



## The economic effects of the Individual Transferable Quota (ITQ) system on the catch of the bluefin tuna in the Strait of Gibraltar



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# Introduction

## - Context

- The research analyzes the Ports of the Strait of Gibraltar (Tarifa and Algeciras), where since 2015 the **Blackspot Seabream** (*Pagellus Bogaraveo*) has been progressively **replaced by the Atlantic Bluefin Tuna** (*Thunnus Thynnus*).
- Blackspot Seabream fishing is limited by a general quota set by the European Union and Blue Tuna Fishing is limited by a Individual Transferable Quota (ITQ) System.
- The Ports of the Strait of Gibraltar have lost employment and number of catches of Blackspot Seabream since 2015.
- The Organization of Artisanal Fishing Producers of the Strait of Gibraltar (OPP78) commissioned a report to the University of Cadiz on the issue.

## - Objectives

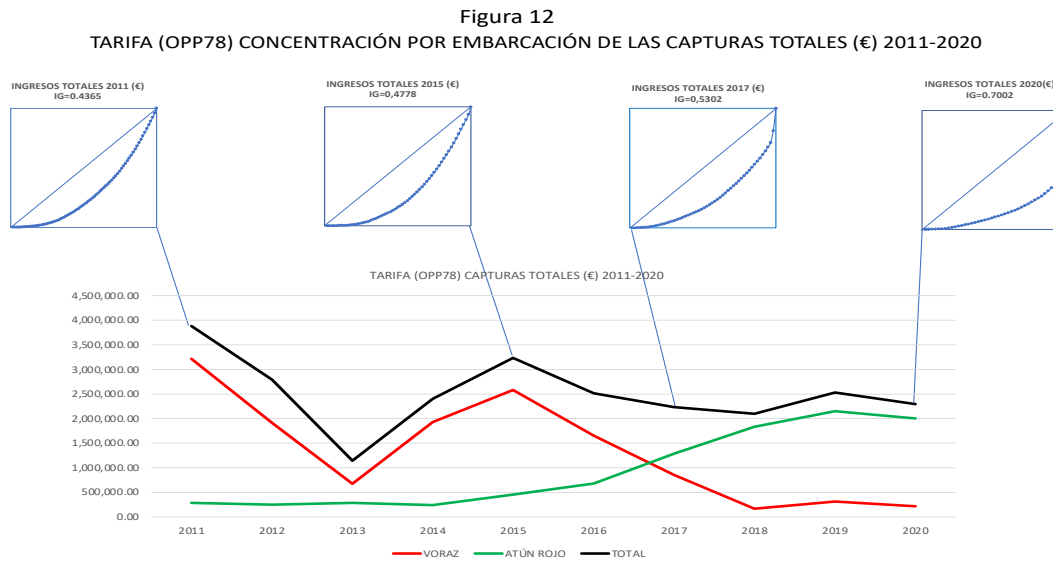
- Detect the reason for the disappearance of employment in the sector
- Propose specific solutions.

## - Methodology

- The report has analyzed data by port, by ship and calculated Lorenz concentration curves and the Gini Index with the evolution of catches and incomes.

# Data per vessel

- The concentration curves and the Gini Index per ship (per kg and per €) show a very homogeneous distribution of fishing until 2015, passing progressively to a very unbalanced distribution in 2020.

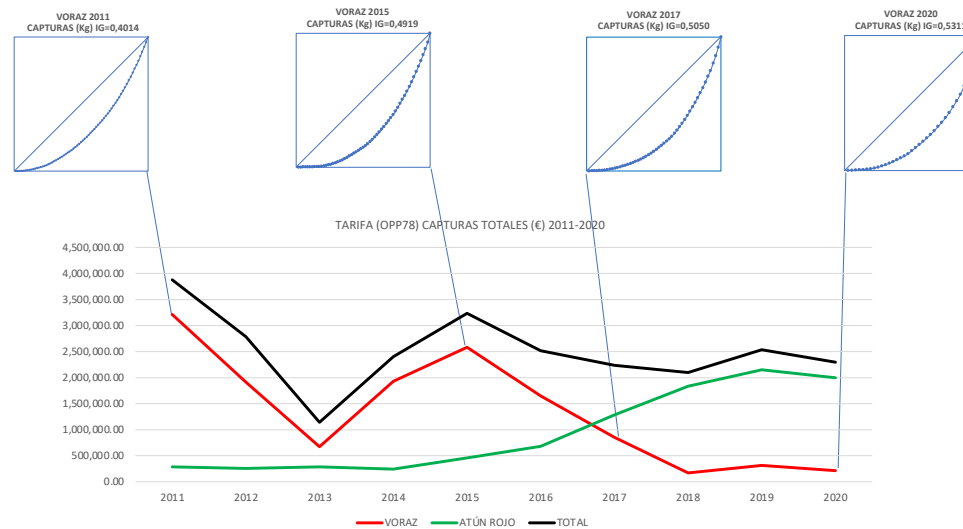


# Data per vessel

- If an analysis is made only for the catches of Blackspot Seabream, the concentration does not change, despite the fact that the catches are reduced to almost 0 from 2018.

Figura 14

TARIFA (OPP78) CONCENTRACIÓN POR EMBARCACIÓN DE LAS CAPTURAS (Kg) VORAZ 2011-2020

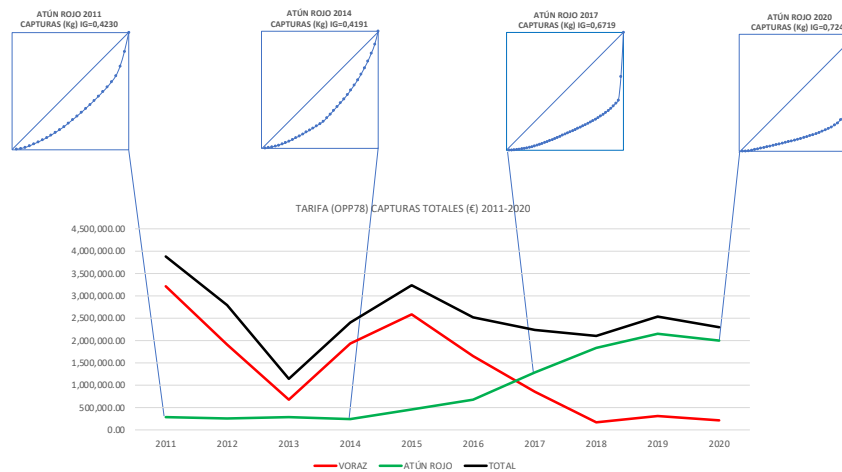


# Data per vessel

- If the analysis by vessels focuses on the Blue Tuna fishery, this fishery was not concentrated in 2011, when there was little fishing and there were few ships dedicated to this catch.
- When the Blackspot Seabream is decreasing and only Bluefin Tuna is caught, we can see a higher concentration in a few ships only.

Figura 15

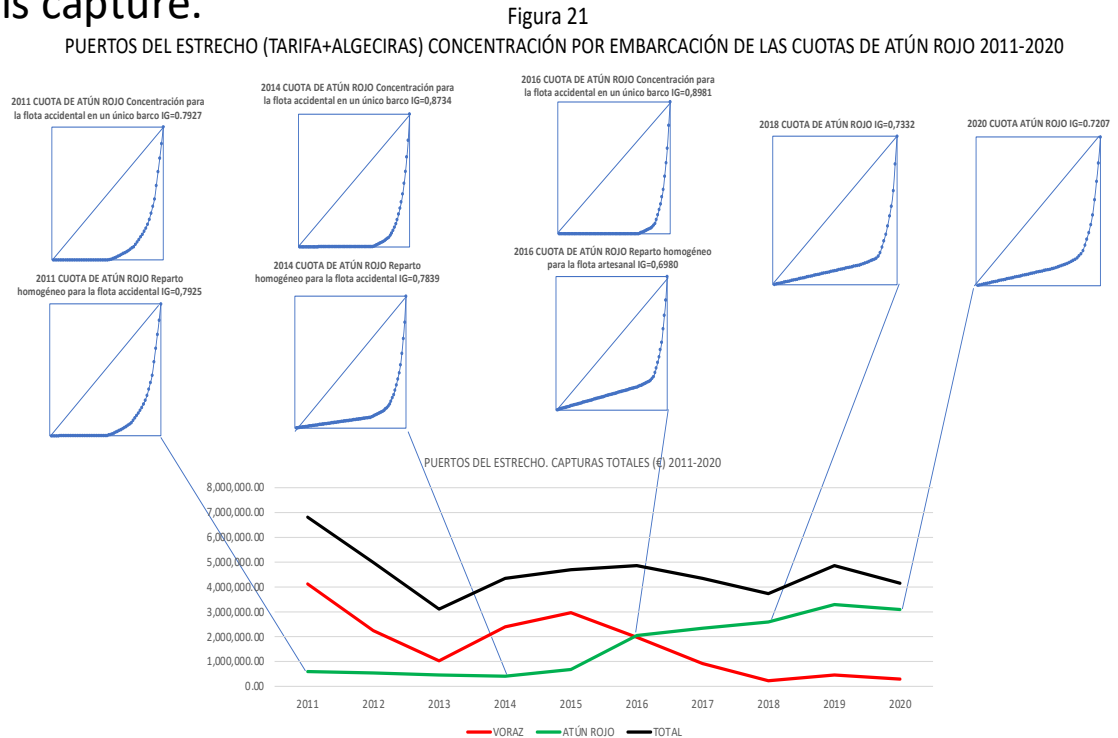
TARIFA (OPP78) CONCENTRACIÓN POR EMBARCACIÓN DE LAS CAPTURAS (Kg) DE ATÚN ROJO 2011-2020



# The origin: ITQ

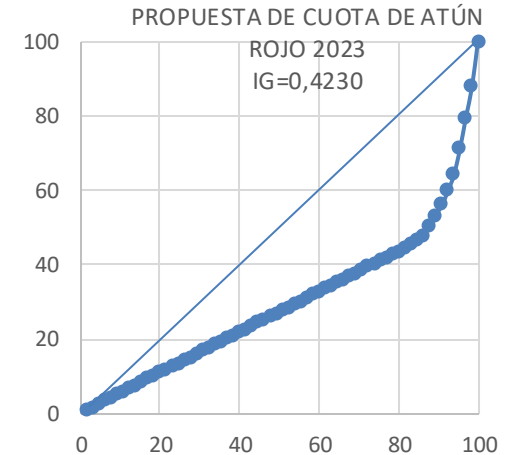
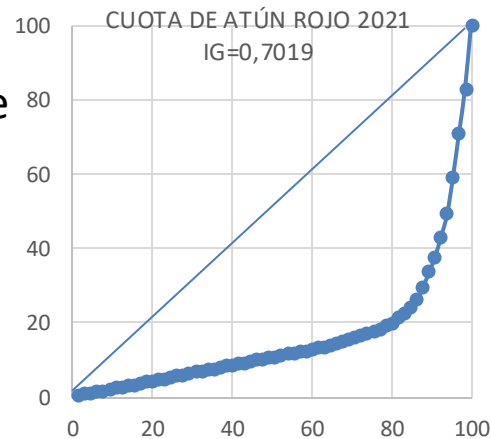
- Bluefin Tuna is organized by the ITQ system. The first quota distribution occurred in 2008 (revised in 2011) when fishing was very scarce and a few ships fished Bluefin Tuna.
- The ITQ system has been maintained over time (without any change), so when Blackspot Seabream fishing is replaced by the Bluefin Tuna, only a few ships cover the total amount of this capture.

- The ships dedicated to the Blackspot Seabream sold their tuna quota because it was less profitable to fish.
- Additionally, Bluefin Tuna high-quota vessels have changed crew compensation from “share” to “salary” only.
- The ITQ system has not been adapted to new monoculture at the Ports of the Strait, the Bluefin Tuna.



# Proposed Solution

- The ITQ system was defined based on the latest catches of each vessel, but at a moment where these catches were very low.
  - The ITQ system on Bluefin Tuna was not evaluated and was not redefined when Bluefin Tuna became the main and practically the only catch of the Ports of the Strait.
- The solution proposed:
1. Increasing the amount of global catches of Bluefin Tuna allowed (possible due to abundance of the resource).
  2. Splitting the additional amount allowed among the vessels with lower ITQ, to make their activity profitable, and maintaining the quota of those with higher ITQ to avoid harming their acquired rights.



## Conclusions

- The ITQ system is a good system for fisheries control, but:
  - It must be defined avoiding an undesirable excessive concentration from the beginning.
  - A better adapted quota transfer system should be defined to avoid adverse effects.
  - The system should be re-evaluated every one or two years to avoid adverse effects (specially if the total amount of catches change radically from one year to the next)
- If the ITQ systems of the Ports of the Strait is not changed, most of the fishing sector of Tarifa and Algeciras is called to disappear.



Thank you very much!!!!!!

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