

## **ESM 211 - Winter 17**

### **Assignment 1**

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#### **Species**

Skipjack Tuna - *Katsuwonus pelamis* (Linnaeus, 1758)

#### **Description**

*K. pelamis* belongs to the Order Perciformes, under the Scombridae family. This family includes all mackerels, tunas, and bonitos. As other species in this family, this species has a pelagic affinity, often found in aggregations between 0 and 260 m deep and is mainly distributed in tropical waters --where they spawn-- but is common to subtropical and temperate waters. Scombrids are also characterized for their fast growth rates and high mobility.

Unlike other Scombrids, *K. pelamis* is relatively small, with a mean length of 80 cm (max up to 110 cm). The maximum reported weight has been 34.5 Kg, and the maximum reported age has been 12 years. It reaches the sexual maturity around one year and 43 cm.

It feeds mainly on fish and crustaceans, but squids and some mollusks also comprise part of their diet. Trophic ecology research indicates that they have a trophic level of  $TL = 4.4 \pm 0.5$  ( $M \pm SE$ ; Froese & Pauly, 2016).

This species is commercially important and sustain a high fishing effort around the world. Besides its populations being classified as stable, there is a high uncertainty in population estimations (which may mask the real status) and some regions are already showing the first signs of overfishing for this species.

#### **Status**

The species has been identified as Least Concern by CITES. FAO reports increased landing in the last years, likely due to an increase in effort.

#### **Conservation or management problem**

Catches of skipjack tuna have been steadily increasing since 1950, reaching a global peak in 1991 at 1 674 970 t. (FAO, 2017, <http://www.fao.org/fishery/species/2494/en>). On the Atlantic Ocean the catches peaked on 2013 at 255,729.78 t.

#### **Data**

Nominal catches data for Skipjack Tuna on the Atlantic Ocean, reported by countries to the International Commission to the Conservation of the Atlantic Tuna (ICCAT). The data was updated on November 2016 and incorporates catches from 1950 to 2015.

#### **Metadata**

The data includes a total of 3,711 records of catch data, specified for 66 years (1950 - 2015). The data also includes information by Fleet (149), country (66 Flags), and Party (39). ICCAT Area code is included to allow spatial identification. In order to control for different gear types, a column for Gear group is included. Stock source (Eastern and Western Atlantic) is also included.

## Figures

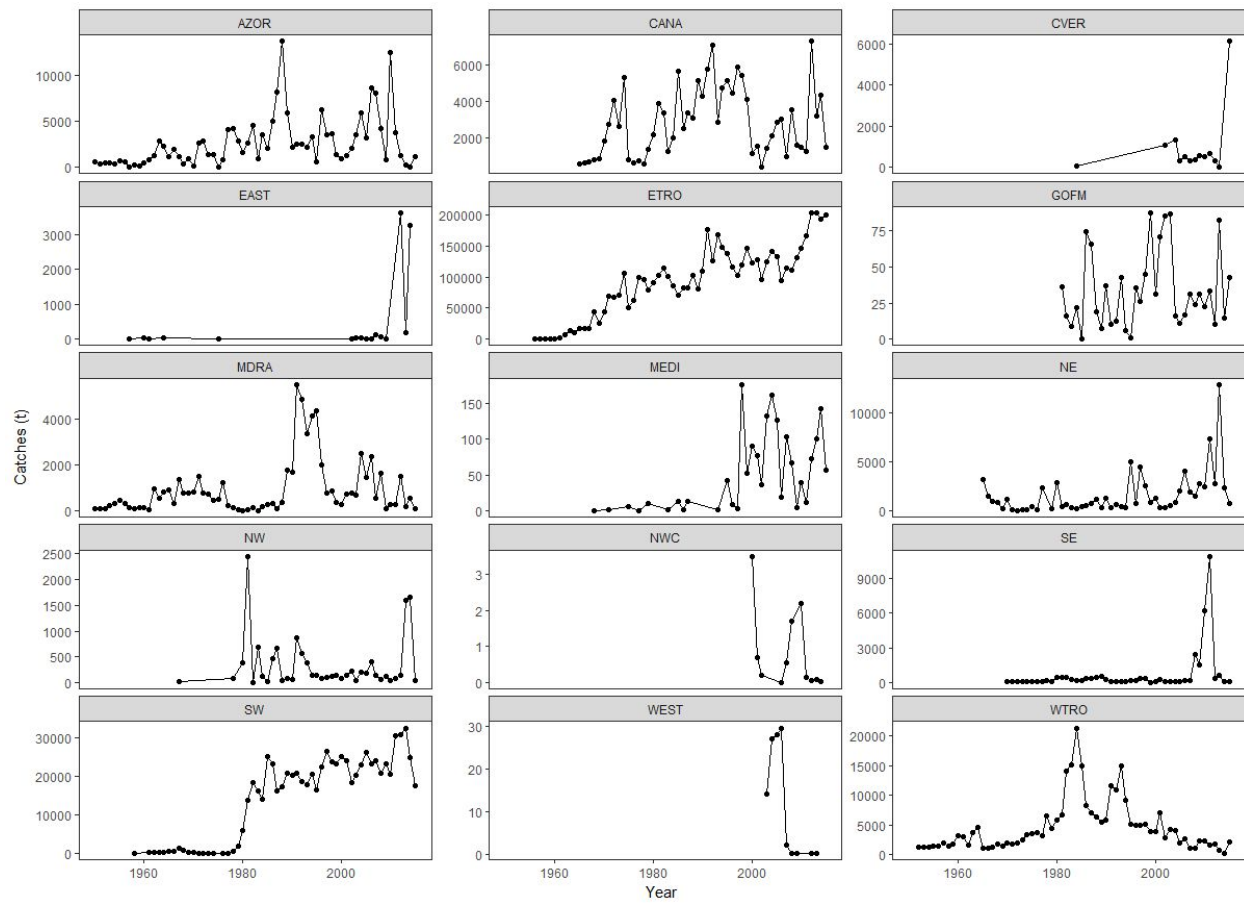


Figure 1- Total catches through time, for the 15 areas identified by ICCAT.

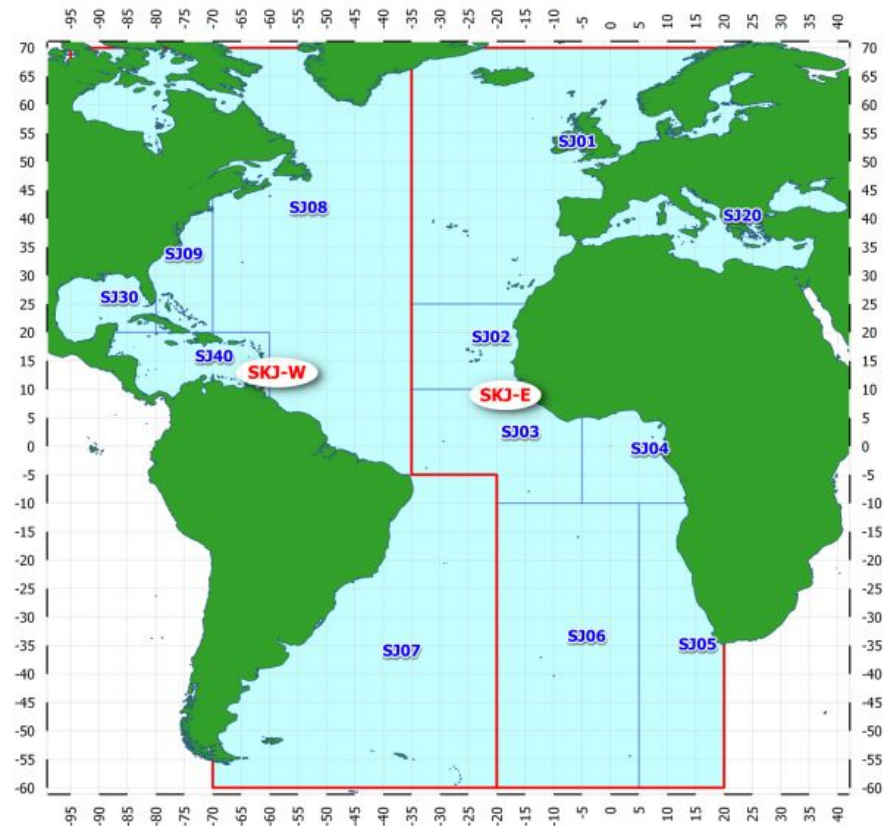


Figure 2- Map of the ICCAT jurisdiction area (blue area). The map also shows the areas for the two Skipjack Tuna populations on the Atlantic Ocean: SKJ-E and SKJ-W, respectively from the East and West (separated by the red line).

## References

<http://www.iucnredlist.org/details/170310/0>

[https://www.iccat.int/Documents/SCRS/ExecSum/SKJ\\_ENG.pdf](https://www.iccat.int/Documents/SCRS/ExecSum/SKJ_ENG.pdf)

Froese, R. and D. Pauly. Editors. 2016. FishBase. World Wide Web electronic publication. [www.fishbase.org](http://www.fishbase.org), ( 10/2016 )