

## ICES Workshop on Fish Condition (WKFICON)

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### FINAL Workshop Programme:

#### Day 1 (17<sup>th</sup> November 2016)

Morning (09:00-13:00 h): **Open session** (open to all participants & university community, no registration needed).

Room "AULA MAGNA" Faculty of Sciences. University of Girona

09:00-09:15. Presentation of the workshop (J. Lloret, Claire Saraux, Pierluigi Carbonara)

09:15-10:15 Presentations of the different groups/participants (5 minutes ppt per group/participant)

10:15-13:00 Theme sessions (15-20 minutes ppt each session):

1. Condition indices in freshwater fish: lessons for marine ecosystems. Emili García-Berthou (University of Girona) & Lluís Benejam (University of Vic).
2. Use of simple morphometric condition indices in North Atlantic fisheries: the example of anchovy, mackerel, white and black anglerfish. Carmen Hernández, Begoña Villamor & Jorge Landa (IEO, Centro Oceanográfico de Santander).
3. Ecological implications of fish condition (relation with population and community dynamics). Manuel Hidalgo & Lucía Rueda (IEO, Centro Oceanográfico de Baleares).
4. Links between habitat quality and fish condition. Alfredo García de Vinuesa & Montserrat Demestre (Institut de Ciències del Mar, CSIC) & Josep Lloret (University of Girona)
5. Effects of fish condition on life history traits of fish: the example of small pelagics in the Mediterranean. Pablo Brosset & Claire Saraux (Ifremer)
6. Seasonal and ontogenetic changes of the European hake stock condition in the South Adriatic Sea: comparison and validation through different indices. Marilena Donnaloia & Pierluigi Carbonara (Coispa).
7. Effects of fish condition on their reproduction: what and when analyses should be carried out? Marta Muñoz, Alba Serrat & Josep Lloret (University of Girona)

Afternoon (14:30-18:30 h). Discussions on Topic 1 & Topic 2. Elaboration of the main conclusions regarding these topics. Session only for registered participants.

Room PB25

## **Day 2 (18<sup>th</sup> November 2016)**

Morning (9:00-13:00 h): Discussions on Topic 3 and Topic 4. Elaboration of the main conclusions regarding these topics. Session only for registered participants.

Room PB25

Afternoon (14:30-17:00 h): Elaboration of the report (conclusions must be agreed by all participants). Possibility to carry out a joint publication. Session only for registered participants. Room "Aula Magna"

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## **LIST OF TOPICS TO BE DISCUSSED**

### **TOPIC 1: State of the art**

This session will discuss the biggest gaps of knowledge in understanding condition of marine exploited species, the potential primary anthropogenic and environmental factors that can affect fish condition (e.g. fisheries, parasitism, pollution, habitat characteristics) and the influence of fish condition on productivity (growth, reproduction and mortality) of fish populations. The discussion, which will take into account the regional / sea peculiarities (Mediterranean, Black Sea, North Sea, Baltic Sea, North Atlantic), will consider the following questions:

1. Why is it important to conduct more detailed studies on fish condition? What are the biggest gaps of knowledge in understanding condition of marine exploited species?
2. What are the potential primary factors impinging on fish condition, and how do we prioritize them? What are our gaps in knowledge?
3. How does fish condition affect life history traits (e.g. reproductive potential, survival) of exploited marine species? In this regard, what are our biggest unknowns?

### **TOPIC 2: Methodological aspects.**

The workshop will present a wide range of approaches being used to better understand the condition of fishes and to promote discussion of fish condition themes critical to sustainable fisheries. It will discuss the pros and cons of the different methods to estimate fish condition and look for the new methods that are being developed to evaluate fish condition. The topic will also discuss on the existing long-term databases on fish condition regarding the possibility of developing standardized inventories to make comparisons possible. The participants will provide their opinions considering the ecosystem and species peculiarities. The discussion will consider the following questions:

4. What are the best methods in term of cost/benefit to efficiently evaluate the condition of fishes for stock assessment purposes?
5. Can we develop an inventory of existing long-term databases on fish condition in order to compare standard indices across stocks and ecosystems?
6. If routine monitoring is possible, when (season, life or reproductive stage) and how (research surveys, fish market) should it be done?

### **TOPIC 3: Application of condition indices in the assessment of marine resources and ecosystems**

The topic will discuss on the possible applications of fish condition indices into the assessment of fish populations and the marine habitats where they live, and discuss on how fish condition variables could be better integrated in fish population and ecosystem models. A major consideration of the session will be how fish condition indices can be used as population and ecosystem status indicators. The discussion will consider the following questions:

7. How the analysis and monitoring of fish condition could contribute to improve stock assessment and management? How could condition indices be incorporated in stock assessment models (through e.g. natural mortality?).
8. Could fish condition be used as an indicator of ecosystem and habitat conditions? Can fish condition be used to identify habitats that are more valuable for fishery production?
9. Definition of meta-analysis on a large spatial scale to summarize exploited fish condition and try to link it with stock status, management, etc.

#### **TOPIC 4: Future research and monitoring**

During this session, the main research and monitoring priorities and future available funding opportunities will be summarized and discussed. The discussion will consider the following questions:

10. What are the research and monitoring priorities in the field of fish condition?
  11. What funding opportunities are available? Who else can do this type of research?
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