

# Food Recycling Project in Hakone

## — an Eco-friendly Tourist Destination

Hakone DMO (Hakone Tourist Association), Kanagawa Prefecture



### Background

Welcoming around 20 million visitors each year, the town of Hakone is one of Japan's most renowned tourist destinations, attracting a wide variety of people. Among them, Hakone welcomes a large number of visitors from Europe, the U.S. and Australia, which have markets that are characterised by strong interests in environment and sustainability. To maintain its popularity as a tourist destination among this audience, it was necessary that Hakone promote sustainable initiatives.

With this in mind, Hakone DMO has put forward the vision of a 'Collaborative SDGs Show Room', aiming to attract travellers with a strong interest in the Sustainable Development Goals (SDGs) and to establish Hakone's brand as an eco-friendly tourist destination. As the discussion on this progressed, attention was drawn to the fact that around 80% of Hakone's burnable waste is generated by businesses, of which approximately 48% is food waste. Furthermore, a regional integration of waste processing with the towns of Yugawara and Manazuru was scheduled to take place in October 2025, raising concerns over increased incineration costs and making it an urgent priority to reduce emissions across the entire region.

As part of its efforts, Hakone decided to launch a 'Food Recycling' project to directly address this

region-wide challenge.

### Objectives

The Food Recycling project has the following three objectives:

- 1) Reduce its environmental footprint and build a resource recycling model:  
By reusing food waste generated by accommodation facilities and restaurants as a resource, Hakone aims to reduce its environmental footprint and build a sustainable model in which local resources circulate.
- 2) Reduce waste output and cut costs:  
By reusing food waste generated by accommodation facilities and restaurants as resource, Hakone aims to reduce both the volume and costs of waste incineration.
- 3) Enhance the regional brand:  
Through the recycling of food waste, Hakone will showcase its eco-friendly initiatives to Japan and the world, thereby enhancing Hakone's brand image. In doing so, Hakone aims to establish its position as a leader in sustainable tourism and continue to be a preferred destination for both domestic and international tourists.

## Project Outline

This project is led by a public-private partnership between Hakone DMO and Japan Food Ecology Center, Inc. (a food recycling company) along with the cooperation of accommodation providers and waste transportation companies.

In the 2024 fiscal year, this project was selected for the Japan Tourism Agency Sustainable Tourism Promotion Model Project subsidy. Following this, Hakone conducted a food waste composition survey and recycling trial programme at several accommodation facilities to verify the project's feasibility. The results confirmed that 70 to 80% of the food waste that was generated could be converted into livestock feed and was suitable quality for recycling. On the other hand, this survey also identified practical challenges related to aspects such as transportation costs and route planning.

As the project was selected for the same subsidy program again in the 2025 fiscal year, based on the results from the previous year, initiatives will be advanced towards the implementation phase. While measuring the project's social acceptability through attitude surveys for tourists and awareness-raising activities targeting local business operators, the program will advance to a new stage aimed at building an operational model.

## Features and Innovations

The project is characterised by the following features and innovations:

- 1) A circular model involving the entire region:  
Unlike many food recycling projects carried out by individual companies or business operators, this project adopts an advanced model under which Hakone DMO, which is responsible for destination management, works in close coordination with the local government (Hakone Town), and business operators, etc. to engage the entire region. By fostering cooperation among diverse stakeholders, including accommodation facilities, transport

operators, and recycling companies, this initiative achieves a comprehensive local resource recycling movement.

- 2) The fusion of tourism and local resource recycling:

This initiative identifies the intersection between tourism and regional resource circulation, treating food waste resulting from tourist consumption not as waste but as local resource that can be recycled to help achieve a sustainable tourism destination. Through this approach, the project addresses local issues from a tourism perspective, and embarks on a new challenge to strike a balance between tourism and environmental conservation.

## Results of the Project

The project is expected to produce the following outcomes:

- 1) Reduction of waste and costs:  
By converting food waste into a resource, there will be a reduction in both the volume and costs of waste incineration.
- 2) Establishment of the Hakone brand as an eco-friendly tourist destination:  
By building a recycling model in which tourist consumption behaviour contributes to environmental conservation, the project aims to attract sustainability-oriented visitors and enhance the Hakone brand.

## Issues, Problems and Responses

- 1) Rising transportation costs and the establishment of a transportation system:  
To transport food waste from individual facilities, an efficient collection/transportation system which is separate from the existing waste collection operations needs to be built, inevitably increasing costs.
- 2) Awareness-raising activities for the promotion of

waste sorting:

To ensure that food waste is properly sorted, there needs to be regular awareness-raising activities aimed at tourists and business operators.

To address these issues, future pilot experiments are being considered in which food waste is collectively transported from multiple accommodation facilities for greater efficiency, as well as the exploration of optimal collection routes for transportation cost-effectiveness. Additionally, through activities such as questionnaires for tourists and information sharing sessions for business operators, the project aims to strengthen its awareness-raising efforts towards fostering understanding and cooperation for the project.

### **Future Developments (expected effects and project vision and issues)**

With full-scale implementation of this project, efforts will focus on expanding the project's participating facilities and regional scope to increase the food waste recycling rate across Hakone. Through this, the project is expected to reduce about 6,700 tonnes of waste per year, as well as convert about 3.9 tonnes of food waste into livestock feed per year (estimates based on data from the 2024 fiscal year pilot experiment).

The 'Food Circulation' model is intended to evolve into a sustainable system in that is fully completed regionally. Going forward, there are hopes to develop a regional closed-loop recycling system by converting food waste collected into livestock feed and serving pork raised on that feed at local accommodation facilities and restaurants in Hakone.

In addition, to promote understanding of these advanced initiatives and strengthening communication to external audiences, consideration is being given to developing tours that take participants on an inspection of food recycling sites (such as the Japan Food Ecology Center) to

learn more about its workings and background, followed by accommodations in Hakone.

### **Websites for Reference**

<https://www.hakone.or.jp/sustainable-tourism/9402>

(Hakone's Sustainable Tourism website)

<https://www.mlit.go.jp/kankocho/content/001880138.pdf>

Japan Tourism Agency's case study

'Eco-friendly Tourism Destinations: Hakone's Project for Achieving a Circular Economy of Food', pp. 64-74

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### **Meaning of Technical Terms and Coined Terms Used**

DMO (Destination Marketing/Management Organisation):

Refers to a corporation engaged in the development of tourist destinations.

Food waste: Inedible or leftover food generated during the preparation of meals and after eating.

Circular and Ecological Economy: A sustainable regional model that aims to maximise the use of regional resources, form a self-reliant and decentralised society and facilitate resource circulation both within and between regions.



Tour of Japan Food Ecology Center (Sagamihara City, Kanagawa Prefecture)



Recycling pilot survey conducted in the 2024 fiscal year



Food waste generated by accommodation facilities and restaurants in Hakone