

Recommendation n° 36:

Improving the scientific knowledge and the assessment of deep-sea demersal stocks, in the outermost regions

The Outermost Regions Advisory Council (CCRUP) considers that scientific research should support responsible and profitable fisheries and that the responsible use of resources is fundamental to guarantee sustainable fisheries. We believe that research should serve to establish the technical basis for an optimised management of fisheries. To achieve these goals it is also necessary to transpose new technologies to the fisheries sector to increase their profitability. Therefore, we understand that the mission of scientific research is to better meet the needs of the management, administration, and competitiveness of the fisheries sector.

For a correct assessment of the status of the fishery resources stocks, it's necessary to monitor fishing effort and improve biological knowledge of species and ecosystems. However, it's also necessary to understand the socio-economic implications of any measures, as well as to develop the technical bases to improve fishing gears.

Monitoring of fisheries

Obtaining data on these fisheries is important at the European and regional levels, in order to meet the increasing requirements for information to be able to manage fisheries properly, as evidenced by the significant increase of funds allocated by the European Union (EU) to improve sampling, information and data collection. The fleet should contribute to the consolidation of data, allowing the increased knowledge on fisheries, which are object of study in international groups, and also to allow the European Commission (EC) to have territorial specifications into account, when creating legislation to regulate their fisheries.

We consider that, using a modern sampling network, it should be able to obtain constantly updated information about:

- (a) Structure and activity of the fleet dedicated to demersal fishing.
- (b) Catches and their characteristics.

Status of the stocks

To study the status of the stocks and the impacts of fisheries, we consider that it is necessary to estimate the following descriptive biological parameters of the dynamics of fishing communities:

- a) Migration;
- b) Identification of stocks;
- c) Distribution;
- d) Growth;
- e) Reproduction;
- f) Mortality (natural and by fishing).

The technology of fisheries

CCRUP considers that it is necessary to improve the selectiveness of the fishing gears, using the latest advanced technologies available and **recommends that research should be conducted about the functioning and effectiveness of fishing gears**, which is one of the main studies to evaluate the selectiveness of the fishing gears. Selectiveness is defined as the ability of fishing gears to capture, in several degrees, certain sizes of fish in comparison to others, regarding the same species, or certain species when compared to others.

The link oceanography-fisheries

To better understand the link between oceanography and fishing activity, we **recommend the realisation of some studies**, namely:

- (a) Study of **the link between the environment** (upwelling, nutrient balance, chlorophyll, plankton, etc.) **and fisheries** (distributions, growth, mortality, etc.).
- (b) Study on the **impact of marine extractive activities** on the marine ecosystem.
- (c) Study of the **marine environment** of fisheries through teledetection;
- (d) Study of the **socio-economic consequences** of fisheries resource management between economic agents.

Proposals to improve the conditions of scientific knowledge on demersal species.

We consider that there should be a perfect synergy between the government, the scientists and the fishing sector.

The support of administrations, from a technical and economic point of view, is necessary and important in order to conduct the necessary studies. Subsequently, it's also necessary to have good collaboration between the three instances (administration, science and fishing sector) in order to allow the defence of these studies at the correspondent governments, so that the applicable legislation takes them into account.

Scientists must assimilate the knowledge of artisanal fishermen, both about the area where they fish and about the use of gears. They must conduct these studies in close collaboration, so that fishermen can contribute with their empirical knowledge. **A scientist must base his study on the empirical knowledge of professional fishermen.**

A scientist without [the input from] a professional fisherman should not be able to conduct a viable study and the study will be less reliable, because despite their many academic qualifications, each fishing area is different, as is the fishing technique used. Also, the fisherman can't do anything without the scientist, because this one is who conducts the study which guarantees its scientific validation, and thus makes it admissible for the highest instances.

Considering the above mentioned, CCRUP recommends that the European Commission and the Member States interested in the Outermost Regions, **improve the conditions for the scientific knowledge, revised by ICES** (International Council for the Exploration of the Sea), **combined with the empirical knowledge**, in order to be able to correctly assess the demersal species populations.

The President of the Executive Committee of CCRUP,

(David Pavón González)