



Supported by



Funded by the
European Union



HEI4S3-RM

Building Ecosystem Integration
Labs at HEI to foster
Smart Specialization
and Innovation
on Sustainable
Raw Materials

T.5.1.12	Communication to the Society and Awareness of the circular economy approach in the raw material sector
Date	Module I: 21.11.2022 - 18:00 -20:00 Module II: 22.11.2022 - 17:00 -19:00 Module III: 15.12.2022 - 17:00 -19:00
Hours	9 hours
Number of participants	No limit
Trainer/*Prof.	Module I: José Miguel Quintana, Atlantic Copper Module II: Irene Ruiz Oria, Atlantic Copper Module III: María Dolores Basallote Sánchez, Postdoctoral Fellow Juan de la Cierva Incorporación, University of Huelva
Level	4 according to the European Qualifications Framework (EQF)
Lecture hours	6 hours
Student Autonomous Work Hours	3 hours
Credits/Points	9 Points (<i>credits will not be possible</i>)
Aim	To learn about cutting-edge circular economy and sustainability innovation projects and the impact of the mining in the biodiversity
Target Public	Academic, Non-academic and Students
Progression	Certificate
Learning Outcomes	The aim of this course is, on the one hand, to introduce and give a description of the CirCular project to be carried out at AC in the next two years. CirCular is a clear example of CirCular Economy. It is aligned with sustainability and green employ generation, based on Green Deal fundamentals, and matches the Next Generation principles. It places AC on the front-line of European metal recycling technology and put together energy efficiency, environmental respect and technological robustness. In order to achieve its challenging goals, AC has counted on metallurgical world class companies. Other examples of Sustainability Innovation Projects based on circular economy carried out in the copper smelter will be explained. Finally, the project business case completes its interest due to promising results. On the other hand, the course will be focused on showing the impact of the mining in the biodiversity. A wide range (and amount) of minerals and metals are required to maintain the standard of living of 8 billion people. The actual projection of society demands is being further amplified by the accelerated world need for the transitions to clean energy, which is supplied by raw material to power it, support it and build it. However, mining is among the most relevant human activities affecting habitat loss and degradation, which is ranked first threat to biodiversity. Thus, the society future lies in finding consensus strategies between the conservation of nature, industry and cross-sectoral decision makers. There are a number of tools, approaches and policy



Supported by



Funded by the
European Union



HEI4S3-RM

Building Ecosystem Integration
Labs at HEI to foster
Smart Specialization
and Innovation
on Sustainable
Raw Materials

	instruments that can be used to ensure that the biodiversity impacts and dependencies of energy and mining developments are planned for result in long term benefits to biodiversity and society.
	The course, organized by HEI4S3-RM members, is focused on academic, non-academic or students which wants to introduce some circular economy and sustainability innovation projects as well as to show the impact of mining in the biodiversity and some approaches used to reduce it.
	Upon successful completion of the course, learners will know about: • Cutting-edge circular economy and sustainability innovation projects ◦ CirCular Project in Atlantic Copper: closing metals value chain (Module I) ◦ Sustainability Innovation Projects based on circular economy in a copper smelter (Module II) • Impact of mining in the biodiversity (Module III) ◦ Raw material projection ◦ Convention on biological Diversity and the sustainable Development Goals ◦ Opportunities toward sustainable raw material industry
Methodology and activities	Theoretical presentations, practical application activities and advice by the speakers.
Evaluation and/or accreditation system	- Attendance 80% online sessions. - Answer a questionnaire
Guidelines (Free download)	Provided by the lecturer during the course
Assessment	Questionnaire with closed questions related to the course topics (both modules) implemented via Google Forms
Qualification	Certificate of assistance "Communication to the Society and Awareness of the circular economy approach in the raw material sector" Workshop (9 hours)