



Co-funded by
the European Union



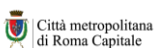
SSPICE IT!

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

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+ program.

The content of this publication reflects only SSPICE IT Consortium's view, and the Commission is not responsible for any use that may be made of the information it contains.



CIPFP CAMINO DE SANTIAGO
ESCUOLA DE HOSTELERÍA & TURISMO DE LA RIQUA



Escola Profissional AMAR TERRA VERDE



Submodule n°1: Humans and the Environment

THEMATIC AREA	Relationships between food, people, and environment	
SUB AREA OF REFERENCE	<i>Sustainable Food</i>	
HOURS	5	
LEARNING OBJECTIVES		
<p>1. Recognize the principal relations and problems between humans and environment.</p>		
LEARNING ACTIVITIES		
Theoretical	Practical	
<ul style="list-style-type: none"> ✓ Reading ✓ Web research ✓ Case study 	<ul style="list-style-type: none"> ✓ Researching the causes, mechanisms, and consequences of contemporary environmental issues 	

CONTENT

SUBMODULE 1: HUMANS AND THE ENVIRONMENT 4

- 1. INTRODUCTION: A BRIEF HISTORY OF THE HUMAN – NATURE RELATIONSHIP 4
- 2. IMPACT OF THE PEOPLE ON THE ENVIRONMENT 5
- 3. IMPACT OF THE ENVIRONMENT ON THE PEOPLE 6
- 4. SOLUTIONS AND PERSPECTIVES 6
 - 4.1. *The European Green Deal* 6
 - 4.2. *On an economic level: social entrepreneurship, the circular economy, and sustainable food* 7
- EXERCISE: *BECOMING AWARE OF ECOLOGICAL ISSUES* 8

EXTRAS 9

- 1. FURTHER READINGS 9
- 2. GLOSSARY 10
- 3. ACKNOWLEDGMENTS 11
- 4. BIBLIOGRAPHY 11

SUBMODULE 1: Humans and the Environment



Fig. 1 – Illustration. Source : <https://www.pexels.com/fr-fr/photo/moulin-a-vent-blanc-414837/>

1. Introduction: a brief history of the human – nature relationship

If we could summarize the relationship between human societies and the environment in a general way, we could say that it is the story of a constant attempt by humans to break free from natural constraints. The early stages of human history were marked by a dependence on natural uncertainties. The primary means of subsistence relied on gathering and hunting. Nature was like a mystical force, a source of life, but also of death for humans. With the development of agriculture (around -8,000 years ago) and the gradual advent of property, we transitioned to a more regular and consistent exploitation of natural resources. As centuries passed, land ownership became a source of wealth, not just a means of subsistence. Consequently, nature was no longer just an uncontrollable given imposed on humans; it became a space where their will extended, a space at their disposal for enrichment.

However, it was not until the two industrial revolutions in Europe, particularly in the 19th century (around 1830), that the use of natural resources transformed into large-scale exploitation. The extraction and transformation of resources were driven by economic ambitions, and there were no longer ethical limits to this exploitation in the collective imagination. Nature seemed boundless. The two world wars and the period of growth during the "Trente Glorieuses" (thirty prosperous years between 1945 and 1975) only reinforced this productive model of "more and faster."

Nevertheless, the 1970s marked the beginning of an awareness of the detrimental impact of human activity on nature. It was the start of the first scientific reports and international conferences, such as the 1972 Stockholm Conference, initiating the idea of environmental protection as a social concern. Today, the concepts of climate change and ecology have been integrated by a significant portion of the population, leading to actions of varying effectiveness.

2. Impact of the people on the environment

Over the last five decades, scientific data on the effects of human activity on the environment have multiplied significantly. These effects are truly visible and undeniable. The primary consequence of human modes of production and lifestyles is climate change. This is primarily due to the emission of greenhouse gases (CO₂, methane, etc.). In 2019, the average global temperature was 1.1°C above pre-industrial levels, and this temperature increase is not a natural phenomenon. Humanity has indeed become a geological force, capable of altering global environmental balances, such as temperatures.

Concretely, this warming leads to the proliferation of extreme climate events, such as hurricanes/storms, floods (especially in Southeast Asia), droughts, and incredible forest fires. In the European Union, nearly 400,000 hectares of forests have gone up in smoke. This is accompanied by the disappearance of many animal species, driven by human encroachment on wild habitats. Between 1970 and 2018, 68% of wild vertebrate populations have vanished (measured by numbers, not species - WWF). This can be explained by the deterioration of natural spaces, including deforestation for agriculture, pollution (waste, plastic, wastewater, etc.), urbanization, overfishing, and more.

3. Impact of the environment on the people

All the environmental repercussions and modifications attributed to humans do not come without consequences for them. By 2030, there could be 230 million climate refugees, and up to 1.2 billion by 2050, according to estimates from the United Nations High Commissioner for Refugees. Several phenomena are responsible for this. Climate change is causing rising sea levels and the disappearance of certain territories. Moreover, droughts make some areas uninhabitable, with an inability to access proper food and even clean drinking water. The increasing number of refugees raises questions about their reception, which can be problematic. Furthermore, as freshwater reserves dwindle, agricultural needs will become increasingly difficult to meet. Ocean acidification and declining oxygen levels in certain areas lead to a decrease in animal populations, not to mention overfishing. Consequently, food shortages are expected, as well as conflicts over resource exploitation.

Finally, due to global warming, natural disasters are becoming more frequent and more intense, resulting in a higher number of victims. For example, in March 2029, Cyclone Idai killed over 1,000 people in Zimbabwe, Malawi, and Mozambique, not to mention the victims of the food shortages it caused. In 2022, it is estimated that floods in Bangladesh affected more than 7.2 million people. It is important to note that the first victims of global warming are often the most vulnerable and precarious individuals.

In conclusion, climate change is not just an environmental catastrophe but also a social catastrophe.

4. Solutions and perspectives

4.1. The European Green Deal

In light of the climate and environmental urgency, both states and international organizations are taking proactive steps to change course and limit global warming and the destruction of natural spaces.

At the European level, one illustrative example of this is the Green Deal launched in April 2021. The Green Deal consists of a set of legally binding measures committing the European Union (EU) to achieve climate neutrality by 2050 and to reduce greenhouse gas (GHG) emissions by 55% by 2030. These initiatives span across all economic sectors, from agri-food to transportation to energy. GHG reduction will be achieved

through actions such as building renovations, reforming the carbon market, and promoting the development of green energy sources. The goal is to encourage environmentally sustainable economic growth and development.

The Green Deal succeeds the Climate package, which was initially adopted in December 2008 and revised in 2014 as a plan to combat climate change. It also included GHG emission reductions and energy efficiency targets, with deadlines set for 2020 and 2030. Today, the Green Deal appears to be more comprehensive than the Climate package, but its effectiveness will ultimately be judged based on its future implementation and long-term impact.

4.2. On an economic level: social entrepreneurship, the circular economy, and sustainable food

To contribute to the fight against climate change, private economic actors in the food sector can embrace the philosophy of a just transition. This framework combines sustainable food, social entrepreneurship, and the circular economy with the aim of creating an economy that is greener, more sustainable, and fairer.

- **Sustainable food:** A sustainable food system is one that uses Earth's resources in a reasonable manner, allowing the Earth sufficient time to replenish the resources we consume each year. It is also a system that considers a range of issues such as food supply security, health, safety, accessibility, quality, a strong food industry in terms of jobs and growth, and simultaneously, environmental protection in terms of climate change, biodiversity, water quality, and soil quality.
- **Social entrepreneurship:** Social entrepreneurship is a form of entrepreneurship that pursues objectives of general interest, such as combating climate change, and reinvests the majority of its profits in support of this mission. You will learn more about it in Modules 5 and 6.
- **Circular economy:** The circular economy is an economic model that aims to minimize the waste of natural resources by promoting recycling, the use of renewable energy, sharing, repairing broken products, short supply chains, and more. It operates in a closed-loop fashion, where waste is no longer seen as waste but as a potential resource that can be reused. You will learn more about it in Modules 2 and 3.

These concepts will be further developed in the subsequent training, which will explain how to apply them at the level of a company in the food sector as well as at an individual level.

Exercise: <i>Becoming aware of ecological issues</i>	
Pre-requisites	/
Time	3 hours
Tools	PC or Smartphone, internet connection
Objectives	1. Understand current ecological issues and their consequences on human societies
Instructions	
<p>1. Step 1: Choose one of the following topics:</p> <ul style="list-style-type: none"> • Climate change • Deforestation • Loss of Biodiversity • Pollution • Ocean acidification • Natural habitat destruction • Overfishing • Water scarcity • Invasive species <p>2. Step 2: Do some research on the chosen topic.</p> <p>3. Step 3: Make a short presentation to your classmates about your chosen topic. The presentation should last 5 to 10 minutes. In your presentation, highlight</p> <ol style="list-style-type: none"> a. The causes of the phenomenon. b. The mechanism behind it (in a simplified way). c. The consequences for human societies. 	

EXTRAS

1. Further readings

General documents:

- ✓ What is Climate change? By the United Nations – a nice introduction about the topic of climate change: <https://www.un.org/en/climatechange/what-is-climate-change>
- ✓ “The State of Food Security and Nutrition in the World 2023” by the Food and Agriculture organization of the United Nations – an update on global progress towards the targets of ending hunger and all forms of malnutrition: <https://www.fao.org/3/CC3017EN/online/CC3017EN.html>
- ✓ “Man, and the Environment: A General Perspective” by Nico Stehr – An history of the changing relations between human and nature, and man perception of it.
- ✓ “An inconvenient truth” by Davis Guggenheim - a documentary film exposing that sensibelize on pollution and climate change caused by man.
- ✓ “Les algues vertes (The Green Algae)” by Pierre Jolivet – a french film showing the repercussions of industrialized agriculture and pesticides/insecticides in Brittany.
- ✓ “What is Climate Change? | Start Here” by Al Jazeera English, a seven-minute YouTube video explaining the basics of climate change: <https://www.youtube.com/watch?v=dcBXmj1nMTQ>

Non-profit organizations:

- ✓ Greenpeace: Provide articles on climate change, human damages to the environment. Fight against ecosystems destruction, fossil energies across the world: <https://www.greenpeace.org/international/>
- ✓ Oxfam International: Produce resources on climate change and disasters and food inequalities. Promote social justice: <https://www.oxfam.org/en>
- ✓ Friends of the Earth Europe: fighting for social and environmental justice and an equal access to found while preventing ecological disasters: <https://friendsoftheearth.eu/>
- ✓ Food and Agriculture organization of the United Nations: A specialized agency of the United Nations that leads international efforts to defeat hunger: <https://www.fao.org/home/en>

Documentaries:

- ✓ Food Security - a Growing Dilemma (documentary): a 30 min documentary that address the future of an agriculture, food production along with sustainability and sovereignty concerns:
<https://www.youtube.com/watch?v=wu7PjKawjwI>
- ✓ Human Impact on the Environment : A playlist of short videos questioning the consequences of the human activity on our planet:
<https://www.youtube.com/playlist?list=PLL4ByIaW73wgSuZyfdxJUnhhOjDanFteu>
 - Other videos from National Geographic about climate change can be found there:
<https://education.nationalgeographic.org/resource/resource-library-climate-change/>

2. Glossary

FAO: The Food and Agriculture Organization of the United Nations (FAO) is a specialized agency of the United Nations that leads international efforts to defeat hunger and improve nutrition and food security.

Green Deal: The European Green Deal, approved in 2020, is a set of policy initiatives by the European Commission with the overarching aim of making the European Union (EU) climate neutral in 2050.

HLPE: HLPE stands for the High-Level Panel of Experts on Food Security and Nutrition, which is a scientific panel established by the United Nations to provide guidance and policy recommendations on food security and nutrition issues.

UN: The United Nations (UN) is an intergovernmental organization whose stated purposes are to maintain international peace and security, develop friendly relations among nations, achieve international cooperation, and serve as a center for harmonizing the actions of nations.

WWF: The Worldwide Fund for Nature (WWF) is a Swiss-based international non-governmental organization founded in 1961 that works in the field of wilderness preservation and the reduction of human impact on the environment.

3. Acknowledgments

We are grateful to Agathe Bausson, Quentin Giret, Jeremiah Lahesa Vega, and Xavier Rodrigues, from POUR LA SOLIDARITÉ-PLS, for their helpful contribution to the writing of this module.

4. Bibliography

Burlingame, B., Dernini, S. (Eds.). (2010). *Sustainable diets and biodiversity: Directions and solutions for policy, research, and action. Proceedings of the International Scientific Symposium Biodiversity and Sustainable Diets United Against Hunger*, Nutrition and Consumer Protection Division, FAO, retrieved from <https://www.fao.org/3/i3004e/i3004e.pdf>

Campiglio L., Rovati G. (2009). *La povertà alimentare in Italia: prima indagine quantitativa e qualitativa*. Guerini e associati, Milano.

Clark, M. A., Springmann, M., Hill, J., Tilman, D., & Fraser, H. (2020). Global food system emissions could preclude achieving the 1.5° and 2°C climate change targets. *Science*, 370(6517), 705-708. Retrieved from: <https://www.science.org/doi/full/10.1126/science.aba7357>

European Commission (2020), *Climate and energy package*, retrieved from https://climate.ec.europa.eu/eu-action/climate-strategies-targets/2020-climate-energy-package_en

European Parliament (May 4, 2023), *Pacte Vert : la voie vers une UE durable et climatiquement neutre*, retrieved from https://www.europarl.europa.eu/news/fr/headlines/society/20200618STO81513/le-pacte-vert-pour-une-ue-durable-et-climatiquement-neutre?at_campaign=20234-Green&at_medium=Google Ads&at_platform=Search&at_creation=Sitelink&at_goal=TR_G&at_audience=le_pacte_vert&at_topic=Green_Deal&gclid=CjwKCAjwu4WoBhBkEiwAojNdXpCvZ7Kaob7oRW2TUIHehMCNF7eWFodNvBd6mesL8MZm2GnvnP42QxoCzjcQAvD_BwE

Eurostat (2021), *Incapacité à s'offrir un repas comportant de la viande, du poulet ou du poisson (ou un équivalent végétarien) un jour sur deux - enquête EU-SILC*, retrieved from <https://bit.ly/3yBDp10>

FAO (2021), *The state of food security and nutrition in the world 2021. Chapter 2 food security and nutrition around the world*, retrieved from <https://bit.ly/3t3y1T2>

FAO (2021), *The state of food security and nutrition in the world 2021. Annex 1a statistical tables to chapter 2*, consulté sur <https://bit.ly/3zx2uvp>

GNAFC (2021), *Global report on food crises. Joint analysis for better decisions*, retrieved from <https://bit.ly/3DssUkp> , p.19.

Gonzalez Fischer C., Garnett T. (2016) *Plates, pyramids, planet Developments in national healthy and sustainable dietary guidelines: a state of play assessment*. Food and Agriculture Organization of the United Nations and The Food Climate Research Network at The University of Oxford. Retrieved from <https://www.fao.org/3/I5640E/i5640e.pdf>.

HLPE. (2020). *Food security and nutrition: building a global narrative towards 2030 (Report No. 15)*. High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security. Retrieved from <https://www.fao.org/3/ca9731en/ca9731en.pdf>

HLPE (September 2020), *Impacts of COVID-19 on food security and nutrition: developing effective policy responses to address the hunger and malnutrition pandemic*, retrieved from <https://bit.ly/2WDQKbQ> , p.4.

Katz D., Meller, S. (2014), *Can We Say What Diet Is Best for Health?* Annual Review of Public Health; 35:1, 83-103, retrieved from <https://pubmed.ncbi.nlm.nih.gov/24641555/>

Nyéleni. (2007). *Declaration of Nyéleni*. Retrieved from <https://nyeleni.org/IMG/pdf/DeclNyeleni-en.pdf>

Oxfam France (September 15, 2022), *Vers une augmentation croissante du nombre de « réfugiés climatiques »*, retrieved from <https://www.oxfamfrance.org/migrations/vers-une-augmentation-croissante-du-nombre-de-refugies-climatiques/>

Oxfam International, *Changement climatique : cinq catastrophes naturelles qui demandent une action d'urgence*, retrieved from <https://www.oxfam.org/fr/changement-climatique-cinq-catastrophes-naturelles-qui-demandent-une-action-durgence>

Sechier T., (October 13, 2022), *Près de 70% des animaux sauvages ont disparu en 50 ans, d'après le WWF, France bleu*, retrieved from <https://www.francebleu.fr/infos/environnement/69-des-animaux-sauvages-ont-disparu-en-50-ans-d-apres-le-wwf-1665637844>

Simon F., (September 7, 2023), *La prochaine Commission se concentrera sur la mise en œuvre des politiques climatiques, un haut fonctionnaire de l'UE*, Euractiv, retrieved from <https://www.euractiv.fr/section/energie-climat/news/la-prochaine-commission->

[se-concentrera-sur-la-mise-en-oeuvre-des-politiques-climatiques-selon-un-haut-fonctionnaire-de-lue/](#)

The Economist (2020), *Global Food Security Index*, retrieved from <https://bit.ly/2V3AUab>

UN Committee on Economic, Social and Cultural Rights (CESCR) (12 May 1999), *General Comment No. 12: The Right to Adequate Food (Art. 11 of the Covenant)*, retrieved from: <https://www.refworld.org/docid/4538838c11.html>

United Nations Environment Programme, & International Resource Panel (2010). *Assessing the Environmental Impacts of Consumption and Production: Priority Products and Materials - Summary*. <https://wedocs.unep.org/20.500.11822/8572>.

Van Dooren C., Marinussen M., Blonk H. et al. (2014), *Exploring dietary guidelines based on ecological and nutritional values: A comparison of six dietary patterns*, Food Policy, Vol. 44. <https://doi.org/10.1016/j.foodpol.2013.11.002>.

WWF Germany & WWF Food Practice. (2020, August). *ENHANCING NDCS FOR FOOD SYSTEMS: RECOMMENDATIONS FOR DECISION-MAKERS*, retrieved from https://wwfint.awsassets.panda.org/downloads/wwf_ndc_food_final_low_res.pdf