

TALK IN PAIRS

How many people do you think die because of hunger every year?



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CD-10

LISTENING

Listen to the story about food and answer the questions below.

Keywords

- throw away starve WFP (World Food Programme)
 food waste edible

Questions

1. How much edible food is thrown away every year in Japan?
2. Are there many starving people in the world?
3. What organization delivers food to starving people around the world?
4. How many countries does the organization deliver food to?

DISCUSSION

Work in groups to discuss the questions below.

1. Have you heard about this food problem before?
2. Why is there hunger in the world?
3. In which of the following places is food wasted?

- supermarkets schools prisons hospitals
 restaurants food courts households



READING

Reading guide questions

1. How much food was wasted in Japan in 2017?
2. What does throwing away food mean?
3. How many people were hungry in 2017?
4. What are needed to produce more food?



CD-11

Food waste and hunger

余る食物、足りない食物

A large amount of food is wasted in Japan. In 2017, more than six million tons of edible food loss and waste was generated. This food loss and waste is food that is unused, left over or discarded. Six million tons of food loss and waste is enough to fill the Tokyo Dome five times. This number is close to Japan's annual rice production of 7.8 million tons, and more than its fishery production of 4.7 million tons.



Generating food loss and waste has significant economic and environmental consequences. People spend a considerable portion of their budget buying food for themselves, their families or their customers. By throwing away food, they are throwing away money. An average Japanese family of four throws away about 60,000 yen by wasting food, and its garbage disposal cost is about 5,000 yen. Wasting food has a big impact on the environment, too. Consider all the resources required to produce food, and bring food from the farm to your table: land for planting, water for irrigation, and oil for transport vehicles. Also, food loss and waste that ends up in landfills produces a large amount of methane — a more powerful greenhouse gas than CO₂.

Food is discarded not only at home or in restaurants, but a lot of food is also lost or wasted at every stage from farm to table. “Food loss” and “food waste” are commonly used, but they are not the same thing. “Food loss” usually refers to food lost in earlier stages of production, such as harvesting agricultural products, processing them into food, storing it, and transporting to its next destination. “Food waste” refers to food items that are for human consumption but thrown away, often at supermarkets or by consumers.

Food loss and waste is a big problem all over the world. Roughly one-third

of the food produced for human consumption gets lost or wasted globally. However, more than 800 million people do not have enough food to live an active, healthy life. The number of hungry people in the world was growing, and reached 821 million in 2017, including 20 million people currently at risk
5 of famine in Africa, such as South Sudan and Nigeria. They are often worried about illnesses, developmental disabilities and low productivity. They have to use all their poor limited resources to put food on the table.

There are a variety of threats to producing enough food to feed an expected global population of 9 billion people by the middle of the 21st century. Would
10 it be possible to increase global food production to meet this demand? More food production means more resources are needed, such as water, land, and oil. Genetically modified technology might be necessary but controversial.

SDG (Sustainable Development Goal) 12 aims to 'ensure sustainable consumption and production patterns.' Target 12.3 calls for cutting in half per
15 capita global food loss and waste by 2030. If we achieve this goal, we will be able to stop hunger and poverty worldwide. Why not reduce food loss and waste together?



VOCABULARY

- | | | | |
|---|--------------------------------------|--|-------------------------------------|
| <input type="checkbox"/> generate | <input type="checkbox"/> discard | <input type="checkbox"/> food supply chain | <input type="checkbox"/> annual |
| <input type="checkbox"/> fishery production | <input type="checkbox"/> portion | <input type="checkbox"/> harvest | <input type="checkbox"/> irrigation |
| <input type="checkbox"/> methane | <input type="checkbox"/> famine | <input type="checkbox"/> genetically modified technology | |
| <input type="checkbox"/> controversial | <input type="checkbox"/> sustainable | <input type="checkbox"/> per capita | |

READING DATA

A Fill in the blanks with the appropriate words below.

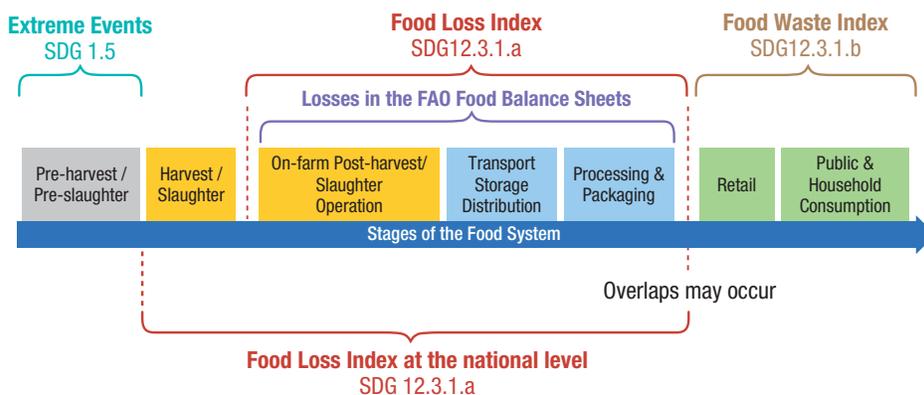
SDG 12 Ensure sustainable consumption and production patterns

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



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

Figure 1



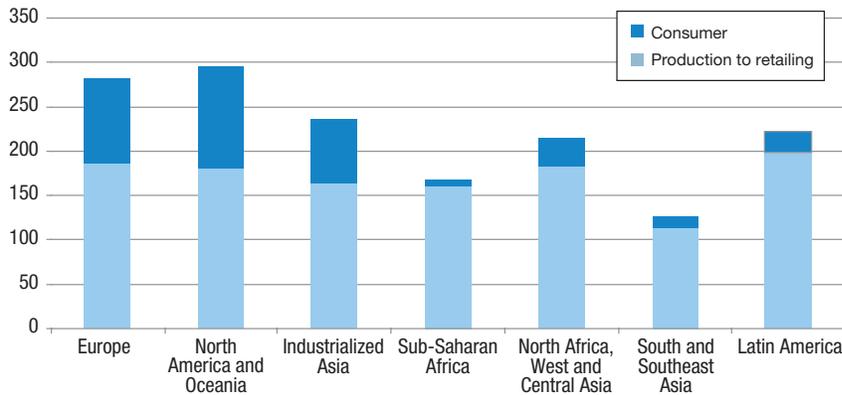
Source: UN Environment Overview of SDGs 12.13.1, measuring food waste

If food fit for consumption is spilled during harvesting or transporting, goes bad in storage, or rots in the market, we call it 1)_____. This usually happens 2)_____. Also, if you take bones out of fish when making canned tuna, you can consider it 3)_____. On the other hand, if you put a lot of food on your plate, eat a little, and throw it away, that is called 4)_____. Or if you buy more food than you actually need and let it rot at your home due to bad 5)_____, you should also call it 6)_____. Suppose a restaurant throws away the rest of the food which was not served or eaten. It could be a case of 7)_____, but if a restaurant stores food and makes it rotten, it could be called 8)_____. Both food waste and food loss might eventually end up with the same result.

food loss food waste planning accidentally

B Fill in the blanks with the appropriate words below.

Figure 2 Per capita food losses and waste, at consumption and pre-consumptions stages, in different regions (kg/year)



Source: FAO

Food is wasted throughout the food supply chain, from initial agricultural production down to final household consumption. In 1)_____ countries, food is usually wasted in the retail and consumption parts of the supply chain. In 2)_____ countries, most food losses occur mainly on the way from the farm to consumers.

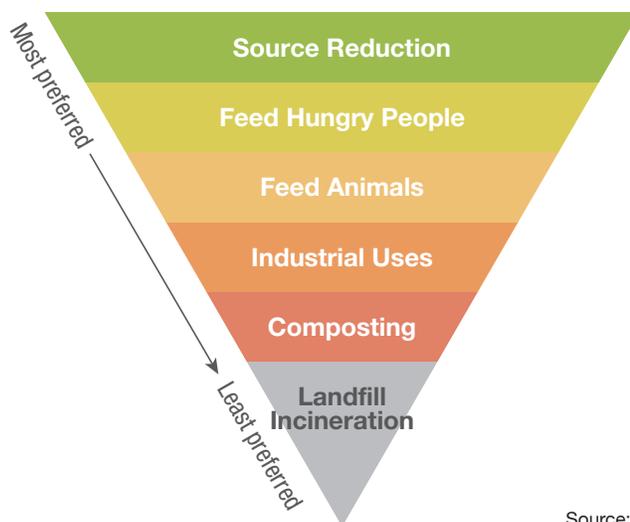
In industrialized countries, food is often lost when production exceeds demand. In order to produce enough crops while anticipating bad weather or pest attacks, farmers sometimes make production plans on the safe side and end up producing 3)_____ quantities than they need. In the case of overproduction, some surplus crops are sold for processing or animal feeding. However, this is often not financially profitable because they are sold at 4)_____ prices than in the market.

In most developing countries, food may be lost due to premature harvesting. Poor farmers sometimes harvest crops too early because they need food or money right away. In this way, the food will lack enough nutrients and become 5)_____ economically valuable. As a result, it may get wasted if it is not suitable for consumption.

low-income high-income smaller larger lower higher less more

C Fill in the blanks with the appropriate words below.

Figure 3 Food recovery hierarchy



Source: EPA

Table 1 Descriptions of food recovery hierarchy

	Category	Definition
1	Source reduction	To reduce the 1) _____ of food waste being generated
2	Feed hungry people	To 2) _____ excess food to food banks, soup kitchens and shelters
3	Feed animals	To provide food 3) _____ to farmers
4	Industrial uses	To provide fats for rendering; oil for 4) _____ ; food discards for farm animal feed
5	Composting	To 5) _____ food scraps to make a nutrient rich soil
6	Incineration or landfill	To burn or 6) _____ food waste in the ground

donate recycle bury fuel scraps amount

D Fill in the blanks with the appropriate words below.

Table 2 Hunger

Question	Answer
What is hunger?	A hungry mind cannot 1) _____, a hungry body does not take initiative, and a hungry child loses all desire to play and study.
Who are hungry?	Nearly one billion people are hungry. Most of them live in 2) _____ countries. More than half of them live in 3) _____. Many of them live in 4) _____ areas, mainly in villages.
What causes hunger?	There are seven billion people now. There is 5) _____ food to feed everyone but some factors cause hunger such as 6) _____ disasters, wars, and 7) _____. A poverty trap is a situation where farmers cannot afford seed to plant the crops that would provide for their 8) _____.
What is malnutrition?	If a person is not getting enough 9) _____ or the right sort of food, the state of malnutrition occurs. Malnutrition causes reduced physical and mental 10) _____, and even diseases.

enough concentrate developing poverty traps families
 natural food development rural Asia and the Pacific

E How can you reduce food waste? Check all that apply, and look up other ways to help reduce food waste.

Ways of Reducing Food Waste		✓
1	Shop Smart. Avoid buying more food than you need.	
2	Plan wisely before cooking to avoid cooking too much food.	
3	Use smaller plates and dishes.	
4	Ask yourself if you really need those mega packs and bulk discounts.	
5	Order the right amount for you at a restaurant.	
6	Understand expiration dates.	
7	Other:	

WRITING AND SPEAKING

1. Write down your answers for the questions.

① What foods have you thrown away at your home in the last few days?

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② Do you try to reduce food waste? How?

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2. Discuss the question in groups.

Choose one problem related to food loss and waste and explain why it should be solved as soon as possible. Think of some ways to solve it.

Study skills

リスニング (1) : 聞き取り力の向上

リスニング力をつけるには、普段から次のことを心がけて、できるだけ多くの英語に触れると効果的です。

- 集中して英語の音を拾えるように、聞く前にシャドーイング（英語が流れたすぐ後に言われた英文を口に出す練習）でウォームアップをする。
- 聞いているときは、言語知識（単語・文法・発音）だけでなく、内容や場面に関する知識や常識を働かせて内容を理解する。
- 聞いた後は、内容や場面に即した表現や話の流れ、書かれた文字と聞こえた音声の違いなどに注意して、スクリプトをしっかりと復習する。