

A Study on Innovation in Waste Management in Tirunelveli District

M. Chandra

PhD (Scholar), Sri Sarada College for Women, Tirunelveli-11(India)

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Corresponding Author

Email: chandrarohini93[at]gmail.com

ABSTRACT

This paper explores whether there are discernible differences in the environment innovation and performance of chemical firms that can be explained by differences in the management practices and characteristics of the firms. Using data from a firm visits, and phone interviews, this research assesses the pervasiveness of the adoption of environmental management practices. It also assesses whether the adoption of these practices is related to leadership in environmental innovation and performance. This paper shows high levels of adoption of several practices for improving environmental innovation and performance. Firms are using practices such as total quality management, certification of suppliers, R&D, and the involvement of employees in innovation and training to integrate environmental management with their production systems. In addition, firms with the highest adoption levels of environmental practices have substituted cleaner materials and changed their production processes for cleaner production, and they are leaders in reducing their generation of chemical waste. Hence the study was made in the tirunelveli area and 80 respondents were randomly selected for the study.

1. Introduction

Global systems of production and consumption continue to impose considerable consequences on the environment and public health. Most of the used natural resources return to the environment in the form of waste, which in most cases is toxic and unsuitable for recycling. Waste is a global issue and if not properly dealt with, waste poses a serious threat not only to the biosphere, but also to public health. It is a growing issue linked directly to the way society produces and consumes. Meanwhile, global trends such as population growth, urbanization and the emerging 'consumer middle class' in many developing countries are expected to drive steady growth in global competition for resources in coming decades. The problem is further exacerbated by the consequences of the enhanced technological progress which leads to generation of more waste products which do not dissolve. Addressing these challenges will require fundamental changes in global systems of resource use and economic growth. That is why one of the pressing issues for developing countries will be a shift away from a linear model of resource consumption towards a circular economy where nothing is wasted. Proper waste management is one of the most important contributions humanity can make to reduce its impact on the natural world. Environmental sustainability is the core issue that will need to be addressed for development to focus on human wellbeing and yet stay within the limitations of planet's capacity. Environmentally sound waste management is one of the key elements for sustainable development.

2. Objectives

1. To analysis of recovered materials through recycling.
2. To explain dig estate - an organic fertilizer and soil improver
3. To study on Carbon credits – additional revenues
4. High calorific fraction refuse derived fuel - Renewable fuel content dependent upon biological component

5. Residual unusable materials prepared for their final safe treatment.

3. Scope

Researchers and Scientific experts of Advances in recycling discipline are encouraged to publish innovative ideas in Open Peer-Review Journals. Advances in recycling Journals broadly covers Solid waste recycling, organic waste recycling, waste water recycling, agricultural waste recycling, sustainable production and consumption patterns, Innovation processes, valorizing waste, Material flow analysis, Life cycle assessment and management of resources etc. Advances in recycling Impact Factor Journals allows quick publication and open discussion will enhance the clarity and information dissemination of a specific topic. The rapid and editorial bias free publishing system will aid the readers to access and disseminate knowledge for the betterment of the scientific society.

4. Method of Data Collection

This study is based upon the analysis of two types of data sources available data collection i.e.

1. Primary data was collected from 80 respondents of waste management from in Tirunelveli district and the tools like percentage analysis and rank were used to analysis the data which is collected from the respondents.
2. Then secondary data from many articles and journals related to competitiveness in Human resource management and from the websites related to the same.

5. Analysis of Data

Table-1

Gender	No of Respondent	Percentage
Male	50	62.5
Female	30	37.5
Total	80	100
Age wise		
Below 25 years	25	31.25
25-35 years	20	25
35-45 years	18	22.5
45-55 years	15	18.75
Above 55 years	2	2.5
Total	80	100
Monthly income		
Below Rs 25000	15	18.75
Rs 25000-35000	20	25
Rs 35000-45000	20	25
Above Rs 45000	25	31.25
Total	80	100
Educational qualification		
Hsc	10	12.5
Graduate	15	18.75
Post Graduate	20	25
Professionals	25	31.25
Others	10	12.5
Total	80	100

Source: Primary data

Table 1 shows that out of 80 respondents 62.5 percentage of the respondents are male, Next 31.25 percentage of the respondents are under below 25 years, Next 31.25 percentage of the respondents are under monthly income of Above Rs 45000. Next 31.25 percentages of the respondents are professionals.

Table-2
Ranking of waste management

Particulars	Total	Mean score	Rank
Recycling	365	73	1
Raw materials	275	55	4
Fertilizer	330	66	2
Products goods	313	62.6	3

Source: Primary data

Table-2 shows that updating treatment of recycling ranked first score 365 , next lack of treatment of fertilizer second score 330, next treatment of Products goods ranked third score 313, next treatment of raw materials ranked fourth score 275.

6. Findings

The findings of the present revealed the following

- The majority of the respondents are male.
- The majority of the respondents were laid on between Above Rs 25000 monthly incomes.
- The majority of the respondents are under the age group of Below 25 years.
- The majority of the respondents are professionals.
- The majority of the respondents says that raw materials is more information overload.

7. Suggestion

- It should be ensured that all states have verbatim same provisions for rates, levy, administration and procedures. Only negative list or exemptions may vary based on regional issues.
- A large number of compliances / returns / reconciliations are proposed. This will only burden all stakeholders; will make waste inefficient and a regressive tax. Cost of compliance will be major issue which may take away the benefits of waste management.
- Smooth, transparent and simple transition provisions are needed rather than revenue centric provisions.
- Refund of any credit balance other than for exports is not allowed. This should be allowed subject to safeguards / limitations.
- Special focus on awareness and training of all-officers, professionals and assesses is required including making available literature on waste available in different languages.

8. Conclusion

This trend is typical for the developed countries where the waste management process is increasingly open, democratic, and covered by the media. State agencies and local authorities present plans and forecasts in this sphere, inform the society about events, run active campaigns promoting waste minimization, encourage the population to have social responsibility for waste disposal and treatment, express the public opinion, and conduct effective exchange of information between the authorities and the civil society. Using waste management as a way to combat GHG and climate change is one of the most innovative and common-sense concepts in Waste today. The role that the waste industry can play in helping to avert climate change must not be underestimated. Given the correct legislation to work to the technologies which are already making great leaps in this area will show how much good they can really do. Although the costs of implementing these processes is oftenseen as prohibitive, the cost to the planet and the resulting financial cost of dealing with this, make all of these moves more than worthwhile.

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