



agriculture, forestry & fisheries

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South Africa's Annual Report to the Ecologically Related Species Working Group of the Commission for the Conservation of Southern Bluefin Tuna

July 2013

1. Introduction

Southern bluefin tuna is only caught in South Africa by means of the swordfish and tuna longline vessels. The swordfish longline vessels are domestic vessels that mainly target swordfish, yellowfin and bigeye within South Africa's EEZ and catch southern bluefin tuna as by-catch. These vessels set after dusk, using shallow sets, squid bait and light sticks. The longline system used is based on the American system, i.e. monofilament mainline used. The tuna longline vessels target yellowfin and bigeye tuna and also catch southern bluefin tuna as by-catch. South Africa is currently in the process of developing this sector of its fishery and recognises that no suitable domestic vessels exist for this fishery. Furthermore, South Africans are not suitably skilled to target tuna using longline. Consequently, there is a significant reliance on chartering of foreign vessels to source suitable vessels for reflagging and for skills transfer to South Africans. The tuna vessels used in the fishery in 2012 have all been chartered from Japan. All vessels set lines after midnight using braided multifilament, fish bait, but no light sticks are used. These vessels also regularly use bait casting machines and line setters. Southern bluefin is mainly caught inside South Africa's EEZ towards the southern part, which is represented by Statistical Area 9. The South African longline fishery mainly operates during the winter months (May – September). When the vessels are operating in this area during the winter months the catch rates of other tuna and tuna-like species decrease due to the fishery operating at the furthest limit of these species geographical distributions. Seabird mortality interaction is high in South Africa's EEZ and much effort has been focused on mitigating measures to reduce seabird mortality to bring it in line with South Africa's NPOA-seabirds.

2. Review of SBT Fisheries

South Africa has had a brief history in targeting southern bluefin tuna in the early 1960s along the west coast of South Africa where southern bluefin was one of the

most common species caught on longline. This fishery ceased by mid-1960s in favour of developing other more lucrative fisheries. Interest in longline fishing only resurfaced in the mid-1990s when joint operations with a Japanese vessel showed that tuna could be profitably exploited within South Africa's EEZ. Subsequently, 30 experimental longline permits were issued in 1997. The experimental fishery was finally closed in 2005 when 50 long-term fishing rights were made available for allocation. The 50 rights were further split between 20 swordfish-directed rights and 30 tuna-directed rights. In the allocation only 44 rights (18 swordfish vessel and 26 tuna vessels) were allocated to South African companies. Activation of the entire fleet remains a challenge due to low catch rates, increasing fuel costs and lack of suitable vessels and skilled crew. In 2008 only 25 vessels were active (12 South African, 11 Japanese, 1 Korean and 1 Philippine vessel). The majority of the vessels fish out of Cape Town harbour and fish the area between Saldanha Bay on the west coast to Port Elizabeth on the South East coast of South Africa. A few vessels operate out of Richards Bay along the east coast of South Africa.

Trends in catch rates are difficult to identify for southern bluefin tuna as much of the catch of southern bluefin tuna is caught while targeting swordfish, yellowfin and bigeye. The deliberate non-targeting of southern bluefin is due to the limited size of South Africa's southern bluefin quota. Despite southern bluefin tuna not being targeted South Africa has regularly caught its full quota since 2007 and in many years the fishery was forced to close rather early in the fishing season.

3. Fisheries Monitoring for Each Fleet

South Africa initially established a national scientific observer programme for the tuna and swordfish longline fishery in 1998. The programme was aimed to achieve 20% on board observer coverage of all fishing trips. In 2005 South Africa formally allowed the charter of foreign fishing vessels where 100% observer coverage was required at the cost of the South African right holding company. In March 2011 the Department's observer contract expired and no subsequent observer coverage was possible on domestic vessels. The Department is currently in the process to re-establish the national observer programme. One hundred percent observer coverage is still maintained for the charter fleet. The observers are required to collect independent data on each set made and retrieved. Data includes effort, the area fished, environmental conditions, number of seabirds, turtles killed, compliance issues, species composition, length frequencies, mauling, release and discard data. The observers have also been instructed to collect biological samples from time to time.

4. Seabirds

Seabird interaction is high in the waters along the south coast of South Africa. An alarming number of seabirds (albatross and petrels) were caught in the fishery which has resulted in stringent bird mitigation measures to be implemented in the fishery in accordance with South Africa's NPOA-Seabirds. For the swordfish longline vessels, mandatory mitigation measures included line weighting and

deploying of tori lines. For tuna longline vessels, mandatory measures include night setting and deploying of a tori line. In addition, bird limits were implemented per vessel. Once the first limit is reached and the vessel has been compliant then the vessel is allowed to continue fishing, but with more mitigation measures, including double tori line, line weighting (tuna vessels) and night setting (swordfish vessels). Through compliance to these measures observed seabird mortality was reduced to 144 seabirds in 2012, which represented 0.054 seabirds per thousand hooks. All seabird catches made in the tuna and swordfish longline fishery is reported to ICCAT and IOTC respectively. South Africa is also in the process of investigating smart hooks and hook pods as a possible means to eliminate seabird mortality.

5. Other non-target fish

Blue and shortfin mako sharks comprise a significant proportion of the total catch. In 2012 these species accounted for approximately 630 t. These sharks are allowed to be retained, but may not exceed 50% of the total weight of the catch. This limit was originally 10% but was increased to 50% when South Africa terminated its directed pelagic shark longline fishery. The charter vessels are limited to 10% of the total catch. Other additional measures include the ban of wire leaders and stainless steel hooks. Other sensitive shark species have been banned. This includes oceanic whitetip, thresher sharks, hammerhead sharks and silky sharks. The Department is also finalizing the NPOA-sharks which would further prioritise shark research and management issues so as to improve the sustainable management of shark resources. All shark catches made in the tuna and swordfish longline fishery is reported to ICCAT and IOTC respectively.

6. Marine mammal and marine reptiles

Although killer whales and pilot whales have been observed on several occasions mauling fish caught on the longline no South African records exist for any of these species to be caught on a longline. Turtle catches are rare and are more often caught by the swordfish vessels which set lines within 50m of the surface and use squid bait. The most common turtle species caught are loggerhead and leatherback turtles, but due to the branch lines being longer than the bouy lines these animals are able to swim to the surface to breathe and hence turtles are mainly released alive by means of appropriate dehooking devices. All turtle catches made in the tuna and swordfish longline fishery is reported to ICCAT and IOTC respectively.

7. Mitigation Measures to minimize seabird and other species by-catch

All mitigation measures have been included in permit conditions which fishers have to adhere to.

A summary of seabird mitigation measures are as follows:

Tuna longline vessels may only set at night and would have to use the specified tori line for each set;

Swordfish vessels have to use a tori line for each set and must use weighted lines;

Vessel to have the necessary bird dehooking device on board;
Bait is to be thawed prior to being used, and;
Deck lighting is to be kept to a minimum.
Compliance with the mitigation measures have increased in recent years due to the 25 and 50 bird cap imposed per vessel since 2008.

A summary of shark mitigation measures are as follows:
South Africa terminated its directed pelagic shark longline fishery in 2011;
Tuna and swordfish vessels are prohibited from using stainless steel hooks and wire leaders (foreign vessels);
All fins and shark trunks must be landed together at the first point of landing to ensure no finning takes place;
Thresher sharks, hammerheads, oceanic whitetip and silky sharks are not permitted to be landed, and;
Shark by-catch is not to exceed 50% of the targeted species for domestic vessels, but limited to 10% for foreign vessels;
Compliance to these measures is essentially 100%.

The following additional information should be noted:
All discharges/ transshipments are monitored;
Transshipping is only allowed in port subject to the issuing of a permit;
All vessels must have a functional VMS on board;
Observer coverage is aimed at 100% for foreign vessels.

The Branch Fisheries Management under the Department of Agriculture Forestry and Fisheries (DAFF) is the lead agency in South Africa undertaking research on large pelagic species and is working closely with Birdlife SA and WWF in terms of investigating mitigation measures.

8. Public Relations and Education Activities

DAFF is working closely with WWF to encourage fishers to responsible fishing courses. These courses were started in 2008 and it is DAFF's vision that all officers should undergo the training.

11. Implementation of the IPOAs

South Africa launched its NPOA-seabirds in 2008. Thus far great progress has been made in reducing seabird mortality in its large pelagic longline fleet and in 2012 South Africa achieved a seabird mortality rate that was below 0.054 seabirds per thousand hooks. DAFF is currently in process of finalizing its NPOA-sharks which was circulated for public comment in 2012 and the final version is currently being formatted for publishing in 2013. Despite not having the NPOA – sharks completed South Africa has nonetheless implemented appropriate measures to address shark concerns as can be seen by the current permit conditions and drastic action to terminate the directed pelagic shark longline fishery in 2011.