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A study of cost effective measures through recycling of waste management: A case study of MCD

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Abstract:- Recycling can benefit community and the environment. "Reduce, reuse, recycle" is the mantra we often hear every time there's a discussion about recycling. Reducing waste means not only to reduce the volume of waste that goes to the landfills, but it also means decreasing the amount of dangerous chemicals that seep into the soil and pollute the air due to improper waste disposal. The purpose of this study is to provide a comprehensive overview of current methods for reusing and recycling construction and demolition (C&D) waste materials. Construction and demolition practices are also examined along with policies and legislation influencing C&D waste management. This thesis examines many of the waste materials produced by the Industrial, Commercial & Institutional sector. A particular effort was made to describe C&D waste recycling methods which are not widely practiced.

1. INTRODUCTION

1. **Financial Income** – There is money in recycling. In the level of the individual, one of the benefits of recycling is financial income. There are a lot of things lying around the house that we no longer want or need that might just end up in a dumpsite somewhere, that we can recycle and earn money from. Cell phones, PDAs, ink cartridges, etc. There is also the financial benefit for the communities who recycle in that there will be reduced costs of waste disposal or recycling. Consider these recycling facts: aluminum cans are the most valuable item in your bin. Aluminum can recycling helps fund the entire curbside collection. It's the only packaging material that more than covers the cost of collection and reprocessing for itself.

2. **Recycling helps conserve limited resources** – Throwing away a single aluminum can, versus recycling it, is like pouring out six ounces of gasoline. Last year, Americans recycled enough aluminum cans to conserve the energy equivalent of more than15 million barrels of oil.

3. Recycling is energy efficient – On a larger scale, recycling could translate into huge reductions in our energy costs. Consider these facts: It costs more energy to manufacture a brand new aluminum can than it does to recycle 20 aluminum cans. 20 cans can be made from recycled material using the same energy it takes to make one new can.

4) **Recycling builds community** – In almost all communities in the country today, there is a growing concern for recycling and the environment. People are working together in recycling programs, lobbies, and free recycle organizations to help promote recycling. We will be featuring these groups in our upcoming posts and link with the various networks to help you locate the nearest recycling center or free recycle group nearest your location.

5) **Recycling creates jobs** – Incinerating 10,000 tons of waste creates one job; land filling 10,000 tons of waste creates six jobs; recycling 10,000 tons of waste creates 36 jobs.

6) **Recycling builds a strong economy** – Done on a nationwide scale, recycling has a huge impact in economy in terms of jobs, energy cost reduction, resources conservation

7) **Recycling is Earth-friendly –** No matter how safe and efficient our landfills are being billed to be, the possibility of dangerous chemicals coming from the solid waste deposited in these landfills, contaminating underground water supply is always present. Combustion or incineration of our solid waste is effective and energy-generating, but we pay the price in increased air pollution.

Recycling being a process to conserve limited resourced and energy efficient is must for developing sustainable environment and is need for our future. Hence there is need to further research on recycling of different waste sources, such as construction and demolition waste, waste water and solid waste. Solution to the same can be developing a proper waste management plant i.e. cost effective.

2. STATEMENT OF PROBLEM

Construction and demolition waste is made up of two individual components: construction waste and demolition waste. It arises from activities such as the construction of buildings and civil infrastructure, total or partial demolition of buildings and civil infrastructure, road planning and maintenance. How to manage these wastes that comes from the industry.\

3. OBJECTIVE

The goal of this research was to analyze the effects of the implementation of reuse systems on construction project schedules and the cost of building projects in the Municipal Corporation of Delhi areas.

4. PURPOSE OF THE STUDY

To study economy and environmental aspect of recycling and to analyze the effects of capital cost, maintenance cost, payback time, project schedule, water conservation issues, tax incentives, complexity of the system on the implementation of waste water reuse systems in the MCD area.

5. HYPOTHESIS

The overall research and data analysis approach adopted for the study was assumed to be adequate to analyze the effects of the implementation of waste reuse systems on construction project schedule and cost of commercial and industrial construction projects.

6. SIGNIFICANCE OF THE STUDY

The environmental condition is not good since the wastes coming out form the different industry. Those wastes may be harmful for environment even for us also. So these methods can be very helpful and significant for the environment and for us also.

7. NEED OF STUDY

The reuse and recycling system for the landfills, waste water, C&D waste will help prolong the lifetime of the resources, by extracting of the reusable and recyclable wastes. Reusable and recyclable materials can be sold, which offsets the cost of waste disposal. In addition, natural resources can be conserved by reusing and recycling the separated waste, which will be an important step towards C & D waste solid waste management.

8. SCOPE OF STUDY

This study will focus on the cost effective measures through recycling with reference to C&D waste management, waste water management and solid waste management at M.C.D. area in Delhi which are through interview and questionnaire to the M.C.D. employees at construction site., landfills and water treatment plants. The parameter for this research is the analysis of waste management strategies with respect broad range of recycling markets from limited recycling to active recycling.

9. METHODOLOGY

The research will be based on primary as well as secondary data. Data was collected concurrently. The primary data will be collected through structured questionnaire. Methods used for the study involved open-ended interviews with different the employees of M.C.D. and users of recycled products. The secondary data will be collected through websites, manuals, books, journals.

RESULTS

Construction and demolition practices are also examined along with policies and legislation influencing C&D waste management. Recycling process can help the environment to be clean and safe from dangerous materials by waste management process.

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