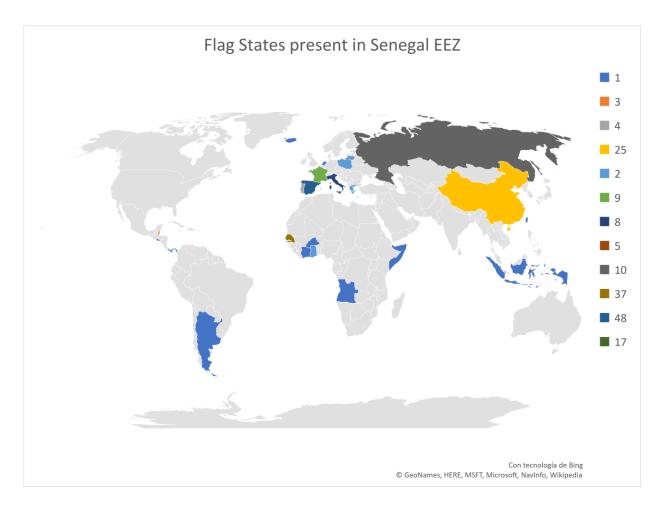
ADDITIONAL INFORMATION TAKEN FROM AVAILABLE AIS AND VMS DATA

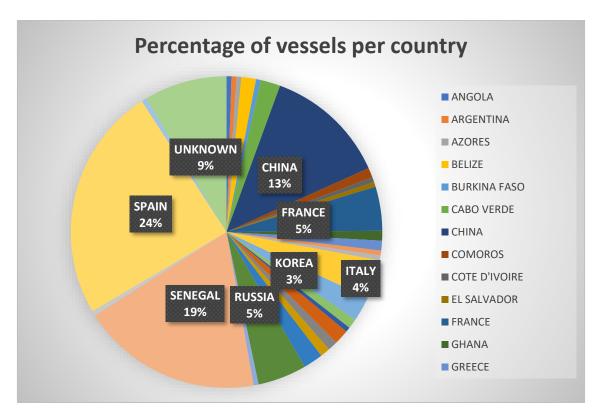
Sonia Doblado - LDAC

The information provided by CRODT (list of boats that send VMS to Senegal) and the AIS data provided by Global Fishing Watch (GFW), have been analysed with the aim of looking for inconsistencies between AIS and VMS signals, between those signals and the maritime legislation in place, and any other additional information that might be useful for the Senegal Case Study of FarFish. In some cases, news articles are provided to clarify certains points.

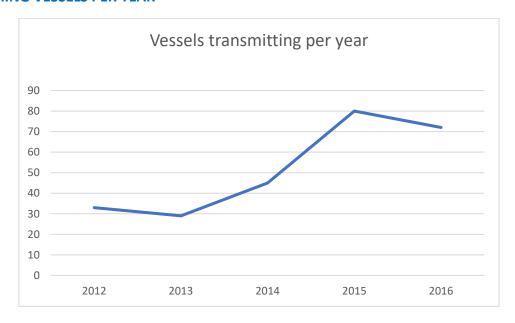
COUNTRIES FISHING IN SENEGAL EEZ

The following image shows the countries with vessels present in Senegal EEZ. The legend shows the number of vessels. Next, a chart explains the percentage of vessels per country.





FISHING VESSELS PER YEAR



The graph above shows the trend of number of vessels transmitting either VMS or AIS per year. Important to note that 2014 was the year the last SFPA between Senegal and the EU was implemented (2014-2019). 24 out of 25 vessels from China started their activities (always according to the signal transmissions) in 2015, being the main responsibles of the increase of number of vessels between 2014 and 2015.

MAIN INCONSISTENCIES BETWEEN CRODT AND GFW DATA (VMS vs AIS)

- 44 of the vessels from the list provided by CRODT do not appear in the Global Fishing Watch provided data. If entered manually into the GFW search engine, 20 of those vessels do appear in the map. But they have activity records from 2016, being outside the year gap studied by the CSIC (2012-2016).
- 7 vessels with identified Flag States (1x Angola, 1x Italy, 1x Argentina, 4x Senegal) are not found via GFW.
- 17 vessels from the CRODT list are not located via GFW, vesselfinder or similar.
 Needs to be considered that they might have stopped working.
- No Chinese vessels appear to be sending VMS data to CRODT.
- No Russian vessels appear to be sending VMS data to CRODT.
- 5 out of 9 French vessels are licensed under the Senegal SFPA, but are not listed by CRODT as VMS transmitting boats.

ACCORDS DE PÊCHE

- According to whofishesfar.org, 30 EU vessels are fishing in Senegal under the SFPA 2014-2019 agreement. But only 22 of those appear on GFW and the CRODT list.
- 42 of the EU vessels listed by CRODT and GFW appear in whofishesfar fishing in Senegalese EEZ under licenses other than the Senegal SFPA, such as ICCAT licenses or licenses under the SFPA of other neighbouring countries (Mauritania and Guinea).
- Senegal has agreements with neighbouring countries, such as Mauritania (400 licenses for Senegalese pirogues to fish in Mauritania) and Guinea Bissau. No mention of other vessels (https://extwprlegs1.fao.org/docs/pdf/sen147223.pdf) (First agreement between Guinea Bissau and Senegal, renewed every two years, last time Jan2019 http://extwprlegs1.fao.org/docs/pdf/sen147223.pdf)
- There are no documents to be found about a fisheries agreement between
 China and Senegal. There are fish meals factories funded by China in Senegal,

but no particular agreement could be found. Conditions for their funding and for their fishing activities remain unclear. The following link shows declarations from the minister affirming that there is no agreement between the countries, dated last December-> https://www.senenews.com/actualites/accord-de-peche-avec-la-chine-les-precisions-du-ministre-alioune-ndoye_293529.html. As the data provided is not up to date, it is not easy to check if the situation today is clearer than it was when the analysed signals where transmitted. I.e. those potentially illegal vessels could have been "punished" already.

(https://www.greenpeace.org/africa/fr/communiques-de-presse/587/la-chine-suspend-les-subventions-et-retire-la-licence-a-des-compagnies-impliquees-dans-des-activites-de-peche-illegale-en-afrique-de-louest/)

The agreement between Russia and Senegal exists, there are articles in national newspapers about it. But an official document for the agreement was not found (https://aprapam.org/publication/l-actualite-d-aprapam/contribution-l-accord-de-peche-fantome-entre-la-federation-de-russie-et-le-senegal)

POTENTIAL ACTIONS

- Confirm with CRODT the lack of an official agreement with China.
- Ask CRODT to provide the agreement with Russia.
- Check with CRODT conditions for mandatory AIS in Senegal EEZ.
- Check compatibility between ICCAT, SFPA and other African countries agreements: are they equivalent?
- EU vessels under the SFPA, investigate why some of them are not sending data. Problem from the transmitter or from the receptor side?
- Ensure if it is mandatory for Senegal to inform the EU about fisheries agreements with third parties.
- Compare fishing effort peaks with biology of catch species. Investigate if fleets under no agreement have different seasonal trends (i.e. do they catch during sensible periods of catch species life cycles).