

# Migration patterns and residence of bigeye tuna (*Thunnus obesus*) in North Atlantic Ocean, based on recent tagging, recapture data and historical data from Canary Islands, Madeira and Azores.

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# Table of Contents

-Materials and Methods

-Results

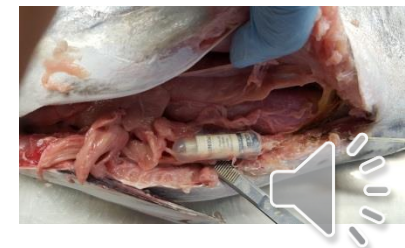
Main movements  
Population resident  
Horizontal movements  
Vertical activity  
Fisheries considerations

-Discussion

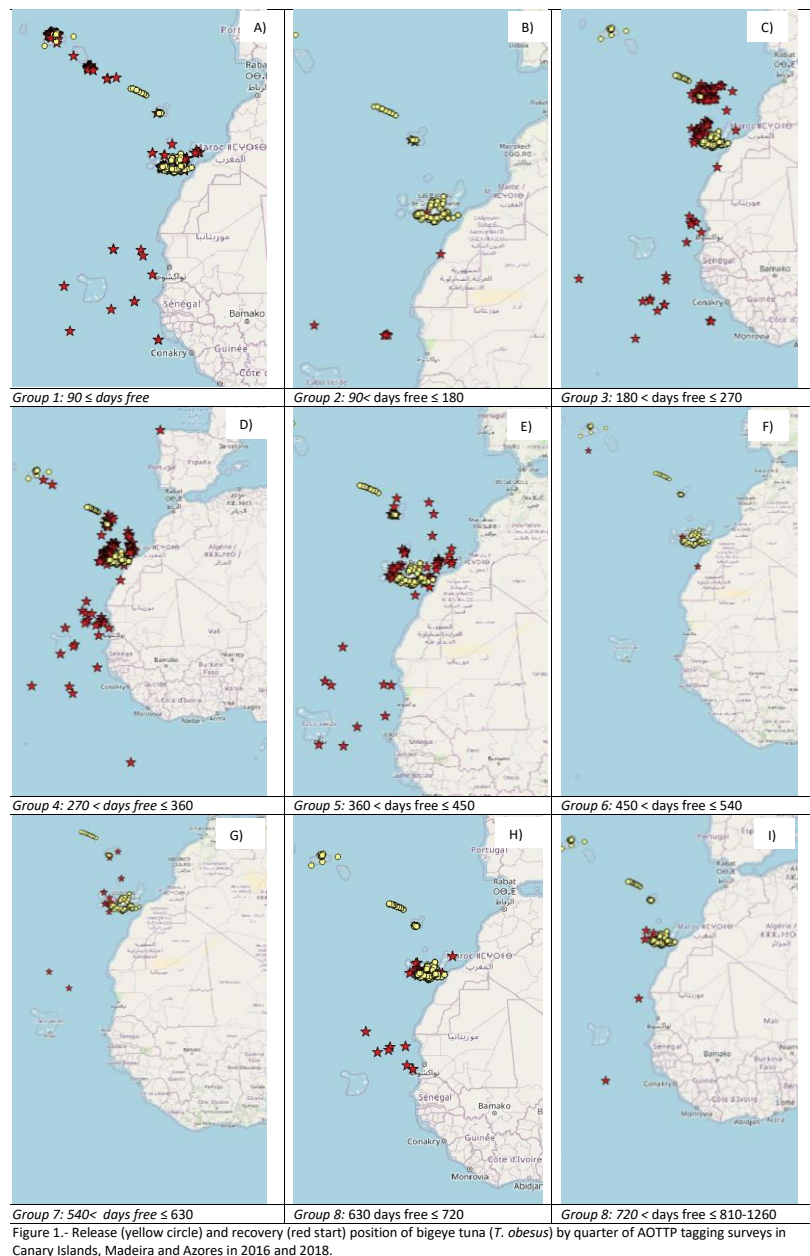


# Materials and Methods

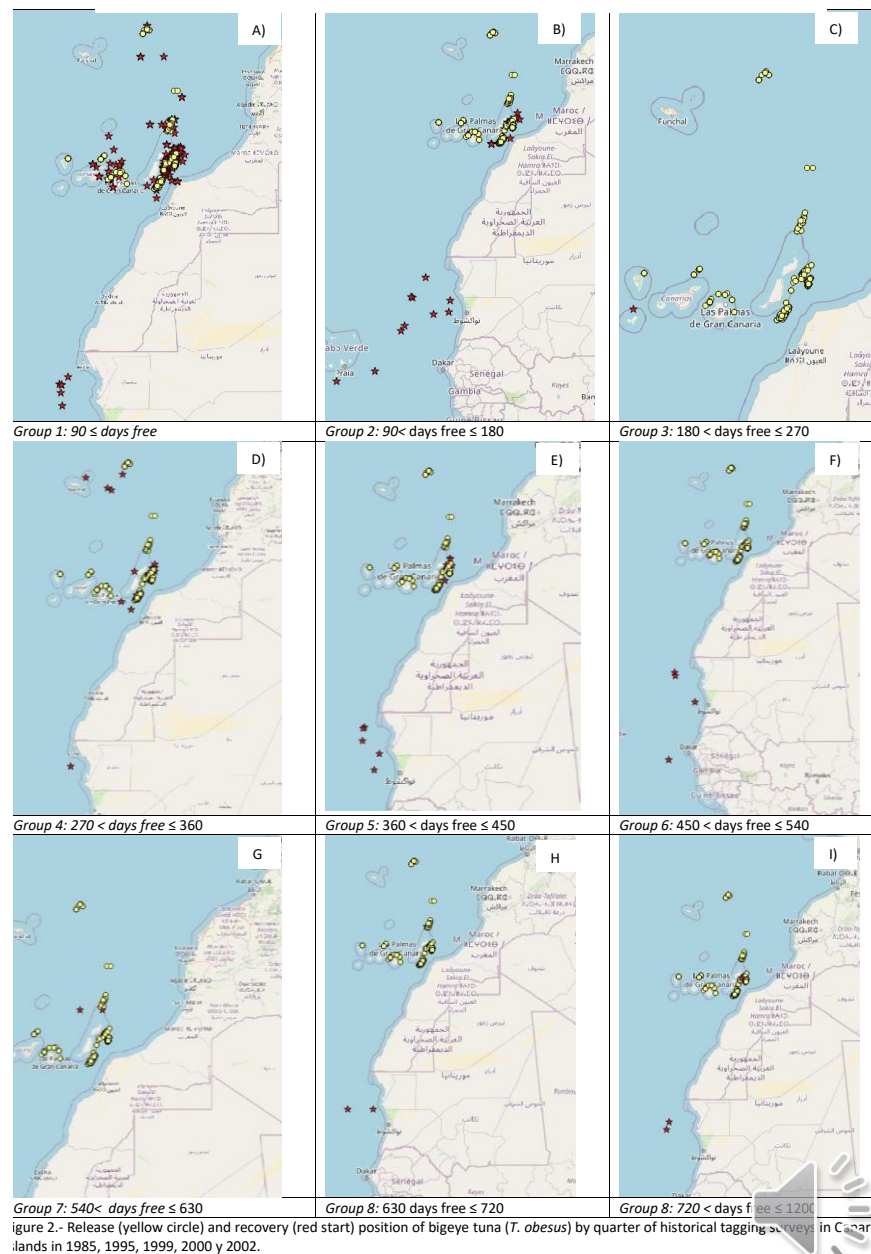
- These tagging surveys, carried out on commercial bait boat fishing vessels.
- A total of 5640 bigeye tuna [fork length (FL) 42-156 cm] conventional tags (dart tag) were release between 2016 and 2018.
- A total of 923 bigeye tuna [fork length (FL) 50-111 cm] conventional tags (dart tag) were release from historical surveys between 1985 and 2002.
- In total 5 electronic archival tags, 0390503 (62 cm FL), 0390491 (61 cm FL) y 0390474 (87 cm FL ) deployed in 2005 and Wildlife SN62906-AOTTP87004 (120 cm FL), Wildlife SN62910-AOTTP87005 (98 cm FL) deployed in 2018.
- In this specific analysis, we use only the records release between 27° to 40° North Atlantic Ocean. The data have been grouped by quarters.



## AOTTP surveys 2016-2018

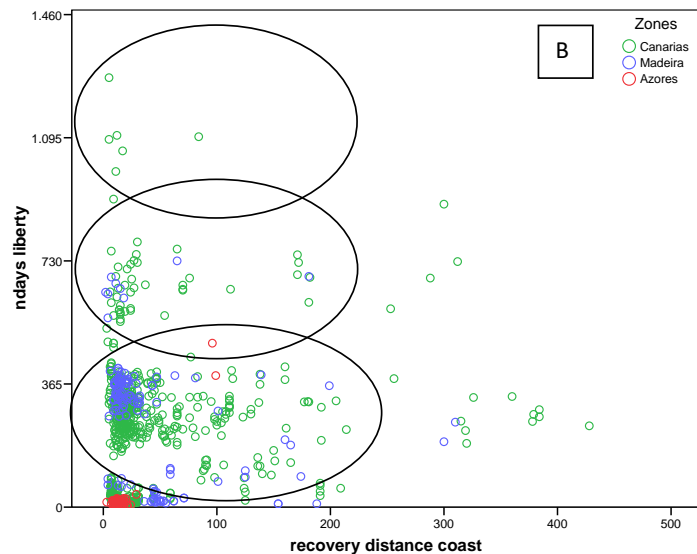
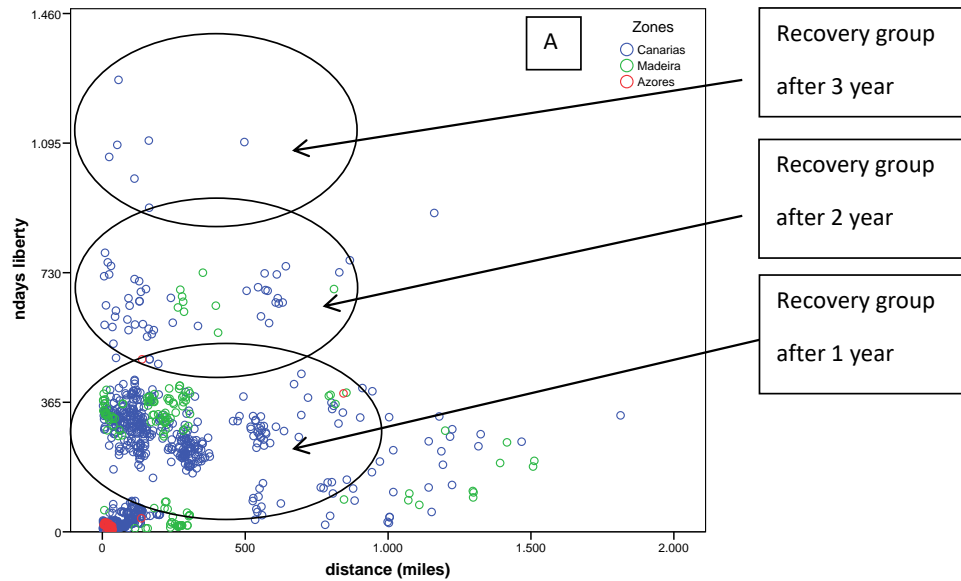


## Historical ICCAT surveys 1985-2002

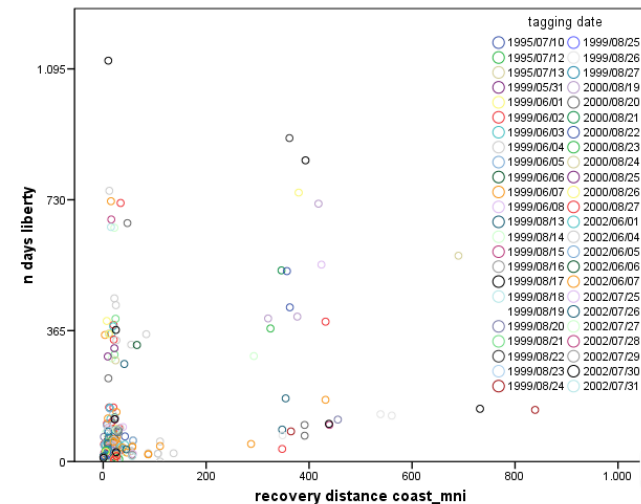
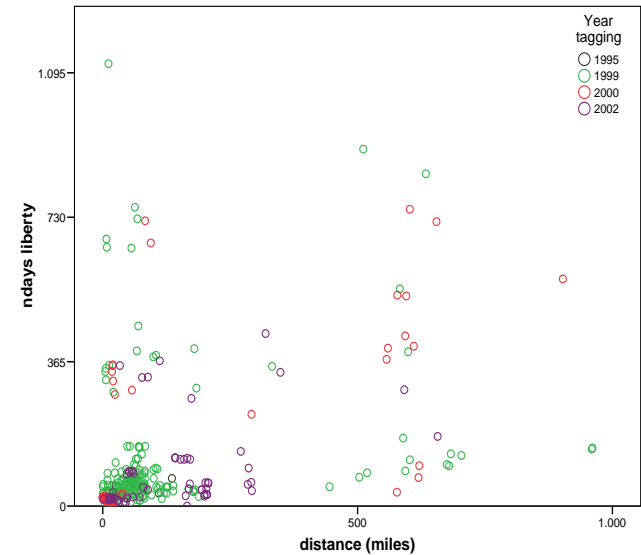
Figure 2.- Release (yellow circle) and recovery (red star) position of bigeye tuna (*T. obesus*) by quarter of historical tagging surveys in Canary lands in 1985, 1995, 1999, 2000 y 2002.

# Results: Residential population Bigeye Tuna

## AOTTP survey 2016-2018

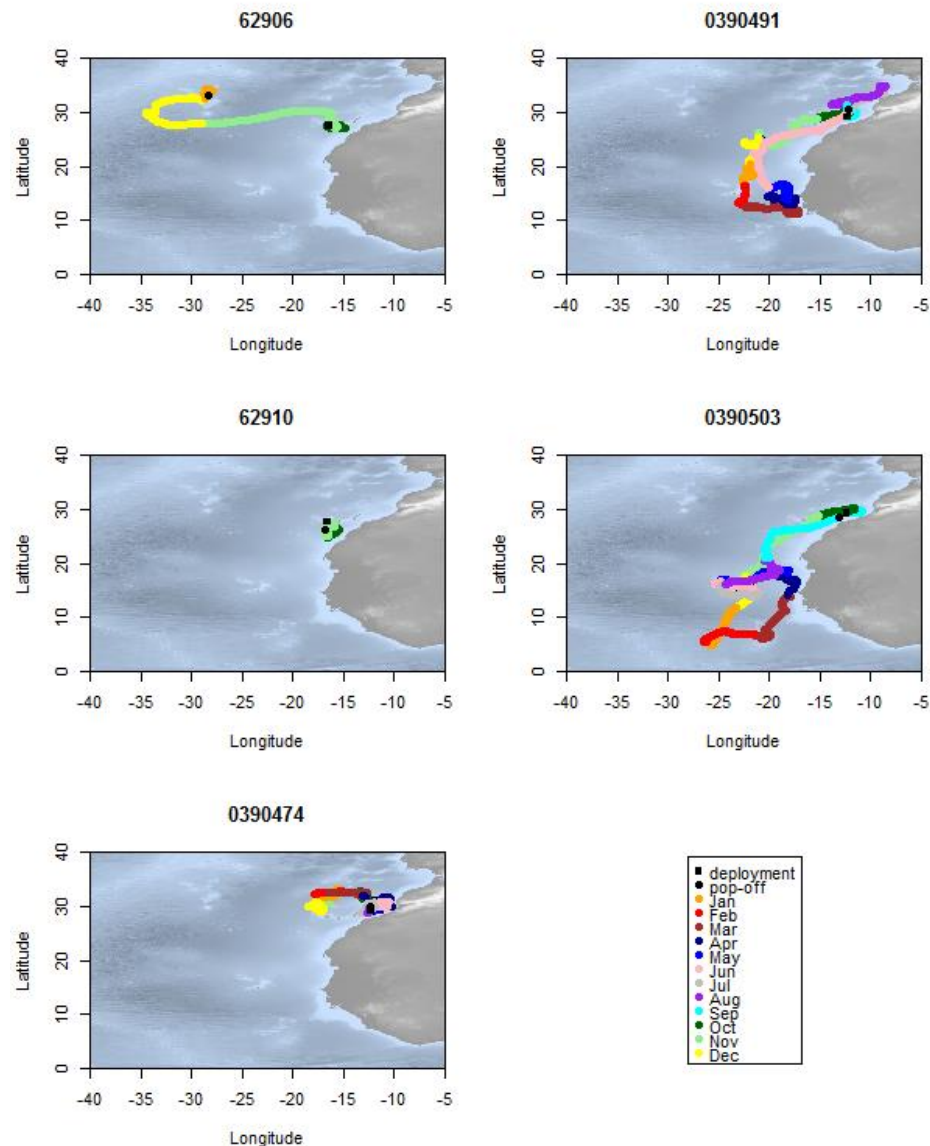


## Historical ICCAT survey 1985-2002



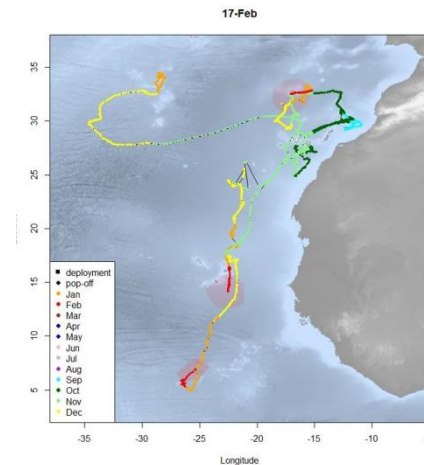


# Results: Horizontal movements

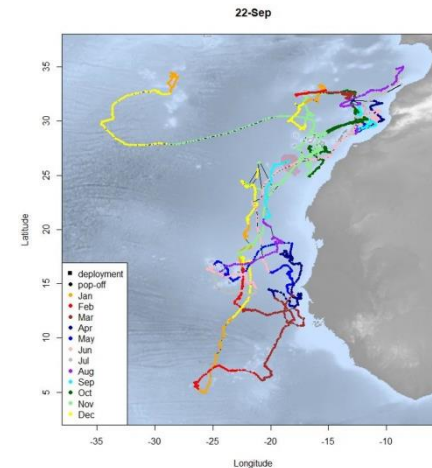


This area could be a key feeding ground for BET in the Northeast Atlantic. The homing behavior of many bigeye tunas to these islands after year to year, indicate that this feeding area is probably a hot spot persistent for foraging from year to year.

Winter time



Summer time

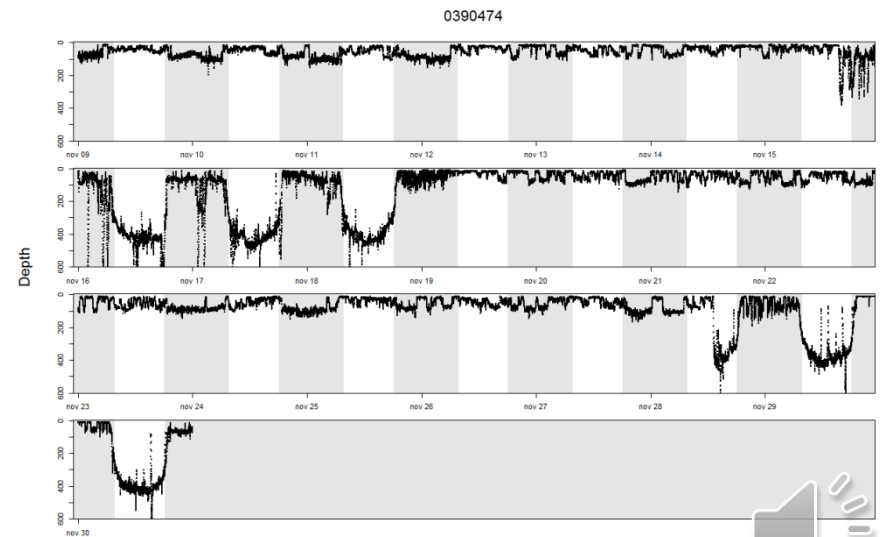
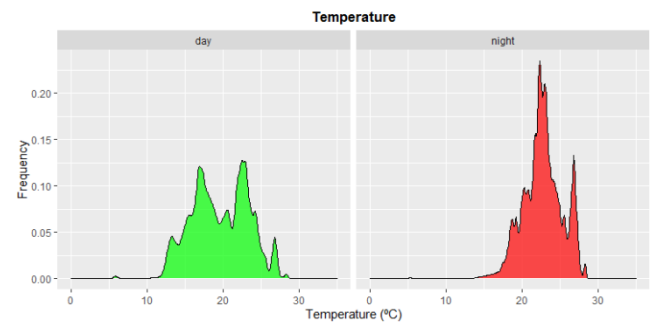
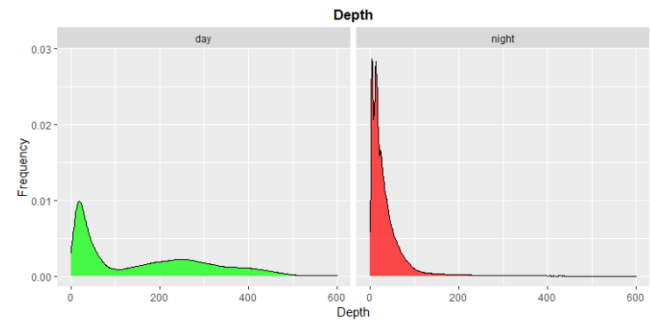
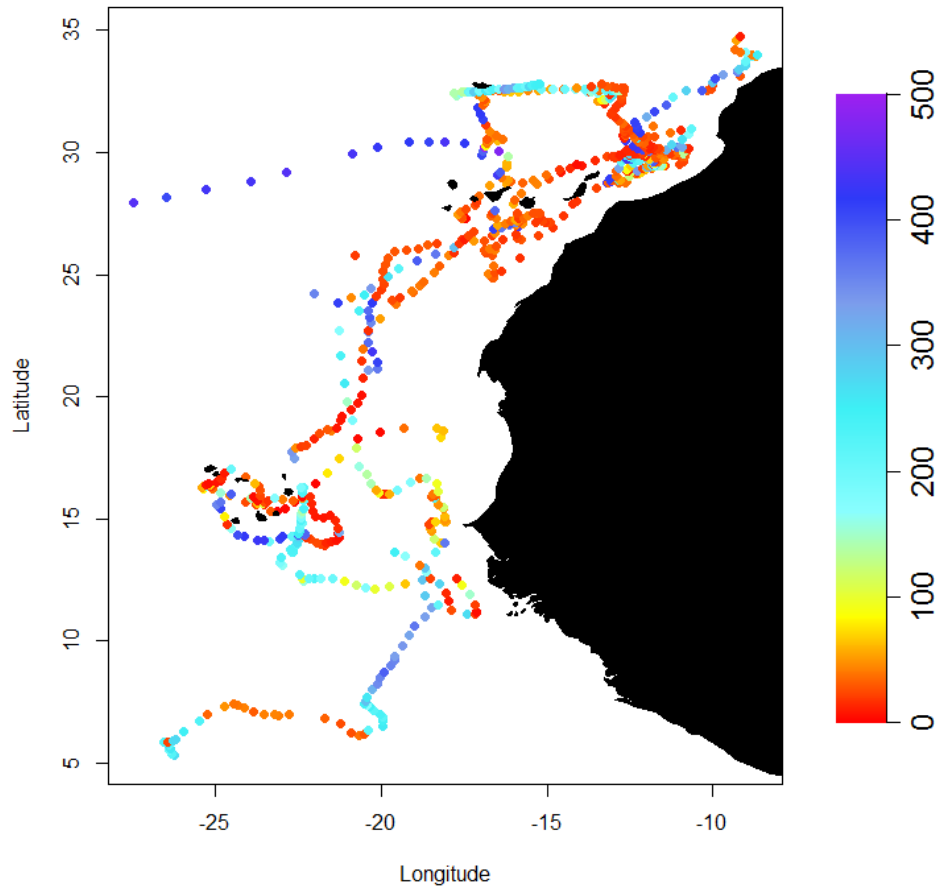


The high residence of the bigeye tuna, in this subtropical marine area of the archipelagos and seamounts, is justified by the feeding behaviors that the species performs in the area.

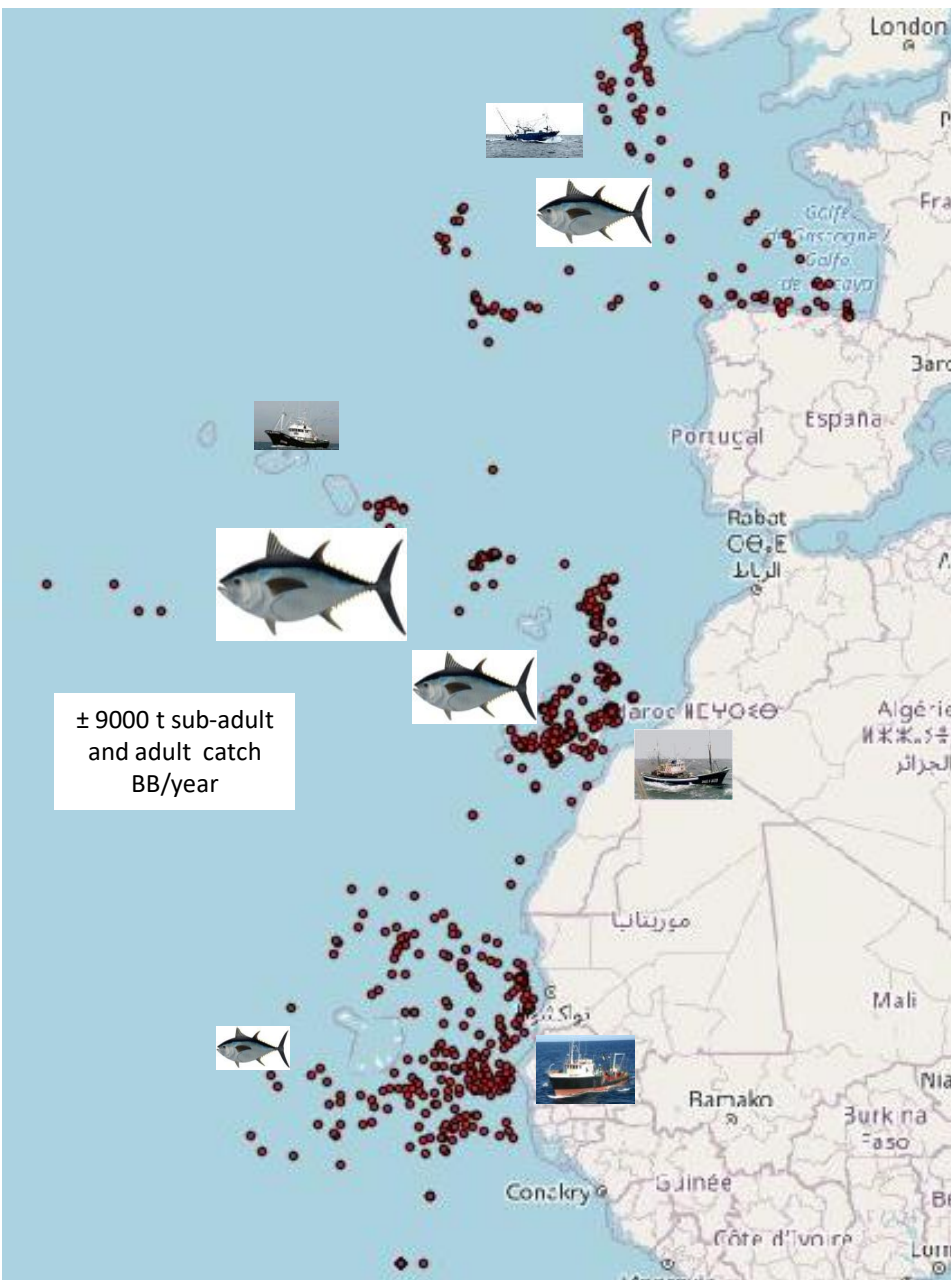


# Results: Vertical activity

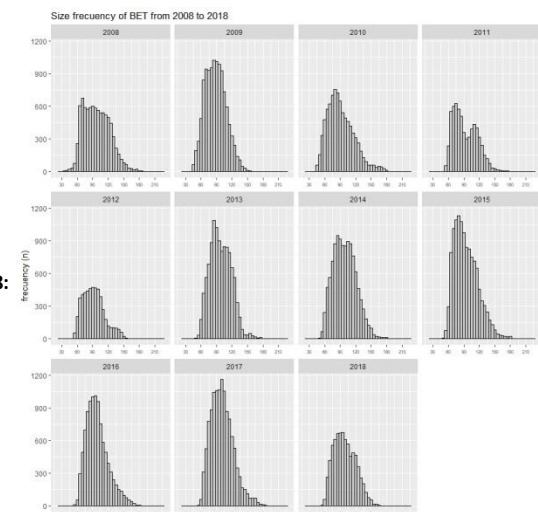
Daytime median depth



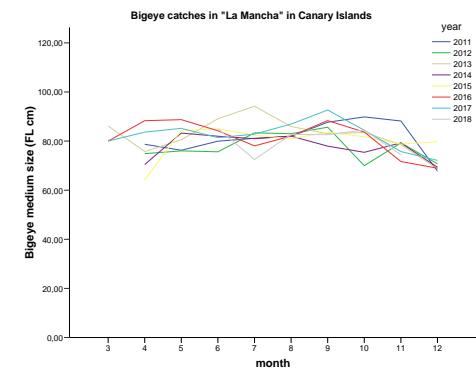
# Results: Fisheries considerations



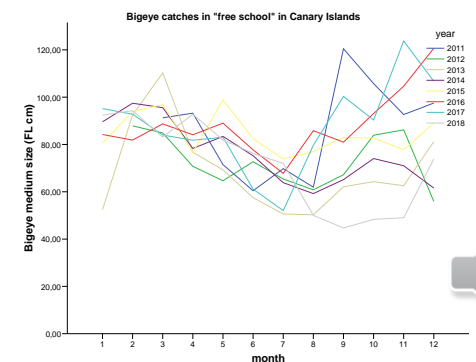
**Length distribution of Bigeye catches in Canary Islands from 2008 to 2018: 80 cm FL is modal size.**



**Bigeye Medium size by month from 2011 to 2018 in “Pesca a La Mancha” fishing mode.**



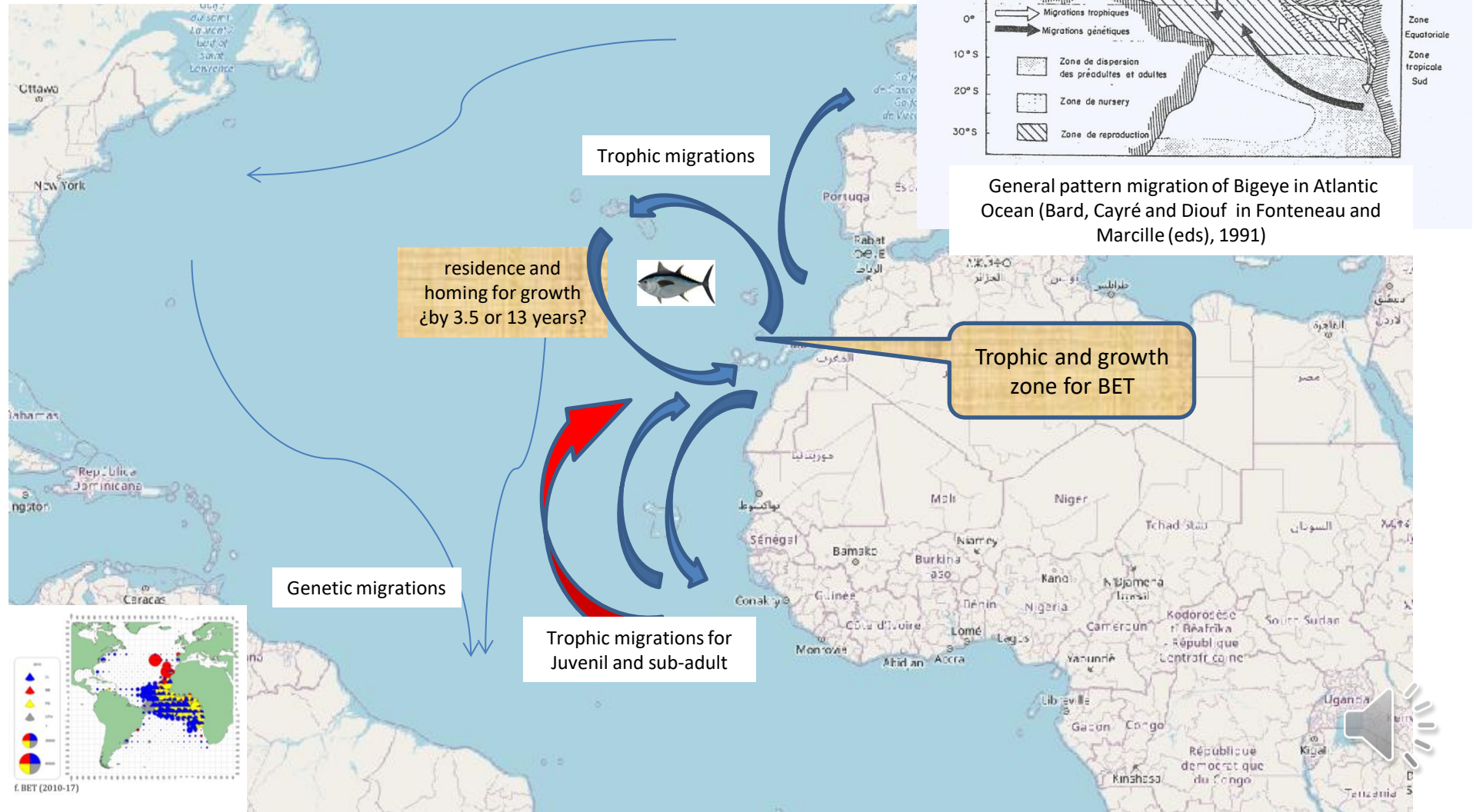
**Bigeye Medium size by month from 2011 to 2018 in “free school” fishing mode.**





# Results: Conclusion

## Subtropical Islands and seamounts greats zones for growth of BET



**Thank you for your attention**

