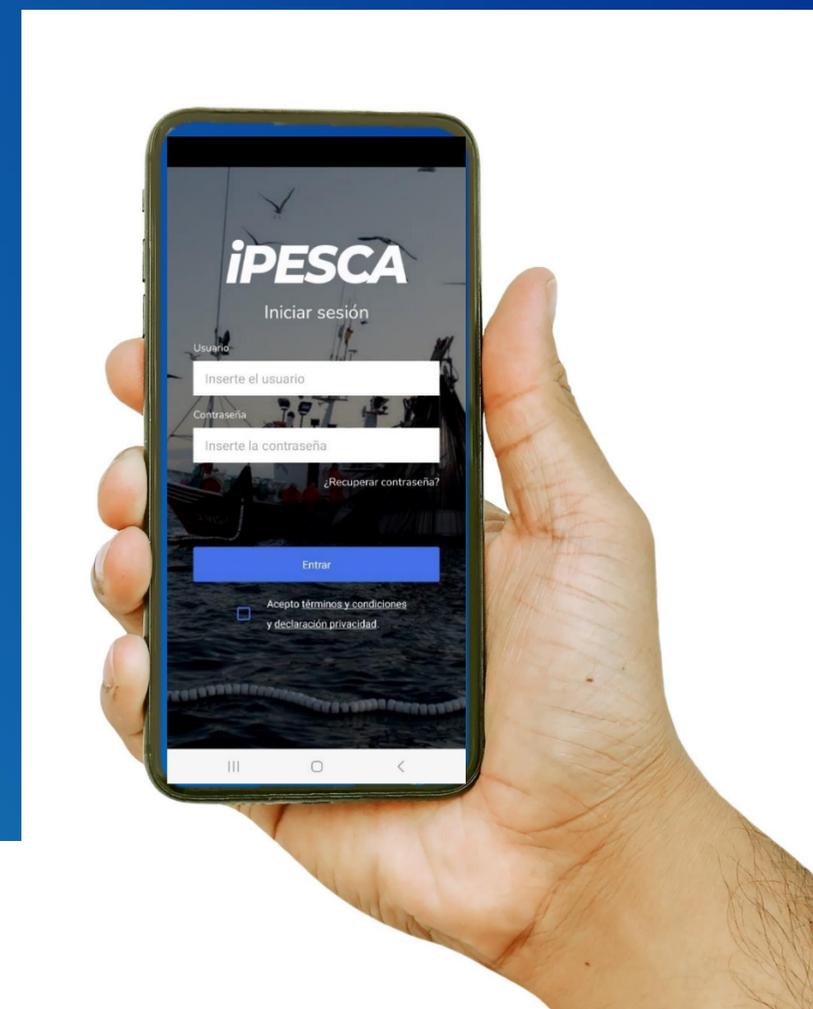
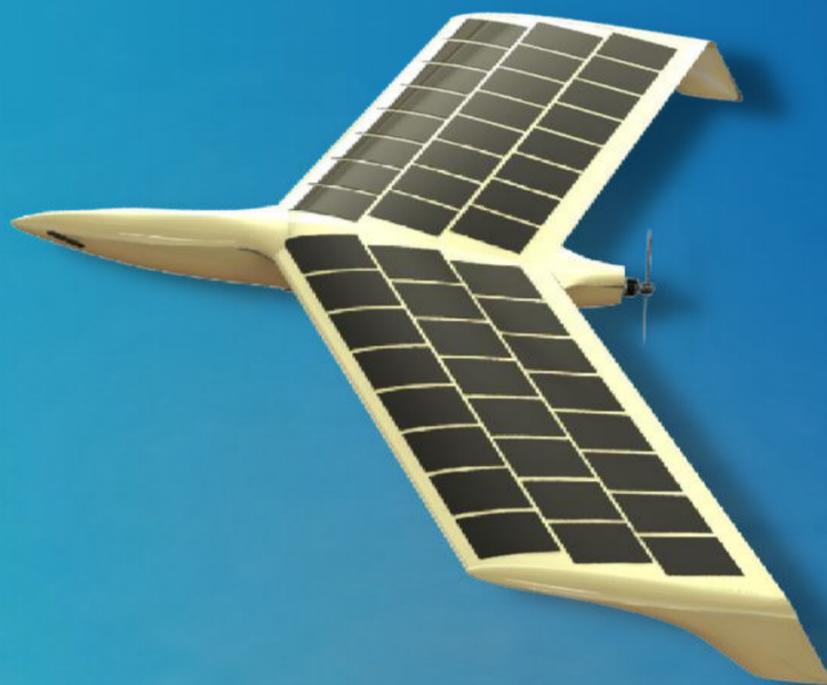


# FISHERIES CONTROL AND TECHNOLOGIES IN SPAIN



# iPesca pilot project. Approach

- **Anticipating** the new provisions for the Control Regulation
- **Foreseeing** the elimination of **paper** logbook.
- **Simplifying.** Technological Generation gap





# iPesca mobile application.

Trip screen

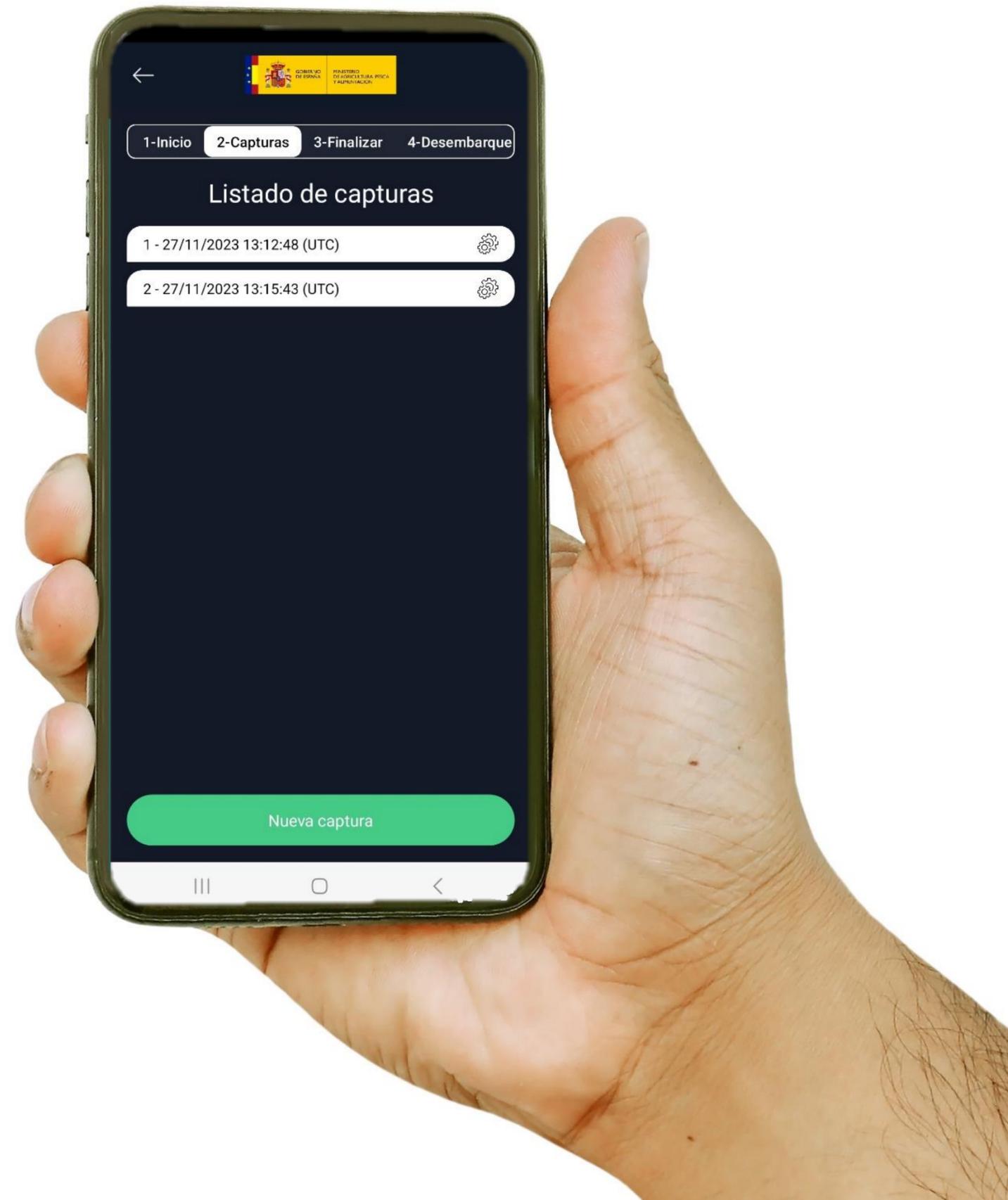
- **Start a trip**



# iPesca mobile application.

## Catches screen

- Track map
- Scrollbar
- Starting position
- Hauls information
- Species (+BMS)
- Discards



# iPesca dashboard. Trip screen

- Trip tracking
- Declarations: master, catches, landings,...

Marea: 50342704      Fecha Salida(UTC): 24/11/2023 06:26  
Fecha Llegada(UTC): 24/11/2023 14:30      Fecha Desembarque(UTC): 24/11/2023 15:13

En esta pantalla podrás observar los detalles de cada marea, los datos de otras mareas de la embarcación y la información de las especies

**Datos Embarcación**

CFR: ESP000026574      Matrícula: 3BI-2-3-05

**Datos Captura**

Mostrar 5 filas   Excel   Generar Informe

ESPECIE	NOMBRE	ARTE	HORA	CANTIDAD
Ningún dato disponible en esta tabla				

**Datos Descarte**

Mostrar 5 filas   Excel   Generar Informe

ESPECIE	NOMBRE	MOTIVO	HORA	CANTIDAD
Ningún dato disponible en esta tabla				

GOBIERNO DE ESPAÑA      MINISTERIO DE AGRICULTURA, PESCA Y ALIMENTACIÓN      SECRETARÍA GENERAL DE PESCA

# DNA: PRESENTATION INDEX

- ▶ Why DNA análisis
- ▶ Current use in Spain
- ▶ Main species
- ▶ Laboratories
- ▶ Sampling process
- ▶ Real case
- ▶ Current challenges



# WHY DNA ANALYSIS

MAIN GOAL: To determine whether there has been an alleged infringement in fishing matters

Some fisheries control regulations apply to specific species like:

- ***R. 2023/2053 establishing a multiannual management plan for bluefin tuna in the eastern Atlantic and the Mediterranean*** (art. 24 whole BFT, recreational fishing)

Other regulations rely in the correct identification of the species, like:

- ***R. 1224/2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy*** (art. 14 Logbook)
- ***R. 1005/2008 establishing a Community system to prevent, deter and eliminate illegal, unreported and unregulated fishing*** (art. 12 Catch certificate)
- ***R. 2019/833 laying down conservation and enforcement measures applicable in the regulatory area of the NAFO*** (art. 25 Monitoring of catch)

# CURRENT USE IN SPAIN

## **Transformed fish on board a fishing vessel or a recreational boat**

Pieces of prohibited species on board found during an inspection

## **Transformed fishing products in containers**

Import of fishing products that have been transformed that do not match with the species declared

## **Similar species**

Intentional missdeclaration of similar species to avoid quota consumption

# MAIN SPECIES

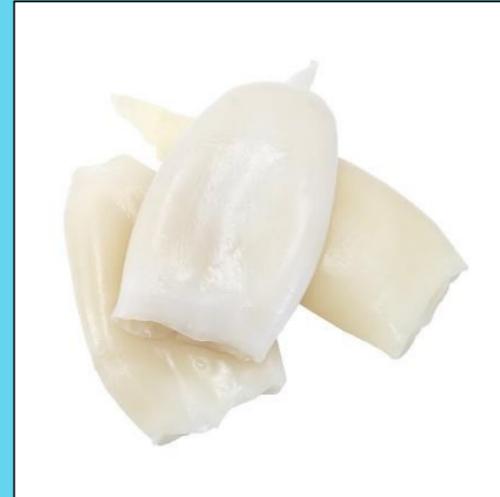
Our efforts are directed towards species with high economic interest:

- **Bluefin tuna and tropical tunas:**



# MAIN SPECIES

- **Squids:**



- ***Dissotichus eleginoides*:**



- ***SWO/ Marlin*:**

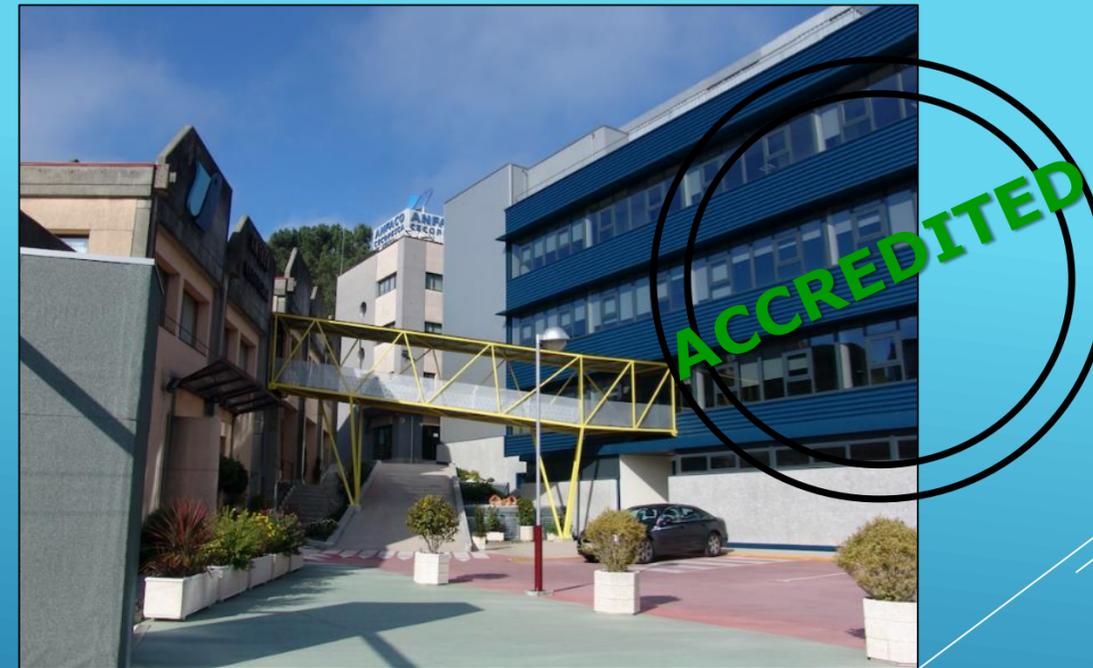


# LABORATORIES

**LABORATORIO CENTRAL DE VETERINARIA**  
Ministerio de Agricultura,  
Pesca y Alimentación



**ANFACO**  
Private sector



# SAMPLING PROCESS

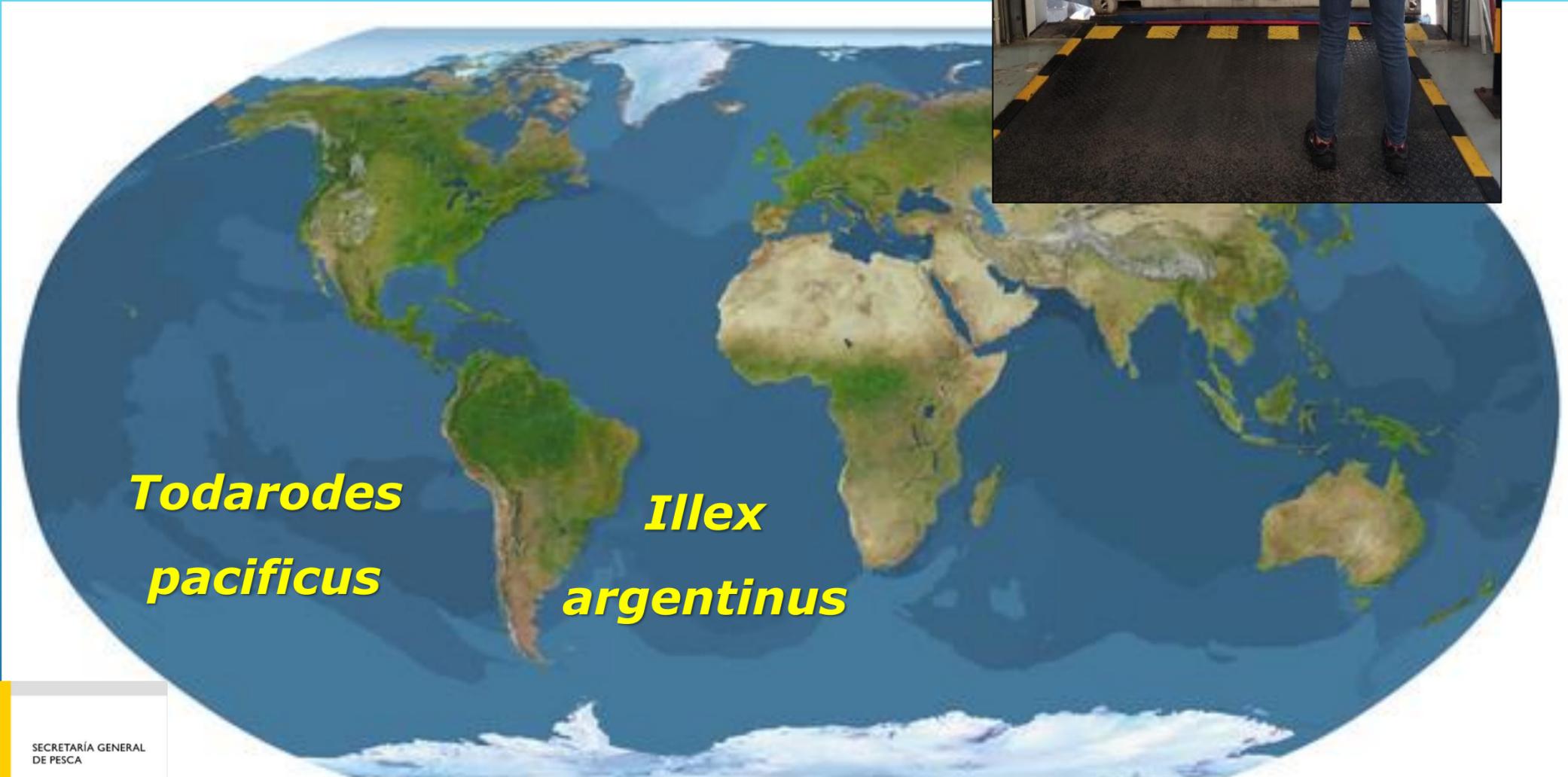
1. We choose the specimen from which we are going to take the samples
2. We take **three** samples per specimen. Preferably from the tail so as not to damage the specimen.
3. We take around **5 gr.** of sample, which is a cube of 1 cm each side.
4. We put the sample into a small bottle and we fill it up with **alcohol**.
5. We put a **sticker** identifying the sample with a code.
6. One of the samples will be guarded by the person **responsible** of the fish products
7. The other two samples will be sent to the **laboratory**. One of them will be used to determine the species through a DNA analysis and the other one will be used as diriment.
8. The samples will be accompanied by a **report** completed by the inspector.



# SAMPLING PROCESS



# REAL CASE OPERATION "PLAZA MAYOR"



# OUR CHALLENGES

1. Accreditation of our laboratory
2. Fishing inspectors reconoced as para-custom bodies
3. DNA analysis and sample taking, should be integrated into specifically in fisheries legislation

# New technologies RPA

## M5D-Airfox Fixed-Wing Solar Drone



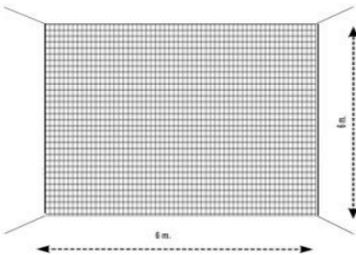
Shuttle



Antenna



Recovery Net



Dji mini: 25 units



Dji mavic: 2 units  
(2 Fisheries inspectors with flying licence)

# M5D-Airfox: TECHNICAL DESCRIPTION

## TECHNICAL SPECIFICATIONS

- MTOW: 4.2 kg
- Autonomy: 10 hours under optimal insolation conditions and 1.5 hours with its internal battery.
- Radio Link Coverage: 18 nautical miles.
- Cruise Speed: 30 knots.
- Maximum Speed: 45 knots.
- Maximum Wind Speed: 20 knots.
- Operating Temperature: 5°C – 40°C
- Dimensions:
  - Length: Less than 1 m.
  - Wingspan: Less than 2.5 m.

## PAYLOAD

**CAMERA** Dual-axis gimbal and two sensors with real-time video and real-time 4k photos. Full HD video and 13 Mpx photography in real-time.

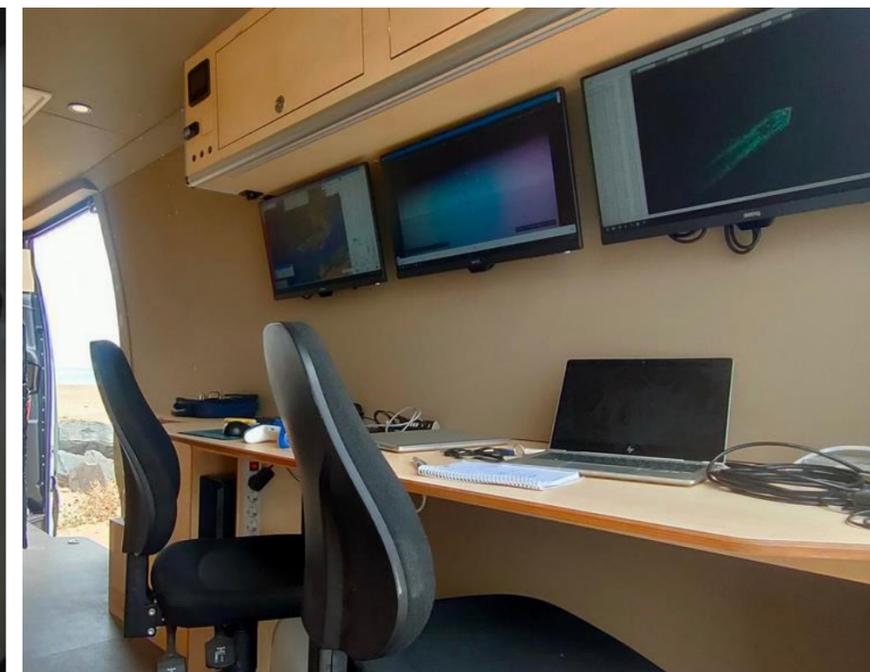


# COASTAL MISSIONS EQUIPMENT

- Van
- Landing Net
- Secretary's Inspector
- 2 technicians
- Antennas
- Launch catapult (if necessary)

## Mobile vehicle equipment:

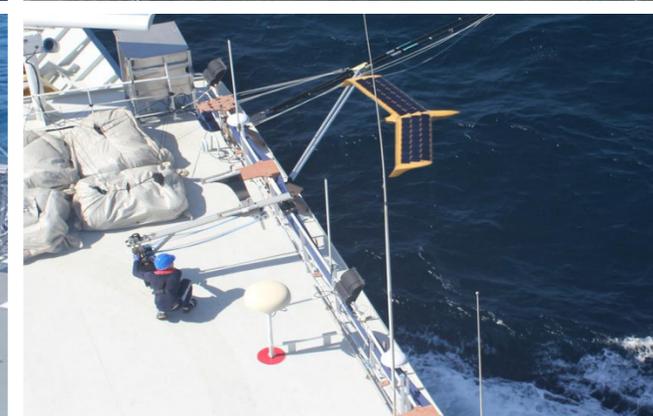
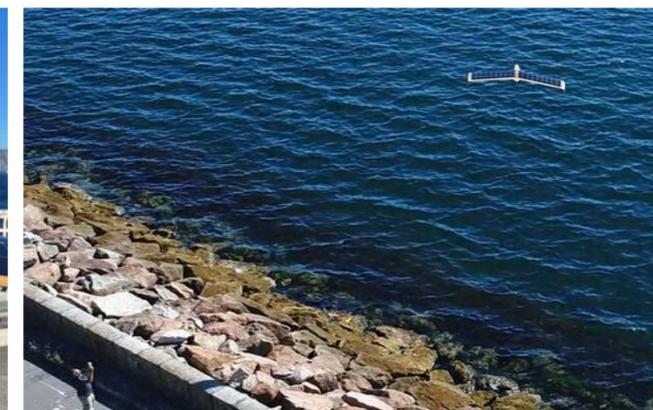
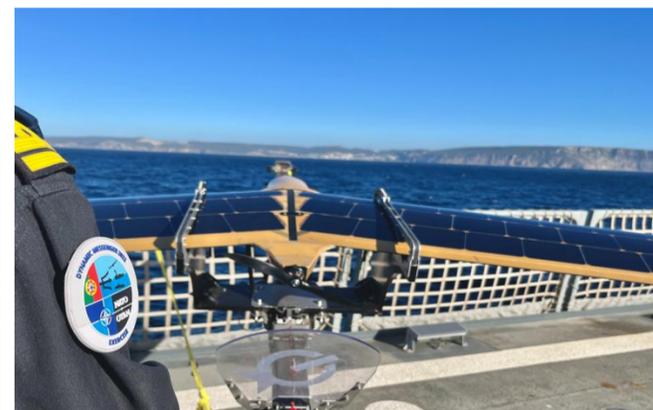
- Customized interior camperization
- 3 UAVs
- BTS System (Antennas)
- PC with MAP software
- 1 specific ground operations network system
- 3 screens, 2 dedicated to the operation itself and 1 for the inspector
- Worktable (for operation or peripheral tasks)
- 3 chairs, 2 for operators and 1 for the inspector
- 1 foldable table for any other use if needed
- Battery charger
- Drawer with spare parts and refrigerator



# CONCLUSIONS M5D-Airfox /Dron missions

## 5 KEYS>

1. SUSTAINABILITY
2. LEGAL FRAMEWORK
3. OPERATIONAL AGILITY
4. OPERATIONAL RANGE
5. COSTS



**THANK YOU VERY MUCH FOR YOUR  
ATTENTION!**

