

FROM: DIRECTOR-GENERAL: MS PAM YAKO

TO: DDG mem

COMMENTS: Approved

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16709 OYSTER TAE 2008 SEASON SUBMISSION

Date Initiated: 05 October 2007 11:24 AM
Initiator: Gloria Sikiti
Current Performer: WF: ODG Scan Registry
Due Date: 28 November 2007 09:23 AM
Done Date:
Workflow Status: Executing


Initiator Comments:

Step Details...

Step Name	Performer	Task Disposition	Due Date	Done Date	Comments
Step 2 - Director	Ntobeko Bacela	Forward to CD	09 October 2007 11:24 AM	09 October 2007 03:02 PM	
Step 3 - Chief Director	Andre Share	Recommended	11 October 2007 03:02 PM	26 October 2007 09:01 AM	
Step 5 - Deputy Director-General	Monde Mayekiso	Recommended	30 October 2007 09:01 AM	15 November 2007 09:59 AM	Andre - for your review please Reviewer's Comments Step Name: ashare Performer: ashare DDG I have replaced all documents that were there before. Annexures have now been seperated into two stand alone attachments. the main submission now incorporates editing as advised.
Step 6 - Chief Financial Officer	Saliem Mohamed	Funds available	19 November 2007 09:59 AM	19 November 2007 01:06 PM	
Step 7 - Chief Operating Officer	Nosipho Jezile	Recommended	21 November 2007 01:06 PM	21 November 2007 05:26 PM	
Step 8 - Language Practitioner	Nondwe Nkayi		23 November 2007 05:26 PM	22 November 2007 09:00 AM	Edited. LP 22 11 07
Step 9 - Director-General	Pam Yako	Recommended	26 November 2007 09:00 AM	22 November 2007 09:17 AM	
Step 10D - Print Documents for DG	Betta Coetzee		26 November 2007 09:17 AM	22 November 2007 09:23 AM	
Step 10E - Scan & Attach Signed Submission	WF: ODG Scan Registry		26 November 2007 09:23 AM		
Step 11 - Workflow Complete	WF: D:IFM		28 November 2007 09:23 AM		

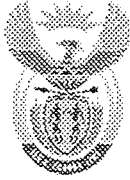
Step 5 - Deputy Director-General - Review

Review Title	Reviewer	Review Date Due	Review Date Done	Instructions
Step 5 - Deputy Director-General -	Steps Completed		12 November 2007	"

 Step Details...

Step Name	Performer	Task Disposition	Due Date	Done Date	Comments
ashare	Andre Share			12 November 2007 01:31 PM	DDG I have replaced all documents that were there before. Annexures have now been seperated into two stand alone attachments. the main submission now incorporates editing as advised. =====

16709



environment & tourism

Department:
Environmental Affairs and Tourism
REPUBLIC OF SOUTH AFRICA

Reference: V1/11/5/1

MINISTER

TOTAL APPLIED EFFORT (TAE) FOR THE 2008 OYSTER SEASON

1. PURPOSE

- 1.1 To request you to determine the TAE in respect of the Oyster fishery for the 2008 season in terms of the provisions of Section 14 of the Marine Living Resource Act, 1998 (Act No. 18 of 1998).

2. SUMMARY

- 2.1 It is recommended that the TAE for the Oyster fishery be determined at 145 harvesters for the 2008 season with no catch limit. It is further recommended that the recreational TAE be maintained at a daily (bag) limit of 25 oysters. The fishing season for oysters is from 1 January 2008 to 31 December 2008.

3. DISCUSSION

- 3.1 For the 2007 season the Minister determined a Total Applied Effort of 107 harvesters that were distributed as follows: KwaZulu-Natal (KZN) North - 23 harvesters; KZN South - eight harvesters; Southern Cape Coast - 72 harvesters; Port Elizabeth - four harvesters. (Annexure A).
- 3.2 The department considered scientific information presented (Annexure B) and established that there is no credible basis to change from historical levels.

- 3.3 Since 2002, a TAE of 145 harvesters has been allocated to the oyster fishery. After the rights allocation process 107 rights were allocated to individual pickers including after appeals. The resource is demonstrating to be under-utilised if judged by the effort that was allocated through fishing rights and comparing it with that which was recommended for the sector. This effort can be reallocated to needy fishers.
- 3.4 There is concern that the inter-tidal zone in the Southern Cape, particularly in Mossel Bay, George and Knysna, is under severe harvesting pressure. The resource in KZN is still considered to be optimally harvested.
- 3.5 The department recommends a precautionary approach to utilisation of the Oyster resource in general for the reason that adequate research on resource dynamics is lacking. As such, a maximum Total Applied Effort of 145 harvesters is recommended.

4. IMPLICATIONS

- 4.1 Personnel
Limited.
- 4.2 Communication
Limited.

5. OTHER CHIEF DIRECTORATES/BRANCHES CONSULTED

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

6. RECOMMENDATION

It is recommended that:

- 6.1 the global Total Applied Effort (TAE) for the Oyster fishery for 2008 be determined at:

Commercial Fishing : 145 harvesters
Recreational Fishing : bag limit of 25 oysters per person per day
Subsistence Fishing : nil allocation

Foreign Fishing : nil allocation

6.2 the global Total Applied Effort (TAE) be apportioned as follows:

	KZN North	KZN South	Southern Cape	Port Elizabeth	TOTAL
TAE	25	15	102	3	145

6.3 the TAE for Southern Cape sub-area be apportioned as follows:

	A1 Heidelberg ("Witsands")	B2 / C3 Riversdale Mossel Bay	D4 / E5 George Knysna	TOTAL
TAE	10	58	34	102

DIRECTOR-GENERAL
DATE:

RECOMMENDATIONS
6.1 APPROVED/~~NOT APPROVED~~
6.2 APPROVED/~~NOT APPROVED~~
6.3 APPROVED/~~NOT APPROVED~~

MINISTER
DATE:

US
27/11/07



environment & tourism

Department:
Environmental Affairs and Tourism
REPUBLIC OF SOUTH AFRICA

Reference: V1/11/5/1

MINISTER

TOTAL APPLIED EFFORT (TAE) FOR THE 2007 OYSTER SEASON

1. PURPOSE

- 1.1 To request that you determine the Total Applied Effort (TAE) in respect of the oyster fishery for the 2007 season in terms of the provisions of Section 14 of the Marine Living Resource Act, 1998 (Act No. 18 of 1998).

2. SUMMARY

- 2.1 It is recommended that the Total Allowable Effort (TAE) for the oyster fishery be 107 pickers for the 2007 season. It is further recommended that the 60,000 annual catch limit be removed. The recreational TAE is maintained at a daily (bag) limit of 25 oysters. The fishing season for oysters is from 1 January to 31 December.

3. DISCUSSION

- 3.1 For the 2006 season you determined a Total Allowable Effort (TAE) of 145 pickers as follows; KwaZulu-Natal (KZN) North: 25 pickers; KZN South: 15 pickers; Southern Cape Coast: 102 pickers; Port Elizabeth: 3 pickers for the oyster fishery (Annexure A).

3.2 The Department considered the recommendations from the Branch: Marine and Coastal Management (Annexure B) and wishes to advise as follows:

- Since 2002, a TAE of 145 pickers has been allocated to oyster pickers with annual a catch limit of 60,000 per annum.
- The Rights Allocation Process listed 107 right holders including after appeals.
- Research in the oyster fishery is still premature with incomplete stock assessment. Once the methodology is refined, and a reliable index of oyster abundance is obtained, researchers will be better equipped to provide proper scientific advice on sustainable harvesting levels.
- In the new 3-year rights allocations process, pickers are allocated rights to empower those who depend on the oyster fishery for livelihood and no additional effort (pickers) to assist with harvesting.
- In the Southern Cape, particularly in the Mossel Bay, George, Knysna areas, there is concern that the intertidal zone is being denuded of oysters as a result of being oversubscribed.
- Harvesting of the oyster resource in KZN is still considered to be optimally exploited.
- Long-term rights will only be considered once there is meaningful stock assessment and the transformation profile is improved.
- Currently TAE is determined according to historic efforts but should also be consistent with rights allocated.

4. IMPLICATIONS

- Personnel: Limited
- Financial: None
- Communication: Limited

5. RECOMMENDATIONS

5.1 It is recommended that the global Total Applied Effort (TAE) for the oyster fishery for 2007 be:

Commercial Fishing : 107 pickers
Recreational Fishing : bag limit of 25 oysters per person per day
Subsistence Fishing : nil allocation
Foreign Fishing : nil allocation

5.2 It is further recommended that the 60,000 annual catch limitations be removed.

DIRECTOR-GENERAL (Acting)
DATE:

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

MINISTER
DATE:

MS.
7/01/07.

**DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND TOURISM
BRANCH: MARINE AND COASTAL MANAGEMENT**

**RECOMMENDATIONS FOR THE SUSTAINABLE MANAGEMENT
OF THE OYSTER FISHERY FOR THE 2008 SEASON**

AUGUST 2007

SUMMARY

The fishery for oysters is managed by means of a Total Allowable Effort (TAE) regime that regulates the number of harvesters (pickers) allowed in the fishery. The TAE for 2008 should remain unchanged until the resource can be properly assessed. Therefore, the recommended TAE for the oyster fishery in 2008 is 145 pickers. The recommended TAE split across the four commercial areas is as follows:

	KZN North	KZN South	Southern Cape	Port Elizabeth	Total
TAE	25	15	102	3	145

The recommended TAE split by sub-area for the Southern Cape coast is as follows:

	A1 Heidelberg ("Witsands")	B2/C3 Riversdale/Mossel Bay	D4/E5 George/Knysna	Total
TAE	10	58	34	102

INTRODUCTION

Overview of the fishery

The commercial fishery for the oyster *Striostrea margaritacea* dates back to the late nineteenth century. Prior to 1998, a handful of individuals (less than 8) held concessions to harvest oysters and employed large numbers of individual "pickers" to assist with the collections. Over the period 2002-2005 rights were allocated to 34 right holders, the majority of whom held limited commercial rights and were allowed to work with up to three pickers. A few right holders held full commercial rights and were allocated a maximum of ten pickers. In total 114 pickers were permitted to harvest oysters during this period.

In the 2006 allocation process, the sector was further transformed and 3-year commercial rights were allocated to 121 individuals. A large number of pickers were accommodated in this process, the idea being that pickers were granted rights as a means of empowering those who are dependent on oyster harvesting as their livelihood. In the new system, right holders are required to harvest the oysters themselves and are no longer allocated additional effort (pickers) to assist with harvesting. Rights were allocated for a three year duration – long term rights will only be considered for this sector once there is sufficient information on the status of the resource and once the transformation profile is improved.

Traditionally, commercial harvesting was restricted to the intertidal zone. However in recent years the area harvested has extended offshore to include the fringes of the subtidal zone. This shift in harvesting depth is most likely attributed to a decline in the number of oysters in the intertidal zone and/or to a gradual increase in gear efficiency. Oyster harvesting takes place during spring low tides. Harvesters are allowed to wear a mask, snorkel and weight-belt and commonly use an oyster

pick (crowbar) to dislodge oysters from the rocks. The use of fins and artificial breathing apparatus are not allowed.

Management

The oyster fishery was previously managed as two separate fisheries related to their areas of operation, namely the KwaZulu Natal Coast and the Southern Cape Coast. Since 2002 the oyster fishery has been managed as a national fishery. Under the new management system, four commercial oyster-harvesting areas were officially recognised, namely KZN North, KZN South, Port Elizabeth, and the Southern Cape (Fig. 1). Regional differences regarding regulations and harvesting patterns have been retained.

For KwaZulu Natal (North and South coasts), the management approach that was previously undertaken by the KwaZulu Natal Provincial Government was retained. The fishery in this province is managed by means of effort limitation whereby the number of pickers are restricted (TAE), and by means of a daily bag limit of 190 oysters per picker per day. The oyster fishery in KZN is further managed by a system of rotational harvesting whereby the coast is divided into zones, and each zone is harvested on a rotational basis. The KZN North and South coasts are subdivided into five zones each. The system requires that each zone remains fallow for at least three

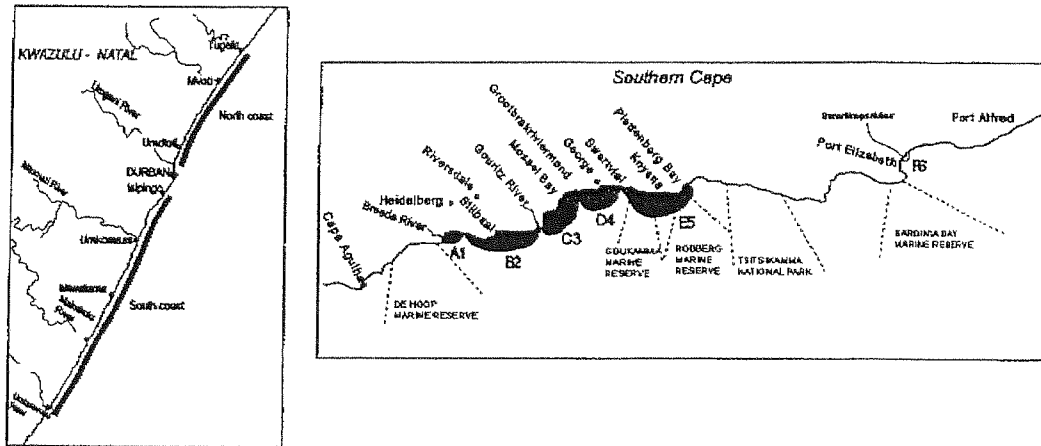


Fig. 1. Oyster fishery in KwaZulu Natal, Port Elizabeth and Southern Cape

years (the optimal length of time required for oyster recruits to reach marketable size) thereby allowing for recovery of the oyster stock before it is harvested for a period of two years. This system accommodates both the commercial and recreational sectors. The commercial industry in Kwa-Zulu Natal has recently been calling for consideration of rezoning both the south and north coast. This is currently being addressed.

The oyster fishery along the Southern Cape Coast is managed by means of limiting effort by regulating the number of pickers (TAE). Furthermore, effort is split across 5 sub-areas according to the extent of accessible oyster reef. The fishery in this region is not managed by means of rotational harvesting and there is no daily bag limit.

In Port Elizabeth, only washed-up oysters are collected. No harvesting of the oyster beds is undertaken.

With the medium-term rights allocated for the period 2002-2005, a category of "limited commercial" rights was created whereby an annual catch limit of 60,000 oysters was imposed on all

limited commercial right holders. This catch level was determined to be the income threshold between full commercial and limited commercial categories. Commercial right holders had no annual catch restrictions at that time. However this distinction between limited and commercial rights has fallen away, and in 2006 a single type/category of commercial right was allocated. Furthermore, in 2006, the 60,000 annual catch limit was lifted - the aim having been to improve the quality of catch and effort data for future use in resource assessments. This catch limitation was not based on resource considerations, but was determined to be the threshold income that distinguished the "limited commercial" from the "full commercial" rights in the 2002-2005 medium-term allocation. However this catch limitation created an incentive for under-reporting of catches, and for now, effort limitation is considered as an adequate regulatory tool for the oyster fishery along the southern Cape coast. In KZN, the fishery is regulated in terms of effort and a *daily* catch (bag) limit.

Research

Research on the oyster resource is still in its infancy. Since oysters are of relatively low value in comparison to the other commercially exploited species, the fishery has received minimal research effort and management attention over the years. The TAE for the oyster fishery is currently determined according to historic effort levels and not on the basis of the size or status of the resource. Recently initiated research on oysters has therefore focused on developing appropriate methods for assessing the oyster resource. However progress has been slow for the following reasons:

The patchy distribution and cryptic nature of oysters make sampling in the intertidal zone extremely difficult. There are also limited sampling opportunities due to adverse environmental conditions. Further constraints to research include staff shortages and inadequate management and compliance for this sector. Attempts at establishing a collaborative working relationship with the (notoriously difficult) commercial oyster industry have proven to be very difficult.

Once the methodology is refined, and a reliable index of oyster abundance is obtained, researchers will be better equipped to provide proper scientific advice on sustainable harvesting levels.

RESOURCE STATUS

KZN North and South

The oyster resource in KZN is considered to be optimally exploited. Preliminary resource assessments undertaken during a research project outsourced to the Oceanographic Research Institute show that although the oyster stocks have declined since 1980, they have been stable for approximately the past 20 years. This suggests that the current harvesting levels are not depleting the stock and may be sustainable. Preliminary results also indicate that the system of rotational harvesting is important for the sustainable management of the oyster resource in this province. It should be noted that the commercial industry has been calling for the consideration of rezoning both the south and north coast because of varying levels of resource abundance in the different zones. There is insufficient evidence, however, to suggest a change to the current harvesting levels along this stretch of coast.

Southern Cape

In the Southern Cape, particularly in the Mossel Bay, George and Knysna areas, there is concern that the intertidal zone is being denuded of oysters as a result of being oversubscribed. A comparison of data collected during pilot surveys undertaken in 2000 and in 2002 within Mossel Bay indicates a significant decline (up to an order of magnitude) in oyster density. Furthermore, based on data obtained from additional pilot surveys undertaken in 2003 and 2004, the mean oyster density in Mossel Bay was estimated to be 0.49 oysters/m² as opposed to Heidelberg ("Witsand"), a

lightly harvested area, for which a mean density of 4.53 oysters/m² was estimated. Size frequency data collected during these surveys showed a greater number of smaller oysters and fewer larger oysters occurring in Mossel Bay, indicating a deviation from a normal population size structure. Evidence therefore suggests that the status of the intertidal component of the oyster stock along the south coast appears to be over-exploited. Moreover, there have been escalating reports of divers illegally harvesting oysters from the subtidal "mother beds". The oyster fishery has historically been managed on the premise that no harvesting takes place on the subtidal beds that are considered to seed the intertidal oyster reefs. Abundance surveys and stock assessments are therefore essential in order to monitor and quantify these trends in the fishery and in order to provide better advice on sustainable harvesting levels. However, at this stage there is insufficient information on which to base a recommendation to change from the current harvesting levels.

FUTURE RESEARCH

In order to make meaningful recommendations to management, a time series of quality data is required. Steps toward improving the quality of catch and effort data and toward undertaking resource assessments are still in the early stages.

Resource assessments have recently been completed for the stocks along the KZN coast. The development of an Operational Management Plan (OMP) for the KZN oyster fishery has progressed well in 2006 and only needs to be implemented. This OMP will form the basis of future TAE recommendations for the resource in this province.

Catch Per Unit Effort (CPUE) data for the southern Cape oyster fishery are unreliable and at this stage are of no use for the purposes of stock assessment. Validation of catch and effort data is required and has been identified as a research priority. Standardization of CPUE data is also required. Research on oysters in the southern Cape region has focused on initiating Fisheries Independent Surveys to estimate abundance of the oyster stocks in this area. Abundance surveys for oysters have proven to be very difficult to undertake and numerous trials (pilot surveys) have required researchers to explore alternative approaches. Albeit slow, progress has been made, with improvements to the survey methodology. However further research is required to refine the sampling methodology and to develop suitable assessments for the oyster resource. This will result in improved quality of scientific recommendations.

RECOMMENDED TAE FOR 2008

The TAE for the oyster fishery has remained the same for the past five years. The recommendation for the forthcoming season is again that the *status quo* be maintained until further data become available. Therefore the recommended overall TAE for the oyster fishery in 2008 is 145 pickers. The recommended TAE split across the four areas is as follows:

	KZN North	KZN South	Southern Cape	Port Elizabeth	Total
TAE	25	15	102	3	145

The recommended TAE split across the three sub-areas for the Southern Cape coast is as follows:

	A1 Heidelberg ("Wissands")	B2/C3 Riversdale/Mossel Bay	D4/E5 George/Knysna	Total
TAE	10	58	34	102



C.J. Augustyn
Chief Director: Research, Antarctica & Islands
Date: 14 September 2007