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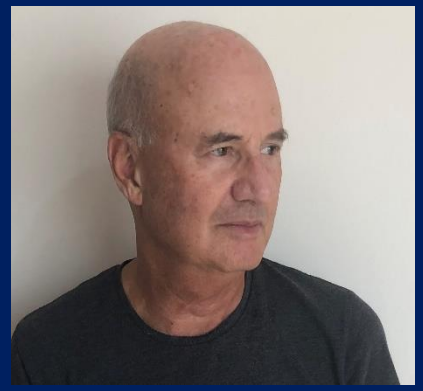
imdis International Conference on Marine Data and Information Systems

OLRAC: Bycatch Avoidance Software Solution for the USA Northeast Atlantic Scallop Fisheries



Presented by: Dr Amos Barkai

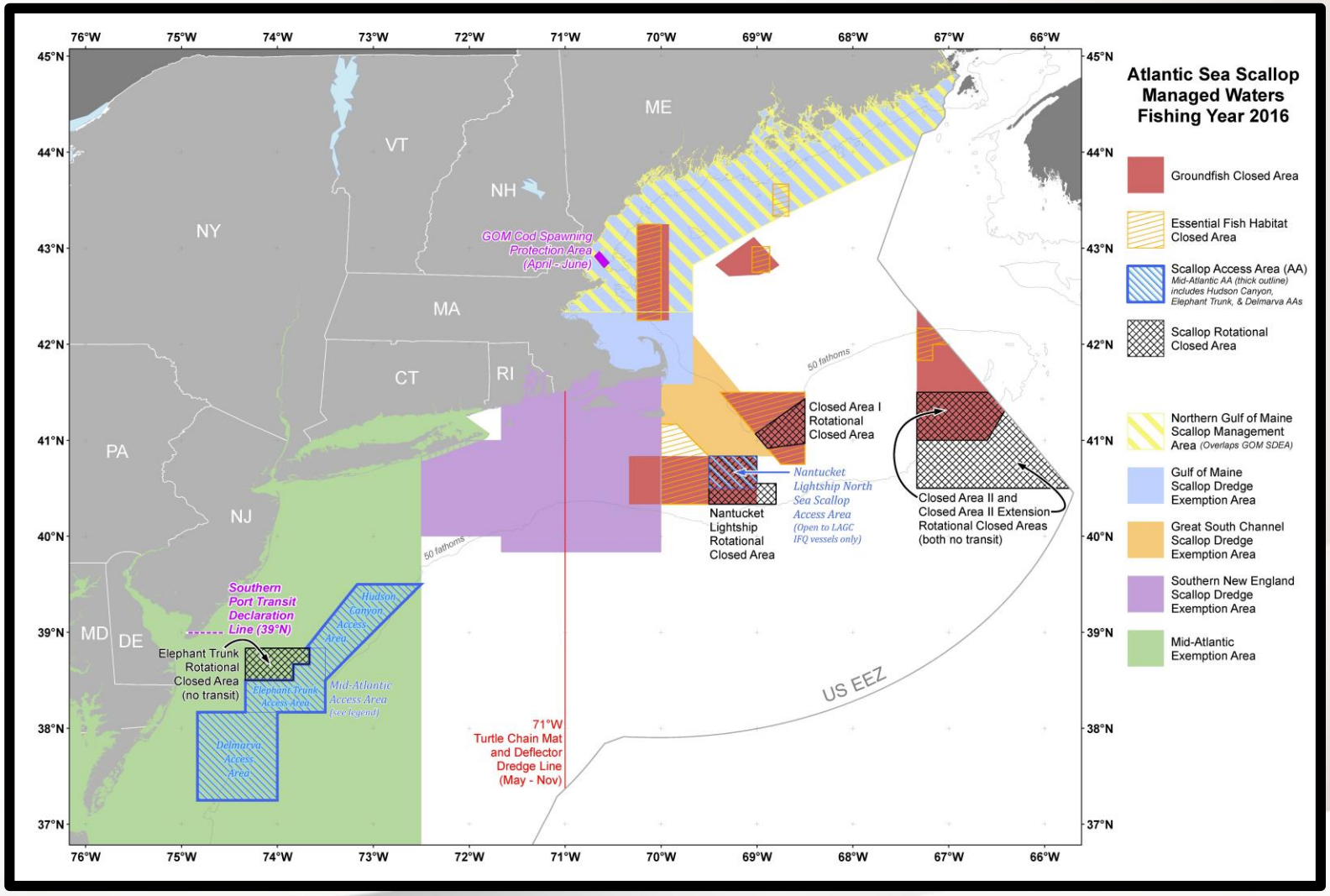
USA North East Atlantic Sea Scallop Fisheries

Mixed Species Fisheries

Limited access to rotationally closed areas

Main Fishery - Scallop

Main Bycatch – Yellow Tail Flounder



The Problem

Scallop Highest Meat Growth Period

Yellow Tail Flounder Peak Spawning Season

Yellow Tail Flounder is a protected species

Yellow Tail Flounder 85% Discard Mortality

Annual Loss? ≈ 1.7M lb Scallop Meat ≈ $ 11.8 Million

Initial intention: To make use of onboard observers in order to mark high Yellow tail Flunder bycatch areas and to warn fishers to avoid them. However, this method was found to be:

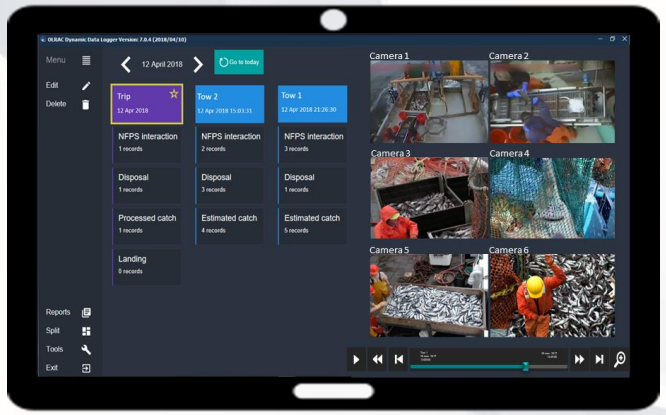
- Slow to obtain and report bycatch data
- Slow to digitise and prepare Data for Further Analysis
- Bycatch distribution data were not available in real time and yellow tail flounder was fished out in great quantities

Alternative Approach

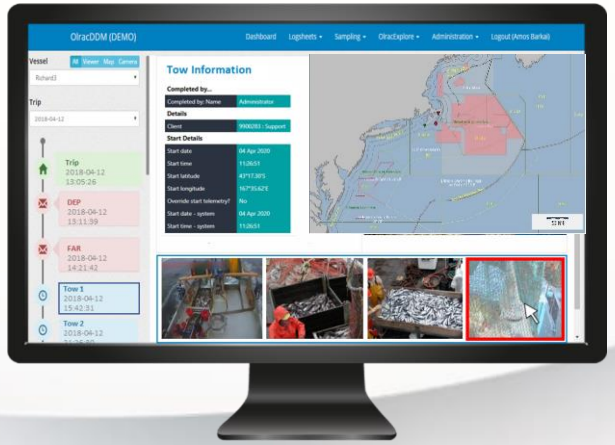
CFARM (the scallop fishery scientific consulting group) contracted OLSPS (www.olsps.com) , to customize its Olrac Commercial Fishing eLog, to provide it with a real-time bycatch avoidance solution.

The Olrac Commercial Fishing eLog

OlracDDL VESSEL UNIT



OlracDDM SHORE UNIT



OLSPS TEAM

40 friendly staff members

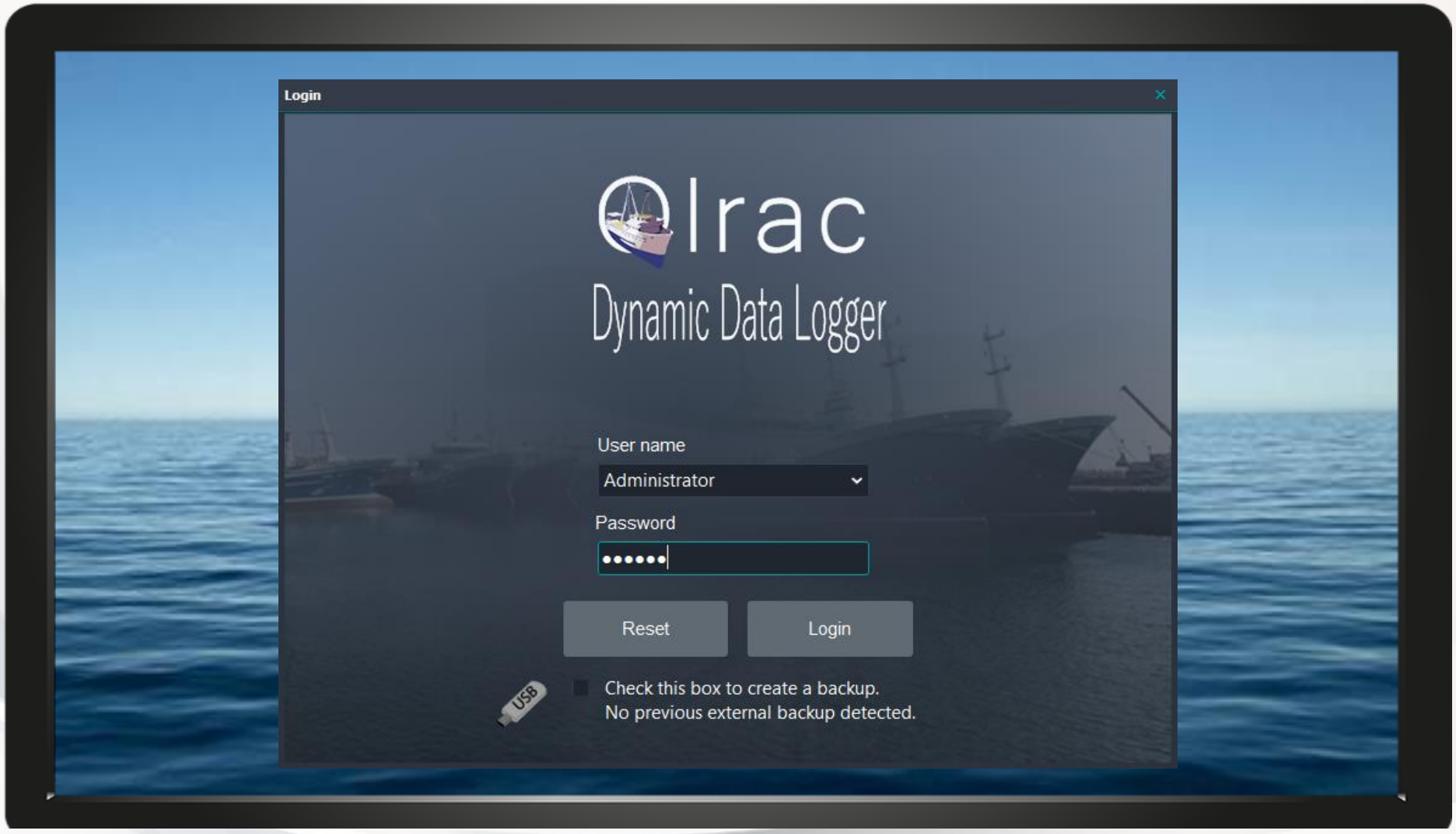
highly skilled technical team of 33 data scientists, mathematicians and software engineers

over 250 years of collective experience

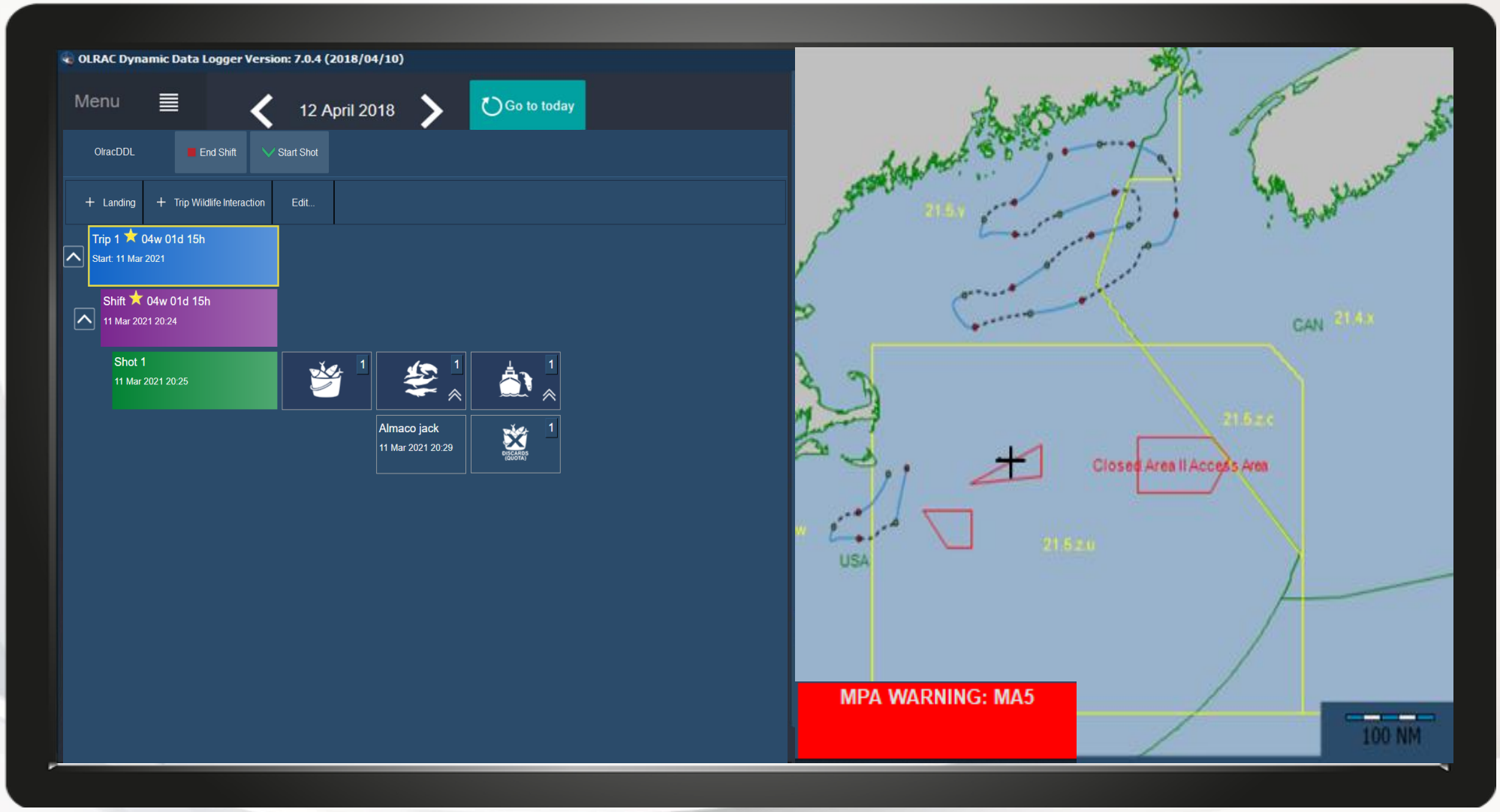
Qualifications include: 4 PhDs, 8 masters degrees, other graduates including a number of engineering and honours degrees

The Olrac Electronic Reporting System Overview

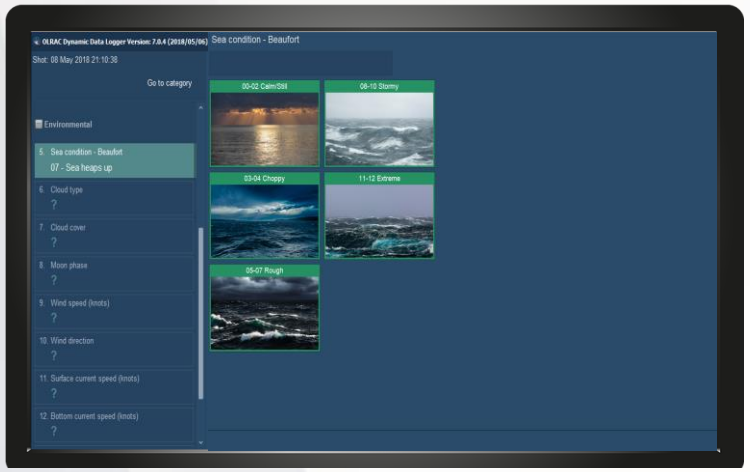
Vessel Unit Overview

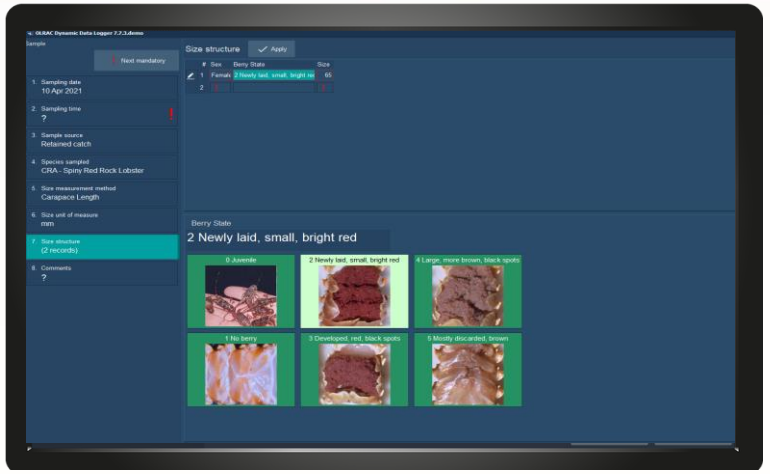


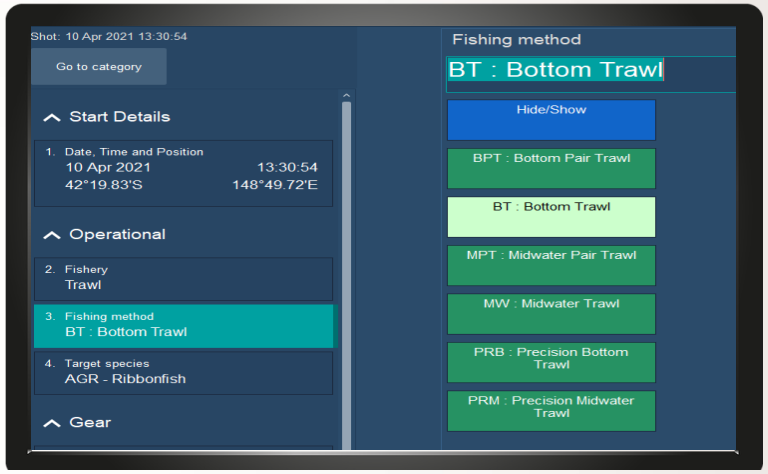
Dashboard With GIS (Mapper) View

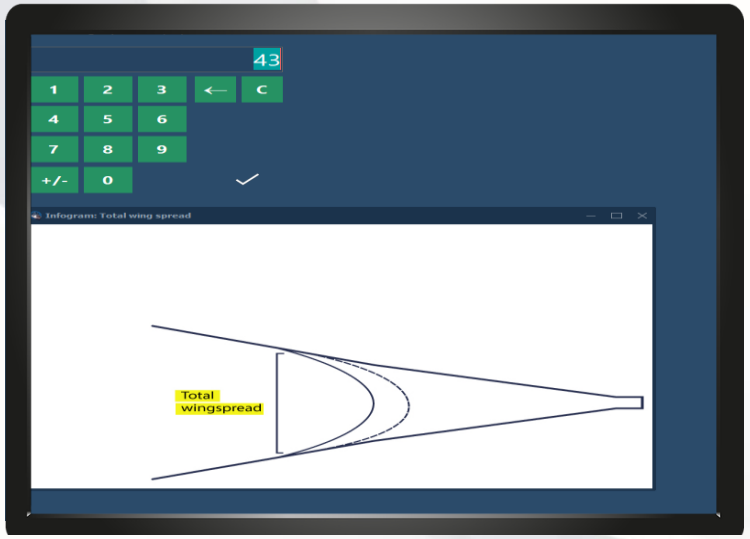


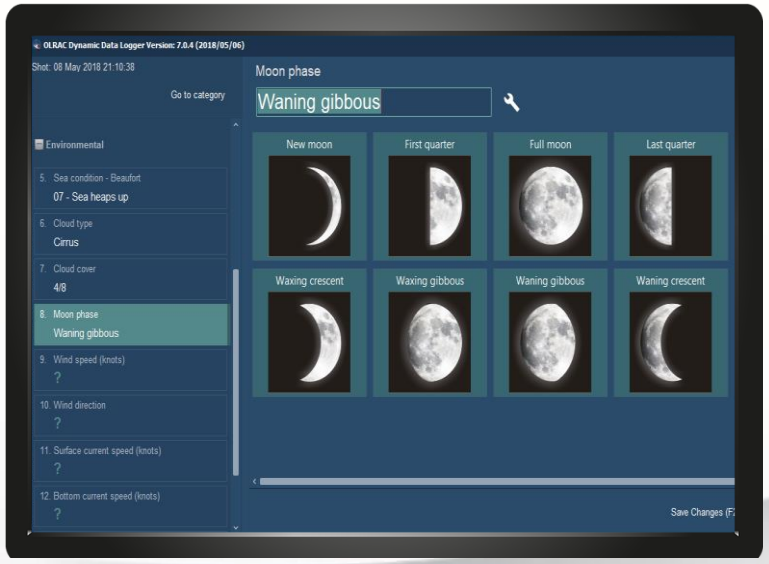
OlracDDL Data Entry Options





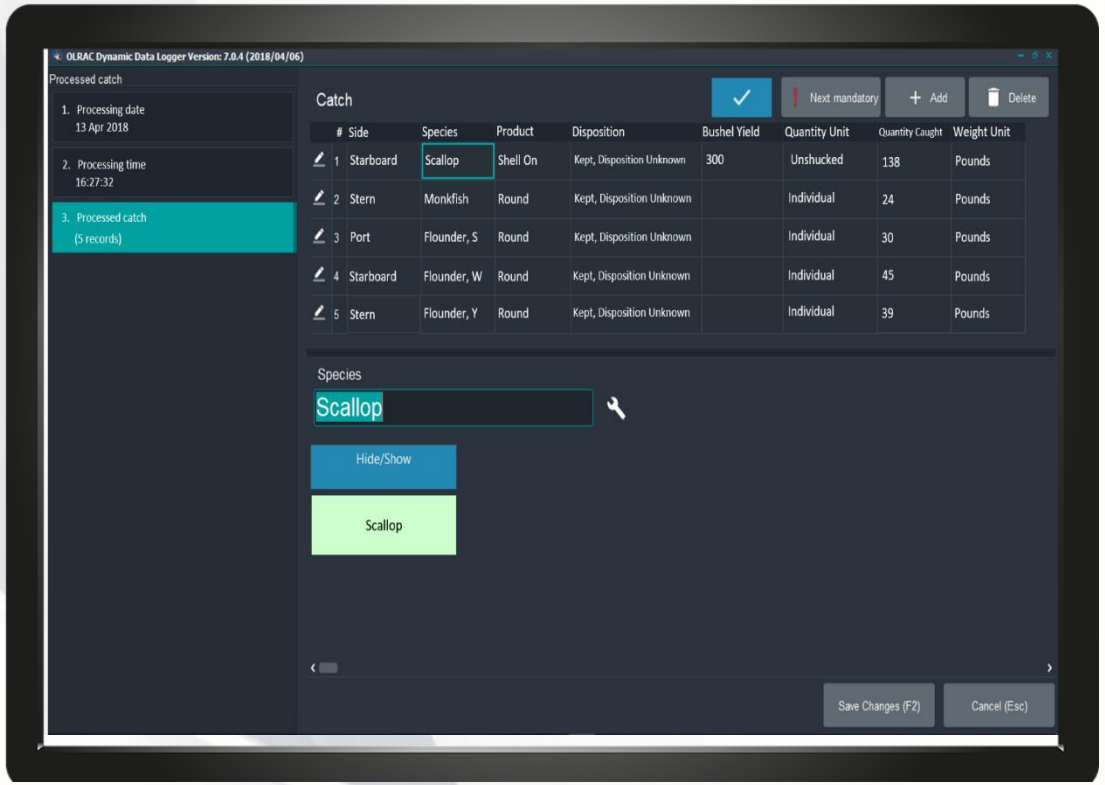






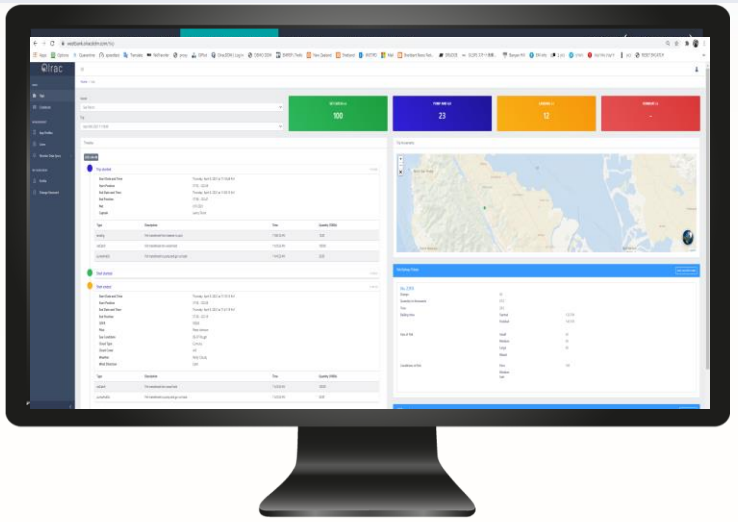
Added value utilities

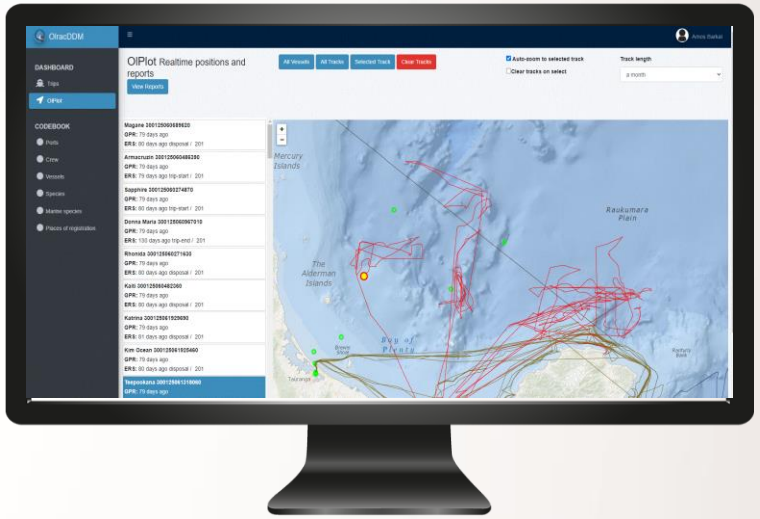
Automatic Onboard Stock Calculator

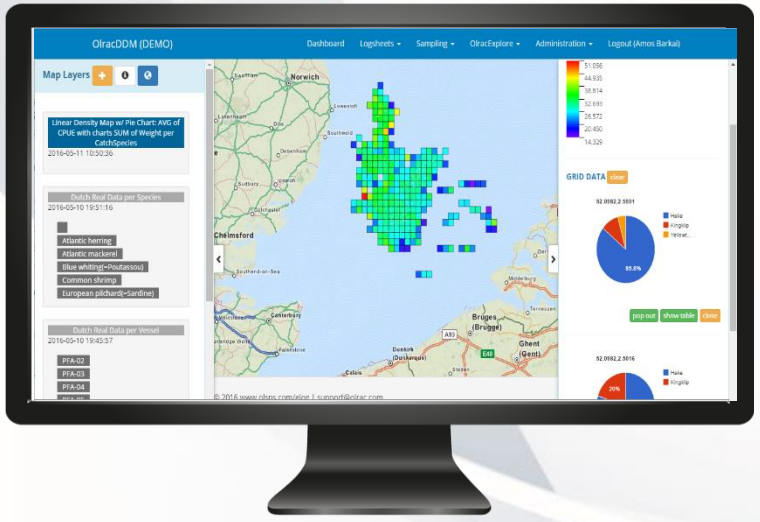


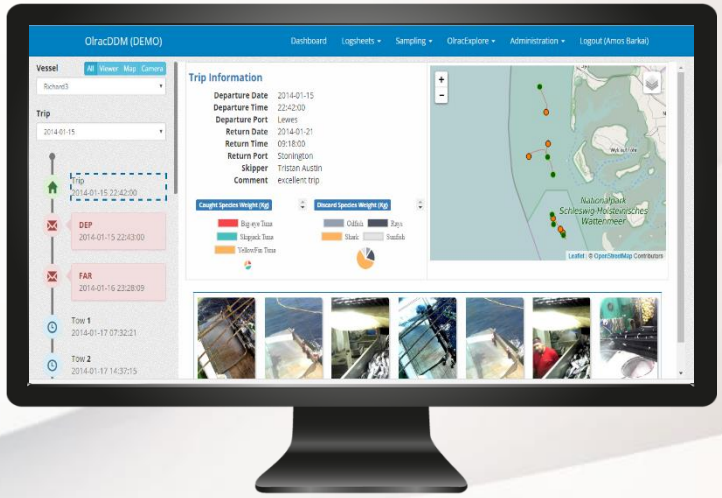
GIS-Based Data Analyser

OlracDDM: Web-Based Shore Unit





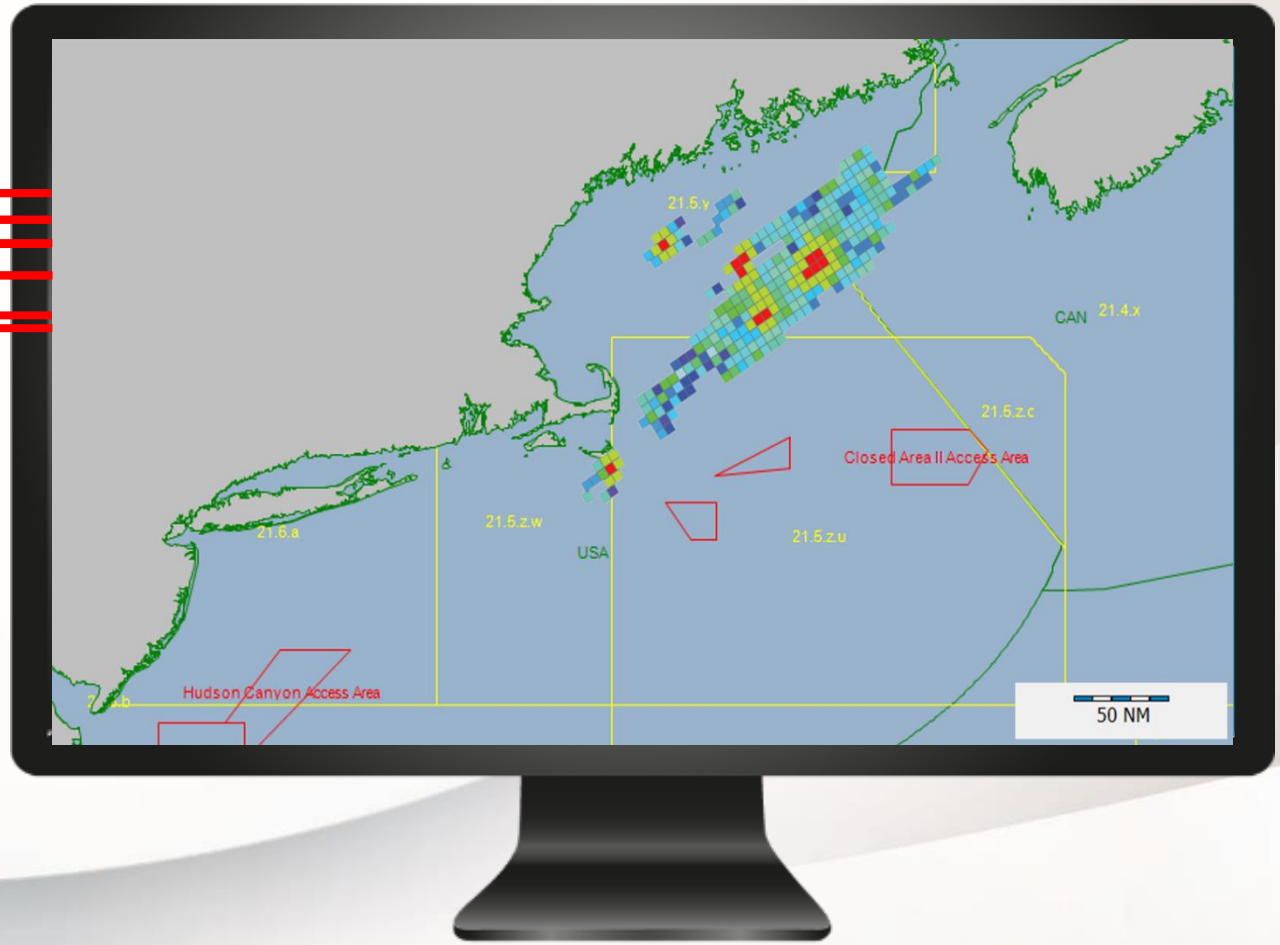




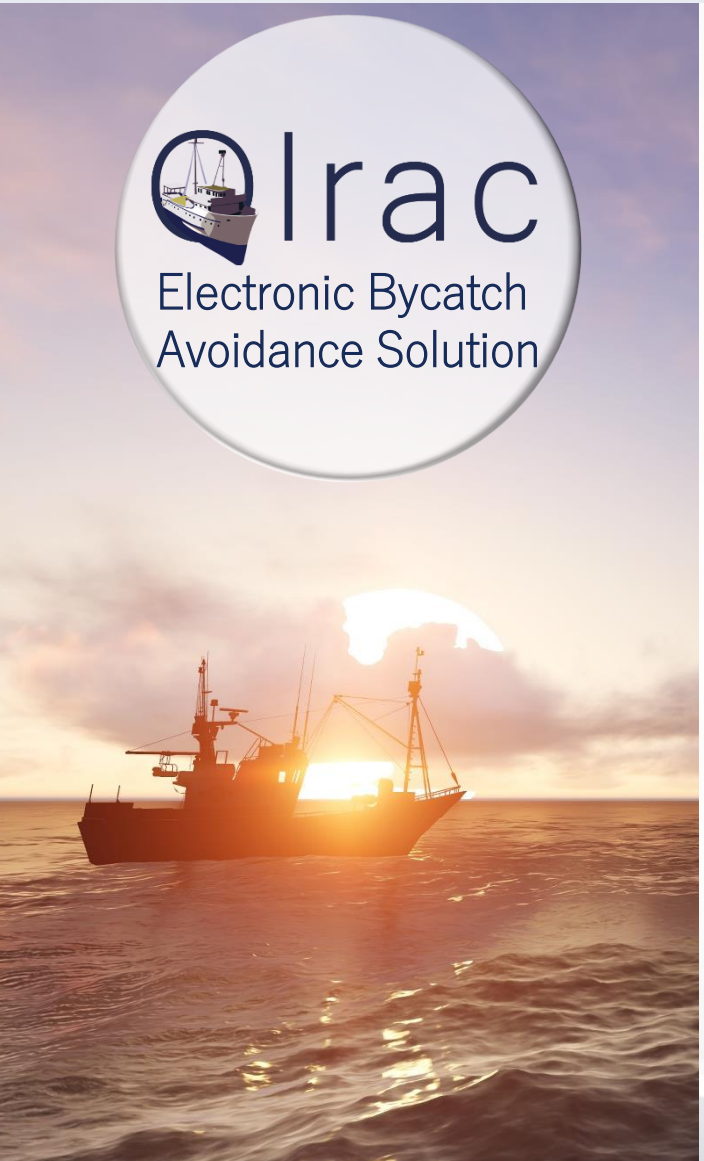
The Olrac Electronic Logbook Solution

The Olrac Bycatch Avoidance Application

Vessels records catch & bycatch data (OlracDDL) → Generates reports & sends to OlracDDM → Combines & standardises bycatch CPUE → Produces bycatch density map → OlracDDL receives alarm & notification → Skipper loads combined bycatch map → Bycatch maps can be refreshed & shared



Advantages Of The Olrac Electronic Bycatch Avoidance Solution



- Enhance fishing efficiencies:
  - Vessel bycatch can be shared amongst fleet
  - Scallop hotspots are NOT shared amongst fleet to maintain confidentiality
- Money saved by:
  - Directing vessels away from high bycatch areas
    - Saves steaming time
    - Reduces unproductive fishing effort
    - Prevents choke species from prematurely closing fishing season

eVTR (eCompliance) Certified And Ready

Olrac vs. Observers?

1 Observer =

+/- $500

to

$700/day

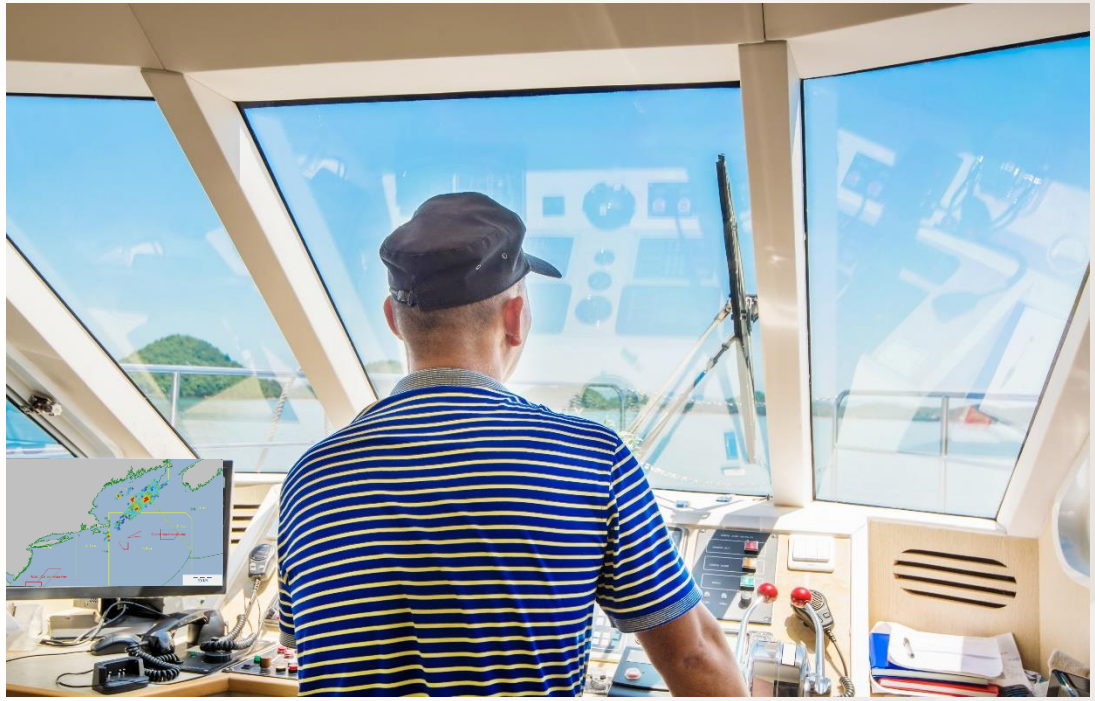
Olrac Vessel Unit =

+/- $1 000/year

In addition to the real time issue presented above, cost saving alone is huge!

Conclusion

- Successful deployment and integration of Olrac bycatch avoidance solution within the limited access scallop fishery.
- Olrac solution successfully identified and communicated areas of high bycatch rates to 15 participating scallop fishing vessels.
- System allows for transparency not currently available within the government-controlled system



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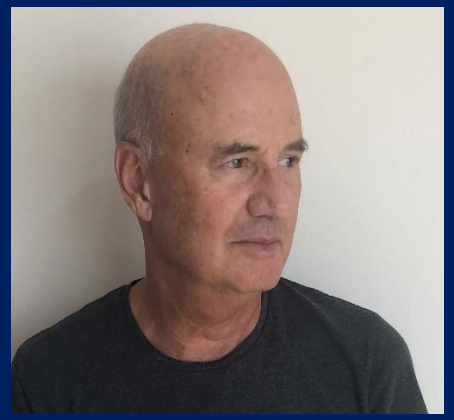
Thank you!

I will now answer any questions



For further information on Olrac Solutions
Please visit **www.olsps.com**
Contact me at **amos@olsps.com**

Olrac

Bycatch Avoidance Utility

Reduce bycatch and increase catch yield