

OBSCAMe: A scientific program to better understand marine mammals bycatches in the bay of Biscaye gillnetters fisheries, remote electronic device as a tool

Un programme d'OBServation, pour mieux Comprendre les captures Accidentelles de Mammifères marins par les fileyeurs du Golfe de Gascogne, en les équipant de systèmes d'observation Electronique à distance



OBSCAMe

OBSERVATION ELECTRONIQUE

- Preliminary study (from July to December 2020): bibliographic review, French scientists and fishermen representatives interviews, benchmark of the different REM solutions => synthesis presented in November to Fisheries, Sea and Environment Ministries, fishermen representatives and NGO
- A pilot/experimental study for 20 gillnetters / 2021-2022 – announced by the French Sea Ministry at the national working group on the 7th of October 2020
December 2020 to May 2021
 - **phase 1** – test phase on 5 vessels / *technical constraints, quality and type of data*July 2021 to December 2022 (R&D partnership SINAY/OFB)
 - **phase 2** – July 2021 to Dec 2022 : 20 vessels
 - **phase 3** – development of machine learning to facilitate video analysis



JBYCWG-ACOBAMS/Ascobans

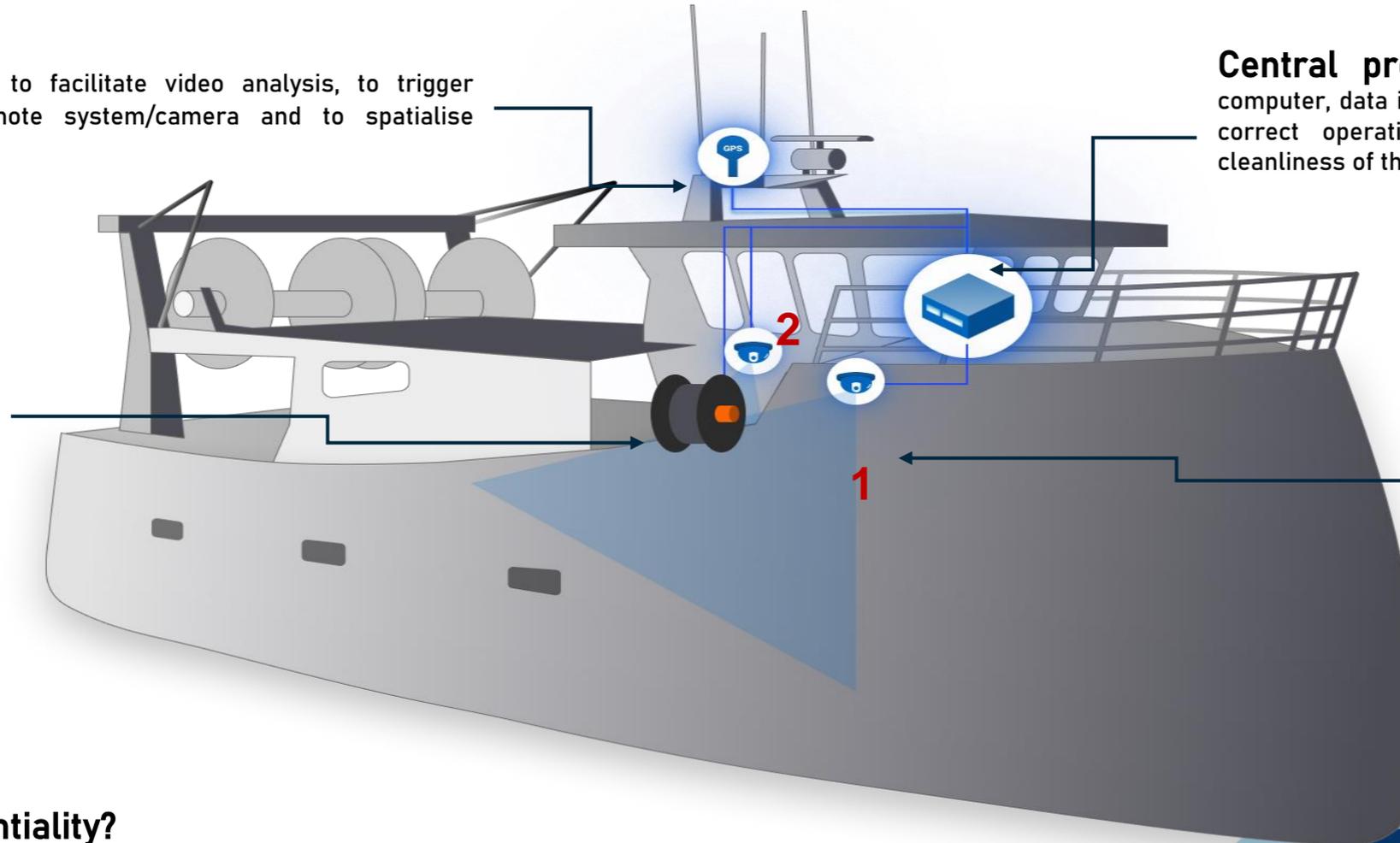
11th of February 2021

Remote electronic monitoring on french gillnetters?

GPS tracker : to facilitate video analysis, to trigger recording of the remote system/camera and to spatialise bycatches.

Central processing unit: storage of data in the computer, data is encrypted, a screen makes it easy to check the correct operations of the device of remote system and cleanliness of the camera

A sensor on net hauler: to collect data on speed and power of the net hauler rotations, start and stop. These data help to better target the video sequences to be analyzed ashore.



One (1) or two (2) cameras: First one is essential to record images when the nets is hauling on board along the hull. The second one needed to identify species and to do measurements and to have a more stabilized image. The acceptance of the 2nd one is more difficult for the crew even we engage ourselves to delete images from the crew.

What about confidentiality?

All data are encrypted and only authorized persons (with dedicated software) are able to watch video. We are careful of business secrecy (we don't publish any data of vessel position which could permit to identify the vessel concerned). We care about General data protection regulation - regulation (UE) 2018/1725) and crew images are deleted.

* Observers on board : 5% of fishing trip observed
* 2 systems of data transfer: changing hard disk and/or 4G



OBSCAMe

OBSERVATION ELECTRONIQUE

Objectives OBSCAMe

- **To contribute to a better understanding of gillnetters and common dolphin interactions** : identify the potential contribution of REM on this interaction and to better understand bycatch
- **To test the processing chain and assess storing data issues** (in a context of a large volume of data transfer and storage particularly for larger vessel)
- **To do a scientific analysis to evaluate the opportunities to reinforce boat trip sampling with REM to better evaluate and survey common dolphin bycatches** (at the end if REM is a success it would contribute to evaluate bycatches but as it is on a voluntary basis we don't expect a quantitative evaluation at the end of 2022)
- If data obtained are consistent, **in partnership with IFREMER and Pélagis/Université La Rochelle to couple REM data with others sources to reinforce the diagnosis** (with on board observer, bycatches mandatory report...)
- **To develop automatic analysis with machine learning (IA)**
- To evaluate the costs of implementation of REM on a significative part of the Bay of Biscaye gillnetters fisheries

Remote electronic monitoring on french gillnetters?

Two small gillnetters already equipped



Hydraulic net-hauler sensor



Source: Archipelago

Images on screen control on dockside

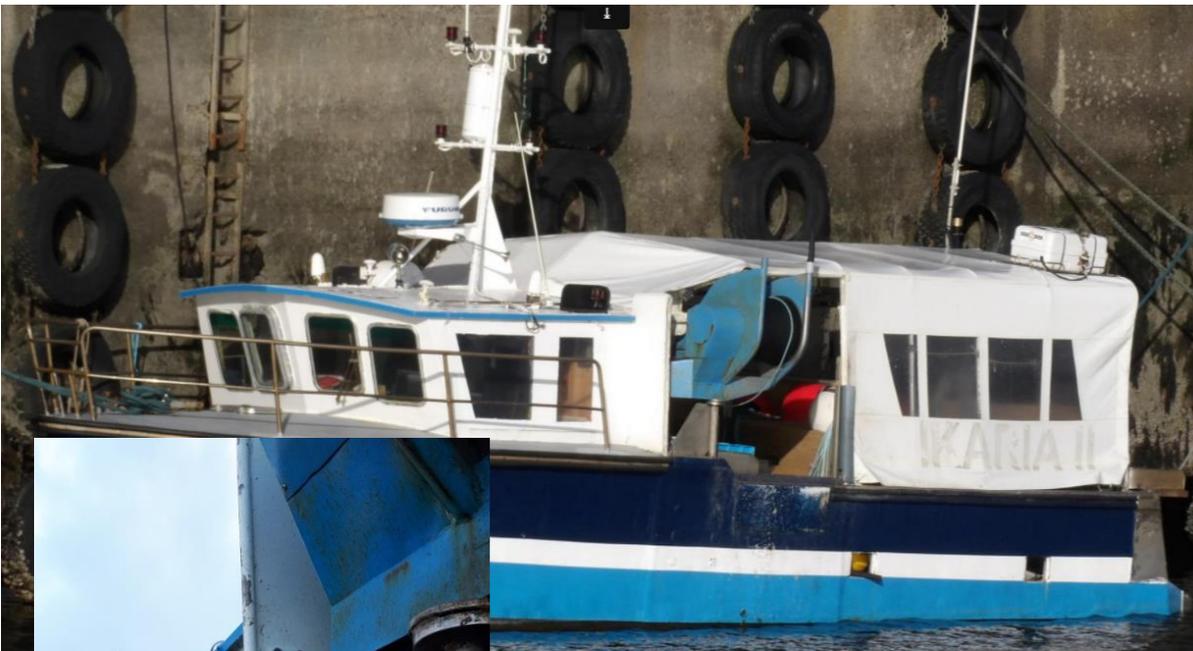
GPS tracker



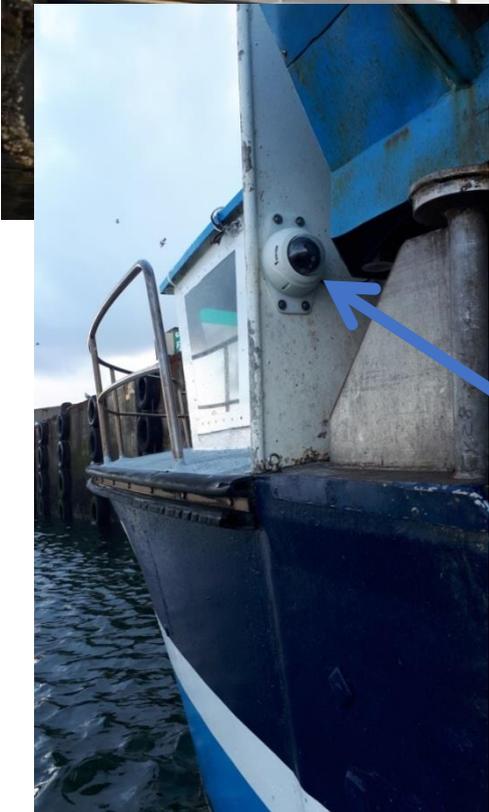
source: OBSCAMe (SINAY/OFB)

Remote electronic monitoring on french gillnetters?

Two small gillnetters already equipped



Images on screen control



camera

Different configurations tested



Source OBSCAMe (SINAY/OFB)

*Different configurations and vessels tested

*Each installation (position of the camera, sensor or not, 1 or 2 camera) is discussed with the captain

On going project... following up on the next bycatch working group...

Volunteers vessels (in partnership with fishing industry)

Vessel length	Operation harbour	Metiers
11,20	Le Croisic	Shrimp trap, trammel net to target sole, red mullet and spider crab, longline during summer
10,20	St Guénolé	Gillnet to target pollack and hake
18 m	Royan	Gillnet to target soles, monkfish
10,9 m	Cap Breton	Gillnet to target sole, sea bass and sea bream, and tuna trolling lines during summer
15 m (to be confirmed)	Cap Breton / St Jean de Luz	Gillnet to target sole and monkfish, (Sole, Lotte), and tuna trolling lines during summer

Equipments

4 equipments (Marine instruments/Archipelago) – 2 already installed, others before the end of february (ready to mobilize/share their expertise closely – expériences on small boats – reseller present in France to do installations)

1 equipment from New-Zeland (SNAP-IT TEEM Fish) - 1 vessel equipped before the end of february (perhaps more compact camera and seemed to have a more operationnal 4G transfer system to be confirmed – expériences on small boats)