

République du Sénégal

Un Peuple - Un But - Une Foi

MINISTERE DE L'ECONOMIE MARITIME

DIRECTION DES PECHEES MARITIMES

**ICCAT Atlantic-wide Research Programme for
the Bluefin Tuna (GBYP-2010)**

Bluefin Tuna catches landed in Senegal in 2010

Introduction

Atlantic bluefin tuna inhabit the pelagic ecosystem of the entire North Atlantic and its adjacent seas, including the Mediterranean Sea. Among the tuna, bluefin tuna is the only large pelagic fish living permanently in temperate Atlantic waters (Bard et al. 1998; Fromentin and Fonteneau 2001).

In East Atlantic, the southern theoretical ecologic limit of Bluefin tuna is the Cap Blanc (21° N). Bluefin tuna catches are always very uncommon in the south of the Canary Islands.

In Senegal, there was no bluefin tuna catch since the beginning of the years Fifties. The tuna baitboats fishing operating in Senegal coastal area between 12 to 21° N (West Africa) target primarily three species of tropical tunas yellowfin, Skipjack and Bigeye.

In 2010, a catch of certain number of bluefin Tuna by Spanish baitboats based in Dakar were announced. These catches were marketed at the same price as Bigeye / Yellowfin tuna towards Spain. It is in this context that this note is produced in order to confirm and give the relative information to these catches carried out by Spanish baitboats based in Dakar. The data are the landing day, the fishing period, the geographic area, the total landings, and the size composition.

This data collection was carried out with a partial financial support by ICCAT Atlantic-wide Research Programme for Bluefin Tuna (GBYP).

Methodology adopted

Following the information collected, the Centre de Recherches Océanographiques de Dakar/Thiaroye (CRODT) and the Direction des Pêches Maritimes of Senegal conducted jointly the investigations in order to compile documents and information relative on bluefin catches in 2010. Meetings were held between the Administration, the Research and the Professionals of tuna fisheries to investigate the catches of bluefin tuna. Later on, Scientists and the fisheries Administration started to discuss the method to adopt in order to collect the maximum information and documents. Thus, many sources were collected.

This paper is based upon:

- Logbooks data collected on the baitboats,
- Statistical sheet and reports filled by the observers of the Direction de la Protection et de la Surveillance des pêches (DPSP) embarked on these spanish baitboats ;
- Trade declarations of fishing societies ;
- Information received from the companies trustees ;
- Documents from the customs office ;
- Sampling in port done by the technicians from the Centre de Recherches Océanographiques de Dakar-Thiaroye (CRODT).

All the fishery data corresponding were selected to be analyzed. For calculation we used the equation relationship between L- W;

$$W=2.95.10^{-5}*FL^{2.899} \text{ (Anon. 1984)}$$

Results and Discussion

The exploitation of the various documents and information emphasized that Spanish baitboats based in Dakar captured and unloaded bluefin tuna during the first quarter of 2010. The unloading took place precisely in February. Those tunas were fresh fishes. The state of unloaded fishes (fresh) supposes that the fish was caught during the most recent sets fishing carried out by these baitboats. In February 2010, 19 specimens were unloaded in Dakar port. The total catches were 4350 kg **Table 1**. The mean size is around 229 cm and the mean weight 224 kg. These measurements indicate that the captured individuals were adults. It should be also emphasize the fact that these specimens had first dorsal length (LD1) except standards which the samplers could not measure with a caliper.

Table 2 shows that bluefin tuna catches were carried out in the latitudes 16°- 17° and longitude 17° and 18°. They are the fishing zones between Senegal and Mauritania. The **figure 1** indicates the fishing areas of the baitboat fleet based in Dakar in February 2010 (12-21° N).

The Figure 2 shows the size distribution of bluefin and bigeye caught by these boats at the same period fishing and area. We note that sizes of bluefin landed were bigger than bigeye sizes. But, it might possible that bluefin tuna smaller are sampled like bigeye.

Conclusion and Recommendation

All documents analyzed confirm that fishes caught by Spanish baitboats and landed at Dakar in February 2010 are Bluefin tuna. The presence of bluefin in this southern area could be linked to trophic migration of bait and environmental changes. More attention should be devoted by the samplers.

REFERENCES

- ANNYMOUS. 1984. Report of the bluefin tuna workshop, Japan September 1983. Collect. Vol. Sci. Pap, ICCAT, 19:1- 282.
- BARD, F. X., P. Bach and E. Josse. 1998. Habitat et écophysiologie des thons : Quoi de neuf depuis 15 ans? Collect. Vol. Sci. Pap, ICCAT,50: 319-342.
- FROMENTIN, J.-M. and A. Fonteneau. 2001. Fishing effects and life history traits: a case-study comparing tropical versus temperate tunas. Fisheries Research 53: 133-150.

Table 1. Landings of Bluefin in Dakar

Vessel	Landing day	Total Bluefin landings (kg)	Total Number	Mean length (cm)	Mean weight (Kg)
Baitboat 1	23 /02/2010	474	2	213	237
Baitboat 2	25 /02/2010	3089	13	235	238
Baitboat 3	28 /02/ 2010	787	4	255	197
Total		4350	1919	229	224

Table2. Size composition of bluefin tuna caught by geographical area and boat

Vessel	Fishing day	Landing day	Latitude	Longitude	Weight (kg)	Size (cm)	Numbers	Depth (m)	Sea surface Temperatures (Celsius)
Baitboat 1	16 /02/2010	23 /02/2010	16° 55 N	17° 39 W	252	206	1	2600	22
					222	182	1		
Baitboat 2	19/02/ 2010	25 /02/2010	17° 19 N	17° 31 W	299	261	1	2500	21,4
					273	253	2		
					270	252	1		
					264	250	2		
					236	241	1		
					224	236	1		
					212	232	1		
					211	231	1		
					197	226	1		
					195	225	1		
					171	215	1		
Baitboat 3	27 /02/2010	28 /02/ 2010	17° 50 N	17° 40 W	212	232	1	2600	23
					192	224	2		
					162	211	1		

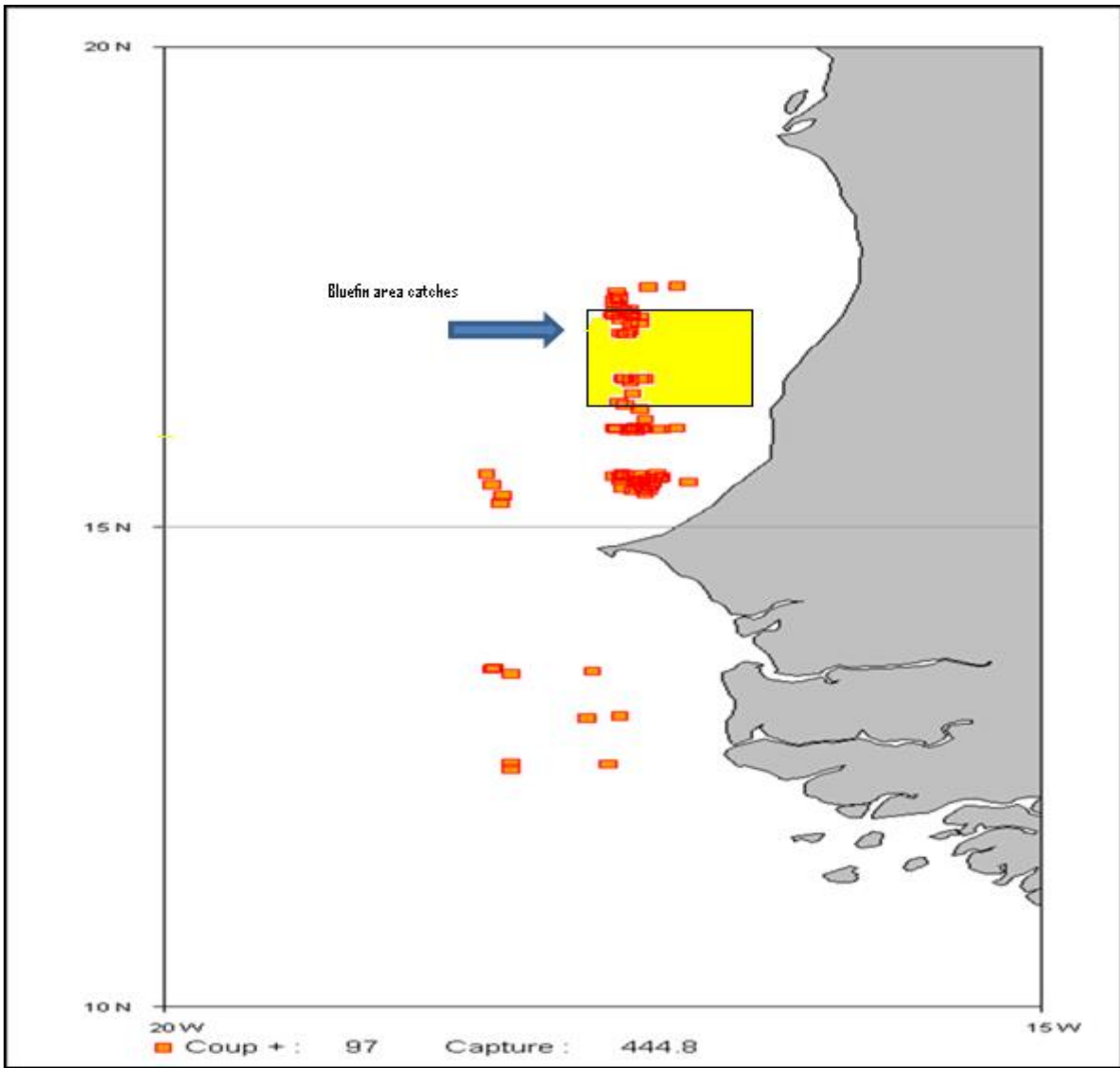
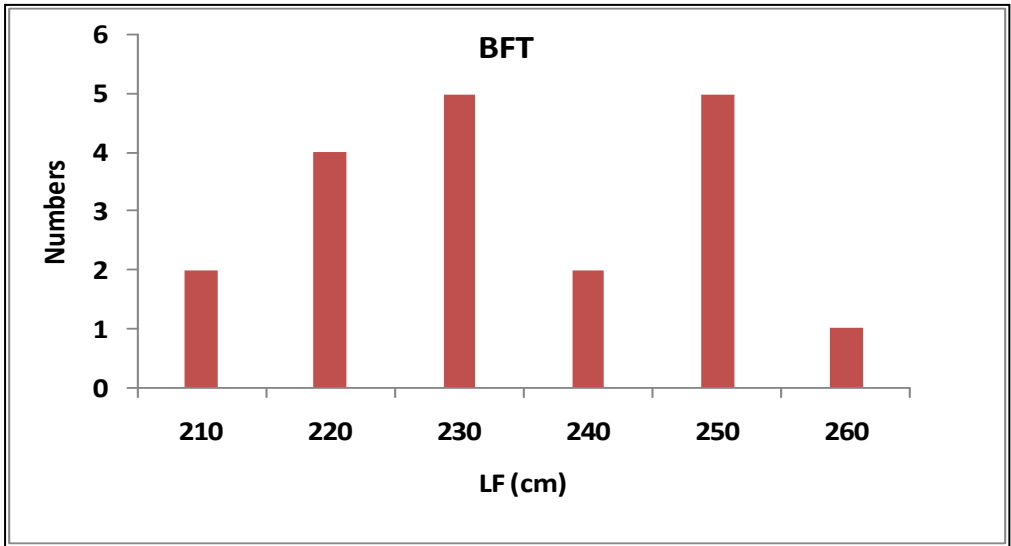
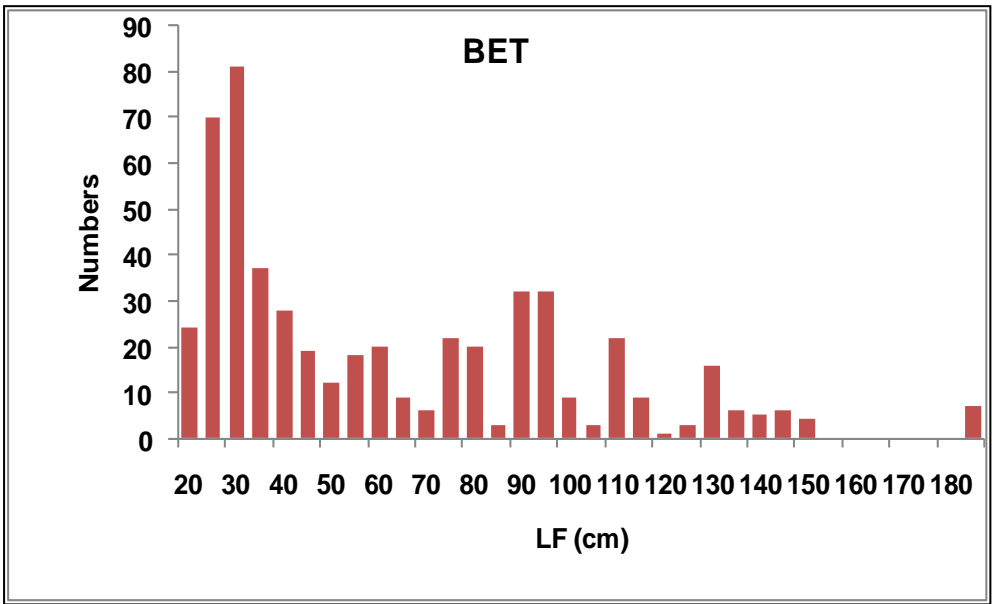


Figure 1. - Fishing areas of the baitboat fleet based in Dakar in February 2010.



a



b

Figure 2. Size frequencies distribution:
 a : Bluefin Tuna
 b : Bigeye