

BLEND ED INTENSIVE PROGRAM (BIP)

Sustainability and Social Innovation on the Move

CULATRA ISLAND, ALGARVE, PORTUGAL

Virtual component: 3rd and 5th of June 2025

Physical component: 7th to 11th of July 2025

Total hours: 40h (virtual: 5h; physical: 35h)



Co-funded by
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Gdański**



As part of the SEA-EU Blended Intensive Programme (BIP), a group of **15 students** from the Universities of **Split** (Croatia), **Kiel** (Germany), **Gdańsk** (Poland), **Naples Parthenope** (Italy), and **Malta** came together in Portugal between July 7th and 11th.

Funded by the Erasmus+ Programme, hosted by the **University of Algarve** and co-organized with **Naples Parthenope** and **Gdańsk**, the event was entitled "**Sustainability and Social Innovation on the Move**" and brought participants together to critically engage with the theme of sustainability in a global context.

Throughout the course, students examined how sustainability intersects with today's most pressing challenges—such as climate change, natural resource depletion, and the erosion of biodiversity. Emphasis was placed on understanding the complex interdependence between environmental, social, and economic systems. Through interactive discussions and real-world case studies, participants explored sustainable practices in key sectors like renewable energy, water management, seafood production, and tourism. The programme also encouraged reflection on how individuals, organisations, and communities can contribute to building a more sustainable future.



In addition, the programme focused on environmental, sustainable, and community-oriented strategies aligned with the **United Nations 2030 Agenda and its Sustainable Development Goals (SDGs)**. This created a valuable opportunity for participants to deepen their understanding of key sustainability principles while exploring practical examples that inspire meaningful contributions toward a more sustainable and inclusive future.



The program was structured into two main phases:

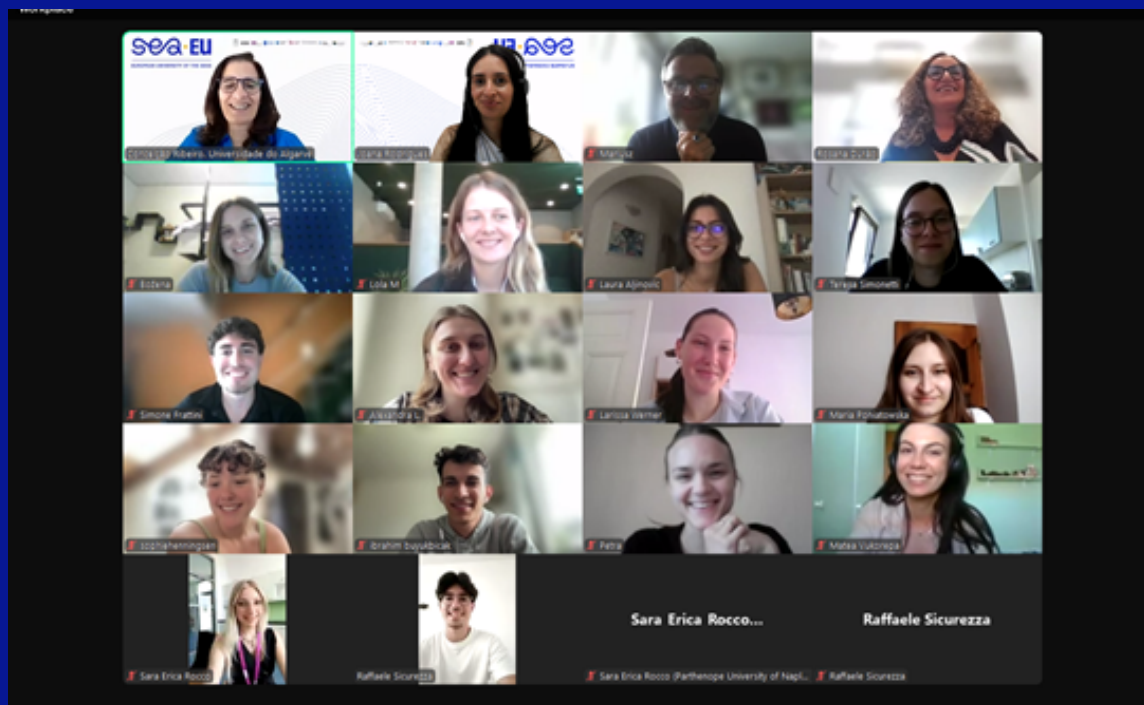
- (I) Virtual component

Day 1: June 3rd

The programme kicked off with a workshop entitled “**The Starting Point of Innovation and Future**”, bringing together participants from the University of Algarve (UALg), the University of Gdańsk (UG), and Naples Parthenope University (UPN). The session opened with a welcome presentation, including an introductory video about UALg by BIP coordinator Conceição Ribeiro, followed by institutional videos from UG and UPN.

Each university took the opportunity to showcase its academic and scientific profile, highlighting areas of excellence such as degree programme diversity, mobility pathways, research initiatives, and student support systems.

This initial exchange provided participants with valuable insights into the academic landscapes and cultural identities of the partner institutions, while fostering the collaborative spirit that lies at the heart of the SEA-EU Alliance.

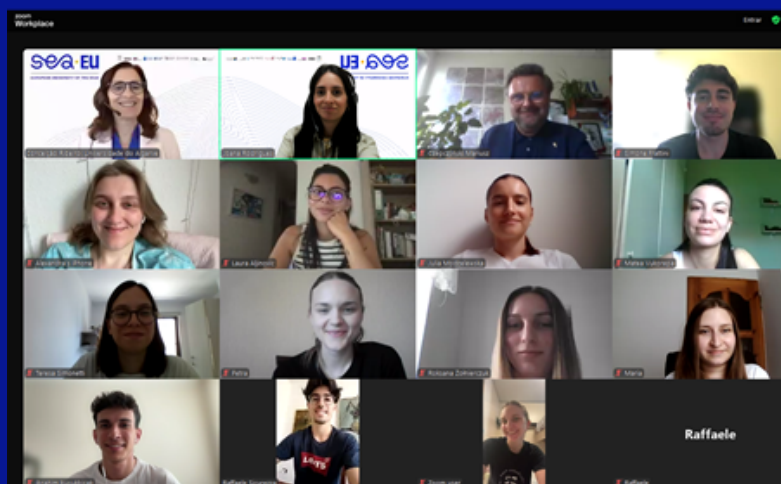


Day 2: June 5th

The second virtual session was centred around the workshop “**Research Exchange**”, which served as a platform for sharing innovative research initiatives in the field of sustainability.

Jânio Monteiro (UAlg) opened the session with a presentation on sustainability-focused research at the University of Algarve, highlighting the **H2Talent project**. This initiative addresses the urgent need for sustainable energy solutions by promoting the development and application of hydrogen technologies. Its goal is to contribute to the decarbonisation of key sectors— such as industry and transport— through the implementation of green hydrogen. Subsequently, **Vincenzo Biancofrom (UPN)** delivered a virtual presentation spotlighting projects such as **RES4CITY**, **SHERLOCK**, and **Low2HighDH**, all of which focus on advancing energy sustainability. **Mariusz Czepczynski (UG)** shared insights into ongoing research efforts both at the university and in the city of Gdańsk in the area of sustainability.

In parallel, participants were also involved in an asynchronous workshop titled “**Diving into the Portuguese Language**”, led by **Rosana Durão and Filipa Perdigão (UAlg)**. This language module included a series of activities designed to be completed before the in-person mobility, providing students with basic linguistic and cultural tools to enhance their experience in Portugal.



- (II) Physical component

Day 1: July 7th

The first day of the on-site programme took place on Culatra Island, offering students a unique setting to explore sustainability within the context of coastal and insular communities. The sessions combined theoretical frameworks with practical examples, encouraging participants to engage critically with the environmental, social, and economic dimensions of sustainability.

The day began with a welcome from **Alexandra Teodósio**, SEA-EU/UAlg Vice-Rector for Internationalisation, who presented the university's strategic alignment with the Sustainable Development Goals (SDGs) and its active contribution to a more sustainable future. This was followed by a warm address from **Patrícia Pinto**, SEA-EU Pro-Rector at UAlg, who welcomed the participants and praised their adventurous spirit, intellectual curiosity, and commitment to the BIP. Next, **Vânia Sousa**, researcher at the Centre for Environmental and Sustainability Research (CENSE) at UAlg, introduced the **Culatra 2030** Initiative—a flagship project aimed at transforming Culatra Island into a sustainable energy community.

The welcome session was further enriched by the presence of distinguished international guests. Representing the **University of Ruhuna** in Sri Lanka – an external partner of SEA-EU and a key institution from a Small Island Developing State – were Suneetha Gunawickrama (Cadre Chair and Senior Professor) and Shyama Ranabahu (Senior Lecturer in Geography), whose participation brought a valuable global perspective to the day's discussions.. In addition, a delegation from the **University of Gdańsk** also joined the session. The university was represented by **Anna Jurkowska-Zeidler** (Vice-Rector for International Cooperation), and **Ewa Szymczak** (Vice-Rector for Education).





The first academic session of the BIP was led by **Carla Nogueira** (UAlg), who explored the topic **"Sustainable Futures for Coastal Communities"**, using Culatra 2030 as a real-life example of community-driven sustainability initiatives.

This was followed by an in-depth session coordinated by **Cláudia Sequeira, Manuela Moreira da Silva, and Vânia Sousa**, also from the University of Algarve, focusing on **water circularity and solar desalination**—key topics in the context of island resilience and sustainable resource management.



Following this session, **Armando Di Meglio** (UPN) delivered a talk on the environmental footprint of cruise tourism, with particular emphasis on the challenges posed by cruise ships in port areas. He introduced the concept of **cold-ironing systems**—a sustainable alternative that allows docked vessels to shut down their engines and connect to onshore electrical power, significantly reducing emissions and noise pollution.



Day 2: July 8th

The second day combined theory and practice around key themes such as **energy sustainability and green urban transitions**.

The morning began with **Armando Di Meglio** (UPN), who continued the session on **sustainable energy in tourism**, focusing on the economic and environmental impact of cold-ironing systems for cruise ships.

This was followed by a session led by **Jânio Monteiro and Joni Santos** (UALg) on **smart grids and energy monitoring**. After an introductory discussion on the challenges of distributed energy, participants visited Culatra Island's energy generation units, where they observed practical applications of smart grid technology in a real-world setting.



In the afternoon, **Mariusz Czepczyński** from the University of Gdańsk led a thought-provoking session titled “**Urban Green Transition in the European Union: Mobility, Pollution and the Fourth Nature**”. His lecture explored how climate change and environmental pressures are shaping urban policy across Europe.

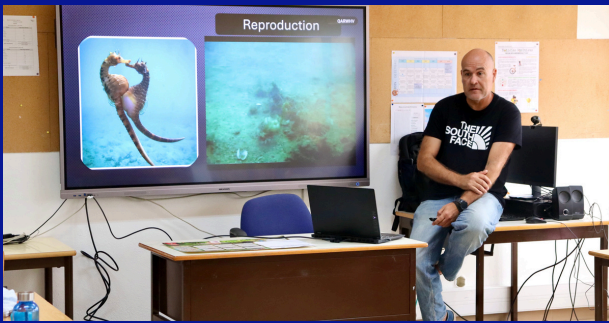
He introduced key strategic frameworks—such as the European Green Deal, the New European Bauhaus, and the Urban Agenda for the EU—which seek to guide the transformation of cities into more sustainable, inclusive, and livable spaces.

The session continued with an in-depth discussion on the concept of urban green transition, inviting participants to analyse different urban environments and reflect on how these transitions are being implemented across diverse European contexts.



Day 3: July 9th

The following day began with a session led by **Jorge Palma** from UAlg, dedicated to the topic of **Marine Protected Areas (MPAs)**. The session featured a short lecture focused on seahorse populations in the Ria Formosa lagoon, highlighting the ecological importance of the species and the conservation strategies in place to safeguard their habitat. Building on this introduction, participants embarked on a guided boat tour, allowing them to directly observe the lagoon's diverse ecosystems. This hands-on experience deepened their understanding of MPAs, offering valuable insight into the complex relationship between marine biodiversity and conservation efforts.



Later in the morning, **António Silva** from UAlg conducted a session on **underwater acoustic propagation**, introducing participants to the principles of sound transmission in marine environments. Before lunch, the group took part in a hands-on activity using an aquasom acoustic transmitter and an SR1 receiver/recorder, both set up on the breech dock. Participants had the opportunity to dive and experience underwater sound, listening to music transmitted below the surface while also becoming aware of the impact of noise pollution generated by nearby motorboats.



The session resumed in the afternoon with a classroom-based lecture on **underwater acoustic propagation**. Participants explored the field of bioacoustics, learning how marine animals use sound to communicate, navigate, and interact with their environment. The lecture also covered the acoustic technologies demonstrated earlier that day, providing context for their scientific applications. To conclude the session, recordings captured during the morning's dive were played back and analyzed, allowing participants to interpret real underwater acoustic data and reflect on their experience from a scientific perspective.



In the final session of the day, participants returned to the topic of smart energy systems with Part II of **“Monitoring and Control of Consumptions in a Smart Grids Context”**, led by **Jânio Monteiro**.

Accompanied by **Jailson Carvalho**, a PhD student, and an international student from Nigeria, the session introduced the **Shelly Plug S**, a smart plug equipped with Wi-Fi connectivity that allows users to monitor and control electrical consumption remotely. Participants were shown how this device measures energy use, providing valuable data for optimising energy efficiency in residential or institutional settings.



Day 4: July 10th

Day 4 began with a session on “**Sustainable Tourism**”, led by **Fernando Perna** (UAlg), which invited participants to reflect critically on the role of sustainability in tourism development. The session encouraged analytical thinking and challenged conventional assumptions within the tourism sector.

The second part of the session took place aboard a boat, offering participants an immersive, real-world exploration of sustainable nautical tourism. This practical component provided a valuable opportunity to observe and reflect on eco-friendly practices implemented in the region’s maritime tourism activities. By directly linking theory with practice, the session reinforced earlier discussions and showcased how sustainability principles can be effectively applied in everyday tourism operations.



In the afternoon, the focus turned to “**Community Development and Empowerment**”, a session led by **António Fragoso, Cátia Martins, and Sandra Valadas** (UALg). The session introduced participants to the core principles and approaches that underpin effective community development, highlighting its relevance in fostering inclusive and resilient societies.

The discussion explored the interconnected roles of different actors in this process, including governmental bodies, non-governmental organisations, community associations, local leaders, and individual citizens. Emphasis was placed on the importance of collaborative action, social cohesion, and capacity-building as essential drivers for sustainable community transformation.



The final session of the day continued the exploration of community development and empowerment, building upon the theoretical foundations laid earlier in the afternoon. This segment adopted a more interactive and applied approach, incorporating case studies, collaborative discussions, and practical group activities. Participants worked in teams to analyse real-life scenarios and develop concrete strategies for promoting inclusive, community-led development. Through these exercises, they were encouraged to translate theoretical concepts into actionable solutions, reinforcing their understanding of how empowerment and participation can drive meaningful and sustainable change at the local level.

Day 5: July 11th

The final day began with a session on “**Sustainable Food Production**”, with a particular focus on oyster farming. Led by **Nuno Leonardo and Jaime Aníbal**, the session included a guided visit to local oyster production sites, offering participants a close-up view of the techniques and processes involved. Throughout the tour, students learned about both traditional practices and modern innovations in shellfish aquaculture. The session also featured a discussion on sustainable production methods, highlighting approaches that balance environmental stewardship with economic viability, and underscoring the importance of responsible aquaculture in coastal communities.



After the coffee break, the focus shifted to **solar cooking**, in a session led by **Nelson Sousa** (UALg). The session began with an overview of solar energy, outlining its key components and the principles behind its capture and use. Participants were introduced to different solar concentration technologies, essential for efficiently harnessing solar power for cooking and other practical applications. The session concluded with a hands-on workshop, where participants had the opportunity to explore solar oven construction techniques, gaining practical insight into sustainable and low-impact food preparation methods.



In the afternoon, the programme turned to “**Sea Sustainable Design**”, focusing on creative approaches to sustainability within the marine environment. Led by **Maria Caeiro and Daniela Garcia** (UAlg), the session began with an introduction to a design technique that incorporates environmental awareness through artistic expression. Participants were then invited to explore this method by developing their own individual artworks, using the technique as a medium to reflect on ecological themes. The activity encouraged students to think critically about the relationship between art, sustainability, and social engagement. The resulting pieces served as powerful visual statements, combining creative exploration with environmental consciousness.



The closing ceremony was marked by a warm and celebratory atmosphere, during which **Patrícia Pinto**, Pro-Rector of SEA-EU at the University of Algarve, **presented certificates of participation to all students, recognising their commitment and active involvement throughout the programme.** In her address, she expressed sincere appreciation for the enthusiasm, collaboration, and creativity demonstrated by the participants during the BIP. She encouraged them to nurture the connections built during the week and to carry forward the spirit of cooperation fostered through this shared experience. **Professor Pinto also emphasised the importance of ongoing collaboration and international networking as key drivers of sustainable development.** She concluded by inviting participants to apply their new knowledge, perspectives, and motivation in their future academic, professional, and community-based initiatives.





The last moment of the programme concluded with a farewell gathering at sunset, providing a relaxed and joyful moment to celebrate the week's achievements. Participants came together to share memories, laughter, and final reflections, strengthening the bonds formed throughout the programme.



Students concluded the programme with a **deeper understanding of key sustainability principles, with particular emphasis on their application in coastal communities.** They explored the potential of the blue economy at a local scale, while gaining valuable insight into community development and empowerment strategies.

Throughout the week, the programme fostered reflection on the importance of building social capital, strengthening community cohesion, and advancing environmental sustainability.

This intensive and hands-on experience offered a unique learning environment, equipping participants with both the theoretical grounding and practical tools needed to engage with real-world sustainability challenges. **Ultimately, the programme empowered students to become active contributors to a more resilient and sustainable future, both within their communities and across international contexts.**



Finally, on behalf of the University of Algarve, we extend our sincere thanks and heartfelt appreciation to all the students, professors, researchers, and collaborators who played an essential role in the organisation and success of this BIP. Your active involvement, expertise, and enthusiasm enriched the programme, bringing practical insights and real-world relevance to each session.

We would like to express our special thanks to the following individuals and institutions for their invaluable support and collaboration:

- Erasmus+ Programme;
- Fernando Rafael and Clara Lopes – Alberto Iria School (Olhão);
- Paula Coelho - Gertal (Dinners in Olhão);
- Mónica Santos - MarTáxi;
- Alexandre Pereira - MarUAlg;
- Guerreiro & Guadiana - Ferryboat service;
- Sílvia Padinha and Luís Dionísio – Resident Association of Culatra Island;
- Tânia Carmo – Pronto para Levar (Meals in Culatra);
- Catarina Perruca and Ermelinda Padinha – Primary School of Culatra Island;
- Nuno Leonardo - NMVL (Oyster production);
- Social Services of the University of Algarve;
- Technical Services of the University of Algarve;
- IT Services of the University of Algarve;
- Ludovico Silva (Communication Office of UAlg);
- UAlg International Relations Office;
- Professors from UAlg, UPN, and UG, with a special thanks to Conceição Ribeiro and Rosana Durão for their exceptional coordination and supervision of the BIP;
- Matheus Mendes and Thibaut Boulier (Volunteers);
- And, above all, all the students who participated with dedication, curiosity, and enthusiasm.

Your contributions helped make this experience not only academically meaningful, but also deeply rooted in community engagement and local connection.

