LP. 1 Current Situation Risks

Target Audience

Vet Trainers

Goal (50-60 words)

The goal of this Learning Plan is to educate participants about food waste, its causes, and its impacts. It also aims to raise awareness of the environmental, economic, and social risks associated with food waste and encourage critical reflection on the current global and local food waste situation, motivating participants to take actionable steps to reduce food waste.

Objectives (1-3 Objectives)

After completing this Module, trainees should be able to:

- Acquire awareness and communicate knowledge about food systems;
- Define what “food waste” is and differentiate between “food waste” and “food loss”;
- Distinguish and communicate the different ways food waste represents a risk.

Theoretical Background (200-400 words)

Food Systems are all the activities related to food production and the network through which food is produced, transformed, and distributed to customers (World Food Program, n.d.). They primarily have 3 objectives: providing food security and nutrition for a growing population, supporting the livelihoods of people working in the food supply chain, and operating in an environmentally sustainable manner. Right now, Food Systems produce large quantities of waste, are not able to ensure food is accessible

everywhere on our planet, and are responsible for about one-third of gas emissions (OECD, n.d.). There is still much to learn about Food Systems and how they function. For further information, you can explore additional resources 5 and 7.

When it comes to food and the ways it gets wasted, it is important to distinguish between two different concepts: “Food waste refers to the decrease in the quantity or quality of food resulting from decisions and actions by retailers, food service providers, and consumers”, while “food loss is the decrease in the quantity or quality of food resulting from decisions and actions by food suppliers in the chain, excluding retailers, food service providers and consumers” (FAO, 2019) . Thus, food waste is usually in the hands of customers, the ones of the individual.

In terms of sustainability, improving food waste management has been identified as a critical factor in the European Union's (EU) efforts to make Europe carbon-neutral and promote a circular economy (Albizzanti et al., 2021). Moreover, improving food waste management would also help to tone down those economic, social, and environmental risks deeply connected to food waste.

According to Eurostat (2023), the total amount of food waste in the EU in 2021 surpassed 58 million tonnes of fresh mass. Households were the largest contributors, generating over 31 million tonnes, which represents 54% of the total waste. The processing and manufacturing sector was the second largest contributor, responsible for more than 12 million tonnes, or 21%. The remaining 25% of food waste came from primary production (5 million tonnes, 9%), restaurants and food services (over 5 million tonnes, 9%), and retail and other food distribution sectors (just over 4 million tonnes, 7%).

When it comes to food loss, there is little the individual can do, but when it comes to food waste individuals have significant control and can make impactful choices to reduce it through mindful purchasing, proper storage, and minimising leftovers.

Lesson Plan Details

Lesson Plan title	Food Waste Current Situation Risks
21st Century Skills	Choose the skills that will be developed in the lesson: ● Collaboration ● Communication ● Creativity ● Critical Thinking

Duration	Total: 90 minutes. Activity 1: 30 minutes Activity 2: 40 minutes Scenario 1: 20 minutes?
Classroom setting	Select how the class needs to be organised for the lesson: ● all together X ● in groups X ● in pairs ● Individually X (Scenario)
Required material/resources	Activity 1: ● Offline: Flipcharts, pens/markers ● Online: Access to a brainstorming platform, such as Mural, Mentimeter, etc. Activity 2: ● Offline: Flipcharts, pens/markers ● Online: Access to a brainstorming platform, such as Mural, Mentimeter, etc., and video call software that allows breakout rooms. Scenario 1: ● Offline: Printed scenario and choices ● Online: presentation and/or document with the scenario and choices
Prerequisites	Prerequisites or prior knowledge that the learners should possess before taking the lesson: ● Knowing the theoretical background key concepts.
Additional resources	1. Institute For Human Education - 17 RESOURCES FOR TEACHING ABOUT FOOD WASTE: a list of additional resources for educators about food waste. 2. Economist Impact - Data point: the dirty truth about wasted food: brief analysis of the current food waste situation. 3. FAO - Global Food Losses and Food Waste: Extent, Causes, and Prevention: report from the Food and Agriculture Organization detailing the extent and causes of food waste and loss globally. 4. FAO - The State of Food Security and Nutrition in the World 2023:

	insights into food security and nutrition globally. 5. OECD - Making Better Policies for Food Systems: report examining the performance of food systems related to their goals. 6. UN Environment Programme - Food Waste Index Report 2024: this report provides data on global food waste, including trends, statistics, and environmental impact. 7. UN Food Systems Summit 2021 - Food Systems Summit Report: a comprehensive overview of global food systems and the outcomes of the summit 8. WWF Report - Food Loss and Waste: Facts and Futures: report focusing on the causes, impact and solutions to food waste and food loss. 9. Zero Waste Europe: promotes sustainable waste management practices and advances towards a zero-waste future.
References	Albizzati, P. F., Tonini, D., & Astrup, T. F. (2021). A quantitative sustainability assessment of food waste management in the European Union. *Environmental Science & Technology*, *55*(23), 16099–16109. https://doi.org/10.1021/acs.est.1c03940 European Commission (n.d.). Food Waste. https://food.ec.europa.eu/safety/food-waste_en Eurostat (2023) Food waste and food waste prevention. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Food_waste_and_food_waste_prevention_-_estimates FAO. 2019. The State of Food and Agriculture 2019. Moving forward on food loss and waste reduction. Rome. Licence: CC BY-NC-SA 3.0 IGO. OECD - Organisation for Economic Co-operation and Development (n.d.). Food systems. https://www.oecd.org/en/topics/policy-issues/food-systems.html World Food Program (n.d.). What are food systems? https://www.wfp.org/food-systems

Lesson Plan for Activities & Scenarios #1 (include 1-3 activities & 1-2 scenarios)

Activity 1. Food Waste or Food Loss?

Overview: This activity consists of first explaining the difference between "food waste" and "food loss" to the participants, then providing them with examples that they must categorise sharing their reasoning.

Objectives:

- Give participants the tools and knowledge to distinguish between "food loss" and "food waste";
- Raise awareness on how food gets wasted, both in general and in participant's everyday life;
- Start a reflection on smart decision-making in terms of buying food.

Duration: 30 minutes

Venue: online/offline

Number of participants: up to 20 (adaptable)

Materials needed:

- Offline: Flipcharts, pens/markers
- Online: Access to a brainstorming platform, such as Mural, Mentimeter, etc.

Instructions:

1. The first step is explaining the difference between "food waste" and "food loss". You can use the definition and the contents from the theoretical background of this Learning Plan, and consult the additional resources listed in the previous section in order to give a general overview to the participants.

2. Draw two columns on a flipchart, one for "food waste" and the other for "food loss".

3. Give participants some examples, they have to categorise them into "food waste" and "food loss". Once they decide, write them down under the right category. You can find some of the following:
    - Expired food in your fridge/at the supermarket (food waste)
    - Vegetables infested by bugs at the farm (food loss)
    - Damaged food packaging during transportation to the supermarkets (food loss)
    - Badly stored food at the distribution centre (food loss)
    - Badly stored food in your fridge/pantry (food waste)
    - Unfinished food at the restaurant (food waste)
    - Thrown away wrong order at the restaurant (food waste)
    - Failed (and inedible) recipes attempt (food waste)

4. Ask participants to list some examples related to their personal life and/or the context they

study/work at every day.

5. Proceed with the debriefing section.

Debriefing:
In this activity, the debriefing section includes a sharing moment where participants can talk and reflect. The debriefing should start with some standard questions, followed by personalised ones based on the participants' answers.
Remember to be patient and to guide them during the reflection process. Here are the first questions:

- Did you already know the difference between “food waste” and “food loss”?
- Have you ever thought about the amount of food we waste every day?
- What do you think could be good ways to avoid food waste?
- Where do you usually buy food and why?

If participants do not take part in grocery shopping, you can transform this question into homework. They will ask this last question to the adults of their family, or whoever is in charge of grocery shopping in their household, and start a conversation about food waste with them.

Tips for facilitators:

- The activity can be conducted both online and offline. Make sure to provide the necessary materials based on the chosen venue.
- Listed examples and reflections coming from them should be appropriate for the participants’ age groups. You can select the examples and create new ones based on your group’s necessities.
- If there is a large number of participants, they can be divided into groups to analyse the given examples. You can ask them to choose a representative or to collectively share what they discussed before starting the debriefing part.
- During the debriefing, make sure to guide your participants through the reflection about food waste by asking questions that help them consider their choices, the factors influencing these choices, and the impact of these decisions.
- It is suggested to introduce a discussion based on the differences between supermarkets and open markets. You can include suggestions about the origin of food, its impact on the environment, and personal and societal implications.
- You can conclude the activity with a sharing moment where participants can express their insights and reflections. This last part encourages a deeper understanding and allows them to learn from each other’s experiences.

Activity 2. Food Waste Awareness Campaign

Overview: This activity consists of having the participants reflect on why food waste can represent a risk. Then, they will create a social media post (or a flyer/poster) to raise awareness about the issue.

Objectives:

- Encourage participants to reflect on the concrete risks (Economic, Social, and Environmental) of food waste;

- Raise awareness on how food gets wasted, both in general and in participant's everyday life;
- Start a reflection on smart decision-making in terms of buying food.

Duration: 40 minutes (15 min for part 1 and 25 min for part 2)

Venue: online/offline

Number of participants: up to 20 (divided in groups)

Materials needed:
- Offline: Flipcharts, pens/markers, sheets of paper/notebooks
- Online: Access to a brainstorming platform, such as Mural, Mentimeter, etc., and video call software that allows breakout rooms.

Instructions:
Part 1. (15 minutes)
1. Ask participants what risks food waste can bring. You can make them start freely or you can differentiate between Economic, Social, and Environmental risks before starting the brainstorming. Following are some examples of risks per category:
    a. Environmental risks: contribution to greenhouse gas emissions, wastage of resources like water, land, and energy used in food production, negative impacts on biodiversity and ecosystems due to intensive farming practices;
    b. Economic risks: financial losses for producers, retailers, and consumers, and higher food prices because of inefficiencies in the supply chain;
    c. Social risks: food insecurity and malnutrition (especially in low-income communities), and ethical considerations regarding food equity and justice.

2. Write participants' ideas on the flipchart.

3. Guide a brief reflection on this topic: ask your participants if they ever thought about these risks, and if they think other people are aware of them.

Part 2. (25 minutes)
1. Divide your participants into small groups (or couples, depending on your group size) and assign them different types of risks.

2. Explain to the group what an awareness-raising campaign is:

    An awareness-raising campaign is an organised effort aimed at informing and educating the public or a specific group about a particular issue, cause, or topic. The primary objective is to increase knowledge, shift perspectives, and motivate people to take action or adopt new behaviours.

3. Now, each group should come up with an idea for a social media post to publish on their institute's social media account and/or website, aiming to raise awareness of their assigned risk. Alternatively, depending on the age and characteristics of the participants, you can suggest they create a poster or some flyers to be displayed in the institute hall.

Tell them they can take inspiration from the internet and can use pens, markers, and paper to take notes and design their post/flyer.

4. To guide your participants in the creation of the social media post/poster/flyer tell them to think about the followings:

    a. Goal of the post: What are you trying to achieve with this post? What is your specific goal?
    b. Target group: Who is this post/poster/flyer destined to? Is there a specific group of people you are trying to reach?
    c. Message: What is the content of your post?

    You can leave these questions on the screen/blackboard/flipchart so that participants can always go back to them during the creative process.

5. Use the last 5 minutes to make them share their social media post ideas.

Debriefing: (5 minutes)
This activity includes a short debriefing since a little reflection is carried out between part 1 and part 2. After participants finished creating and sharing their social media posts, ask them:

- Was it challenging for you to create this post?
- Did you find new information during your research for the post?
- Would you have done it differently with a different target group? Why?
- Do you think social media can have a significant impact in raising awareness about food waste?
- What do you think would be the best ways to spread awareness about food waste in your community?
- What could be other effective ways to do it?

Tips for facilitators:

- The activity can be conducted both online and offline. Make sure to provide the necessary materials based on the chosen venue.
- In order to better guide the brainstorming process, it is suggested to consult additional resources to gather more information about the different types of food waste-related risks.
- For the brainstorming of the first part of the activity, you can proceed freely or decide to structure it based on the age and/or the necessities of your group. You can make them list the various options to then guide them into categorising their ideas into the three groups (Economic, Social, and Environmental risks) or, as suggested in the instructions, give them the categories before starting.
- Consider the age of your participants when implementing this activity. Very young participants or older ones might not be familiar with the use of social media. You can adjust the activity by making them create a poster or an ad to put up in school or around the neighbourhood.
- You can decide on a specific social media platform by asking participants which one they prefer (i.e. Instagram, Facebook, X, etc.) or give them the freedom to choose by themselves if not everyone is comfortable with the same option.

Scenario 1. Save the Restaurant

Scenario

You are a VET trainee focusing on sustainable food systems. You have recently started working in a restaurant that has food waste issues: large amounts of unsold food, inventory and food preservation issues. The owner is worried about the economical loss and the environmental impact and wants to find a solution, but doesn't know what to do.

Choices

1. Planning a training session for the restaurant staff to raise awareness about the causes and consequences of food waste;
2. Developing a detailed food waste management plan that includes optimising portion sizes, improving inventory management, and donating unsold food to local charities;
3. Suggesting the restaurant invests in composting equipment to turn food scraps into compost that can be used in local farms or community gardens.

Feedback choice n. 1

Good choice. Raising awareness about the causes and impacts of food waste empowers the employees to make more conscious decisions in their daily tasks. This option may not lead to immediate reduction in waste, but it creates a strong foundation for long-term behavioural change and sustainable practices that the restaurant can integrate in their policies and the staff can adopt in their private lives too.

Feedback choice n. 2

Excellent choice. Developing and following a food management plan represents a structured approach to reducing food waste by addressing key areas such as portion control, inventory management, and food donation. By adopting this solution, the restaurant can cut down on the costs, reduce environmental impact, and contribute to the community.

Feedback choice n. 3

Good forward-thinking choice. By adopting composting as a practice, the restaurant can actively reduce the amount of waste and contribute to local agricultural sustainability at the same time. This approach requires investment and time to function properly though, it would work best in combination with other waste reduction strategies.