Food losses and food waste in China: A first estimate

Chong Li
ON BEHALF OF
Gang Liu, Xiaojie Liu, Xue Li
Institute of Geographic Sciences and Natural Resources Research, CAS
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Food losses and food waste: a global concern

- **FAO**: 1/3 of food produced is lost or wasted globally (13 billion tons).

**Targets**

- **UN**: To halve per-capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains by 2030 (SDG 12.3)
- **EU**: Committed to meeting the SDG 12.3
- **USA**: Calling for a 50-percent food waste reduction by 2030
- **P.R.China**: In 2020, promote the construction of smart grain depots and reduce food losses and waste (through policy, technology, and public advocacy)
Food losses and food waste (FLW) in food system

Agricultural production
- Crop Planting
- Animal husbandry
- Aquaculture
- Others

Harvesting

Agricultural products

Postharvest handling & Storage
- Slaughtering
- Grinding
- Drying
- Storage

Raw materials

Processing
- Primary processing
- Industrial processing
- Reprocessing
- Packing

Processed food

Distribution
- Transport
- Wholesale
- Supermarket
- Fresh market

Ready-to-buy food

Consumption
- Household
- Out-of-home
- Restaurants
- Canteens and public services (school, hospital, government, etc.)

Production loss/waste

Postharvest losses/waste

Textured food utilization
- Seeds
- Animal feed
- Biofuels
- Other utilities

End-of-life management
- Landfill
- Incineration
- Composting
- Biogas
- Others

Consumer waste
Food waste in restaurants: a first estimate

- 3557 tables in 195 restaurants in four case cities investigated
- Case cities: Beijing, Shanghai, Chengdu, Lhasa
Findings I: Restaurant food waste and composition of the four case Chinese cities

- The average amount of food waste per capita per meal in the four cities is calculated as 93 g.
- Vegetables contribute the most (29%), followed by rice (14%).
Findings II: Food waste per capita per meal and proportions of each case city

- Varies by cities, consumer groups, restaurant categories, and purposes of meals...
- Total restaurant waste of the 4 cities: 1.3 Mt.
Findings III: Comparison of restaurant food waste per capita per meal with different occasions

- Restaurant food waste from **friends gathering** (107 g) and **business banquet** (102 g) were significant.
Specific Survey: Plate Waste in School Lunch Programs in Beijing

Location of the six surveyed schools in Beijing
Composition and patterns of school food waste

Food waste disparity under different food supply patterns

<table>
<thead>
<tr>
<th>Supply Pattern</th>
<th>Food Waste (g/Cap/Meal)</th>
<th>Share of Food Served (%)</th>
<th>Food Waste Composition (g/Cap/Meal)</th>
<th>Staple Food</th>
<th>Vegetables</th>
<th>Meats</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packed Meal</td>
<td>216</td>
<td>35</td>
<td>84</td>
<td>45</td>
<td>12</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Buffet Meal</td>
<td>63</td>
<td>10</td>
<td>45</td>
<td>12</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Set Meal</td>
<td>109</td>
<td>18</td>
<td>39</td>
<td>49</td>
<td>10</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>130</td>
<td>21</td>
<td>56</td>
<td>55</td>
<td>12</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

- **Packed meals** are the most wasteful.
- The average amount of school plate waste was **130 g/cap/meal**.
- **Staple food and vegetables** were the main proportions of food waste.
**Actions from Stakeholders**

**Government**
- Encourage residents to actively consume and improve the level of food consumption
- Introduce relevant policies and special funds to develop tourism catering
- Strengthen legislation and implementation of catering consumption
- Formulate local provisions to eliminate food waste
- Strict implementation of food safety laws and catering enterprise hygiene regulations, etc.
- Strictly control food purchase channels
- Comply with food processing operations and remove health hazards
- Strengthening health supervision and health training for catering employees
- A la carte service and reminder consumption, pay

**Catering Companies**
- Formulate industry norms and promote the standardization of the catering industry
- Timely reflection of key issues and opinions in the catering industry
- Play an intermediary organization and promote communication between stakeholders
- Promote public opinion supervision and publicity
- Choose regulated dining places for food and beverage consumption
- Reporting and supervising food and beverage consumption issues
- Advocate recycling tableware and reduce the use of disposable tableware
- Establish a correct concept of food and beverage consumption, no extravagance and waste
- Actively participate in public welfare education

**Industry organisations**

**Consumers**
Government-led, Multi-Stakeholder participation model

From the macro level, the government-led perspective proposes the realization path of promoting sustainable consumption of food in China at this stage.

- **System Design**
  - Laws, policies, and regulations are enacted

- **Program development**
  - Mission focus, clear division of tasks, clear responsibilities

- **Scientific guidance**
  - National participation, consumption concept, value orientation

- **Demonstration promotion**
  - Government-led, setting standards, setting benchmarks

- **Supervision and evaluation**
  - Scientific and accurate measurement methods, regular assessment, feedback
The Beijing Municipal Education Commission issued the "Notice on Further Improving Campus Catering Supply and Eliminating Food Waste in School"; The Beijing Municipal Commission of Education and Industry has held different types of seminars and theme education practice activities, which attracted widespread attention.
CCTV broadcasts continuously, and the research team provided data support.

Focal point interview:
- 2017.2.6: Waste on the tip of the tongue
- 2017.4.3: Keep your tongue tipless and no waste
- 2017.6.3: No waste: have heart and action
- 2017.6.19: What is left of the "leftover feast"?
- 2017.8.14: How to eliminate waste?

CCTV News:
- 2017.5.27: "Waste on the tip of the tongue" can not be ignored
- 2017.5.28: "Clean you plate" Rejects waste on the tip of the tongue
- 2017.5.29: "Clean you plate" Reduce waste, campus in action
- 2017.5.30: "Clean you plate" Refuse the "leftover" feast
- 2017.6.1: "Clean you plate" Don't let "feast" become "leftover feast"
- 2017.6.3: Multiple measures to help "Clean you plate"
- 2017.6.4: "Clean you plate" Start small
2017-19 Reduce Food Loss & Waste Actions
From Chain Store Business

- **Consumer educational materials**
- **Launch of SAVE12.3 Platform**
- **World Food Day**
- **Forum on FLW**
- **FAO China Rep. Dr. Vincent Martin**

**Publicity materials package**

**2018 Launch of SAVE12.3 Platform**

**2018 World Food Day theme publicity activities**

**2018 Forum on FLW**

**FAO China Rep. Dr. Vincent Martin**

Former Swedish Ambassador has participated and delivered speeches...
Scientific support for the “Reduce food waste for young people” campaign

- 2017.05: Host the "Reduce Food Waste" Challenge
- 2017.01: Co-hosting Chinese youth “Reduce food waste” environmental creativity contest;
- 2017.04: Participated in “Food education and youth environmental protection creative competition of Chinese primary and secondary school”.

![Image of a presentation slide with the title "Campus Food Waste Research Activity"]

![Image of a banner with the text "Reduce food waste" and a banana]

![Image of a flyer for the "Reduce Food Waste" competition with eligibility and prize details]
Expanding Networks on FLW in China

Highlighted issues in China
- Poverty Alleviation
- Sustainable Agriculture
Thanks for your attention!!

Contact:

IGSNNR:
Dr. Gang Liu: liugang@igsnrr.ac.cn
Dr. Xiaojie Liu: liuxj@igsnrr.ac.cn

CCFA:
Ms. Chong Li: lc@ccfa.org.cn