

FROM DIRECTOR-GENERAL: MS PAM YAKO

TO: DDG: MCM

COMMENTS: Andre Share

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16727 TAE 2008 Demersal Shark Longline

Date Initiated:	Initiator:	Current Performer:	Due Date:	Done Date	Workflow Status:
08 October 2007 09:04 AM	Beryl Batties	WF: ODG Scan Registry	10 December 2007 03:12 PM		Executing

Initiator Comments:

[Step Details...](#)

Step Name	Performer	Task Disposition	Due Date	Done Date	Comments
Step 2 - Director	Theressa Akkers	Forward to CD	10 October 2007 09:04 AM	08 October 2007 11:29 AM	
Step 3 - Chief Director	Andre Share	Recommended	10 October 2007 11:29 AM	26 October 2007 08:59 AM	
Step 4 - Deputy Director-General	Monde Mayekiso	Recommended	30 October 2007 08:59 AM	22 November 2007 09:03 AM	Andre - for your review please.
Step 5 - Chief Financial Officer (MCM)	Saliem Mohamed	Funds available	26 November 2007 09:03 AM	23 November 2007 05:33 PM	
Step 6 - Chief Operating Officer	Nosipho Jezile	Recommended	27 November 2007 05:33 PM	27 November 2007 08:38 PM	
Step 7 - Language Practitioner	Nondwe Nkayi		29 November 2007 08:38 PM	28 November 2007 10:45 AM	Edited. LP 28 11 07
Step 8 - Director-General	Pam Yako	Recommended	30 November 2007 10:45 AM	04 December 2007 01:35 PM	
Step 8D - Print Documents for DG	Betta Coetzee		06 December 2007 01:35 PM	04 December 2007 03:12 PM	
Step 8E - Scan & Attach Signed Submission	WF: ODG Scan Registry		06 December 2007 03:12 PM		
Step 9 - Workflow Complete	WF: D.O&HSFM		10 December 2007 03:12 PM		

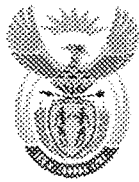
Step 4 - Deputy Director-General - Review

Review Title	Reviewer	Review Date Due	Review Date Done	Instructions
Step 4 - Deputy Director-General - Review	Steps Completed		20 November 2007 02:44 PM	"

[Step Details...](#)

Step Name	Performer	Task Disposition	Due Date	Done Date	Comments
ashare	Andre Share			20 November 2007 02:44 PM	

16727



environment & tourism

Department:
Environmental Affairs and Tourism
REPUBLIC OF SOUTH AFRICA

Reference: V1/20/5/1

MINISTER

TOTAL ALLOWABLE EFFORT (TAE) FOR THE 2008 SEASON: THE DEMERSAL SHARK LONGLINE FISHERY

1. PURPOSE

- 1.1 To request you to determine TAE for the 2008 Demersal Shark Longline season in terms of the provisions of Section 14 of the Marine Living Resources Act, 1998 (Act No. 18 of 1998).

2. SUMMARY

- 2.1 It is recommended that TAE for the demersal shark longline fishery remain at six vessels for 2008. This recommendation reflects the total number of long-term rights allocated in 2006. The fishing season for demersal shark longline is from 1 January to 31 December.

3. BACKGROUND

- 3.1 For the 2007 season you determined TAE of six vessels for the demersal shark longline fishery (Annexure A).
- 3.2 The department considered the recommendations from the Chief Directorate: Research, Antarctica and Islands of the Branch: Marine and Coastal Management (as per Annexure B) and wishes to advise as follows:
 - Sharks are extremely vulnerable to over-exploitation because of the nature of their reproductive biology. They cannot support prolonged intensive fishing pressure.

- Concerns over the impact of intensive shark fishing have been raised at international forums, i.e. the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), International Commission for the Conservation of Atlantic Tunas (ICCAT), Indian Ocean Tuna Commission (IOTC) and the Food and Agriculture Organisation of the United Nations (FAO). These concerns have resulted in the development of international conservation and management plans. The South African National Plan of Action for sharks is currently in draft phase.
- Despite the South African shark longline fishery comprising of two distinct components, namely an inshore and offshore component, it has historically been managed as one fishery. The inshore component (demersal) uses bottom-set gear to target predominantly soupfin and hound sharks, while the offshore fishery used drift gear that was deployed in a pelagic environment to target predominantly highly migratory species, mako and the blue sharks.
- There are currently six rights holders in the demersal shark longline fishery. Demersal shark catches have declined from 140 t in 2000 to 18 t in 2004. Unreported catches and poor quality fisheries data have led to huge uncertainties over the stock status of these species. Therefore, the precautionary approach should be adopted.
- Subsequent to long-term rights allocation, the six Right Holders collectively caught a total of 11.23 t in 2006. Right Holders have concentrated their catching effort on other sectors like hake longline and tuna pole, while pursuing targeting of demersal sharks during relatively quiet periods of their hake and tuna fishing operations.

4. IMPLICATIONS

4.1 Personnel

Limited

4.2 Financial

None

4.3 Communication

Limited

5. OTHER BRANCHES/CHIEF DIRECTORATES CONSULTED

- 5.1 The Chief Directorate Research, Antarctica and Islands was consulted.

4. RECOMMENDATION

It is recommended that:

- 6.1 TAE for the demersal shark longline fishery remain at six vessels and that such TAE be apportioned and allocated as follows:


Commercial:	six vessels
Recreational fishing:	Nil allocation
Subsistence fishing:	Nil allocation
Foreign fishing:	Nil allocation

DIRECTOR-GENERAL

DATE:

RECOMMENDATION APPROVED/~~NOT APPROVED~~

MINISTER
DATE:


6/12/07
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10812



environment & tourism

Department:
Environmental Affairs and Tourism
REPUBLIC OF SOUTH AFRICA

Reference: V1/13/5/1

MINISTER

TOTAL APPLIED EFFORT (TAE) FOR THE 2007 DEMERSAL SHARK LONGLINE FISHERY SEASON

1. PURPOSE

1.1 To request that you determine the TAE for the 2007 Demersal Shark Longline season in terms of the provisions of Section 14 of the Marine Living Resources Act, 1998 (Act No. 18 of 1998).

2. SUMMARY

2.1 The TAE for the demersal shark longline fishery should remain at six vessels for 2007. The fishing season for demersal shark longline is from 1 January to 31 December. This recommendation reflects the total number of long-term rights allocated in 2006. Another rights allocation process will be held for the large pelagics sector in 2007, to effectively consolidate the pelagic shark operators who are currently operating under exemption in the large pelagic sector. Once this allocation is concluded, targeting of pelagic sharks should be terminated.

3. BACKGROUND AND DISCUSSION

3.1 For the 2006 season you determined a Total Applied Effort (TAE) of six vessels for the demersal shark longline fishery (Annexure A).

3.2 The department considered the recommendations from the Chief Directorate: Research, Antarctica and Islands of the Branch: Marine and Coastal Management (as per Annexure B) and wishes to advise as follows:

- Sharks are extremely vulnerable to over-exploitation because of the nature of their reproductive biology. They cannot support prolonged intensive fishing pressure.

- Concerns over the impact of intensive shark fishing have been raised at international forums, such as, Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), International Commission of the Conservation of Atlantic Tunas (ICCAT) and Food and Agriculture Organisation of the United Nations (FAO). These concerns have resulted in the development of international conservation and management plans. The South African National Plan of Action for sharks is currently being drafted.
- Despite the South African shark longline fishery comprising of two distinct components, namely, an inshore and offshore component, it has historically been managed as one fishery. The inshore component (demersal) uses bottom-set gear to target predominantly soupfin and hound sharks. The offshore fishery uses drift gear that is deployed in a pelagic environment to target predominantly highly migratory mako and blue sharks.
- There are currently six rights holders in the demersal shark longline fishery. Demersal shark catches have declined from 140 t in 2000 to 18 t in 2004. Unreported catches and poor quality fisheries data have led to huge uncertainties over the stock status of these species. Therefore, the precautionary approach should be adopted.
- Conversely, as market prices for pelagic shark species improved in recent years, there was a concomitant increase in activity in the fishery. Landings of pelagic sharks increased sharply from < 6 t in 2002 to > 800 t in 2005.
- Coupled to this, the increase in fleet size of the large pelagic longline fishery raised concerns on the sustainability of a directed pelagic shark fishery given the expected increase in shark bycatch by the large pelagic fleet, the biology of sharks and the international concern for the stock status of pelagic sharks.
- As the offshore (or pelagic) component of the fishery catches the same species as tuna and swordfish longline vessels, the department decided that these fisheries be consolidated into the large pelagic (tuna and swordfish longline) fishery for easy management.
- The large pelagic policy (tuna and swordfish), gazetted on 24 March 2004, included the objective to consolidate all commercial large pelagic longline fisheries. This includes the pelagic shark longline, but excludes the demersal shark longline. According to this policy the commercial harvesting of pelagic sharks by the existing longline fishery should have terminated on 31 December 2005. Despite the Shark Longline Association (SLA) not agreeing to the termination of

the directed pelagic shark longline fishery in the final drafts of the policy, the department took the decision to terminate the fishery. However, after receiving several exemption applications and meetings with medium-term right holders, the department issued exemptions to nine operators.

- In an effort to effectively bring about consolidation in the large pelagic sector, the pelagic shark fishers operating under exemption would be afforded an opportunity to apply for a large pelagic right through a rights allocation process to allocate the additional TAE in 2007.

4. IMPLICATIONS

4.1 Personnel

Limited.

4.2 Financial

None.

4.3 Communication

Limited.

4. RECOMMENDATIONS

It is recommended that:

- 5.1 The Total Applied Effort (TAE) for shark longline remain 6 (six) vessels in the demersal shark longline component and that such TAE be apportioned and allocated as follows:

Commercial: 6 vessels

Recreational fishing: Nil allocation

Subsistence fishing: Nil allocation

Foreign fishing: Nil allocation

- 5.2 The pelagic component of shark longlining be terminated upon consolidation of the large pelagic sector through a rights allocation process in 2007.

Accounted by Deputy DG via email 10/11/2006

DIRECTOR-GENERAL (ACTING)

DATE:

TOTAL APPLIED EFFORT (TAE) FOR THE 2007 DEMERSAL SHARK LONGLINE FISHERY SEASON

RECOMMENDATIONS

5.1 APPROVED/NOT APPROVED

5.2 APPROVED/NOT APPROVED

MINISTER

DATE:



20/11/06.

DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND TOURISM
MARINE AND COASTAL MANAGEMENT

**RECOMMENDATIONS FOR SUSTAINABLE MANAGEMENT OF
DEMERSAL SHARK RESOURCES in 2007 (SHARK LONGLINE)**

AUGUST 2007

Summary

The uncertainty regarding the stock status of demersal shark species and their status as a by-catch species require that a precautionary approach to management should be adopted. Hence, it is recommended that the TAE for the demersal shark longline fishery should remain at six vessels for 2008.

Introduction

Sharks have life-history characteristics such as long lifespans and low fecundity which makes them particularly vulnerable to overexploitation. These attributes result in low inherent rates of increase and low resilience to fishing mortality and they can therefore only withstand modest levels of fishing without depletion and stock collapse (Hoenig & Gruber, 1990). Concerns over the impact of intensive shark fishing have consequently been raised at various international for a such as CITES, IUCN, ICCAT, IOTC and FAO. These concerns have resulted in the development of international and national conservation and management plans. The South African National Plan of Action (NPOA) -Sharks is currently in draft phase.

Unfortunately, the implementation of this management approach is difficult to achieve, particularly when confronted with multi-species fisheries or with fisheries where little data on catches, effort and biology are available. Elasmobranchs fall into this category. They are often caught as a suite of species in the absence of high-value bony fish (teleosts) and they exhibit complex migratory patterns and life-history characteristics. Further complications arise due to the inherent difficulties of researching these animals. As a result, few data concerning their biology are available. These factors, in conjunction with poor fishery data and limited identification abilities of dressed animals have resulted in poor management. It is also widely accepted that elasmobranch fisheries are unsustainable. **It has however been demonstrated by Walker (1998) that sustainability is theoretically possible under an active management regime.** As a result, scientists have

highlighted the need to develop management strategies for chondrichthyans based on the implementation of the FAO's *Precautionary Approach to Fisheries*

The *Precautionary Approach to Fisheries* (FAO, 1995) was developed for the purpose of enabling management bodies to cope with uncertainty in the face of increasing marine resource usage. The primary aim of this approach is to reduce the risk to fisheries through caution when faced with data-poor situations, and by taking socio-economic and environmental implications into account when making management decisions.

The pelagic and longline shark fishery

The directed shark longline fishery has two distinct fleets. The first longline fleet predominantly targets highly migratory mako (*Isurus* spp) and blue sharks (*Prionace glauca*) using offshore pelagic drifting gear. The second demersal component operates in shallow waters generally shallower than 100 m, and uses bottom-set gear to predominantly target soupfin (*Galeorhinus galeus*) and hound sharks (*Mustelus mustelus*).

Catches of demersal sharks have generally been poor, due to fishers only being active on part-time bases. During 2006 a total of only 0.78 t of soupfin shark and 10.45 t of copper shark were reported by the six long-term successful demersal rights holders. Under-utilization of fishing rights is a common occurrence in this fishery as right holders generally view shark fishing as a part-time activity to keep vessels busy during the lean periods of other more lucrative fisheries such as pelagic shark and hake. In contrast, catches of pelagic sharks have increased sharply since 2003 to reach over 539 t in 2006.

Shark fisheries appear to be largely influenced by market trends. The bulk of soupfin and hound shark trunks and fins are exported to Australia for use in the fillet trade. The value of fillets is currently low, and consequently only a few right holders fish for these species. The majority of the profits made from the demersal fillet trade are from Carcharhinid fins of larger animals. In contrast, mako shark and blue shark fins are high-value products and are exported to Europe and Asia. In contrast to blue shark trunks, mako shark trunks are considered to be of high value.

Due to concerns about high pelagic shark catches in the developing domestic swordfish and tuna longline sectors the Department has decided to terminate targeting of pelagic sharks. Consequently, no long-term rights were issued for pelagic sharks. Eight pelagic shark operators are currently fishing under exemptions until another rights allocation process is held in the large

pelagic sector in 2007. In 2006 only 6 long-term rights were made available for targeting of demersal sharks, in order to reduce latent fishing effort in the fishery.

Updated data: Demersal shark catches have declined from 140 t in 2000 to 11 t in 2006, which has largely been due to a decrease in fishing effort relating to quality issues. Although the demersal longline fishery catches comparatively low numbers of sharks, other sectors are providing a significant contribution to the overall shark catch. Although demersal sharks are primarily caught as by-catch by the bottom inshore trawl fisheries and the traditional linefish fishery there is anecdotal evidence suggesting that sharks are being targeted. The large unreported catches of demersal sharks made by these sectors in addition to poor quality fisheries data have led to huge uncertainties regarding the stock status of these species. However two recent stock assessments completed on soupfin shark and smoothhound sharks (McCord, 2005; Da Silva, 2007) suggest that this resource may be overexploited. Further sampling by Da Silva in shark processing facilities suggest that the actual catch of smoothhound sharks may be as high as 1326 t, which is significantly higher than the 284.9 t reported by the traditional linefish, longline and trawl fisheries for 2005.

It is therefore strongly recommended that the precautionary approach should be adopted, by retaining a TAE of 6 vessels. This recommendation is in line with the draft SA NPOA – Sharks, which also calls for a capping of fishing effort at current levels until more information becomes available.

Due to improved market values for pelagic sharks, landings of these sharks have increased sharply from under 6 t in 2002 to over 539 t in 2006, with most fishing effort shifting to the Indian Ocean, and mako sharks contributing over 85% of the catch in 2003 and 2004. Pelagic shark species are highly migratory and as such are managed by regional fisheries management organisation such as the International Commission for the Conservation of Atlantic Tunas (ICCAT) and the Indian Ocean Tuna Commission (IOTC). Stock assessments for Atlantic blue and mako sharks were conducted by ICCAT in 2004. The assessment was not conclusive due to the poor quality of fisheries data and high levels of under-reporting by all fleets fishing for sharks.

As the offshore component catches the same species as tuna and swordfish longline vessels it was decided by the Department that these fisheries should be consolidated into the large pelagic longline fishery for ease of management. However, one of the main objectives of the new large pelagic fishery is to improve tuna catch performance. Hence, the fleet was increased to 50 vessels.

The increase in fleet size raised concerns on the sustainability of a directed pelagic shark fishery given the expected increase in shark by-catch by the large pelagic fleet. In addition, blue and mako sharks are described as threatened by the IUCN. Sharks are generally considered to be susceptible to over-exploitation due to their life history, and concerns over ecosystem effects have led MCM not to allocate long-term rights for the targeting of pelagic sharks.

Management recommendations for the sustainable management of the resource:

Due to uncertainty regarding stock status and catch data from the demersal fishery the precautionary approach should be adopted. Hence, it is recommended that the TAE for the demersal shark longline fishery remain at 6 vessels for 2007. This recommendation reflects the total number of rights allocated in 2006.

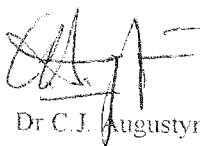
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Dr C.J. Augustyn

Chief Director: Research, Antarctica & Islands

Date: 14 September 2007