ODYSSEA

Operating a network of integrated observatory systems in the Mediterranean Sea

Project Deliverable Report

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1   Executive Summary

Two training workshops/summer schools were planned around the topic of operational oceanography in the Mediterranean context.

PhD candidates or professionals at the early stages of their careers were targeted for the purpose of building an educated workforce to capitalise on increased demand and new market opportunities.

The summer schools were advertised widely via the ODYSSEA social media channels, the project website, the project consortium and their extended networks to reach potential candidates.

The main objective was to enable participants to manage the available marine environmental data to provide targeted and understandable information to the relevant end-users. Use of the ODYSSEA project platform (Marinomica) for retrieving, managing and processing oceanographic and environmental data from the Mediterranean Sea was a key part of the programmes.

The objectives were achieved through a mixture of lectures and hands-on sessions, organised and delivered by the partners and guest lecturers, with a focus on data access and standards, infrastructures, and applications.

All training material has been uploaded to the ODYSSEA website and is publicly available (Training Materials | ODYSSEA).

Feedback from both summer schools was positive and participants said that the experience inspired them to want to contribute to the ODYSSEA observatory and platform in their home country, as well as to other initiatives, or in the context of their own research projects.

2 Introduction

This report covers the activities taken by ODYSSEA partners to meet the objectives of Task 11.4.

The objective of the task was to organise two training workshops/summer schools to target early career scientists for the purpose of building an educated workforce to capitalise on increased demand and new market opportunities generated.

To achieve this objective, the first ODYSSEA summer school was held during period 1 and the second ODYSSEA summer school was held during period 2.
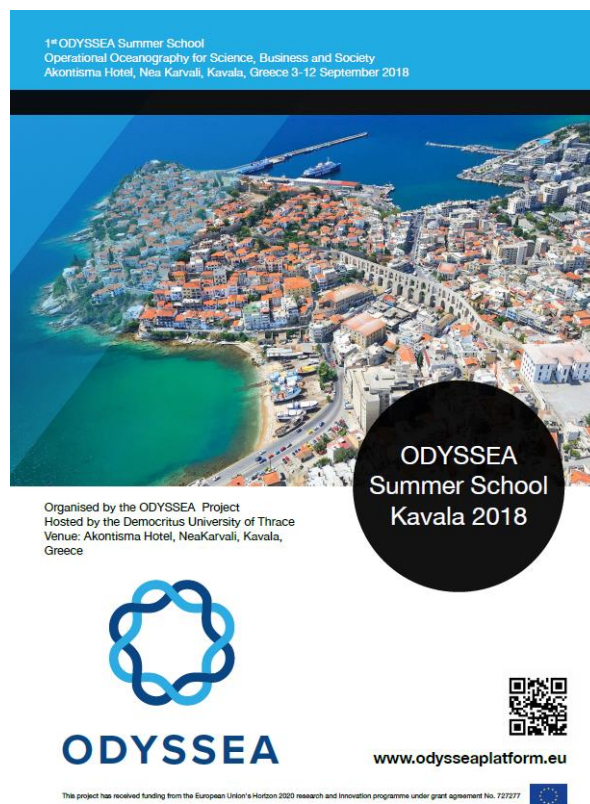
3   ODYSSEA Summer Schools

The two training workshops/summer schools organised and run to meet the objectives of Task 11.4 were:

- **1st ODYSSEA Summer School**: Operational Oceanography for Science, Business and Society, 3-12 September 2018, Akontisma Hotel, Nea Karvali, Kavala, Greece, hosted by Democritus University of Thrace.

- **2nd ODYSSEA Summer school:** Oceanography and Fisheries in the Mediterranean, 2- 6, September 2019, Amphitheater of Alonissos Town Hall, Patitiri Village, Alonissos

3.1   1st ODYSSEA Summer School

The 1st ODYSSEA Summer School introduced trainees to all stages of operational oceanography, contributing towards Blue Growth in the Mediterranean.

The programme was hosted by the Democritus University of Thrace (DUTH).

3.1.1   Objectives

The overall objective of the 1st ODYSSEA Summer School was to stimulate a scientific dialogue and create a learning experience about operational oceanography in the Mediterranean context. More precisely, after the end of the programme, the trainees were able to:

- Understand the concept of operational oceanography

- Use the Marinomica platform (at that time still ODYSSEA Platform v.0) for retrieving, managing and processing oceanographic and environmental data from the Mediterranean Sea

- Explore the Copernicus Marine Environment Monitoring Service (CMEMS) products, learn the data and parameters provided, download and process these datasets

- Retrieve and use satellite datasets and explore databases on the marine environment

- Learn about the modern developments in marine instruments and sensors used in field sampling for operational oceanographic monitoring

- Get acquainted with the use of operational forecasting mathematical models e.g., hydrodynamic, wave, water quality models, etc.

3.1.2   Target Audience

The programme was intended to train oceanographers and engineers, young researchers, PhD candidates or professionals at the early stages of their careers who were interested in learning to manage the available marine environment data to provide targeted and understandable information to the relevant end-users.

3.1.3   Registration and Selection

The 1st ODYSSEA Summer School received 56 applications from various parts of the world, mostly from Northern African and Middle Eastern countries. Selection was carried out by the programme's scientific coordinator.

28 participants from 10 countries attended the programme.

3.1.4   Course Fees and Costs to Trainees

Registration and attendance were free of charge. Students were required to cover all costs related to travel, accommodation, local transportation and other living expenses. Special rates for programme attendees were available at the hotel where the event was held.

3.1.5   Programme Structure and Content

Training content was developed as part of WP10, Task 10.1 and reported in D10.1.

The programme ran from 0900 - 1800 each day with two 30-minute breaks. The course lasted 9 days with a one day break partway through. 14 tutors presented the course materials. The detailed course programme for the 1st ODYSSEA summer school and a list of tutors including their areas of expertise can be found in the programme brochure.

The training materials for the programme are publicly available on the ODYSSEA website:

Operational Oceanography for Science Summer School | ODYSSEA

3.1.6 Student Credits

Participants successfully attending the summer school were awarded a certificate of attendance which also provided them with 6 ECTS.

3.2   2nd ODYSSEA Summer School

The 2nd ODYSSEA Summer School introduced trainees to all stages of operational oceanography and fisheries, aiming towards the Blue Growth of the Mediterranean Sea.

The summer school was co-organised in partnership with the School of Biology at the Aristotle University of Thessaloniki and the Department of Environmental Engineering at the Democritus University of Thrace (DUTH), and with the support of the Thalassa Foundation.

3.2.1   Objectives

The overall objective of the 2nd ODYSSEA Summer School was to stimulate a scientific dialogue and create a learning experience on oceanography and fisheries in the Mediterranean context. After the end of the program, the trainees were able to:

- Understand the basic concepts of oceanography and fisheries science

- Use the Marinomica platform for retrieving, managing and processing oceanographic, environmental and fisheries data of the Mediterranean Sea
- Retrieve and use oceanographic datasets and explore international databases on the marine environment
- Learn about the modern developments on marine instruments and sensors used in field sampling for operational oceanographic monitoring
- Learn to assemble fisheries data and monitor marine mammal populations
- Understand fisheries reference points and main stock assessment models and their applicability in fisheries management
- Understand ecological models and their role in marine ecosystem management

3.2.2 Target Audience

The program was intended to train oceanographers and biologists, young researchers, PhD students or professionals at the early stages of their careers who were interested in learning to manage the available marine environmental, oceanographic and fisheries data to provide targeted and understandable information to the relevant end-users.

3.2.3 Registration and Selection

For the 2nd ODYSSEA Summer School selection was carried out by the two principal programme tutors. After selection, 20 trainees from 5 countries were confirmed, with 18 attending the programme.

3.2.4 Course Fees and Costs to Trainees

Registration and attendance of lectures was free of charge. Students were required to cover all costs related to travel, accommodation, local transportation and other living expenses.

3.2.5 Programme Structure and Content

The programme ran for 5 days: the first 4 days were from 0900 - 1800 with two 30-minute breaks and the final day from 0900 - 1500 with one 30-minute break. 6 tutors presented the course materials.

The modules included in the summer school were:

- Introduction to operational oceanography
- Modern marine instrumentation and sensors
- Sampling and surveying
- Fisheries stock assessment and management
- Marine ecological modelling

A more detailed course programme for the 2nd ODYSSEA summer school and the presenting tutors can be found in the [programme brochure](#).

The training materials for the programme are publicly available on the ODYSSEA website:

[Oceanography and Fisheries in the Mediterranean | ODYSSEA](#)

3.2.6   Student Credits

Participants successfully attending the summer school were awarded a certificate of attendance which also provided them with 2 ECTS.

3.3   Student Feedback

10 participants gave feedback on the programmes. They reported that the experience widened their professional horizons, strengthened their technical skills and knowledge, and expanded their professional networks.

In their evaluations of the course, participants said that the experience inspired them to want to contribute to the ODYSSEA observatory and platform in their home country, as well as to other initiatives, or in the context of their own research projects.

The training programme was well received by all delegates with most agreeing that the summer school had clear objectives and material was well organised and presented.
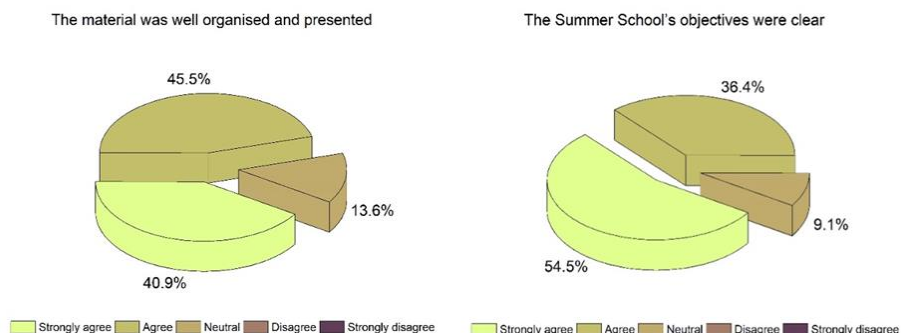

FIGURE 3.1. *SUMMER SCHOOL PARTICIPANTS AGREED THAT OBJECTIVES WERE CLEAR AND THE MATERIAL WELL ORGANISED AND PRESENTED.*

FIGURE 3.2. TRAINING OF PARTICIPANTS IN THE SUMMER SCHOOL.

4   Outreach and Communication Activities

The two summer schools were primarily communicated through the ODYSSEA website and social media.

4.1   ODYSSEA website

www.odysseaplatform.eu was used to communicate news about the summer schools and to host brochures with information about the programmes, registration procedures and selection process. Events were created and blog articles written before, during and after the events (Table 1). Content was primarily aimed at oceanographers and biologists, young researchers, PhD students or professionals at the early stages of their careers who were the target audience for the summer schools as well as other end-users and stakeholders to inform them about the project's activities.

Table 1: Type of website communications used for ODYSSEA Summer School including links.		
Type of website content	**Description**	**Link**
Event	Call for Applications, 1st ODYSSEA Summer School Operational Oceanography for Science, Business and Society, Akontisma Hotel, Nea Karvali, Kavala, Greece 3-12 September 2018	https://odysseaplatform.eu/events/operational-oceanography-for-science-business-and-society/
Event	Call for Applications, 2nd ODYSSEA Summer School, Oceanography and Fisheries in the Mediterranean, Alonissos Island, Greece 2-6 September 2019	https://odysseaplatform.eu/events/call-for-applications-2nd-odyssea-summer-school-oceanography-and-fisheries-in-the-mediterranean-alonissos-island-greece-2-6-september-2019/
Blog Post	ODYSSEA getting in gear for pioneer Summer School session.	https://odysseaplatform.eu/2018/08/09/odyssea-getting-in-gear-for-pioneer-summer-school-session/
Blog Post	ODYSSEA Summer School opens participants' horizons, bolsters professional skills and networks	https://odysseaplatform.eu/2018/12/20/odyssea-summer-school-opens-participants-

		horizons-bolsters-professional-skills-and-networks/
Blog Post	Time to sign up for 2nd ODYSSEA Summer school on Alonissos!	https://odysseaplatform.eu/2019/06/26/time-to-sign-up-for-2nd-odyssea-summer-school-on-alonissos/
Blog Post	ODYSSEA 2nd Summer School session on Alonissos a 'great success'	https://odysseaplatform.eu/2019/09/24/odyssea-2nd-summer-school-session-on-alonissos-a-great-success/ n

Training material for both summer schools has also been uploaded to the website and is publicly available: Training Materials | ODYSSEA

4.2   Social media

Facebook and Twitter, including the local sites set up for the Observatories in Greece, Egypt, Tunisia, Israel, Morocco and Spain shared posts advertising the summer schools and encouraging potential applicants. Posts were shared in Arabic, English, French, Greek and Spanish. Posts were aimed at oceanographers and biologists, young researchers, PhD students or professionals at the early stages of their careers who were the target audience for the summer schools. Follow up posts showed the activities and achievements of participants as well as linking to resources and promoting participation in future live or online events.

4.3   Extended Network

Summer schools were promoted by partners through their networks and at events where potential participants were present.

5 Summary

Two training workshops / summer schools were run to meet the objectives of Task 11.4.

The target audience of phD or early years professionals was targeted to contribute to developing an educated workforce to capitalise on increased demand and new market opportunities for Blue Growth in the Mediterranean.

By the end of the programmes participants were able to manage the available marine environment data to provide targeted and understandable information to the relevant end users. This includes use of the Marinomica platform for retrieving, managing and processing oceanographic and environmental data from the Mediterranean Sea.
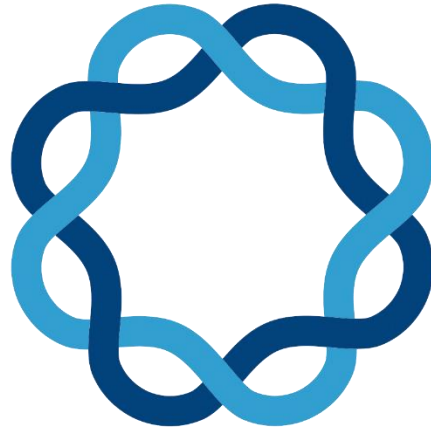
Use of the ODYSSEA social media channels, project website and partners' extended networks ensured suitable candidates applied for the programmes and both programmes met targets for registration.

The programmes included a combination of lectures and practical sessions organised and delivered by ODYSSEA partners and guest lecturers. See Table 2 below for programme brochures, which include detailed course programmes.

Feedback from summer schools was positive and participants said that the experience inspired them to want to contribute to the ODYSSEA observatory and platform in their home country.

6   Resources

Table 2: ODYSSEA Summer Schools Resources and Materials available on the project website including links		
Type of resource/material	**Description**	**Link**
Brochure	1st ODYSSEA Summer School Brochure including detailed programme and tutors	https://odysseaplatform.eu/download/ODYSSEA-001-1st-Summer-school-booklet-1.3-Digital.pdf
Brochure	2nd ODYSSEA Summer School Brochure including detailed programme and tutors	https://odysseaplatform.eu/download/2nd%20ODYSSEA%20Summer%20School/ODYSSEA_Summer_School_Program%20and%20Info.pdf
Training Materials	1st ODYSSEA Summer School materials: Operational Oceanography for Science Summer School	https://odysseaplatform.eu/project-information/training-materials/operational-oceanography-for-science-summer-school/
Training Materials	2nd ODYSSEA Summer School materials: Oceanography and Fisheries in the Mediterranean	https://odysseaplatform.eu/project-information/training-materials/ceanography-and-fisheries-in-the-mediterranean/