

Different means contributing to FAD's Fishing selectivity

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Species found under FAD

- 36 different species recorded in French West Indies (22 GUADA & 26 MART)
- Small scale fisheries
- Main large pelagic species under ICCAT BUT requirement of regional management for Dolphinfinh & Blackfin tuna → CRFM

Emblematic species around FAD?

- Birds → exceptional captured by accident
- Turtles → never seen around FAD
- Marine Mammals → reasonable presence, can affect FAD fishing in particular the Dolphin but not captured
- Shark have being detected during experimental fishing trips by night & day, the species were: *Carcharhinus longimanus*, *Carcharhinus signatus*, *Prionace glauca* & *Isurus ocyrinchus* . In Martinique only 1,3% (2009) - 1,5% (2010) of landings were diverse sharks

Proportion of juveniles (number of fishes)

Trolling line

45%

Status of

FADs

79%

the stocks

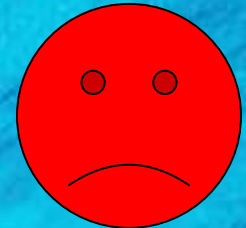
Captures on
FADs

% of juveniles

*Makaira
nigricans*



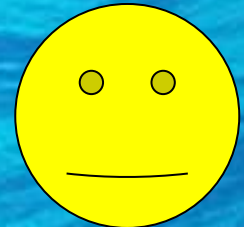
8%



*Thunnus
albacares*



93%



*Thunnus
atlanticus*



75%

??

*Coryphaena
hypurus*

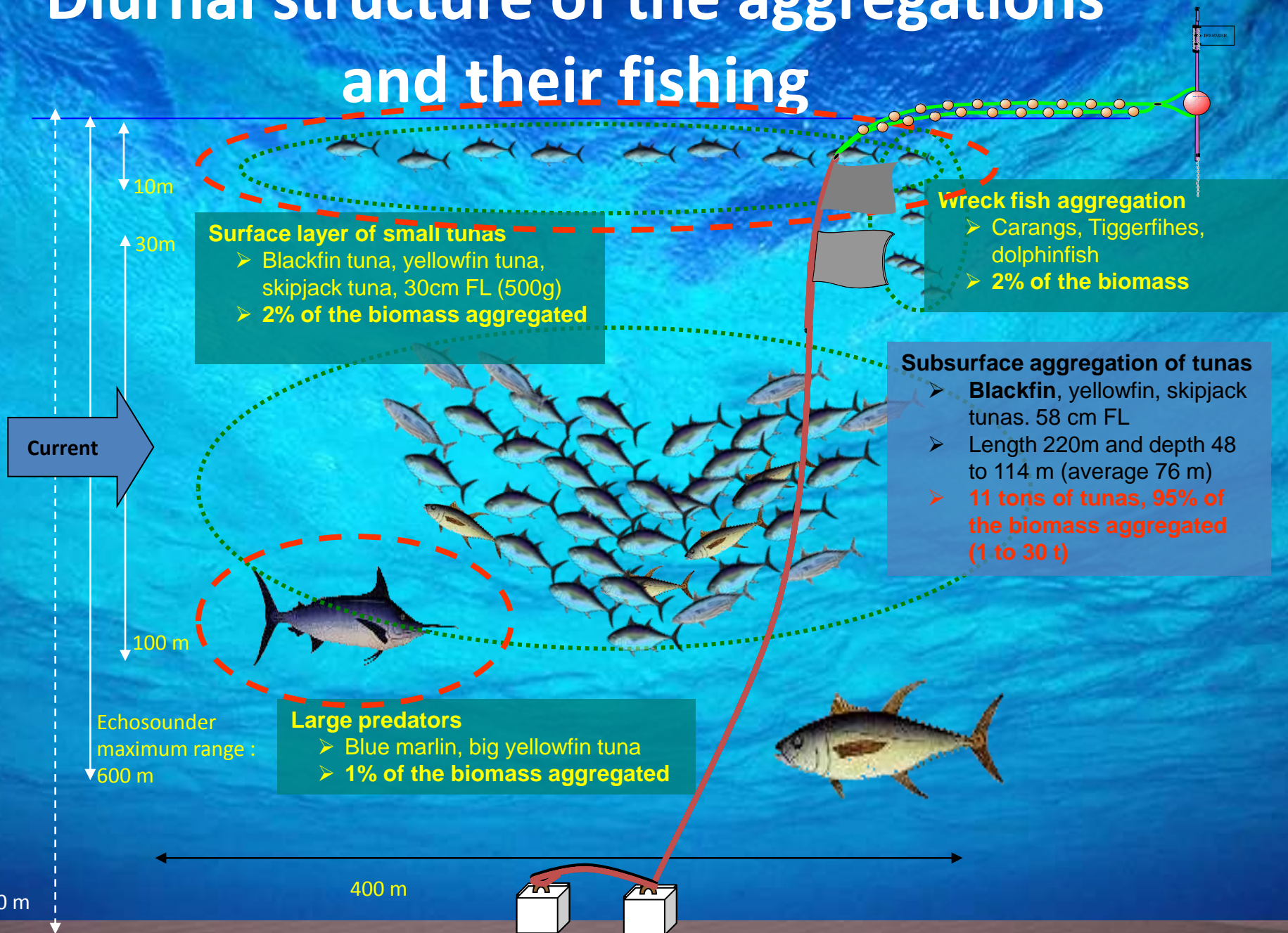


TL: 56% FAD 74%

??

1 – Different modes to utilize FADs

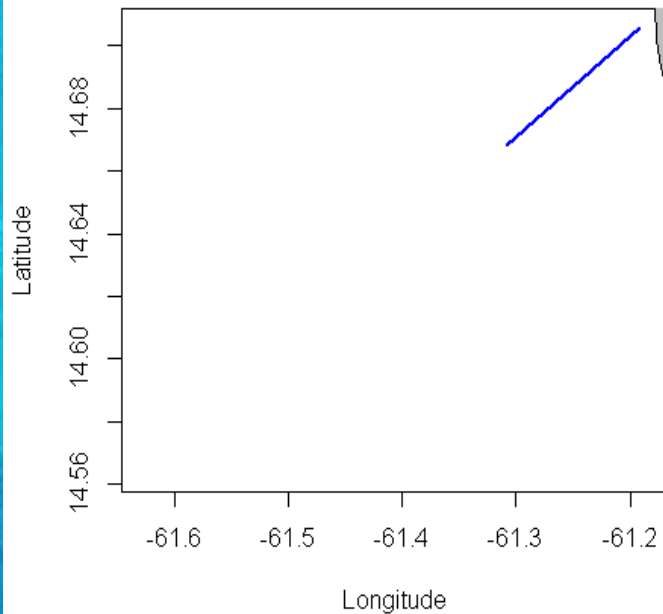
Diurnal structure of the aggregations and their fishing



Example of vessels trips on moored FADs

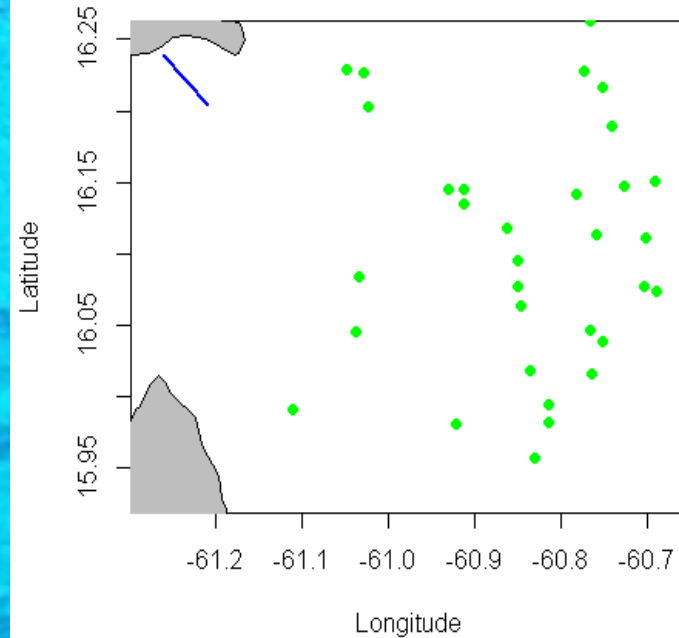
Martinique

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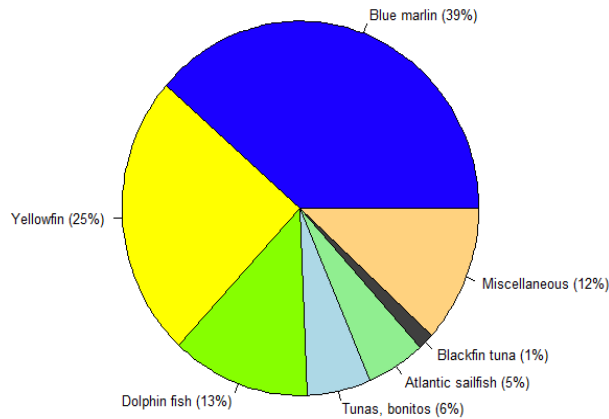
Guadeloupe

2009-03-08 09:38:09

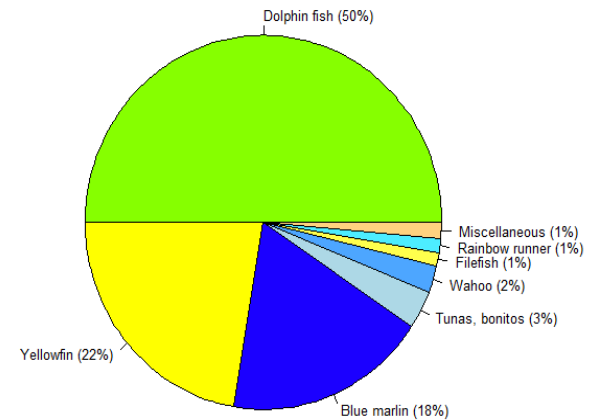


Landings structure of the catch around FAD

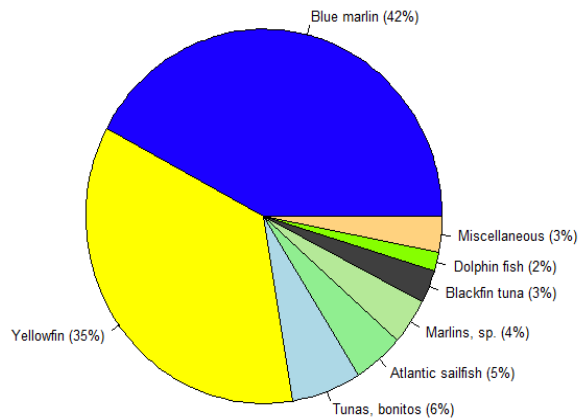
Martinique December-May 2008



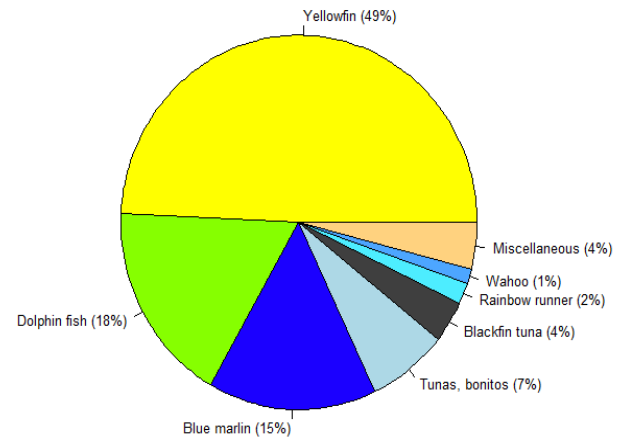
Guadeloupe December-May 2008



Martinique June-November 2008



Guadeloupe June-November 2008



Size frequencies of Blackfin tuna on FAD according to time slot

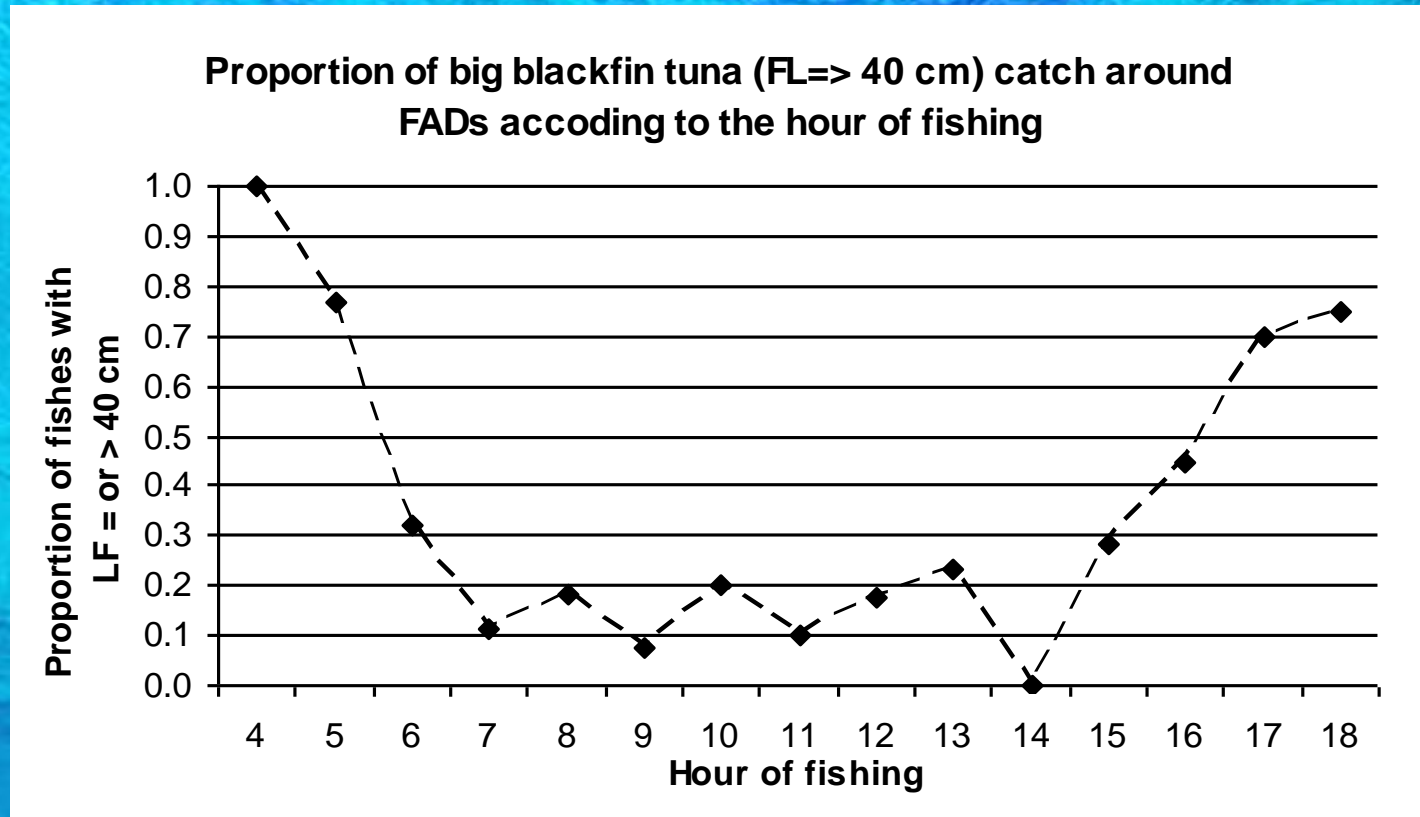


Figure 9. Proportion of big Blackfin tuna (FL => 40 cm) caught around FADs according to the hour of fishing (2004 & 2005)

The background of the slide is an underwater scene. It features a deep blue color palette with various shades of cyan and turquoise. The water surface is visible at the top, with ripples and light reflecting off it. Below the surface, there are some faint, blurry shapes that could be fish or underwater vegetation, but they are not clearly defined. The overall texture is that of moving water.

2 –Gears and Fishing techniques

Size frequencies of Blackfin tuna and gears selectivity

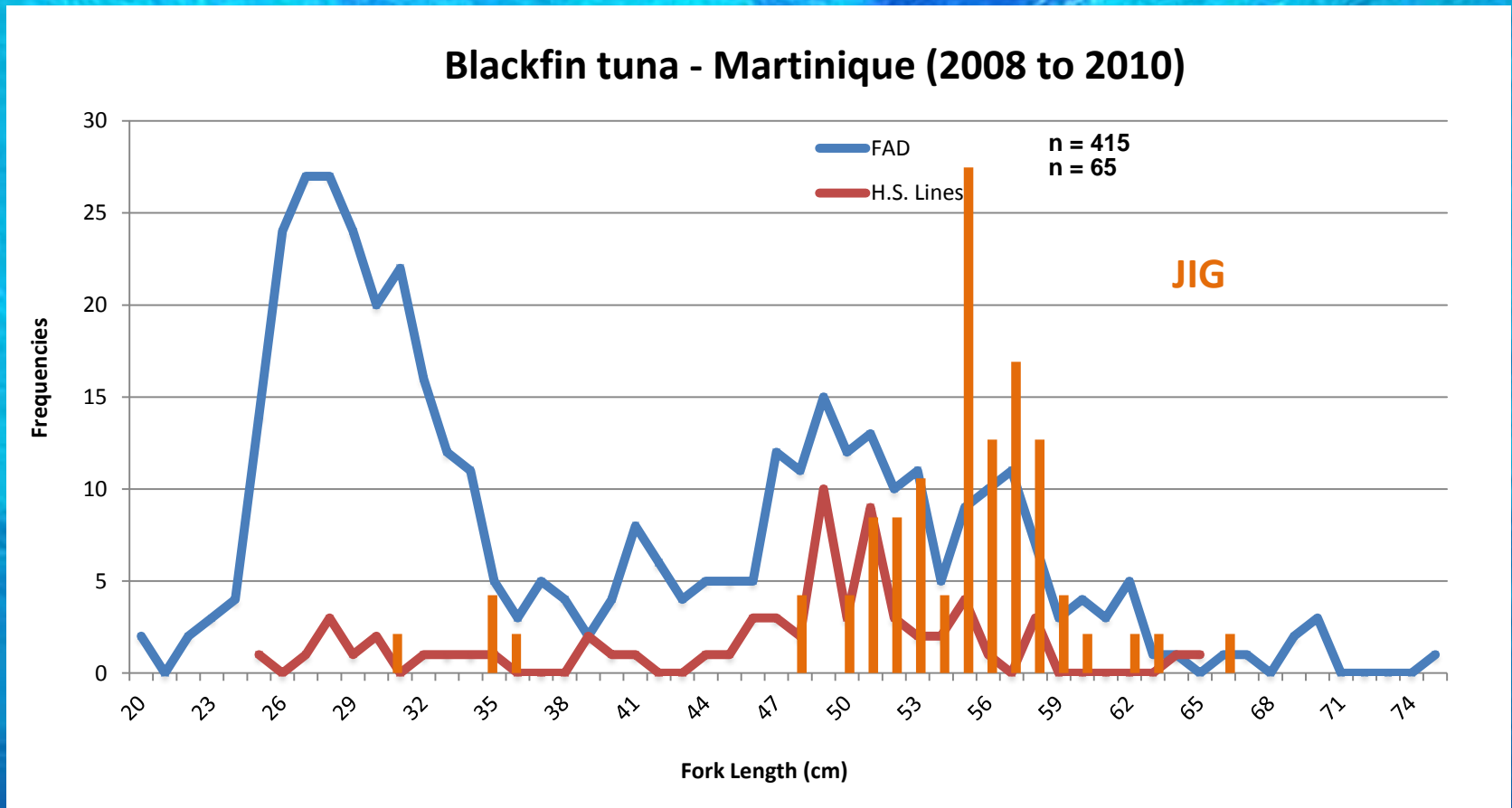
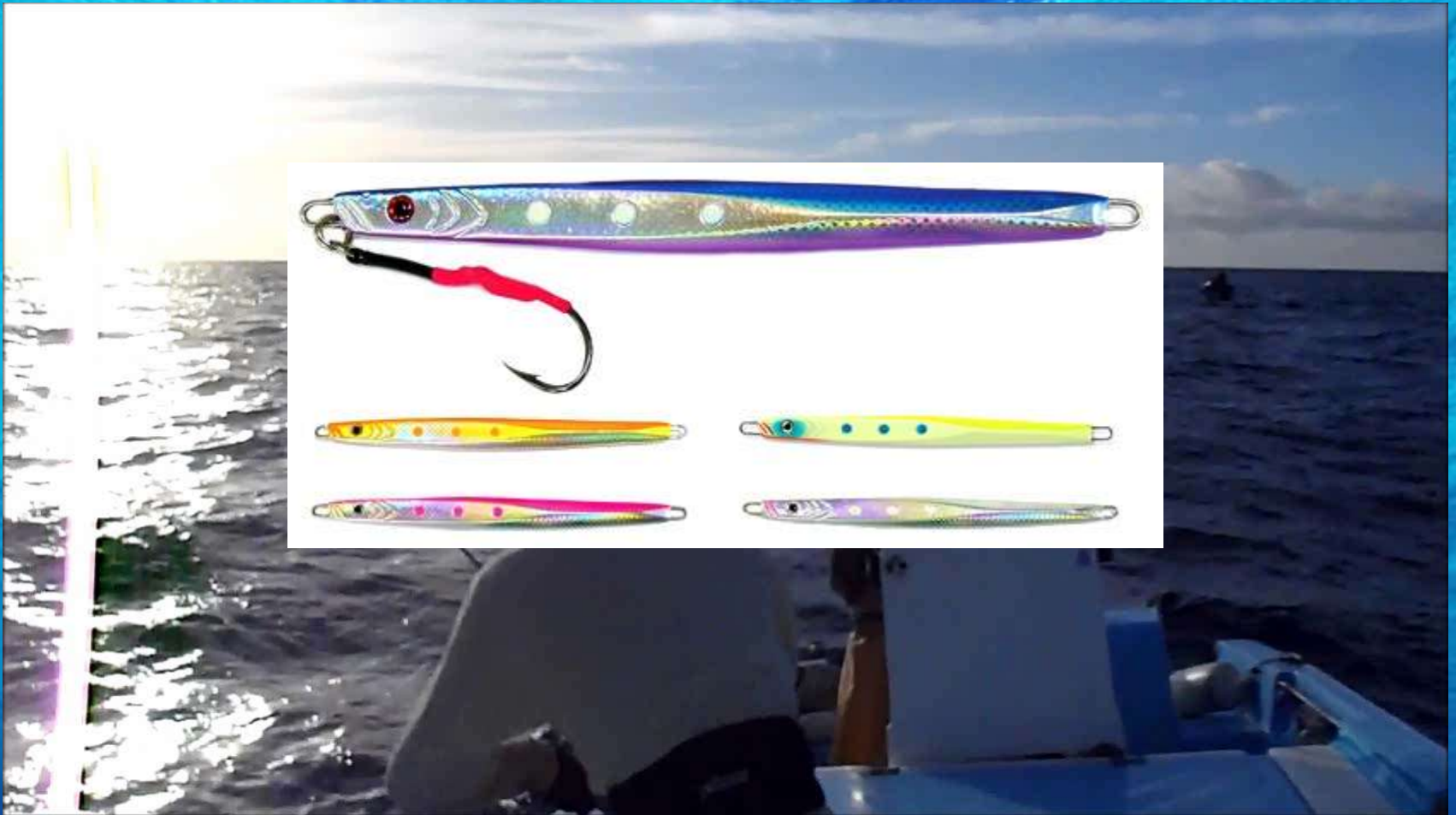
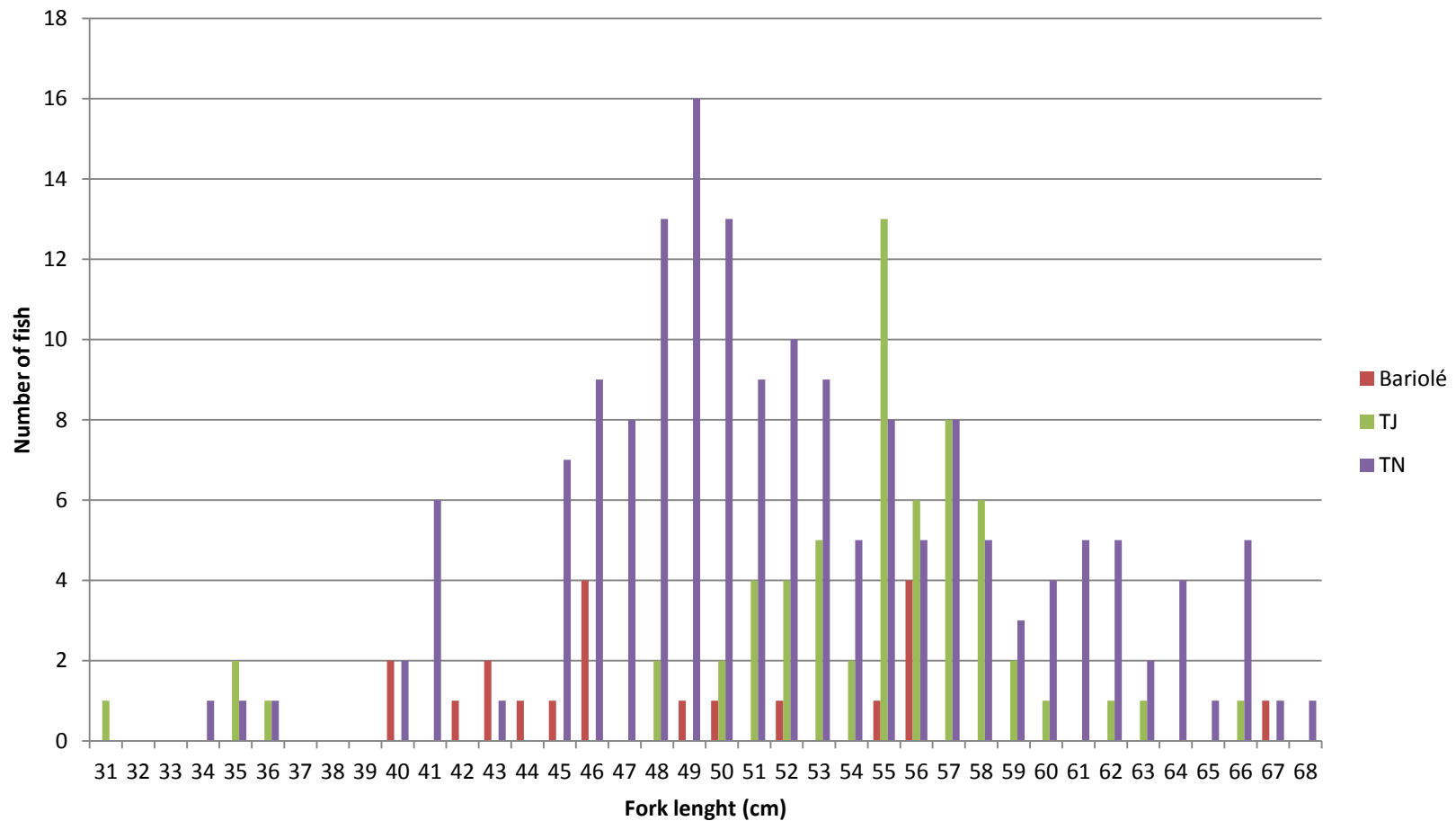


Figure 7. Size frequencies of Blackfin tuna landed by FADs and high sea lines fishing (2008 to 2010)

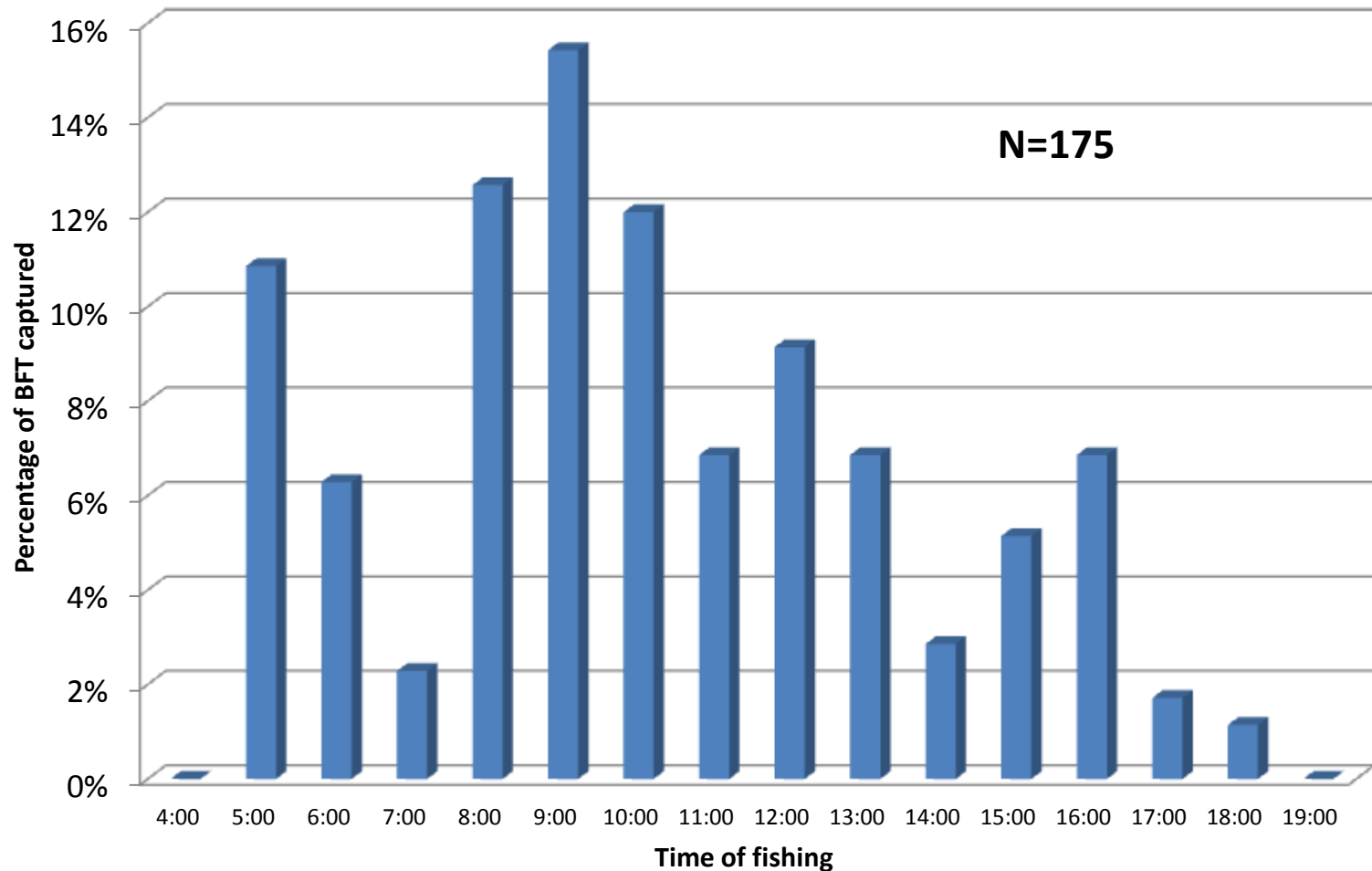
Fishermen from Martinique jigging



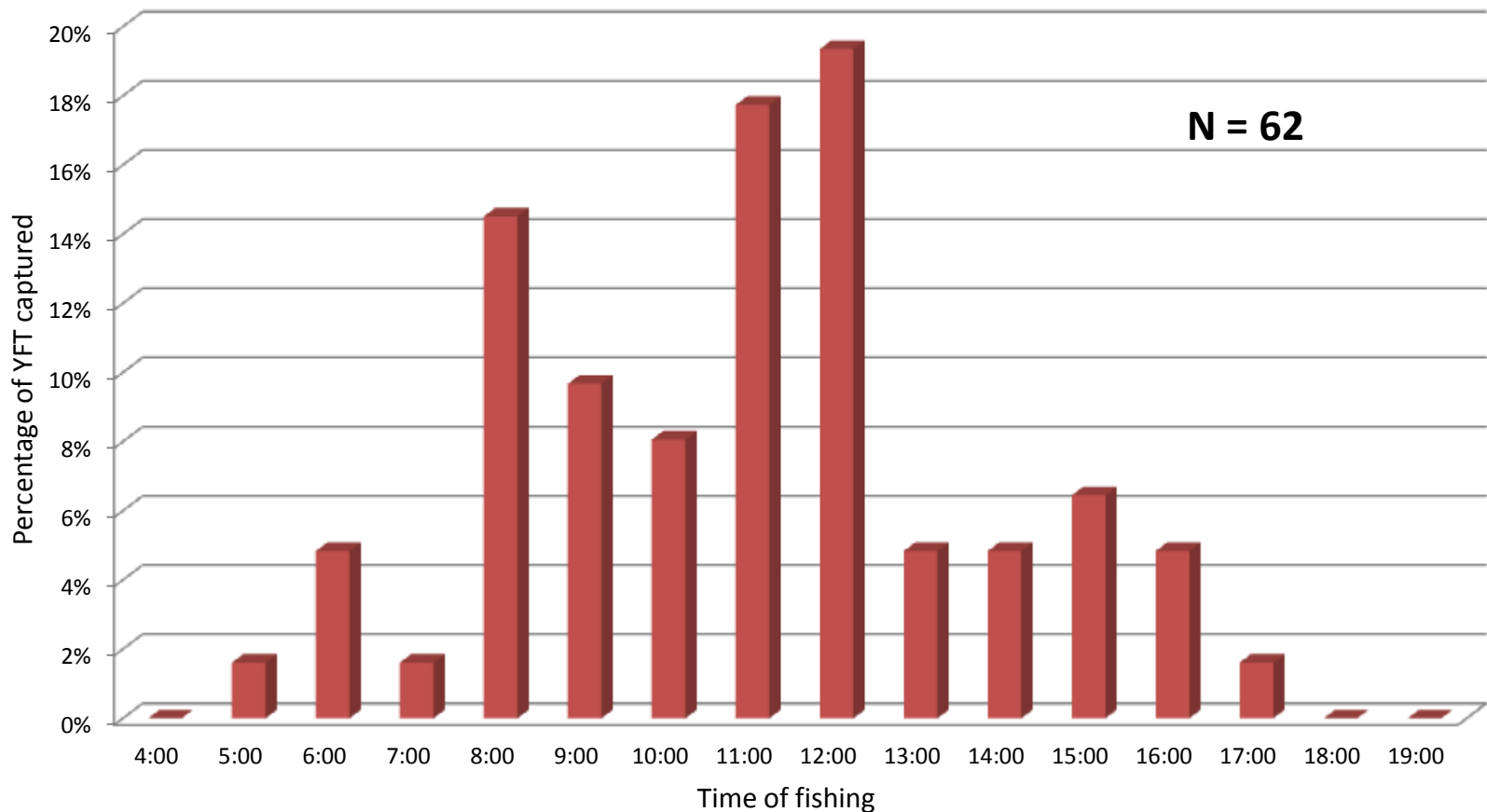
Size frequencies of tunas caught by Jigging around FAD



Quantity of Blackfin tuna caught by jigging around FAD



Quantity of Yellowfin tuna caught by jigging around FAD



CPUE and seasonality of Blackfin tuna catches in Martinique

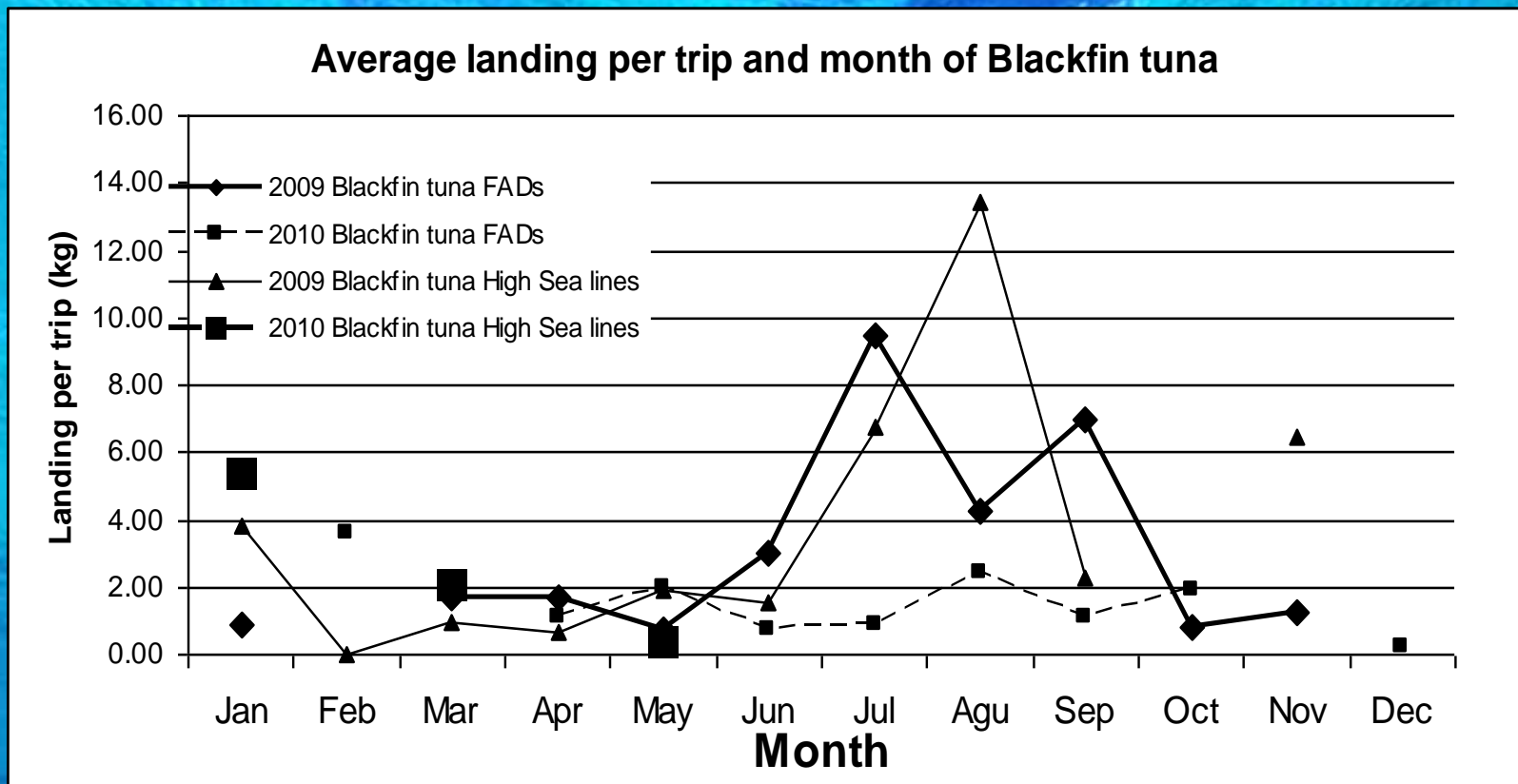


Figure 3. CPUE of Blackfin tuna per month (2009 & 10)



3 – Bait choice on vertical longlines (drifting buoy)

- Life bait (% of capture)
 - Flying fish: 20% (n=62)
 - Blackfin tuna: 15% (n=196)
 - Skipjack: 10% (n=153)
 - Yellowfin tuna: 8% (n=36)

- Dead bait :
 - Flying fish: 50% (n=6)
 - Frozen fish and dead sliced fish: 18% (n=98)
 - Dead sliced fish: 18% (n=154)
 - Frozen squid + dead fish: 13% (n=26)
 - Frozen squid: 8% (n=110)



No Blue
Marlin
captured with
dead bait and
flying fish



4 – Distance of FAD deployment from shore

Distance to the coast vs fishing

0 to 12 nautical miles

10,5 fishes /trip
44,9 kg / trip

240 kg/FAD/Day

YFT

17 kg / trip

90 kg/FAD/Day

12 to 24 miles

14,7 fishes /trip
89,7 kg / trip

340 kg/FAD/Day

YFT

42 kg / trip

160 kg/FAD/Day

24 miles & more

19,9 fishes /trip
135 kg / trip
540 kg/FAD/Day

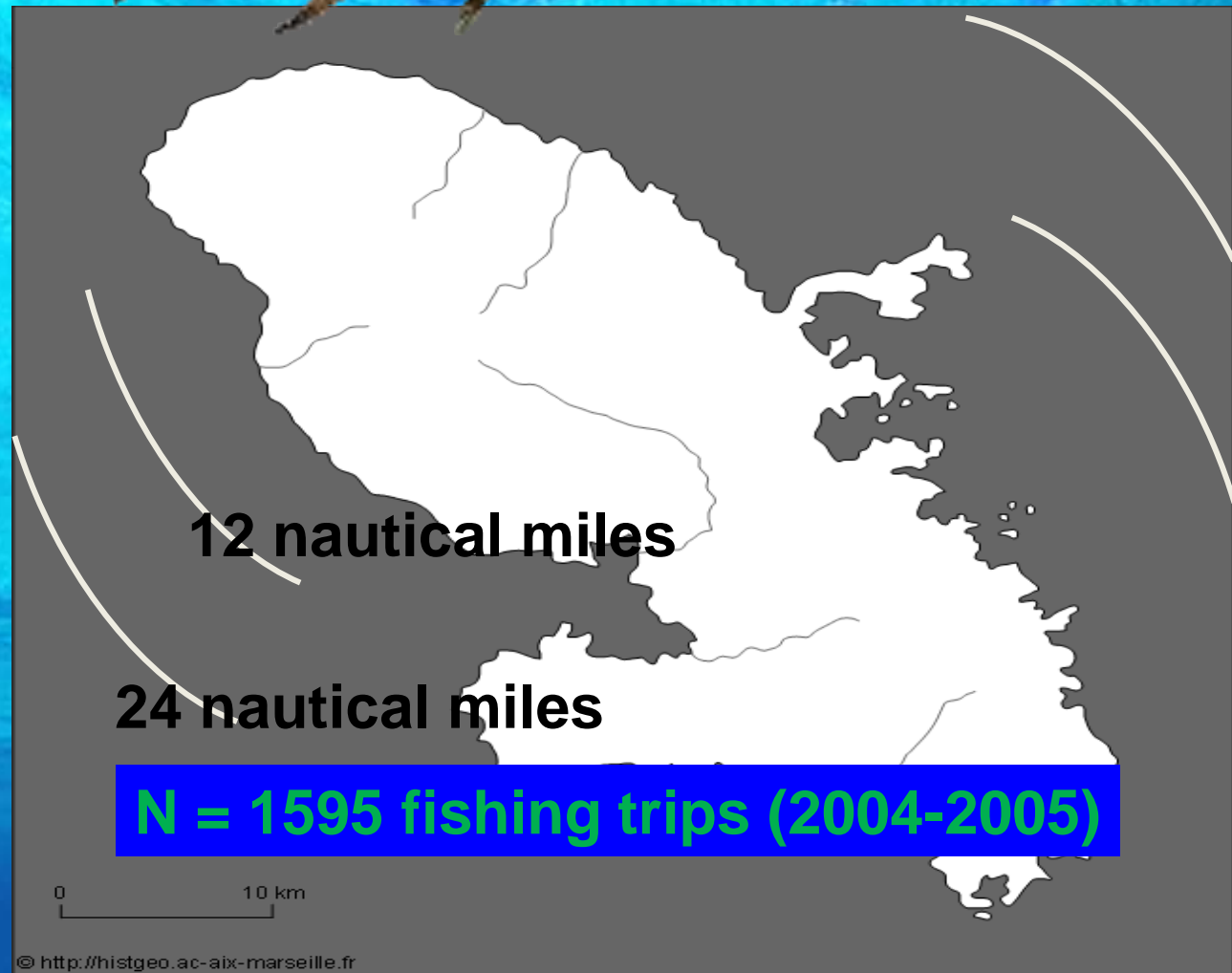
YFT

86 kg / trip

344 kg/FAD/Day



Yellow fin tuna (YFT)



Quantity caught according to the distance of the FAD and Species

Species (kg)	< 12 MN	12 – 24 MN 20 MN	> 24 MN
Skipjack	1,5	4,3	
Yellowfin tuna	17	42	86
Blue marlin	17	36	34

Average caught per fishing trip in Martinique, 2004 & 2005



Thank you