



Sustainable Fisheries Management

International Master of Science (120 ECTS)

2023/2025



Universitat d'Alacant
Universidad de Alicante



GOBIERNO
DE ESPAÑA

MINISTERIO
DE AGRICULTURA, PESCA
Y ALIMENTACIÓN

SECRETARÍA GENERAL
DE PESCA



Objective

Fishery resources are an excellent source of food and a driver of job creation in coastal areas. According to the FAO, seafood supply from both capture fisheries and aquaculture currently provides about 17 % of the total supply of animal protein. At the same time, international trade of fish and fishery products has expanded significantly in recent decades, with about 36 % of the production being exported. These statistics, however, do not reveal the concern about the current situation of fishery resources. If fishing is to be both stable and sustainable in the long term, better management is required.

In order to obtain and interpret different management-supporting data, experts should address the issue from diverse perspectives such as biology, economics, sociology or law. In this way, they will be able to assess fishery resources and management measures through different techniques such as mathematical simulations, statistics, surveys, assessments or negotiation. It is of maximum interest to train experts able to advise stakeholders in the diverse world of fisheries: different administrations (local, regional, state or supranational), fishermen (artisanal, semi-industrial or industrial), social groups (shipowners, trade unions, consumers, processors, fish farmers, etc.).



This high-level, multidisciplinary programme trains future fisheries managers to understand the complex world of fisheries. They will learn to interact with a broad range of stakeholders and to provide support for cooperation from local to international level, in order to plan and implement optimal and sustainable management policies.

Organization

The Master programme is jointly organized by the University of Alicante (UA), the International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM), through the Mediterranean Agronomic Institute of Zaragoza (CIHEAM Zaragoza), and by the Spanish Ministry of Agriculture, Fisheries and Food (MAPA), through the General Secretariat of Fisheries (SGP).

The General Fisheries Commission for the Mediterranean (GFCM) and the Fisheries and Aquaculture Division of the United Nations Food and Agriculture Organisation (FAO) provide technical support within the limits of their respective mandates. The Master also counts on the collaboration of Casa Mediterraneo, the Association of Large Tuna Freezers (AGAC), the National Association of Freezer Tuna Shipowners (ANABAC) and the Organisation of Producers of Frozen Tuna (OPAGAC).

Why choose this Master?

1. **More than 60 lecturers** from international institutions, universities, research centres, administration services and private firms.
2. **Multidisciplinary specialization** from the perspective of different sciences such as biology, economics, law and sociology.
3. **Comprehensive teaching system** combining lectures, individual and group work, practicals, and technical visits to fishing harbours, administrations, associations, companies and research centres.
4. **Initiation to professional work and research** by applying the knowledge, skills and competences acquired in the treatment of real problems on the assessment and management of fishing activity.
5. **Official Spanish Master degree** awarded by the UA and **Master of Science Degree** awarded by CIHEAM. Postgraduate Specialization Diploma awarded by CIHEAM upon completion of the first year.



Programme

1st year of the Master (60 ECTS)

This part is held in Alicante, and includes lectures, practicals, supervised work, seminars and technical visits, which foster the exchange of ideas between lecturers, professionals and participants.

Unit 1: Introduction to the marine ecosystem, fishery resources and aquaculture (6 ECTS)

Structure and characteristics of marine ecosystems. Fishery resources. Introduction to aquaculture.

Unit 2: Statistical analysis and database use (5 ECTS)

Statistical analysis. Uses of databases in fisheries. Geographical Information Systems.

Unit 3: Dynamics of exploited fish populations (5 ECTS)

Population units. Basic concepts of population dynamics. Recruitment, growth and mortality. Selectivity. Catches and fishing effort. Standardization of fishing effort. Data sources for population dynamics.

Unit 4: Theory and models for fisheries evaluation (6 ECTS)

Global or production models. Models structured by age. Direct evaluation methods: fisheries survey by swept area and acoustic prospections. An ecological model: Ecopath (Ecological Pathways Model). Reference points obtained from the different models and exploitation regulations.

Unit 5: Basic economics and production factors in fisheries (4 ECTS)

Basic economics. Fisheries business activity. The fishing vessel and fishing technology.

Unit 6: Fish trade and processing (4 ECTS)

The fish trade worldwide. World trade institutions. Fish trade and marketing. Consumer behaviour and market research. The economic context of fishing.

Unit 7: Theory and application of bioeconomic models and economic and social indicators (6 ECTS)

Static and dynamic bioeconomic models. Application of bioeconomic models (MEFISTO). Models structured by age and optimal management. Use of economic and social indicators.

Unit 8: Institutional framework: cooperation and research (4 ECTS)

International cooperation. Fisheries research.

Unit 9: Maritime law and socio-cultural perspective (5 ECTS)

Worldwide legal and institutional framework for maritime law. EU common fisheries policy. Administrative management of aquaculture. Aquaculture administrative management. The application of fisheries legislation. The historical perspective of fishing communities. The socio-cultural and socio-political perspectives

Unit 10: Objectives and instruments for fishing policies (5 ECTS)

Fisheries management aims. Technical measures and regulation instruments. The environmental impact of fisheries and discards. Marine protected areas of fisheries interest. Artificial reefs. Fishing control. The FAO and Regional Fishery Organisations (RFOs). The Common Fisheries Policy (CFP) of the European Union.

Unit 11: Applied fisheries policies (5 ECTS)

The role of Spanish Autonomous Communities in fisheries management. The anglers' perspective. The role of NGOs. The role of consumers, certification tools (MSC). Fisheries management in different countries: typology and importance.

Unit 12: Institutional visits (5 ECTS)

Technical visits and conferences at government institutions, research centres, fishing organizations, processing industries and markets.

2nd year of the Master (60 ECTS)

This part is focused on introduction to research, internships and the completion of a Master Thesis based on the results of an original research work. This part is conducted at the University of Alicante or other collaborating institutions and will last for 10 months. The coordinators will help students to find tutors, research topics and host institutions, as well as possible financial aid.

Unit 13: Introduction to research (15 ECTS)

Unit 14: Internships (15 ECTS)

Unit 15: Master Thesis (30 ECTS)

Contact:

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<https://www.iamz.ciheam.org/education/master-programmes>



With the collaboration of:



Admission and registration

The Master is designed for participants that fulfil the following conditions:

- Eligibility to pursue postgraduate studies in their country of origin.
- University degree related to the topic of the Master; preference will be given to graduates in Biology, Marine Science, Economics, Law, Administration and Business Management, Agronomy and Fisheries Engineering.
- Spanish is the working language of the Master. Applicants from non-Spanish speaking countries should accredit knowledge of Spanish at B1 level or higher. Because some lectures and part of the teaching material will be in English, knowledge of this language will be also valued.

Registration fees for each academic year amount to approximately EUR 2400*. For candidates wishing to attend part of the course, the fees will be proportional to the credits they register for.

*This price may vary according to the Valencian Regional Government.

Dates and deadlines

The first year of the Master will be held from October 2023 to July 2024.

The second year will end in September 2025.

Pre-registration deadlines:

- For applicants requesting CIHEAM scholarships: from 13 March to 7 May 2023 at the following address: <http://www.admission.iamz.ciheam.org/en/>
- For other applicants: from 15 March to 26 June 2023 at the following address: <https://sa.ua.es/es/preinscripcion-master/>

Scholarships

Candidates from CIHEAM member countries (Albania, Algeria, Egypt, France, Greece, Italy, Lebanon, Malta, Morocco, Portugal, Spain, Tunisia and Türkiye) may apply for scholarships covering registration fees, medical insurance and accommodation. Scholarships will be awarded according to academic merit, and preference will be given to candidates from non-EU countries.

Candidates from Seychelles may apply for scholarships covering the registration fees, travel and accommodation. These scholarships, which are funded by the Large Tuna Freezer Associations, ANABAC and OPAGAC, are managed by CIHEAM Zaragoza.

The University of Alicante provides information about other aid schemes for postgraduate studies at the following address: <https://web.ua.es/en/oia/becas-ayudas/>

Degrees

- Postgraduate Specialisation Diploma (60 ECTS)
- Official Spanish Master degree awarded by the UA and Master of Science Degree awarded by CIHEAM (120 ECTS)

