

TAC Committee

TAC Chairman: 13, Monaco Place, Howrah, Tasmania 7018

10 April 2012

The Hon. Katrina Hodgkinson, MP
Level 30 Governor Macquarie Tower
1 Farrer Place
SYDNEY NSW 2000

Dear Minister

Under Section 32 of the Fisheries Management Act 1994, the Total Allowable Catch Setting and Review (TAC) Committee is required to keep its determination of the abalone Total Allowable Commercial Catch (TACC) under review. In response to representations by industry and the Department, the TAC Committee agreed to reconsider its initial determination of a TACC for the abalone fishery for the period July 1 2011 to June 31 2012. In carrying out the review the TAC Committee sought, and carefully considered, written and verbal submissions from the industry and Department.

Following this review, the TAC Committee has determined that the Total Allowable Commercial Catch (TACC) for 2011/12 shall be **110 tonnes**. The signed determination and an outline of the process followed in undertaking the review are provided as Attachments 1 and 2 to this letter.

The TAC Committee has balanced several contradictions in making this determination. There are a number of signs that stock status is clearly improving under the low TACs and increased Minimum Legal Length (MLL) of recent years.

- The average weight of abalone in the catch continues to increase in Regions 4, 5 and 6, which provide most of the catch, indicating rebuilding of the larger animals in the stock.
- All reports from industry are that there is a good representation of abalone below the size limit that will recruit to the fishable stock in future, though there are varying views on the numbers of these undersized abalone.
- It is particularly promising to see that the monthly catch rate has not decreased at a time in which a down-turn in productivity might be expected if past fluctuations in productivity were repeated (and recent decreases of catch rate in the East Coast of the Tasmanian abalone fishery suggest that this widespread pattern has been repeated there).
- The monthly catch rate in NSW has remained variable but 'flat' in Regions 2-5 and has continued to increase in Region 6. This indicates that there has been

sufficient rebuilding of the stock in recent years to sustain fishery catch rates (and by implication the stock) through periods of low productivity. This has been one intention of the TAC Committee's decisions in recent years.

- Elements of the industry have recognised the benefits of, and have shown strong support for, increases in the MLL.

As industry has understandably strongly suggested, the stock and fishery appear to be in a good position to capitalise on the rebuilding that has occurred, and that it would be appropriate to move to a more productive future, which includes a series of increased TACs. However, there are countervailing concerns that must be considered in contemplating the appropriate path to that future. These are:

- it is not known how large and robust the rebuilding has been;
- it is not known whether the current rebuilding and catch rates can be maintained at higher catches;
- only 'trailing indicators' are being measured and analysed so that there is no predictive insight and any problems will only be detected after they have occurred;
- there has been limited progress in fully recognising and correcting the failures in the management arrangements that caused overfishing and sequential depletion of the stock historically (e.g. the implementation of finer space-scale assessment and management and more appropriate MLLs); and
- while the current fishing year is not over there appears to be on-going difficulty in achieving the industry-agreed fine scale distribution of catches within the set catch caps, despite this being a necessary capability to avoid a repetition of past sequential depletion.

In this context the TAC Committee took the view that some exploration of changed management settings is appropriate and is aware that there will be an on-going dialogue with industry and the Department and opportunities for further review and change.

The TAC Committee continues to maintain the position that setting a single TACC number is not a necessary and sufficient action to achieve the role and function of the TAC Committee under the Fisheries Management Act 1994 (the Act). The TAC Committee reiterates its position that the determination is inextricably linked to selectivity (with size limit and spatial aspects) considerations and that the TAC and selectivity operate together to determine the sustainable yield. The TAC Committee notes that recent recovery of the NSW rock lobster fishery required changes in both the TAC and the size limits. In accordance with Section 30 of the Act outlined below, the TAC Committee has once more conditioned its determination in the context of these selectivity considerations, and in particular, minimum legal lengths (MLLs) and the spatial distribution of the additional 16t provided by this re-determination.

It should be very clear that the TAC Committee continues to be fully supportive of efforts by industry to use fine scale approaches, based on collecting data using loggers, the results of which are discussed at industry workshops and fed through to the TAC Committee. There remains some divergence of opinion across some

elements of industry about the conclusions that may be drawn, and the confidence of those conclusions, from the somewhat limited current fine-scale data and workshops. The TAC Committee encourages more complete development of the criteria for these discussions, particularly in relation to avoiding sequential depletion and overfishing, guiding recovery to an optimised and robust fishery in the future, and avoiding repetition of the past patterns of exploitation in this fishery.

The TAC Committee remains committed to rebuilding a robust and profitable fishery. The size limit changes and regional distribution of catches recommended by the TAC Committee, in combination with the determined TAC levels, have three aims:

- to provide a larger and better protected spawning stock;
- to have a sufficient biomass to buffer the stock and fishery catch rates against periodic decreases in productivity; and
- to increase the biological and economic yield per recruit.

It should also be noted that this approach was put forward in some industry submissions and supported by the Department’s management report.

The information available in relation to each of these aims is very limited by the monitoring and analysis provided, and this limitation continues to require a precautionary approach to fishery management. Given the clear dissatisfaction voiced by the industry members of ABMAC, the TAC Committee believes it is important that the TAC Committee’s strategy towards size limits is clear. The table below seeks to increase an understanding of the logic and limitations behind the TAC Committee’s past and current MLL recommendations.

Aim	Main information available that is relevant	Comments
A larger and better protected spawning stock	Size/weight composition of the catch. Catch rate.	Clearly some improvement and this is continuing. Extent and robustness unclear. Cannot accurately determine the size of the current stock or the impact of higher catches.
Sufficient biomass to buffer the stock and fishery catch rates against periodic decreases in productivity	Catch rates, especially monthly catch rates through last about 18months when productivity decrease expected.	Monthly catch rates fluctuating but without decrease in regions -5; continued increase in region 6. So far rebuilding appears to have provided a sufficient buffer at this TAC level.

Increase the biological and economic yield per recruit	Size/weight composition of the catch. Catch rate.	Rapid increase in mean weight and recovery of catch rate observed after increases in MLL; implies we are on the steep, non-optimal, part of the yield per recruit curve; earlier slow-growth assumptions not correct for bulk of the stock; while increased MLL is indicated the available information does not estimate the optimum.
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Because of the spatial variability of abalone life history parameters, increasing the yield per recruit implies different MLL in different areas. If the MLL is too small even moderate TAC levels can result in both growth and recruitment overfishing in areas where growth is fast and reproduction begins at larger size, which are the most productive parts of the population, resulting in sequential depletion. Conversely there are mechanisms that allow for targeted harvest of abalone in areas of slow growth rate that would be mostly below the MLL needed to protect the faster growing areas. The TAC Committee has consistently recognised the need for different MLLs in different areas but has argued for higher overall MLLs, adequate to protect fast growing areas, augmented by specific arrangements to provide harvesting access to slower growing areas. In the absence of adequate MLL protection for the fast growing portions of the stock this is provided for by a low overall TAC, but alone this is an inefficient tool and does not allow the fishery to reach its biological and economic potential.

There is no doubt that there has been substantial improvement in the state of the stock in recent years, starting in about 2006 but particularly since about 2009. The TAC reductions and increased MLLs have succeeded in this regard and the population has accumulated stock 'on the bottom' from a period of low TAC and high productivity. While there is no doubt that this accumulated stock could be caught through a substantially higher TAC, the sustainability of such an increase in TAC is highly uncertain. The central questions relate to the extent of the recovery and the robustness of the current recovery.

Some industry submissions raised questions about the relevance of the Fishery Management Strategy (2007) and Share Management Plan (2009) to the TAC Committee's consideration and Determination. Most of the indicators used in these documents are no longer measured or estimated. Commercial catch rate is still available but its interpretation as an index of legal sized abalone and of the spawning biomass is very uncertain, particularly in the current context of changed MLLs and low TACs where small catches can be taken at very high catch rates from well-targeted locations. The TAC Committee has previously pointed out the problems that have flowed from dismantling the earlier system of monitoring and stock

assessment before a replacement system was developed, tested and adopted. Also the TAC Committee has previously expressed concern that the benchmarks and parameters of the Strategy and Plan were not adequate to protect the stock from sequential depletion and overfishing. The TAC Committee is required to implement the objectives in the Fisheries Management Act (1994) but it also considers the overall intentions of the Strategy and Plan along with other matters that it is required to take into account.

You will be well aware of the controversy surrounding size limits in the abalone fishery. As discussed above it is very apparent that some members of industry support the TAC Committee including advice on size limits and spatial catch recommendations in their determinations while others are strongly of the view that the TAC Committee, under its legislative responsibilities, should have no part in influencing the choice of MLLs or the spatial distribution of catch.

The role of the TAC Committee in setting a TAC under the Act is clearly defined under Section 28(2) of the Fisheries Management Act, 1994, which states that The 'TAC Committee is required to determine a specified total allowable catch for a share management fishery if the management plan for the fishery so requires'.

Further instructions as to the general considerations for the TAC Committee to take into account in determining a TAC is provided in Section 30 of the Act:

- 1) In determining total allowable catches under this Division, the TAC Committee is to give effect to the objects of this Act and is to have regard to all relevant scientific, industry, community, social and economic factors.
- 2) The TAC Committee is also to have regard to:
 - the need to ensure that the exploitation of fisheries resources is conducted in a manner that will conserve fish stocks in the long term, and
 - the impact of fishing activities on all species of fish and the aquatic environment, and
 - the precautionary principle, namely, that if there are threats of serious or irreversible damage to fish stocks, lack of full scientific certainty should not be used as a reason for postponing measures to prevent that damage.

In light of the above, the TAC Committee considers that it would be derelict in its duty not to condition TAC determinations with advice on size limits and spatial distribution of catch and hence the advice provided as an integral part of the TAC determination.

To address this controversy, the TAC Committee suggests that you give consideration to the provisions of the Act under Section 28(4) under which:

'The TAC Committee may also determine, in accordance with this Division, any other matter relating to fishing effort in a share management fishery if (and only if) required to do so by the Minister. This Division applies to the determination of any such matter in the same way as it applies to the determination of a total allowable catch'.

Under this provision it appears that the Minister may request the TAC Committee to make a determination on size limits and spatial distribution of catch in the same way as the TACC, which would, in our opinion, remove much of the controversy surrounding the size limit issue. The TAC Committee suggests that some thought be given to utilising this provision in the future, possibly commencing for the determination due in early 2013 rather than this year, and the benefits such a requirement may provide.

The TAC Committee is well aware of the level of angst among a proportion of industry regarding the management of the abalone fishery, and the decisions and recommendations of the TAC Committee. In the view of the NSW Abalone Council and ABMAC, industry has established a fisheries assessment and monitoring framework, which now should dictate TAC setting, MLLs, spatial distribution of catch and other key decisions for the abalone fishery. As indicated above, the TAC Committee continues to have some concerns over the way in which conclusions are drawn from this framework; this is not to say they are wrong, more that the scientific evidence on which they are based requires strengthening.

These processes have been established largely, and in the TAC Committee's view inappropriately, independently of the Department. This has resulted in, among other things, industry alone holding data, which should more properly reside with the Department (with the usual confidentiality safeguards). Currently we note the Department has had to seek industry assistance (and, by inference, permission) to access data to help inform TAC Committee deliberations. The degree to which the Department, as the representative of whole-of-community interests in NSW fisheries resources, is engaged in, or endorses the new assessment and management process that is being implemented by industry, is not clear. It will be necessary for the Department to take an active role in ensuring that fine scale management (FSM) is introduced with the relevant measures to ensure quality assurance and quality control of data, and a transparent and effective process to arrive at industry advice on appropriate TACs, catch distribution (to avoid local depletions) and size limits.

The TAC Committee considers that up-front agreement of the elements of FSM and how it will be rolled out are an essential part of the process, as are the provision of adequate resources, a responsive and supportive administration, and cohesive and meaningful industry involvement.

As we have stated previously, the TAC Committee is very supportive of implementing industry based FSM approaches that it is hoped will ultimately result in an alternative and improved system of assessment, management and TAC setting. While there has been a great increase in the amount of fine scale data collected from the commercial fishing operations and provided to the TAC Committee in recent years these data were again not analysed or interpreted meaningfully with respect to stock status or trends. .

Finally, expecting industry to achieve consensus on difficult issues within industry FSM workshop situations may be overly optimistic, particularly where advice suggests an impact, real or perceived, to industry revenues. The uncertain support of some sectors of industry for workshop outcomes driven by the Abalone Council of NSW is illustrative of this situation.

It is also clear that some component of fishery independent research would assist in validating industry data and fill key gaps in the information required to set TACs and develop management settings. The TAC Committee requests that the Department gives strong consideration to carrying out this work as it could provide a greater degree of confidence in estimating stock status; allow less precautionary TAC setting to assist in optimising economic returns to industry, as well as giving greater certainty that the fishery can be sustainably managed over the long term.

I turn now to the economic circumstances of the fishery. Gross revenues from abalone fishing are expected to be around the same level in 2011/12 as they were in 2010/11; \$2.9 million in real terms. This is much improved from the low level of \$2.0 million, in real terms, in 2009/10. Beach prices have increased slightly from an average of \$30.00/kg in 2010/11 to \$30.71/kg in 2011/12 (to date).

Despite gross returns from abalone fishing remaining reasonably constant, it is likely that net returns to shareholders will have improved considerably over 2011/12 (to date) due to a dramatic decline in the cost of fishing. Over 2011/12 the cost of fishing fell significantly as a result of increases in catch rates over the same period. This is evidenced through a reduction in the price paid to divers by quota holders; from \$15.0/kg in 2010/11 to between \$6.0/kg to \$10.0/kg in 2011/12 (to date; based on anecdotal evidence).

Further evidence of the improvement in economic returns from abalone fishing and likely improvement in optimism in the future fishery, can be seen through a return to share trading in the fishery. During 2011/12 (to date) there have been four share transfers in the fishery totalling 160 shares. While one of these share transfers was a book transfer the other three were genuine transfers with shares going to existing divers. However, as price information on these share transfers is not available, it is difficult for the TAC Committee to make a full assessment of the degree to which optimism has returned in the fishery.

The return to share trading in the fishery mirrors, to some extent, the previous situation in the NSW rock lobster fishery, whereby, following a series of conservative TAC determinations and a significant size limit change, stocks rebuilt, TACs and profitability increased and the market for shares became very active. However, further restructuring will need to take place in the abalone fishery for it to improve its economic viability as stock status continues to improve.

As articulated in the TAC Committee's 2011/12 determination, the abalone fishery is in a better position economically, but this is off a very low base. The industry continues to remain in a parlous state economically. The rate of recovery of management fees and charges is also so low as to be insufficient to allow the industry to invest in appropriate management services (including research and compliance) to allow it to improve its economic situation into the future.

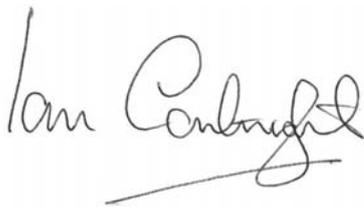
In conclusion, the TAC Committee is all too aware of the short-term personal economic implications of once again setting a precautionary TACC under this re-determination. The maintained increase in catch rates, and the way in which data from the fishery is presented by the industry research biologist, continues to give rise to very optimistic perceptions about the extent of the recovery of the resource. Industry have expressed great frustration at what they perceive as intransigence by

the TAC Committee in relation to its precautionary approach towards using industry observations and submissions, particularly those on the recent substantial increases in CPUE, to underpin TAC increases.

The TAC Committee remains committed to TAC decisions and minimum size recommendations that will assist in securing the future sustainability prospects, both biological and economic, of the NSW abalone fishery. As stated above we believe that until additional information is available, such a precautionary approach is warranted to avoid simply repeating the mistakes of the past.

The TAC Committee will continue and renew its efforts to improve communication between industry, fishery managers, scientists and the TAC Committee.

Yours faithfully

A handwritten signature in black ink, reading "Ian Cartwright". The signature is written in a cursive style with a long horizontal stroke at the end.

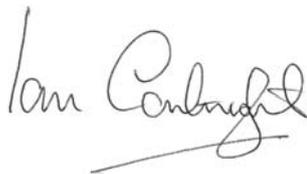
Ian Cartwright
Chairman

Review of initial Abalone TACC Determination for 2011/12

The Total Allowable Catch Setting and Review TAC Committee, pursuant to Section 32, Division 4 of Part 2 of the Fisheries Management Act 1994, determines that the total allowable commercial catch of abalone that may be taken in the Abalone Fishery during the period 1 July 2011 to 30 June 2012 should be **110 tonnes**. In making this determination, the TAC Committee strongly recommends that the following distribution of catches and MLLs be adhered to:

Region 1 North (subregions A-H)	3t available for Fishing Surveys or Structured Fishing to a design acceptable to the Department to inform future TAC setting. Recommended MLL 120mm.
Region 1 South (subregions F-H)	0t we note access has now been provided – if this is to continue, recommend apply Region 1 North conditions
Region 1 South (subregions J, K &L)	4t available for Fishing Surveys or Structured Fishing to a design acceptable to the Department to monitor stock condition and recovery. Recommended MLL 120mm.
Region 2	6.5t available for Fishing Surveys or Structured Fishing to a design acceptable to the Department to monitor stock condition and inform future TAC setting.
Regions 3 and 4	36.5t
Regions 5 and 6	60t Recommended MLLs: For Region 6: i) 123mm for the area south of Wonboyn (Z1-Z5) ii) 120mm for the area between Green Cape Lighthouse and Disaster Bay (Y31 – Y32). For Region 5 117mm

It should be noted that this determination again seeks to provide a balance between ensuring the rebuild continues and a desire by industry to take some of the rebuilding biomass to alleviate short term financial pressures. This decision, while unlikely to unduly prejudice the rebuild, will reduce the rate of that rebuild and the size of buffer against future downturns in recruitment that would have otherwise occurred in the TAC had remained at 94t



Ian Cartwright
Chairperson



Keith Sainsbury
fisheries scientist



Jessica Hartman
natural resource economist



Bill Talbot
fisheries management

Process followed for the Review of initial Abalone TACC Determination for 2011/12

Introduction

Under Section 32 of the Fisheries Management Act 1994, the TAC Committee is required to keep its determination of the abalone TACC under review and following such review may determine a different TAC. In response to representations by industry and the Department, the TAC Committee agreed to reconsider its initial determination of a TACC for the abalone fishery for the period July 1 2011 to June 31 2012. Since the review was to be more than 6 months after the initial determination was made, the TAC Committee called for public submissions in relation to the appropriate total allowable catch.

Call for submissions and submissions received

Public submissions on the appropriate total allowable catch under the requirements of Section 31 Division 4 of the *Fisheries Management Act 1994* were called for from abalone fishers, relevant industry bodies, environmental groups and the community generally were encouraged to make submissions on the total allowable commercial catch. This was achieved through advertisements placed in the Daily Telegraph, Sydney Morning Herald and Australia on Wednesday 28 December 2011.

The TAC Committee interviewed and received reports from:

- NSW Department of Primary Industries Management (NSW DPI – Fisheries Management Unit);
- representatives and members of the Abalone Management Advisory Committee; and
- industry members.

A total of six submissions were received:

- three from individual abalone fishers/quota holders;
- one from a group of industry members of the MAC;
- a collection of scientific data, industry workshop reports and analysis from the Abalone Council of NSW; and
- one from the Fisheries Management Unit of NSW Fisheries (DPI)

Matters considered

Before reaching its determination, the TAC Committee considered:

- the documentation available on the fishery and the submissions it received;
- the management objectives set out in the draft management strategy and plan;
- the current state of the fishery;
- advice on the status of management of the fishery provided by the Department;
- advice on the economic status of the fishery as assessed by the Department and by industry representatives;
- data and analysis presented by a consultant on behalf of the NSW Abalone Council; and
- a range of technical and other industry comments regarding the status of the abalone stock and other matters regarding aspects of the management of the abalone industry.

Due to an unavoidable conflict with other assessment procedures a report was not available from the Fisheries Research Unit of the NSW DPI. This is a serious shortfall in information available to the TAC Committee. Continuing to solely rely on, and be called upon to review the work of, an independent consultant, who has been operating largely independent of NSW DPI is unacceptable. The TAC Committee recommends that a report from the Fisheries Research branch, along the lines the report provided by rock lobster, be prepared for the upcoming TACC setting process for 2012/2013. In preparing this report, the Fisheries Research Unit is encouraged to liaise closely with Professor Keith Sainsbury.

The Department's Fisheries Management Report, which is essential to inform TAC Committee deliberations, was provided the day before the TAC Committee met, which, while understandable as a result of uncertainty about the timing and form of the Review, placed the TAC Committee in some difficulty.

Process

Whilst under no obligation under the Act to do so, the TAC Committee provided an opportunity for industry to provide a short verbal presentation to the TAC Committee, using a teleconference arrangement. The authors of three submissions took up this opportunity:

- An industry member (provided *in camera* comments to the TAC Committee);
- Industry members of the Management Advisory TAC Committee; and

- Dr Duncan Worthington on behalf of the Abalone Council of NSW.

In addition, the Department spoke to the document 'Management Report-Abalone with industry members of the MAC and Dr Duncan Worthington listening in.

