Lessons from South Korea’s Waste Management Policy

What is the issue?

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- Quality of life in India’s towns and cities has been deteriorating due to poor pollution control norms, waste disposal and management.
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- South Korea’s success in this domain has important lessons to learn from.
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What is India’s status?

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- India generates over 150,000 tonnes of **Municipal Solid Waste** (MSW) per day, with Mumbai being the world’s fifth most wasteful city.
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- Despite the situation becoming a cause of serious concern, only 83% of waste generated in India is collected and less than 30% is treated.
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- According to the World Bank, India’s daily waste generation will reach 377,000 tonnes by 2025.
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- Unregulated urbanisation and industrialisation has caused this, and the consequences are real and troubling.
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- India’s waste predicament presents numerous social and environmental challenges for urban local bodies (ULBs) as there are significant health effects.
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- Additionally, the plight of thousands of informal ragpickers who sustain their livelihoods by collecting, sorting, and trading waste goes largely unnoticed.
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How did South Korea respond to the challenge of waste management?

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- South Korea has a robust waste management system, and has been successful in decoupling the link between economic growth and waste generation.
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- It is a small country with just 5 crore people but generates around 53,000 tonnes of MSW per day, which is 5 times the per-capita generation in India.
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- Despite rapid industrialization over the past half century, has reduced MSW by 40% while its nominal GDP has seen a five-fold increase.
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- **The approach -** Unique economic and social development trajectories of individual countries mandate different approaches to waste management.
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- Until the 1980s, Korea, like most other developing countries, focused on improving efficiency of waste management through incineration and landfills.
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- While this was a relatively easier approach than public campaigns to "Reduce and Recycle", focus on the harder aspects gained traction in 1990s.

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- The challenge was to decelerate waste generation, and hence South Korea implemented a volume-based waste fee system.
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- This was a paradigm shift focused on controlling waste generation and achieving maximum rates of recycling.
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- **Results -** It has since seen a drastic reduction in MSW generation - from 30.6 million MT in 1990 to 19.3 million MT in 2016.
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- Meanwhile, landfill and incineration rates have decreased dramatically from 94% in 1990 to 38% in 2016.
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- It is one of the few countries to recycle food waste and at 60% recycling rate, South Korea is currently the 2nd highest in the world after Germany.
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What are the accessory initiatives that were taken up?

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- **Landfill Recovery -** Projects such as the Nanjido landfill recovery project of the Seoul metropolitan government have been aplenty.
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- Today, the Nanjido site welcomes 10 million visitors a year, and saves about $600,000 a year by providing landfill gas to be used as boiler fuel.
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- Also, world's largest landfill, Sudokwon landfill in Incheon, is currently being converted into "Dream Park", a leisure and environmental education centre.
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- These initiatives are successfully transforming hazardous waste sites into sustainable ecological attractions.
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- **Electricity projects -** As a complementary to its waste management policies South Korea focused on **Waste to Energy** (WTE) projects.
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- Budgetary and technical support was provided to local governments for the expanding WTE facilities since 2008.
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- Notably, world's first landfill-powered hydrogen plant was built in South Korea in 2011.
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- Currently, as much as 60% of South Korea's new and renewable energy is from WTE facilities.
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What are the lessons to be learnt?

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- South Korea's success in the waste management domain is a result of strong political will and public demand for cleaner and healthier environments.
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- India's economy is growing rapidly, and is expected to face an insurmountable waste crisis, unless waste management is taken up as a high priority now.
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- Hence, all stakeholders much come together to ensure a clean and healthy natural environment for the current and for generations to come.
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