



ACCOBAMS MMO/PAM Course

ACCOBAMS MMO/PAM certificate Course Structure

2025 Course dates May 4- 10 inclusive (7 days) in Ponta Delgada in the Azores. A unique opportunity to experience a range of species visually and acoustically while learning how to recognise and record them.

Cost €800 with €200 deposit on acceptance to course and final amount payable by April 4.

If interested in doing the course please email Patrick.lyne@dmad.org.tr to express and interest and briefly state previous marine mammal experience.

The modules required to be covered by ACCOBAMS are as follows but emphasis will be on PAM.

Who should attend

All attendees will be expected to satisfy ACCOBAMS experience requirements of 30 days experience with marine mammals prior to registration for courses and places will be limited. The course is aimed primarily at MMOs (Marine Mammal Observers) who wish to expand their skills to include **Passive Acoustic Monitoring (PAM) and QGIS**. The ACCOBAMS course is specifically aimed at mitigation in the Mediterranean and Black Seas but the principles learned are applicable worldwide.

Trainers

Training is carried out by Dr Aylin Akkaya and Patrick Lyne (Ch.Mar. Sci. IMarEST). Aylin has been involved in Marine Mammal Research in the Mediterranean area with DMAD and worldwide for approximately two decades. Patrick is certified to carry out JNCC training and has been involved in mitigation in Ireland and worldwide over a similar duration.

Certification

Training is based on passing all evaluations and is an ACCOBAMS approved certificate course. All those certified are required to sign an agreement to state they will uphold standards and may have certification removed if found to not carry out works appropriately.

Course Schedule (subject to change due to weather to use best weather for boat experience)

Day 1

1- Presentation of the High Quality MMO/PAM certificate of ACCOBAMS

- 1.1 ACCOBAMS: a tool for the conservation of biodiversity in the Mediterranean and Black Seas
- 1.2 Process and Objective of the ACCOBAMS Certification for Highly Qualified MMO/PAM

2- Introduction to underwater acoustics

- 2.1 What is sound?
- 2.2 Seismic waves
- 2.3 The sonar equation
- 2.4 Octaves and one third octave

3- Introduction to marine mammals and turtles and cetacean acoustic

- 3.1 Marine mammals and turtles in the ACCOBAMS area (and Turtles)
- 3.2 Cetacean and turtle biology and distribution in the ACCOBAMS area (and Turtles)
- 3.3 Critical habitat identification of marine mammals and turtles?
- 3.4 Cetacean vocalisations and hearing

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4- Introduction to human activities generating impulsive noise

- 4.1 Overview of oil and gas industry use of sound-active exploration
- 4.2 Other activities generating impulsive noise of major concern for marine wildlife conservation
- 4.3 Further anthropogenic noise sources
- 4.4 Spatial extent of noise producing human activities in the Mediterranean Sea
- 4.5 Impact of noise on marine mammals

5- Introduction to existing regulations and ACCOBAMS Guidelines

- 5.1 Introduction to international and European environmental law
- 5.2 International Treaties dealing with marine mammal conservation and/or noise mitigation
- 5.3 European regulations dealing with marine mammal conservation and/or noise mitigation
- 5.4 Regional TREATIES dealing with marine mammal conservation and/or noise mitigation
- 5.5 National legislations
- 5.6 ACCOBAMS Guidelines
- 5.7 Presentation of existing guidelines in the world
- 5.8 Operational points of the different guidelines

Day 2 and 3

6- Introduction to the role of MMO/PAM

- 6.1 Pre-survey phase
- 6.2 Survey phase
- 6.3 Passive Acoustic Monitoring Tools and PamGuard software Examination of the vocalisations of marine mammals.
 - Anthropogenic noise sources and PAM.
 - PAM deployment and setup
 - Setting up a basic PAMguard configuration to monitor for marine mammals. This will include:
 - Setting up a spectrogram and Radar display
 - Using Whistle and Moan Detector
 - Decimator
 - Click detector
 - Storage options
 - Localisation and distance determination
 - Species determination including the use of ROCCA whistle classifier.
 - Examination JNCC guidelines on PAM use.
- 6.4 Detection of cetaceans/other species
 - Examination of recordings to identify different sounds and species.
 - Detection and range estimation with towed array in the field (boat)
- 6.5 Communication with crew
- 6.6 Data logging
- 6.7 Practical aspects of PAM on fixed stations and seismic vessels
- 6.8 Post- survey phase

7- Introduction to the “life style” onboard

- 7.1 Offshore survival and safety
- 7.2 MMO medical condition requirements
- 7.3 Life style and organisation onboard



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7.4 Data confidentiality

Day 4

8- Introduction to QGIS mapping

- 8.1 What is geographic information system and why it is important?
- 8.2. Data collection for QGIS software
- 8.3 Exporting data from a spreadsheet to QGIS
- 8.4 Selection of coordinate systems
- 8.5 Examining the difference between vectoral and raster shape files
- 8.6 Visualising your sightings and survey effort
- 8.7 Creating a layout map

In addition there will be two days of practical boat training which will be determined based on best weather for the week and one rest day which will allow weather flexibility.

Practical training (conducted on a boat at sea) enables future MMOs/PAM operators to test and gauge their skills and master the detection and identification of species and the use of the equipment (binoculars, stick, angleboard, PAM system, acoustic software, completion of forms, etc.). We will look at collecting data both from a towed array and a drop down hydrophone and evaluate collected data in the classroom afterwards.

Evaluation

Evaluation covers all the learned skills both on during the theoretical and practical parts of the course, with evaluation and assessment test included as part of the course.