



CIHEAM

International Centre for Advanced
Mediterranean Agronomic Studies
Mediterranean Agronomic Institute of Zaragoza



MINOUW

MINOUW project - European Union



Advanced Course

MANAGING DISCARDS IN FISHERIES: ECOLOGICAL AND SOCIOECONOMIC ANALYSIS AND METHODOLOGIES

Zaragoza (Spain), 9-13 April 2018

1. Objective of the course

Increasing concerns on the sustainability of marine fisheries and the ecosystems within which they occur are resulting in urgent and high-level demands for responsible management actions. The capture of undesirable species and sizes is a recognized problem in world fisheries. Globally, 30% of catches are discarded at sea, resulting in a waste of resources affecting the marine ecosystem and the economic and social dimensions of fisheries. Bioeconomic research, technology and social work (such as participatory approach, co-management) can help to incentivize the adoption of best practices that reduce discards, contributing to positive outcomes for management, ecological objectives and the long term prosperity of the fishing industry.

The course is jointly organized with the MINOUW project, a Research and Innovation Action (RIA) of Europe's Horizon 2020 Framework Programme, addressing the topic "Towards a gradual elimination of discards in European fisheries". The general approach is based on technological and socioeconomic solutions through a case-by-case analysis of the main types of European fisheries.

This course follows a comprehensive approach, analysing the impact of discard reduction in the whole fishing sector and the ecosystem, and providing a better understanding and ability to interpret the outputs of fisheries and ecosystem models. Furthermore, the participants will gain experience in social tools for stakeholder engagement in fisheries. While it focuses on the Mediterranean region, examples and experts will be drawn from other European areas to demonstrate the diversity of available methodologies.

By the end of the course the participants will:

- Be aware of the current issues concerning discard management and the regulatory framework.
- Have an up-to-date overview of innovative fisheries and ecosystem models, including specific examples of successful developments in different fisheries.
- Understand the behaviour and output of complex ecosystem models and how they can support the decision making process.
- Appreciate how more selective fishing practices positively affect the economic results of fisheries.

- Gain insights about stakeholder engagement, surveillance and control procedures for compliance with discards regulations.

2. Organization

The course is jointly organized by the International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM), through the Mediterranean Agronomic Institute of Zaragoza (IAMZ), and the EU H2020 RIA project MINOUW (Science, Technology and Society Initiative to Minimize Unwanted Catches in European Fisheries).

The course will be held at the Mediterranean Agronomic Institute of Zaragoza, taught by well qualified lecturers participating in the MINOUW Project, as well as invited experts from international institutions and from universities, research centres and administration bodies in different countries.

The course will be held over a period of 1 week, from 9 to 13 April 2018, in morning and afternoon sessions.

3. Admission

The course is designed for 25 professionals with a university degree, and is addressed to fisheries managers, technical advisors, researchers and other professionals involved in fisheries management.

Given the diverse nationalities of the lecturers, knowledge of English, French or Spanish will be valued in the selection of candidates, since they will be the working languages of the course. IAMZ will provide simultaneous interpretation of the lectures in these three languages.

4. Registration

Candidates can apply online at the following address:

<http://www.admission.iamz.ciheam.org/en/>

Applications must include the *curriculum vitae* and copy of the supporting documents most related to the subject of the course.

The deadline for the submission of applications is 27 January 2018.

Applications from those candidates requiring authorization to attend the course, may be accepted provisionally.

Please display on a notice board if possible



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See updated information at

www.iamz.ciheam.org

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Registration fees for the course amount to 500 euro. This sum covers tuition fees only.

5. Scholarships

Candidates from CIHEAM member countries (Albania, Algeria, Egypt, France, Greece, Italy, Lebanon, Malta, Morocco, Portugal, Spain, Tunisia and Turkey) may apply for scholarships covering registration fees, and for scholarships covering the cost of travel and full board accommodation in the Hall of Residence on the Aula Dei Campus. Candidates from institutions participating in the MINOUW Project may apply for scholarships covering registration fees.

Candidates from other countries who require financial support should apply directly to other national or international institutions.

6. Insurance

It is compulsory for participants to have medical insurance valid for Spain. Proof of insurance cover must be given at the beginning of the course. Those who so wish may participate in a collective insurance policy taken out by the IAMZ, upon payment of the stipulated sum.

7. Teaching organization

The course requires personal work and interaction among participants and with lecturers. The international characteristics of the course favour the exchange of experiences and points of view.

Lecture contents are based on background information combined with debates, case study analysis, model exercises and a practical session of stakeholder analysis and participation.

Participants are asked to prepare, before the beginning of the course, a brief summary on discard problems and reduction initiatives in their countries/regions. These documents will be shared with lecturers and participants and will constitute the basis of an open discussion at the beginning of the course.

8. Programme

1. Introduction (5 hours)

- 1.1. Mediterranean fisheries: specificities, current exploitation status, fishers' socio-economic behaviour in relation to discarding practices
- 1.2. Regulatory framework: International agreements and European legislation (Landings Obligation)
- 1.3. Fisheries management in an Ecosystem Approach to Fisheries (EAF) context.
- 1.4. Open discussion

2. Results of MINOUW Project: technological and social solutions (1 hour)

3. Fishing selectivity and sustainability (3 hours)

- 3.1. Fish behaviour and the capture process. Exploitation pattern (selectivity) vs exploitation rate (effort). Size and species selectivity
- 3.2. Fishing technology and fisheries sustainability: solutions to minimize discards
- 3.3. The social and economic dimension of fisheries sustainability

4. Biological impacts of discard reduction: analysis and methodology (7 hours)

- 4.1. Ecosystem impacts on fish populations and habitats
- 4.2. Impacts of discards on birds and other megafauna
- 4.3. The spatial dimension of discard reduction. Examples of application
 - 4.3.1. Spatial planning
 - 4.3.2. Spatial tools to reduce discarding
 - 4.3.3. Satellite data for monitoring
- 4.4. Fisheries ecosystem models
 - 4.4.1. Overview of ecosystem models
 - 4.4.2. Trophic web models
 - 4.4.3. Ecosystem analysis of the impact of discarding fisheries

5. Socioeconomic impacts of discard reduction: analysis and methodologies (6 hours)

- 5.1. Bioeconomic models theory. Indicators, targets and reference points
- 5.2. Economic impact of more selective fisheries on market and non-market values. Economic instruments to incentivize compliance
- 5.3. Socioeconomic changes in fishing organization, operational processes and logistics
- 5.4. Utilization of unwanted catches brought on land

6. Stakeholder engagement processes to minimize discarding practices (5 hours)

- 6.1. Participatory approach and co-management
- 6.2. Practical session on stakeholder participation ("MINOUW" approach)

7. Monitoring, surveillance and control in the context of landings obligation (2 hours)

8. Practical work with Atlantis model: MINOUW case studies on technological and socioeconomic solutions for discard reduction (6 hours)

- 8.1. Estimation of ecological and socioeconomic effects of discards in Icelandic fisheries
- 8.2. Estimation of ecosystem effects of discard reduction on Sicilian bottom trawl fisheries

9. Open discussion and concluding remarks (1 hour)

GUEST LECTURERS

J.M. BELLIDO, IEO Murcia (Spain)
M. BREEN, IMR, Bergen (Norway)
F. COLLOCA, CNR-IAMC, Mazara del Vallo (Italy)
M. COSTANTINI, WWF MedPO, Rome (Italy)
N. FERRI, GFCM, Rome (Italy)
A. HATCHER, Univ. Portsmouth (United Kingdom)
F. MAYNOU, CSIC-ICM, Barcelona (Spain)

R. PÉREZ MARTÍN, CSIC-IIM, Vigo (Spain)
B. PÉREZ VILLARREAL, AZTI, Derio (Spain)
C. RALPH, Marine Scotland, Edinburgh (United Kingdom)
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