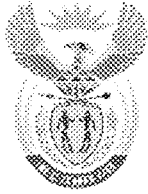


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environment
& tourism

Department:
Environmental Affairs and Tourism
REPUBLIC OF SOUTH AFRICA

Reference: V1/20/5/1/2

MINISTER

INITIAL TOTAL ALLOWABLE CATCH (TAC) FOR THE 2008 PELAGIC (PILCHARD/SARDINE AND ANCHOVY) SEASON

1. PURPOSE

To request that you determine the initial Total Allowable Catch (TAC) for the 2008 Pelagic (Pilchard/Sardine and Anchovy) season in terms of the provisions of Section 14 of the Marine Living Resources Act, 1998 (Act No. 18 of 1998).

2. SUMMARY

As per the revised Operational Management Procedure (OMP-08), it is recommended that the initial Pelagic Total Allowable Catch (TAC) be determined as follows: Sardine-directed TAC (90 776 t), Anchovy initial TAC (247 500 t), sardine initial bycatch allowance for anchovy-directed fishing (25 065.9 t) and sardine bycatch allowance for red-eye-directed fishing (3 500 t). Furthermore it is recommended that the Precautionary Upper Catch Limit (PUCL) of 100 000 t be applied to red-eye. The fishing season for the pelagic fishery is from 15 January to 31 December.

3. BACKGROUND AND DISCUSSION

3.1 In January 2007 you determined an initial (provisional) TAC of 368 791 t (162 436 t of directed Pilchard/Sardine, 186 942 t of Anchovy and a Pilchard/Sardine initial bycatch allowance of 19 413 t) for the 2006 pelagic season (See Annexure A).

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

- A revised Operational Management Procedure (OMP-08) was applied to the results of the 2007 spawner biomass survey to calculate the initial TAC recommendations.
- Results from the November 2007 spawner biomass survey indicated a continued decline in sardine biomass which was estimated at 260 684 t and is substantially lower than the long-term (1984-2006) median of 713 000 t. In contrast, anchovy spawner biomass was estimated at 2.5 million tons and was higher than that estimated for 2006 and is approximately 20% above the long-term median of 2.04 million tons.
- The 44% decrease in the sardine-directed TAC compared to 2007 is a direct result of the reduced sardine biomass indicated by the 2007 spawner biomass survey.

4. OTHER BRANCHES/CHIEF DIRECTORATES CONSULTED

The Chief Directorate: Marine Resource Management consulted with the Chief Directorate Research, Antarctica and Islands within the branch Marine and Coastal Management.

5. IMPLICATIONS

Personnel	:	Limited
Financial	:	None
Communication	:	Limited

6. RECOMMENDATIONS

It is recommended that:

6.1 the Total Allowable Catch (TAC) for the initial pelagic season be determined as follows:

Sardine-directed TAC	90 776 t
Anchovy initial TAC ¹	247 500 t
Sardine initial by-catch allowance for anchovy-directed fishing ²	25 065.9 t
Sardine by-catch allowance for redeye-directed fishing ³	3 500 t

¹ Note that this figure will be revised following the May 2008 recruitment survey.

² Note that this figure will be revised following the May 2008 recruitment survey.

³ Note that this by-catch allowance is not allocated on an individual basis to right holders whereas that taken in anchovy-directed fishing is allocated individually.)

- 6.2 no exchange between sardine-directed TAC and sardine by-catch allowance be permitted.
- 6.3 the Department encourages the activation of a Sea Management Forum to monitor sardine, chub mackerel and horse mackerel by-catch levels and to temporarily close fishing blocks to pelagic fishing should by-catch levels be too high.
- 6.4 the catch of juvenile horse mackerel by the pelagic fishery should not exceed 5 000 t. (Reasonable flexibility should be exercised regarding this limit during years when the high incidence of mixed-species shoals makes it very difficult for the pelagic fleet to avoid juvenile horse mackerel and adaptive management measures such as time-area closures should be followed if necessary).
- 6.5 a Precautionary Upper Catch Limit (PUCL) of 100 000 tons should apply to red-eye.
- 6.6 the fishing areas within 20 km radius of the Dassen Island lighthouse and 30 km radius of St Croix Island be closed to pelagic fishing.

DIRECTOR-GENERAL (ACTING)

DATE:

RECOMMENDATION IN PARAGRAPH 6.1 APPROVED/~~NOT APPROVED~~
RECOMMENDATION IN PARAGRAPH 6.2 APPROVED/~~NOT APPROVED~~
RECOMMENDATION IN PARAGRAPH 6.3 APPROVED/~~NOT APPROVED~~
RECOMMENDATION IN PARAGRAPH 6.4 APPROVED/~~NOT APPROVED~~
RECOMMENDATION IN PARAGRAPH 6.5 APPROVED/~~NOT APPROVED~~
RECOMMENDATION IN PARAGRAPH 6.6 APPROVED/~~NOT APPROVED~~

MINISTER

DATE:


11/01/08

11625



environment & tourism

Department:
Environmental Affairs and Tourism
REPUBLIC OF SOUTH AFRICA

Reference: V1/4/5/1

MINISTER

INITIAL TOTAL ALLOWABLE CATCH (TAC) FOR THE 2007 PELAGIC (PILCHARD/SARDINE AND ANCHOVY) SEASON

1. PURPOSE

To request that you determine the initial Total Allowable Catch (TAC) for the 2007 Pelagic (Pilchard/Sardine and Anchovy) season in terms of the provisions of Section 14 of the Marine Living Resources Act, 1998 (Act No. 18 of 1998).

2. SUMMARY

As per the revised Operational Management Procedure (OMP-04), it is recommended that the initial Pelagic Total Allowable Catch (TAC) be determined as follows: Sardine-directed TAC (162 436t), Anchovy initial TAC (186 942t), sardine initial bycatch allowance for anchovy-directed fishing (19 413t) and sardine bycatch allowance for red-eye-directed fishing (10 000t). Furthermore it is recommended that the Precautionary Upper Catch Limit (PUCL) of 100 000t be applied to red-eye. The fishing season for the pelagic fishery is from 15 January to 31 December.

3. BACKGROUND AND DISCUSSION

In January 2006 you determined an initial (provisional) TAC of 438 962 tonnes (204 000 tonnes of directed Pilchard/Sardine, 212 251 tonnes of Anchovy and a Pilchard/Sardine initial bycatch allowance of 22 711 tonnes) for the 2006 pelagic season (See Annexure A).

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

- The Operational Management Procedure (OMP-04) and revisions thereof (conducted in order to accommodate rulings made during 2004 and 2005 by the Supreme Court of Appeal and the Cape High Court) were used as the bases to recommend the pelagic TAC's and bycatch allowances during 2005, with a re-revised OMP-04 used for 2006 TACs.
- Results from the November 2006 Spawner Biomass Survey indicated a 30% decrease in the anchovy spawner biomass compared to that observed in 2005 and a substantial decline in the sardine spawner biomass.
- The 20% decrease in the sardine-directed TAC compared to 2006 is a direct result of the reduced sardine biomass indicated by the 2006 spawner biomass survey.

4. IMPLICATIONS

Personnel	:	Limited
Financial	:	None
Communication	:	Limited

5. RECOMMENDATIONS

It is recommended that:

5.1	the Total Allowable Catch (TAC) for the initial pelagic season be determined as follows:	
	Sardine-directed TAC	162 436 t
	Anchovy initial TAC ¹	186 942 t
	Sardine initial bycatch allowance for anchovy-directed fishing ²	19 413 t
	Sardine bycatch allowance for redeye-directed fishing ³	10 000 t

INITIAL TOTAL ALLOWABLE CATCH (TAC) FOR THE 2007 PELAGIC (PILCHARD/SARDINE AND ANCHOVY) SEASON

¹ Note that this figure will be revised following the May 2007 recruitment survey.

² Note that this figure will be revised following the May 2007 recruitment survey.

³ Note that this by-catch allowance is not allocated on an individual basis to right holders whereas that taken in anchovy-directed fishing is allocated individually.)

- 5.2 no exchange between sardine-directed TAC and sardine bycatch allowance be permitted;
- 5.3 the catch of juvenile horse mackerel by the pelagic fishery should not exceed 5 000t. (Reasonable flexibility should be exercised regarding this limit during years when the high incidence of mixed-species shoals makes it very difficult for the pelagic fleet to avoid juvenile horse mackerel and adaptive management measures such as those implemented in September 2005 should be followed if necessary).
- 5.4 a Precautionary Upper Catch Limit (PUCL) of 100 000 tonnes should apply to red-eye.

DIRECTOR-GENERAL

DATE:

RECOMMENDATION IN PARAGRAPH 5.1 ~~APPROVED/NOT APPROVED~~
RECOMMENDATION IN PARAGRAPH 5.2 ~~APPROVED/NOT APPROVED~~
RECOMMENDATION IN PARAGRAPH 5.3 ~~APPROVED/NOT APPROVED~~
RECOMMENDATION IN PARAGRAPH 5.4 ~~APPROVED/NOT APPROVED~~

MINISTER

DATE:

WS
7/1/07

DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND TOURISM
BRANCH: MARINE AND COASTAL MANAGEMENT
INITIAL PELAGIC TAC RECOMMENDATIONS FOR 2008

December 2007

1. Background - The document entitled "Final Pelagic TAC Recommendations for 2007, June 2007" (MCM/2007/JUNE/SWG-PEL/05) provides a description of the process followed to set the final pelagic TACs for 2007. The TACs, by-catch allowances, PUCLs, and total landed catches (up to 19/12/07 and subject to verification) for 2007 are shown in the table below. Achieved catches total to around 430 000t, and catches are less than the TACs for sardine and particularly anchovy. This is due, in part, to reduced availability of fish (particularly anchovy in the last quarter of the year), and inclement weather conditions that constrained fishing operations during various months.

	Normal season		Sub-season TAC / allowance (separate from normal season)	Total Catch ³
	Initial TAC / allowance / PUCL ¹	Final TAC / allowance		
Sardine-directed		162 436t		135 962t
Anchovy	186 942t	386 942t	150 000t	249 774t
Sardine by-catch	29 413t ²	36 503t ²	2 000t	4 650t
Redeye round herring	100 000t			48 229t
Horse mackerel	5 000t			1 925t

¹ Precautionary Upper Catch Limit

² The sardine initial and final by-catch allowances include an amount of 10 000t of primarily adult sardine that may be taken during fishing for redeye.

³ Up to 19/12/07 and subject to verification.

2. November 2007 Spawner Biomass Survey Results - Results from this survey are fully described in MCM/2007/DEC/SWG-PEL/03. The anchovy spawner biomass was estimated at around 2.5 million t (see Table 1), up from that estimated in 2006 and about 20% above the long-term (1984-2006) median of 2.04 million t. The sardine spawner biomass continued to decline and was estimated at 260 684t (see Table 1), substantially below the long-term (1984-2006) median of 713 000t for this stock and comparable to the low biomass estimates observed in the mid- to late-1980s. Redeye spawner biomass in 2007 was estimated at 1.72 million t, the second highest

estimate observed to date. Time-series of annual November survey estimates of anchovy, sardine and redeye spawner biomass are given in Table 1.

3. Initial TAC recommendations for 2008 – A revised operational management procedure known as OMP-08 (see MCM/2007/26NOV/SWG-PEL/01) was applied to the results of the 2007 spawner biomass survey to calculate the Initial TAC recommendations (see MCM/2007/DEC/SWG-PEL/04) for 2008. These are as follows:

Sardine-directed TAC	90 776t
Anchovy initial TAC ¹	247 500t
Sardine initial by-catch allowance for anchovy-directed fishing ²	25 065.9t
Sardine by-catch allowance for redeye-directed fishing ³	3 500t

¹ Note that this figure may be revised following the May 2008 recruitment survey.

² Note that this figure may be revised following the May 2008 recruitment survey.

³ Note that this by-catch allowance is not allocated on an individual basis to right holders whereas that taken in anchovy-directed fishing is allocated individually.

The sardine-directed TAC for 2008 is substantially lower than that recommended in 2007 and reflects the low sardine biomass observed during the 2007 spawner biomass survey. Given that the observed sardine biomass is only 11 000t above the Exceptional Circumstances threshold (of 250 000t), the OMP-08 rules result in a directed-sardine TAC for 2008 close to the minimum TAC (in the absence of Exceptional Circumstances) of 90 000t.

The anchovy initial TAC recommendation for 2008 is based on how the 2007 anchovy spawner biomass estimate compares to previous estimates, and is also subject to constraints. Because the 2007 Final anchovy normal-season TAC was above the 2-tier threshold level of 330 000t, and because the anchovy biomass observed during the 2007 spawner biomass survey was above the Exceptional Circumstances threshold (of 400 000t), the constraints applied result in a maximum reduction to 75% of the anchovy 2-tier threshold level.

The estimate of redeye abundance from the November 2007 survey does not indicate any need for modifying the present precautionary upper catch limit (PUCL) of 100 000t for that species.

4. RECOMMENDATIONS

a) At this time the TACs for 2008 should be set as follows:

Sardine-directed TAC	90 776t
Anchovy initial TAC	247 500t
Sardine initial by-catch allowance for anchovy-directed fishing	25 065.9t
Sardine by-catch allowance for red-eye-directed fishing	3 500t

b) No exchange between sardine-directed TAC and sardine by-catch allowance should be permitted. Note that the evaluations underlying OMP-08 assume that the sardine by-catch allowances set may be reached on occasion, but are anticipated to be under-caught on average through time, which is the reason that such change is not allowed.

c) The Chief Directorate: Research, Antarctica and Islands is extremely concerned about the rapid decline in sardine population size observed over the past few years. Given that a population recovery will depend on successful sardine recruitment which is more likely at higher biomass levels, and because sardine recruits are caught in anchovy-directed fishing operations, the pelagic industry should introduce measures and take appropriate steps to attempt to keep the sardine by-catch to an absolute minimum. This could be achieved through a number of adaptive management measures including the activation of a Sea Management Sub-Committee (or Area Committee) to monitor sardine by-catch levels and temporarily close fishing blocks to pelagic fishing should by-catch levels be too high.

d) Because of the low sardine-directed TAC, rights-holders will (to a greater extent than normal) seek to can most of their sardine allocations to enhance their economic returns. The Chief Directorate: Research, Antarctica and Islands anticipates increased pressure on skippers of sardine-directed vessels to land catches of sardine that are suitable for canning purposes. In view of this, measures to ensure compliance in the pelagic sector should be increased, particularly to reduce possible instances of dumping of undersize sardine.

e) The joint and carefully considered recommendation from the SWG-EAF and SWG-PEL (see EAFWG/OCT2007/STG/07) regarding the closure to pelagic fishing of areas

around Dassen Island on the west coast and St Croix Island on the east coast as part of an experiment related to implementing an Ecosystem Approach to Fishing (EAF) for the small pelagic sector is endorsed by the Chief Directorate: Research, Antarctica and Islands.

- f) The catch of juvenile horse mackerel in the purse-seine fishery should not exceed 5 000t. Reasonable flexibility should be exercised regarding this limit during years when the high incidence of mixed-species shoals makes it very difficult for the pelagic fleet to avoid juvenile horse mackerel, and adaptive management measures by the industry such as those implemented previously (*i.e.* local area closures) should be followed if necessary.
- g) A precautionary upper catch limit (PUCL) of 100 000t should apply to red-eye, as in immediately previous years.



Dr K. Prochazka
Director: Research and Development

Date: 20/2/2007



Mr A.D. Naidoo
Acting Chief Director: Research, Antarctica and Islands

Date: 20/2/07

Table 1. End-of-year estimates of anchovy, sardine and redeye spawner biomass (in thousands of tonnes) and their coefficients of sampling variation (CV) from the November acoustic surveys. Note that the time-series presented have been revised to take account of the “capping” problem and revision of the target strength equations for anchovy and sardine, and to correct for attenuation by sardine schools.

Year	Anchovy biomass	CV (%)	Sardine biomass	CV (%)	Redeye Biomass	CV (%)
1984	1 586	27	42	60	78	34
1985	1 449	19	71	40	246	23
1986	2 597	18	211	40	339	31
1987	2 165	16	168	55	529	20
1988	1 641	22	144	40	369	32
1989	797	18	373	25	859	26
1990	697	20	346	35	427	18
1991	2 500	16	583	28	624	25
1992	2 231	16	431	37	729	17
1993	1 189	20	613	28	508	22
1994	708	17	783	26	279	21
1995	643	21	817	31	569	13
1996	213	35	666	24	579	16
1997	1 191	24	1 185	28	684	29
1998	1 318	20	1 612	25	1 248	15
1999	2 100	15	1 564	22	1 396	17
2000	4 506	11	2 387	48	1 421	17
2001	7 926	13	2 500	14	1 046	12
2002	3 858	16	4 138	22	934	16
2003	3 669	23	3 243	20	1 762	10
2004	2 036	13	2 607	33	1 474	9
2005	3 063	14	962	32	1 620	34
2006	2 106	14	713	35	1 228	11
2007	2 507	16	261	34	1 721	15