



Ecomarine is at the home stretch!

3rd Transnational Partners Meeting, 8th May 2023, Samos, Greece

The ECOMARINE consortium had the chance to meet again face-to-face during the **3rd Transnational Partners Meeting on May 8th, 2023, on the island of Samos in Greece**. The meeting was hosted by Archipelagos – Institute of Marine Conservation, held on the Archipelagos Research Base.



Twelve partner representatives from Greece, Cyprus, Spain, India, Malaysia, & Germany had the opportunity to discuss the progress of all Work Packages and Milestones and agree on their upcoming steps and deadlines. Main discussion points revolved around the **conclusion of equipment purchases**, the **finalisation of the training materials & e-courses**, the **continued operation of the 4 Marine Monitoring Labs (MMLs) in India and Malaysia**, as well as **quality assurance & dissemination activities**.

Special mention was given to the compilation of **Operation Protocols for the 4 MMLs**, the **organisation of trainings in India & Malaysia**, and the preparation of a **scientific report following the year-long operation of the MMLs**.

Practical Training Courses, 9-15 May & 8-14 October 2023, Samos, Greece

The **practical training courses** were successfully held in person between the **9th and 15th of May & 8-14 October 2023**, on **Samos, Greece, hosted by Archipelagos Institute**.

Two sessions of the practical course were held, since representatives from Kerala University were not able to attend the first one in May, which, however, representatives from all other partners attended. The courses' goal was to adapt research protocols to the needs of the different HEIs' needs, so that academics and researchers could use them directly in the Indian Ocean.



The focus of the research revolves around **microplastic pollutants**, **mapping of marine ecosystems**, **measurement of blue carbon**, as well as the **effective utilisation of the results of field research for the protection of marine ecosystems**. The experienced speakers' interactive discussions promoted the

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exchange of knowledge, expertise, and best practices among the participants.

National Trainings

Based on the ECOMARINE materials and their acquired knowledge and competencies, the trained professionals from Malaysia and India have organized and delivered a series of **basic and advanced national trainings** in the four HEIs over the past months.

Andhra University, India

The **Advanced National Training** took place from **26 to 28 June 2023** in Visakhapatnam, India with **23 trainees**. Training sessions focused on the effects of microplastics on the environment, mitigation measures, & treatment methods, whereas trainees also had the chance to get hands-on experience in analysing and interpreting various samples.



Basic National Training sessions with a total of 52 participants from various backgrounds (students, fishermen, sailors, NGO representatives, municipal workers) were also organized in October & November 2023. The sessions included both theoretical & practical aspects, spanning from the dangerous effects of plastic on terrestrial & marine environment, to collecting and analysing water sediments and plastic garbage.

University of Kerala, India

The University of Kerala in India held several national training sessions over the past months, both at an advanced and at a basic level:

- a) An Advanced National Training on **Marine Pollution & Microplastics** was held between **May 22-23, 2023**, attended by 16 researchers, scientists, and marine enthusiasts, whereas the Basic level Training was held on **May 29th to 31st**, with 88 participants. Both training attendees were provided with the opportunity to learn about marine debris and microplastic pollution and monitoring, and gain practical experience in processing samples, sorting, and characterizing microplastics, as well as conducting FTIR analysis.
- b) The Advanced National Training on **Marine Biodiversity Monitoring** was held on **May 5 & 6**, attended by 20 participants, while the Basic level training was on **July 13-14th**, with a total of 80 participants. The trainings shed light on the current knowledge gaps on marine biodiversity in India and marine taxa collection methods and biodiversity informatics, combined with practical activities.
- c) Two National Trainings were also held in autumn 2023 addressing **Blue Carbon Ecosystems & Climate Change**; the Advanced Training took place on **November 30th**, with 19 participants, while the Basic Training was held on **December 8-9th**, with 58 participants. Participants on both trainings gained insight into Blue Carbon in sediments within marine ecosystems, Biodiversity assessment using ROVs, Estimation of Blue Carbon in Mangroves, Water Pollution Monitoring, Estimation of Blue carbon in seagrass, and more!



University Malaysia Terengganu

A series of Advanced National Trainings took place over fall 2023 in UMT. The first was an introductory course on **Marine Litter & Microplastics**, conducted between **September 11 and 14**, during which the 7 trainees were introduced to laboratory procedures and analytical techniques in marine litter and microplastics characterization, as well as technical procedures for Sampling of Surface Water.

On **November 14th**, 42 trainees were presented with the results of habitat mapping using drones and other monitoring tools at the coastal zone of Selangor, Peninsular Malaysia, whereas on **November 29th**, 20 people were trained on habitat mapping, microplastics and blue carbon.



Universiti Kebangsaan Malaysia

The Advanced National Training for UKM took place on the **3rd & 4th of January 2024** and was attended by 17 trainees, comprising of UKM faculty, students, and researchers. The training covered both theoretical and practical aspects of data collection and analysis, i.e., sampling of macro plastics in sea water and sediment, measurement of productivity from the deployment of dome and Minidot and conducting acoustic survey of the seabed and logging sonar data using the Sonar unit Lowrance Elite FS and the ReefMaster software.

Monitoring visits to the MMLs

The **four Marine Monitoring Labs** that have been created in each of the four participating HEIs constitute the basis for both the long-term capacity building and ecosystem monitoring of the project. The MMLs aim to quantify the existing situation and

challenges of the marine ecosystems in the partner countries, focusing on a) **Monitoring Climate Change, Ocean Acidification and Temperature Rise, Blue Carbon, and Related Ecosystem Responses**, b) **Monitoring productive protected ecosystems (coral reefs, seagrass meadows, mangroves)**, c) **Monitoring of the Microplastic Debris in Marine Ecosystems**.

Since the MMLs have been in operation for almost a year, receiving virtual and in-person coaching and mentoring from EU partners is crucial to improving the quality of their services. The EU partners take on the role of Mentors, contributing their knowledge and assisting the HEI personnel in their work.



Monitoring visit @ Andhra University, India

Thus, in **February and March 2024**, a series of monitoring visits on the part of EU partners (**UCY, UNIOVI, Archipelagos**) were realised in the 4 MMLs in India & Malaysia. Their purpose was to allow EU partners to monitor the operation of the MMLs and offer their guidance and expertise for their sustained exploitation, even beyond the project's end.



Monitoring visit @ University of Kerala, India

These monitoring visits provided a great opportunity for the EU representatives from the University of Cyprus, the University of Oviedo, and Archipelagos Institute to examine the dedicated equipment purchased for the proper operation of the MMLs, as well as get deeper insights into the research conducted by the MMLs, the samples collected, and measurements performed.



Monitoring visit @ University Kebangsaan Malaysia

Furthermore, throughout the monitoring visits, HEIs staff informed the EU partners about their respective MMLs' marine monitoring areas and study types, as well as about the training and outreach activities they have realised in the past months. Overall, the visits helped strengthen the relationship and collaboration between the EU partners and Asian HEIs, contributing to the sustained operation of the established MMLs.



Monitoring visit @ University Malaysia Terengganu

Save the dates!

10 - 13 May 2024, UKM

Basic National Training

22 May 2024, Kerala University

Ecomarine Info Day

8 June 2024, Andhra University

Ecomarine Info Day

7-8 June 2024, UMT

Ecomarine Info Day (World Ocean Week 2024)

10 June 2024, Putrajaya, Malaysia

Final International Conference

11-12 June 2024, Putrajaya, Malaysia

Final Face-to-face Partners Meeting