

## CASE STUDY TITLE

Electronic monitoring in fishing vessels



### SUMMARY

Monitoring of the extractive fishing activities is a need to ensure sustainability and a requirement in the legislation. Monitoring is currently done by experts embarked in vessels.

Electronic monitoring is technically feasible but requires professionalism of the implementing companies and the acceptance of all stakeholders; owners of the vessels, fishermen, authorities and scientist. The way to progress has been the development of a voluntary Spanish National Standard, UNE 195007:2021 *Electronic monitoring in fishing vessels. Requirements* which will help to achieve targets 12.2 and 14.4 of the Sustainable Development Goals.

### BACKGROUND

Regulation of fishing activities includes monitoring certain aspects, such as surveillance of fishing operations. The physical monitoring is done on board the vessels by an external independent scientist, with the associated requirements of space, costs and potential conflicts with the crew. The pandemic has brought additional restrictions to this kind of supervision, which covers around the 5% of fishing.

The electronic monitoring is technically feasible and has many advantages over physical monitoring, but is not widely accepted as there are concerns on aspects like privacy, reliability and legal recognition.

### STRATEGY

Standardization is an excellent tool to provide trust to all the sector. Therefore, after some testing implementation, most relevant stakeholders decided to promote the development of a Spanish standard in the technical committee CTN 195 Extractive

### AT A GLANCE

#### COUNTRY

- Spain

#### LEVEL

- National

#### SDG ADDRESSED

- SDG 14 - Life Below Water

fishing. The development of the standard received financial support from The Spanish Ministry of Environment and the European Union.

An association of extractive fishing boats started with a pilot project including cameras on board and saw some advantages, as well as some concerns and problems, like privacy, as nobody want to have a “big brother” on board.

Once the feasibility was tested, they promoted the development of a voluntary standard, involving all the relevant stakeholders; public authorities, unions, scientists, manufacturers of equipment, IT companies, etc. They all agreed on the basic table of contents and the schedule for developing a standard under the neutral environment provided by the standardization committee.

## STRATEGY

The standard establishes the guidelines and technical conditions for the operators involved in the implementation of the electronic observation system, as well as the characteristics of these systems. The systems are intended for vessels greater than 12 meters in length. The standard affects to all operators involved in electronic observation, i.e. fishing vessel owners, technology companies manufacturers of electronic observation equipment, and data analysis entities.

This standard determines that an electronic observation system must be made up of a series of on-board components: central unit; onboard user interface; cameras that allow to view and monitor all the fishing operations (together with its proper location in the vessel); geolocation system to locate the fishing operation in time and space; and uninterruptible power supply.

It includes also encryption requirements and affects the data analysis station on land equipped with the corresponding analysis software, which allows analyzing the information recorded by the on-board system. The electronic monitoring does not completely substitute physical monitoring, but is working as a perfect complement, allowing larger and better monitoring with a lower cost.

The standard is strictly voluntary and in the short-term it will maintain this condition, but legislation on the topic is under revision and might consider the implementation of a standard as an advantage. Further verification schemes (certification) might be promoted.

## RESULTS & IMPACT

The standard UNE 195007 *Electronic monitoring in fishing vessels. Requirements* was published in September 2021 and its implementation is progressing in the Spanish fleet.

The expected impact is a better monitoring of fishing operations and a significant contribution to target 14.4 "Effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time

feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics".

It also contributes to target 12.2 "By 2030, achieve the sustainable management and efficient use of natural resources".





## CHALLENGES & LESSONS LEARNED

Key success factors were the positive results of test pilot project and involvement of all stakeholders under a neutral environment (technical committee).

The acceptance of the electronic monitoring required the involvement of all the affected stakeholders and this was achieved in the standardization technical committee, as the single forum with all parts cooperating in a neutral environment. The final document, standard UNE 195007, has been accepted as a tool to provide trust on the critical aspects of electronic monitoring and to promote the professionalism amongst the service providers.

The voluntary character of the standard has been seen as very positive by all parts, and particularly by the vessel owners, who are not forced to implement it. This allows reluctant stakeholders to test its implementation and progress according to their needs.

## POTENTIAL FOR REPLICATION

The standard and the whole experience is fully replicable in other countries. In fact, some countries, like New Zealand, already have legislation covering the same aspects.

The Spanish standard might also be considered as a basis for further ISO standard in the mid-term. The adoption of this standard by other countries can be seen as a transfer of knowledge, as it includes useful guidelines for comparable vessels.

**CASE STUDY DEVELOPED BY:**  
**Daniel Masso and Rosa Cepas**  
**Asociación Española de Normalización**  
**(UNE)**

