



# Food consumption & Food Waste in Japan

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Insights for Social Governance  
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**IGES**  
Institute for Global  
Environmental Strategies

# Outline

- 1. Changes in food consumption pattern**
2. Current Situation of Food Waste
3. Food Waste Recycling Law
4. Measures other than Law
5. Others related issues

## 1.1 Japanese food and its cultural

- **“Washoku” -Japanese Cuisine-**  
In 2013, it was registered as an Intangible World Heritage.



- **“Itadaki-masu” (いただきます)**

**“Itadaki-masu” is a phrase Japanese say before every meal which represents respect and gratitude for people who prepared dishes, people who cultivated crops and hunted animals and crops and animals which provided their lives to us.**



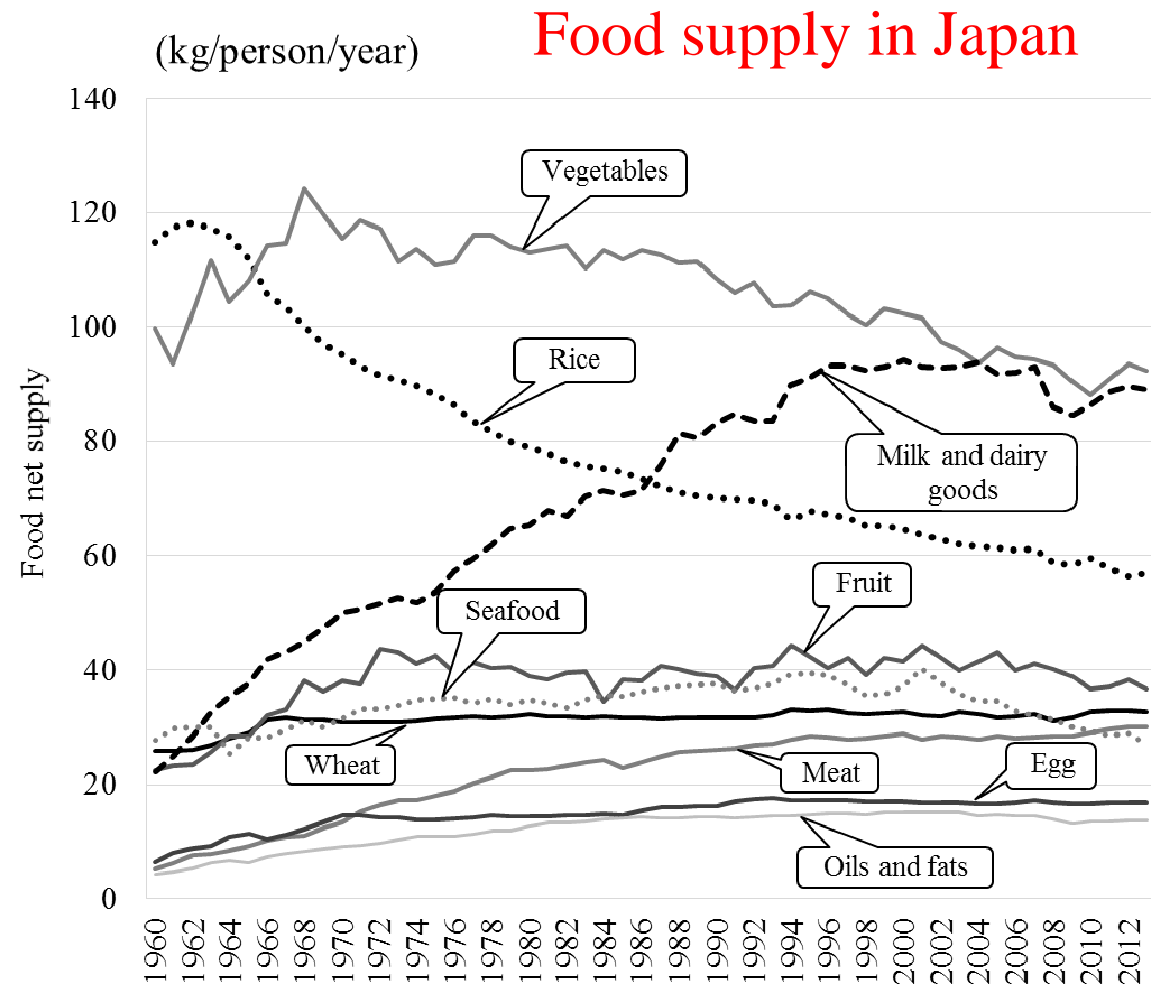
- **Techniques Not to Waste Foods**

**Japanese people have been pursuing techniques to avoid wasting foods as much as possible. As the result, in Japan, variety of fermented food culinary culture blossomed.**



## 1.2 Changes in food consumption pattern in Japan

### ■ Diversification & Westernization of diet

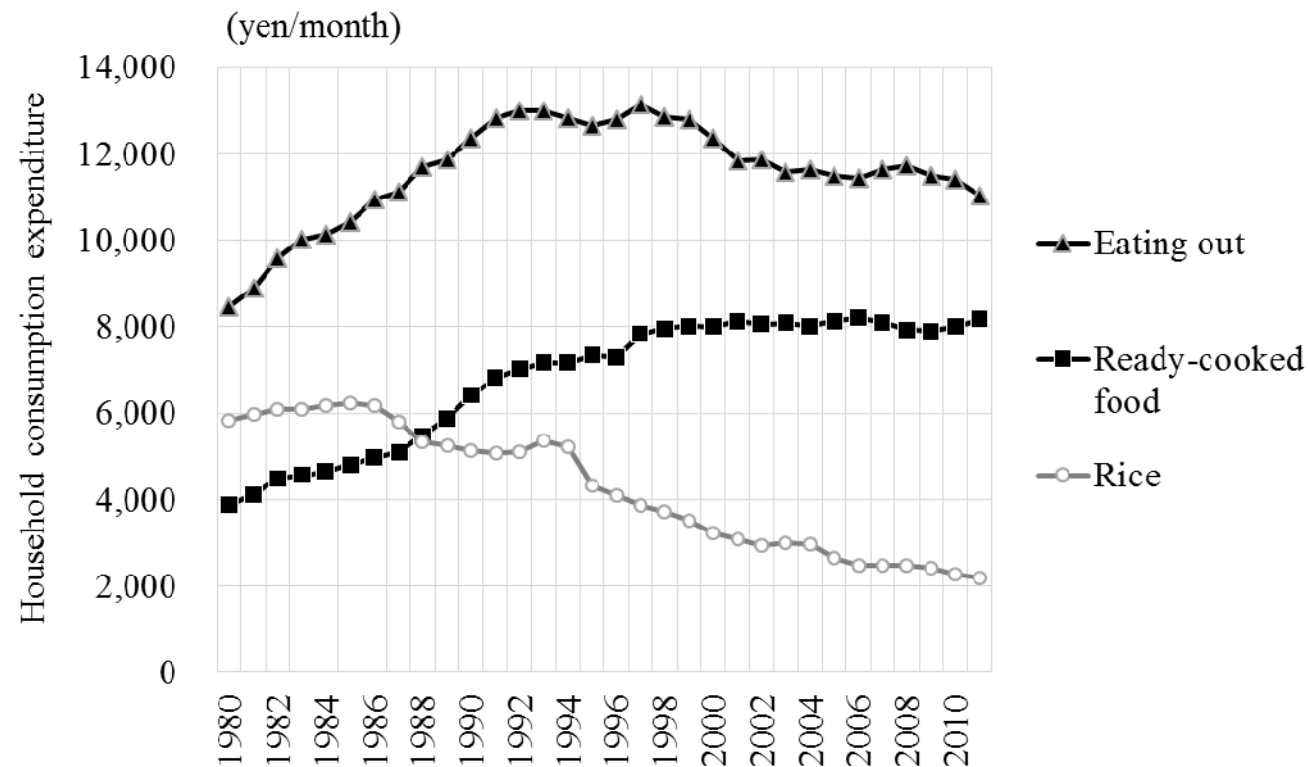


(Watabe et al. 2016: Food Consumption in the City )

## 1.2 Changes in food consumption pattern in Japan

- **Out-sourcing of food preparation (increase in eating out and or to purchase more ready-to-eat foods)**

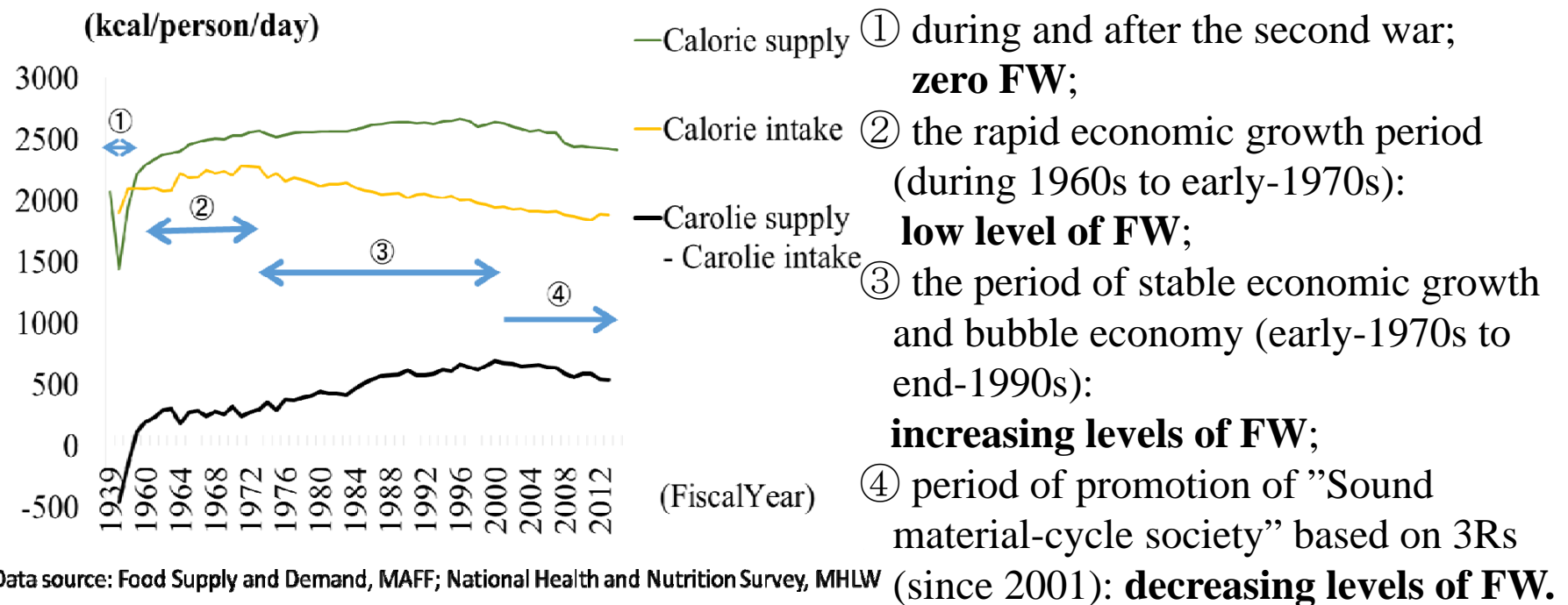
### Household consumption expenditure for food



(Watabe et al. 2016: Food Consumption in the City )

## 1.2 Changes in food consumption pattern in Japan

- High levels of satisfaction with diet (90%)
  - Increasing distancing - physically and psychologically
    - between farming and eating
    - between food business and consumer
    - between food and waste
- ⇒ Factors for food waste increasing



(Liu et al. 2016; Watabe et al. 2016)

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## 2.1 Urgent Needs to Reduce Food Waste

### ■ At global level

- 32% of the food produced in the world for human consumption was lost or wasted (FAO, 2011),
- The 'SDGs' Goal 12.3 aims to "By 2030, halve per capita global food losses and waste along production and supply chains, including post-harvest losses"(UNEP, 2015).
- Reducing food losses/waste would contribute to abating interlinked sustainability challenges such as food security, natural resources shortages, climate change, SCP, and SD.

### ■ At Japan national level

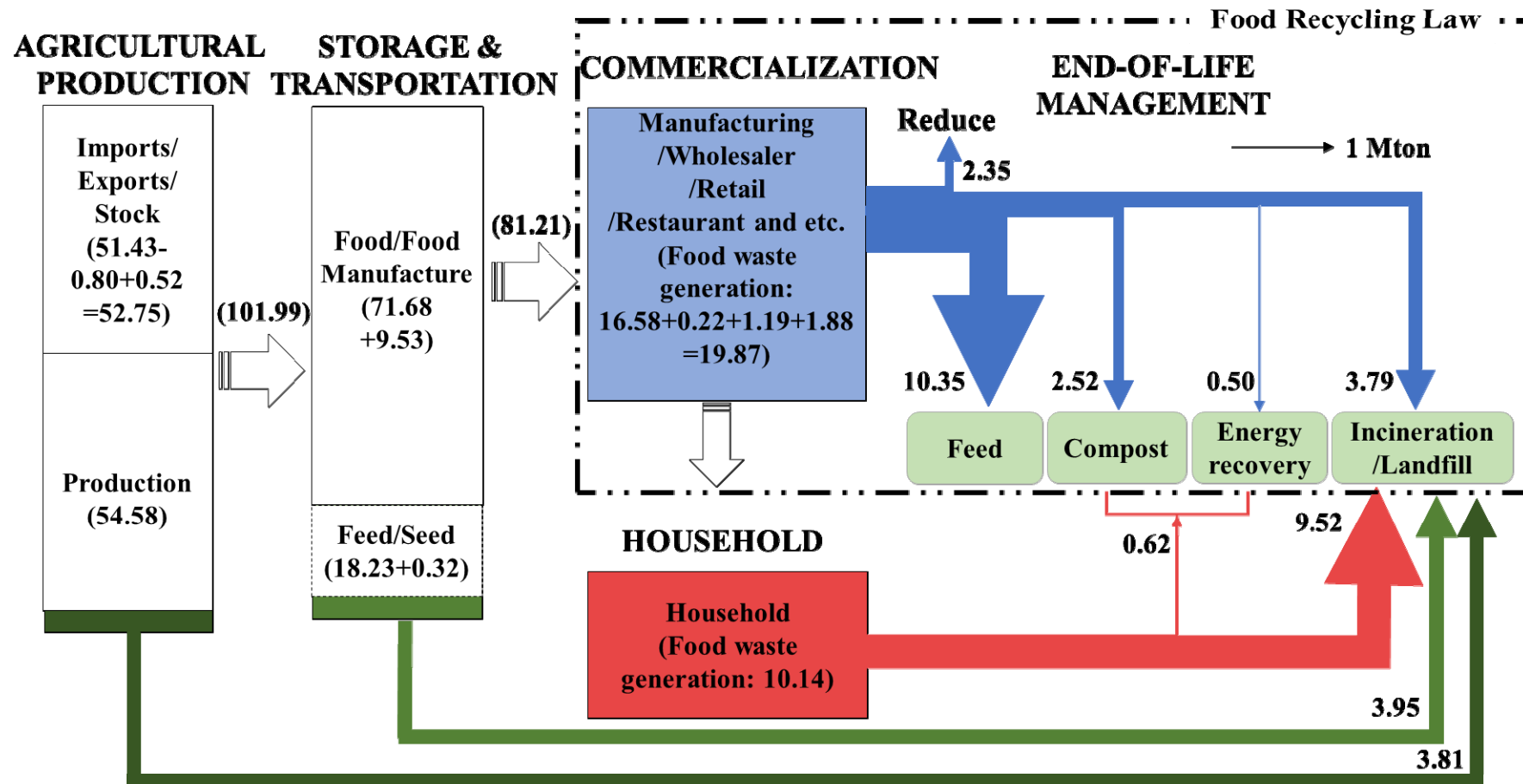
- low food self-sufficiency rate (39% calories in 2015); the national target (45% in 2020);
- shortage of available landfill sites for waste disposal; and
- national directives for establishing a sound material-cycle society



# Food waste reduction closely related other SDGs goals and targets.

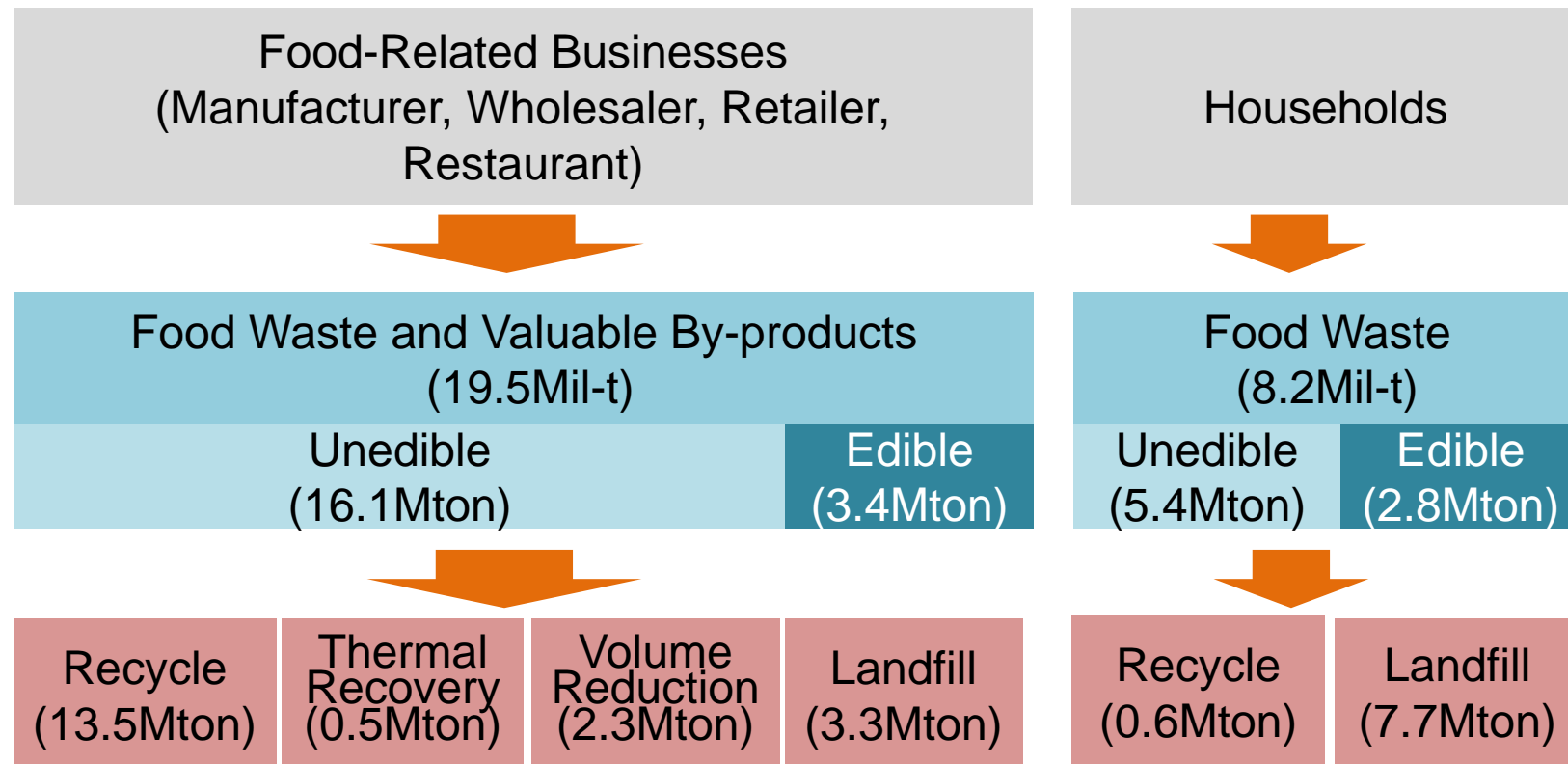


## 2.2 Status of Food Loss & Waste in Food Supply Chain in 2011



(Liu et al. 2016; Food waste in Japan: Trends, current practices and key challenges)

## 2.3 Latest Data on Food Waste (2014)

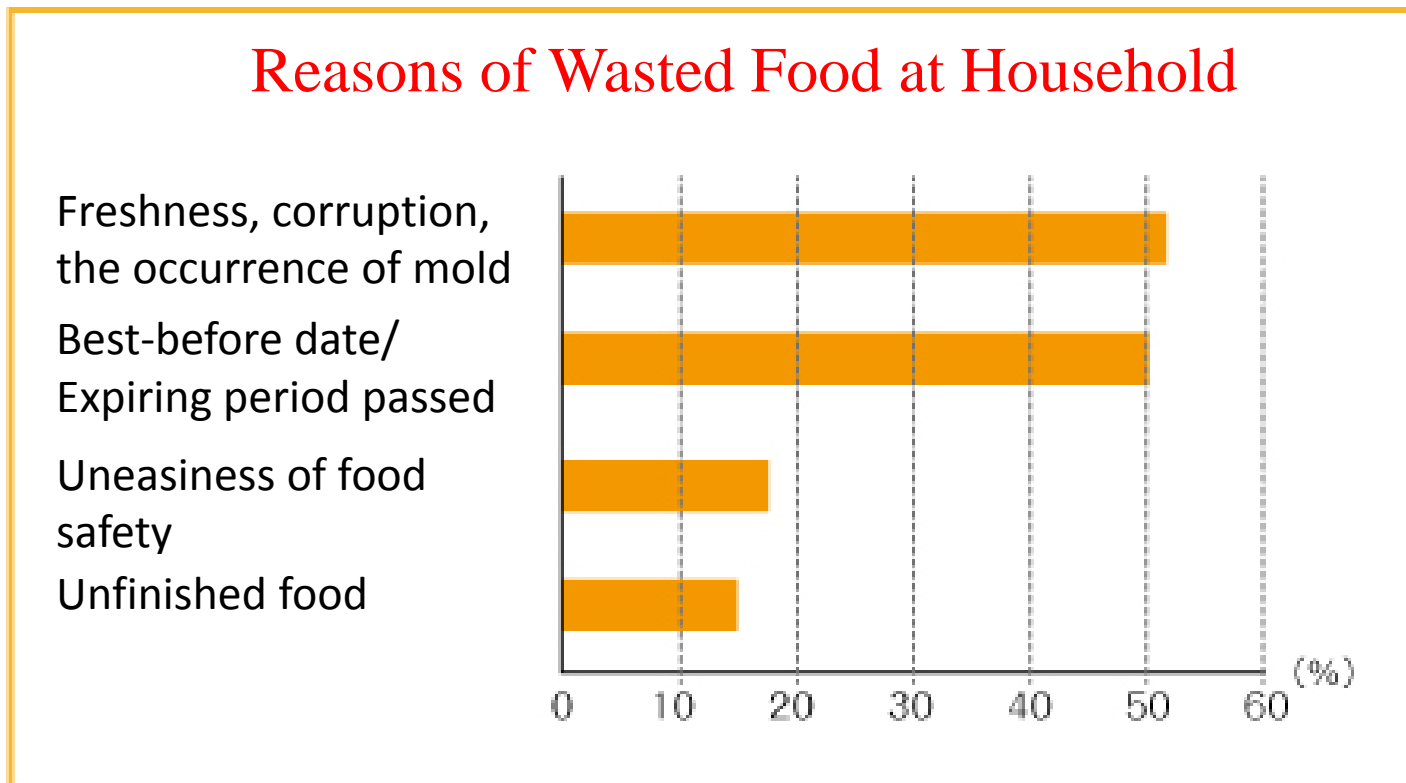


Wasted Food  
(6.2Mton; 29% of total)  
134g/day/person

which is twice as much as the amount of annual world food aid by UN.

## 2.4 Main reasons of wasting food at household

### ■ Main reasons of wasting food at household

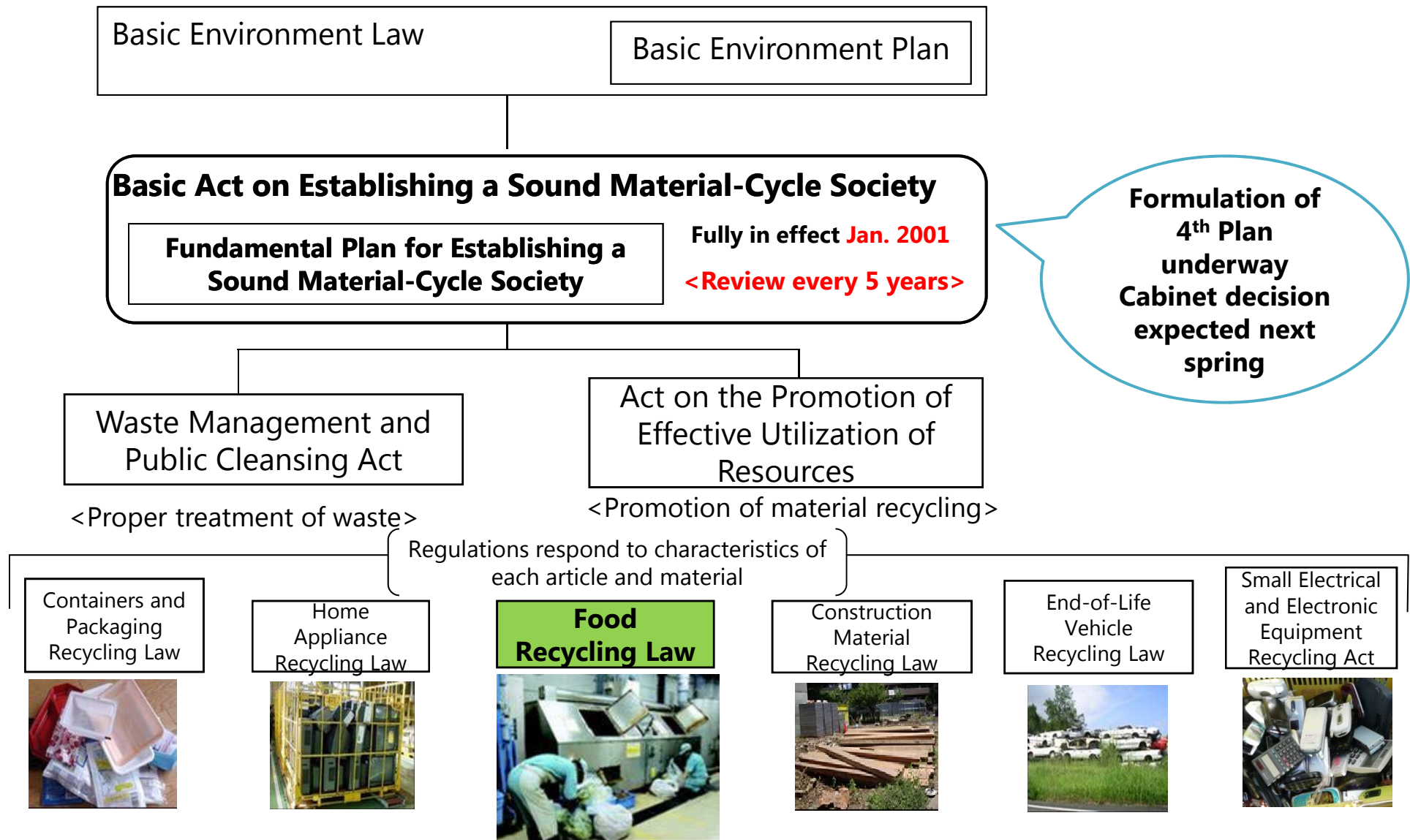


(資料：農林水産省「平成21年度食品ロス統計調査（世帯調査）」（複数（複数回答による））

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# 3.1 The Food Recycling Law under the legal system for establishing a sound material-cycle society



## 3.1 The Food Recycling Law

### ■ Establishment

The Food Recycling Law was established in May, 2001.

### ■ Direction

The Food Recycling Law focuses mainly on food waste from food related businesses. It aims to

- reduce food waste generation, and
- promote recycling of food waste into feedings or fertilizers.

### ■ Role of the National Government

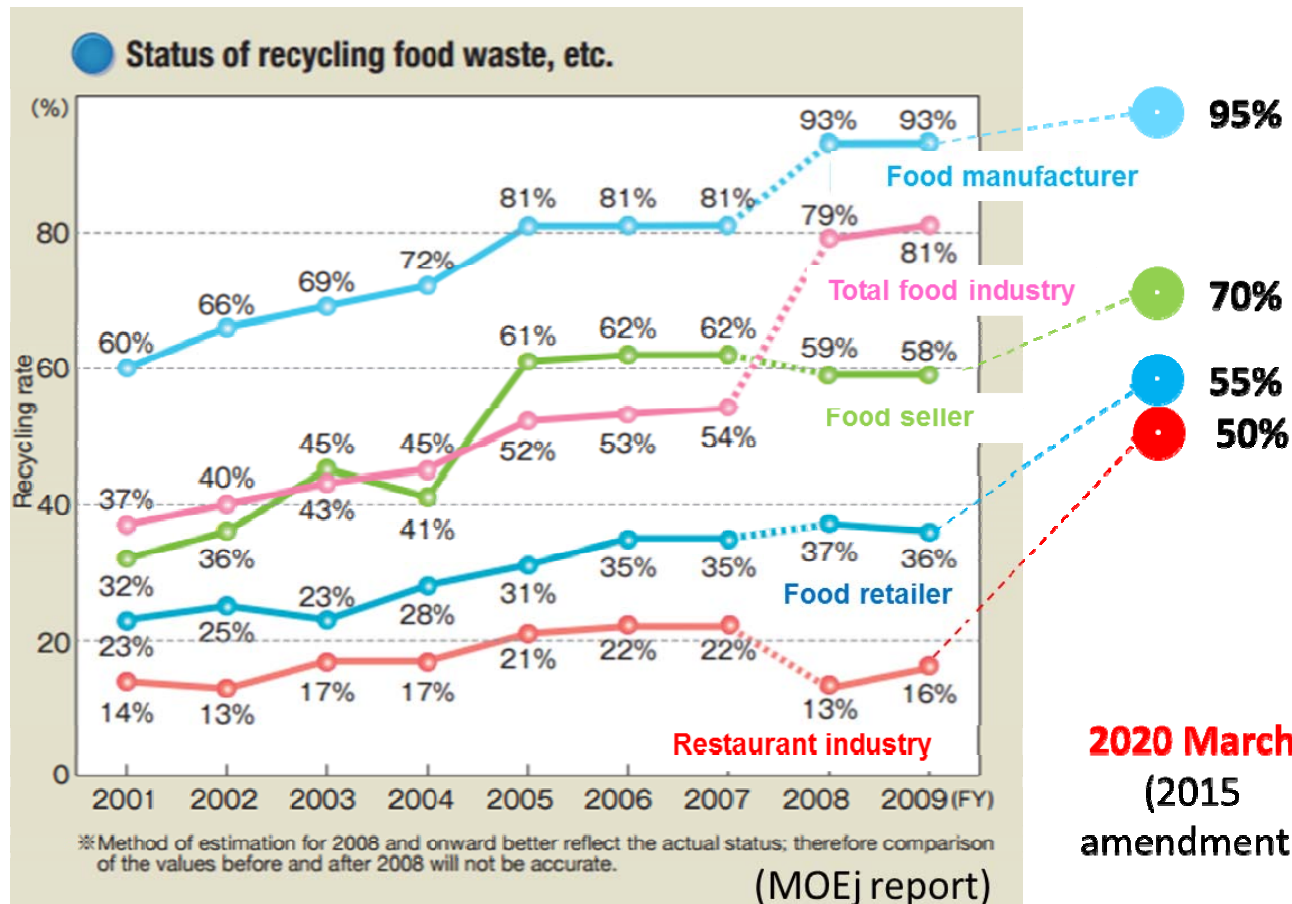
- Formulation of Basic Plan
- Development of requirements to food related businesses
- Advice, Recommendations and Orders
- Awareness Raising

### ■ Responsibility of Food Related Businesses

- Reduction of FW generation / Recycling of FW
- Periodical Report

## 3.2 Challenges at business sectors based on Food Recycling Act

### ■ Goals Setting & Trend of Recycling Rate



### ■ Institutional and technological support for food waste recycling



## 3.3 Recycling Loop System

### ■ Recycling Loop System

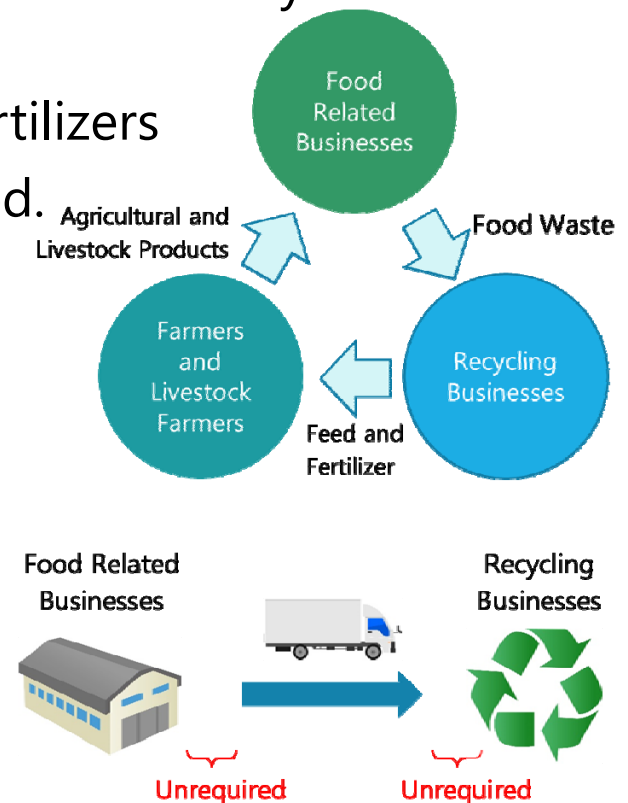
Recycling projects can be approved by the national government when

- food waste is planned to be collected, transported and recycled in an appropriate manner, and
- agricultural products raised using feeds or fertilizers made from food waste are certainly consumed.

As of April 2019, 53 loops had been approved.

### ■ Additional Reduction of Administrative

In addition to reduction of administrative proceeding for recycling businesses registration system, when the recycling project is approved by the national government, the permission of the municipality where the food waste generator exists is not required as well.



# 3.3 Recycling Loop System

## ■ Example – feed for pigs



Food Residues from  
Department Store



Pork (Ham)  
(Own Brand)



Feed for Pigs



## ■ Example – fertilizer use



Food Residues from  
Supermarket



Vegetables



Fertilizer



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## 4.1 Good practice to reduce FW before wasted

### ■ Salvage party (household)

Participants bring together unused food items at households  
Food Salvage inc. can send professional chef  
Share food items / cook together  
Share the recipe with colleagues or neighbors



© 2016 Food Salvage Inc.

### ■ Eat-up movements (3010 campaign)

The campaign asks organizers to encourage participants to

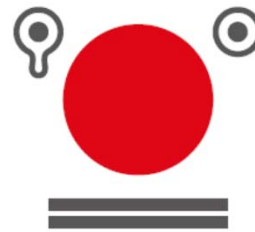
- 1) Sit down 30 minutes in the beginning,
- 2) 10 minutes in the end of parties and banquets

Provide stickers to restaurants/hotels



### ■ Food bank

### ■ Other initiatives



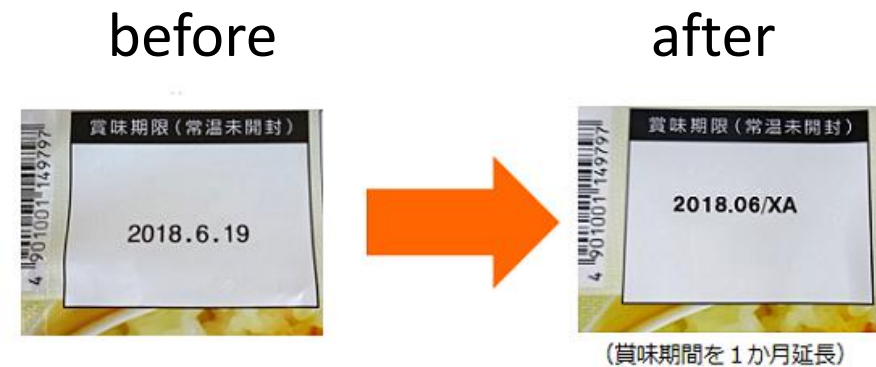
NO-FOODLOSS PROJECT



## 4.2 Other good practice to reduce FW before wasted



Expiring period:  
One months -> four months

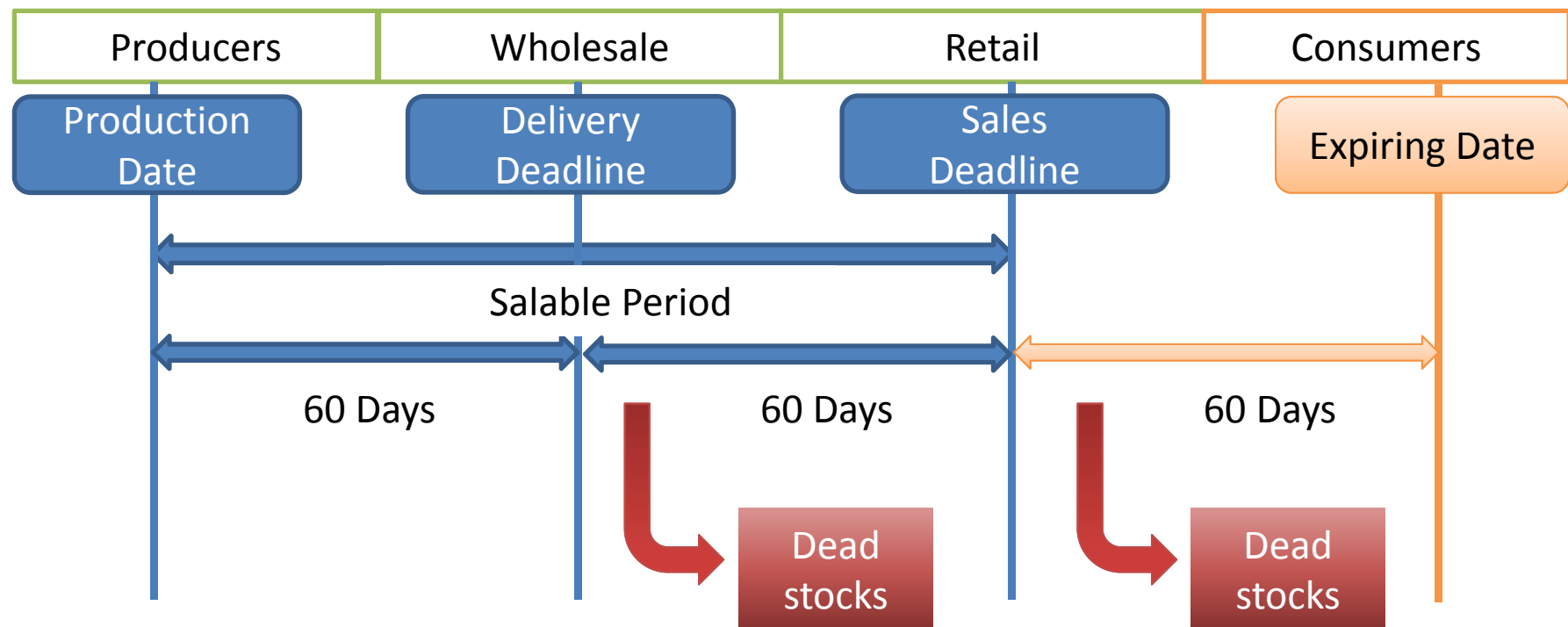


Display of best-before date:  
day -> month

## 4.3 Review of business practices to reduce FW before wasted

### ■ Review of business practices

#### The 1/3 Rule (EX: 180 days before expiring)



➤ 35 companies' experiment of extending delivery & sales deadlines

## 4.4 Composting at household to reduce waste

### ■ Household composting (support through subsidies)



Kiero composter



Keeru composter



Takakura composter

### ■ Key challenge:

- Supporting and assisting system
- How to sustain and scaling up

# 4.5 Regional vitalization based on FW recycling by linking producer and consumer at rural community

## Food waste/kitchen garbage separating/collecting at community as the "local loop"

### Ooki, Fukuoka

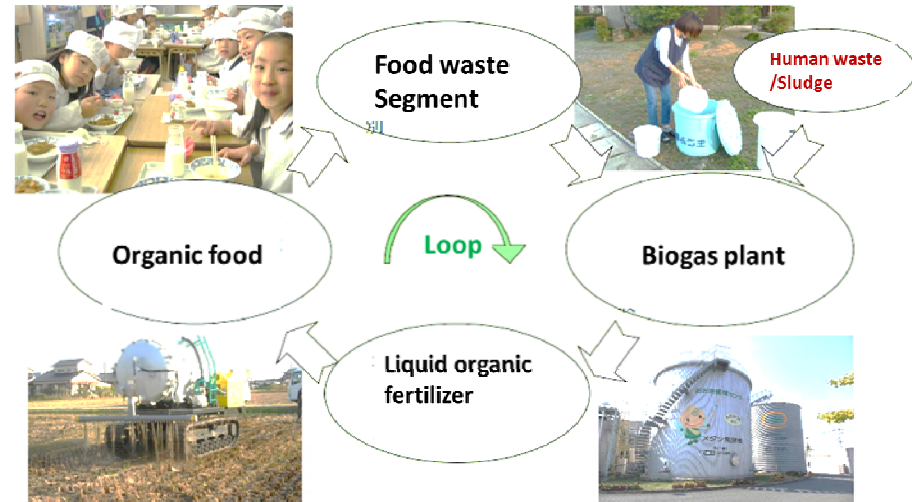
- Popu: 14,500
- Household: 4700
- Area: 18.43 km<sup>2</sup>



Basket-to-basket collecting system



Social platform to support the "loop"





## Main Conclusion about FW in Japan

- **Japan's Food Waste Recycling Law and related initiatives have made progress in encouraging recycling and waste minimization.**
- **However it mostly focus on food industries and further efforts to systematically reduce and recycle food wastes are urgently needed across all stages of the food supply chain, especially downstream.**
- **Social platform of food waste segregation/collection system based on the public-participation, performed as part of activities aimed at revitalizing a community is effective to reduce the domestic food waste generation.**
- **The encouragement of "social" responses to connect producers and consumers by "loop" help to promote the 3Rs of food waste.**
- **There are a few good practices to reduce food waste by the consumer side in the urban area. How to sustain and scale up is yet a challenge.**

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# Funded by S-16 Project (Japan's Environment Research and Technology Development Fund (S-16) of the Ministry of the Environment, Japan.)

## Focusing on “**Policy Design and Evaluation to Ensure Sustainable Consumption and Production Patterns in Asian Region**”

Starting from June 2016 for 3-5 years.

4 themes related to SCP in the context of Asia.

Led by University of Tokyo (Theme 1), NIES (Theme 2), **IGES (Theme 3)**, and Keio University (Theme 4) (with 11 sub-themes)

- Theme 1 approach: Engineering. Strengthening Relations between Consumption and Production towards Sustainability
- Theme 2 approach: Sociology. Focusing on lifestyle and stakeholders engagement.
- **Theme 3 approach: Policy and Economics. Focusing on policy evaluation, modeling and sufficiency approach**
- Theme 4 approach: Governance and SDGs. Focusing on SDGs implementation in the context of SCP



## References

**Chen LIU**, Yasuhiko HOTTA, Atsushi SANTO, Matthew HENGESBAUGH, Atsushi WATABE, Yoshiaki TOTOKI, Desmond Allen and Magnus BENGTTSSON. Food waste in Japan: Trends, current practices and key challenges. *Journal of Cleaner Production* 133, 557-564, 2016.

Atsushi WATABE, **Chen LIU** and Magnus BENGTTSSON (2016) Uneaten food: Emerging social practices around food waste in greater Tokyo. Sahakian, M., Saloma, C. and Erkman, S. (eds) *Food Consumption in the City: Practices and patterns in urban Asia and the Pacific*. Routledge, London and New York.

Thank you very much for kind attention &  
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