



# UPM IMPACT in SDG12

## Quality Education

### EELISA ACITIVITIES AROUND SDG12

Essay competition for students on the topics of panel discussions of the Academic Forum on Crimea- 2022

Description

Co-creation with consumers guides new concept and product developments by including them in the qualitative research. Senior naïve consumers will be invited to join the sessions together with food scientists, sensometricians and industrial partners.

Community	Green Planet		
Coordinator	carolina.chaya@upm.es	ECTS	
Kind of activity	Course / Seminar		
Principal SDG	SDG12 - Responsible Consumption & Production	Others SDG	
Starting date	2021-01-01	Ending date	2021-12-31
Target group	master   bachelor	Teaching mode	Hybrid
Link	<a href="https://community.eelisa.eu/?post_type=eelisa_activity&amp;p=1250">https://community.eelisa.eu/?post_type=eelisa_activity&amp;p=1250</a>		



## International Open Access Week 2022: Open Science practices in the framework of Open for Climate Justice

### Description

Group of students, faculty members and staff @Industriales aiming at implementing the Circular Economy principles (and strategy) in their centre and beyond. The strategic work lines for this group are described here.

The last achievements include:

Collaboration with the Centre Administration to introduce the sustainable public purchasing practices (SDG LO 12-B-2). In particular, this year we have worked in the RFP requirements for toner purchasing and cafeteria services in the centre. Particularly, the new RFP emphasize on reducing single-use packaging in the centre and waste management metrics.

Improvements and baseline studies on centre waste management: waste management suppliers mapping, research on downstream recycling operations after collection, paper recovery in the centre (door-to-door collection service), launch organic fraction separate collection.

Supplier development initiative, particularly with cleaning service and cafeteria, training and support on working procedures that make our centre more sustainable.

Design, implementation and operation of our Circular FabLab, a unique initiative of its kind, which has collected more than 10 kg of rejected PLA from the Coronamakers movement.

All this collected PLA has been fully recycled by CircularizatE students: manual separation by colors and qualities, first manual shredding (using hammers, scissors, etc.), shredding, drying, extrusion. The recycled 3D printing filament is 100% recycled PLA, which constitutes a technical milestone. The procedure is “artisanal” and somehow labor intensive, and it is managed and developed mostly by students using a permanence in the lab system.

Technical evaluation and characterization of recycled PLA and other polymers (relevant chemical engineering processes)

Development of a procedure for plastics classification using densities (water, salted water, and oil), used in outreach and scientific diffusion activities, such as Semana de la Ciencia.

Design of communication materials

Social networks management: @circularizate



Achievement of funds for assets purchasing (lab machines) through the participation in students in challenges and contests such as the Ford Community Challenge (Apadrina la Ciencia) or the Fundación Vodafone Project Lab.

The group meets quarterly (1 hour-meetings) under an internal organization structure in functional departments, each of them with its own Teams channel, besides the General channel. Students had been trained in lean and agile project management techniques to self-sufficiently advance in the project guided by staff and faculty members.

The activity is included in the ETSII catalogue as “Antenas de sostenibilidad” (pp.10) with an ECTS recognition ranging from 0.5 to 1.5 ECTS (<https://www.etsii.upm.es/estudios/grados/doc/CatalogoEspecificoETSIICompleto2020-21.pdf>)

Community	The CIRCULAR and REGENERATIVE CAMPUS (EELISA CRC Community)		
Coordinator	ruth.carrasco@upm.es	ECTS	
Kind of activity	Course / Seminar		
Principal SDG	SDG12 - Responsible Consumption & Production	Others SDG	
Starting date	2021-01-01	Ending date	2021-12-31
Target group	all	Teaching mode	In person
Link	<a href="https://community.eelisa.eu/activities/circularizate/">https://community.eelisa.eu/activities/circularizate/</a>		



## Introduction to Sustainability Management

### Description

Innovative pedagogical game that introduces direct team competition as a gamification resource to foster learning in supply chain dynamics.

The core of the activity is a supply chain game in which two teams of 3-4 students each, participate in a competition game to gain market share when facing supply chain disruptions. Ultimately, it can show the reasons behind collaboration among supply chain market competitors, as well as consumer behaviors, to achieve a more sustainable market.

In this first experience it consists of 3 sessions:

Session 1: Introduction to supply chain basic agents and disruption management through the study of real cases. Description of the pedagogic game.

Session 2: The resilience game. Series of team decisions concerning supply chain resilience strategy. Simulation of evolution of market share based on an excel tool.

Session 3: Debriefing of the game. Analysis of the concepts behind the experience leading to understanding of environmental impact originated from the dynamics of supply chain competitors and the dynamics of consumer behavior.

The idea is to explore the possibility of evolving the experience to a 1 ECTS activity based on the game, by complementing the 3 sessions with a case develop assignment and another session of team presentations of the respective cases. Furthermore, if some means are available to develop a Web version of the game, the game could be scaled and offered as a resource that could be played online as a complementary activity of a great number of European courses.

Initially, it is intended to be offered as face to face activity in UPM (Spain) and thus it is planned to be in Spanish. In case it can be of interest for international students to travel and join the course (maybe if different face to face UPM activities are bundled), we would be willing to switch to English language.



# OBJETIVOS DE DESARROLLO SOSTENIBLE



Community	Society Transition towards Digitalization and Energy Decarbonization		
Coordinator	miguel.gutierrez@upm.es	ECTS	1
Kind of activity	Course / Seminar		
Principal SDG	SDG12 - Responsible Consumption & Production	Others SDG	
Starting date	2022-11-15	Ending date	2022-12-15
Target group	bachelor	Teaching mode	In person
Link	<a href="https://community.eelisa.eu/activities/supply-chain-resilience-game/">https://community.eelisa.eu/activities/supply-chain-resilience-game/</a>		



## ScapeRoom 2022: A vigorous escape from linear economy via international collaboration

### Description

The core of the activity is a supply chain game in which two teams of 3-4 students each, participate in a competition game to gain market share when facing supply chain disruptions. Ultimately, it shows the reasons behind collaboration among supply chain market competitors, as well as consumer behaviors, to achieve a more sustainable market.

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Community	Society Transition towards Digitalization and Energy Decarbonization		
Coordinator	miguel.gutierrez@upm.es	ECTS	1
Kind of activity	Course / Seminar		
Principal SDG	SDG12 - Responsible Consumption & Production	Others SDG	
Starting date	2023-04-17	Ending date	2023-04-21
Target group	bachelor	Teaching mode	In person
Link	<a href="https://community.eelisa.eu/activities/supply-chain-resilience-game-2/">https://community.eelisa.eu/activities/supply-chain-resilience-game-2/</a>		



## Social Challenge in Rural Areas Workshop

### Description

Critical Raw Materials (CRM) are strategically important raw materials for the economy, but are at high risk of supply shortages and, in addition, there is a lack of viable substitutes. Mining is essential for the extraction of these resources and has a key role in the technology industry. But how to incorporate the circular economy into mining?

The aim of the competition is to promote the knowledge of secondary and high school students about critical raw materials and the circular economy.

Come and show your creativity 😊!

### HOW TO PARTICIPATE AS A HIGH SCHOOL STUDENT

Students who wish to participate should send an email to [EELISA Circular Community circular.community@upm.es](mailto:EELISA_Circular_Community_circular.community@upm.es), including their Passport/ID, name and surname of each participant, and contact email. Students can participate by themselves or in groups of maximum of 3 participants. A tutor will be assigned to each participating group or student. Once the student or group of students gets in contact with the tutor, they will start working on the elaboration of the video. They will make a short video around 60 seconds (should not exceed 120 seconds) about critical raw materials in urban mining. For example, the video can focus on a specific CRM and its recycling potential through urban mining, as well as its use and applications.

When?: Before November 1st

Information for students

### HOW TO PARTICIPATE AS A TUTOR

Tutors who wish to participate should send an email to [EELISA Circular Community, circular.community@upm.es](mailto:EELISA_Circular_Community_circular.community@upm.es), including their Passport/ID, name and surname, university and bachelor/master studies in which they are enrolled. Tutors are committed to advise the assigned students and attend to a minimum of two online follow-up meetings that tutors will program with the students.

When?:&nbsp;Before June 30th

formation for tutors

### PRIZES

Winners will receive the following prizes:



1st Prize: AirPods

2nd Prize: Speaker

3rd Prize: Thermal bottle and wireless charge station

The tutor of the winning video will also win AirPods.

All participants will receive a diploma and an international credential from the EELISA European Alliance of Universities.

Community	Circular EELISA Community		
Coordinator	circular.community@upm.es	ECTS	
Kind of activity	Contest		
Principal SDG	SDG12 - Responsible Consumption & Production	Others SDG	
Starting date	2023-03-14	Ending date	2023-11-01
Target group	master   bachelor   phd   researcher   alumni	Teaching mode	Hybrid
Link	<a href="https://community.eelisa.eu/activities/circular-eelisa-short-videos-critical-raw-materials-and-urban-mining/">https://community.eelisa.eu/activities/circular-eelisa-short-videos-critical-raw-materials-and-urban-mining/</a>		





## Urban Air Quality Modelling

### Description

Based on the successful use of business simulation games in UPM Schools, it's proposed to create a virtual competition with the participation of EELISA universities. Students form teams of 3-5 members, and each team is placed in a group of 5-8 teams. The teams are then given a virtual company, initially identical to every other company in the competition. Each team then develops their company by making a series of decisions relating to every aspect of the business, such as how many machines to buy, or how much to spend on advertising. In each round, five sets of decisions are taken, corresponding to five quarters.

These decisions - made on a Decision Sheet - are run through sophisticated business simulation software, which generates in-depth Management Reports, showing the consequences of the decisions. The aim is to finish the game with the highest share-price on the virtual stock exchange.

Assessment: On the one hand, it's linked to the results obtained in the virtual market, and on the other hand, it's connected with the analysis of the business situation, the competitive dynamics and the environment.

Deliverables: Teams should deliver several reports (Decision Sheets) during the simulation. Besides they should record a 5 minute video explaining the strategy followed at the end of the activity.

Universidad Politécnica de Madrid ;Budapesti Műszaki és Gazdaságtudományi Egyetem ;École Nationale des Ponts et Chaussées ;Friedrich-Alexander-Universität Erlangen-Nürnberg ;İstanbul Teknik Üniversitesi ;Scuola Normale Superiore ;Scuola Superiore di Studi Universitari e di Perfezionamento Sant'Anna ;Universitatea Politehnica din Bucuresti ;Université Paris Sciences et Lettres ;École Nationale Supérieure de Chimie de Paris ;École Nationale Supérieure des Mines de Paris ;



# OBJETIVOS DE DESARROLLO SOSTENIBLE



Community	Society Transition towards Digitalization and Energy Decarbonization		
Coordinator	mercedes.grijalvo@upm.es	ECTS	
Kind of activity	Course / Seminar		
Principal SDG	SDG12 - Responsible Consumption & Production	Others SDG	SDG 4 - Quality Education
Starting date	2021-01-01	Ending date	2021-12-31
Target group	master   bachelor	Teaching mode	Synchronous remote
Link	<a href="https://community.eelisa.eu/activities/business-for-engineers-studying-with-simulation-games/">https://community.eelisa.eu/activities/business-for-engineers-studying-with-simulation-games/</a>		



## Summer School ESPOIR

### Description

Training workshops to increase the knowledge of students on i) processes behind GHG emissions in cropping systems, ii) measurement techniques to quantify these fluxes and iii) estimate C and N footprints of main agricultural products in Mediterranean agriculture.

Community	Sustainable Food Production (SFP)		
Coordinator	david.menoyo@upm.es	ECTS	
Kind of activity	Workshop		
Principal SDG	SDG12 - Responsible Consumption & Production	Others SDG	SDG13 - Climate Action   SDG15 - Life on Land   SDG 2 - Zero Hunger
Starting date	2022-06-22	Ending date	2022-06-22
Target group	all	Teaching mode	In person
Link	<a href="https://community.eelisa.eu/activities/towards-nitrogen-neutrality-in-agricultural-systems-a-way-for-sustainable-food-production/">https://community.eelisa.eu/activities/towards-nitrogen-neutrality-in-agricultural-systems-a-way-for-sustainable-food-production/</a>		



## Measurement platforms suited for environmental contaminants

### Description

The Sustainable Food Production Community organizes this seminar with Professor Urs Schmidhalter from the Technical University of Munich, in the context of the XXI international Nitrogen Workshop. The seminar will revise how sensors (from terrestrial systems to satellite-based) can help to optimize N fertilization by detecting crop N status and allow reducing N surpluses. But research to date has focused too much on capturing N status exclusively, so efforts should focus on approaches towards development of algorithms that can be used to provide N recommendations integrated into agricultural management.

Community	Sustainable Food Production (SFP)		
Coordinator	miguel.quemada@upm.es	ECTS	
Kind of activity	Course / Seminar		
Principal SDG	SDG12 - Responsible Consumption & Production	Others SDG	SDG13 - Climate Action SDG15 - Life on Land SDG 2 - Zero Hunger
Starting date	2022-10-27	Ending date	2022-10-27
Target group	all	Teaching mode	In person
Link	<a href="https://community.eelisa.eu/activities/optimizing-the-nitrogen-management-on-the-farm-level-by-using-proximal-and-remote-sensing-%ef%bf%bc/">https://community.eelisa.eu/activities/optimizing-the-nitrogen-management-on-the-farm-level-by-using-proximal-and-remote-sensing-%ef%bf%bc/</a>		



## Introduction to Business Design & Value Proposition Creation @FAU

### Description

Training workshop to increase the knowledge of students on i) processes behind GHG emissions in cropping systems, ii) measurement techniques to quantify these fluxes and iii) estimate C and N footprints of main agricultural products in Mediterranean agriculture.

Community	Sustainable Food Production (SFP)		
Coordinator	a.sanz@upm.es	ECTS	
Kind of activity	Workshop		
Principal SDG	SDG12 Responsible Consumption & Production	- Others SDG	SDG13 - Climate Action   SDG15 - Life on Land   SDG 2 - Zero Hunger
Starting date	2022-11-17	Ending date	2022-11-17
Target group	all	Teaching mode	In person
Link	<a href="https://community.eelisa.eu/activities/towards-nitrogen-neutrality-in-agricultural-systems-a-way-for-sustainable-food-production-2/">https://community.eelisa.eu/activities/towards-nitrogen-neutrality-in-agricultural-systems-a-way-for-sustainable-food-production-2/</a>		



## Extreme Events Gamified Preparedness

### Description

#### Project-Based service learning

Students will participate in different PsL activities on food waste reduction to raise awareness about responsible food consumption by creating online workshops. Combines community service with academic instruction as it focuses on critical, reflective thinking and civic responsibility. Service-learning programs involve students in organized community service that addresses local needs, while developing their academic skills, sense of civic responsibility and commitment to the community.

#### Team-based learning

Students and professors will make a collective effort to participate in the AEIPRO National and International Project Management Championship to promote interest in project management by facilitating dialogue and the exchange of knowledge among young people from different countries.

#### Inquiry-Based Learning

Sharing experiences from the elaboration TFM. A community will be created with the participants and extended through social networks to transfer knowledge about SDGs 2, 12, and 17.

#### Global eCollaboration Competition GeCCo

GeCCo is a international event for young project managers and students interested in project management that focuses on online collaboration organized by AEIPRO and IPMA Young Crew. Within 24 hours teams of 4-6 young professionals work in virtual teams, solve a case study and listen to keynote speakers. Students will be invited to participate in this competition as a complementary activity to develop and evaluate their skills

#### Assessment

Presentation and exhibition of proposals, studies, and contributions AEIPRO IPMA Spain Award for best TFM



# OBJETIVOS DE DESARROLLO SOSTENIBLE



Community	Egalitarian Societies: Opportunities for Everyone (ES: O4E)		
Coordinator	Ignacio.delosrios@upm.es	ECTS	
Kind of activity	Course / Seminar		
Principal SDG	SDG12 - Responsible Consumption & Production	Others SDG	SDG17 - Partnerships for the Goals SDG 2 - Zero Hunger
Starting date	2021-01-01	Ending date	2021-12-31
Target group	master	Teaching mode	In person
Link	<a href="https://community.eelisa.eu/?post_type=eelisa_activity&amp;p=1203">https://community.eelisa.eu/?post_type=eelisa_activity&amp;p=1203</a>		



## Co-fabulating the waste terrain- a nebulous guide

### Description

This project commits to empower new generations of professionals working in a circular transition with a socio-civic compromise. To that end, we establish the Circular & SOC Learning (CIRC.LE) Hub; a meeting point for students, professors, transdisciplinary experts, society at large, and decision-makers, working together with a circular and sociocivic compromise. In the Circular & SOC Learning Hub, students reflect on challenges by evaluating social and civic implications and become co-creators and active part of the challenge. This humanizing approach is here considered as the perfect complement to the technical skills for a true application of circularity principles. The CIRC.LE Hub creates a multi-stakeholder, participatory, democratic mutual learning and knowledge transfer platform and puts on the table complex dilemmas and "out of the box" ideas for students' social and civic development and promoting local action and global thinking. This contributes to boosting the concept of the European Engineer. The pilot Circular & SOC Learning Hub will be promoted by the participating Universities and Associated Partners and then grow beyond this partnership.

Create a meeting point for students, researchers, professors and all stakeholders working on a circular transition with a socio-civic engagement. Launch socio-civic learning experiences (SOCs) with a global and local perspective, to be addressed by transnational groups of students guided by multidisciplinary experts. Collect and create quality open educational resources on circular and socio-civic aspects and promote training and reflection. Offer best practices for evaluating students' circular and socio-civic experiences.

Community	Circular EELISA Community		
Coordinator	justo.gnavarro@upm.es	ECTS	
Kind of activity	Challenge		
Principal SDG	SDG12 - Responsible Consumption & Production	Others SDG	SDG17 - Partnerships for the Goals SDG 4 - Quality Education
Starting date	2022-02-28	Ending date	2025-02-27
Target group	master bachelor all	Teaching mode	Synchronous remote
Link	<a href="https://community.eelisa.eu/activities/circular-socio-civic-learning-hub-cir-cle/">https://community.eelisa.eu/activities/circular-socio-civic-learning-hub-cir-cle/</a>		