Legal and policy framework on food waste in Japan and consequences in practice

Current Situation, Issues and Perspective in Japan

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International Workshop on Food Loss and Waste Prevention Tomio Kobayashi (Aichi Institute of Technology)

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Self Introduction of "Tomio Kobayashi"

Affiliation:

Professor, Faculty of Business, Aichi Institute of Technology

Education:

Ph.D. in Economics, Nagoya City University, March 2015.

Ph.D. in Agriculture, Nagoya University, March 2003.

Research Interests:

Adjustment between supply and demand in food supply chains.

Economic impact of environmental policy on food loss and waste

Committee Service:

- 2019- Member of Strategic planning meeting for food loss and waste reduction (food service division), Consumer Affairs Agency, Japan.
- 2018- Member of Central Environment Council, Food Recycling Special Committee, Ministry of Environment, Japan.
- 2015- Chairman, Doggy Bag Committee in Japan.(2010-Advisor), and many others..

Books and Book Chapters:

Kobayashi, T. (Publishing) Economics of Food Loss and Waste, Agriculture and Forestry Statistics Publishing Inc. (English Edition)

Kobayashi, T., Nomiyama, T. (ed.) (2019) Food Bank Diversity and Food Supply Chain Evolution

-Overseas Trends in Food Donation and problems in Japan-, Tsukuba Publishing Inc.

Kobayashi, T. (2018) Economics of Food Loss and Waste (Third Edition), Agriculture and Forestry Statistics Publishing Inc., Japan.





Agenda

- 1.Policies and Issues of Legal system for food loss and waste in Japan
- 2.Food loss and waste management in Japan
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Awareness of Food Shortage during World War $~\rm I~\&~II$



er, 1917, Ministry of Food (UK). Similar posters were cognition that the waste of internationally traded cc



Second World War poster, 1939–45, UK

Global trends in food loss and waste

SUSTAINABLE GOALS



- SDG 12 seeks to "ensure sustainable consumption and production patterns."
- The third target under this goal (Target 12.3) calls for halving per capita global food waste at the retail and consumer levels and reducing food losses along production and supply chains (including postharvest losses) by 2030.

	Target	Year decided				
EU	Reduce food waste and food loss in 30% and 20% in 2025 & 2030 respectively in comparison to 2014 figure	2017				
UK	Reduce food waste per capita in 2025 by 20% in comparison to 2015					
France	Reduce food waste in the supply chain in 2025 by 50% in comparison to 2013	2013				
US	Reduce food loss and waste by 50% in 2013	2015				
	Source: 21th meeting handout of Food Recycling Special Committe					

History of Legal system in Japan

- 2001: "Food Recycling Law" enforced
 - Food waste measures are mainly food recycling
- 2007: Enacted "Revised Food Recycling Law"
 - Regular report (>100 tons / year)
 - > CVS franchisors are required to take measures including their franchisees
- 2013: "Food Recycling Law" Basic Policy Revision
 - > Target setting for food loss limit (by food industry)
- 2018: "Basic Plan for Establishing a Recycling-Based Society (4th)"
 - > Cabinet decision to halve household food loss by 2030
- 2019 "Food Recycling Law" Basic Policy Revision
 - Set target of halving food loss by 2030 (whole food industry)
- October 1, 2019 Scheduled implementation of the "Food Loss Reduction Promotion Law"
 - Reduce food loss as a national movement

FLW Flow in Japan Food Loss structure from Food



Source: MAFF

FLW Definition Focusing on Food Supply Chain

	Farm	Post Harvest	Food Manufactu rer	Wholesaler, Retailer	Restaurant	Household
JAPAN				Food	Loss	
FLW Protocol		Food loss a	nd waste	4	減目標の対象	
FAO			Food loss	and waste		
EU		F	ood waste = 肖	削減目標の対象		
UK	Food waste) j	削減目標の対象	2	
France			Food waste=肖 (Gaspillage	減目標の対象 Alimentaire)		
US DA			Fo	od loss and was	te	
US EPA				Food waste		

Source: MOE

In Japan, measures in the household and agriculture sectors did not progress because they were not covered by Food Recycling Law.

Definition of Food Loss in Japan



"Food Loss" is edible portion of "Food Waste", which also includes inedible portion

FLW Definition focusing on the edible/ inedible

	Edible port	ion (food)	Inedible Portion			
JAPAN	Food	Loss	Food Waste			
FLW Protocol	Food loss ar		nd waste			
FAO	Food loss and waste					
EU		Food w	vaste			
UK –	avoidable	possibly avoidable	unavoidable			
	Food waste					
France	Food waste (Gaspillage Alimentaire)					
US DA	Food loss and waste					
US EPA	Wasted food	Food v	vaste			

Source: MOE

In the UN Food Loss and waste (FLW) protocol, reduction targets can be defined according to the purpose of the setting entity

World FLW

		JPN	US	UK	France	Germany	Netherland ****	Korea	China
FLW		17 56.4	12	9.99	10.97	2.52	5.9	103	
(Ex. Farmer, By-product)					~13.27		~ 3.73		
	Mt	^t 6.4		9	4.692	-	1.35		
Edible Portion"					∼6.02		∼1.99		
ELW For Pooveling			20.4	2 5	3.7	4 40		5 5	0
FLW FOI Kecyching		5.5	20.4	2.5	∼4.94	4.49	-	5.5	9
FLW per capita	FLW per capita	kg 133.6 17	177.5	187	148.7	136	149.9	114	75.74
					~200.5		222.9		
Recycling Rate	%	32%	36%	21%	37%	41%		93%	9%

- 出所:各国の各種統計・調査、および流通経済研究所の推計による。日本の数値は、農林水産省「食品廃棄物等の利用状況等(平成24年度推計)」を用いた推計。斜字体部分は推計値、または参考値。
- フランス、オランダは、「可食部分」のみのデータから「潜在的可食部」「非可食部」を含む数値を推計(参考値)。
- ・ また、フランスは発生量に各セクターの再生利用率(参考値)を乗じて、再生利用量を推計(参考値)。
- *フランスの「可食部分」数値は、「可食部分」のみで「潜在的可食部分」は含まない。ドイツの「可食部分」数値は、「avoidable」「partly avoidable」の合算値。オランダも、「avoidable」「potentially avoidable」の合算値。
- **英国の「再生利用量」の数値範囲は、「Recycling (AD/composting)」のみ。「飼料化」は「Redistribution (humans & animals)」に、 「耕地への鋤き込み」(飼料化)は「Recovery (thermal, landspreading)」に含まれ、個別の数量が不明のため算出範囲に含まれて いない。このため、実際の「再生利用量」はここに記載された数値よりも大きくなると考えられる(参考値)。
- ***ドイツ、中国の「再生利用量」「人口1人当たり再生利用量」は、「飲食店・機関系(食堂等)」と「家庭」のみの数値であり、「食品製造業」「卸売業」「小売業」の数値は不明のため含まれていない。このため、実際の「再生利用量」「人口1人当たり再生利用量」は、ここに記載された数値よりも大きくなると考えられる(参考値)。
- ****オランダの数値には、「卸売業」が含まれていない。また、「小売業」の数値はスーパーマーケットのみの推計値。スーパーマーケット以外の小売業が含まれておらず、その分だけ数値が小さく出ていると考えられる(参考値)。

Issues in Japan (1): Leftover in Restaurant



- In Japan, as an excessive response to food hygiene, restaurants may ban taking out of leftovers
- The Consumer Affairs Agency mentions taking home of leftover food is at the consumer's own risk

Issues in Japan (2): Food Sharing



• In Japan, donation for Foodbank is very low.

• Japan has the lowest rate when it comes to donation among the advanced countries (WGI 102nd)

(WGI)

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(Reference) Doggy Bag Act in France



In France, where doggy bags are not well-mannered, legislation that requires the provision of doggy bags is under consideration for enforcement in 2021.

New development of food bank in Japan







- In Japan, where children's poverty is serious, there are 3,718 children's cafeterias in 2019, and food is often donated
- Cases where local governments directly operate or outsource business, the donated surplus food is sold at a low price and the proceeds are used for the operating cost of the food bank, Co-op or food wholesaler that has logistics facilities conducts food bank activities directly.

Japanese way of Food Sharing



• In Japan, gift exchange of food is popular among family and close relatives (ex. Gifted rice from rural area to people living in city).

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Japan's outlook regarding food loss in 2030

- From recycling-oriented "garbage countermeasures" to "reducing mechanism"
- From "must be reduced" to "realization that life is enriched by reducing"
- What should be reduced??? Further discussion is needed (sashimi garnish, eating competition, education forcing students to eat up all their lunch (Inokori school lunch)), etc.
- Cross-sectional <u>industry-government-academia</u> collaboration design that coordinates various measures such as environment, economy, and society, etc.