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From Trash to Treasure:

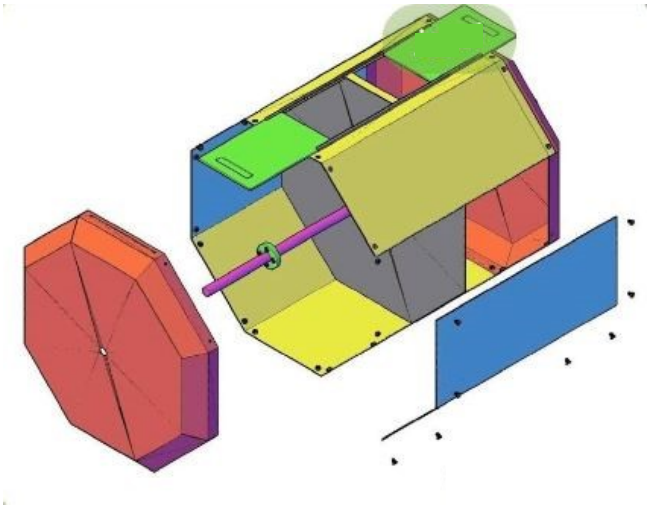
How Japan Revolutionized Waste Management

Imagine a country where garbage isn't just thrown away, but transformed into power, heat, and new products. Welcome to Japan, a nation that has perfected the art of waste management out of necessity and ingenuity.

With limited land and a culture of resourcefulness, Japan has built a globally recognized system that is now studied around the world.

At its core are over 1,000 state-of-the-art incineration plants. These aren't just smokestacks; they are high-tech facilities that burn waste to a fraction of its original size while generating energy for the national grid. Advanced filtration systems ensure minimal pollution, turning what was heretofore a disposal problem into a vital energy source. The process begins long before the garbage truck arrives. Japanese citizens meticulously sort their waste into considerable number of categories, a practice enforced by laws and regulations represented by 'Act on Waste Management and Public Cleaning' as well as a strong sense of community responsibility.

This multi-pronged approach has resulted in high recycling rates and drastic reduction of the need for landfills.



Japan's knowledge: A Blueprint for Improvement of Waste Management in Iran

In Iran, rapid urbanization and economic growth have created a new challenge: a massive increase in municipal waste, a trend exacerbated by the COVID-19 pandemic.

Waste Management Law was enacted in 2004 in Iran. Based on this law, fragmented waste management initiatives are undertaken separately by central and local authorities. After the enactment of this law, the Government of Iran requested the Government of Japan to provide opportunities to systematically study Japan's experience, and to receive technical training, with the aim of developing human resources to modernize municipal waste management operations under the new system.

Ever since then, Japan has been a key partner of Iran in tackling waste management over decades. This collaboration has focused on a crucial concept: the **3Rs—Reduce, Reuse, and Recycle**. By studying Japan's advanced policies, such as the "Sound Material Cycle Society" and its low-carbon initiatives, Iran is gaining valuable insights to develop its own sustainable waste management policies and practices for years to come.

To raise environmental awareness and knowledge of environmental issues related to solid waste management among the people and the community through expanding the rotary composter in the pilot areas, JICA Iran office and Municipalities and Rural Management Organization (MRMO) also formulated a project to design, manufacturer, and distribute the rotary composters in cities in Gilan province and other cities in Iran. This is the first project of its kind in Iran. A rotary composter, also known as a compost tumbler, is a sealed, drum-shaped container that rotates on an axis to mix and aerate organic materials such as food scraps and yard trimmings. Its integrated design offers several advantages over traditional compost piles, including faster decomposition, reduced odors, and protection from pests such as rodents.

The regular rotating action ensures a consistent mixture and provides the necessary oxygen for the aerobic microbes that break down the waste. This process can significantly reduce the composting time, producing nutrient-rich compost in a matter of weeks, compared to the months required for a static pile.

Through this project, we are aiming to reduce waste and improve soil quality, contributing to environmental sustainability and community development. We hope this technology will provide a practical and efficient solution for managing organic waste, especially in rural and coastal areas of Iran.