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

Current Situation, Issues and Perspective in Japan

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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:
Agenda

1. Policies and Issues of Legal system for food loss and waste in Japan
2. Food loss and waste management in Japan
3. Japan’s outlook regarding food loss in 2030
Awareness of Food Shortage during World War I & II

First World War poster, 1917, Ministry of Food (UK). Similar posters were common to raise public awareness of food conservation and the importance of not wasting food.

Second World War poster, 1939–45, UK. This poster emphasizes the importance of a clear conscience by not taking more than you can eat, highlighting the need to conserve food resources during the war.
Global trends in food loss and waste

- 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.

<table>
<thead>
<tr>
<th>Target</th>
<th>Year decided</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU</td>
<td>Reduce food waste and food loss in 30% and 20% in 2025 &amp; 2030 respectively in comparison to 2014 figure</td>
</tr>
<tr>
<td>UK</td>
<td>Reduce food waste per capita in 2025 by 20% in comparison to 2015</td>
</tr>
<tr>
<td>France</td>
<td>Reduce food waste in the supply chain in 2025 by 50% in comparison to 2013</td>
</tr>
<tr>
<td>US</td>
<td>Reduce food loss and waste by 50% in 2013</td>
</tr>
</tbody>
</table>

Source: 21th meeting handout of Food Recycling Special Committee
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 industry (2014 FY)

Manufacturer: 1440k ton (42%)
Wholesaler: 160k ton (5.0%)
Retailer: 600k ton (18%)
Restaurant: 1200k ton (35%)
Total: 339 kt (100.0%)

Source: MAFF
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.

Source: MAFF
In the UN Food Loss and waste (FLW) protocol, reduction targets can be defined according to the purpose of the setting entity.
<table>
<thead>
<tr>
<th></th>
<th>JPN</th>
<th>US</th>
<th>UK</th>
<th>France</th>
<th>Germany</th>
<th>Netherland **</th>
<th>Korea</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLW (Ex. Farmer, By-product) Mt</td>
<td>17</td>
<td>56.4</td>
<td>12</td>
<td>9.99</td>
<td>10.97</td>
<td>2.52</td>
<td>5.9</td>
<td>103</td>
</tr>
<tr>
<td>Edible Portion*</td>
<td>6.4</td>
<td>-</td>
<td>9</td>
<td>4.692</td>
<td>-</td>
<td>1.35</td>
<td>5.5</td>
<td>9</td>
</tr>
<tr>
<td>FLW For Recycling</td>
<td>5.5</td>
<td>20.4</td>
<td>2.5</td>
<td>3.7</td>
<td>4.49</td>
<td>-</td>
<td>5.5</td>
<td>9</td>
</tr>
<tr>
<td>FLW per capita kg</td>
<td>133.6</td>
<td>177.5</td>
<td>187</td>
<td>148.7</td>
<td>136</td>
<td>149.9</td>
<td>114</td>
<td>75.74</td>
</tr>
<tr>
<td>Recycling Rate %</td>
<td>32%</td>
<td>36%</td>
<td>21%</td>
<td>37%</td>
<td>41%</td>
<td>93%</td>
<td>9%</td>
<td></td>
</tr>
</tbody>
</table>

- 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）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）。

*Edible Portion*
• 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
In Japan, donation for Foodbank is very low.
Japan has the lowest rate when it comes to donation among the advanced countries (WGI 102nd)
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We are acting as Doggybag Committee

* Membership fee (starter kit fee)
  Individual membership fee 1,000 yen (one set)/ Restaurant / Corporate Fee 5000 yen (6 sets)
  Individual self-responsible member 300 yen/Restaurant self-responsible member 500 yen
There is no annual fee or other maintenance fee, registration only (free)

More than 600 members nationwide
(including about 100 companies)
In France, where doggy bags are not well-mannered, legislation that requires the provision of doggy bags is under consideration for enforcement in 2021.
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 industry-government-academia collaboration design that coordinates various measures such as environment, economy, and society, etc.