



# *Seabird bycatch in Spain. Demersal long-liners in the Catalan coast*



Albert Cama SEO/BirdLife Marine Programme

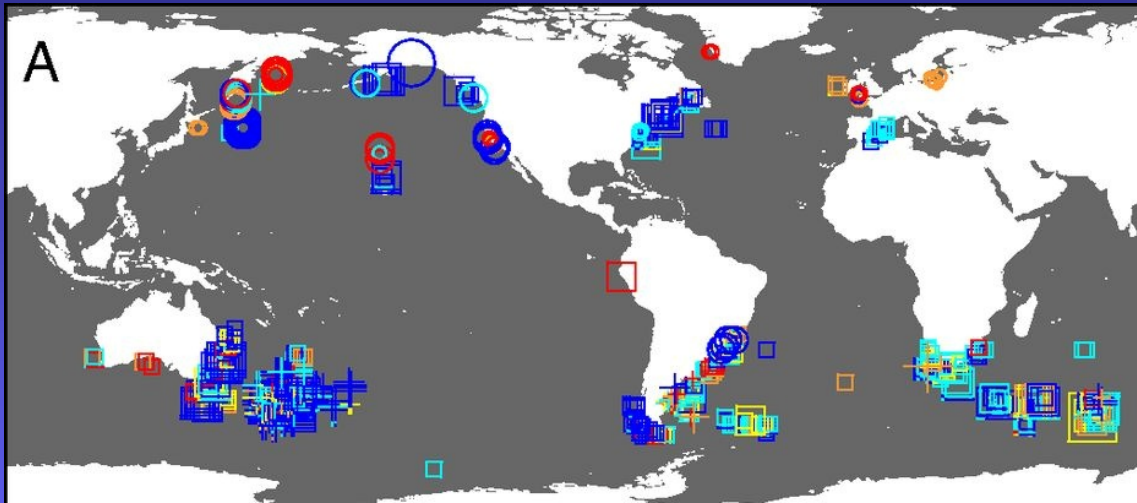
Mediterranean Seabird Workshop  
23rd-25th November 2015 Malta





# By catch, a global problem

- Big threat for albatrosses in the Southern seas
- Concern extended to other seas



*Lewison et al. 2014 - PNAS*



- Global estimates: >160.000-320.000 long liners, >400.000 nets (...)



- Effective mitigation programmes -- bycatch reduced >90% (FAO; BirdLife International – Albatros Task Force)

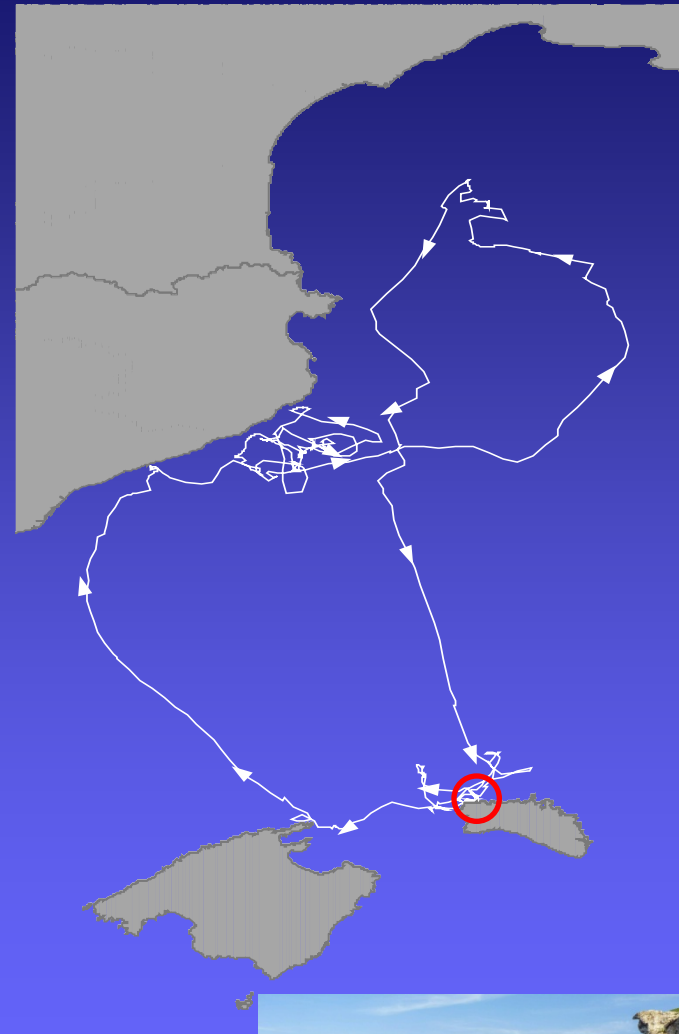
# Why Catalonia?



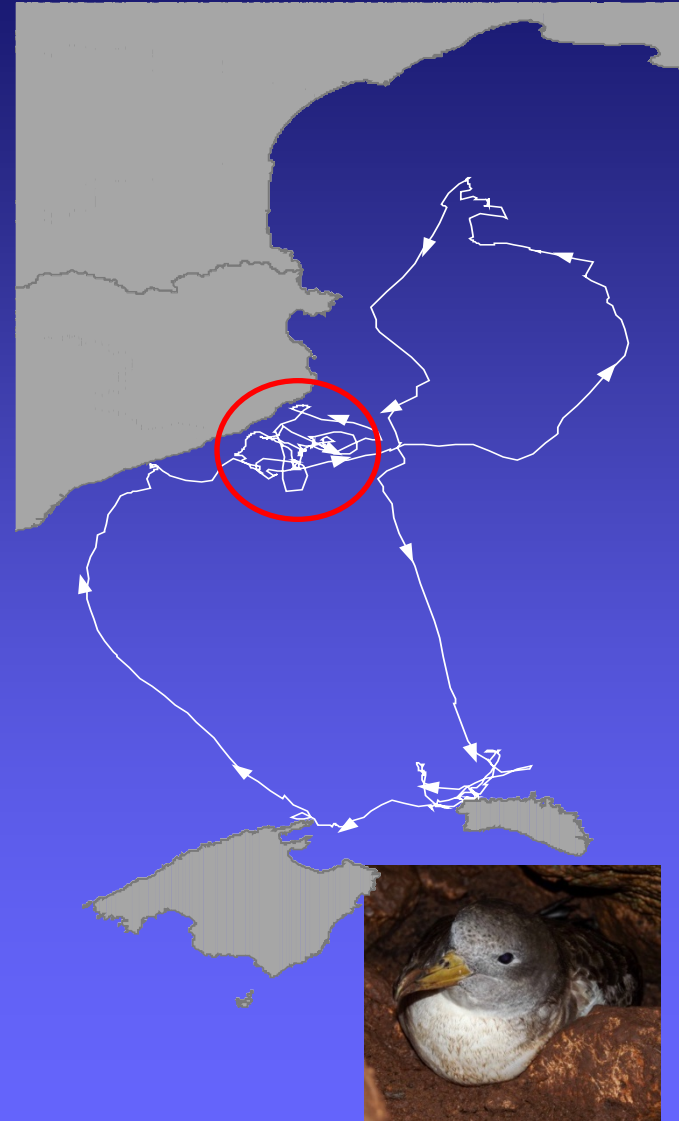




# Why Catalonia?



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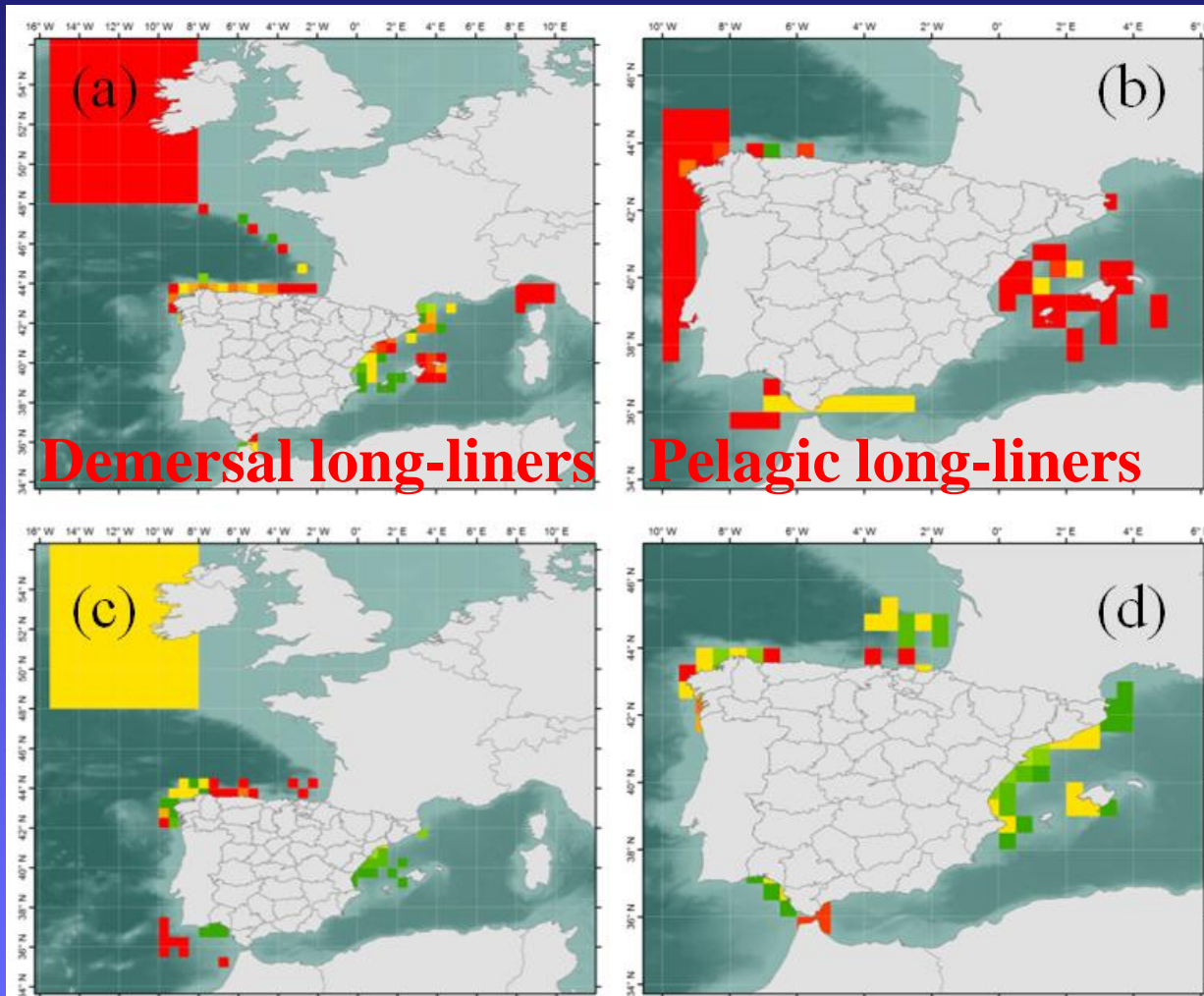


# Why demersal long-liners?



# Questionnaire survey

## Seabird by catch risk in Spain



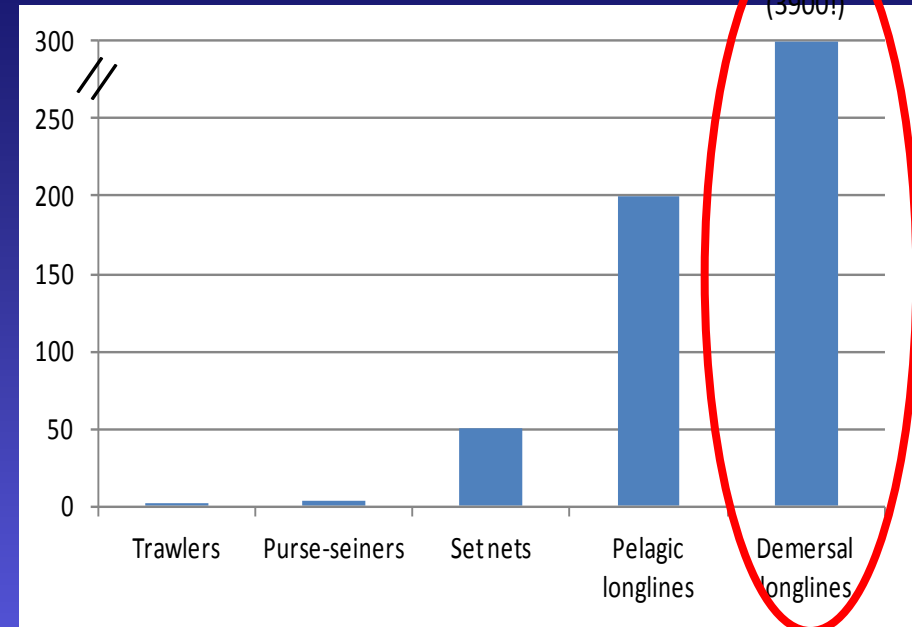
614 questionnaires (FAME & INDEMARES)

67 harbours (Atlantic + Mediterranean)

- (a) Demersal long-liners
- (b) Pelagic longliners
- (c) Trawlers
- (d) Purse seiners



# Questionnaire overall results



INDEMARES



# Concern that goes back a long way

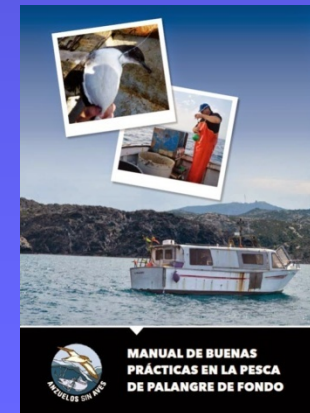
- 90's first on-board surveys and evidences of higher impact of demersal long-liners
- 2000's collection of data of massive by catch events
- 2010's collaboration with UB



<http://www.seo.org/aves-marinas/>

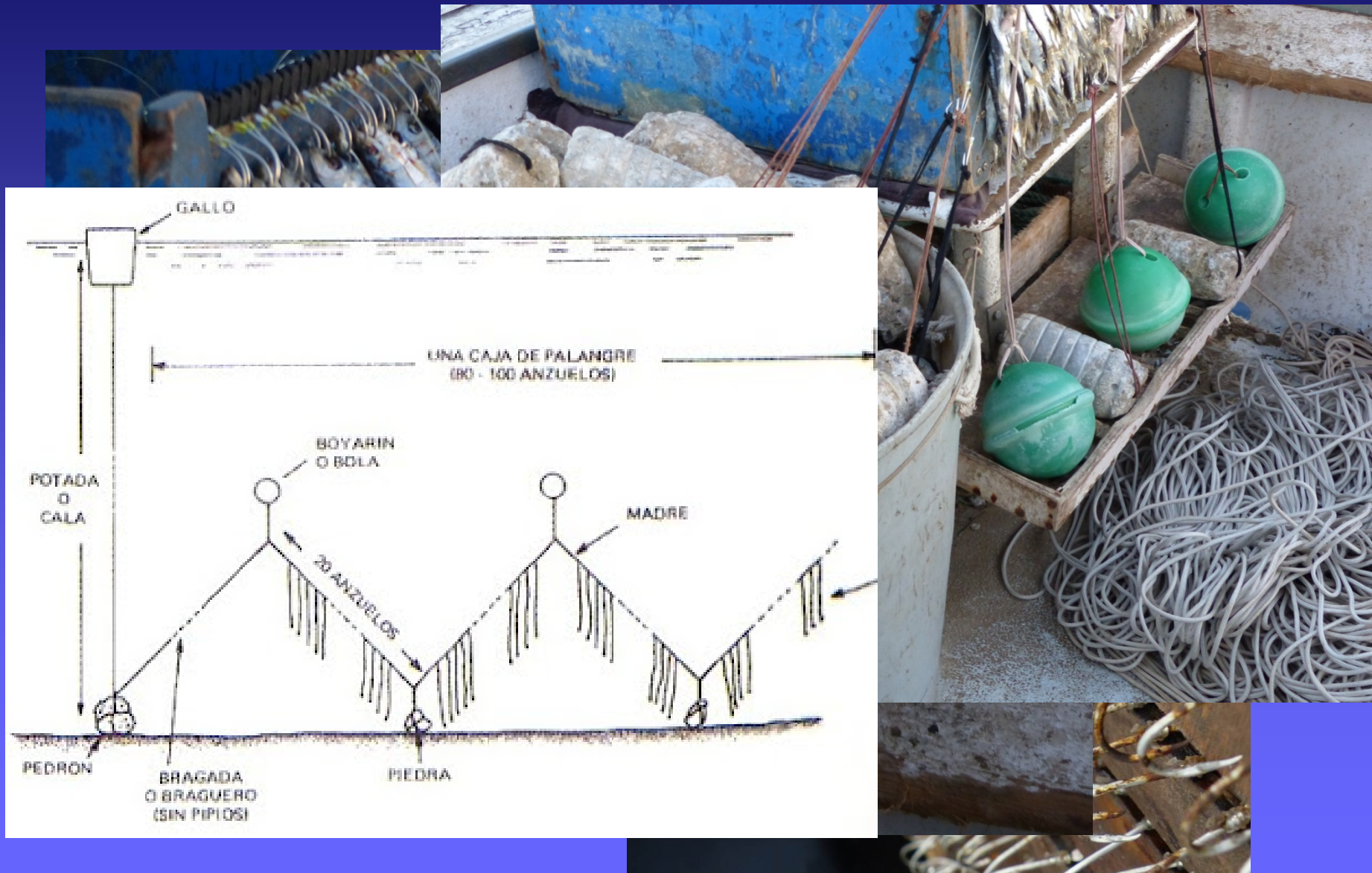
<http://seabirdbycatch.com/>

<https://www.copy.com/s/NzuI3LFcr0NcQgpZ>





# Demersal long-lining



# Demersal long-lining



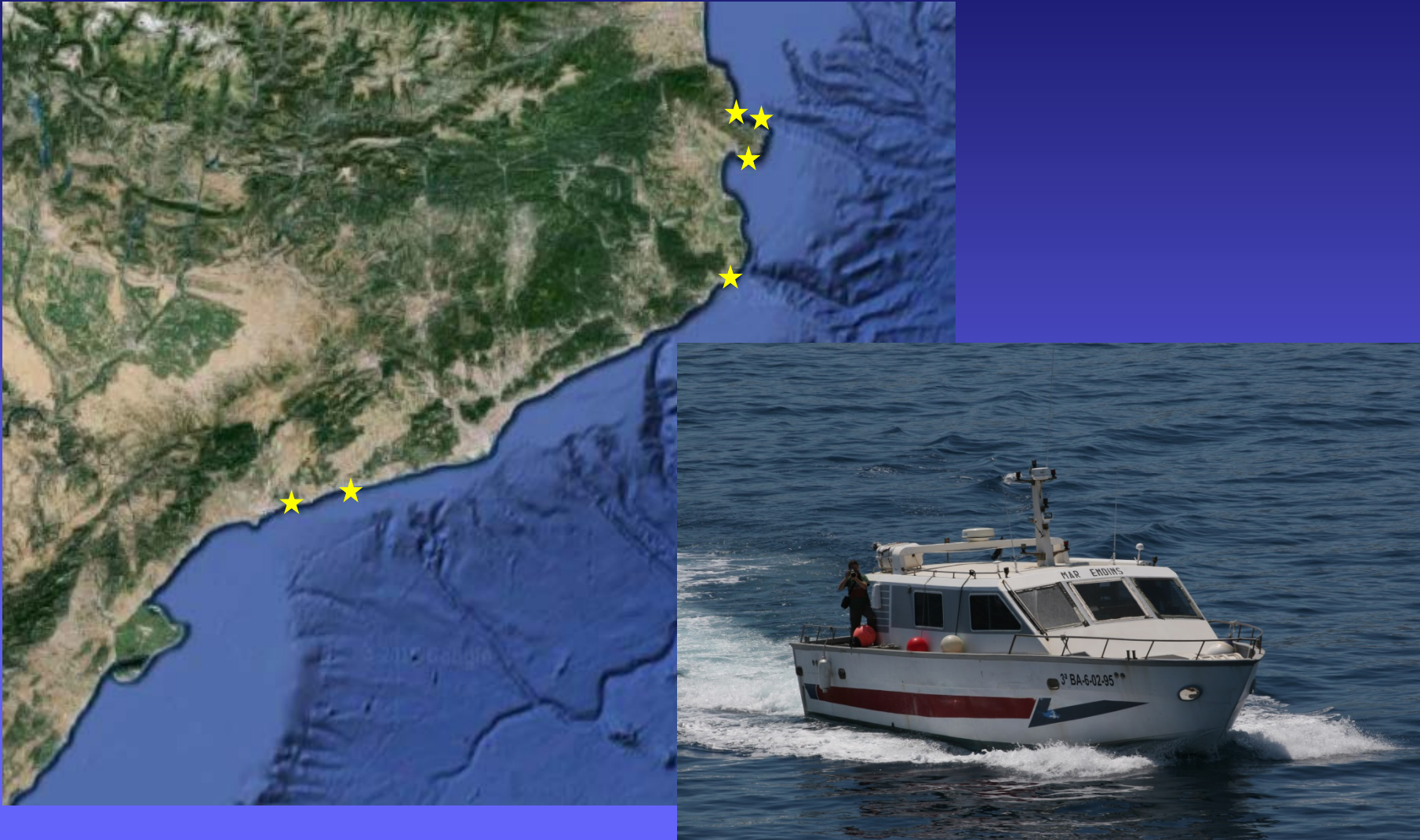


# Demersal long-lining in Catalonia



15 boats in the study area

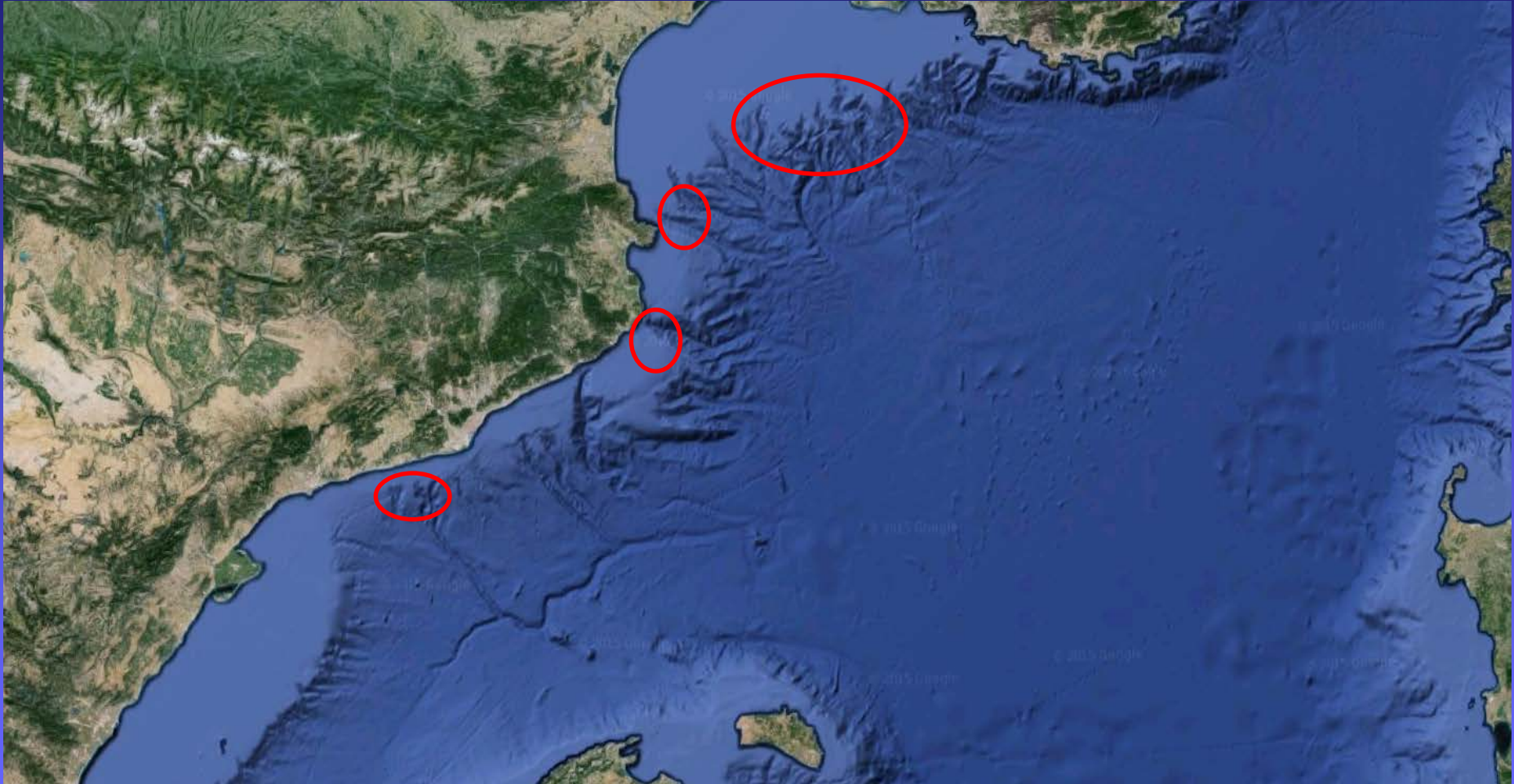
# The observers programme



Collaboration with 6 boats, allowing observers



# The observers programme



Main fishing grounds

# The observers programme





# The observers programme



hauling



setting



Transect seabird counts

# The observers programme

- 68 days at sea
- 150,000 set hooks monitored
- 200 operations monitored
- 1,500 seabird census during operations (10 minutes)
- 1,200 attacks to the bait recorded
- 6 birds caught
  - 3 Scopoli's Shearwaters
  - 3 Yellow legged gull



0.04 birds/ 1,000 hooks



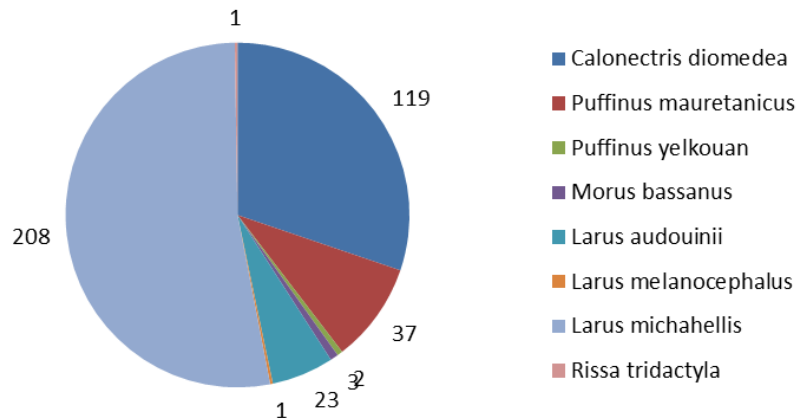
# The observers programme

## Some results

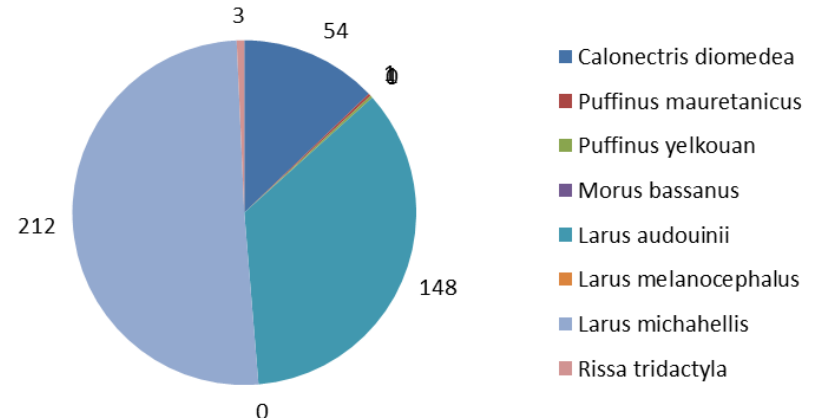
### Attacks to bait or discards



Set



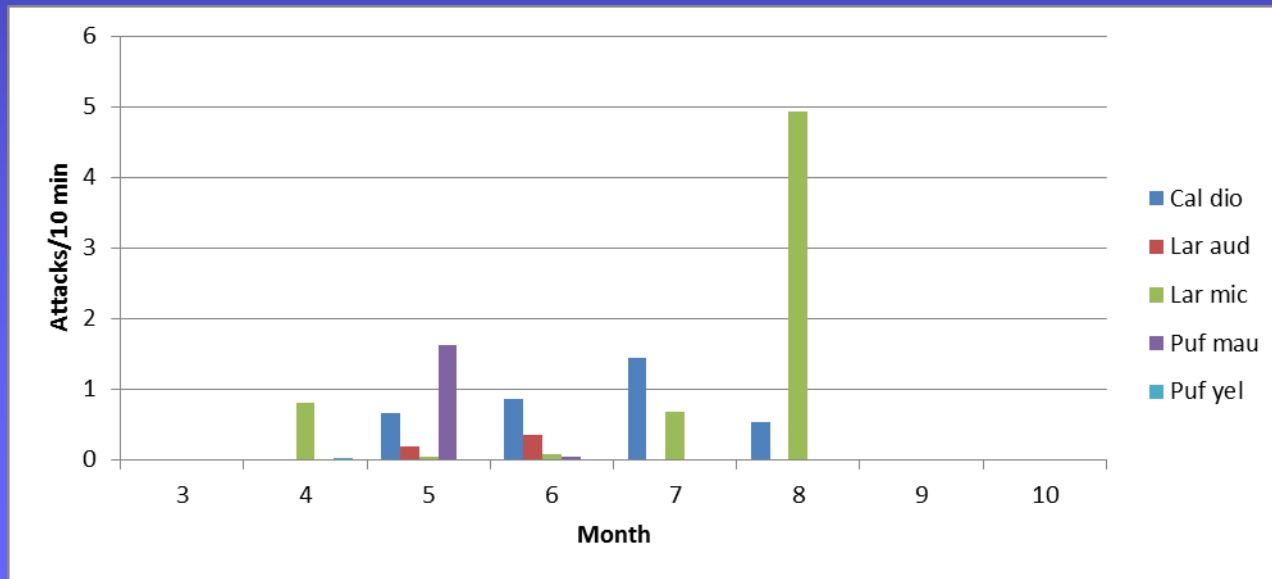
Haul



# The observers programme

## Some results

Attacks to bait during hauling  
Monthly distribution

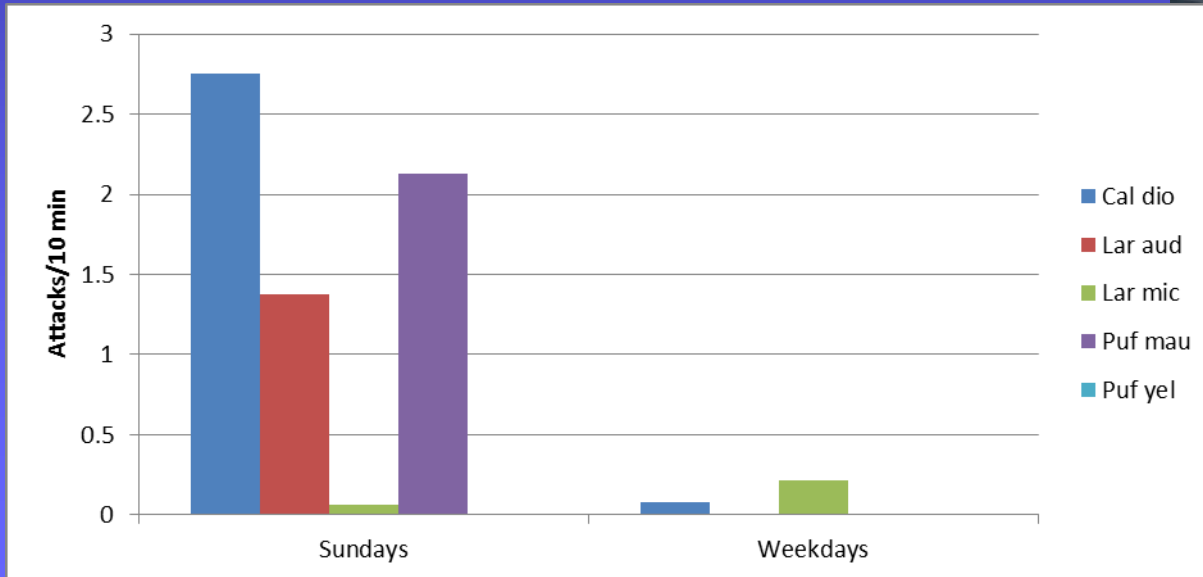




# The observers programme

## Some results

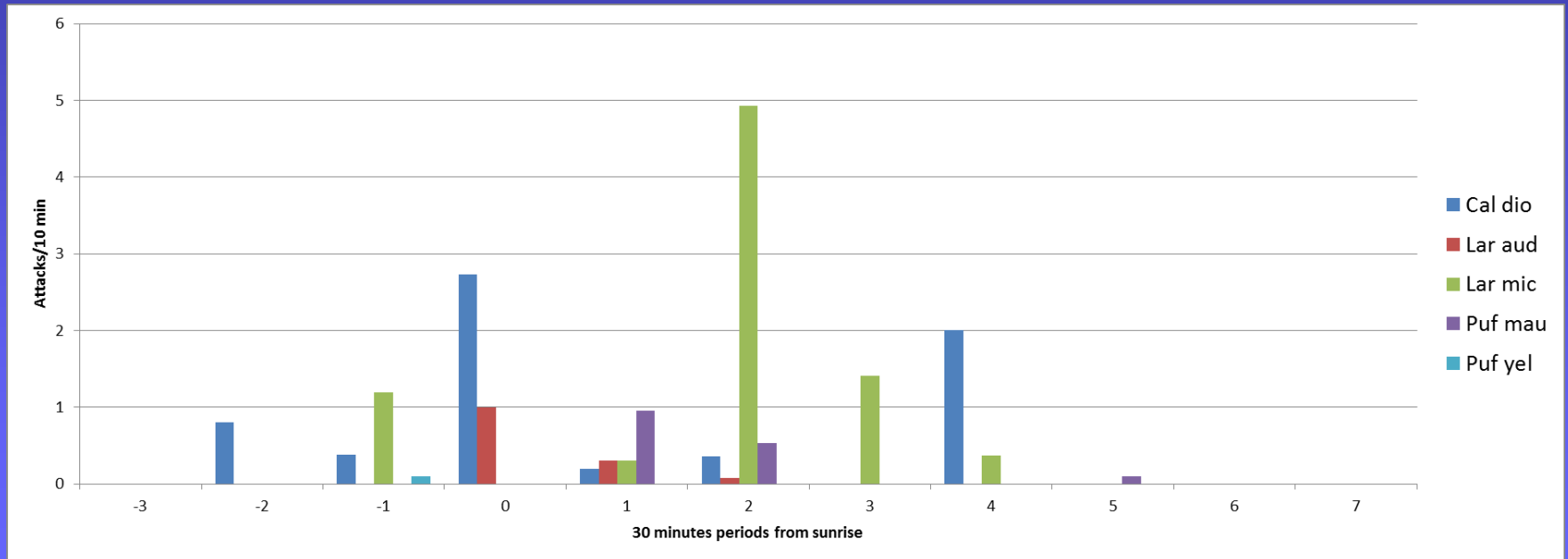
### Attacks to bait during hauling Sundays vs Weekdays



# The observers programme

## Some results

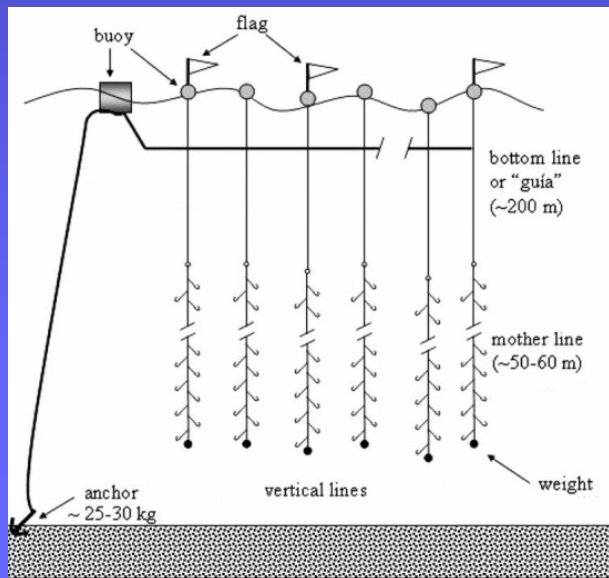
Attacks to bait during hauling  
Time respect to the sunrise





# Next step

## Testing and implementation of mitigation measures





# *Thanks!*

