

## **Indicator 12.3.1**

### **Indicator Name, Target and Goal**

**Indicator 12.3.1** a) food loss index and b) food waste index

**Target 12.3** By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses

**Goal 12** Ensure sustainable consumption and production patterns

### **12.3.1-1 Food Loss and Waste From Food Industry**

#### **Definition and Rationale**

##### Definition

Food Loss and Waste From Food Industry

The term “food loss and waste” is defined as “foods which were disposed while they were originally edible”. The amount of “food loss and waste from food industry” represents the amount of food loss and waste generated by food-related business operators (food manufactures, food processors, food wholesalers, food retailers, restaurants and other businesses engaged in food services).

This indicator is calculated by multiplying the amount of food-derived losses and wastes (including valuable byproduct) by ratio of the edible part of them. Food loss and waste does not include inedible parts of the losses and wastes generated accessorially through food processing, such as vegetable peels and bones.

##### Concepts

The amount of food loss and waste is represented by the weight of foods disposed while they were originally edible. The amount is generally weighed and estimated once the losses and wastes are generated by food-related business operators.

Ratio of edible part of food-derived losses and wastes is calculated by examining the ratio of edible and inedible part of the losses and wastes generated by food-related business operators.

○ Rationale and Interpretation:

This indicator has a certain affinity to “per capita global food loss and waste at the retail and consumer levels” and “food losses along production and supply chains, including post-harvest losses”, by showing the amount of edible part of food-derived loss and waste generated by food-related business operators.

The amount generated by households, which is another part of “per capita global food loss and waste at the retail and consumer levels”, is calculated as “food loss and waste from households”.

**Data Sources and Collection Method**

Mandatory annual reporting based on Paragraph 1, Article 9 of Law for Promotion of Recycling and Related Activities for the Treatment of Cyclical Food Resources (Food loss and waste Recycling Law), statistical survey “Survey on Recycling of Cyclical Food Resources” and voluntary survey “Survey on Edible/Inedible Amount of Food-Derived Losses and wastes Generated by Food-Related Business Operators”.

## Method of Computation and Other Methodological Considerations

### ○ Computation Method

The amount of food losses and losses and wastes from food industry is calculated as follows:

$$FL_b = FW_{bm} * r_{epm} + FW_{bw} * r_{epw} + FW_{br} * r_{epr} + FW_{be} * r_{epe}$$

$FL_b$ : Total amount of food losses and wastes from food industry in the reference year

$FW_{bm}$ : Amount of food-derived losses and wastes generated by food manufacturers and food processors in the reference year

$r_{epm}$ : Ratio of edible part of food-derived losses and wastes generated by food manufacturers and food processors

$FW_{bw}$ : Amount of food-derived losses and wastes generated by food wholesalers in the reference year

$r_{epw}$ : Ratio of edible part of food-derived losses and wastes generated by food wholesalers

$FW_{br}$ : Amount of food-derived losses and wastes generated by food retailers in the reference year

$r_{epr}$ : Ratio of edible part of food-derived losses and wastes generated by food wholesalers

$FW_{be}$ : Amount of food-derived losses and wastes generated by food service providers

$r_{epe}$ : Ratio of edible part of food-derived losses and wastes generated by food service providers

Data on the amount of food-derived loss and waste is earned through annual reporting which is mandatory for food-related business operators whose amount of food-derived loss and waste is equal to or greater than 100 tons. Data on the amount of food-derived loss and waste of business operators whose amount of that is less than 100 tons is earned and estimated through statistical survey "Survey on Recycling of Cyclical Food Resources".

## ○ Comments and limitations

Since food-derived losses and wastes, which are generated daily, are difficult to weigh accurately, the method for data collecting includes sample survey. Considering the difficulty in annually collecting data of business operators whose amount of food-derived loss and waste is less than 100 tons, estimated data is used as complementary.

Survey on the ratio of edible/inedible amount of food-derived loss and waste is regularly conducted per a couple of years and the latest data is applied.

## **Data Disaggregation**

N/A

## **References**

MAFF website "What is food loss and waste"

[http://www.maff.go.jp/j/shokusan/recycle/syoku\\_loss/161227\\_4.html](http://www.maff.go.jp/j/shokusan/recycle/syoku_loss/161227_4.html)

## **Custodian Ministries of Data**

Ministry of Agriculture, Forestry and Fisheries

## **Custodian Ministries of Related Policies**

Consumer Affairs Agency

Ministry of Education, Culture, Sports, Science and Technology

Ministry of Agriculture, Forestry and Fisheries

Ministry of Economy, Trade and Industry

Ministry of Environment

## **International Organizations**

Food and Agriculture Organization (FAO)

Environment Programme (UNEP)