



EUSTEPs

Enhancing Universities' Sustainability TEaching
and Practices through Ecological Footprint

Intellectual Output 3

IO.3 EUSTEPs Educators' teaching module

How to cite this material:

Malandrakis, G., Pulselli, F.M., Galli, A., Moreno Pires, S., Bacelar-Nicolau, P., Caeiro, S., Nicolau, M., Papadopoulou, A., Mapar, M., Patrizi, N., Niccolucci V. Theodosiou, N., Zachos, D. (2021). *EUSTEPs Educators teaching module: "Sustainability around us: From theory to practice...and back"..* ERASMUS+, KA203 2019-2022, Agreement No. 2019-1-EL01-KA203-062941.



Material Development

- **BACELAR-NICOLAU, Paula**, Universidade Aberta
- **CAEIRO, Sandra**, Universidade Aberta
- **GALLI, Alessandro**, Global Footprint Network
- **MALANDRAKIS, George**, Aristotle University of Thessaloniki
- **MAPAR, Mahsa**, Universidade Aberta
- **MORENO PIRES, Sara**, University of Aveiro
- **NICCOLUCCI, Valentina**, University of Siena
- **NICOLAU Mariana**, University of Aveiro
- **PAPADOPOULOU, Athanasia**, Aristotle University of Thessaloniki
- **PATRIZI, Nicoletta**, University of Siena
- **PULSELLI, Federico Maria**, University of Siena
- **THEODOSIOU, Nikolaos**, Aristotle University of Thessaloniki
- **ZACHOS, Dimitrios**, Aristotle University of Thessaloniki

Coordination

- Aristotle University of Thessaloniki (AUTH)

Contents

| | Page |
|---|------|
| Introduction. Theme and goal of the EUSTEPs sustainability module | 5 |
| EUSTEPs Sustainability module. Module overview | 9 |
| Unit 1. Introduction - Sustainability around us: from theory to practice...and back | 11 |
| Unit 2. Ecological overshoot | 12 |
| Unit 3. Sustainability and SDGs | 13 |
| Unit 4. Introduction to Ecological Footprint | 14 |
| Unit 5. Your personal Ecological Footprint (EF) | 15 |
| Unit 6. Higher Education Institutions (HEIs) and sustainability | 17 |
| Unit 7. EUSTEPs module closure - What we have learned and what we can teach | 19 |
| List of contributors | 20 |
| APPENDIX | 22 |
| CLASS EXERCISES | 23 |
| <ul style="list-style-type: none"> ▪ Class Exercise 1. Two (2) rounds of 'Fisher for an hour' <ul style="list-style-type: none"> ○ 'Fisher for an hour' game guidelines ○ Table for 'Fisher for an hour' game table (Handout) ○ Table with expected results from the 'Fisher for an our' game | 27 |
| ▪ Class Exercise 2. Connecting SDGs and your University | 28 |
| ▪ Class Exercise 3. Two (2) rounds of the individual Footprint Calculator | 28 |
| HOMEWORK ASSIGNMENTS | |
| ▪ Homework 1. Sustainability features at HEIs | 31 |
| ▪ Homework 2. Personal EF and daily activities | 34 |
| ▪ Homework 3. Sustainability around the world | 36 |
| ▪ Homework 4. Students' feedback survey | 38 |
| ▪ Site-Visit (optional). University Sustainability in Practice | 39 |
| EDUCATIONAL VIDEOS | |
| ▪ Educational videos for Unit 3. Sustainability and SDGs | 42 |

- **Educational videos for Unit 6.** HEIs and sustainability

Introduction. Theme and goal of the EUSTEPs Sustainability module

This module, developed by the ERASMUS+ project EUSTEPs (*Enhancing Universities' Sustainability TEaching and Practices*), uses a “learning-by-doing” approach to equip EU university students with science-based knowledge, multidisciplinary skills, and the trans-disciplinary mindset needed to play a critical role in our societal effort towards sustainability, thus allowing students to be best prepared for the future labour market.

The module is made highly effective by the adoption of the concept of Ecological Footprint (EF), a well-known and widespread quantitative approach to study, assess and understand sustainability concept. The EF is an ecology-based environmental accounting method, but we propose it not as a technical tool but as a medium to transfer important aspects of sustainability from a wide range of teachers to a wide range of students. This is possible by virtue of the verified ability of the EF method and related accessories to communicate, inform, visualize, and represent sustainability in its variegated forms.

The module embraces a hands-on, experiential approach to sustainability teaching: by presenting sustainability within the context of everyday life rather than through a mere abstract teaching of intangible theories and concepts, the goal of the module is to allow students to understand, realize, and learn the full complexity of the economy-society-environment relationships, and help them grasp how sustainability relates to the whole spectrum of daily life.

A series of universal, community and environmental education pedagogical approaches (PA) are employed in this module for the development of sustainability competencies¹. More specifically, seven out of the ten literature suggested education for sustainable development (ESD) pedagogical approaches are commissioned in this EUSTEPs teaching module (see Lozano et al., 2017; Evans, 2019)², including the universal PAs of Case studies, Interdisciplinary team teaching/planning, Lecturing, Concept maps, Project or problem-based learning, along with the community PA of Participatory Action Research, and the environmental education PA of Place-based environmental education.

Table 1 highlights the links between EUSTEPs teaching module parts and characteristics with literature suggested ESD pedagogical approaches.

The ESD pedagogical approaches described in table 1 facilitate and promote the development of the majority of ESD competencies, including Anticipatory thinking or future thinking, Assessment and evaluation, Critical thinking and analysis, Empathy and change of

¹ Lozano, R., Barreiro-Gen, M., Lozano, F., & Sammalisto, K. (2019). Teaching Sustainability in European Higher Education Institutions: Assessing the Connections between Competences and Pedagogical Approaches. *Sustainability*, 11(6), 1602. <https://doi.org/10.3390/su11061602>

² Lozano, R., Merrill, M., Sammalisto, K., Ceulemans, K., & Lozano, F. (2017). Connecting Competences and Pedagogical Approaches for Sustainable Development in Higher Education: A Literature Review and Framework Proposal. *Sustainability*, 9(10), 1889. <https://doi.org/10.3390/su9101889>

Evans. (2019). Competencies and Pedagogies for Sustainability Education: A Roadmap for Sustainability Studies Program Development in Colleges and Universities. *Sustainability*, 11(19), 5526. <https://doi.org/10.3390/su11195526>

perspective, Interpersonal competences, Justice, Responsibility, Ethics, Normative competences, Personal involvement, Resource Accounting skills, Strategic competences, and Systems-thinking and handling of complexity². The links of these competencies with EUSTEPs module characteristics are illustrated in the following sections describing each unit of the module.

The two core characteristics of the EUSTEPs teaching module are:

1. Sustainability is presented and addressed as a multi- and trans-disciplinary issue that spans across all fields of educations, all spheres of life, and all sectors of the economy;
2. Teaching is conducted in a highly interactive way, in which students experience first-hand the crosscutting, holistic and interactive nature of sustainability by assessing and debating their own behaviour and how it influences their personal “Footprint”.

Table 1. Links between EUSTEPs teaching module parts and characteristics with ESD pedagogical approaches (PA)

| Classification | ESD Pedagogical Approaches | EUSTEPs part / characteristic | Description |
|----------------|---|--|--|
| Univ ersal | Case studies | Unit 3: <ul style="list-style-type: none"> ▪ Class exercise 2 - Connecting SDGs and your university ▪ Homework 1 - Sustainability features at HEIs Unit 5: <ul style="list-style-type: none"> ▪ Homework 2 - Personal EF and daily activities Unit 6: <ul style="list-style-type: none"> ▪ Homework 3 - Sustainability around the world | Examples of specific case studies are incorporated in the module aiming to provide qualitatively rich descriptions of settings, problems, and controversies in sustainable development. Through case studies, we invite students to consider real-world examples and examine issues. |
| | Interdisciplinary team teaching/development | All Units | EUSTEPs module was developed from an interdisciplinary team of researchers and educators, including ESD, political, sustainability, economics and Ecological Footprint experts, along with specialist in distance and asynchronous education. |
| | Lecturing | Units 3, 4, 6 | In these units, lecturing is the dominant approach as a substantial amount of content knowledge related to sustainability, SDGs, EF, and HEIs’ sustainability is tackled. However, the units are also enriched and supported with other ESD PA (see this table). |
| | Concept maps | Unit 1: C-map (individual / collective) Unit 7: Class exercise 4 - C-map (individual / collective) | Individual and/or collective concept maps are used for the assessment of students’ entry and exit level of understanding on sustainability and its link with their personal life. |
| | Problem-based learning | Unit 3: <ul style="list-style-type: none"> ▪ Homework 1 - Sustainability features at HEIs | Small scale, real-world problems, related either with students’ personal life or their |

| | | | |
|-------------------------|-------------------------------------|--|---|
| | | <p>Unit 5:</p> <ul style="list-style-type: none"> Class exercise 3 - Two (2) rounds of the personal Footprint Calculator <p>Unit 5:</p> <ul style="list-style-type: none"> Homework 2 - Personal EF and daily activities | <p>university were incorporated in the module. Students, working in groups, suggest ways of implementing SDGs in their universities (Homework 1) and reduce their personal EF (Class exercise 3 & Homework 2).</p> |
| Community | Participatory Action Research | <p>Unit 1:</p> <ul style="list-style-type: none"> EF 3-tier Pre-test <p>Unit 7:</p> <ul style="list-style-type: none"> EF 3-tier Post-test Homework 4 - Students' feedback survey | <p>The whole module design and development was based on an active participatory processes. In particular, it was piloted, by members of the research group, in 4 Universities (3 countries) during the 2019-'20 spring semester. Researchers kept classroom notes of its strengths, weaknesses, difficulties, and highlights. Students' feedback regarding the perceived effectiveness of the module (Homework 4), and data regarding its actual learning effect (EF 3-tier pre/post test) were also recorded. Based on the analysis of all collected data^{3,4,5} the module was further elaborated for the second round of implementation in the 2020-'21 winter semester. This second, elaborated and updated version of the module is presented here.</p> |
| Environmental Education | Place-based environmental education | <p>Unit 3:</p> <ul style="list-style-type: none"> Class exercise 2 - Connecting SDGs and your university Homework 1 - Sustainability features at HEIs <p>Unit 6:</p> | <p>Sustainability learning is linked with students' universities and their characteristics (Class exercise 2 & Homework 1) and supported by site visits to the</p> |

³ Moreno Pires, S., Mapar, M., Caeiro, S., Pulselli, F.M., Galli, A., Patrizi, N., Bacelar-Nicolau, P., Malandrakis, G. 2020. "Sustainability teaching in Higher Education Institutions: gaps between practices, ideal competencies and pedagogical approaches". Paper presented in 26th International Sustainable Development Research Society Conference (ISDRS 2020), July 15-17, 2020 Budapest, Hungary.

⁴ Moreno Pires, S., Mapar, M., Nicolau, M., Patrizi, N., Malandrakis, G., Pulselli, F.M, Bacelar-Nicolau, P., Caeiro, S., Galli, A. 2020. "Teaching Sustainability within the context of everyday life: the case of the EUSTEPs project". Paper presented in 8th International Conference on Sustainable Development (ICSD2020), September 21-22, 2020 New York, USA.

⁵ Galli, A., Pulselli, F.M, Malandrakis, G., Mapar, M., Nicolau, M., Patrizi, N., Bacelar-Nicolau, P., Caeiro, S., Moreno Pires, S. 2020. "Assessment of a pilot experience of teaching sustainability through everyday life in European University students". Paper presented in the 2nd Conference on Sustainable Campus (CCS2020), October 30, 2020, Tomar, Portugal.

| | | | |
|--|--|---|--|
| | | <ul style="list-style-type: none"> ▪ Site visit (Optional) | university campus as an optional activity within the module. |
|--|--|---|--|

Through this module, students (and educators) will not only be able to learn about sustainability and the human-environment relationship but also track their own individual Footprints; by discussing their results and behaviour decisions with peers shaping a “learning by group discussion” process.

The EUSTEPs module is primarily intended for undergraduate students (for all course and degree types) and postgraduate students with no specific environmental science background. The total length of the EUSTEPs core module is six (6) hours frontal lesson, with the possibility to extend it up to 12 academic lesson hours (each X 45’) through the inclusion of optional lessons. The EUSTEPs module corresponds to about 1-1.5 ECTS workload (depending on University rules).

The structure of the module is summarized in Table 2. More information on the module and the overall project can be found at: www.eusteps.eu

Table 2. Overview of EUSTEPS module “Sustainability around us: from theory to practice...and back”

| Unit & length (academic hours) | Session Name/Topic | Mandatory | | | | Optional ² |
|-----------------------------------|---|--|---|---|--|---|
| | | Class Exercise (entire class or in split-out groups) | Supporting educational material | Homework (individually or in pairs, at home) | Further reading document | Research / Assessment [‡] |
| 1 (1 h) | Sustainability around us: from theory to practice...and back <ul style="list-style-type: none"> Reflection “Sustainability and your daily activities” (leave at the teacher discretion to just produce a collective C-map all together or first give a few minutes to students to draft individual C-maps) Intro to EUSTEPS project and course | C-map (individual / collective) | - Lesson guideline - PPT Unit 1 | - | - | <u>3-tier pre-test</u> (as homework, see Liampa et al., 2019) |
| 2 (1 h) | Ecological Overshoot <ul style="list-style-type: none"> Groups’ identification ‘Fisher for an hour’ - Game Results discussion around 4 key concepts: Equity, Sustainability, Knowledge, Cooperation Introduction to Ecological Overshoot and connection with daily life | Class Exercise 1 <i>Two (2) rounds of ‘Fisher for an hour’ (Fish Game)</i> | - Lesson guideline - PPT Unit 2 - Game instructions - Game handouts | - | - <u>Overshoot Day site</u> (mandatory) - Niccolucci et al., 2017 (optional) - Kitzes et al., 2008 (optional) | - |
| 3 (1 h) | Sustainability and SDGs <ul style="list-style-type: none"> Introduction to the concept of Sustainability SDGs Intro Group reflection on university opportunities to deal with SDGs | Class Exercise 2 <i>Connecting SDGs and your university</i> | - Lesson guideline - PPT Unit 3 - Video(s) link(s) - Homework instructions | Homework 1 <i>Sustainability features at HEIs</i> | - Waas et al., 2011 (mandatory) - Pulselli et al., 2015 (optional) - Kuhlman and Farrington, 2010 (optional) - UNDP SDGs booklet (optional) | - |
| 4 (2 h) | Ecological Footprint Introduction³ <ul style="list-style-type: none"> Basics of the EF methodology Equations (optional topic) Global EF and biocapacity (BC) trends and results Discussion | - | - Lesson guideline - PPT Unit 4 | - | - Borucke et al., 2013 (mandatory) - http://data.footprintnetwork.org/#/ (mandatory) | - |

| | | | | | | |
|-------------------|--|---|--|--|---|--|
| | | | | | - Kitzes and Wackernagel, 2009 (optional) - Galli et al., 2007 (optional) | |
| 5 (2 h) | Your Personal Ecological Footprint <ul style="list-style-type: none"> Students use of the calculator Results discussion | Class exercise 3 <i>Two (2) rounds of the personal Footprint Calculator</i> | - Lesson guideline - URL link to EF calculator - PPT Unit 5 - Homework instructions | Homework 2 <i>Personal EF and daily activities</i> | - Collins et al., 2020 (optional) | |
| 6 (2 h) | Higher Education Institutions (HEIs) and Sustainability <ul style="list-style-type: none"> Introduction to University sustainability Aspects of HEIs' sustainability Methodologies/tools for sustainability assessment of universities 1-2 Examples of sustainability projects (from HEI and not) | | - Lesson guideline - PPT Unit 6 - Homework instructions - Video (s) link(s) | Homework 3 <i>Sustainability around the world</i> NOTE: implementing this might imply additional one (1) hour. | - Caeiro et al., 2020 (mandatory) - Move the date link (Reading 1) - Global solution forum link (Reading 2) | Site (or website) visit to University campus (optional) NOTE: implementing this might imply additional one (1) hour. |
| 7 (1 h) | EUSTEPs module closure - what we learned and what are we take home <ul style="list-style-type: none"> Examples of real-world solutions Collective revision of the C-map | Class exercise 4 <i>C-map (individual / collective)</i> | - Lesson guideline - PPT Unit 7 | Homework 4 <i>Students' feedback survey (LimeSurvey)</i> | - Wackernagel et al., 2017 (optional) | 3-tier post-test (as homework, see Liampa et al.) |

1. Gray shaded sessions are optional, although suggested to complement the EUSTEPs core module consisting of sessions 2-5 (6 hours).
2. Optional and to be implemented only by those teachers who want to assess learning outcomes.
3. Before implementing this Unit, educators might want to read Collins et al. (2018). Learning and teaching sustainability: The contribution of Ecological Footprint calculators. *Journal of Cleaner Production* 174, 1000-1010. <https://doi.org/10.1016/j.jclepro.2017.11.024>.

UNIT 1

Unit 1 (1 x 45') – Sustainability around us: from theory to practice...and back

- Expected learning outcomes (ELOs)** Students are expected to:
- show their current (entry) level of understanding of the sustainability concept and its related issues,
 - describe in outline the EUSTEPs project, the module and its objectives.
- Competences**
- Personal involvement
 - Empathy and change of perspective (if C-map is done in group)
- Classroom activities/worksheets**
- Collective (or individual) construction of a C-map about the relationship between daily activities and the Environmental, Economic, Societal, and Institutional pillars of sustainability.
- Supporting educational material**
- Lesson guideline
 - PPT of Unit 1
- Homework (Optional)** Assessment of students' initial (pre-module implementation) understanding of Ecological Footprint (3-tier test: <https://gmalandrakis.webpages.auth.gr/limesurvey/index.php/825995?lang=el>)

Unit 1 Overview:

- Initial reflection of the whole classroom about: *“Daily activities and how they are linked with environment, economy, society, and institutions⁶”*. Suggested sequence of activities:
 - 10 min: initial class reflection
 - 25 min: C-Map explanation and development of students' C-Map(s)
 - 10 min: EUSTEPs project and module overview
- Please note that although the development of a collective class C-map is suggested, whether to ask students to work as a group – to produce a first collective class C-map – or individually – to produce individual C-Maps as homework – is left at the teacher discretion.

⁶ Please note that in this first lesson, and for the purpose of assessing the initial level of students' understanding, the concepts of *Environment, Economy, Society* and *Institutions* should not be defined but rather left to the personal interpretation of students.

UNIT 2

Unit 2 (1 x 45') - Ecological Overshoot

- Expected learning outcomes (ELOs):** Students are expected to:
- realize the concept of planetary limits and how these affect, and are affected by, human activities,
 - realize the importance of knowledge and cooperation in avoiding ecological overshoot.
- Competences:**
- Empathy and change of perspective, to be able to develop their self-awareness and awareness of others' perspective
- Classroom activities/ worksheets**
- **Class Exercise 1.** Two (2) rounds of 'Fisher for an hour' game (Fish Game) (Appendix)
- Supporting educational material:**
- Lesson guideline
 - PPT of Unit 2
 - Game instructions
 - Game handouts

Unit 2 overview:

- 30 min: Two (2) rounds of the 'Fisher for an hour' (Fish game) are conducted with students (**Class exercise 1**).
- 10 min: Plenary discussion, after the 2nd round of the game, about four (4) key concepts: *Equity, Sustainability, Knowledge, and Cooperation*.
- 5 min: Introduction to Ecological Overshoot concept and connection with daily life.

Suggestions for further reading:

- Overshot Day website (<https://www.overshootday.org>) (**Mandatory**)
- Niccolucci, V., Pulselli, F. M., & Tiezzi, E. (2007). Strengthening the threshold hypothesis: Economic and biophysical limits to growth. *Ecological Economics*, 60(4), 667–672. <https://doi.org/10.1016/j.ecolecon.2006.10.008>. (**Optional**)
- Kitzes, J., Wackernagel, M., Loh, J., Peller, A., Goldfinger, S., Cheng, D., & Tea, K. (2008). Shrink and share: Humanity's present and future Ecological Footprint. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 363(1491), 467–475. <https://doi.org/10.1098/rstb.2007.2164> (**Optional**)

UNIT 3

Unit 3 (1 x 45') - Sustainability and SDGs

- Expected learning outcomes (ELOs):** Students are expected to:
- realize the definition of sustainability and its main aspects (Environment, Economy, Society),
 - what SDGs are and what is their role.

- Competences:**
- Systems-thinking and handling of complexity
 - Normative competences
 - Knowledge of SDGs: context and specificities

- Classroom activities/ worksheets**
- **Class Exercise 2.** Connecting SDGs and your university (Appendix)

- Supporting educational material**
- Lesson guideline
 - PPT of Unit 3
 - Video(s) link(s) (10 suggested videos, ~30' in total, see Appendix). Educator may choose 1-2 of these videos as compulsory for students.
 - Homework instructions

- Homework**
- **Homework 1.** *Sustainability Features at HEIs (Appendix)*

Unit 3 Overview:

- 15 min: Introduction to the concept of sustainability (PPT)
- 15 min: Introduction to SDGs (PPT)
- 15 min: Group reflection on university opportunities to deal with SDGs - Connecting SDGs and the university

Suggestions for further reading:

- Waas, T., Hugé, J., Verbruggen, A., & Wright, T. (2011). Sustainable Development: A Bird's Eye View. *Sustainability*, 3(10), 1637–1661. <https://doi.org/10.3390/su3101637>. **(Mandatory)**
- Pulselli, F. M., Coscieme, L., Neri, L., Regoli, A., Sutton, P. C., Lemmi, A., & Bastianoni, S. (2015). The world economy in a cube: A more rational structural representation of sustainability. *Global Environmental Change*, 35, 41–51. <https://doi.org/10.1016/j.gloenvcha.2015.08.002>. **(Optional)**
- Kuhlman, T., & Farrington, J. (2010). What is Sustainability? *Sustainability*, 2(11), 3436–3448. <https://doi.org/10.3390/su2113436>. **(Optional)**
- UNDP SDGs booklet (<https://www.undp.org/content/undp/en/home/librarypage/corporate/sustainable-development-goals-booklet.html>) **(Optional)**

UNIT 4

Unit 4 (2 x 45') - Ecological Footprint Introduction (EF)

- Expected learning outcomes (ELOs)**
- Students are expected to realize:
- what EF is,
 - the unit of measure of EF,
 - the factors constituting EF,
 - the usefulness of EF
 - EF and other types of footprints and their respective calculation methods and calculators,
 - the usefulness of EF as a sustainability indicator,
 - the relationship of SDGs with EF.

- Competencies**
- Normative competences
 - Critical thinking and analysis
 - Resource accounting skills
 - Assessment and evaluation

- Classroom activities/worksheets**
- Lesson guideline
 - PPT of Unit 4

Unit 4 Overview:

- 30 min: Basics of the EF methodology (PPT)
- 20 min: Equations (optional)
- 30 min: Global EF and biocapacity (BC) trends and results
- 10 min: Discussion

Suggestions for further reading:

- Borucke, M., Moore, D., Cranston, G., Gracey, K., Iha, K., Larson, J., Lazarus, E., Morales, J. C., Wackernagel, M., & Galli, A. (2013). Accounting for demand and supply of the biosphere's regenerative capacity: The National Footprint Accounts' underlying methodology and framework. *Ecological Indicators*, 24, 518–533. <https://doi.org/10.1016/j.ecolind.2012.08.005>. **(Mandatory)**
- Ecological Footprint Explorer - GFN (<http://data.footprintnetwork.org/#/>) **(Optional)**
- Kitzes, J., & Wackernagel, M. (2009). Answers to common questions in Ecological Footprint accounting. *Ecological Indicators*, 9(4), 812–817. <https://doi.org/10.1016/j.ecolind.2008.09.014>. **(Optional)**
- Galli, A., Kitzes, J., Wermer, P., Wackernagel, M., Niccolucci, V., & Tiezzi, E. (2008). An exploration of the mathematics behind the ecological footprint. *International Journal of Ecodynamics*, 2(4), 250–257. <https://doi.org/10.2495/ECO-V2-N4-250-257>. **(Optional)**
- Wackernagel, M., Hanscom, L., & Lin, D. (2017). Making the Sustainable Development Goals Consistent with Sustainability. *Frontiers in Energy Research*, 5. <https://doi.org/10.3389/fenrg.2017.00018>. **(Optional)**

UNIT 5

Unit 5 (2 x 45') – Your Personal Ecological Footprint

- Expected learning outcomes (ELOs)** Students are expected to:
- realize their personal EF,
 - realize the gap between personal EF and resources availability,
 - identify possible solutions for reducing their personal EF,
 - implement these solutions and alternative choices and assess their impact on the planet,
 - consider why EF is an evaluation tool and how it differs from other evaluation tools regarding its specific advantages.
- Competences**
- Critical thinking and analysis
 - Assessment and evaluation
 - Personal involvement
 - Empathy and change of perspective
 - Justice, responsibility, and ethics.
- Classroom activities/ worksheets**
- **Class Exercise 3.** Two (2) rounds of Footprint Calculator
- Supporting educational material**
- Lesson guideline
 - URL link to the EF calculator (<https://www.footprintcalculator.org>)
 - PPT of Unit 5
 - Homework 2 instructions
 - **NOTES:**
It is highly recommended that the teacher collects all the results of the calculator exercise(s) in a file in order to visualize the behaviour of single students and the whole class. We suggest using an excel spreadsheet in which each student can put his/her own results (see some examples in appendix) producing synthesis diagrams. This can be done by the educator or by one or more students.
Before implementing Unit 5, educators might want their students to read Collins et al., 2018 (<https://doi.org/10.1016/j.jclepro.2017.11.024>) as this article describes implementation and outcomes of a similar class exercise
- Homework**
- **Homework 2.** Personal EF and Daily activities (Appendix)

Unit 5 overview:

Two (2) rounds of Footprint Calculator:

- 25 min: 1st round: Calculation of personal EF by means of Footprint Calculator (<https://www.footprintcalculator.org/>)
- 25 min: Suggestions for personal EF reduction & plenary discussion

- *20 min: 2nd round:* Recalculation of personal EF, based on the agreed suggestions, in order to meet the one planet goal
- *20 min:* Discussion and reflection on the effectiveness of the proposed suggestions regarding the achievement of one planet goal.

Suggestion for further reading:

- Collins, A., Galli, A., Hipwood, T., & Murthy, A. (2020). Living within a One Planet reality: The contribution of personal Footprint calculators. *Environmental Research Letters*, 15(2), 025008. <https://doi.org/10.1088/1748-9326/ab5f96>. **(Optional)**

UNIT 6

Unit 6 (2 x 45') – Higher Education Institution (HEIs) and sustainability (Optional)

- Expected learning outcomes (ELOs)** Students are expected to:
- realize the many ways in which HEIs deal with sustainability issues,
 - understand the different aspects of HEIs' sustainability,
 - be aware of the various tools assessing universities sustainability.
- Competences**
- Normative competences
 - Assessment and evaluation
 - Critical thinking and analysis
 - Personal involvement (site-visit)
 - Interpersonal competences (site-visit)
- Teaching activities/worksheets**
- Data search and analysis
 - Debate
 - Site visit to the University campus or sustainability office of the University (optional)
- NOTE:** In this case, educators will need one (1) more hour.
- Supporting Educational material**
- Lesson guideline
 - PPT of Unit 6
 - Video(s) link(s) (4 videos, see Appendix)
- Homework**
- **Homework 3.** Sustainability around the world (Appendix).
- NOTE:** Implementing this might imply an additional one (1) hour.
- Outdoors activity**
- Site (or website) visit to University campus (optional)

Unit 6 Overview

- PPT of Unit 6:
 - Introduction to University sustainability
 - Aspects of HEIs' sustainability
 - Methodologies/tools for sustainability assessment of universities
 - Examples of used scales (SAQ, STARS, STAUNCH, THE World University Ranking)
- 1-2 Examples of sustainability projects (from HEIs and not)
- Site (or website) visit to University campus (optional) (Appendix)

NOTE: implementing this Unit might imply two (2) additional hours.

Suggestions for further reading:

- Caeiro, S., Sandoval Hamón, L. A., Martins, R., & Bayas Aldaz, C. E. (2020). Sustainability Assessment and Benchmarking in Higher Education Institutions—A Critical Reflection. *Sustainability*, 12(2), 543. <https://doi.org/10.3390/su12020543>. **(Mandatory)**
- Move the Date Solutions (<https://movethedate.overshootday.org>). **(Optional)**
- Global Solutions Forum
(<https://static1.squarespace.com/static/5d3720b10078a10001a36fd5/t/5d939e06a6347f3e8cfc30d7/1569955361348/GSF-Booklet.pdf>). **(Optional)**

UNIT 7

Unit 7 (1 x 45') – EUSTEPs module closure – What we have learned and what we can teach (Optional)

- Expected learning outcomes (ELOs):** Students are expected to:
- realize what they have learned during the module,
 - learn about existing sustainability solutions and debate about them with the class,
 - be willing to be engaged in sustainability action in their daily life and their University.

- Competences:**
- Strategic competences
 - Critical thinking and analysis
 - Anticipatory thinking or futures thinking
 - Interpersonal competences

- Classroom activities/worksheets**
- Examples of real-world solutions
 - What we learned and what are the takes home
 - Collective revision of the C-map*

- Homework**
- **Homework 4.** Students' feedback survey ([LimeSurvey](https://gmalandrakis.webpages.auth.gr/limesurvey/index.php/825995?lang=el))
 - POST learning assessment of students' understanding about EF (3-tier test):
<https://gmalandrakis.webpages.auth.gr/limesurvey/index.php/825995?lang=el>. (**Optional**)

Unit 7 Overview:

Post reflection of the whole classroom about: *“Daily activities and how they are linked with environment, economy, society, and institutions*”*

*We explain to students that environment, economy, society and institutions can be considered in any way they want.

Teachers should work together with their students to produce a revised collective (or individual) C-map all together in the classroom.

CONTRIBUTORS

Authors (*in alphabetical order*)

- BACELAR-NICOLAU, Paula.** Assistant Professor in the Department of Sciences and Technology, Universidade Aberta, PORTUGAL. e-mail: pnicolau@uab.pt CV: <https://www2.uab.pt/departamentos/DCT/detaildocente.php?doc=59>.
- CAEIRO, Sandra.** Associate Professor with Habilitation I Environmental Sciences, Department of Science and Technology, Universidade Aberta, Portuguese Distance learning University, PORTUGAL. e-mail: scaeiro@uab.pt, CV: <https://www2.uab.pt/departamentos/DCT/detaildocente.php?doc=64>
- GALLI, Alessandro.** Global Footprint Network, Director, Mediterranean-MENA Program, SWITZERLAND. e-mail: alessandro.galli@footprintnetwork.org, CV: <https://www.footprintnetwork.org/about-us/people>
- MALANDRAKIS, George.** Assistant Professor in Environmental Education, School of Primary Education, Aristotle University of Thessaloniki, GREECE. e-mail: gmalandrakis@eled.auth.gr, CV: <https://qa.auth.gr/en/cv/gmalandrakis>.
- MAPAR, Mahsa.** Postdoctoral researcher. Department of Science and Technology and Distance Education and Elearning Laboratory (LE@D), Universidade Aberta, PORTUGAL, m.mapar@fct.unl.pt.
- MORENO PIRES, S.,** Assistant Professor of Public Policies, Department of Social, Political and Territorial Sciences, Research Unit of Governance, Competitiveness and Public Policies (GOVCOPP), University of Aveiro, PORTUGAL. e-mail: sarapires@ua.pt, CV: <https://www.ua.pt/govcopp/profile/160>
- NICCOLUCCI, Valentina,** Administrative Staff member at the Department of Physical Sciences, Earth and Environment, University of Siena, ITALY. e-mail: valentina.niccolucci@unisi.it, CV: http://www.ecodynamics.unisi.it/?page_id=120&lang=en
- NICOLAU Mariana.** MSc in Political Science, Department of Social, Political and Territorial Sciences, University of Aveiro, PORTUGAL, mariananicolau@ua.pt.
- PAPADOPOULOU, Athanasia.** Agriculturalist, Primary School Teacher, Ph.D. Candidate, School of Primary Education, Aristotle University of Thessaloniki, GREECE. e-mail: papath55@yahoo.gr.
- PATRIZI, Nicoletta.** Post-doc fellow in Environmental and Cultural Heritage Chemistry, Sustainability, Indicators, Environmental assessment, Department of Physical Sciences, Earth and Environment, University of Siena, ITALY. e-mail: patrizi2@unisi.it, CV: http://www.ecodynamics.unisi.it/?page_id=123&lang=it
- PULSELLI, Federico Maria.** Associate Professor in Environmental and Cultural Heritage Chemistry, Sustainability, Indicators, Environmental assessment, Department of Physical Sciences, Earth and Environment, University of Siena, ITALY. e-mail: federico.pulselli@unisi.it, CV: http://www.ecodynamics.unisi.it/?page_id=107&lang=en

THEODOSIOU, Nikolaos. Professor, Division of Hydraulics and Environmental Engineering, Department of Civil Engineering, Aristotle University of Thessaloniki, GREECE. e-mail: nikthead@civil.auth.gr, CV: <https://qa.auth.gr/en/cv/nikthead> .

ZACHOS, Dimitrios. Assistant Professor of Pedagogy - Intercultural Education, School of Primary Education, Aristotle University of Thessaloniki, GREECE. e-mail: dimzachos@eled.auth.gr, CV: <https://qa.auth.gr/en/cv/dimzachos>.

Appendix

- **Class Exercises**
- **Homeworks**
- **Educational videos**

Class Exercises

- **Class Exercise 1.** Two (2) rounds of 'Fisher for an hour' game (Fish Game)
- **Class Exercise 2.** Connecting SDGs and your university
- **Class Exercise 3.** Two (2) rounds of personal Footprint Calculator

Class Exercise 1. Guidelines for the game 'Fisher for an hour' (Unit 2)

Divide students into groups of six:

- 5 Fishermen
- 1 omniscient, omnipresent banker/observer.

Identify the banker one per each group.

The educator takes all bankers/observers, one from each group, out of the room to explain instructions and give them handout. Educator returns to the room and gives the following instructions to players:

INSTRUCTIONS to ALL:

- **Fishermen:** Each day, you have the options to catch 1, 2 or 3 fish. You will have 10 days of fishing. The object of the game is to have **as many fish as possible after playing 10 rounds.**

NOTE FOR THE EDUCATOR: it's up to them to decide if it means to catch as many fish as possible or to leave as many fish as possible in the lake! Fishermen could have a vague sense that there may not be an unlimited number of fish, but they are not really sure.

- **Fishermen** can talk to each other
- **Bankers/observers:** Being omniscient, will be watching over and keeping track of the Game Table (See below) of the fishermen's decisions and **MUST NOT TALK TO FISHERMEN.**
- The **banker/observer** informs the educator when the fish stock runs out.

INSTRUCTIONS only for the BANKER/OBSERVER:

- Initial stock: 25 fishes.
- Growth rate: 1 fish born for every 5 fish left in the lake every day.

ROUND 1: PLAY

The Educator will allow approximately 1 minute for each round of fishing (the entire game should take about 10 minutes). At the end of each round, the banker/observer will record in a table each player's take, the total take, fish remaining after harvest, growth, and fish remaining after growth.

NOTE: The players can talk to each other but not to the banker/observer! The banker/observers must keep the table hidden!

- Questions should be answered as they arise, but questions about whether the most fish should be caught by individuals, caught by the group, or left in the lake should not be answered at this point.
- If at any point the fishery is depleted, the banker/observer will stop the game for that group, telling them that the fish (and the game) is over.

- When all groups collapse, start the discussion.

Discussion

The educator sets the following questions to the class:

- How many groups crashed the fishery?
- Why did the fishery crash?
- Did anyone not crash the fishery?
- If so, ask them to explain what they did and for their total group take.
- Did anyone else get a higher group take?
- How could you have avoided crashing the fishery?
- Needed to know what Nature knew!

Educator explains the situation.

Here is what you did not know – the fishery started with 25 fishes. Each night, more fish were born – it took 5 fishes in the lake to make one baby each night.

So that was what Nature knew that you did not know.

Educator will point out that the key to the fishery collapse is that any time take is higher than growth, the stock is depleting, and you will crash, sooner or later. This has obvious parallels later to global overshoot.

ROUND 2: PLAY

- OK, let's try this one more time. Now you know what only Nature knew in the first round! Remember, you are starting with 25 fishes, and it takes 5 fishes each night to make a new baby fish. Note that the initial stock cannot be more than 25 fishes and that you are fishermen hence you should fish to survive.
- Take a few minutes to discuss, then we'll fish again.
- Play the game again.
- After the second round, start a discussion to understand the different strategies put in place by each group.

Class Exercise 1. Table for the game 'Fisher for an hour' (Handout) (Unit 2)

FISHER FOR AN HOUR

| FISHERMEN | | | | | | | | | | |
|---------------------|---|---|---|---|---|------------|-------|-----------|------------------|------------------------------------|
| Day | 1 | 2 | 3 | 4 | 5 | Total take | STOCK | Fish left | overnight growth | Fishes available for the day after |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| PESCA TOTALE | | | | | | | | | | |

Expected results for Fish Game (Unit 2)

FISHER FOR AN HOUR

| FISHERMEN | | | | | | | | | | |
|---------------------|----------|----------|----------|----------|----------|------------|-------|-----------|------------------|------------------------------------|
| Day | 1 | 2 | 3 | 4 | 5 | Total take | STOCK | Fish left | overnight growth | Fishes available for the day after |
| 1 | 1 | 1 | 1 | 1 | 0 | 4 | 25 | 21 | 4 | 25 |
| 2 | 1 | 1 | 1 | 0 | 1 | 4 | 25 | 21 | 4 | 25 |
| 3 | 1 | 1 | 0 | 1 | 1 | 4 | 25 | 21 | 4 | 25 |
| 4 | 1 | 0 | 1 | 1 | 1 | 4 | 25 | 21 | 4 | 25 |
| 5 | 0 | 1 | 1 | 1 | 1 | 4 | 25 | 21 | 4 | 25 |
| 6 | 1 | 1 | 1 | 1 | 0 | 4 | 25 | 21 | 4 | 25 |
| 7 | 1 | 1 | 1 | 0 | 1 | 4 | 25 | 21 | 4 | 25 |
| 8 | 1 | 1 | 0 | 1 | 1 | 4 | 25 | 21 | 4 | 25 |
| 9 | 1 | 0 | 1 | 1 | 1 | 4 | 25 | 21 | 4 | 25 |
| 10 | 0 | 1 | 1 | 1 | 1 | 4 | 25 | 21 | 4 | 25 |
| PESCA TOTALE | 8 | 8 | 8 | 8 | 8 | | | | | |

Class Exercise 2. Connecting SDGs and your university (Unit 3)

Objective

Understanding the connection between SDGs and university and realization of the world as an interconnected whole

Instructions

As second exercise, we propose students a particular experience entitled “SDGs and your institution”. Once the SDGs have been introduced, the exercise for students consists of identifying the relationship between their own university, both as an institution and the physical spaces in the campus (buildings, community, services, etc.) and each SDG. The work can be carried out individually or in pairs and everyone (or every group) should provide a brief discussion in the classroom by illustrating at least two examples as follows:

- 1) Choose two (2) examples of university’s features or practices that are taken from “your own university”
- 2) Describe how these examples are relevant to SDGs (and which SDGs) and how they can help their university move towards sustainability.



The following questions can be used as suggestions to guide class discussion with the teacher and among students:

- 1) What is the sense of the connection between SDGs and your university?
- 2) Which SDGs are more connected to your examples? Why? (Medium difficulty)
- 3) What about universities and Goal 4 (education), in general? (Easy)
- 4) What about university and Goal 3 (health), in general? (Medium difficulty)
- 5) What about university and Goal 5 (gender equality), in general? (Difficult)
- 6) How can we make links between SDGs and realize the world as an interconnected whole?

Recommendation: Invite students to use creativity and fantasy without being afraid to make mistakes. The teacher could also moderate a possible discussion among students. Sometimes, very surprising observations emerge from the students.

Class Exercise 3. Two (2) rounds of personal Footprint Calculator (Unit 5)

The footprint calculator is available at: www.footprintcalculator.org. Notice that every student can find the results of his/her exercise at the end of the footprint calculator questionnaire on a summarizing page.

It is highly recommended to collect and organize the results of this class exercise in an Excel file.

For example, students' names can be put in the file and results from their calculation from the 1st and the 2nd round can be entered in **two different sheets**.

The differences between the two rounds of EF calculation can be visualized by means of histograms or other diagrams.

Below, samples of data organization in an excel spreadsheet are provided.

| | A | B | C | D | E |
|----|--|---|---|---|---|
| 1 | Column A to be filled by teachers | | | | |
| 2 | Students' Name and last name | Do you think your Footprint is higher or lower than 1 planet? | In your opinion, which daily activities has the greatest relevance in your Footprint? | | |
| 3 | Name Surname1 | | | | |
| 4 | Name Surname2 | | | | |
| 5 | Name Surname3 | | | | |
| 6 | Name Surname4 | | | | |
| 7 | Name Surname5 | | | | |
| 8 | Name Surname6 | | | | |
| 9 | Name Surname7 | | | | |
| 10 | Name Surname8 | | | | |
| 11 | Name Surname9 | | | | |
| 12 | Name Surname10 | | | | |
| 13 | Name Surname11 | | | | |
| 14 | Name Surname12 | | | | |
| 15 | Name Surname13 | | | | |
| 16 | Name Surname14 | | | | |
| 17 | Name Surname15 | | | | |
| 18 | Name Surname16 | | | | |
| 19 | Name Surname17 | | | | |
| 20 | Name Surname18 | | | | |
| 21 | Name Surname19 | | | | |
| 22 | Name Surname20 | | | | |
| 23 | Name Surname21 | | | | |
| 24 | Name Surname22 | | | | |
| 25 | Name Surname23 | | | | |
| 26 | Name Surname24 | | | | |
| 27 | Name Surname25 | | | | |
| 28 | Name Surname26 | | | | |

| | B | C | D | E | F |
|----|---|-----------|-------------------|---|---|
| 1 | NOTE: This tab is to be used in the 1st round ONLY | | | | |
| 2 | NOTE: In editing the file, please edit the grey cells ONLY | | | | |
| 3 | NOTE: Look for your name in the Blue boxes! | | | | |
| 4 | | | | | |
| 5 | Name Surname1 | | | | |
| 6 | | month day | # planets | | |
| 7 | Personal Overshoot Day | - | 2.2 | | |
| 8 | | | | | |
| 9 | Footprint by Land type | % | gha/capita | | |
| 10 | Carbon Footprint | #DIV/0! | | | |
| 11 | Crop Land | #DIV/0! | | | |
| 12 | Grazing Land | #DIV/0! | | | |
| 13 | Forest Land | #DIV/0! | | | |
| 14 | Built up Land | #DIV/0! | | | |
| 15 | Fishing Grounds | #DIV/0! | | | |
| 16 | Total (in gha) | #DIV/0! | | | |
| 17 | | | | | |
| 18 | Footprint by Activity | % | gha/capita | | |
| 19 | Food | #DIV/0! | | | |
| 20 | Shelter | #DIV/0! | | | |
| 21 | Mobility | #DIV/0! | | | |
| 22 | Goods | #DIV/0! | | | |
| 23 | Services | #DIV/0! | | | |
| 24 | Total (in gha) | #DIV/0! | - | | |
| 25 | | | | | |
| 26 | | | | | |
| 27 | Name Surname2 | | | | |
| 28 | | month day | # planets | | |
| 29 | Personal Overshoot Day | - | | | |

Homework assignments

- **Homework 1.** Sustainability features at HEIs
- **Homework 2.** Personal EF and daily activities
- **Homework 3.** Sustainability around the world
- **Homework 4.** Students' feedback survey
- **Site-Visit (optional).** University sustainability in practice

Homework 1. Sustainability features at HEIs (Unit 3)

| Objective |
|--|
| <p>Identification of sustainability features at your university <i>Campus</i> and suggestion of solutions to promote sustainability in the university and also identification of the relation between your University and the SDGs</p> <p>Note: <i>Campus</i> areas may include:</p> <ul style="list-style-type: none"> - Planning and administration (e.g., registration or other activities) - Operational (e.g., study areas, library, etc.) - Academic/ research (e.g., teaching, educational materials, students' homework, project and thesis development, etc.) |
| Delivery date |
| |
| Instruction |
| <p>Step 1- Select your work team. Each team should include two (2) to three (3) students. Use the attached Table to write your names in the “Team members” column.</p> <p>Step 2- Choose the specific <i>Campus</i> area of your university that you will be analysing, as well as its location within the <i>Campus</i>, and write it in the table, in the “<i>Campus</i> area” cell.</p> <p>Step 3- With your team members, find two (2) examples of current/expected sustainability features (e.g., paperless activities) in each sustainability dimension (environment, social, economic, institution), and write it in the “Sustainability feature” column.</p> <p>Note 1: In each dimension, you should find one current sustainability feature (i.e. currently applied in the selected area) and one expected sustainability feature (i.e. not applied in the selected area yet, but can be considered in the future). Specify it by ticking a mark (✓) in the “Status” column.</p> <p>Note 2: Collect the sustainability features through the university website without the field visit (applicable only for online classes as well as during the COVID-19 to prevent the spread of the virus)</p> |

Step 4- Determine the relevant sustainability dimension of each feature by applying the tick mark (✓) in the relevant column. Write down how / in which way the characteristic is related with the particular dimension(s). The justification should be **short, precise, and clear.**

Note: If the selected feature covers **more than one sustainability dimension**, please specify them by applying the tick mark (✓) on the “Relevant sustainability dimension” columns----- and justify it in the subsequent column.

Step 5- Link the sustainability features with the 17 SDGs. For each selected sustainability feature please specify **one (1) or two (2)** SDGs that is/are more relevant to the feature. Write only the **number(s)** of the relevant SDGs on the table (e.g., SDG4)

Step 6- For each **expected** sustainability feature, propose a sustainable solution to show how it can be considered/applied at the university in the future. Elaborate the solution in the “Sustainable solution” column. The solution should be **short, precise, and clear.**

Note: Elaborate the solutions only for expected features (not current features).

| Team members | | | | | | | | | |
|---|---------|----------|-----------------------------------|-------------|----------|---------------|---------------------------------------|-------------------------|---|
| Name of the Institution and Campus area | | | | | | | | | |
| Sustainability feature | Status | | Relevant sustainability dimension | | | | Reasons for the selected dimension(s) | Relevant SDGs number(s) | Sustainable solution (just for expected features) |
| | Current | Expected | Social | Environment | Economic | Institutional | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Homework 2. Personal EF and daily activities (Unit 5)

| Objective |
|--|
| Identification of your Personal Ecological Footprint (EF) in your daily activities/behaviours, interpretation of your results and find solutions |
| Delivery date |
| |
| Instruction |
| <p>Step 1 - Choose two (2) areas of your daily activities/behaviours. It can be any activities/behaviours in your indoor daily routine such as cooking, eating, cleaning, doing exercise, home office working, household activities, taking care of your pet, and other household activities.</p> <p>Caution: To prevent the spread of Covid-19 virus, please choose only the indoor daily activities that do not require to leave the home. (Applicable in the case of constrain measures because of Covid-19).</p> <p>Step 2 - For each selected area, provide two (2) examples of your activities/ behaviours that oppose ecological footprint:</p> <ul style="list-style-type: none"> - One with high EF - One with low EF <p>* Note: For each example, please provide one (1) or two (2) original photos (taken by yourself), to clarify your selected activity/ behaviour.</p> <p>Step 3 - Interpret your examples:</p> <ul style="list-style-type: none"> - Clarify the reasons (for both high and low EF examples) to show why these selected activities/ behaviours have a high/low EF. - Suggest two (2) solutions (only for each high EF example) that can reduce your EF. <p>Step 4 - Present your results in the PowerPoint format (PPT):</p> <ul style="list-style-type: none"> - One (1) slide as a cover page that consist of your name and your selected areas of indoor daily activities. - Two (2) slides for presenting your results: |

- ❖ Each slide should support two of your examples including i) the original photos, ii) reasons (for high and low EF examples), and iii) solutions (only for high EF examples). The reasons and solutions should be **short, precise, and clear.**
- ❖ Each slide should consist of **maximum 200 words** (Font: Times New Roman/ size 16 or 18).

Homework 3. Sustainability around the world (Unit 6)

| Objective |
|---|
| Identify and investigate successful examples of sustainability projects/ practices around the world and understand what makes a project/practice a successful long-lasting solution. |
| Delivery date |
| ----- |
| Instruction |
| <p>Step 1 - Select your work team. Each team should include two (2) students.</p> <p>Step 2 - Get initial insight and reflect on what makes a project/practice an impactful solution by looking at this video: https://www.youtube.com/watch?v=cpkRvc-sOKk.</p> <p>Step 3 - Provide an example of a successful sustainability project/practice. It can be any successful examples in public or private sectors such as:</p> <ul style="list-style-type: none"> - Universities/campus - Cities/countries (e.g., municipalities, public organizations, etc.) - Industries/small or medium enterprises - Non-Governmental Organizations (NGOs)/Social entities <p>Note: Some examples can be found on the internet. The following links can also help find relevant examples in different sectors:</p> <ul style="list-style-type: none"> - https://unesdoc.unesco.org/ark:/48223/pf0000220304 - https://international-sustainable-campus-network.org/projects-all/ - https://www.mmu.ac.uk/environmental-science-research/inter-university-sustainable-development-research-programme/ - https://sustainablecampus.unimelb.edu.au/ - https://green.harvard.edu/ - https://sustainable.stanford.edu/ - https://sustainablecampus.cornell.edu/ - https://www.environment.admin.cam.ac.uk/ |

- <https://www.unsdsn.org/>
- <https://sustainabledevelopment.un.org/partnerships/goodpractices>
- https://issuu.com/sustainia/docs/sustainia_top10_2014?e=4517615/9429162
- <https://www.globalsolutionsforum.org/video-gallery>
- <https://www.iisd.org/story/real-world-solutions-to-sustainability/>
- <https://www.equatorinitiative.org/>
- <https://www.greengrowthknowledge.org/case-studies>
- <https://www.kiva.org/>

Step 4 - Elaborate on the main features of the selected sustainability project/practice by covering the following questions:

- Describe what motivated your choice and explain why you think the selected sustainability project/practice can be considered a “successful example”.
- What are the main features/aspects/steps of sustainability in the example you selected?
- What are the main strengths/highlights of the selected example?
- Do you think that learnings from the selected example could be transferred elsewhere (other countries and/or other sectors)? If so, how?

Step 5 - Present your results in the PowerPoint format (PPT):

- One (1) slide as a cover page that should consist of your team members' names and your selected example of sustainability project/practice.
- Up to four (4) slides for presenting (clearly and concisely) your findings based on the questions mentioned in step 4.

Homework 4. Students' feedback survey (Unit 7)

After the end of the module, students have to fill the feedback survey about its quality and perceived effectiveness. The survey is available [here](#).

Site visit to University campus. University sustainability in practice (Unit 6 - optional)

Objectives

1. Challenge students to interact with the complexity of sustainability issues found in a reality/context they know well, such as the University campus, library, canteen, laboratories, etc.
2. Invite students to an outdoor experiential learning, to consider real-world examples and examine the specificity of the University from a diversity of perspectives.

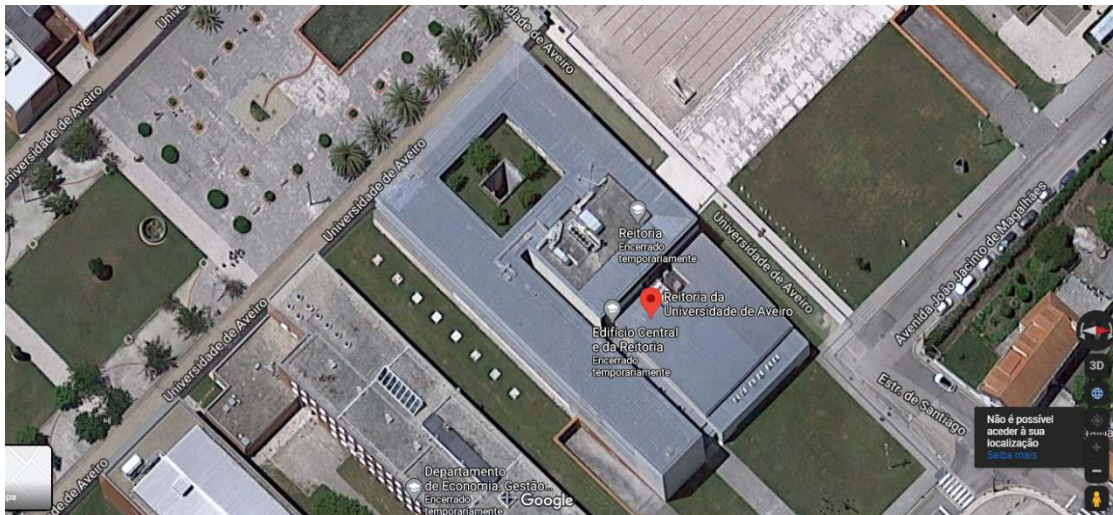
Instructions

The activity is proposed as a way to consolidate and connect the notions taught in class and the reality of the campus where they are inserted. It is an optional activity. From the following aspects, the educator can choose some to address in this activity:

- 1) Search for vegetable gardens within the campus;



- 2) Visit a canteen or cafeteria and examine the menu or food options. Attempt to stimulate a discussion about the sustainability of food options.
- 3) Observe how the mobility is done around the campus – how many people are walking; how many are using cars or the number of bikes around.
- 4) Explore all the existent green spaces within the perimeter of the campus. For this purpose, you may also resort to Google Maps to observe some hidden spaces (solar energy, green roofs, etc.). In the following figure, you may find a top garden in the Rectorate Building of University of Aveiro. This is also an option for those who teach online.



Recommendation: Always seek to create a discussion about each situation. Try to promote a dialogue where the students relate the concepts previously approached and the situation they are observing.

- **Note.** Alternatively, you can visit other areas of universities based on the structure of your university (e.g., the sustainability office of the university or any similar office, the library, laboratories, etc.)

EDUCATIONAL VIDEOS

- **Educational Videos for Unit 3. Sustainability and SDGs**
- **Educational Videos for Unit 6. HEIs and Sustainability**

Educational videos for Unit 3. Sustainability and SDGs

| Topic | Publisher | Link | Time |
|---|---|---|----------------------------|
| 1- SDGs, from 1338 to 2030 | Universita di SIENA | https://www.youtube.com/watch?v=1peETpy85BI | 2' |
| 2-Do you know all 17 SDGs? | UN (SDGs / Knowledge platform) | https://www.youtube.com/watch?time_continue=1&v=0XTBYMfZyrM&feature=emb_logo | 1:24' |
| 3-The world we want: SDGs | UN (Office of Secretary-general's Envoy on Youth) | https://www.un.org/youthenvoy/video/sustainable-development-goals-explained/ | 5:30' (applicable part) |
| 4-Transitions from the MDGs to the SDGs | UNDP | https://www.undp.org/content/undp/en/home/presscenter/pressreleases/2015/09/24/undp-welcomes-adoption-of-sustainable-development-goals-by-world-leaders.html | 2:30' |
| 5- The Sustainable SDGs – Action Towards 2030 | CAFOD (Catholic Agency for Overseas Development) | https://www.youtube.com/watch?v=9-xdy1Jr2eg | 5:52' |
| 6- UN SDGs - Overview | UNICEF Georgia | https://www.youtube.com/watch?v=M-iJM02m_Hg | 2:12' |
| 7- SDGs | 17 SDGs | https://www.eda.admin.ch/agenda2030/en/home/agenda-2030/die-17-ziele-fuer-eine-nachhaltige-entwicklung.html | 4' |
| 8- What is sustainability | ACCIONA/ Sustainability for all | https://www.youtube.com/watch?time_continue=1&v=FbAjxkGvDNs&feature=emb_logo | 1:43' |
| 9- Sustainability | Explainity® | https://www.youtube.com/watch?v=_5r4loXPyx8 | 3:40' |
| 10- Sustainability in everyday life | ACCIONA/ Sustainability for all | https://www.youtube.com/watch?time_continue=1&v=kZlrIQDf1nQ&feature=emb_logo | 1:34' |

Educational videos for Unit 6. HEIs and Sustainability

| Topic | Publisher | Link | Time |
|--|---|---|-------|
| 1- Sustainability model at Harvard University | Harvard University Office for Sustainability | https://www.youtube.com/watch?v=eUurJEQvNkl | 3:46' |
| 2 - Some initiatives that has been done in Pennsylvania University | Pennsylvania University Office of Communications | https://www.youtube.com/watch?v=eksLn-P3v_4 | 2:37' |
| 3 - Tips about living sustainably in the Campus | Hong Kong University of Science and Technology - Sustainable Smart Campus as a Living Lab | https://www.youtube.com/watch?v=ZjYmU2Yufww | 1:00' |
| 4 - Tips about living sustainably in the Campus | College of the Atlantic | https://www.youtube.com/watch?v=cjxvURrQJD8 | 2:55' |

The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflect the views of the authors only. The Commission, along with the National Authority (IKY), cannot be held responsible for any use which may be made of the information contained therein.