Tracking Portuguese small scale fisheries

Marta M. Rufino, Miguel Gaspar

1. Portuguese Institute for the Sea and the Atmosphere (IPMA)
2. Centre of Statistics and its Applications (CEAUL)

# 4th Fish X Webinar – May 2023

Fisheries sustainability

FOOD

JOBS

OCEAN HEALTH

oceans + fisheries → **sustainable of fisheries**

data and knowledge to support decision makers
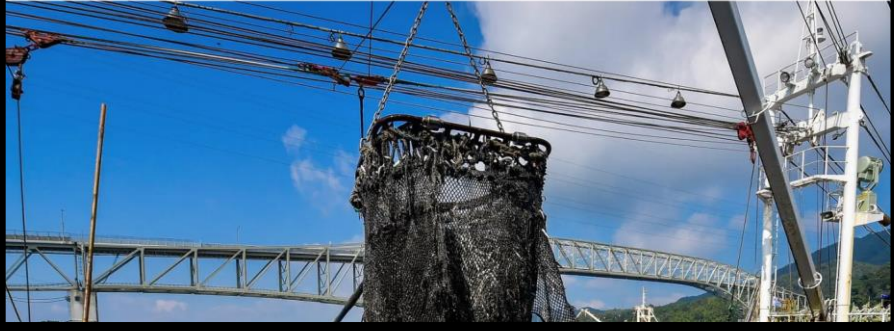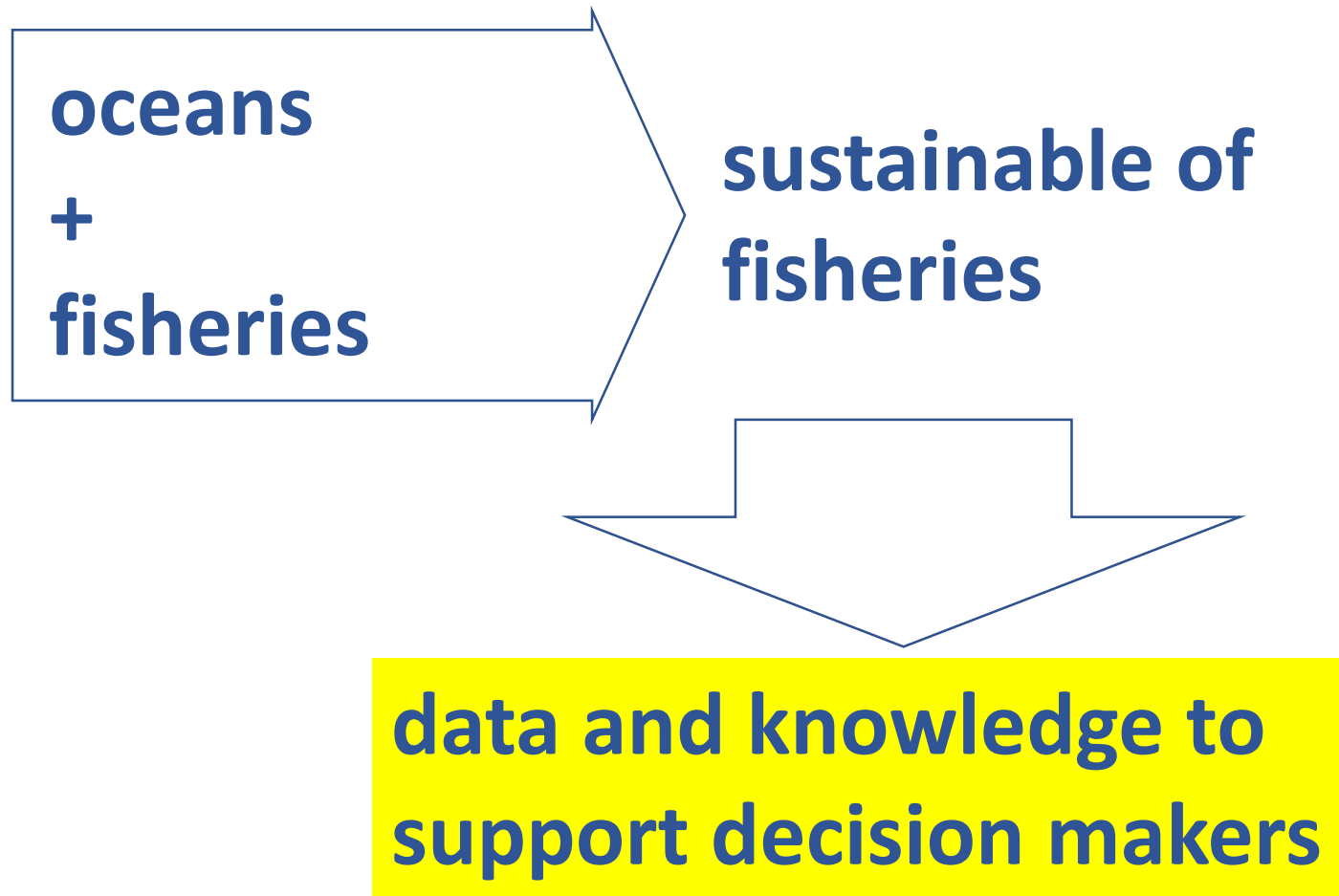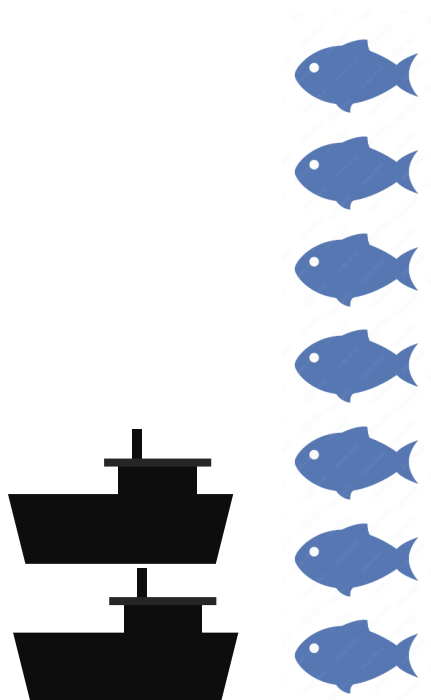
Large Scale Fisheries
> 12 m LOA

Small Scale Fisheries
<12 m LOA;
coastal

20% — Boats and persons

70% — Captures

80% — Boats and persons

30% — Captures

4
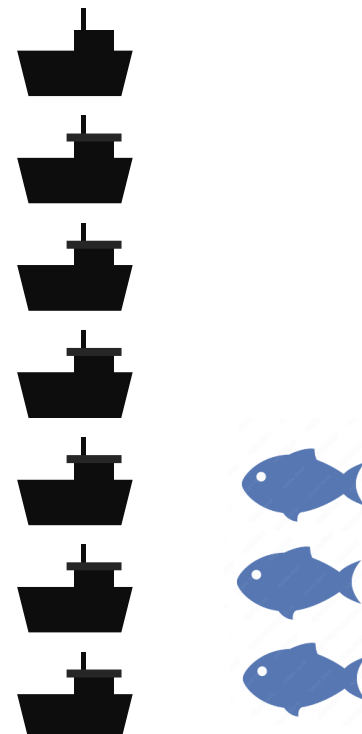
Small scale fisheries

→ Food (fisheries), work and cultural heritage – traditional fisheries systems

Operate near the coast (<100 m depth)
→ areas most used by humankind
→ home of many commercial species juveniles
→ biodiversity hotspots

Are generally more species specific (less by-catches, i.e. non-target species)
Considered to have lower impact on ecosystems – more sustainable

But than, as they are data poor, we don't really know what impact they have

Tracking Small scale fisheries?

→ The question is not if small scale fisheries will be using digital technologies...
the question is HOW and WHICH?

- Trackers (GPRS, AIS...) - high temporal resolution (sec-mins)

- Logbooks (paper or electronic)

- On board cameras (activity, catches and by-catches, ...)

- Activity sensors (e.g. Winch)

- Environmental / oceanographic monitoring (passive on fishing boats or gears)

The more we know about the systems, the best we can apply it.

- What information in logbooks we want or we prefer to get this information from cameras?

- What temporal resolution we need?

- Can we use fishing boats to improve climate models to better forecast climate change?

Why tracking Small scale fisheries?

→ Why for we need high resolution fishing effort data?

- Ocean is a common resource
  - if it is not in a good state. There is no fish to fish

- Spatial management (marine spatial planning)
  - for example avoid spatial grabbing (competition for space with other uses)

- Impact on the ecosystems
  - increase/decrease effort
  - high resolution data permits to see the impact

- Marine protected areas

- Economical and social studies

- Stock assessment models
  - complement survey information