.*

I. INTRODUCTION

Green technologies are the new innovative ideas to be implemented for a healthy environment. It is a path discovered to improve global economy and environmental crisis by developing new products and systems used to conserve the natural environment and resources. Green Technology minimizes the degradation of the nature; it has lesser Green House Gas (GHG) emission making the nature safe[1].

Green technologies have the potential to give birth to sectors which were previously not thought of. Particularly at the time of global economic slowdown and environmental crisis we need to create paths which can improve the economy and the environment. Green Technology gives us an opportunity to combine the two. Waste dumping is one of the ways where we can minimize environmental pollution. It requires lessening at source, recycling and reusing, thus resulting in clean surroundings and healthier environment. Normally people in a cleaner state have better efficiencies and a beneficial life than individuals in contrary conditions. Eco-friendly technology has nice impact on communities of the areas wherever it has been imposed. Atmosphere-friendly techniques facilitate to keep the environment clean and which might profit society financially, physically and mentally.

A. *Few advantages of using green technologies are:*

- 1) It does not discharge anything harmful into the air
- 2) It can bring monetary benefits in certain areas
- 3) Low maintenance and less manpower involvement
- 4) It can slow the effects of global warming by reducing CO₂ Emissions[2].

B. *Disadvantages to Adopting Green Technologies Are*

- 1) High initial investment
- 2) Lack of knowledge
- 3) Option for chemical or raw material inputs is not known
- 4) Alternative process technology not known
- 5) Uncertainty about performance impact
- 6) Lack of human resources and skills[2].

In addition to waste management; raise consumer alertness on water use. Water meter system is also an important way to spot and limit water leakage. Water metering would profit society in the long run as it is proven that water metering increases the competence of the entire water system, as well as help needless expenses for individuals for years to come.

C. Methods

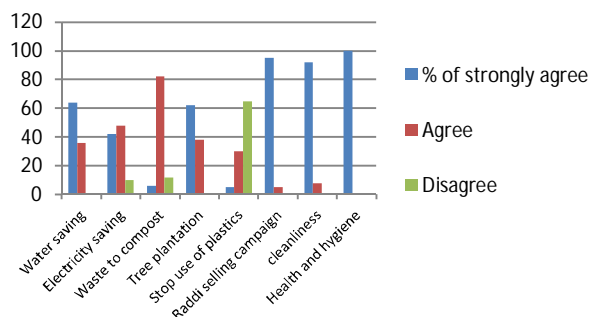
A survey was conducted to learn the level of awareness in people about the green technology. This survey helped us in making a team of intellectuals who are specialised in different domain and contribute for keeping housing society clean and green. Teachers gave theoretical knowledge, Businessmen were ready to give the financial support and they helped us in arranging the resources. Society took the permission from government authorities for implementation of proposed schemes. We received an overwhelming response from residents. Flash mobs were arranged on different occasion to make it informative.

D. Survey Details

52 flats of Salasar Brij Bhoomi Housing Society in Bhayander (West) were taken into observation. Survey form was prepared for knowing the level of awareness about environment by considering the following criteria:

- 1) Total number of family members
- 2) Electricity consumption in winter and summer
- 3) Use of electrical appliances (Star rating)
- 4) Segregation of waste
- 5) Ways you are contributing to keep your society clean and green
- 6) Revenue generation for the procuring the needs of the society
- 7) Tree plantation and its survival
- 8) Festival celebrations using eco friendly items

| Sr. No. | Criteria | % who strongly agree | Agree | Disagree |
|---------|---|----------------------|-------|----------|
| 1 | Water saving | 64 | 36 | 0 |
| 2 | Electricity saving | 42 | 48 | 10 |
| 3 | Waste to compost | 6 | 82 | 12 |
| 4 | Tree plantation | 62 | 38 | 0 |
| 5 | Stop use of plastics and use cloth bags | 5 | 30 | 65 |
| 6 | Raddi selling campaign | 95 | 5 | 0 |
| 7 | cleanliness | 92 | 8 | 0 |
| 8 | Health and hygiene | 100 | 0 | 0 |



Study of impact on society by using eco friendly techniques:

| Sr. No. | criteria | before awareness | after implementing eco friendly techniques |
|---------|------------------------|------------------|--|
| 1 | Water saving | 10% | 45% |
| 2 | Electricity saving | - | 50% |
| 3 | Waste to compost | - | 15% |
| 4 | Tree plantation | 20 | 10 more saplings planted |
| 5 | Stop use of plastics | 90% | 35% |
| 6 | Raddi selling campaign | - | 65% |
| 7 | cleanliness | 70% | 90% |
| 8 | Health and hygiene | 30% | 40% |

E. Organic Waste Processor Installed in the Society

Salasar Brij Bhoomi Housing Society in Bhayander (West) implemented a measure to reduce waste disposal by segregating the daily waste into dry waste which includes plastic, metals etc and wet waste (kitchen waste like cooked food, vegetables, fruits, rice starch etc). The wet waste was collected in “Organic waste processor”. OWP is a BioCNG plant where good bacteria breakdown the organic material in the absence of air producing cooking gas and organic manure. The BioCNG plant runs without electricity[3].



F. Process Description of OWP

After segregating the waste the larger waste is passed through the shredder after which it enters the digester where the decomposition takes place. It takes 15-17 days to convert the waste into manure which is also called as “Biofertilizer”. This Biofertilizer is used in gardening which tends to give high yield.

Problems faced by society in implementation of techniques were lack of awareness among residents, less cooperation, lack of 100% literacy, lack of self motivation.

G. Discussion and Conclusion

In 2016 initial survey was conducted for identification of problem faced by residents of society and tried to fill the gap by interacting with the society and residents. Meetings were conducted and association was formed with the group of people



specialised in various domains. Suggestions were taken from different age groups and planning was done addressing the various issues faced by residents. Major issues taken into consideration were water, electricity, organic waste, cleanliness and health & hygiene.

The first major concern was water saving. Earlier water was supplied for 2 hours in a day. Supply of water was reduced to 30 minutes every day. We were able to saving approximately 45% of water consumption daily.

The second major concern was electricity saving. Though the occupants were not sure about the success of installing solar panels for saving electricity, after installation they were happy about reduction of electricity bill. Also, LED lights were installed in place of CFL. Hence the idea of implementation of solar panels was successful.

Third major issue was disposal of waste at individual level. Awareness was created by hybrid groups of society comprising of youth and adults of various professions along with MBMC (Mira-Bhayander Municipal Corporation) professionals. Idea of installing organic waste processor was proposed and finalised. To install the OWP, "Raddi selling campaign" (old newspaper, magazines, books and other papers) was initiated for revenue generation without creating additional burden on the residents of the society.

Fourth major concern was clean and green society supporting "Clean India" campaign. Flash mobs were organised during weekends and holidays in the society campus to create awareness on cleanliness. Associations were formed to observe the cleanliness of the society. Saplings were planted and survival was monitored on weekly basis.

Last major concern of health and hygiene; was addresses by medical professionals by arranging health checkups camps free of cost twice a year.

II. FUTURE SCOPE

- A. By saving water today the society is contributing their bit towards the water scarcity issue.
- B. By installing solar panels and using solar power the usage cost will be drastically reduced and the installation cost will be recovered in the long run.
- C. Revenue can be generated by selling the compost and cooking gas can be self utilized or sold.
- D. By maintaining clean and green environment, health and hygiene we can have a healthy long life and inculcating good habits in future generation.

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