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Reducing Food Loss and Waste in Japan: An Environmentally Friendly Approach

ABSTRACT

The poster I presented at the LD30 Conference was about reducing food loss and waste. I proposed one idea on how to reduce food loss and waste in Japan based on two research questions. In my presentation, I first provided the background of food loss and waste by referring to environmental damages and the north-south divide, including the differences between food loss and waste. Second, I explained the past situation of food loss and waste in Japan based on my reading of the literature. Additionally, I compared the actions that had been taken for food loss and waste in Japan and Europe. Finally, I offered and discussed my idea to deal with food loss and waste in Japan. I concluded my session by summarizing the main points and talking to the participants about the issue and actions that could be taken to reduce food loss and waste.

First, let me explain how I decided to work on this project. I have been taking a course in my department in which we were given an assignment to write a paper about social issues. I took this course to encourage me to work on academic writing which I wasn't good at. In this course, I decided to search about food loss and waste. Seeing the actions or policies towards food loss and waste in Japan made me feel it can be encouraged more. It motivated me to search and think about this issue. That is why I have done my research about food loss and waste in university focusing on SDG goal 12. Then I had the opportunity to participate in the LD30 Conference, so I decided to share my ideas with participants in a poster session.

In my research, I focused on the situation in developed countries to consider suggestions for Japan by setting two research questions:

1. What is the situation of food loss and waste in Japan in comparison to the rest of the world?
2. What can be done to reduce Japan's food loss and waste?

MY POSTER

In this poster presentation, I proposed one idea on how to reduce food loss and waste in Japan. The poster is reproduced below. To guide my thinking, I set two research questions which appear at the top left of the poster. Below this, I then provided the background of food loss and waste by referring to environmental damages and the north-south divide including the differences between food loss and waste. Below this, I answered my first question by looking into the current situation of food loss and waste in Japan through my reading of the literature ('Current Situation in Japan'). I also compared the actions that have been taken for food loss and waste in Japan and Europe

(‘What Other Countries Do’). Finally, I offered and discussed my idea to deal with food loss and waste in Japan to answer the second research question. (‘My Connection’ > ‘My Idea’).

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References

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One-third of the world's food production is thrown away every year.

1.3billion tons



(WFP, 2021)

- **Food loss:** Being lost between harvesting and retailing
- **Food waste:** Being wasted at the consumption level

RESEARCH QUESTIONS

- What is the situation of food loss and waste in Japan in comparison to the rest of the world?
- What can be done to reduce Japan's food loss and waste.

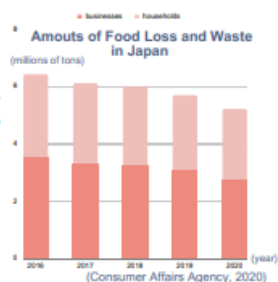
BACKGROUNDS

There are three issues caused by food loss. First, damaging to natural resources. As the right figure shows, these amounts of resources for growing food are eventually consumed for food waste. Second, there are a great amounts of CO2 emissions from carrying food products from place to place by vehicles which would be the third-largest greenhouse gas emitter, behind China and the US. In addition, there is the North-South (developed and developing countries) divide. North countries including Japan mainly happen at the consumption level while those happen before reaching consumers in the South. So, I focused on the North's situation to consider what Japan should do.



CURRENT SITUATION IN JAPAN

The left graph shows there is a great amount of food loss and waste in Japan even though it's gradually decreasing year by year. These are mainly from businesses such as supermarkets and restaurants, and from households. Japan relies on imports from overseas because of low self-sufficiency while they produce a high amount of food waste.



WHAT OTHER COUNTRIES DO

Denmark has supermarkets that sell food at discounted prices which can no longer be sold in common supermarkets because of the imminent expiration dates with discounted prices. The French parliament voted for the law to force supermarkets to give away unsold food that has reached sell-by date to volunteer or charity groups for supporting citizens who suffer from lack of food in December, 2015. A local councilor who encouraged legislating this law was aiming to spread this law to whole EU countries, and around the world eventually. These examples show that European countries are trying to reduce food loss and waste at the consumption level.

MY CONNECTION

I see actions for reducing food loss and waste in Japan, and the cafe where I'm working also has a service for that. So, I am eager to encourage more actions to reduce food loss and waste which is one of the big discussions in the current world.

SDGS LINK



Goal 12 of SDGs, aims to get the patterns of sustainable consumption and production which is categorized in four parts: planetary crisis, food loss and waste, reliance on natural resources, and electronic wastes.

MY IDEA

I would like to propose an idea to use vacant spaces of vehicles such as trains, and buses for carrying food to the people who need it. It is necessary to encourage supermarkets to put irregular-shaped vegetables and products nearing their expiration date in buses and sell these discounted prices. I learnt this idea from the activity which uses the vacant spaces of vehicles to carry local crops to elder's residences. There are two purposes:

- Reducing the food which is thrown away before reaching consumers
- Being environmentally friendly

There's no extra CO2 emission by using vacant spaces. This idea makes other profits. By carrying food to elderly and physically disabled people, they can not only get food but also provide a space for them to communicate with each other. On the other hand, there are possible obstacles. There are fewer networks to find demands and build smooth operations at first. In addition, without smooth operations, managing carrying products to consumers before the expiration date would be difficult. Therefore, it is necessary to find how to build well-organized operation systems by carrying surveys to local communities and merchandisers.

WHAT I LEARNED

From my research, I learned about the gap of food loss and waste among developed countries, and I found good policies or actions which other countries do to lead the situation better.

FROM SMALL CHANCES

I want everyone to get more interested in this issue through my poster. My proposal can start with a single truck, and I hope that this will develop over a wide area, with stronger ties to local supermarkets and farmers.

Learning for Change and Action, Making a Difference for the Future, Oct 21st, 2023.

PCP REFLECTION

I joined the LD30 Conference for my academic experience. In the preparation stage, making a big poster was a good way to wrap up my research and consider how to convey it to the audience. I was excited to speak up about my idea at an academic conference for the first time in my life.

On the day of LD30 (day 1, Oct 21), the session time flew by faster than I expected with valuable communications. There were both professors and students from various areas of Japan visiting my poster. There were two memorable episodes during the session.

First, several teachers visited my poster. One of them gave me a comment on my poster that world food transportation is the third largest CO2 emitter behind China and the US. This was surprising. In addition to what the professor pointed out, I put two more serious issues caused by food loss and waste on my poster. The first issue is the damage to natural resources caused by food loss (freshwater, fertilizers, and croplands). Food waste means disposing of food and natural resources. The second issue is the difference between developing countries and developed countries. In response to the section on my poster about waste loss in Japan, another professor asked me why it is considered serious although the graph in the poster shows the amount of food loss and waste in Japan has been declining for five years. I explained to him that it is obvious the amount has been reduced, but I pointed out that there was still 5.22 million tons of waste from households and businesses in 2020. This fact shouldn't be forgiven.

I explained to the teachers two examples from other countries. Denmark's supermarkets sell goods at discounted prices which can no longer be sold in common supermarkets because of the imminent expiration dates. In France, the law forced supermarkets to give unsold food to charity groups who suffer from a lack of food. Considering these in mind, I put the idea of carrying extra food products to places where they are in demand in the vacant space of transportation. For example, on highway buses, there are spaces to put passengers' luggage, but there are extra spaces that contain nothing. Extra food could be carried in these spaces. It can reduce the food that retailers throw away. It's also environmentally friendly, not using extra vehicles. At this time, one of the teachers mentioned one of the actions in Japan. It is called "Second Harvest Japan". They play a role similar to food banks. So, I could get new knowledge which stimulates my ideas. The professors admired the fact that I've done research and tried to share in this session. They made me feel satisfied with all my work.

I had another valuable conversation with a student who is also learning English. Looking around my poster, she was interested in my idea to reduce food loss and waste. She told me that she is interested in agriculture, and had some experience learning about farmers. Then she asked whether my idea could save farmers. From her perspective, one of the serious issues of agriculture is the lack of successors, people who can take over the running of farms after this generation. We came up with the idea to carry local crops from rural to urban areas so that people can get to know more about farmers or production areas. I feel that if customers knew more about the farmers who produce the goods they buy, they would feel more familiar with them, which would raise people's interest in agriculture. We had a nice discussion till the end.

Through my poster session, I learned various kinds of new things, and points of improvement in my research, and mostly I enjoyed sharing ideas with people who have different majors, and backgrounds. It gave me the confidence to try new things in English.

I appreciate it at all.