

## **ASSIGNMENT – 6**

**Write an article about Health and Hygiene based on your study and research using appropriate pictures.**

**By Shiva Suri**

## Waste Management in India and the Road Ahead

How much longer can our planet sustain us if we continue to bury and burn our waste instead of embracing a circular economy? India faces a mounting waste crisis, producing nearly 62 million tonnes of waste annually, of which only about 30% is scientifically processed. Inefficient disposal practices, weak enforcement of regulations, and low public participation have led to severe environmental damage. Waste management is vital as it safeguards human health and ecological balance by preventing pollution of our surroundings. It conserves resources through reuse and recycling, drives a sustainable economy, and mitigates climate change by limiting landfill waste and emissions. Waste management ensures a cleaner, healthier, and more resilient planet for present and future generations.

Waste pickers, who form the invisible backbone of waste management systems are the real time problem of concern, continue to live and work under some of the harshest and most hazardous conditions despite their immense contribution to recycling and environmental protection. They remain excluded from social security and medical benefits, their jobs unregistered and unprotected, while they are forced to work daily amidst dangerous dumpsites, toxic fumes, sharp objects, biomedical waste, and hazardous materials without even the most basic protective equipment. Fatigue, malnutrition, anaemia, tuberculosis, respiratory diseases, infections, depression, and frequent injuries are part of their everyday reality, with women and children bearing the heaviest burdens. Their living quarters are often next to landfills, lacking access to clean water, toilets, and



healthcare, exposing them further to disease and indignity. Child labour is common, life expectancy remains tragically low, and occupational hazards such as cuts, burns, infections, respiratory distress, and even cancers are documented at alarming rates. Yet, despite being the very workforce that enables cities to stay clean and industries to thrive on recovered materials, they face systemic marginalisation, poverty, social stigma, and exclusion from policymaking. The paradox is stark: while waste pickers protect the environment and public health, their own health, rights, and dignity remain neglected, making it urgent to recognise, organise, and integrate them as formal stakeholders with adequate protections, fair wages, and social security.

Waste accumulation in India creates significant problems, including environmental degradation, severe health hazards, ecosystem disruption and economic losses. Effects include polluted water from contaminated landfills and plastics, worsened air quality from burning waste, loss of land, health issues like waterborne diseases and respiratory illnesses, fatalities in animals that ingest plastics, and increased vector-borne diseases due to stagnant water. It contributes to climate change through methane emissions. Waste management is not just a government problem but also a societal issue that requires effective solutions that involve a combination of improved infrastructure, community awareness, regulatory enforcement, innovative business models, and the integration of informal waste collectors, all contributing to a circular economy and better public health. That's where the PESTLE analysis for waste management for India come into picture.

The PESTLE view highlights systemic challenges and resolutions in political, economic, social, technological, legal and environmental aspects. Political & Legal factors include Government initiatives like *Swachh Bharat Mission*, *Plastic Waste Management Rules* that ban single-use plastic (2016, amended 2022) and challenges lack of enforcement at local body levels as well as bureaucratic delays in large-scale projects. Economic aspects highlight limited funding for



municipal waste systems despite the rapid growth of India's waste management market, driven by urbanization and industrialization. However, recycling rates remain very low, underscoring the urgent need to strengthen recycling infrastructure and industries. Under social challenges, key issues include low public awareness about waste segregation, the persistent stigma associated with sanitation work, and the health risks faced by waste pickers. Technological advancements like waste-to-energy plants, biomethanation, composting units, smart bins, and AI segregation systems are crucial but adoption is uneven. Legal frameworks like *Solid Waste Management Rules (2016)* that mandate segregation exist but struggle with large-scale implementation, while environmental pressures from rising waste generation, especially plastic and e-waste, necessitate urgent solutions.

Our daily choices directly shape the waste crisis. Mixing garbage at home makes recycling impossible, food scraps that could nourish the soil instead rot in landfills, single-use plastics continue to choke ecosystems despite bans, and burning waste fills our air with poisons. Yet, change is not only possible, it is already happening. Across India, champions like Hasiru Dala



in Bengaluru, which integrates waste pickers into formal systems, SWaCH in Pune with its worker-owned collection model, Waste Warriors in the Himalayas driving clean-ups and awareness, and environmentalist Saalumarada Thimmakka who inspires sustainable living, are proving that solutions exist. Citizens too can be changemakers by segregating waste, composting food scraps, refusing single-use plastics, supporting community recycling, pushing for stronger policies, joining hands with NGOs, and even taking action digitally through civic apps. Together, we can turn waste from a burden into a resource, and build a cleaner, healthier future.

The path forward lies in embracing a circular economy an approach that transforms waste into opportunity by keeping products and materials in use through reusing, repairing, recycling, and regenerating waste. Unlike the linear "take-make-dispose" model, this system not only reduces our reliance on finite resources but also builds resilience, creates economic value, and safeguards the environment for future generations. Waste management is no longer a matter of disposal but a matter of survival, the power to reverse this crisis rests in collective responsibility and urgent action. Waste is not just a by-product of human progress; it is one of the greatest threats to our health, ecosystems, and climate. Your actions today shape tomorrow's world. Reduce, reuse, recycle, and compost to transform waste into a resource and build a cleaner, healthier future for all.



### **How you can connect & contribute**

| <b>Region</b>   | <b>Purpose</b>   | <b>Contact Details</b>  |
|-----------------|--|---|
| Bengaluru       | Use BBMP's toll-free helpline, the Swachha Bengaluru Mobile App, or email their office for complaints. | General Helpline (BBMP): 1533 (toll-free)<br>Office Line: 080-22660000<br>Joint Commissioner (Health & SWM): 080-22975591 |
| Guwahati, Assam | Report garbage-collection issues via helpline or WhatsApp.   | GMC Helpline: 08811007000 (also accepts WhatsApp)   |
| Mumbai          | Report garbage dumping via WhatsApp with photos and location.  | WhatsApp Helpline: 81696 81697  |
| Delhi           | Use for general civic issues, including waste management, via phone or the MCD 311 app                 | Customer Care (Landline): +91 11 2652 2700  |
| Noida, UP       | Report sewage/drainage and general civic problems.   | 24×7 Toll-Free: 14420<br>Water/Drain Call Centre: 0120-2425025/26/27  |

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**THANK YOU!**