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Management of plastic and Non-plastic material in Today Generation

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ABSTRACT

The waste hierarchy is described as a pyramid because the fundamental principle is to avoid waste generation should be encouraged by policies. The next or desired move is to explore new uses, i.e., reuse, for the waste produced. Material recovery and waste-to-energy follow this stage. The final intervention is dumping, without energy recycling, in landfills or by incineration. This last stage is the previous waste resort that has not been stopped, redirected, or retrieved. The waste hierarchy reflects the progression through the linear levels of the pyramid of waste management of a substance or content. For each commodity, the hierarchy reflects the later sections of the life cycle for each product. The objective of this paper was to review and to assist and develop our climate and to help minimize packaging waste and transition to the lifestyle of zero waste.

Introduction

Waste management involves growing the waste we generate. It means handling and disposing correctly of the waste we have already developed**.** Waste management or disposal of waste is the operation and intervention appropriate for the processing of waste from its inception to its final disposal. This covers the waste generation, processing, storage, and recycling, as well as control and enforcement of the waste management process. Even in nonzero waste projects, this checklist can be applied to identify lacunae and adopt the appropriate corrections to make the projects sustainable and zero waste. Waste disposal needs a holistic approach. It needs to be seen as a "money gainer" and not as a "money loser" Daily waste can generate employment, income, and income. Coverage of landfills, which is the current norm, in place of waste processing, only increases costs rather than (Atiq *et al.,* 2015, 2014, 2011, 2016). India faces challenges due to its lack of awareness and rampant dumping. Zero waste means zero pollution to land, water, and air due to efficient MSWM, zero waste to landfills, and sustainability. Since there is no waste going to landfill sites, there are no associated transport costs. This reduces the monetary stress and carbon footprint of MSWM due to transport. In the current scenario of waste management practices, only the after-effects of the waste have been addressed, i.e., various strategies and solutions have been devised to be implemented once the waste has been generated. There have not been many strategies to focus on the initial reduction of municipal solid waste locally through various channels, such as waste-to-energy projects (Yeny *et al.,* 2015).

Waste Management Principles

Waste hierarchy

The waste hierarchy applies to the removal, reuse, and recycling of the '3 Rs', which classifies waste management methods in terms of waste minimization according to their desirability. The hierarchy of waste is the core of most waste minimization techniques (Kiriaki *et al.,* 2013). The goal of the waste hierarchy is to derive from goods the most functional advantages and to produce the least volume of final waste.

Benefits of using Zero Waste

- Supports sustainability
- Faster Progress
- Saving money
- Goals of sustainability
- Improved material flows

Resource efficiency

Resource productivity represents the awareness that existing supply and demand levels cannot support global economic growth and development. Humanity extracts more energy worldwide to generate products than the earth can replenish. The quality of power decreases the environmental effects of the processing and use

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of these products, from the final exploitation of raw materials to their last use and disposal. This resource efficiency method will tackle sustainability.

The life cycle of Product Analysis

The life cycle starts with architectural design and continues to manufacturing, delivery, and primary use, and then follows the processes of reduction, reuse, and recycling through the waste hierarchy**.** Every phase of the life cycle provides policy action opportunities to reconsider the need for the product, to redesign it to eliminate the potential for waste, to increase its use, and to reduce its packaging**.**

Socio-Economic and Health Problems Solved by Zero

A significant increase in a waste generation has followed the growth of industrialization worldwide. In 2012, the World Bank estimated that urban communities produced 1.3 billion tonnes of industrial waste and forecast that by 2025 that figure will exceed 2.2 billion tonnes. The growth in the production of solid waste raises the need for landfills. These landfills are being put near cities with the rise in urbanization (Ramayah *et al.,* 2012, Asmawati *et al*., 2011, Zotos *et al.,* 2009). In areas with low socioeconomic mobility and predominantly non-white minorities, these landfills are overwhelmingly situated. Findings showed that these locations are mainly targeted as waste sites because licenses are issued more quickly, and there was less opposition from the group in general. In comparison, over 400 hazardous waste plants have issued statutory compliance penalties over the past five years for undisclosed violations perceived to be a danger to human health. Waste management needs to switch from a linear system to a more cyclical one to reach zero waste, ensuring that resources, goods, and items are used as quickly as possible (Timlet *et al.,* 2008). Materials must be selected so that they can either return to an environmentally sustainable cycle or stay viable throughout the manufacturing cycle (Palmer 2004, Zaman 2015, O'Farrell 2019). Zero waste facilitate reuse and recycling, but, most critically, it reduces mitigation and product innovations that take into account the whole product life cycle (Butler 2019). Zero waste models tend to minimize the consumption of products, the use of recycled materials, and the use of environmentally benign materials, longer product life, reparability, and ease of disassembly at the end of existence. A zero-waste policy promotes all three of the environmental targets widely agreed.

1. Economic well -being
2. Environmental protection
3. Social well- being

Health Issues Related to Landfill

Promoting a cyclical commodity life of zero waste will help decrease the need to build and fill landfills. This can help mitigate the occurrence of congenital disabilities and respiratory disorders associated with toxins emitted from landfills (Qingbin *et al.,* 2015). Zero waste can also help protect local habitats and supplies of drinking water by avoiding toxins into the atmosphere. Many diseases spread due to toxic metals present in the atmosphere, which are discussed below:

Insufficient birth weight and congenital disabilities

It is associated with proximity to landfills, particle matter, and nitrogen dioxide pollution.

Respiratory disorder and lung cancer

Hydrogen sulfide released from toxic atmosphere cause cancerous disease along with infection in respiratory organs, which resulted in death after a prolonged illness.

Conclusion

Due to the contamination of our indoor and outdoor environment by plastics, we eat, drink and breathe plastics every day. Plastics are not biodegradable, and bacteria known to cause human diseases tend to grow on the plastic surface. Thus, Zero waste is an efficient lifestyle choice, and it helps to improve economic benefit for both individuals and the collectives.

Refereces

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