

# **BLENDED INTENSIVE PROGRAM (BIP):**

## **Sustainability and Social Innovation on the Move**

Venue: Culatra Island | Algarve | Portugal

Virtual component: 14th and 17th of May 2024

Physical component: 17th to 21st of June 2024

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



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Under the SEA-EU Blended Intensive Program (BIP), **19 students** from the Universities of Split (Croatia), Kiel (Germany), Gdańsk (Poland), and Naples Parthenope (Italy) gathered in Portugal **from June 17th to 21st**. Hosted and organized by the **University of Algarve** in collaboration with the **Universities of Gdańsk and Naples Parthenope**, students participated in the BIP titled "Sustainability and Social Innovation on the Move".

This course was intended to explore the concept of sustainability and its significance in addressing global challenges such as climate change, resource depletion, and biodiversity loss. The interconnectedness of environmental, social, and economic systems and their impact on sustainability efforts were examined. Through case studies and discussions, participants learned about sustainable practices in various sectors, including energy, water cycle, seafood production, and tourism. Additionally, strategies to promote sustainability at individual, organizational, and community levels were explored.



Furthermore, it addressed environmental, sustainable, and social/community strategies, synchronized with the **Sustainable Development Goals of the 2030 Agenda**. Therefore, it was an opportunity for the participants to gain a comprehensive understanding of sustainability principles and to gain insights from practical cases to contribute to a more sustainable future.



The program was structured into two main phases:

## 1. Initial Online Workshops

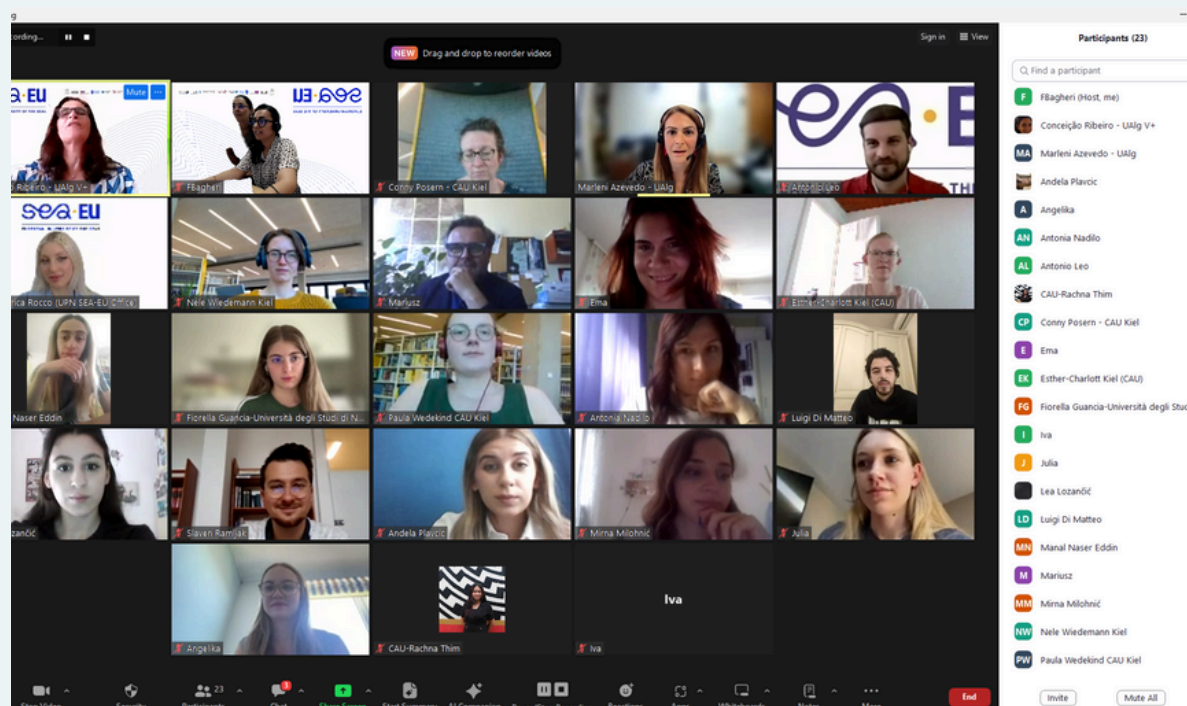
- **Day 1: May 14th**

On the first day of the program, a workshop titled "The Starting Point of Innovation and Future" was conducted. This workshop involved participants from the University of Algarve (UAAlg), the University of Gdansk (UG), and the Parthenope University of Naples (UPN).

The session began with a welcome presentation, featuring a video about UAAlg by Conceição Ribeiro. This was followed by a video from UG, and another video from UPN.

In the subsequent workshop titled "Diving into the Portuguese Language," participants engaged in six asynchronous sessions led by Rosana Durão and Filipa Perdigão.

The workshop included various activities, such as videos and quizzes, which the students were required to complete before their mobility period.

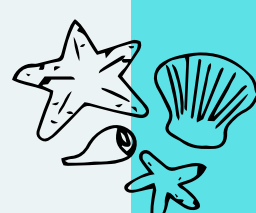
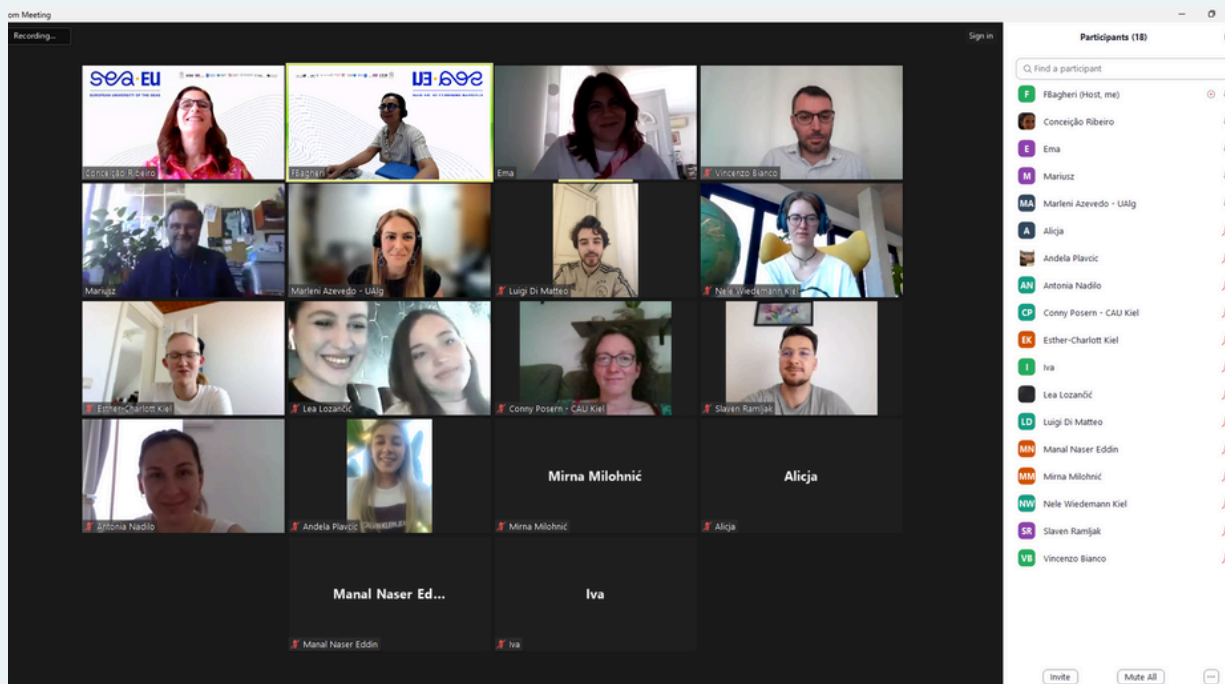


- **Day 2: May 17th**

The second day of the program featured a workshop called Research Exchange.

UAlg presented a video module on research related to general sustainability developed at the university. Following this, UG and UPN each presented their own video modules on similar topics.

Vincenzo Bianco from UPN delivered an online presentation on research related to energy sustainability, focusing on the RES4CITY, SHERLOCK, and Low2HighDH EU projects. His presentation summarized three ongoing EU projects concerning the integration of renewables in cities, energy efficiency in buildings, and the integration of renewables in district heating networks.



## 2. Physical Workshops

- **Day 1: June 17th**

The first day of the physical participation was held on **Culatra Island** and featured a series of engaging sessions focused on sustainability, particularly within the context of coastal communities. The sessions were designed to provide both theoretical knowledge and practical insights, fostering a comprehensive understanding of sustainability challenges and solutions.

Pro-Rector of SEA-EU, Patrícia Pinto initiated the day with a brief welcome session, setting the stage for the day's activities and discussions.

Then, on behalf of the Resident Association of Culatra Island, Sílvia Padinha presented "**Challenges to the Future of Culatra,**" highlighting the key issues and aspirations of the island's residents. This session provided a community perspective on sustainability and local challenges.

André Pacheco from Centre for Marine and Environmental Research of UAlg introduced the Culatra 2030 Initiative, focusing on **the development of a sustainable energy community on the island**. The presentation outlined the project's goals, progress, and future plans.





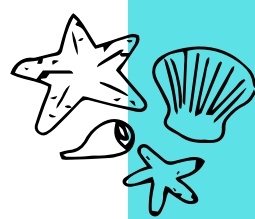
Carla Nogueira from UAlg led a session on **sustainable futures for coastal communities**, using Culatra 2030 as a case study.

Then, Cláudia Sequeira, Manuela Moreira da Silva, and Vânia Sousa from UAlg led a detailed session on **water circularity and solar desalination**. The session included:

- Part 1: Water Cycle Dynamics on Culatra Island
- Part 2: The Concept of Solar Desalination
- Part 3: Culatra Island Solar Desalination Prototype
- Part 4: Applications and Future Perspectives

After that, Armando Di Meglio from UPN addressed the **environmental impact of cruise ships and the benefits of using cold-ironing systems to reduce this impact**.

Participants learned about the problem of the environmental impact of cruise ships and reduced environmental impact by utilization of coldironing systems.



- **Day 2: June 18th**

The second day of the program included an extensive schedule that combined theoretical learning with practical insights into **energy sustainability and urban green transitions**.

The day began with the continuation of the session on **energy sustainability in the tourism sector**, led by Armando Di Meglio from UPN. This session focused on the cost analysis and potential impacts on the power market related to cold-ironing systems for cruise ships.

Jânio Monteiro and Joni Santos from UAlg facilitated a session on **monitoring and control within smart grids**. The session began with an in-class discussion on the challenges of distributed generation in distribution grids and the motivation for utilizing smart energy grids. This was followed by **a visit to the generation units on Culatra Island**, where participants observed practical implementations of the concepts discussed.

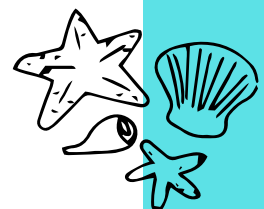






In the afternoon, Mariusz Czepczyński from UG delivered a lecture on **the urban green transition within the European Union**. The session covered how climate change and environmental degradation drive European urban policies and the strategies like the European Green Deal, New European Bauhaus, and Urban Agenda for the EU, which aim to transform cities into sustainable, resource-efficient, and healthy environments.

The session continued with a deeper exploration of the urban green transition. Participants engaged in discussions and analyses of various urban milieus and how the transition is progressing in different contexts.



- **Day 3: June 19th**

Next day began with a session led by Jorge Palma from UAlg, focusing on **Marine Protected Areas**. The session included a **guided tour** with a short lecture on seahorse populations in the Ria Formosa lagoon and the conservation measures in place for their protection.

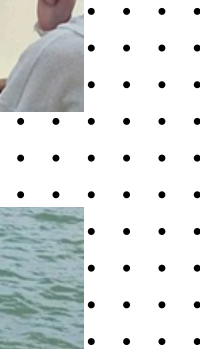
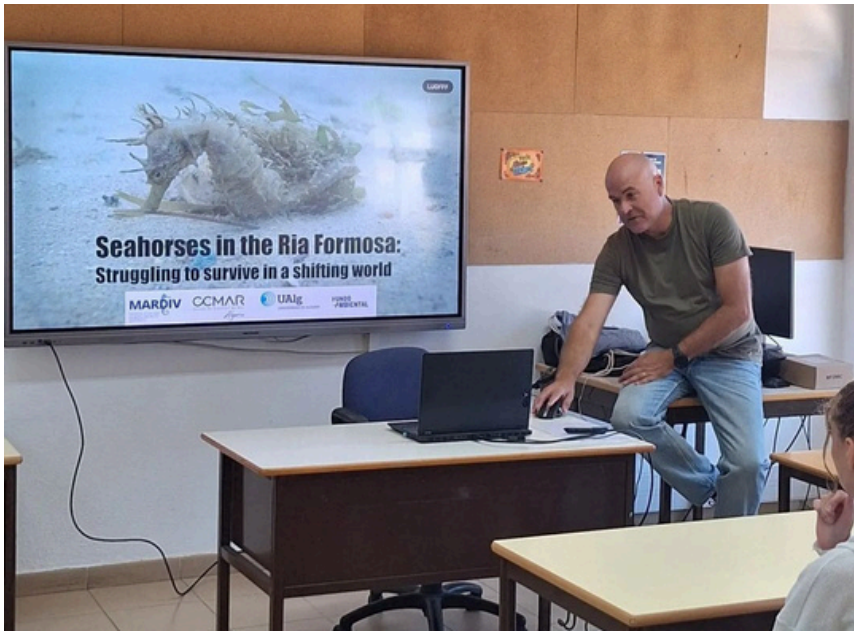
Participants continued exploring Marine Protected Areas via a boat tour, further observing the habitats and learning about the ecosystems firsthand.



António Silva from UAlg led a session on **underwater acoustic propagation**. Before lunch, participants engaged in activities involving an Aquasom acoustic transmitter and an SR1 acoustic receiver/recorder placed on the breech dock. They dived to experience underwater music and the noise pollution caused by motorboats.



The session continued after lunch in the classroom, where participants attended a lecture on **underwater acoustic propagation**. They learned about bioacoustics, the use of acoustics by marine animals, and the acoustic technologies employed earlier in the day. Sounds recorded in the morning were played back and analyzed.



- **Day 4: June 20th**

The fourth day started with a session focused on **sustainable tourism**, led by Fernando Perna and Maria João Custódio. The session explored whether sustainability should be regarded as an ultimate goal or an initial condition for tourism development.

The second part of the sustainable tourism session took place on a boat, providing participants with practical, hands-on experience. This on-site session allowed attendees to observe and discuss sustainable nautical tourism practices in a real-world setting. The experience reinforced the theoretical concepts discussed earlier and highlighted the practical applications of sustainability principles in nautical tourism.

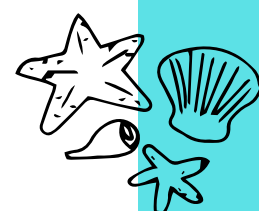


The afternoon session shifted focus to **community development and empowerment**.

António Fragoso, Cátia Martins, and Sandra Valadas introduced the fundamental principles of community development and empowerment. They discussed the roles and importance of various actors in the community development process, including governmental and non-governmental organizations, community groups, local leaders, and individuals.



The final session continued the discussion on community development and empowerment. Building on the morning's theoretical foundations, this session involved deeper discussions, case studies, and interactive activities designed to reinforce the concepts covered earlier. Participants engaged in group work and practical exercises to develop actionable strategies for real-world application in community development and empowerment.



- **Day 5: June 21th**

The final day began with a session on **sustainable food production**, specifically focusing on oysters.

Nuno Leonardo and Jaime Aníbal led participants on a **guided tour of oyster production sites**. This tour provided an in-depth look at the processes involved in oyster farming, highlighting both traditional and innovative methods. The session also included a discussion on sustainable shellfish production methods, emphasizing practices that ensure environmental and economic sustainability.



Following the coffee break, Nelson Sousa introduced participants to **solar cooking**.

The session began with a characterization of solar energy, explaining its components and how it can be harnesses. Participants were then introduced to various technologies for solar concentration, which are essential for effectively capturing and utilizing solar energy. The session included a hands-on activity where participants learned techniques for constructing solar ovens.



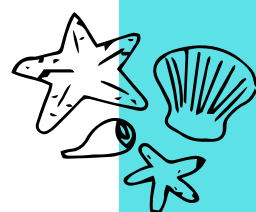
After lunch, the focus shifted to **sustainable design in the marine environment**. Maria Caeiro and Daniela Garcia led a session that began with **waste collection on the beach**. This activity served as the basis for a brainstorming session where participants developed sustainable design projects. The goal was to create temporary art installations that highlight environmental issues, using the collected waste as materials. The second part of the Sea Sustainable Design session continued the activities from the morning. Participants further developed their design projects and prepared for their exhibition.





At the closing ceremony, the Vice-Rector of SEA-EU, Alexandra Teodósio, presented certificates to all participants, acknowledging their dedication and engagement throughout the event. She expressed heartfelt gratitude for their active participation in the BIP and praised the collaborative spirit and innovative ideas shared over the sessions and encouraged everyone to maintain the connections they had formed.

She also highlighted the importance of continued collaboration and networking to drive sustainable practices forward, urging participants to apply their newfound knowledge and passion in their future endeavors.



Participants then engaged in a collaborative construction activity, creating a seahorse sculpture from sustainable materials. This activity emphasized teamwork and creativity, fostering a sense of community and shared responsibility for environmental conservation.



The last day concluded with a farewell gathering at sunset.



Students left the program with a deeper understanding of fundamental sustainability concepts, particularly within coastal communities. They acquired knowledge on the potential of the blue economy at a local scale and strategies for community development and empowerment. The program emphasized building social capital, enhancing community cohesion, and promoting environmental sustainability.

This intensive program offered a unique opportunity for the participants to gain practical experience and insights, equipping them with the skills and knowledge to contribute effectively to a more sustainable and resilient future.



Finally, on behalf of the University of Algarve, we extend our heartfelt gratitude to all the **students, professors, researchers** and **collaborators** who played an integral role in organizing this BIP. Your contributions and insights have been particularly impactful, enriching the program with practical perspectives and real-world applications.

**With special thanks to:**

- Sílvia Padinha (Resident Association of Culatra Island)
- André Pacheco (Culatra 2030 Initiative)
- Fernando Rafael and Clara Lopes (Alberto Iria School in Olhão)
- José Santos (Associação Nossa Senhora dos Navegantes)
- Catarina Perruca and Ermelinda Padinha (Primary School in Culatra Island)



