

STATUS OF SOUTH AFRICAN LOBSTER AND SQUID FISHERY - AUGUST 2013

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West Coast rock lobster: Status, TAC, Prospects

The West Coast rock lobster resource is managed by means of an Operational Management Procedure (OMP) for the determination of a global TAC. Key inputs into the OMP each year are the commercial catch-per-unit-of-effort (CPUE) for both hoop net and trap fishing, the Fisheries Independent Monitoring Survey (FIMS) index, and the somatic growth rates. The global TAC is divided amongst different sectors of the fishery (nearshore, offshore, interim relief, recreational), each of which is further divided and allocated to the following super-areas:

Areas 1 and 2 (Port Nolloth and Hondeklipbaai);

Areas 3 and 4 (Lamberts Bay and Elandsbaai);

Areas 5 and 6 (Saldanha Bay Area);

Area 7 (Dassen Island); and

Area 8 (Cape Point).

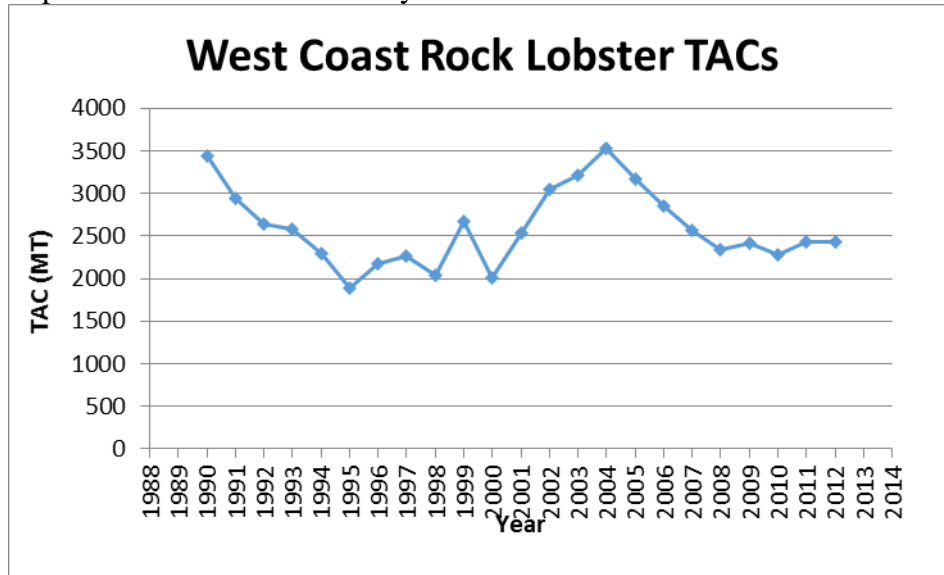
OMPs are revised every four years. Work on the revision of the OMP was carried out in 2010 and 2011. During 2011, prior to the start of the 2011/2012 fishing season, the scientific working group (SWG) reviewed a number of alternate OMPs. The OMP eventually submitted to management was designed to achieve a 35% biomass recovery by 2021. This is a higher level of recovery than was built into the previous OMP, a consequence of greater risk aversion towards the management of the resource, due partly to the fact that under previous OMPs the desired level of rebuilding was not achieved, as well as biological concerns about the high level of depletion the resource is estimated to have sustained over the course of the fishery. Management modified this OMP so that the long term recovery level of 35% was unaffected, but the 2011/2012 allocation to the offshore sector was set at the level associated with a 30% recovery target (1540.65 MT), a variant for which calculations had been carried out. There was also a request from the Interim Relief sector that the minimum legal carapace length for their sector be reduced from the current 80mm CL to 75mm CL as for the other commercial sectors, and this was granted. The final OMP, which commenced with the 2011/2012 fishing season, accommodates these changes. Following this, there was a further request, given excellent fishing performance in Area 5 and 6 and concerns about the biological status of Area 7, to transfer 40 MT from Area 7 to Area 5+6 and this modification has also been incorporated into the OMP.

The result for 2011/2012 is a global TAC of 2426 MT, which represents an increase on the 2010/2011 TAC of 2286 (kg whole weight) of 6.1%. For the 2012/2013 season the TAC stayed the same as for 2011/2012, which was cause for great concern given the advice of a 150 MT drop in TAC by the scientific working group. This was well publicised and ended in court . This benefit of an unchanged TAC for the 2012/2013 is, however, not without cost. The new OMP contains two important provisions, which cover some risks that have the potential to influence the TAC negatively, should the resource perform below par. These are:

- 1) **TAC reduction constraint rule:** The previous OMP limited TAC reductions to 10%. The new OMP makes provision for as much as a 30% reduction under certain circumstances.
- 2) **The low abundance rule:** There is a 'bale-out clause' known as an 'Exceptional Circumstances rule' that provides for the closure of all fishing in a super-area should that super-area underperform to a sufficient degree. Following this, the SWG would have to convene and reconsider the OMP with a view to the possible transfer of the TAC to other super-areas.

The TAC for the 2013/2014 fishing season will be determined by the new OMP formula, which has been finalized, subject to the modifications outlined above. Based on new catch data, exceptional circumstances has been triggered in zone 7 (Dassen Island) and performance of zone 8 (South Coast) was also reduced for the 2012/2013 season. Subsequently, there will be a substantial decline in the TAC in 2013/2014 compared to 2012/2013 to ensure that the 35% recovery target is adhere to. While the new TAC have been determined, the figure is still confidential, and will be announced by DAFF in due course.

The development of a new OMP for the west Coast Rock Lobster will also start in January 2014, with implementation to occur in July 2015.



South Coast rock lobster: Status, TAC, Prospects

The South Coast rock lobster (SCRL) fishery is managed via a combination of output controls in the form of a Total Allowable Catch (TAC) and input controls in the form of a Total Allowable Effort (TAE). The TAC is the primary control measure. The TAE, based on a fishing day allocation, is a secondary measure and will seldom be an active constraint, i.e. the probability that the number of fishing days will be insufficient is slight. The following data are used in the management of the resource:

- Catch-per-unit-effort – measured as kg tails per trap set
- Catch-at-length data
- Tagging data

An Operational Management Procedure (OMP) is in effect for the determination of the TAC. This OMP is based on an interpretation and calculation of trends in CPUE in recent years, separately for each of three areas, where Area 1 is the easternmost fishing area, Area 3 is the westernmost area on the west side of the Agulhas Bank, and Area 2 is a central area between Mossel Bay and the Tsitsikamma area.

The OMP formula was revised and retuned in 2010, whereupon the SWG agreed to apply it for a further two fishing seasons, for the 2010/2011 and 2011/2012 fishing seasons. Work on the revised OMP has been ongoing, so that a new and improved formula could have been used to determine the 2012/2013 TAC. This work has involved the following innovations:

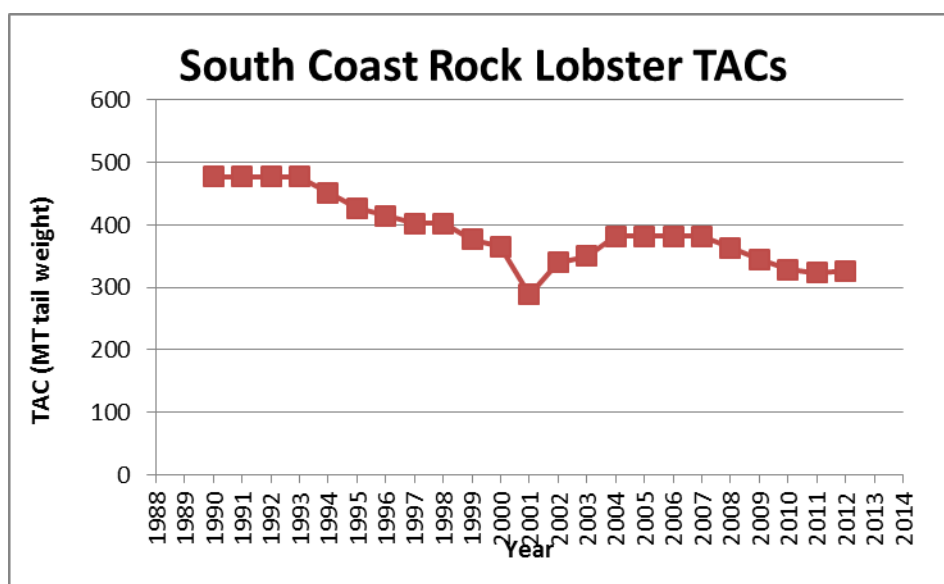
1. The use of industry self-sampling catch-at-length data;
2. Revision of growth rate estimates in different areas, coupled with a possible split of Area 1 into a western and eastern area; and
3. The possible amalgamation of Areas 2 and 3.

No separate area management is applied, so the area distinctions referred to above are all related to statistical and mathematical modeling considerations. In the course of these revisions, it became clear in early 2012 that the full scientific considerations and complications in revising the OMP were more extensive than originally envisaged. It was, therefore, proposed at the SCRL SWG that the adoption of a revised OMP be delayed by one year. This measure was approved by the SWG and means that the prevailing OMP was applied for one more year, namely, the 2012/2013 TAC. This resulted in the 2012/2013 season seeing a small upward adjustment in the TAC from 323 MT tail weight (for 2011/2012) to 326 MT.

The necessity for a full OMP review for the West Coast Rock Lobster ('Exceptional Circumstances rule' being invoked – see West Coast Rock lobster section) and the lack of resources has made it difficult to set up the new OMP for the South Coast Rock Lobster as originally planned. For this reason it was decided on a SWG meeting that the South Coast rock lobster OMP will undergo a quick revision to be applied for the next four year. For the determination of the 2013/2014 TAC the use of a revised OMP was suggested. This new OMP will involve the inclusion of the new fishing area separation and then re-tuning the current OMP parameters accordingly.

Given the new data and updated model to be used for the TAC calculation for 2013/2014, it is clear that the stock is at pleasing depletion levels, indicating good stock health. Some uncertainty is implied by the better than expected stock depletion rates based on current operating models. The updated OMP has not been finalized as yet, as some work is still required. Despite this, there will be an increase in TAC for the coming season, the extent of which is still confidential.

The possible impact of proposed off-shore phosphate mining around the Mosselbay area on various fisheries has also been raised, of which the South Coast rock lobster is but one. This is clearly a major issue and has been taken up by both FishSA and DAFF on behalf of industry. There is no clear research to give any possible indication of impacts of the mining.



Squid jigging industry

There is a continuation of the extensive revision of the data underlying the management of the resource. As mentioned in 2012, numerous inconsistencies were noted between company catch records submitted for the long-term rights allocation process and the records produced by MCM for scientific calculations. In addition, the two sets of records showed very substantial differences in the number of fishing days per vessel. This was despite significant efforts to improve the data recording process via the replacement of the 'blue books' with the new 'yellow books'. The number of fishing days per vessel was a critical input into discussions of closed seasons, which was based on a desire to curtail latent effort in the fishery.

An important development that occurred in 2010 was the revision of the Bayesian assessment model for the squid jigging fishery. This revision was carried out using a new agreed dataset. The results of this revision suggest a more optimistic appraisal of the resource and, in particular, a position in which effort levels is presently sub-optimal. This removes much of the risk inherent in the possible expression of all the latent effort in the fishery. As a result, the additional closed seasons have been removed and continued during the 2011 and 2012 seasons. This position is, however, contingent on the revised Bayesian assessment model and there is a possibility that future revisions of the model, coupled with data updates as they accrue, will overturn this position.

Anecdotal low catch rates reported from industry in the most recent season does however place some question on the current management framework and the role of environmental conditions on recruitment success. No clear intervention has been taken regarding this low catches, and data is yet to be collated to establish the extent of this problem. No further information on the squid industry is available, although some decision is expected in the next 2 months.

Furthermore, the squid industry also appear to be at some risk of the proposed off-shore phosphate mining off Mosselbay as discussed in the South Coast Rock Lobster section.

