



EE375 APPLIED ECONOMICS FOR NATURAL  
RESOURCES AND ENVIRONMENT

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POLICY BRIEF

# Waste Management in India

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# Introduction

*Management of solid waste impacts every individual worldwide. This includes both people who conduct their own waste or governments who provide waste management services to citizens. Moreover, around 2.01 billion tonnes of solid waste is produced every year, with at least 33 percent of that not being managed in an environmentally sound manner (Statista, 2021).*

Waste management refers to an organisation of all activities and stages related to the disposal of waste. This includes wide ranges of actions such as discarding, destroying, processing, recycling and reusing waste together with monitoring and regulation. Even though waste has been created by humans since the beginning of time, efficient ways to cope with them are not widely implemented. With poor waste disposal systems, almost every aspect of life is negatively affected. One of the most impacted factors is human health which is undeniably essential.

The degrees of destruction varied according to how well the country can handle disposal of waste. Countries that are capable of contending with waste are better off as they are free of potential problems while other countries are struggling with these influential issues. India, a country in South Asia, is one of them.

India has been suffering from a number of problems arising from waste disposal. For instance, severe air pollution as a result of burning waste at landfill, or the most recent situation where a river is covered by floating toxic foam which disturbs the local festival. In order to tackle these problems, a useful and practical policy has to be put into practice along with people's engagements.

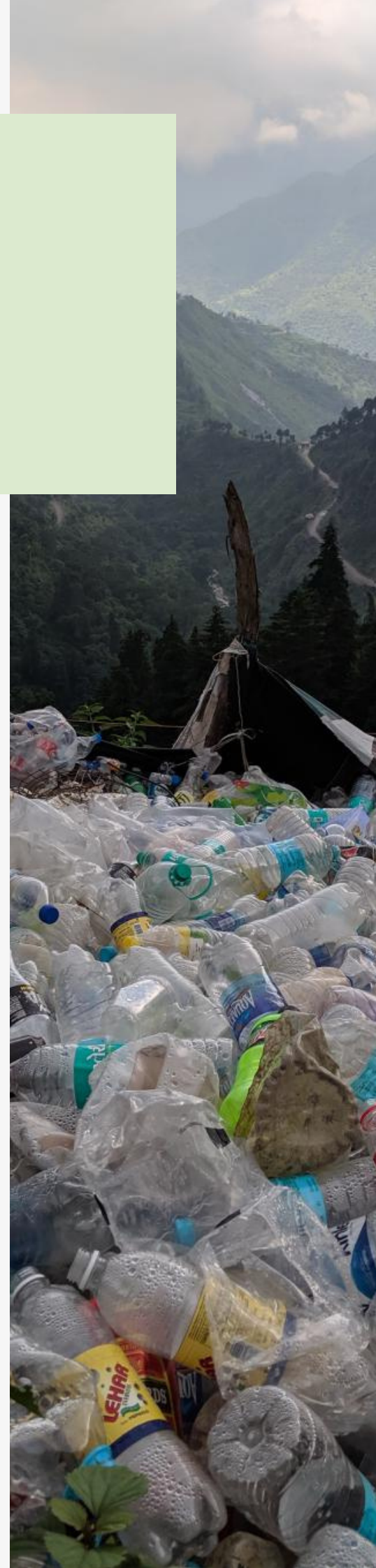
This report is intended to raise awareness of impactful issues related to waste management in India and propose an effective policy as a solution to the occurring problems. The report is structured as follows. After the introduction, significant problems will be explained followed by proposing policy, economic insights, SDG goals relation and conclusion respectively.

# Waste Management Problems

*Waste is an unusable residue which can be categorized into many types such as organic waste, hazardous waste, liquid waste, solid waste, and recycled waste. Each category needs different methods to dispose and manage. There is an increasing trend of improper waste management in recent years that leads to negative impacts on the environment and human well-being.*

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Generally, poor economic development countries suffer from poor waste management owing to their lack of infrastructure. But, their waste generation rate is also low. However, India faces both inefficient waste management and a growing rate of waste generation as they want to boost the economic sector. This is a very unique situation in India which requires unique solutions.



# Problems & Challenges in India

Urban India generates more than 60 million tonnes of waste annually (MSW), and is predicted to reach 165 million tonnes by 2030. The two-third of wastes is solid waste with only 25 percent being treated, the rest is dumped into the landfills. The public bins are not sufficient and almost covered with waste overflow all over the streets. The waste transported vehicles are also not enough. Many Indians recklessly litter the streets too. In the past, they litter the biodegradable wastes which can be eaten by animals; however, nowadays there are mostly plastic wastes. It is not easy to change their littering culture.

As mentioned before, there are many challenges in India's waste management. First, their landfills' size is constantly increasing and becoming a major concern by exceeding their capacity and contaminating around their neighborhood. Delhi generates the most waste with a limited dumpsite. Hence, there is more cost to waste transportation. Second, their centralised technology, waste-to-energy, uses illegal mass-burning technology causing air pollutants. Moreover, they have to transport waste from the outskirts, if they can decentralise, it would reduce this cost. Nevertheless, this project and contract agreements were signed by the private sector and they call for tipping fees.





# Economic insights

India is one of the fastest developing countries in the world. According to this rapid growth, solid waste significantly increases from both industrial and household sectors in India's metropolitan areas

To manage solid waste, India's governments have established urban local bodies (ULBs) to provide basic services to the collection, processing, transportation, and disposal of waste. However, most ULBs are facing inefficient waste management due to financial problems, lack of infrastructure and technology, and a lack of involvement from the private sector and non-governmental organizations. The poor financial health of ULBs is caused by the deficiency fund for solid waste management (SWM) service which is one of the key functions of the ULBs.

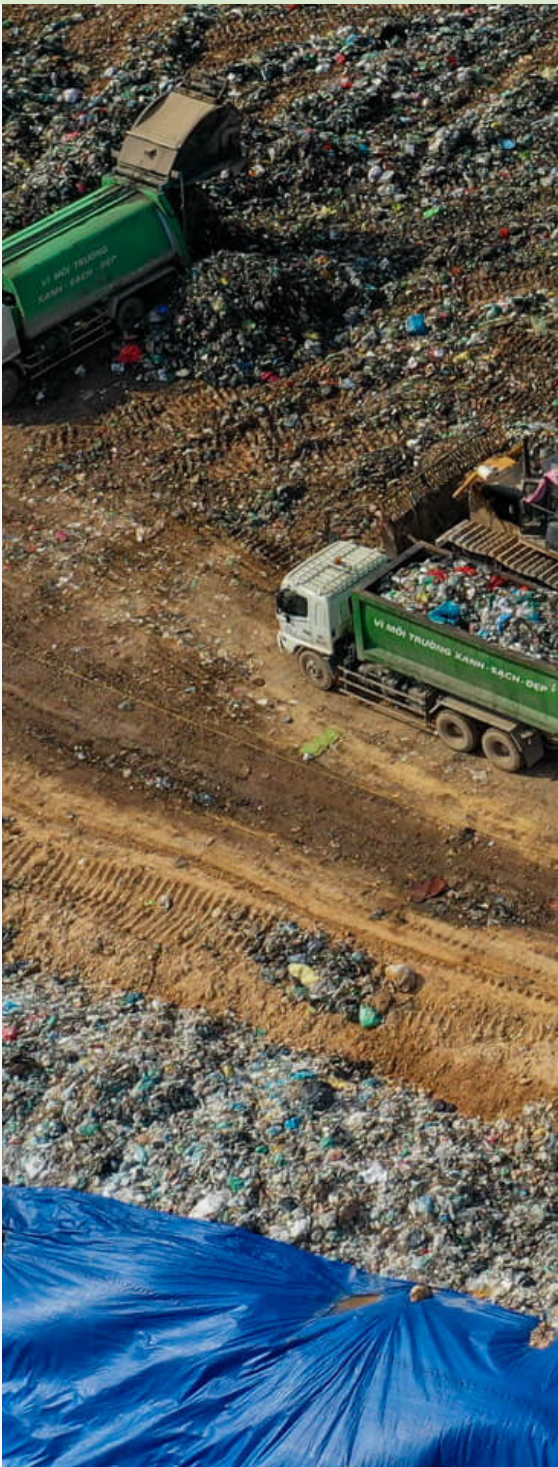
Typically, the financial sources of municipal authorities in India, such as ULBs, is from levy taxes, charges, fees, and the like for raising money to meet their statutory obligations. Although the ULBs have the power to impose the tax, most services still do not have sufficient funds to operate. This is because the tax base is generally very weak; many people and taxable properties are not registered and escaped from the tax net and the tax recovery method is also weak. Moreover, there is also the government failure in the management of SWM tax and Usage fees. In many cities, they rarely levy sanitation or municipal cleaning tax, and they rarely charge user fees for rubbish collection or any other SWM service. Only a few communities have had the foresight to charge user fees for door-to-door collection. These failures not only lead to financial burden for ULBs but also less community participation in sustainability initiatives .

Furthermore, as a developing country , India's government chooses to focus on infrastructure development more than the waste management system which they think is not worth money.



# Policy : Solid waste management rules, 2016

The policy that is applied in India nowadays is the Solid Waste Management Rules (SWM), 2016. These rules consist of 6 categories of waste management which are plastic, e-waste, biomedical waste, hazardous waste, and construction and demolition waste management rules.



For waste disposal, this law intends to make people separate waste at source. For household waste management, it's mandatory to separate waste by separate into 3 categories - Biodegradable waste, dry waste and domestic hazardous waste. For large waste-distributors, hotels and hospitals for example, they have to cooperate with urban local bodies which are local authorities who govern local areas.

For urban local bodies responsibilities, they have an obligation to include informal waste pickers into the waste management system. There are about 1.5 million subsistence informal waste pickers all over India. This policy makes urban local bodies manage their waste management system better and give informal waste pickers more income opportunities. Moreover, urban local bodies are permitted to charge bulk waste generators for waste collecting "user fee" and to charge "spot fine" people who burned the waste or discarded waste in public spaces.



Fast-moving consumer goods (FMCG) producers who use non-biodegradable packaging must put in place a waste collection system caused by their production.

For waste to energy policy, SWM rules 2016 emphasize promotion of waste to energy plants. This rule requires all industries which use fuel and located in a 100 km area nearby solid waste-based Refuse-Derived Fuel (RDF) plant.

Generally, This policy which was enacted recently still has a lot of problems. First problem is the policy is not incentivized enough to make people follow the rule which leads to the problem that informal sectors such as households neglect the rule because of low and ineffective punishment. The other problem is the waste management system which is still not decentralized enough to let the local manage waste disposal systems by themselves.

# Action waste management brings benefits across the SDGs



Make cities and human settlements inclusive, safe, resilient, and sustainable

- Reduce the adverse per capita environmental impact of cities, including by paying special attention to municipal and other waste management



Ensure sustainable consumption and production patterns

- Halve per capita global food waste at the retail and consumer levels.
- Achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment.
- Substantially reduce waste generation through prevention, reduction, recycling and reuse.

# Conclusion

Unlike other countries, India has to handle both increasing rates of waste generation and disorganized waste management due to the growth of the economy. The main reason why India has poor waste management is that its laws and policies are ineffective. Not only a suitable policy that focuses on better waste disposal organizations but also a change in Indian people's attitudes and behaviors are required to subside the issues.

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