



Food and Agriculture  
Organization of the  
United Nations



INTERNATIONAL  
FOOD  
WASTE  
COALITION

EDUCATION MATERIAL PACKAGE ON FOOD WASTE REDUCTION  
IN PRIMARY AND SECONDARY SCHOOLS

# DO GOOD: SAVE FOOD!

For age group 3

10 TO 13 YEARS OLD



FOODSAVERS



10-13  
years



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## ■ CORE LESSON 1: DO GOOD: SAVE FOOD!



**CORE LESSON 1: DO GOOD: SAVE FOOD!** explains the problems and consequences of food waste and introduces solutions for avoiding food waste at home and school. In the first core lesson, students learn about the problems and consequences of food waste and also beginning to understand how they can avoid food waste at home and in school. The main tool to teach the contents of core lesson 1 is Presentation 1: "DO GOOD: SAVE FOOD!" Depending on the time and (technical) resources available, you can decide to project or print the illustration slides (to be found in the annex of this document).

The presentation is designed to go with the accompanying voice-over text (to be found on the following pages) for you to read out or draw inspiration from for telling a story. For older students, it might be more suitable to have it read by the students themselves, adapt it to form a small drama/role-play exercise, or assign the thorough reading of it as a homework task. Use the accompanying revision sheet to help students extrapolate the key issues from the presentation.

Within the voice-over text you will find questions for discussion and engagement with the students. These are only suggestions, so feel free to change, complement or shorten them.

*NB: The voice-over to slide 4 mentions the possibility of war and conflict as a result of climate change. If you feel that this will disturb your students, please feel free to leave that sentence out.*



# 45 min

### You will need:



- A video projector and a computer that can open PDF files
- A digital copy of the presentation

*Alternatively, print the slides on transparencies and use an overhead projector, or else print them on A4 sheets of paper and have a student hold them up while you are reading the voice-over to the class.*

- If you want to use them: printouts of the voice-over and revision sheet RS 1 (one per student)



### Instructions:

1. Show the presentation and read/narrate the accompanying voice-over script or have students read the voice-over script during class or as homework.
2. Discuss the content with the students. You might find the questions provided in the voice-over a good starting-point for discussion.
3. Hand out the revision sheet and ask students to fill it in.
4. Compare and discuss results: What did the students learn from the core lesson? What is the relevance of this information to their own lives? How can they change their own behaviour to reduce food waste? Why is it important for each of us to change our behaviour?

## ■ CORE LESSON 1: VOICE-OVER

### DO GOOD: SAVE FOOD!



**1** Next time you're out shopping for more food than you can actually carry or loading food onto an already overflowing plate: beware! You might be wasting food! Let's have a look what food savers Lou, Amal, and Sam can show us about why and how we can avoid wasting food.

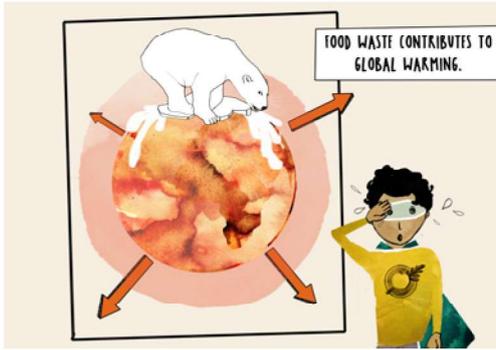


**2** Every year, an estimated 1.3 billion tonnes of food is lost or wasted worldwide. This means that nearly one-third of all food produced is not actually consumed. This equates to approximately 100 kg of food loss or waste for every person on the planet. That means that for every two apples that are eaten, one apple goes to waste. You buy three yoghurts but you only eat two and throw away the other one because it has gone off in your fridge. Three carrots are harvested, but one of them is thrown away because it is too small or too crooked or because mice have eaten it while it was being stored.



**3** Producing food uses up energy and produces greenhouse gases. A total of 3.6 gigatons of greenhouse gases are emitted each year in the production, processing, storage and transportation of food that is later thrown away. When we compare this to the emissions of all the countries in the world, only China and the USA produce more greenhouse gases every year.

*Q: Do you know what greenhouse gases are? What do they do?*



**4** The Earth is wrapped in various layers of what we call greenhouse gases. Together, these make up the atmosphere. The Earth’s atmosphere prevents it from cooling off in space: It lets some rays of the sun in but also stops some of the heat from leaving the Earth again. Greenhouse gases occur naturally, and without them, there would be no life on Earth. However, humans have been producing more and more greenhouse gases, e.g. in industry, agriculture, waste management activities, and by burning fossil fuel in cars and coal-fired power stations. The greenhouse gases we produce have unbalanced the natural atmosphere and contributed to climate change: Too great a volume of these gases is in the atmosphere and not all of the heat that should leave the Earth can escape into space. Climate change makes our planet warmer than it should be. If we continue producing such high amounts of greenhouse gases, a lot of the ice on Earth will melt, the sea level will rise, and there will be less land for people and animals to live on. The weather will become more extreme. Some animals and plants will not survive the new temperatures, and it will become more difficult for a lot of people to grow food and to find places to live. Most likely, the risk of conflicts will also increase due to challenges in the distribution of land, water and food.



**5** Among other things, climate change, which is accelerated by the amount of food we are wasting, leads to water shortages, droughts and desertification in many places on Earth. At the same time, producing food uses a lot of water. One-quarter of all the water we use for agriculture is used to grow food that later ends up as loss or waste. This is roughly the same amount of water as all the people on the planet use per year.



**6** The way we grow food can also be very harmful to what we call biodiversity. Forests are cut down to make space for fields and other places used to produce food.

**Q:** Do you have any idea what biodiversity is?  
**A:** The term biodiversity refers to the variety of life on Earth at all its levels, from genes to microbes, and from animals to ecosystems. All species and organisms contribute something to their common environment, so it's very important to interfere as little as possible with functioning ecosystems.

This means that the plants in the forest are lost, which increases the problems associated with CO<sub>2</sub> emissions and other greenhouse gases.

**Q:** Why does cutting down forests contribute to climate change?  
**A:** Plants use sunlight and CO<sub>2</sub> to produce energy. During this process, they release oxygen. Plants thus filter the air and capture CO<sub>2</sub>. When we cut down forests, all the CO<sub>2</sub> is released into the atmosphere, which contributes to climate change.

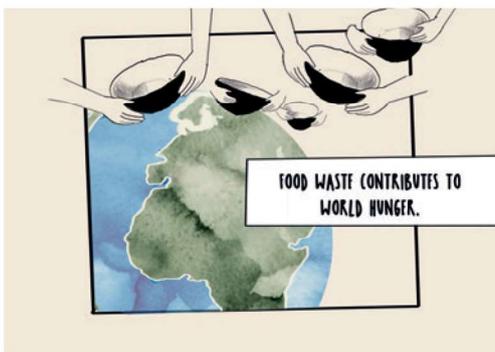
Cutting down forests also means that a lot of animals lose their habitat and are ultimately threatened by extinction.

**Q:** Can you think of some animals that might be endangered by deforestation, i.e. cutting down forests?

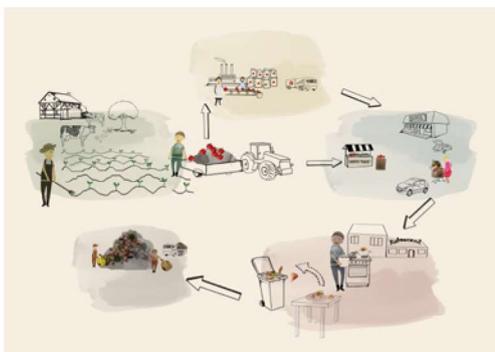
**A:** e.g. fox, wolf, orangutan, panda, gorilla.



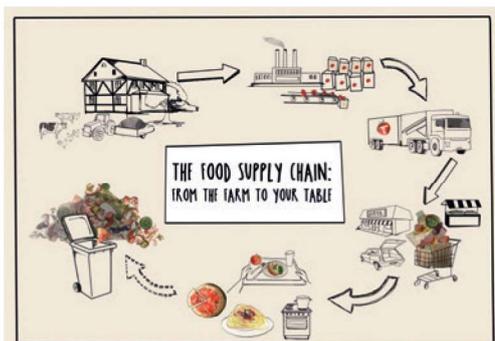
**7** Food that is later wasted is grown on about 1.4 billion hectares of land, which is a larger area than China or Canada, the second- and third-largest countries in the world. This land cannot be used to grow other food or to provide habitats for animals and plants, or to create living space for humans.



**8** Using so much water and land to grow food that is later lost or wasted will become an even bigger problem in the future: A growing number of people are living on Earth, and there is only a limited amount of water and land on which to grow food for everyone. Avoiding food loss and waste means that we directly reduce the number of people going hungry in the world. In order to feed us all, we will have to be much more careful about not wasting any food.



**9** Shopping for food and preparing food to be eaten takes time and physical effort. Even more resources go into getting the food ready to be sold before it's taken to our homes. If you throw away food, all the labour that has gone into growing, processing and transporting food products has been wasted too. Moreover, throwing away food creates waste that needs to be taken care of, and a lot of labour is expended on the disposal of waste that could have been avoided.



**10** Food is lost or wasted all along what we call the food supply chain, so all the way from the farm to the table. The food supply chain starts with the farmer. Fruits, grains and vegetables are grown in a field or a greenhouse. Animals are raised on farms or in fisheries. Fruit and vegetables are taken to markets to be sold or to handling and processing centers where they are packaged, sometimes processed and prepared for transport. Animals are taken to the slaughterhouse and their meat is then also taken to handling and processing centers. From here, they are taken to markets, shops and other retailers. The last step takes the food either to a restaurant or cafeteria or else to our homes. Ideally, the food supply

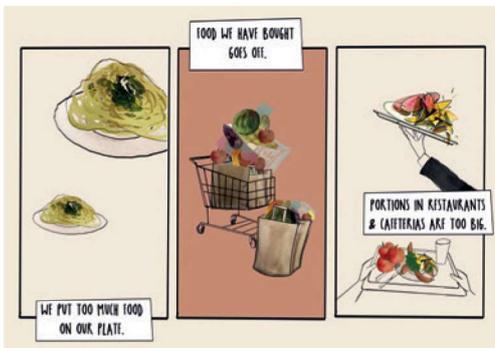
chain would end here, but as you already know, a lot of food is not in fact eaten but thrown away and fed into the system of food-waste disposal.

**Q: Do you know what happens to your food waste?**

**A: Depending on each country, county and municipality, there are different systems of waste disposal. Ideally, food waste should be used as animal feed or in home composting. A second option is its use in anaerobic digestion plants, in which the waste is used to create a biogas that can be used to generate electricity and heat. Sadly, however, most of the wasted food is transported to landfills, where its decomposition produces a greenhouse gas called methane.**



**11** Any food that is unintentionally lost because of malfunctioning or inadequate food supply chains (e.g. lack of appropriate storage or refrigeration) is called food loss. If stored corn, for instance, is eaten by mice, if fish goes off during transportation because the cooling system has stopped working, or if you drop and break your eggs on the way home from the shop, this is food loss. Any food that could have been eaten but is wasted due to neglect and our behaviour (e.g. poor planning or overshopping) is called food waste. If something goes off in your fridge because you haven't eaten it in time or if you have put too much on your plate and then throw away your left-overs instead of eating them later, this is food waste. We as individuals cannot do much to reduce food loss, but we can do a lot to reduce the amount of food that is wasted after it has left the shop.



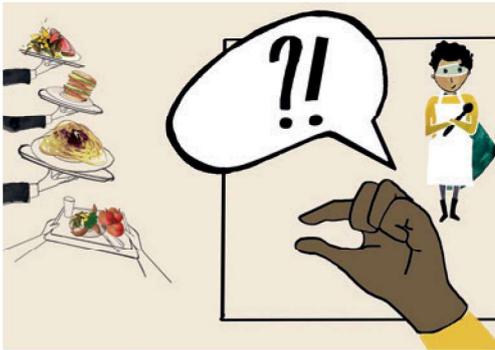
**12** Food is wasted because we put too much food on our plates, we buy too much food and don't eat it before it goes off, or because restaurants or school cafeterias serve portions that are too big.



**13** So you can simply take smaller portions and go back for more should you still be hungry. Put whatever left-overs you have in a closed container and then in the fridge to eat the next day, or in the freezer to eat at another time. Try and think of ways to use food that is in danger of spoiling – freezing is an option, but you can also use vegetables to make a stew or a smoothie. Fruit about to spoil can also become a smoothie, or you can make a fruit salad, chutney or jam out of it.



**14** Together with your parents or guardians, think carefully about what you need when you shop. Take a shopping list and stick to it. When you're out shopping, consider buying oddly shaped vegetables and fruits. Many supermarkets offer them at lower prices, and even if they don't, by choosing the oddly shaped fruit you show the owner that you're buying food for its taste and nutritional value and not its shape. Finally, when taking your shopping home and putting it in the fridge or cupboard, rotate it so that the freshest stuff is at the back.



**15** If you're at a restaurant or a cafeteria that you know tends to serve too much, ask for a smaller portion to start with. If you cannot finish your plate, ask for a doggie bag and enjoy the rest of your meal at home the next day. Lobby for your school cafeteria to install a system of food-waste reduction.



**16** Wasting food means wasting energy, land and water. If we avoid wasting food, fewer people in the world will go hungry, fewer animals will lose their habitat, and climate change will slow down. Every one of us can make a difference – by putting smaller portions on our plates, by keeping and reusing left-overs and by shopping sensibly. Together, we can fight food waste. So DO GOOD: SAVE FOOD!