



A worker at the Tsurumi Recycling/Incineration plant in Yokohama, Japan, monitors operations as oversized garbage is crushed in a grinder. PHOTOS BY CHRISTOPHER SERJU

# Making solid waste more manageable

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**Y**OKOHAMA, JAPAN'S second-largest and most populous municipality, with a population in excess of 3.5 million people, is the capital of Kanagawa prefecture.

Growth in trade and commerce, which quickly propelled Yokohama from a fishing village in 1859, had a downside. As its economy grew, so did the population, bringing an abundance of domestic, commercial and industrial waste.

From just over 500,000 people in 1955 generating 0.12 million metric tonnes of garbage, by 1999 an estimated 3.4 million residents were responsible for some 1.7 million tonnes of solid waste. The city took action and, by 2014, as the number of residents inched closer to four million, Yokohama recorded a dramatic 43.2 per cent decline in solid waste output of 0.8 metric tonnes.

It achieved this by making solid waste much more manageable. Four incineration centres, four recycling centres fed by 18 collection offices supplying four transit centres and one final deposit site was key to Yokohama's success.

## PRACTICAL, ACHIEVABLE MEASURES

With the Tsurumi combination recycling/incineration plant coming on stream in 1995, it went about setting practical, achievable measures for garbage collection, separation, packaging, storage, and disposal.

Residents put out household



Manager for the Policy Coordination Division in the Resources and Waste Recycling Bureau, Tomohiro Kamewaka, makes a point about the 43 per cent drop in solid waste collected, as a result of the successful waste management programme. CHRISTOPHER SERJU

waste and recyclables at the 74,000 collection points, each of which serves 10-30 households. Waste is separated by type in transparent/translucent bags and put out by 8 a.m. on collection days.

Garbage collection trucks come in three different sizes, medium with maximum laden weight of 3,000

kilogrammes, small with a carry capacity of 2,000 kilogrammes, and a light-duty dump truck which can carry 350 kilogrammes. Their narrow configuration makes these vehicles ideally suited for collection on narrow streets. All are either diesel-powered or hybrid.

The city hosts ongoing public

awareness campaigns at train stations, supermarkets, elementary schools, and kindergartens, as well as hosting information sessions on waste separation at the community level.

Persons who put out unsorted waste are first given guidance on what to do and, if they persist, are fined. However, the city places greater emphasis on compliance rather than punishment. From all indications, it has worked well for Yokohama and is a standard other cities would do well to emulate.

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## From trash to cash

THE SUCCESS of the Tsurumi recycling/incineration centre in Yokohama, Japan, which has kept a tight lid on its solid-waste growth, is due largely to its matching of heavy-duty machinery with an investment in human capital, which makes for a seamless operation.

During a recent guided tour of the plant by participants in the Association for Promotion of International Promotion (APIC) Japan Journalism Fellowship 2019, those present got a first-hand look at what really happens behind its walls.

It begins with the sorting of waste with the machinery known as a bag breaker literally ripping the garbage-filled plastic bags apart, dumping their contents onto the bag breaker conveyor. A worker then removes the pieces of bags by hand as plastic bottles, glass bottles, and cans, among other recyclables, are unloaded on to the separator. All the used bags and other packaging are sent on to the incinerator.

The separator allows heavier bottles to drop through on to another conveyor belt where workers sort them by colour, while the lighter cans and PET bottles continue straight across. From the magnetic separator the steel cans are channelled into the steel press machine, which then

crunches and compacts them.

The PET bottles are hand-sorted before going on to a bottle baler which crushes and bales them in the process, while another powerful magnet simultaneously sends the aluminium cans flying across the room, while dirt and debris drop into a container. The cans are collected by the aluminium press machine which compresses them.

But what of the many other types of solid waste?

They are also separated into specific categories before being properly disposed of, including: burnable garbage; non-burnable garbage; spray cans; dry cell batteries; plastic containers and packaging; small metal items; used paper boxes; old cloth and oversized garbage.

This last category includes mattresses, sofas, desks, and chairs, but excludes TVs, refrigerators, washers, dryers, and personal computers. Special arrangement must be made for disposing of these, while small household appliances less than 50 centimetres in size, made mostly of plastic go to burnable garbage. Also qualifying for this category are kitchen scraps from which the excess water has been drained.

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Minoru Nakagawa of the Resources and Waste Cycling Bureau explains that, even though they are the same size, the green-labelled bale of compressed aluminium cans weighs 25 kilogrammes compared to the bale of compressed steel cans weighing 60 kilogrammes.

### INVITATION FOR SUBMISSION TO THE EARLY CHILDHOOD PARENT PARTNERS DIRECTORY

**MINISTRIES, DEPARTMENTS AND AGENCIES (MDAs)  
NON - GOVERNMENT ORGANIZATIONS (NGOs)**

**DO YOU PROVIDE PARENTAL SUPPORT IN ONE (1) OR MORE OF THE FOLLOWING AREAS?**

- ◆ Family Support and Intervention
- ◆ Fathering Support
- ◆ Parenting of Children with Special Needs
- ◆ Parental Education
- ◆ Health and Wellness

**SEND IN YOUR PROFILES!**

**PROFILE MUST INCLUDE:**

- ◆ Name of Agency
- ◆ Telephone number
- ◆ Email address
- ◆ Fifty (50) word description of parental services provided by organisation
- ◆ Profiles must include social media handles

**Interested Early Childhood Partners should submit profiles NO LATER THAN FRIDAY, NOVEMBER 29, 2019**  
Via email to: [estp@moe.gov.jm](mailto:estp@moe.gov.jm)

For additional information contact the Education System Transformation Programme  
2-4 National Heroes Circle, Contact number (876) 612-6093  
Subject: ECC/TC Profile - Name of Company  
*We thank all partners in the Early Childhood Sector for your continued support!*

## Notice to Farmers

### DRIED ANNATTO SEEDS REQUIRED

**\$500 per lb**  
**Minimum quantity**  
**400 lbs**

Contact number: **876-470-5646**  
or Email: [info@jamaicanteas.com](mailto:info@jamaicanteas.com)