

FAD-Free tuna for Indian Ocean canneries: Justification and Consequences

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Discards

- An international campaign against discards is in full swing...
- No reasonable fisheries biologist or manager would oppose this!
 - Discards are wasteful
 - They usually result from fish which is not suitable for markets – species, sizes, condition and sometimes quota limitations
 - Limited carrying capacity of the fishing vessel may be another reason
 - More particularly, they distort catch data on which stock assessment depends

Discards



- Discarding has dropped significantly but :
 - Trawl fisheries still account for 63 % of global discards for 22% of landings
 - Shrimp trawling averages 55% discards but can reach 90%...

BUT

The campaign has shifted to target *BYCATCH* in tuna fisheries

- ★ Is this **justified** and what could be the **consequences**?



Pole-and-line

This is the gear
recommended by
Greenpeace for cannery
tuna

- Current global production is 400,000t – only part of this is exported as canned product
- The Maldives are the only export-oriented pole-and-line producer in the Indian Ocean with 67,531t in 2010, only 1/3 of which is canned
- Could the Indian Ocean production be expanded?



Pole-and-line

- Baitfish resources are very limited in the western Indian Ocean – Nosy-Bé (Madagascar), the Zanzibar channel and the Oman coast have some bait, with small seasonal resources in Seychelles

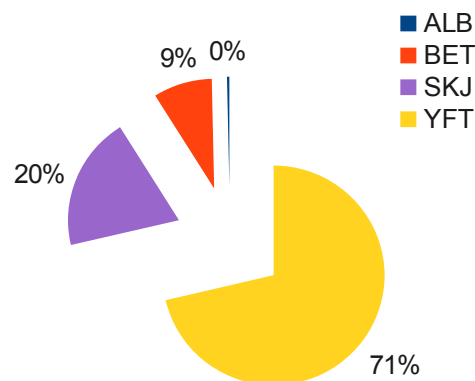
- Repeated attempts to introduce pole-and-line in West African countries have all failed (Mozambique, Zanzibar, Seychelles...)
- Entrepreneurial skills and investment funding are generally lacking...
- Replacing the seiner catch with pole-and-line would double the fuel consumption per tonne of fish !



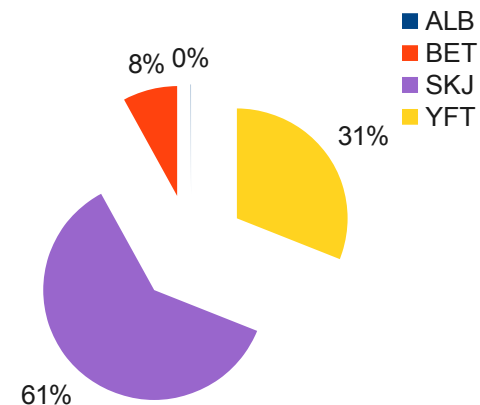
Purse seine

- Free-school (FS) sets in the Indian Ocean are only possible for 3-4 months yearly, when a shallow thermocline keeps the fish at the surface
- FS sets produce very little skipjack but the large catch of yellowfin and bigeye tuna could reduce longline sashimi landings

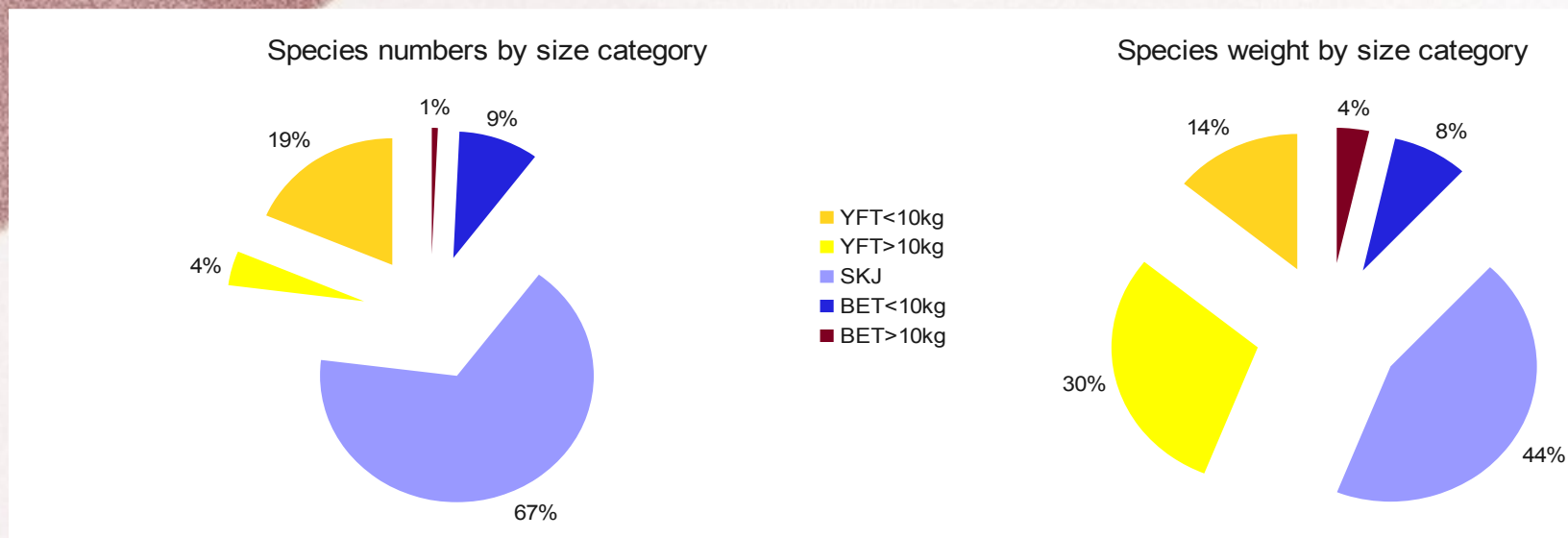
Free-school purse seine species composition



Associated-school purse seine species composition



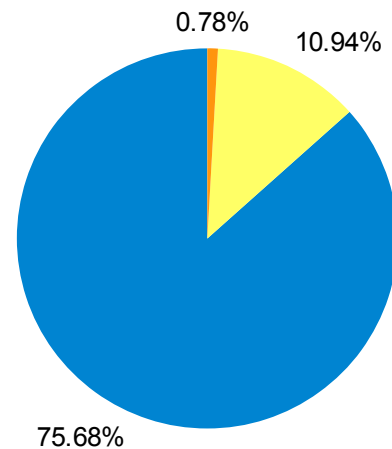
Purse seine



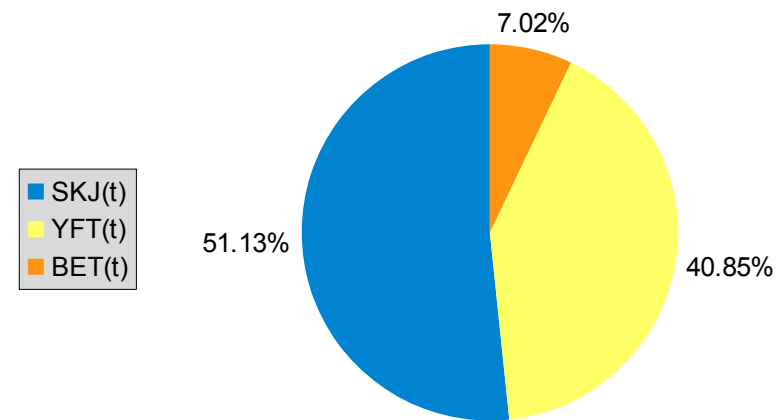
- In FO (Floating object \equiv FAD) sets, 28% of the yellowfin and bigeye tuna are small fish, which may constitute growth overfishing
- Unless a market is found for the FO (FAD) fish, the seiners would probably leave the Indian Ocean
- The economic cost would be some \$500 million and 30,000 jobs to the western Indian Ocean

Retained catch

- Yellowfin and bigeye tuna are target species for both gears *but* IOTC takes measures to limit catches of these species (such as the Somali time-and-area closure) *and* neither species is overfished



Pole-and-line target species composition



Purse seine target species composition

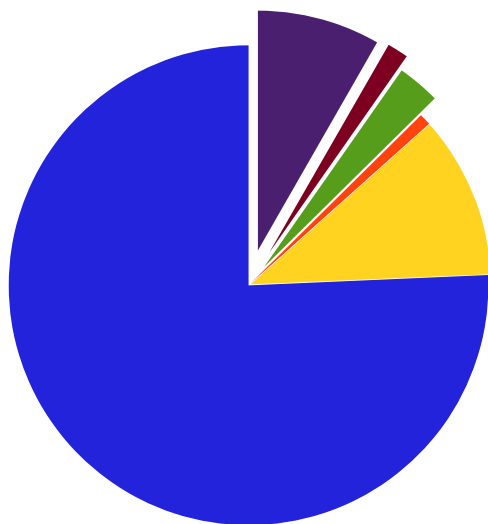
Retained catch and Discards

The real issue is DISCARDS

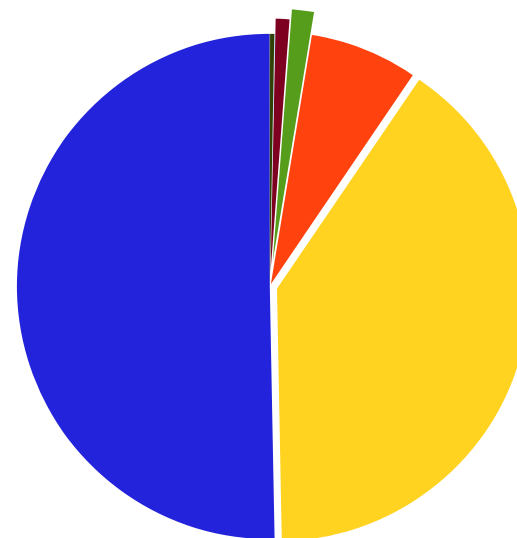
PROVIDED that no species is threatened

- The proportion of skipjack tuna is higher for pole-and-line, BUT so is the proportion of bycatch and 10,000t of bait are “discarded”
- The large yellowfin tonnage is largely due to free school sets but the number of juvenile yellowfin and bigeye tuna has increased, with more FAD sets because of piracy

Pole-and-Line



Purse seine



■ SKJ
■ YFT
■ BET
■ FRI
■ KAW
■ NTAD



Retained catch and Discards

- Megafauna (cetaceans, mantas, whale sharks) and seabirds are not impacted
- Seiners catch some marine turtles which are released alive; “ecological” FADs will reduce turtle and shark entanglement
- Tonnage of each bycatch species is small and all are from “robust” stocks
- Most bycatch is consumed or further processed, *including* cannery waste





CONCLUSIONS

- *Both* pole-and-line and purse seining have very low ecological impacts compared to trawl fisheries
- Pole-and-line, the “Gold Standard” to meet, produces 70% **more** bycatch per tonne of catch than Indian Ocean purse seining
- Replacing the purse seine catch by pole-and-line could result in 40,000t of retained bycatch, 30,000t of bait and a large increase in carbon footprint
- Scarce bait resources, social and economic barriers make a large increase in pole-and-line catch unlikely
- Shifting Indian Ocean purse seining towards FAD-free sets would decrease skipjack and increase yellowfin yields
- Very little fish is discarded (dead) in either fishery

CONCLUSIONS

In conclusion, achieving current production levels of FAD-free cannery tuna in the Indian Ocean seems neither *feasible* nor *justifiable* because of environmental concerns or for economic and social reasons

***Thank you for your
attention***