

APEC MEMBER ECONOMY REPORT AND INFORMATION SHARING INDONESIA

DIGITILIZATION AND INNOVATIONS IN TACKLING WITH THE ISSUE OF FOOD LOSS AND WASTE

FACTS ABOUT FOOD LOSS AND WASTE IN INDONESIA

- 1) The accumulation of *food loss* dan *food waste* in Indonesia in the period of 2000-2019 reached 23-48 millions tons each year or equivalent with 115- 184 kg/capita/year or equivalent with Indonesian GDP of 4-5% yearly
- 2) As with social impact, this loss is equivalent with food portion for 61-125 millions people (21-47%) of the total population.
- 3) Indonesia is regarded as one of the largest food waste contributors in the world. The 2021 Food Waste Index report estimates that Indonesia generates 77 kg of food waste per capita or 20,938,252 tons per year.
- 4) According to the United Nations, food waste contributes 7.3% of greenhouse gas emissions (GHG) every year in Indonesia, with 115 kg to 184 kg of food waste wasted per citizen (BAPPENAS 2021).
- 5) The high rate of food loss in Indonesia could be due to inadequate infrastructure between food producing regions and major population centers, which causes delays in food transportation; (source: jakartaglobe.id/business/indonesia-second-largest-food-waster)

Other contributing factors:

- Consumer habits
- Excess food inventory
- Inadequate storage
- Misinformation regarding food expiration dates
- The Covid-19 pandemic has also led to an increase in household food waste due to a rise in shopping routines through food delivery applications

The National E-Agriculture Strategy Roadmap

Target: 2027

Indonesia, in collaboration with FAO, has launched ***The National E-agriculture Strategy Roadmap*** with its main target to integrate database for farmlands and farmers, as well as providing a digital early warning system for disasters that could threaten agricultural production, and run a system for agricultural data collection, extraction, and analysis by 2027.

PRIVATE SECTORS: ENCOURAGING DIGITILIZATION AND INNOVATIVE TECHNOLOGY TO PREVENT FOOD LOSS AND WASTE

Gamification: game like application to create a sense of food adequacy and food security awareness



Mobile Applications: practical application for grocery/food buying and planning



Start up company participation in helping the reduction of Food Loss and Waste in Indonesia

Play the documentary video from DW:

<https://www.dw.com/en/indonesian-startup-taps-into-ai-to-combat-food-waste/video-65870650>

Positive response to the apps:

- 1) “...The apps are quite important because I can plan and record with my phone, so it's more efficient. The apps provide benefits... I can monitor it and know when it expires. If there is no application, I often forget. So that there is no more food waste and food wasted. The most useful feature is the pantry” (Participant 5, 38 years old, female).**

- 2) “...I like the grocery list feature the most because, with a shopping list, we know what we want to buy. The pantry feature is more fun because you can know when it expires... Quizzes are fun too, and good for adding insight...”**

To conclude:

- 1) There is positive response to the initiatives and efforts to take benefit from food loss and waste applications because of it has potential for daily use in helping users reduce food waste, especially for younger adults.
- 2) The perceived usefulness of the application has a major influence on the user's decision to use the application
- 3) Gamification can help increase motivation to use applications and engage in reducing wasting food habits since it is more interesting and exciting. It also supports the function and emphasizes the goals of the application to reduce wasting food habits.
- 4) Private sectors through start up companies have actively engaged in the preventing of food loss and waste by developing a unique system to prevent food loss and waste in Indonesia.