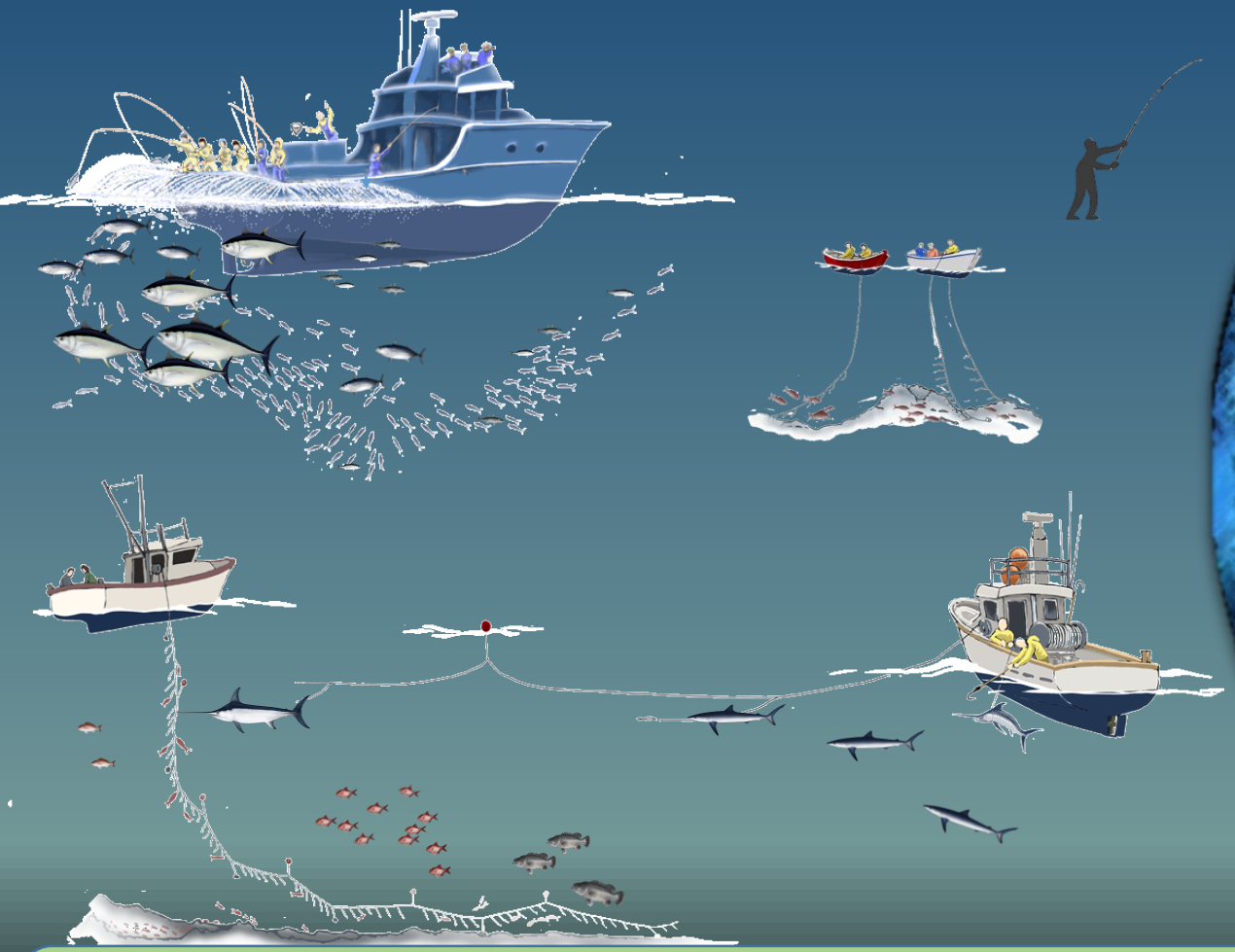
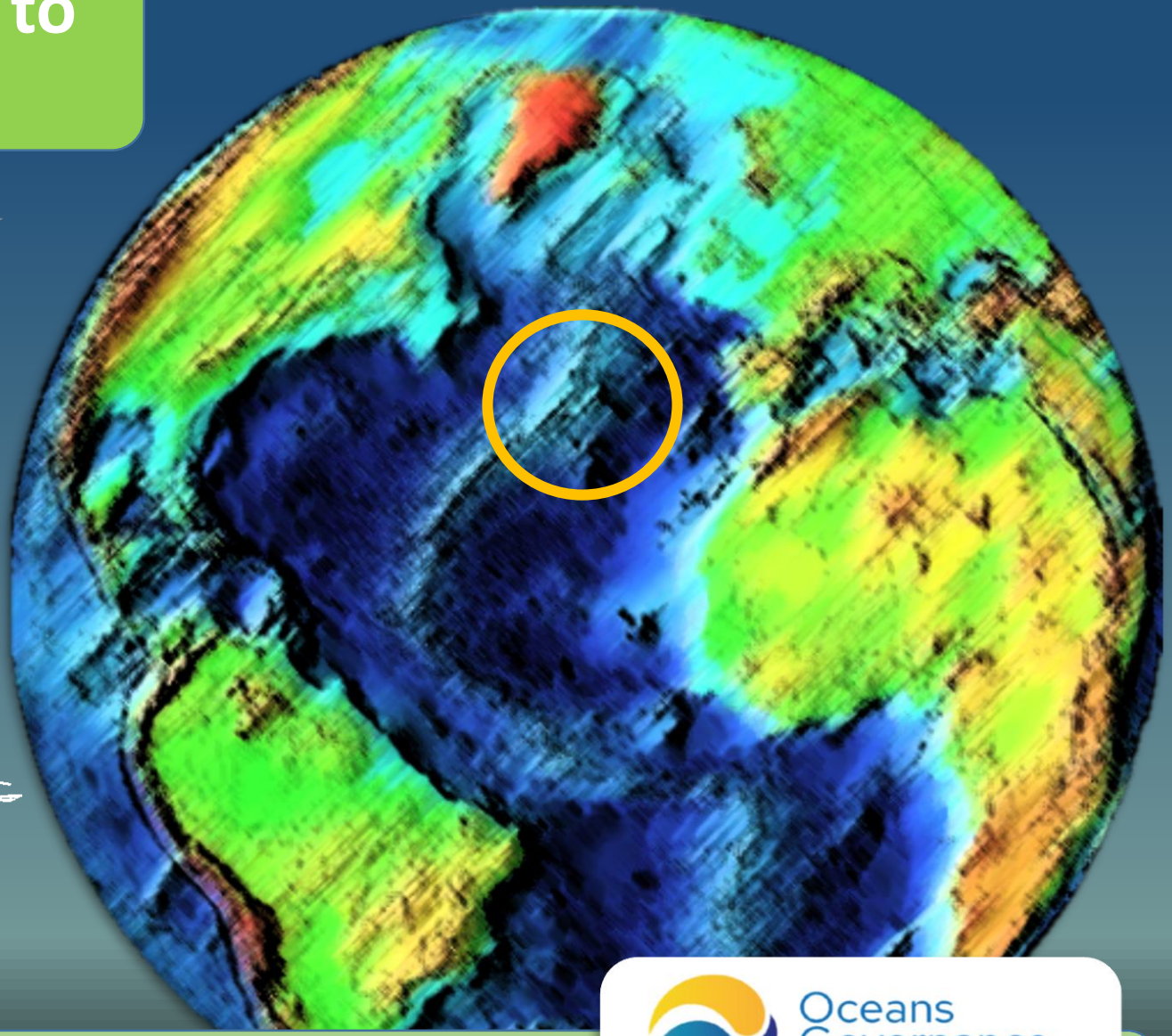
Data collection in fisheries: how to change the paradigm?





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Governo dos Açores

imar

MARE

Oceans Governance In Archipelagic Regions

International Conference
7-10 October 2019
Faial (Azores)
Portugal

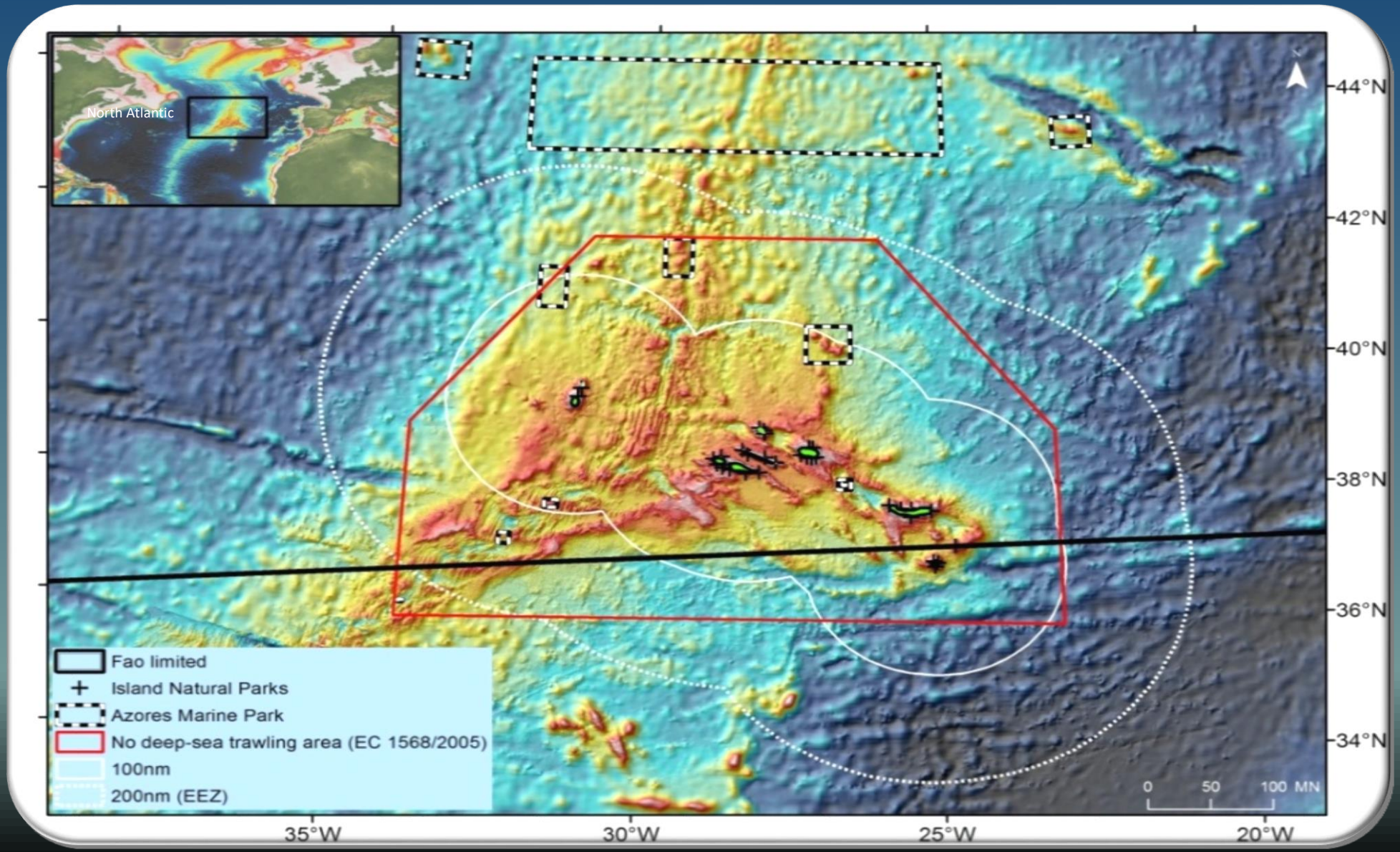
Resume

1 - Framework

2 - Concerns

3 – Working for solutions

Our Region



. 9 islands - 600 km line

. Oceanic currents: NAC + AC

. 1000 m average depths

. Special habitats:
- Hydrothermal vents
- DWC colonies
- 450 seamount features

. Feeding and nursering grounds – L predators

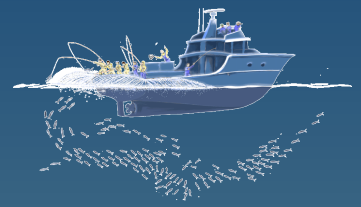
Our Fisheries

2018 Stats

584 licensed professional vessels

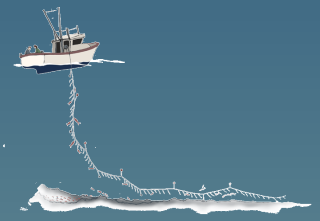
Pole-and-line tuna fishery
(Seasonal fishery: April - October)

105 vessels: 6-31 meters length (Popa >20m: 25 vessels)
99% Weight → 46 vessels



≈ 8100 tons / 13,5 M€
VL < 20m: 2900 t / 4,9 M€
VL > 20m: 5200 t / 8,6 M€

Bottom longline and Handlines



≈ 2880 tons / 22 M€
LLS: 1350 t / 10 M€
LHP: 1530 t / 12 M€

LLS:	LHP:
105 vessels	475 vessels
6-30 meters length	4-15 meters length
99% Weight → 74 VL	99% Weight → 399 VL

Other small artisanal fisheries
(PS, GNS, FPO)

80 vessels: 4-12 meters length
99% Weight → ≈40 vessels

≈ 1555 tons / 3,4 M€
PS: 1077 t / 1,66 M€
GNS: 392 t / 1 ,07 M€
FPO: 84 t / 0,67 M€

Drifting longline for Large Pelagic
(Azores and mainland fleet)

17+20 vessels: 9-30 meters length
99% Weight → 13 vessels

≈ 60 tons / 0,18 M€
– LLD mainly land outside Azores

Recreational fisheries
(vessels, spearfishing, shore ang)

1400 vessels < 10 meters lenght + 3000 sp + 10.000 ang

Vessels: ?150 tons
Spearfishing: ?250 tons

Why monitor?

Fish stocks are considered common goods

- Consumption by one person precludes consumption by others

- When no limits exist, stocks are likely to be depleted for future generations

Sustainability requires that activity is regulated, so that yields do not exceed certain limits that jeopardize the population and other ecosystem services (e.g. other uses).

To be able to regulate it is necessary to have information, i.e. COLLECT DATA.

How?

Fisheries Data Collection Programs

- to assess stock status, sector profitability and the effects of fishing on the ecosystem;
- to substantiate the EU CFP on the best scientific advice possible on

WHAT, HOW, WHEN, and WHERE to fish

DCF - Azores

- mandatory programs implemented in all member states

Comissão Europeia

Some programs (e.g. POPA and COSTA) may have additional specific objectives:

- Dolphin safe certification for tuna fisheries
- Supplementary data on associated species (e.g. sightings)
- Oceanographic data
- Marine litter (drifting + onboard management of residuals)
- Bycatch of sensitive species (EU MSFD)

POPA

COSTA

Which data?

Fisheries Data

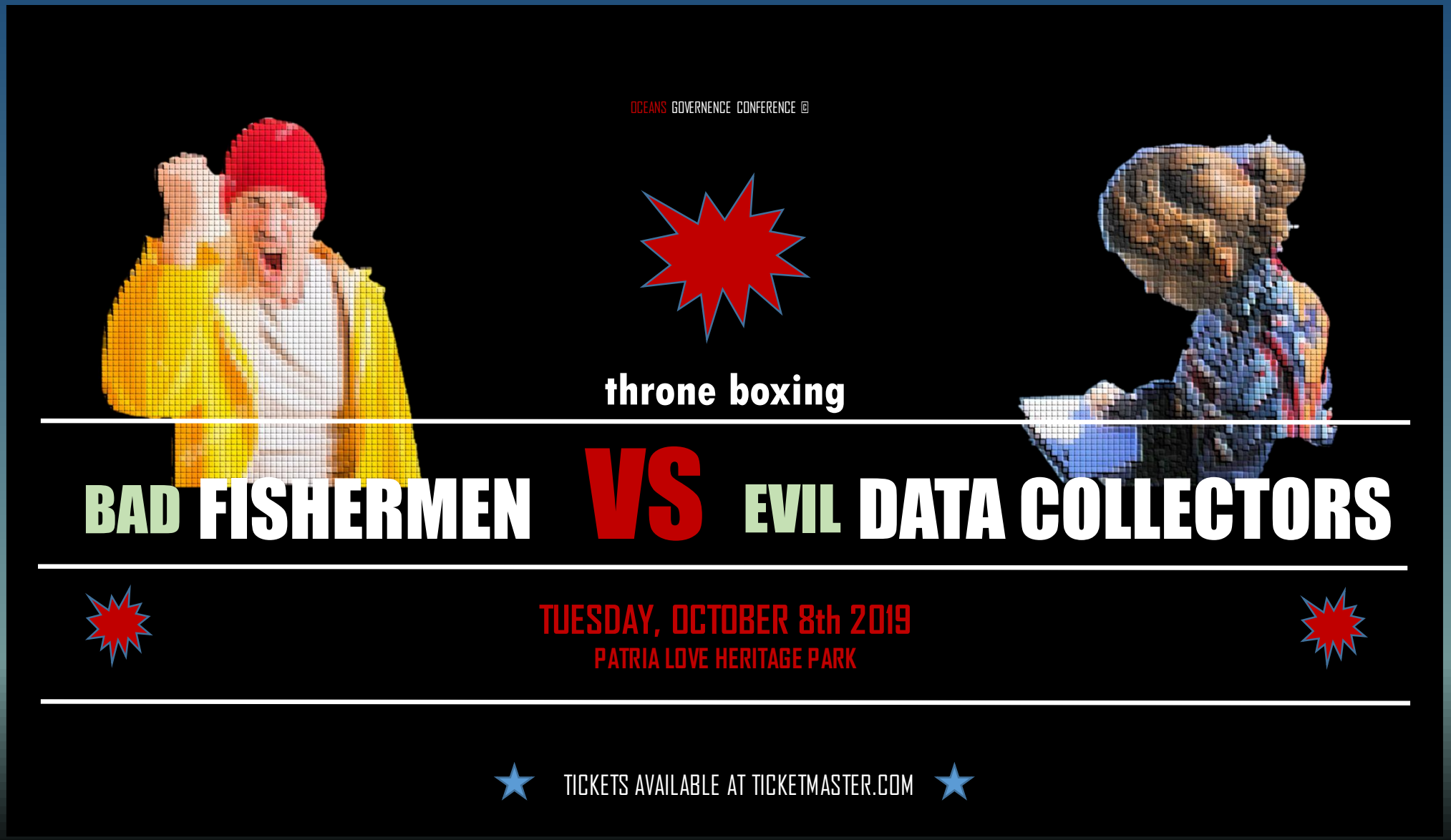
Transversal data:

- **mostly data under control regulation**
  (Fleet characteristics, VMS, logbooks, landings, etc.)
- **mostly mandatory**
- **confidential and non-confidential**

Scientific data:

- **data collection programs**
- **collected by scientific observers (on land and on-board)**
- **data on operation and catches (including biological data)**
- **confidential**

The current paradigm



Scenarios

Good fisheries data → Adequate analysis → Correct evaluation → Reliable results

Bad fisheries data → Inadequate analysis → Biased evaluation → Doubtful results

EU FISHERIES POLICY - Demands member states to comply and provides Financial Support

Actual situation

COOPERATION LEVEL

On Board

Pole-and-line tuna fishery	100% cooperation in the Azores on vessels > 20 meters length
Drifting longline for Large Pelagic	≈ 60% cooperation of mainland vessels (100% regional fleet)
Bottom longline and Handlines	≈ 20% cooperation of <12 and <12<15 meters segments
Other small artisanal fisheries	≈ 20% cooperation

On Land

Sampling on landing places	≈ 40% cooperation

How can we assure adequate coverage?

Actual situation

In those who want to cooperate, the following issues persist:

. Vessel availability (When? Where?)

. Vessels' conditions for embarking observer (one more is ok?)

. Vessels' maximum capacity (one more is possible?)

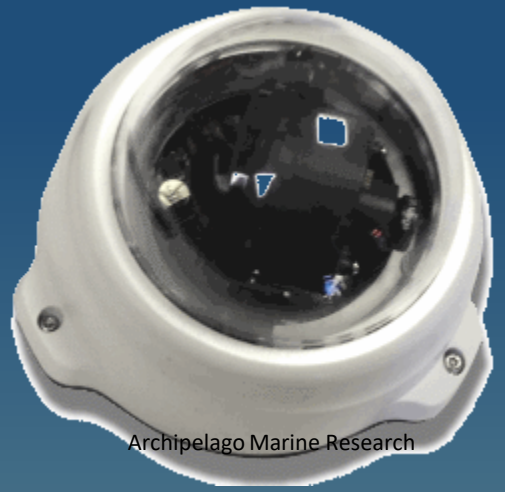
. Non-embarkment as retaliation (it was possible, not anymore)

. Biased sampling (possible but can measure only those)

. Observer effect (possible but are all fishing trips representative?)

New avenues?

Electronic monitoring and self sampling



In particular, adequate alternative for small scale artisanal fisheries or small recreational vessels

BUT

. in the “antagonistic” paradigm and in a non-mandatory scenario, how can we implement?

. if cameras can be installed (e.g. data protection law issues, etc.), how can we provide effective analysis?

. How to effectively articulate with the work of fishing observers and who pays for all this?

. How to plan effective and reliable self-sampling schemes ?

Workshop – Starting point

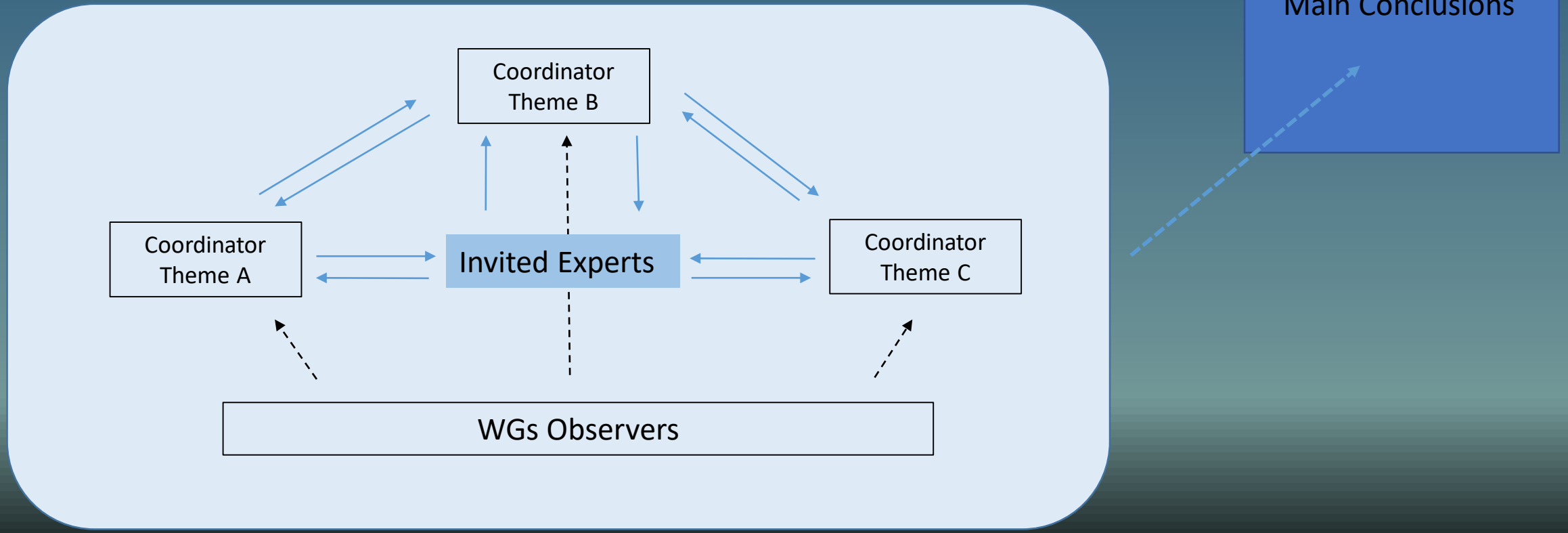
Fisheries data collection working group

A) Sampling planning
B) Observer effect
C) EM and Self sampling

Workshop – Starting point

Suggestion sheet: we welcome each participant to make suggestions for each WS theme

Fisheries data collection working group



Let´s work!

Thank you to fishery data collection teams and fishermen who already work on the same side!