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A Review of Waste Management in Indian Scenario

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Abstract:- In modern scenario waste management is a former concept for everyone. Every industry is trying to recycle the waste, control the waste, but due to lack of awareness of technology, many peoples are facing difficulties. Different type of waste has different way of dumping. In this paper researcher will review of different article related to waste management and try to get every information related to waste management. India's current waste management systems are unable to handle the volume of waste produced by an expanding population density in cities has an effect on the environment and public health. Although there are many obstacles and challenges, there are also many opportunities. This study examines the state of municipal waste management in several Indian regions. The motive of this article is to get previous research done in India on waste management.

Keywords:- *Waste management, Control, Recycle, Industry, Dumping, Municipal.*

I. INTRODUCTION

All the behaviours and actions required to manage garbage from its creation to its final disposal are referred to as waste control or waste disposal. This includes, but is not limited to, managing and recycling garbage as well as controlling and enforcing it. It also involves the legal and regulatory.

The three most popular waste management approaches are:

- Recycling \sIncineration \sLandfill
- Reprocessing Animal Feed Biologically

Let's examine these various waste management techniques in more detail using the following examples:

➢ *Recycling*

Recycling significantly improves environmental protection. Recycling is one of the different methods of waste management that prevents trash from being dumped in landfills or waterways by turning it into useable litter components. By requiring labelling to indicate whether or not a material is recyclable, many organisations and towns have made it simpler to recycle things.

This trash management technique is fantastic in that it benefits both the environment and the economy. It generates a sizable amount of income, creates thousands of jobs, and spares the government resources required for garbage programmes. To earn money from recycling, only bring recyclable waste to the nearest recycling facility.

➢ *Incineration*

The burning of waste items is a part of this sort of waste management. Another name for this disposal technique is heat treatment. A wide range of waste products may be incinerated and disposed of on a personal or commercial scale. Most nations with little available land take into account incineration. The heat, energy, or steam generated by burning waste items can be used in several ways. The fact that this disposal method may contribute to air pollution is one of its disadvantages.

➢ *Landfill*

It is among the most widely used forms of waste management systems worldwide. It comprises gathering, moving, dumping, and burying waste on authorised property. To deal with waste, many communities are planning desolate and barren areas.

Authorities are committed to making sure that each landfill is built in a way that promotes good sanitation and efficient land use. However, landfills are a substantial source of health and environmental issues that many communities are concerned about. For instance, the gas released from these sites is frequently quite hazardous.

➢ *Reprocessing via Biology*

Biological reprocessing, a common approach among the various types of waste management, allows chemical waste materials, such as kitchen garbage and paper products, to be reused after the process. In biological reprocessing, various physiological systems, such as recycling and biomass gasification, are employed. Writing is a biological process that happens naturally under controlled circumstances. Natural gas, which is used to generate heat and power, is one of the stock's endpoints. Industrial waste is frequently disposed of through the process of biological reprocessing.

➢ *Pet food*

Food waste is a severe problem that requires careful thought. The United States Department of Agriculture estimates that between 30 and 40 percent of the food produced in the country is consumed by consumers and retailers. Given that the estimated worth of the food is $161 billion, this is a serious issue. The reason why the country is topping the globe in food waste is obvious. Manure and livestock feed are two ecological waste management techniques that can help preserve food.

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II. MANAGING WASTE IS IMPORTANT

The environment is protected from the hazardous effects of the inorganic and biodegradable elements included in trash via waste management. Air pollution, soil erosion, and water poisoning can all result from improper waste management.
If waste is collected and managed well, it can be recycled. Plastic, glass, and paper waste can be separated into distinct columns so that they can be processed to create new products while conserving natural resources. Additionally, this trash poses a threat to both human health and marine life when it is not recycled and instead ends up in landfills or the ocean. Sewage treatment is typically not done effectively, which causes eutrophication and beach closures in most parts of the world. The World Wildlife Fund (WWF) estimates that each year 8 million tonnes of plastic enter the ocean.

❖ *Why waste management should be a priority for industry?*

➢ *Environmental Advantages*

Every industry produces garbage. Some people may merely have trash or unclean water, while others may have toxic or hazardous wastes that need specific care and disposal. Whatever kind or amount of garbage your business produces, it all has one thing in common: it costs you money. In actuality, you pay for it twice: once when you acquire it and again when you discard it. The basic line is that you can save money by avoiding waste.

You will need to manage, treat, and dispose of garbage less if you consume and discard less. There are several ways to prevent waste, including:

- Investing in sturdy, long-lasting materials
- Attempting to get rid of any raw materials that won't go into your finished good or service
- Utilising non-toxic goods
- Minimising the use of packaging
- Conserving energy or water
- Putting in place in-process recycling

Many waste reduction strategies, such printing on both sides of the page and sending documents by email instead of printing them, are affordable and easy to implement. They frequently merely call for a shift in mind set or operational practises.

No matter the size or type of organisation, waste prevention is a profitable business strategy. Along with cost savings, it can help you increase worker safety, lower liability, and improve public perception. Additionally, you might be able to avoid pricey licences and government approvals if the waste you are eliminating or reducing is governed by state or federal law - and your reductions are big enough.

➢ *Principles of waste management*

- Waste hierarchy, refers to the "3Rs rule" of Reduce, Reuse, and Recycling, with waste reduction and minimization being the most desirable goal.
- Extended producer responsibility, which includes end-of-life disposal and includes all environmental costs in the market price of a product.
- The polluter pays concept states that waste generators are responsible for paying for the proper disposal of their waste.

III. LITERATURE OF REVIEW

With the help of literature of review Researcher trying to collect the information related to waste management. In previous years many research is done by different researchers.

Dr. Raveesh Agarwal, Mona Choudhary and jayveer singh, June 2015. “Waste Management initiative in India for human well-being” researchers says that there is an urgent need for a well-defined strategic waste management plan and a strong implementation of the same in India in order to avert any pandemic and to make each city a healthy city—economically and environmentally. The strengths and weaknesses of the community as well as the municipal corporation must be systematically analysed in order to achieve the financial sustainability, socioeconomic, and environmental goals in the field of waste management in India. From this analysis, an efficient waste management system can be developed with the help of various stakeholders.

Abhishek Nandan, Bikarama Prasad yadav, Soumyadeep baksi, Debajyoti bose, Janusry 2017. “Resent Scenario of solid waste management in India” Researchers claim that Due to the increased use of electronics and other things, plastic garbage and e-waste now make up a sizeable portion of the overall waste stream. If any part of solid waste management is not handled properly, these wastes may pose a risk to the environment or human health. In India, the approach to managing solid waste is still not scientific. Effective Solid Waste Management should be practised not just in urban regions but also in rural ones. Although the government has undertaken numerous steps to enhance waste management capabilities, there is still a long way to go before municipal solid waste management goals can be successfully met. Different NGOs are essential in raising public awareness and enlisting citizens in better waste management procedures. Swachchh Bharat Abhiyan, often known as the "Clean India Mission," is the most recent effort. The promotion of effective waste management practises among the public is one of the goals of this campaign.

Sunil Kumar, Stephen R. Smith and others February 2017. “Challenges and opportunities associated with waste management in India” India's current waste management systems are unable to handle the volume of waste produced by an expanding urban population, which has negative effects on the environment and general welfare. Although there are many obstacles and challenges, there are also many opportunities. India now relies on an insufficient garbage infrastructure, the unorganised sector, and waste disposal. Public involvement in trash management raises significant challenges, and the community as a whole generally lacks

responsibility for waste. The development of proper and sustainable waste management systems depends on raising community awareness and altering people's attitudes toward garbage.

Shweta choudhary 2019. A Research Paper on Solid Waste Management. According to the researcher the system for managing the generation, storage, collection, transport, treatment, and disposal of solid wastes is known as solid waste management. The state of a nation's growth can be described in a number of ways. Regarding its impact on solid waste management, this publication's growth status is divided into two categories based on the level of industrialization development and the accessibility of financial resources. Landfilling is still the most common method used in the north-eastern region of Illinois, despite the many new approaches that are being developed for the management of solid waste. Landfill construction and closure could pose a risk to the quality of the air and groundwater owing to leachate ingestion and emitted gases. Even though appropriate treatment and monitoring are maintained for a considerable amount of time (30 years), this could endanger the public's health.

Priyabarta Banerjee, Abhijit hazara ,Pritam ghosh, and others January 2019.”Solid waste management in India: A brief review” According to the researchers it is imperative that society as a whole raise awareness in order to reduce the production of solid waste. A thorough investigation finds that a significant portion of the overall volume of solid waste is contributed by municipal solid waste (MSW). However, e-waste is the type of garbage that is most frequently produced and is a good source of a number of harmful substances. Increased demand for nuclear energy globally increases production of radioactive solid waste (RSW), which could cause hazardous radiation effects. Whether intentionally or accidentally, human society is on the verge of producing vast quantities of solid garbage that will have a negative impact on people's health. The saying "prevention is better than treatment" is fairly common, and in this case, preventing these behaviours is preferable to treating the negative effects they have on living systems and the environment.

IV. CONCLUSION

To create effective and sustainable waste management systems, it is essential to raise community knowledge and alter people's attitudes toward garbage. Maximum resource extraction from trash must be linked with secure disposal of remaining garbage through the construction of engineered landfill and waste-to-energy plants to provide sustainable and economically successful waste management. Swach Bharat Abhiyan intends to involve residents in the Clean India effort [9]. and to clean both urban and rural regions with support from the general public. But it's important to make sure that everyone is trusted and ethically committed to the Clean India Mission.

Waste management is a comprehensive system that includes reducing waste generation, collection, segregation, and proper transportation to the appropriate recycling hub. It does not merely deal with waste treatment and disposal. Solid waste cannot be properly disposed of using traditional methods to lessen its toxic effects. The biggest obstacles to efficient solid waste management are a lack of funding, institutional shortcomings, and a lack of public support. Only collection and transportation are covered by 80–90% of the overall budget; more funds must be set up for solid waste disposal and treatment. For this industry, the viability of the current business model continues to be a worry.

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