

Students' Teaching Module

Unit 1. Understanding Sustainability: From theory to practice...and back



EUSTEPs

Enhancing Universities' Sustainability Teaching
and Practices through Ecological Footprint

KA 203, Strategic Partnership in Higher Education 2019-2022, Agreement No. 2019-1-EL01-KA203-062941

Co-funded by the
Erasmus+ Programme
of the European Union



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Global Footprint Network®
Advancing the Science of Sustainability



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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
- **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)

HOW TO CITE THIS MATERIAL

- Malandrakis, G., Pulselli, F.M., Bacelar-Nicolau, P., Caeiro, S., Galli, A., Moreno Pires, S., Nicolau, M., Papadopoulou, A., Mapar, M., Patrizi, N., Theodosiou, N., Zachos, D. (2020). EUSTEPs Students' teaching module. Unit 1: "Understanding sustainability: From theory to practice ... and back"

¹ Optional and to be implemented only by those teachers who want to assess learning outcomes

		Mandatory				Optional
Units & length	Unit Name/Topic	Class Exercise (as entire class or in split-out groups)	Supporting Educational material	Homework (individually or in pairs, at home)	Further reading document	Research / Assessment ¹
1 (1 h)	Sustainability around us: from theory to practice...and back - Reflection "Sustainability and your daily activities"(leave at the teacher discretion to just produce a collective C-map all together or first give few minutes to students to draft individual C-maps) - Intro to EUSTEPs project and course	C-map (collective)	- Lesson guideline - PPT Unit 1	-		3-tier test (as Homework)
2 (1 h)	Ecological Overshoot - 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 2 rounds of Fisher for a day (Fish Game)	- 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 - Introduction to the concept of Sustainability - SDGs Intro - Group reflection on university opportunities to deal with SDGs	Class Exercise 2 Connecting SDGs and your university	- Lesson guideline - PPT Unit 3 - video(s) link(s) - Homework instructions	Homework 1 Sustainability Features at HEIs	- Waas et al., 2011 (mandatory) - Pulselli et al., 2015 (optional) - Kuhlman & Farrington, 2010 (optional) - UNDP SDGs booklet (optional)	-

Units & length	Unit Name/Topic	Mandatory				Optional
		Class Exercise (as entire class or in split-out groups)	Supporting Educational material	Homework (individually or in pairs, at home)	Further reading document	Research / Assessment ¹
4 (2 h)	Ecological Footprint Introduction - Basics of the EF methodology - Equations (optional) - Global EF and BC trends and results - Discussion	-	- Lesson guideline - PPT Unit 4		- Borucke et al., 2013 (mandatory) - http://data.footprintnetwork.org/#/ - Kitzes & Wackernagel, 2009 (optional) - Galli et al., 2007 (optional)	-
5 (2 h)	Your Personal Ecological Footprint - Class use of the calculator - Results discussion	Class Exercise 3 2 rounds of Footprint Calculator	- Lesson guideline - URL link to calculator - Excel results file - PPT Unit 5 - Homework instructions	Homework 2: Personal EF and Daily activities	- Collins et al., 2020 (optional)	-
6 (1 h)	HEI & University sustainability - Introduction to University sustainability - Aspects of it - Methodologies/tools for sustainability assessment of university - 1-2 Examples of sustainability projects (from HEI and not)		- Lesson guideline - PPT Unit 6 - Homework instructions - Video (s) link(s)	Homework 3: Sustainability around the world	- Caeiro et al., 2020 - Reading 1 - Reading 2	Site visit to Campus
7 (1 h)	EUSTEPs module closure - Collective revision of the C-map - Examples of real-world solutions	Class Exercise 4 C-map (collective)	- Lesson guideline - PPT Unit 7	Homework 4: Students survey (LimeSurvey)	- Wackernagel et al., 2015 (optional)	3-tier test



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Concept map about daily activities and Society, Economy, Environment and Institutions

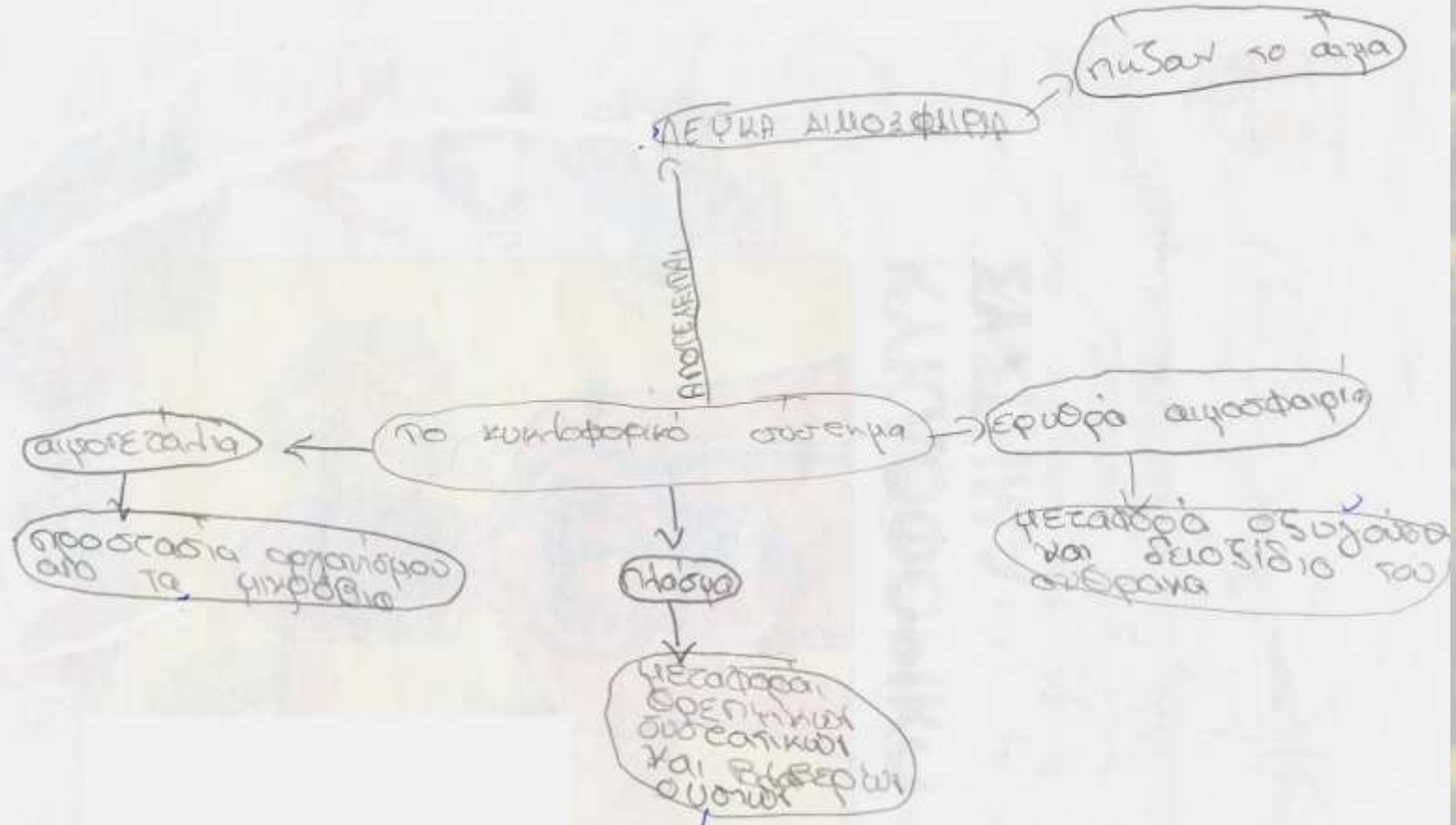
a- Class exercise - Concept map to cmaps tool

b- Optional Homework – 3-tier test about Ecological Footprint (EF)

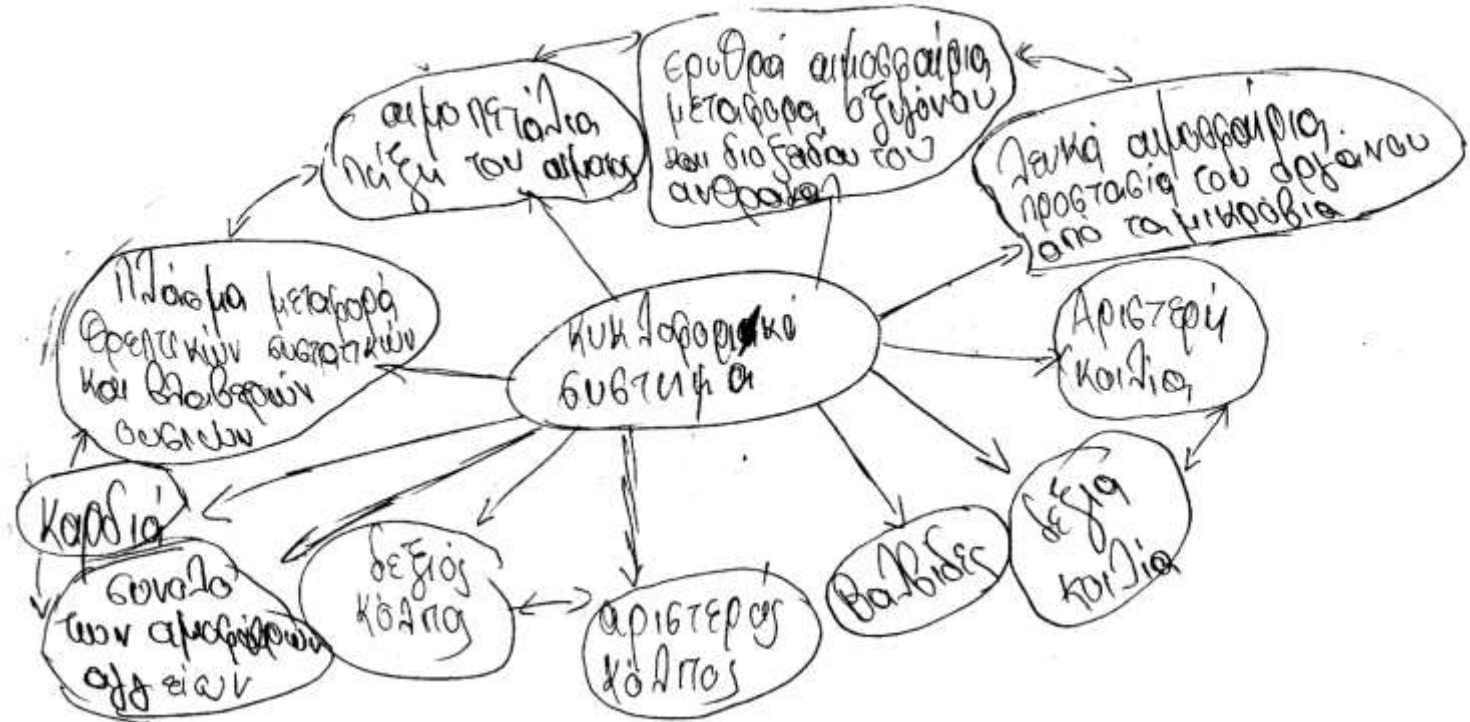
The class draws a **concept map** illustrating
**“Your daily activities and how they are
linked with environment, economy,
society and institutions*”**

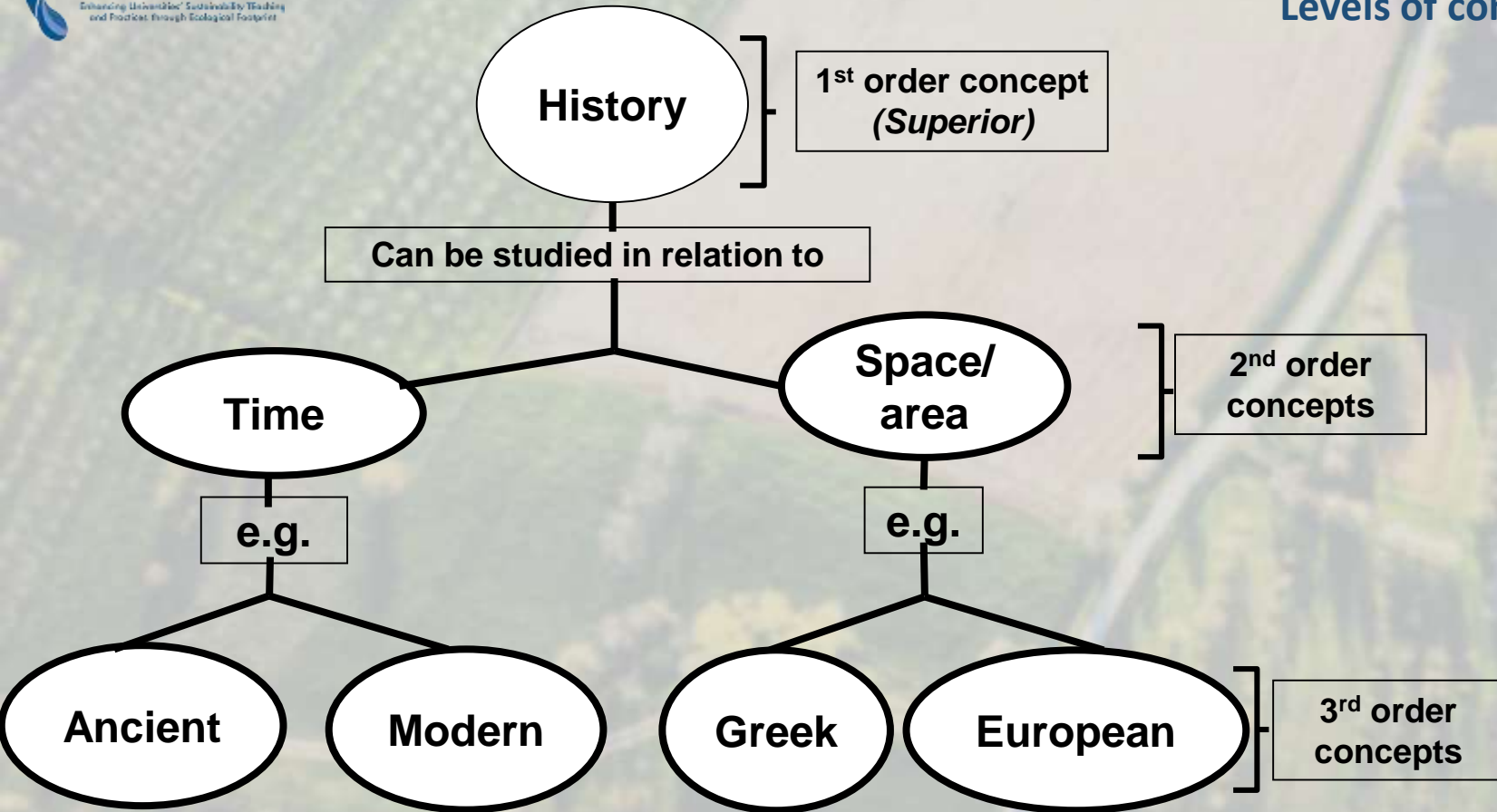
**Environment, economy, society and institutions can be considered with any way
you want*

Examples of elementary students' C-maps

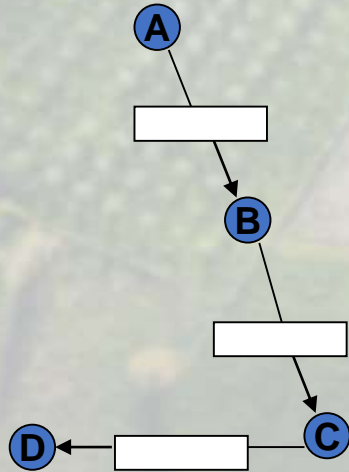


Το κυκλοφορικό σύστημα

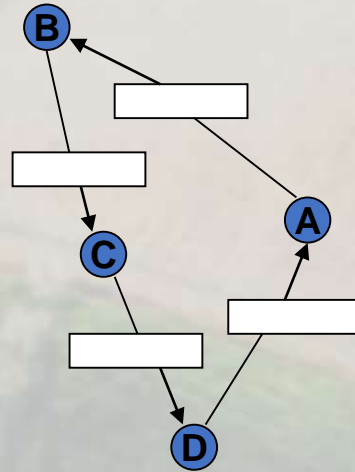




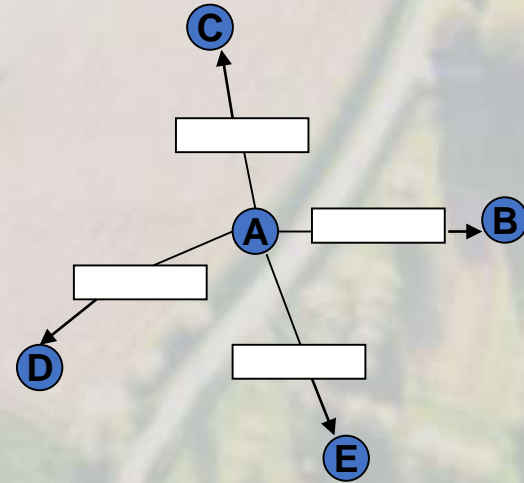
Basic structures of cmap's I



Linear



Cyclic



Center / radials

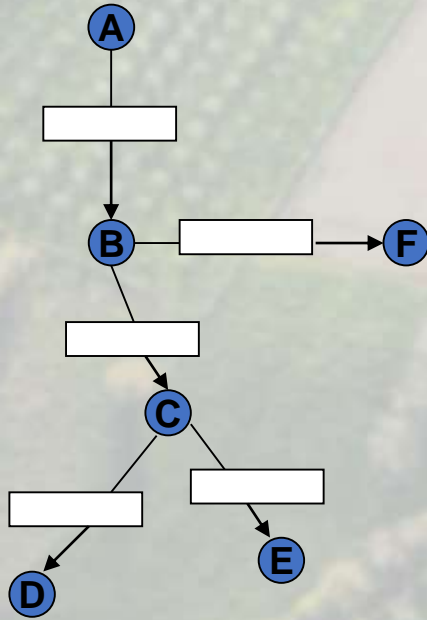


= linking phrase

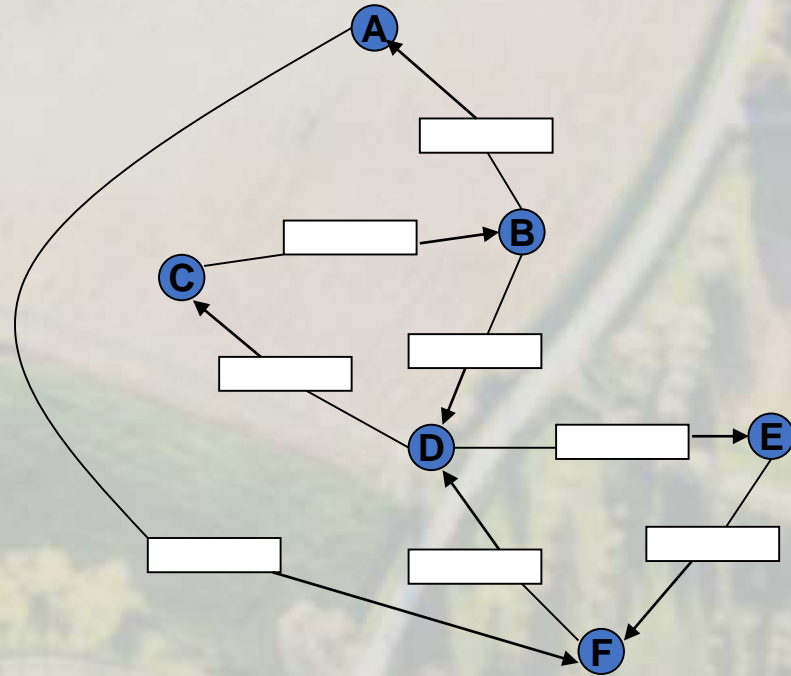


= concept

Basic structures of cmapss II

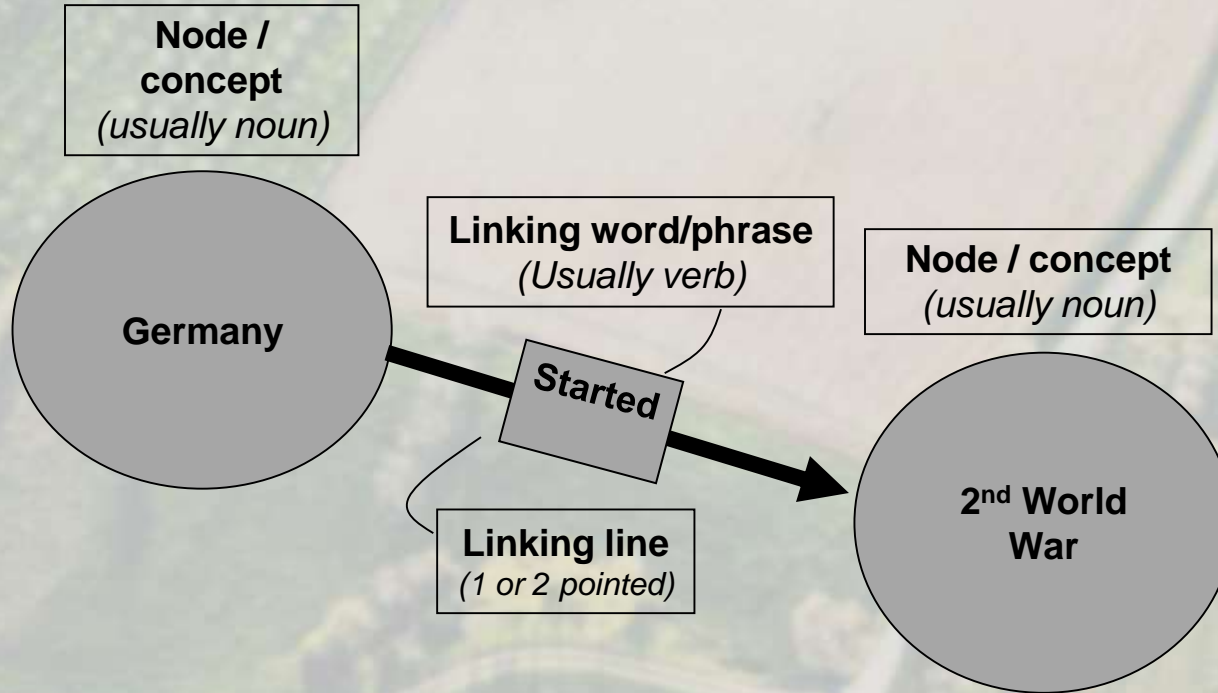


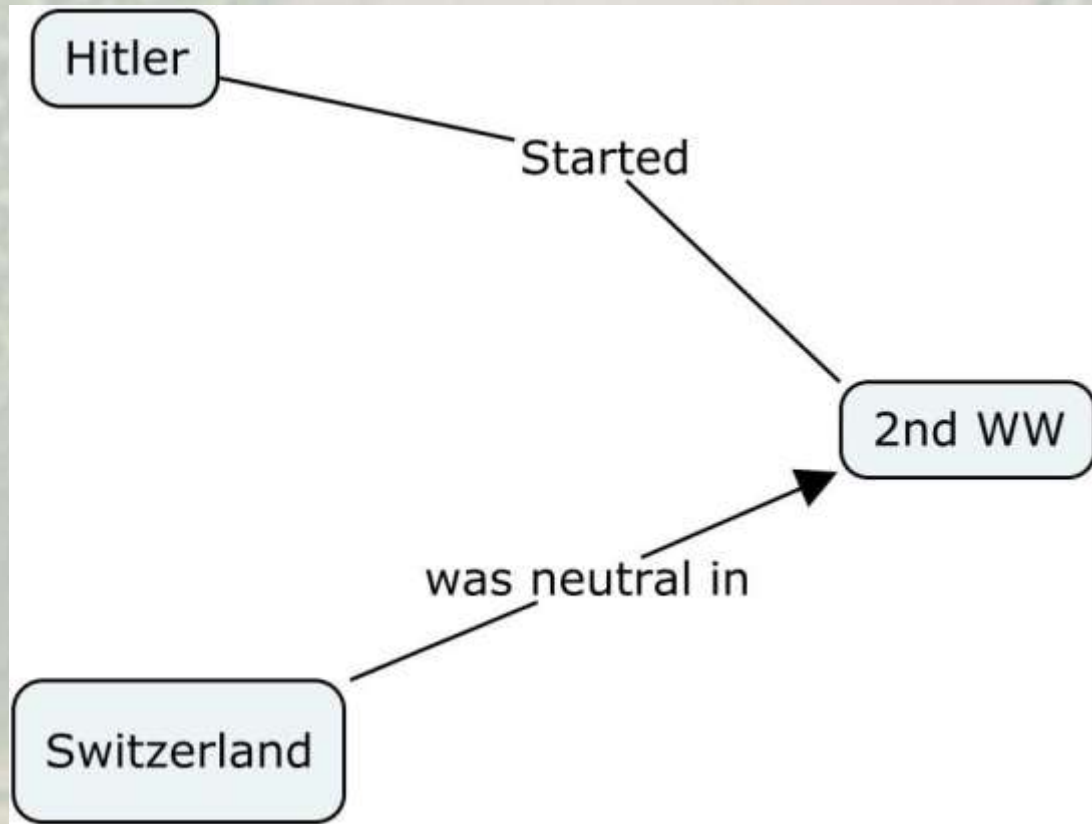
Tree



Net

Fundamental elements of cmap





References for C-map and possible individual exercise: after finishing the C-map in the classroom

- Download C-maps tool software from <https://cmap.ihmc.us/products/>
- Install it to your PC. Pay attention to the location of its installation. Follow the suggested by the program path of installation.
- Transfer your original paper C-map to C-maps tool.
- Name the file of your C-map by giving your Surname followed by the number 1. E.g.: 'Jackson_1.cmap'
- Send the file of your cmap (*.cmap) to the instructor (or upload to the system) by next week.
- Keep a copy of your original cmap file for future use in the project.
- Fill the survey available here:
<https://gmalandrakis.webpages.auth.gr/limesurvey/index.php/882988?lang=en>

Optional HOMEWORK: 3-tier test about EF

Goal of the EUSTEPs project

ULTIMATE GOAL: EUSTEPs to become the blueprint for teaching and practicing sustainability in European Higher Education Institutions (HEIs).

OBJECTIVES: EUSTEPs has two main objectives

1. Educate European university students – thus creating a future generation of environmentally-aware proactive European citizens – and the wider higher education community (teaching and administrative staff, and management bodies) on sustainability and related topics;
2. Assess and reduce the impact of European Union HEIs on the planet's ecosystems through an advanced use of the Ecological Footprint (EF) concept and calculator.

HOW? by interweaving conceptual knowledge of environmental, economic and social principles of sustainability with popular digital tools and innovative teaching and learning practices



About the authors of the EUSTEPs module

BACELAR-NICOLAU, Paula. Assistant Professor in the Department of Sciences and Technology, Unibersidade Aberta, PORTUGAL, pnicolau@uab.pt
<https://www2.uab.pt/departamentos/DCT/detaildocente.php?doc=59>.

CAEIRO, Sandra. Associate Professor with habilitation I Environmental Sciences, Department of Science and Technology, UAb, Portuguese Distance learning University, PORTUGAL, scaeiro@uab.pt
<https://www2.uab.pt/departamentos/DCT/detaildocente.php?doc=64>

GALLI, Alessandro. Global Footprint Network, Director, Mediterranean-MENA Program, SWITZERLAND, alessandro.galli@footprintnetwork.org
<https://www.footprintnetwork.org/about-us/people>

MALANDRAKIS, George. Assistant Professor in Environmental Education, School of Primary Education, Aristotle University of Thessaloniki, GREECE, gmalandrakis@eled.auth.gr
<https://qa.auth.gr/en/cv/gmalandrakis>.

MAPAR, Mahsa. Postdoctoral researcher. Department of Science and Technology and Distance Education and Elearning Laboratory (LE@D), PORTUGAL, m.mapar@fct.unl.pt

MORENO PIRES, Sara. Researcher in Sustainable Cities and Regions, Research Unit on Governance, Competitiveness and Public Policies (GOVCOPP), Department of Social, Political and Territorial Sciences, University of Aveiro, PORTUGAL, sarapires@ua.pt
https://www.ua.pt/govcopp/profile_160

NICCOLUCCI, Valentina, PhD in Environmental and Cultural Heritage, Sustainability and Indicators. Department of Physical Sciences, Earth and Environment, University of Siena, ITALY. valentina.niccolucci@unisi.it.

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, 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, patrizi2@unisi.it 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, federico.pulselli@unisi.it
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, niktheod@civil.auth.gr
<https://qa.auth.gr/en/cv/niktheod> .

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



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"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."

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