

# Promotion of Recycling and Reuse Aiming for Zero Waste

Kamikatsu Town



## Background

Having become a mass consumption society with high-economic growth, in addition to urban areas, even rural areas produce a substantial amount of waste. That amount has been increasing steadily, and the increased financial burden weighs heavily on municipalities, which are responsible for waste processing. In the past, residents of Kamikatsu Town burned their own waste in fields, but that practice was halted after a directive from Tokushima Prefecture. At the same time, municipal finances were not sufficient for the purchase of a new incinerator for disposing of the town's refuse.



Field incineration

Kamikatsu Town examined recycling strategies having investigated processing alternatives to the construction of an

incinerator, as well as the nature and quantity of the waste that was produced in the town.

While collecting and studying information about recycling, we identified a critical issue when we visited a large food processing plant to inspect its incinerator, which handles a few tons of vegetable scraps every day. Incinerating food waste requires a large and costly facility that consumes a large amount of fuel, adding significant cost. The increase of CO<sub>2</sub> emissions is also a significant challenge. Because of these concerns, we examined high-speed composting, as we determined that composting organic waste was the best waste processing method.

## Purposes of Project

The composting of food waste, the promotion of the three Rs (Reduce, Reuse, Recycle), and the reduction of incineration and landfill waste volume through these efforts

## Outline of Project

Food waste is made into compost by each household. Most of the households in Kamikatsu Town have a garden or farmland, so the compost can be used effectively.

Other kinds of waste should be sorted and collected as comprehensively as possible by various recycling businesses. While selecting the appropriate recycling business, we established waste classifications, eventually identifying 45 types. In addition, we developed a system that calls for residents to bring waste to the waste station, a general intermediate waste treatment facility, located in each community, eliminating the need for waste collection by the town.

### **Progress and Achievements**

1. We established a subsidy to allow residents to purchase discounted electric waste disposal machines for home use for 10,000 yen, so that food waste can be made into compost by each household. For businesses such as restaurants, an industrial waste disposal machine was installed and is managed by a business cooperative, and half of the electricity cost is subsidised.
2. To reduce the waste to be burned, residents thoroughly separate each type of recyclable waste for collection by recycling businesses.
3. We do not use waste collection vehicles, so residents bring waste to the Hibigatani Waste Station, a general intermediate waste treatment facility within the town.
4. We established a recycling shop, the Kuru-kuru shop, where residents can bring things they no longer need but which are still useable, and people who have a use for an item can take it free of charge.
5. The shop also offers goods that are remade from fabrics and cotton that are no longer needed, using the traditional wisdom

and technologies learned from the town's elderly people, while also providing them with nursing care.



Waste separation also creates an environmental education opportunity for children

### **Effects of Project**

- In 2002, Kamikatsu Town started sorting waste into 34 types based on a zero-waste philosophy to build a system of waste-free production and consumption. In 2003, the Kamikatsu Town Council unanimously approved Japan's first zero-waste declaration.
- Improvement of residents' awareness of waste and environmental problems by promoting waste sorting and recycling
- Improvement of the recycling rate, achieved by the composting of food waste and the thorough sorting of waste.  
(54.8% (FY1998) to 79.5% (FY2015))
- Promotion of the reuse of waste by establishing the Kuru-kuru Shop (15 tons brought in and 15 tons taken away in FY2016)
- Reduction of waste produced at events and festivals by using reusable dishes.  
(6,452 dishes for 35 events in FY2016)
- Reduction of incineration and landfill volume (approximately 136 tons in FY1998)

to 61 tons in FY2015)

- Resources with value are extracted through thorough waste sorting.



The Kuru-kuru Shop promotes reuse

### **Problems and Responses**

Waste was not separated at all in the past when it was burned in fields. Therefore, we visited 55 communities within the town and held briefing sessions to obtain the understanding and cooperation of residents regarding waste sorting. We started with sorting into nine types of waste in 1997, increasing to 34 types in 2002 and then to 45 types in 2016.

Waste sorting in Kamikatsu Town is managed with the cooperation of the residents. Although the types of waste produced in households are limited, the elderly may feel the system is very complicated. Thus, we seek improvements for easier sorting while maintaining the recycling rate.

A problem that emerged early on was that households without a vehicle, such as those of elderly residents, could not bring their waste to the waste station. To solve this problem, we established a support system to collect waste once every two months.

The waste station facility itself is a repurposed prefabricated power company facility. There is no roof above the carpark, and one of the problems with this is that whenever it rains, residents get wet when walking from their cars to carry their waste to the waste station.

Securing the privacy of residents when they come to the station to dispose of their waste has also become an important requirement, since more and more people wanting to study the zero-waste strategy conducted by Kamikatsu Town come to visit, because of the increasing awareness of waste processing and environmental issues around the world.

We plan to rebuild the waste station as it is an aging facility and to eliminate the inconvenience and dissatisfaction of the residents. The new facility will allow residents to stay dry when they come to recycle, and it is designed to keep visitors separate to ensure the privacy of residents.

### **Outlook**

The new waste station will improve the efficiency of work by consolidating stockyards, as well as by adding a community hall, laundromat, shared workspace for companies and universities and a lodging facility, etc. The facility is designed to offer a learning experience in addition to an enjoyable visit to dispose of waste.

The construction of this facility will make the most of furniture and fixtures that are no longer needed by using them as materials, as well as timber from Kamikatsu Town, to

embody the zero-waste concept within the facility.



Rendering of the new waste station  
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In FY2015, the recycling rate of Kamikatsu Town reached approximately 80%, showing a certain level of success. However, waste production per capita is tending to increase. To head off potential future issues, we will continue to recycle and to work toward the reduction of waste. We will pursue activities that allow the residents and businesses to take the initiative and promote this lifestyle further within the town with the message, "Do not bring waste in, do not buy what is disposable, and do not create waste." Many municipalities may think, "It is not possible for us to do what has been done in Kamikatsu," or, "It is possible only because Kamikatsu is a small town with a population of 1,600." However, Canberra, Australia, which was the first municipality in the world to declare its adoption of Zero Waste, is a major city with a population of 310,000. Although the current recycling rate of Kamikatsu Town has increased to approximately 80%, there is still waste being incinerated in town or taken for incineration elsewhere. We will continue our efforts to achieve the goal of zero waste in Kamikatsu Town by 2020 in cooperation with residents, businesses, and NPOs.

Under current Japanese law, waste collection is borne by consumers, and people who dispose of waste illegally are subject to punishment.

Illegal disposal often happens, and local governments must bear the cost of collecting such waste. An ideal system would allow refunds for bringing in products that are no longer used, with the refund amount added to the original purchase price. Illegal disposal would result in a loss. Also, picking up of illegally dumped goods would provide a reward, so littering and illegal dumping would decrease.

After Kamikatsu Town declared its zero-waste policy, three municipalities have followed suit so far, and each of them is developing their own activities. We believe that our small town of less than 1,600 people can have a significant impact on the world and continue to expand the activities of our zero-waste policy.

#### Reference URL

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