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SSPICE IT!

Sustainability Skills Program for International Catering operators and Entrepreneurs through Integrated Training

SSPICE IT! project is co-funded by the European Commission within the Erasmus+ programme.

Città metropolitana di Roma Capitale · POUR LA SOLIDARITÉ European think & do tank · CIPFP CAMINO DE SANTIAGO ESCUELA DE HOSTELERÍA & TURISMO DE LA RIOJA · Escola Profissional AMAR TERRA VERDE · AKMI · WORK'S · iED · CAPITALE LAVORO

Teacher's manual

Module 3

MODULE TITLE	**How to create a sustainable supply chain**
HOURS	15

SUMMARY OF THE MODULE

This module is an introduction to Sustainable Nutrition. Sustainable nutrition is an especially important issue and is intricately connected to the environment. The concept of food and nutrition always goes hand in hand with that of malnutrition or undernourishment, which is also associated with high mortality rates among humans in developing countries. By contrast, large quantities of food are produced in so-called industrialised countries, which could feed the entire world population. Unfortunately, the reality is more tragic: one billion people in the world still do not have enough food to survive, and two billion human beings are undernourished. The concept of sustainable food concerns the economic, ecological and social spheres of sustainability. In this sense, policies for sustainable food must be interpreted in an integrated manner with respect to the ecological, economic and social aspects of food. With regard to the ecological-environmental aspects, the sustainability of food derives on the one hand from the efficient use of resources and on the other hand from the conservation of biodiversity.
With regard to the content to be covered, particular attention will be paid to water resources, energy resources and soil. Another important aspect to be dealt with is food waste. Reducing food waste is high on the agenda of the EU institutions.

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MAIN TOPICS COVERED

- ✓ Water Proofing and water resources
- ✓ Sustainable Soil Management
- ✓ Loss of biodiversity
- ✓ Sustainable development: environmental, economic, social and political aspects
- ✓ Footprints for assessing the impact of food.
- ✓ The seasonality of agricultural and fisheries production
- ✓ Mile 0 farming and fishing
- ✓ Protein transition
- ✓ Local food distribution chains

ADDRESSED SKILLS

- ✓ #5 Know which ingredients have the highest environmental impact.
- ✓ #7 Develop a menu focused on seasonal ingredients, produced locally, using smaller amounts of animal products in dishes and expanding plant-based dishes.
- ✓ #8 Select sustainable production systems for all food and consumables.
- ✓ #10 Build a network with local producers.

SKILLS MEASUREMENT

N°	Skill	Descriptor	Level 1	Level 2	Level 3	Level 4
#5	**Know which ingredients have the highest environmental impact.**	How much does your shopping pollute? An important question to ask because the fight against climate change also passes through the shopping trolley. Knowing which of the main ingredients we put on our plates have the greatest impact on the environment in general terms, as well as on water	I would like to try to define which products have the greatest impact on environment.	I can tell which products have the greatest impact on environment	I can create a recipe with sustainable ingredients, also including a few ingredients with a higher environmental impact.	I can create new recipes following the fundamental principles of environmental sustainability, using a minimum number of

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		consumption, soil and CO2 production				ingredients with a higher environmental impact	
7	**Develop a menu focused on seasonal ingredients, produced locally, using smaller amounts of animal products in dishes, and expanding plant-based dishes.**	Knowing the main principles of a sustainable diet. Being able to create and prepare new recipes following these principles. Being able to design and prepare whole menus following these principles.	Demonstrates basic understanding of the importance of seasonal and local ingredients. Recognizes the benefits of reducing animal product consumption for sustainability. Aware of the availability of plant-based alternatives.	Possesses knowledge of seasonal produce and their flavour profiles. Understands the environmental impact of food choices and sourcing. Familiar with basic plant-based cooking techniques and ingredient substitutions.	Develops menus that incorporate seasonal and local ingredients. Reduces the use of animal products in dishes without compromising taste. Expands plant-based options on the menu.	Creates innovative dishes that showcase the flavours of seasonal produce. Designs plant-based dishes that appeal to a diverse range of tastes. Implements creative cooking techniques to enhance plant-based and locally sourced ingredients.	Leads the development of a comprehensive seasonal, local, and plant-based menu. Collaborates with local producers to strengthen the supply chain. Advocates for sustainable and plant-forward practices in the culinary industry.
#8	Select sustainable production systems for all food and consumables	Following Goal No. 12 of the Agenda 2030, sustainable consumption and production aim to increase the wellbeing benefits through the reduction of used resources, of degradation and of pollution of the entire production cycle. It is necessary to create a cooperative relationship between the various actors involved in the entire supply chain in order to involve consumers in initiatives aimed at reducing environmental impact, and in our own small way by starting to select what are sustainable production systems	I would like to try to understand which productions are sustainable, both for vegetables and animals.	I can tell the difference between products of both animal and vegetable origin.	I can prove that I can make decisions about the choice of sustainable food.	I can define the fundamental principles of the food system and choose which food is sustainable and which is not.	
#10	Build a network with local producers.	Building a network of food producers possibly not linked to large retailers: in addition to the alarming environmental impacts, the social issues are equally problematic. But even more disconcerting when one considers that every year one third of the food produced is wasted. A food system that is not only environmentally and	I would like to try to build a network with local producers	I can understand how to build a network of local producers.	I can define a network of local producers by finding at least three in the area	I can build a network of local producers by bringing together various actors such as producers and consumers to reduce the food supply chain	

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		socially unsustainable, but also increasingly unstable and uncertain To cope with this situation, the importance of revaluing and supporting local food systems by promoting networks between local producers is increasingly emphasised. The main strategies of these networks are the shortening of supply chains, the promotion of small-scale agriculture, the consumption of quality seasonal food at fair prices, the building of mutually supportive and trusting relationships between producers and consumers				and promote sustainable food

EXERCISES

Exercise #1 - Our water consumption

Pre-requisites	In-depth knowledge of chapter 1
Hours	1 hour + presentations
Tools	SSPICE IT! Manual, PC or smartphones, internet connection, printer
Addressed skills	#9 - Develop an idea of how much water is consumed every day
Addressed level of the skills	#9 Level 3: Once an estimate has been made of the water consumed, formulate your own water footprint.
Objectives	1. To recognise the factors, habits and food choices that influence our water footprint.

Instructions

This exercise should be realised, when possible, in group.

1) Gather information on water consumption, using also the references showed in the manual, and analyse your own water consumption over 24 hours.

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2) Draft short texts highlighting the consequences of mismanagement of water resources and suggesting ways to improve your water footprint.

3) Make posters or Power Point files, inserting these texts and images previously printed or downloaded.

4) Present the work to the other groups, expressing also personal considerations.

Criteria:

- ✓ Describe your water consumption over 24 hours and highlight critical issues: 1 pt. per item.
- ✓ Try to develop a sustainable water footprint: from 0 pt. (unrealistic) to pt. 3 (perfectly possible).
- ✓ Which of the practices included can really have a positive impact on the environment: from 0 pt. (0 element) to 3 pt. (4 elements)
- ✓ (Bonus) the new water footprint touches innovative life practices: from 0 pt. (not original) to 3 pt. (original).

CRITERIA	NOTATION			
	0	1	2	3
Describe your water consumption over 24 hours				
Develop a sustainable water footprint				
Which of the practices included can really have a positive impact on the environment				
The new water footprint touches innovative life practices to reduce waste				
NOTATION	/12			

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Exercise #2 - *Which food has the least environmental impact and which should be consumed most consciously*	
Pre-requisites	In-depth knowledge of chapter 2
Hours	1 hour
Tools	SSPICE IT! Manual, PC or smartphones, internet connection, printer
Addressed skills	#6 and#8: Know which ingredients have the highest environmental impact and be able to develop a sustainable menu/diet
Addressed level of the skills	#6 Level 3
Objectives	**1.** Carry out a survey on Foods with Greater Environmental Impact and Conscious Consumption among school students

Instructions

This exercise should be realised, when possible, in group.

1) Gather information on sustainable food consumption, using the material provided in the Manual, including the added references, and make a list of foods with less environmental impact, with a focus on foods which could be integrated in the students daily eating habits.

2) With the support of the teacher, realise a questionnaire to investigate conscious food consumption among your peers: the aim of the questionnaire is to understand what kind of food they usually consume (food with high or low impact on the environment) and if they are conscious of the impact of their habits.

3) Carry out a survey, using the questionnaire, among your peers, trying to reach as many students at your school as possible.

4) Analyse the results of the survey and elaborate a report, calculating the average of each answer.

Criteria:

- ✓ Draw up a list of foods with lower environmental impact: 1pt (few typologies of food, few sustainability aspects taken into consideration) to 3pt (varied typologies of food, taking into consideration different sustainability aspects)
- ✓ Quality of the questionnaire prepared by the students to analyse their peers eating habits: 1pt (basic questions about only eating habits), to 3 pt (complete questionnaire, including questions about their awareness on the impact of food)

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- ✓ Analysis of the results of the peer-to-peer nutritional awareness survey: 1pt (superficial analysis) to 3pt (in-depth analysis and correct statistical calculations)
- ✓ Bonus: up to 3pt for originality, in the list of food with low environmental impact, in the questionnaire and/or in the analysis of the answers.

CRITERIA	NOTATION			
	0	1	2	3
Draw up a list of foods with lower environmental impact.				
Quality of the questionnaire prepared by the student to analyse their peers eating habits.				
Analysis of the results of the peer-to-peer nutritional awareness survey				
Originality bonus				
NOTATION	**/12**			

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	Exercise #3 – Analyse the sustainability of your local producers
Pre-requisites	In-depth knowledge of chapter 3; capacity to carry out basic research on Internet
Hours	1 hour
Tools	SSPICE IT! Manual, PC or smartphones, internet connection, printer
Addressed skills	#11 Getting to know the particularities of a sustainable company, the product and its history.
Objectives	1. Use the information provided by the Manual to evaluate the sustainability of a supplier

Instructions

This exercise should be realised, when possible, in group.

1) With the support of the teachers, choose two suppliers of your territory. They will have to be found within 70 km of your VET centre.

2) Using the information provided by the Manual, develop a sustainability check list. Each check list should include the list of products obtained, the area of production, the product's characteristics, as well as any elements that characterize the products and production system in terms of sustainability.

3) Using the check list, assess the sustainability of the two suppliers, finding the most sustainable one.

Criteria:

- ✓ Elaboration of the sustainability check list: 1pt to 6 pt (1 pt for each one of these aspects taken into consideration: production system, processing, transport, food waste, innovation and communication)
- ✓ Quality of the sustainability assessment of the two suppliers: 1pt (only some criteria have been analysed) to 3 pt (all criteria have been analysed)
- ✓ Capacity to find the more sustainable producer and explain why: 1pt to 3 pt.

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CRITERIA	NOTATION					
	1	2	3	4	5	6
Elaboration of the sustainability check list						
Quality of the sustainability assessment of the two suppliers						
Ability to find the more sustainable producer and explain why						
NOTATION	**/12**					

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FINAL TASK OF THE MODULE

FINAL TASK MODULE 3: A Sustainability Map	
Pre-requisites	Learners should have completed Module 3
Time	3 hours
Tools	SSPICE IT! Manual, Pc or smartphones Internet connection, printer
Addressed skills	#9 Select sustainable production systems for all food and consumables. #11 Build a network with local producers
Addressed level of the skills	
Objective(s)	1. Help students become aware of the main sustainable suppliers within 50 km of their school. 2. Train the students for the final exercise of SSPICE IT! Training 3. Encourage students to formulate opinion, discuss, negotiate, speak in public

Instructions to the students:

1) Create groups of 3-4 students each and assign to each group a specific food category (fish and meat, fruits and vegetables, cereals and legumes, dairy products).

2) Each group will have to carry out research (using Internet) to find the suppliers/producers are present in the territory, considering the aera of about 50 km around the school, in their own food category. With the help of the checklist, they will have to evaluate how sustainable the suppliers/producers are, taking into consideration all the sustainability aspects.

3) Based on this evaluation, each group will have to set up the list of the more sustainable producers of the territory. Each group will present their list to the class, giving information about the producers/suppliers they selected.

4) To prepare the Final Task of SSPICE IT! Training, the students will choose the suppliers with whom they could collaborate for their sustainable business.

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Using PowerPoint or Canva, they will map the sustainable suppliers/producers with which they could collaborate.

For each supplier, they must show:

- their geographical situation,
- their production, processing, transport, innovation, communication characteristics
- the reasons why they were selected.

Criteria:

- ✓ The list of producers/suppliers is exhaustive and offers a wide range of products in each category: from 1pt (only some typologies foods are present, and many are missing) to 3pt (all the typologies of products that can be found on the territory are present)
- ✓ The producers/suppliers selected are sustainable: from 1pt (only the production or one other aspect has been considered by students) to 3pt (the students have checked all aspects of sustainability)
- ✓ The presentation in front of the class is clear and well prepared: from 0pt (no effort has been made) to 3pt (a big and honest effort has been made)
- ✓ Bonus: from 0pt to 3pt, with one point for each producer/supplier sustainable

CRITERIA	NOTATION			
	0	1	2	3
The list of producers/suppliers is exhaustive and offers a wide range of products in each category				
The producers/suppliers selected are sustainable				
The presentation in front of the class is clear and well prepared				
Bonus points for sustainable producers/suppliers				
NOTATION	**/12**			

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Added material:

https://www.fondazionedietamediterranea.it/dieta/sostenibilita/

https://www.salute.gov.it/imgs/C_17_pubblicazioni_1248_allegato.pdf

https://op.europa.eu/webpub/eca/special-reports/cap-water-20-2021/it/

https://www.fondazioneveronesi.it/la-fondazione/news-dalla-fondazione/leconomia-circolare-puo-essere-una-soluzione-sostenibile-per-contrastare-lo-spreco-alimentare

https://eur-lex.europa.eu/legal-content/IT/TXT/PDF/?uri=CELEX:52022IR5930

SUGGESTED SCHEDULE

HOURS	ACTIVITIES
1 - 3	Chapter 1
4	Exercise 1
5 - 6	Chapter 2
7	Exercise 2
8 - 10	Chapter 3
10 - 12	Exercise 3
12 - 15	Final task

PEDAGOGICAL SUGGESTIONS AND GENERAL REMARKS

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- The chapters should be read in their entirety and studied in depth.
- It is recommended that added material be distributed to students to ease understanding of the topics covered.
- The website https://unric.org/it/agenda-2030/ supplies more information about chapter 1 of module 3.
- It is highly recommended that students be grouped in small groups during the exercises.
- To make the lessons more interesting involve the students with personal experiences by interacting with them constructively

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