



MATALE



BACKGROUND

Matale is a medium-sized urban centre in central Sri Lanka, with a population of nearly 37,000 and a large additional population commuting daily in and out of the city. Matale is surrounded by large plantations and is famous for its spice gardens. In addition to agriculture, the city's economic activities also include tourism and trade.

SOLID WASTE MANAGEMENT

The city generates about 21 tons of municipal waste per day, of which 17 tons are disposed at an open dumpsite. Although 20 per cent of the Municipal Council's budget is spent on solid waste management, there is no city-wide collection; in a recent survey on the waste situation, carried out by the Sevanatha Urban Resource Centre, household respondents described the service provided by the municipality as poor. Priority issues, according to the household respondents in that same survey, were unclean drains, poor waste management practices and sanitation conditions in general. In parts of Matale, waste is collected daily or every two days, depending on the route, but otherwise the collection is irregular. The Municipal Council has prioritized the provision of a more cost-efficient solid waste management system that will also improve household service. But it also finds itself lacking sufficient resources to make the necessary improvement.

Fortunately, the composition of the household waste in Matale is ideal for eco-efficient solutions: 70 per cent of the waste is organic and can be used for composting and producing biogas; 10 per cent of the waste is recyclable and so can be sold after processing. Thus only 10 per cent of the waste needs to be buried in a landfill. The city is relatively small, so it is suitable to a decentralized approach that minimizes transporting the waste collection and involves the communities in a productive and cleaner waste management system.

Currently, two integrated resource recovery centres (IRRCs) operate in Matale under the management of the Micro Enriched Compost and Sevanatha. The first centre was initiated through

CITY FACTS

POPULATION	36,331
ORGANIC WASTE	70%
TOTAL WASTE GENERATED	21 tons/day
TOTAL WASTE COLLECTED	17 tons/day

an ESCAP project in 2006, and the second centre was set up with funds from the Government of Sri Lanka through the Pilisaruru project in 2010. Together with ESCAP and Waste Concern, Sevanatha, Micro Enriched Compost and the Matale Municipal Council are planning to scale up the IRRC approach to treat most of the waste the city generates.

IRRC: A MODEL OF TRUE VALUE ADDED

The IRRC in Matale has successfully shown the importance of community participation and has proven that it is possible to achieve a high degree of separation of waste at the household level. After training and awareness raising, people are now separating their waste in the area covered by the IRRC services. Sevanatha has worked with the community through committee meetings and door-to-door training to promote waste separation at the source. The project also has demonstrated that the community is willing to pay collection fees when they receive a good service for their money.



COMPOSTING WASTE PUTS LIVES AND COMMUNITIES ONTO SAFER GROUND

For 40-year-old S. Murugan, a worker at the integrated resource recovery centre (IRRC) in Matale, handling waste is nothing new. "Matale's waste has provided livelihoods for generations of people," explained Murugan, whose father and grandfather earned a living from scavenging for scrap metal to sell to local scrap shops. But Murugan's involvement in waste management has brought him a dignity and sense of security that eluded his father and grandfather. As part of an initiative to provide employment and take advantage of the resource potential that waste creates, the Matale Municipal Council, together with Sevanatha Urban Resource Centre and ESCAP, established Sri Lanka's first IRRC in 2006. The IRRC where Murugan works is operated by Micro Enriched Compost (MEC), a company started by Sevanatha.

"When I used to work on the streets, people didn't respect my work," he recalled of scavenging before he was hired on at the Matale IRRC. "Before the IRRC, I had no security," Murugan said. "When I woke in the morning I didn't know if I would earn enough to feed my family. Now I have a salary and own my own home. I'm very grateful for this opportunity."

Building on the success of the first centre, a second IRRC opened

in Matale. In the Matale municipality, MEC and waste workers like Murugan are demonstrating how organic waste, which makes up the bulk of the municipal waste in Asian cities, can build up live and local economies while tackling issues of environment protection and safe waste management.

PLANS FOR THE IRRC

ESCAP, the Municipality of Matale and Sevanatha piloted a project Gongawela ward, Community-Based Decentralized Solid Waste Management, in 2006 to introduce the means for turning heaps of urban waste into a useful resource through what is known as an integrated resource recovery centre. Based on the approach of Waste Concern, an IRRC reduces costs for a municipality, provides opportunities for entrepreneurship, improves services to households and minimizes the waste that is sent to a landfill. The project was ground-breaking because the Municipal Council granted permission to collect fees from households for the service.

In an evaluation, a significant number of household respondents expressed their satisfaction with the service, particularly the daily door-to-door, on-time collection. Because of the initial success in treating 2 tons of waste daily, the Matale Municipal Council decided the IRRC approach is a suitable option for treating waste across the city. In 2009, a second IRRC was set up, with funds from the national Pilisaruru waste management programme.

Both IRRC are located within the neighbourhood they service, which keeps transportation costs low and allows fruit and vegetable vendors to take their waste directly to the plant. The central location has contributed to making the IRRC and its merits well known in the town – an important factor in motivating households to separate their waste.

The close involvement of the community and the households' willingness to separate their waste has been instrumental in the success of each plant. Households were trained to separate the organic from the inorganic waste and dispose it separately to the waste collectors. The practice is reinforced when the workers collect the waste directly from the households. At the plant, the waste is further sorted into organic waste, recyclables and rejects.

The plants produce high-quality compost using the aerated box method. It is comparatively cost-effective, using less land than other composting methods. The technology is simple and non-mechanical, which makes it easy to operate and maintain for the local staff while keeping operation costs low. In comparison with more advanced technological compost technologies, there are minimal breakdowns and need for repairs. The production period for compost is an average of 90 days. Strict quality control is maintained, and the compost complies with numerous standards for certified organic compost.

To further reduce costs for the municipality by minimizing the rejects that need to be sent to the landfill, the IRRC stores, processes and sells the recyclable material. Because the waste is sorted at the household level, the recyclables are clean and have not been soiled by other waste, which increases their value. In addition, by storing the recyclables and selling them in bulk at an appropriate time, the IRRC can get a higher price than if it sold the material on a daily basis.