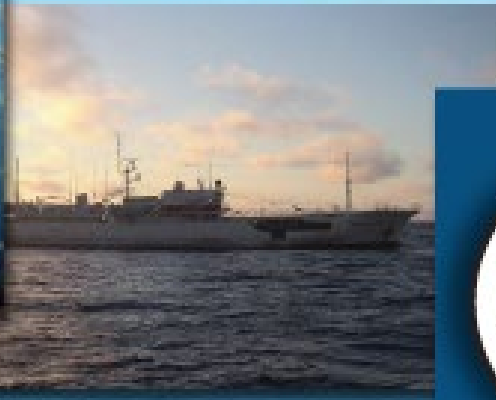


Comisión Interamericana del Atún Tropical
Inter-American Tropical Tuna Commission



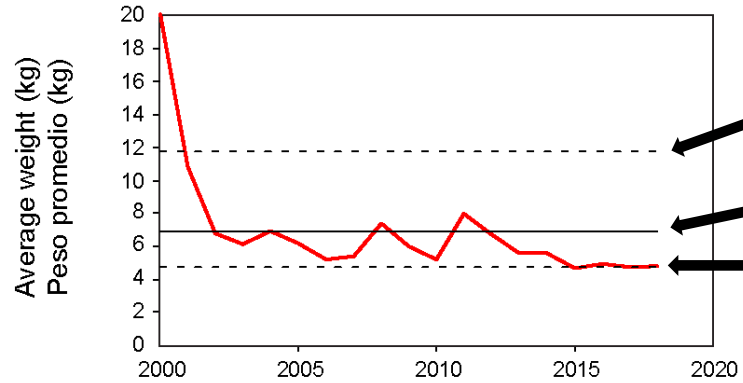
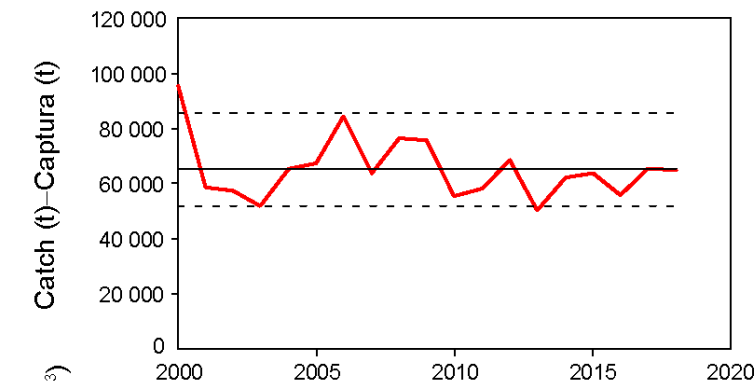
INDICATORS OF STOCK STATUS FOR BIGEYE TUNA IN THE EASTERN PACIFIC OCEAN

Haikun Xu, Mark N. Maunder, Cleridy E. Lennert-Cody and Marlon H. Román

Outline

- Indicators for bigeye tuna
 - Based on data including purse-seine catch, effort, CPUE, mean weight, and fishing capacity
 - Reference levels are based on the 5th and 95th percentiles (2000-2018)
- Relationship between days fished and the number of sets
 - Based on data from vessels that made more than 50% of their sets on floating objects
- Why did the number of OBJ sets increase?

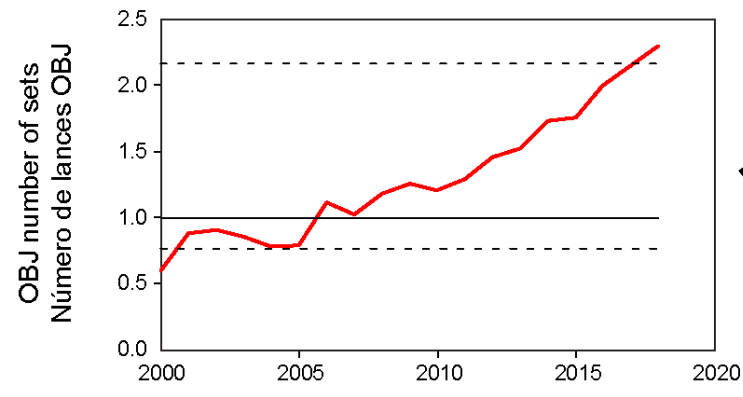
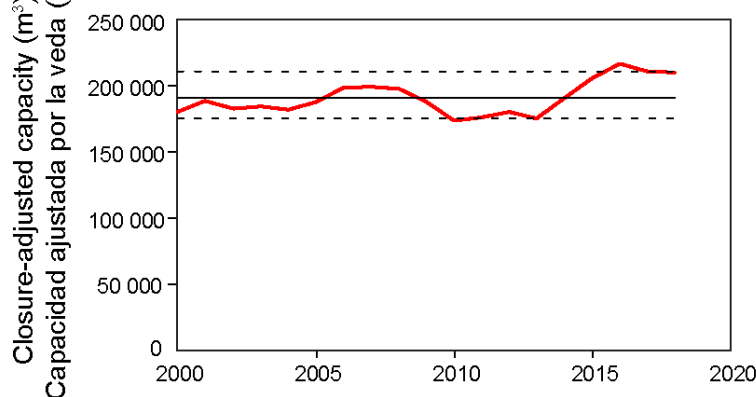
Indicators for bigeye tuna



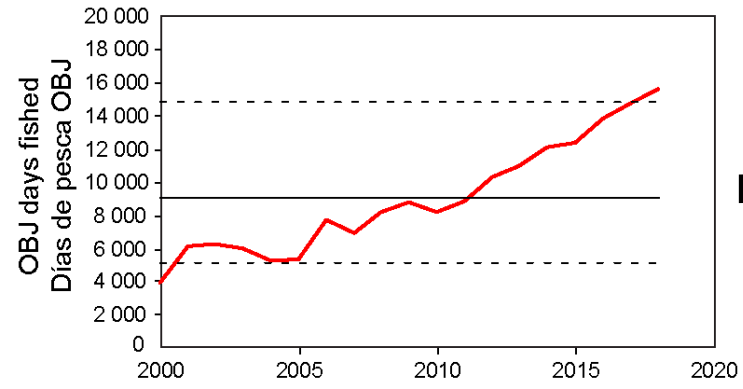
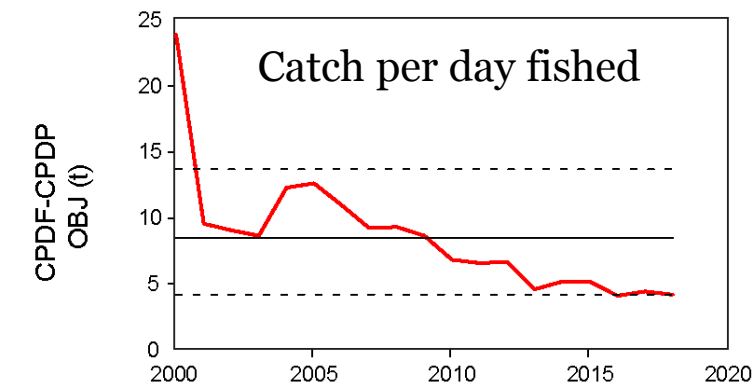
95th percentile

Median

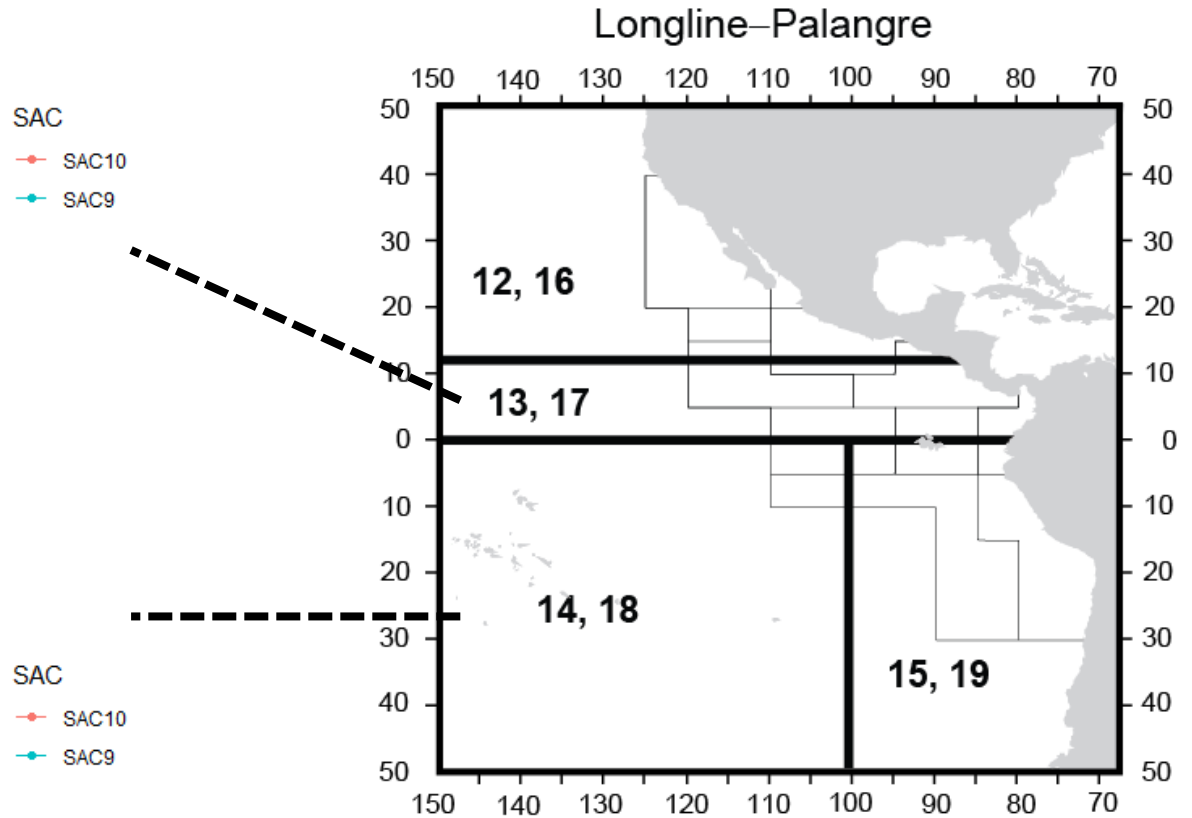
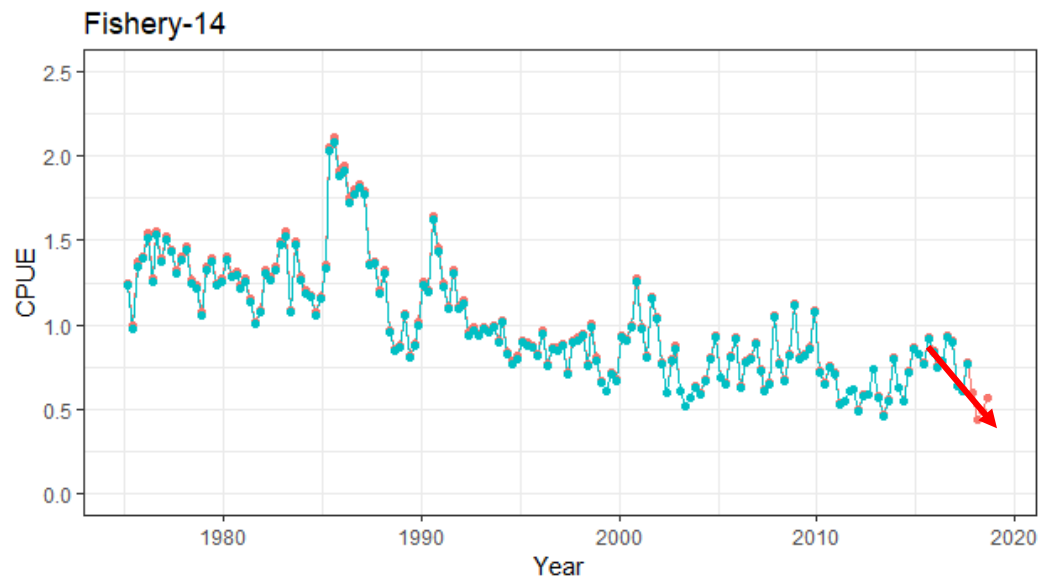
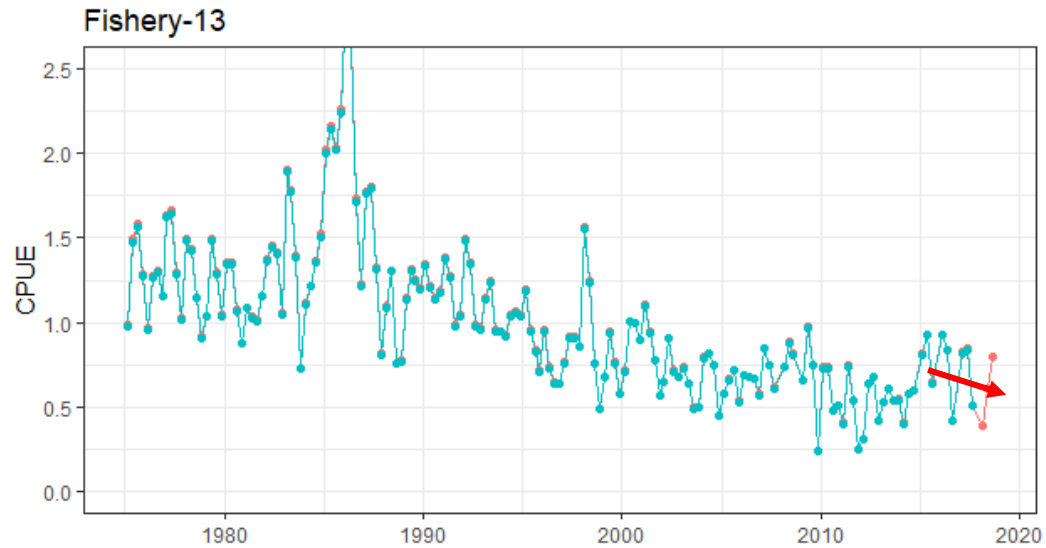
5th percentile



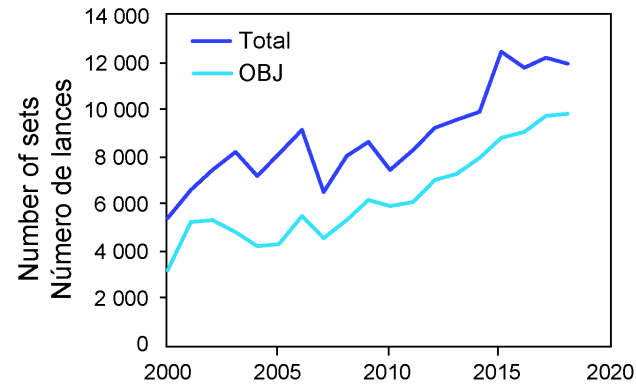
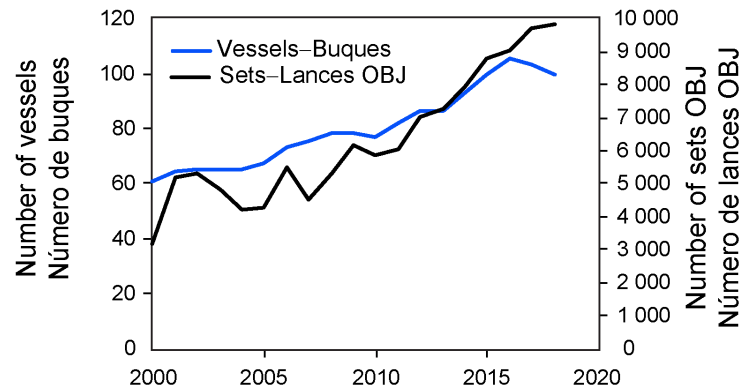
days fished is positively related to the number of sets



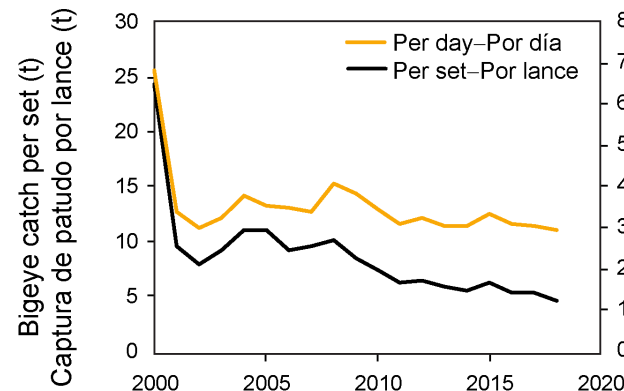
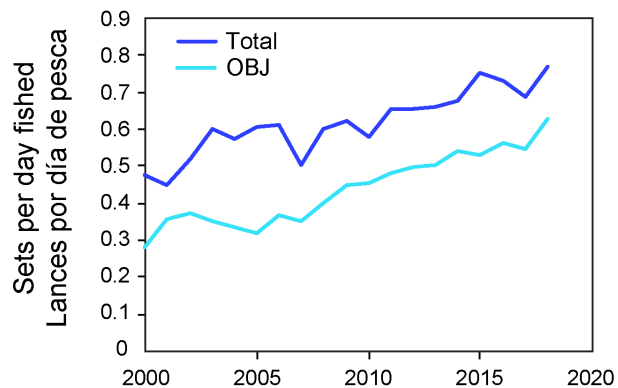
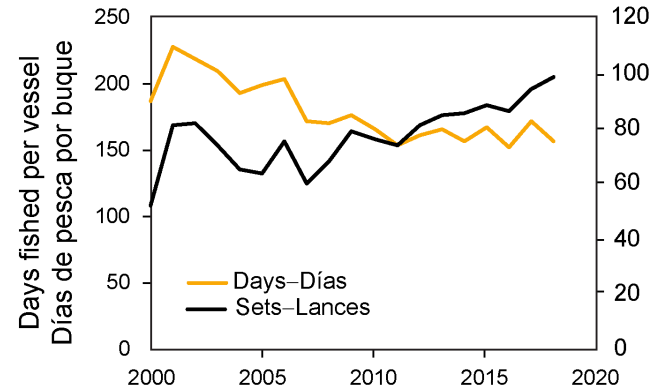
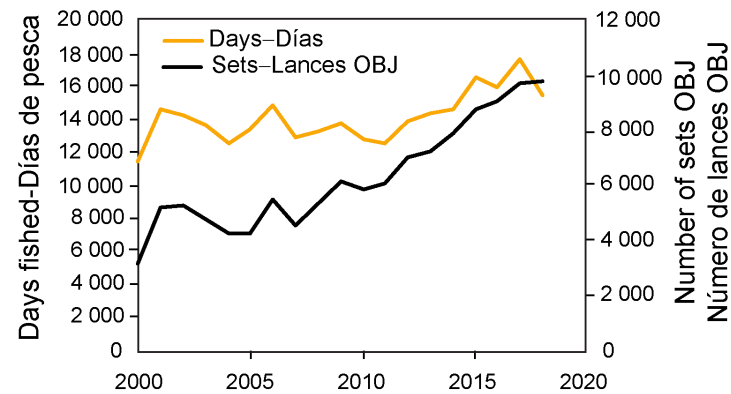
New request: update the LL indices of abundance



Relationship between days fished and the number of sets



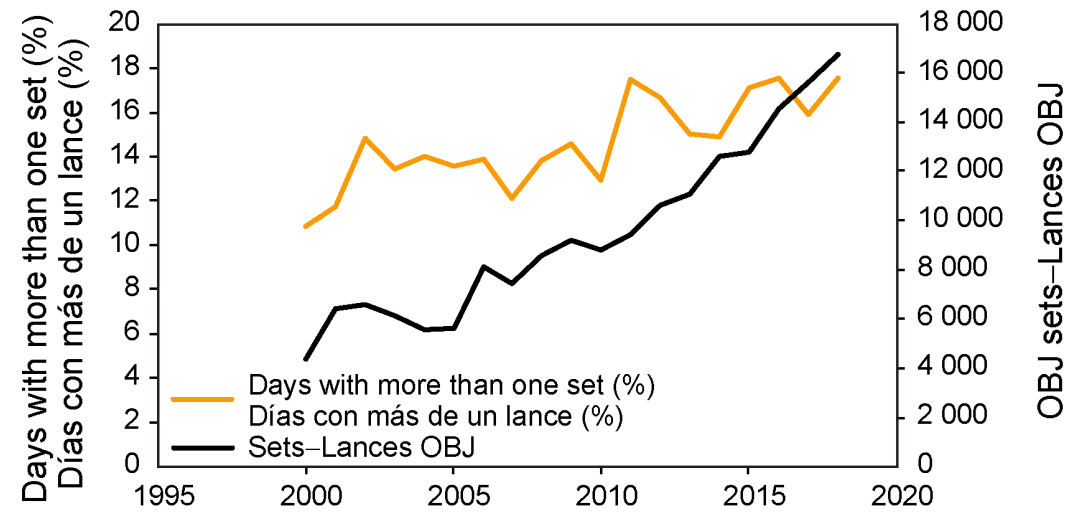
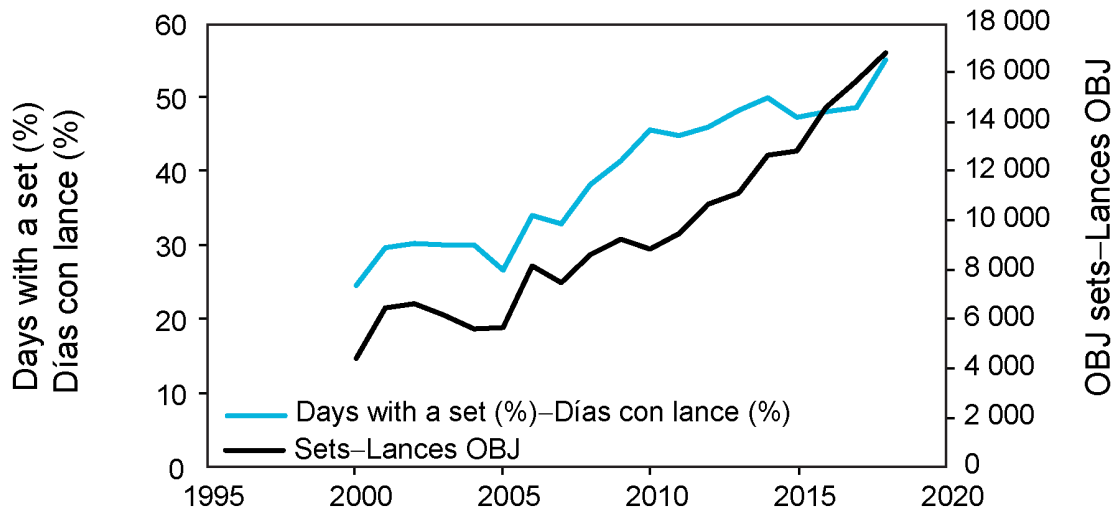
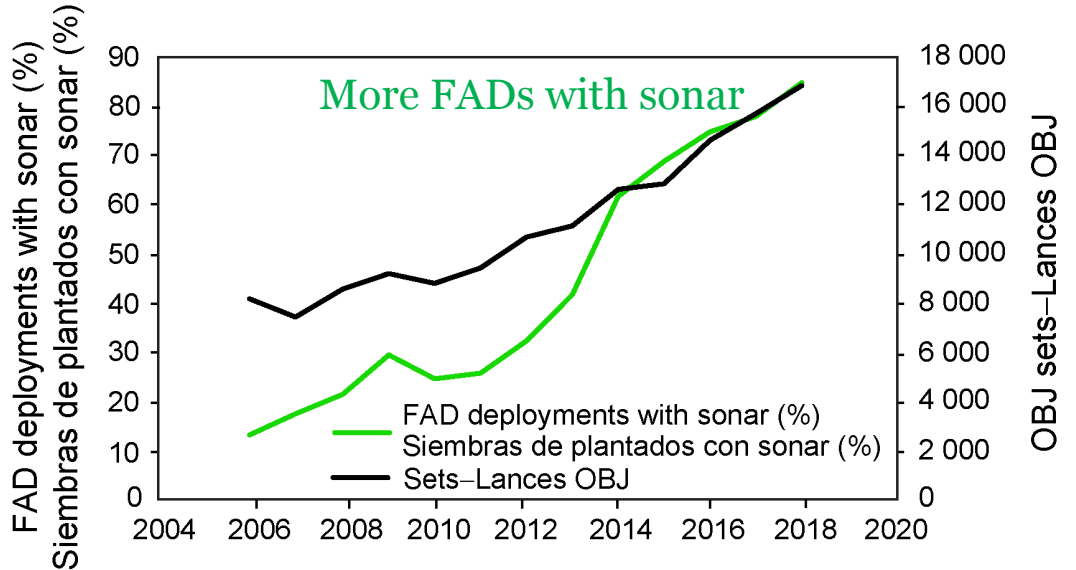
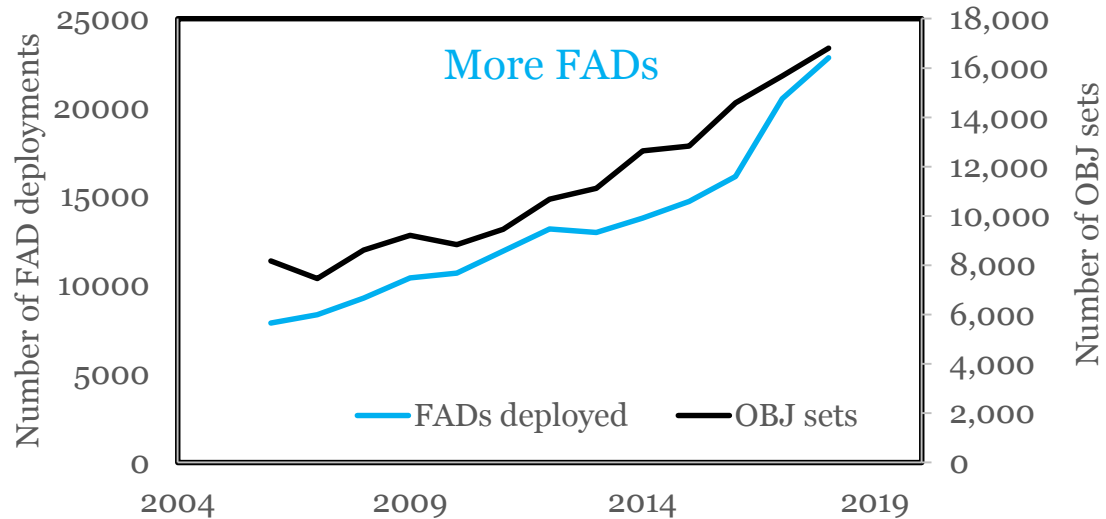
Data are from the purse-seine vessels that made more than 50% of their sets on floating objects



Number of sets per vessel
Número de lances por buque

Bigeye catch per day fished (t)
Captura de patudo por día de pesca (t)

Why did the number of sets increase?



Summary

- Indicators for bigeye tuna
 - All bigeye indicators, except for catch, show apparent long-term trends and their values in 2018 are close to or exceed the reference levels
 - Suggest increased purse-seine fishing mortality and reduced abundance
- Relationship between days fished and the number of sets
 - Indicator of days fished is probably biased
 - Number of OBJ sets is increasing
- Why did the number of OBJ sets increase?
 - Probably due to increased efficiency in finding FADs with tunas (both the number of FADs deployments and proportion of FADs with sonars increased over time)



Questions