

## **SUSTAINABILITY REVIEW 2015**

### **LOW KNOWLEDGE STOCKS**

#### **BACKGROUND**

While there are some 600+ stocks in the QMS, approximately 85% of those have never had a change of the TACC since their introduction to the QMS. Many of those stocks that have not been reviewed had initial TACC allocations set at levels that have unnecessarily constrained fishing activity. As a consequence of better catch reporting under the QMS, there is an opportunity to reset the TACCs and provide enhanced fishing opportunities.

#### **PROPOSAL**

In 2006, MPI reviewed 20 stocks that met the following criteria:

- No known sustainability concerns;
- Average of at least 20% catch in excess of the TACC during the last 3 fishing years;
- No management intervention in the last 3 years; and
- When the stocks were introduced into the QMS deemed value rates had been set deliberately low to encourage reporting.

All eligible stocks had TACC increases.

In addition to that package, MPI has reviewed and increased the TACCs of a further 16 stocks based solely on the catch levels exceeding the TACC, e.g. KIN7, KIN8, LEA3, GSH2, GSH8 and RBY4. For Group 6 low information and low value stocks, the management framework is based on catch performance.

Industry considers that it is appropriate that a number of low knowledge stocks which meet the following criteria should be reviewed:

- have a long or recent history of being over-caught or are consistently being caught at or near the TACC; and
- for which there are no sustainability issues;

Within the stocks that are proposed for this review, there are three distinct groups:

- stocks where the initial TACCs were based on assumptions to divide a combined species into separate species – viz. RSK and SSK;
- stocks where there was a stated intent to reduce the level of commercial catch to attain specified objectives – KIN stocks;
- stocks where the TACCs were set lower than previous catch levels for no stated reason – e.g. PAR1.

In each of these instances, the initial TACCs were set lower than previous catch history and involved assumptions as to the species or FMAs. The improved reporting under the QMS and the subsequent

development of fisheries has provided updated and better information on which to assess the TACCs. It is proposed that TACCs are reviewed in light of this new information.

Industry is concerned that the over-catch levels for the fishstocks proposed have existed in some instances since the stocks entered the QMS. During that period, despite the over-catch and the requirement in the deemed value policy that the cause of any significant over-catch should be investigated and the appropriate fisheries management response taken, none of the stocks has had a comprehensive review of the TACC. For the stocks in this proposal, a review of the TACC is the appropriate response.

In not reviewing the stocks, MPI has unduly enriched the Crown through the receipt of deemed value payments and unfairly denied quota-holders the ACE revenue streams that would have resulted from increased TACCs. We will not support the continuation of that position.

The stocks proposed for review in this low knowledge initiative submission are:

- BYX2;
- KIN2, 3, 7, 8;
- PAR1;
- RSK7, 8
- SSK1, 7, 8; and
- TRU4.

The DeepWaterGroup have indicated that they may seek to add other stocks to this low knowledge initiative.

There are a number of references throughout this proposal to the recently released report on recreational fishing. The report referred to is J Wynne Jones, A Gray, L. Hill, A Heineman, *National Panel Survey of Marine Recreational Fishers 2011-12*, Ministry for Primary Industries, November 2014, ISBN 978-0-477-10504-0. Any references to the estimated take of recreational finfish stocks, the share of recreational finfish take or the selectivity ranking are derived from the report and its tables.

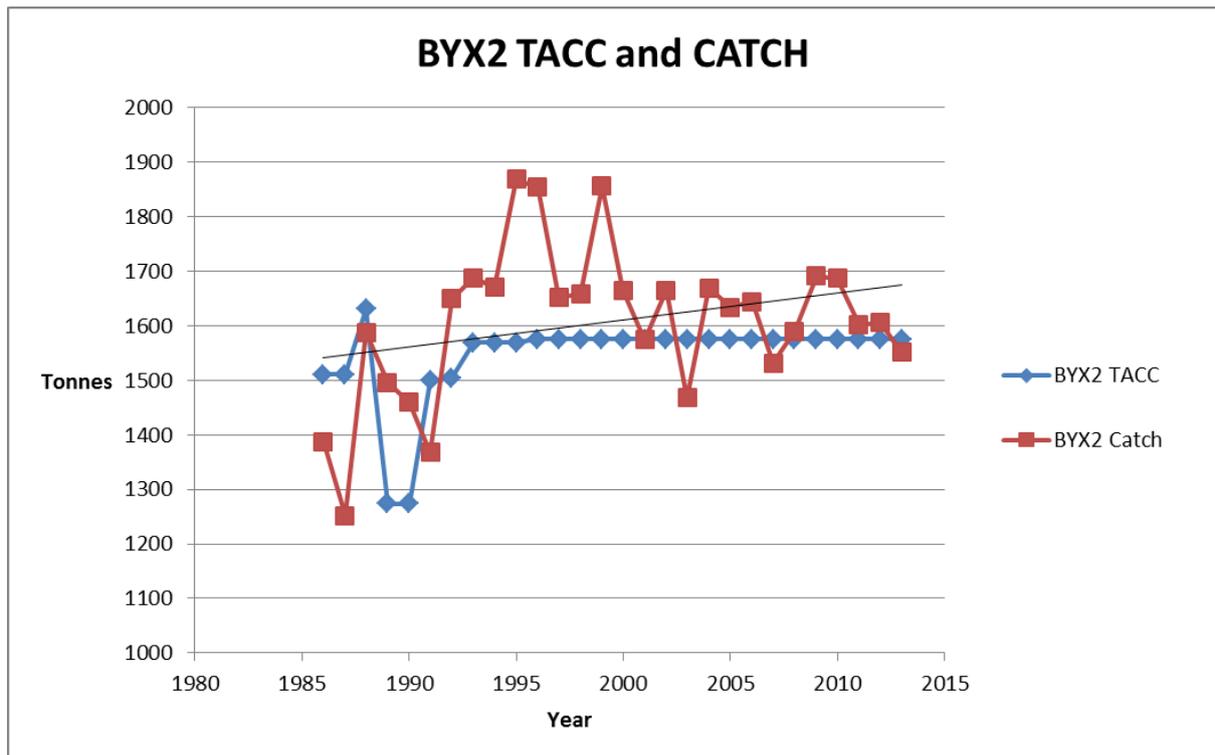
## **DETAILED PROPOSALS**

### **BXY2**

BXY2 was introduced into the QMS in 1986 with an initial TACC of 1,510 tonnes. The target alfonsino fishery was only developed in the early 1980s and new fishing grounds have been discovered since that date. The TACC was reduced to 1,274t in 1989 but was restored to 1,500t in 1992 after an appeal from industry. The TACC was set at 1,575t in 1997 and has not been reviewed since that period.

The TACC has been over-caught in all but 6 years since its introduction into the QMS. During that period the catch has averaged 105% of the TACC but has been as high as 119%.

In the past 10 years, deemed value payments have totalled \$775,000. That represents a significant impost on fishers, a significant loss of revenue to the BYX2 quota-holders and a significant undue enrichment to the Crown.



While there is an absence of definitive information on the status of the stocks, the Plenary document states: *“Annual landings from 1986 to 2012–13 have remained reasonably stable at or above the level of the TACC. Catch at this level appears to be sustainable in the short to medium term”*.

The deemed value rates for BYX2 were reviewed in 2011 with an accelerated ramping of the differential deemed value rate introduced to limit catch. As a deemed value review, the suitability of the TACC was not considered. However, given the Plenary assessment, the more appropriate fisheries management response would have been to review the TACC, rather than the deemed value regime.

In view of the persistent over-catch and the Plenary sustainability assessment, it is proposed that the TACC be increased to 1,700 tonnes.

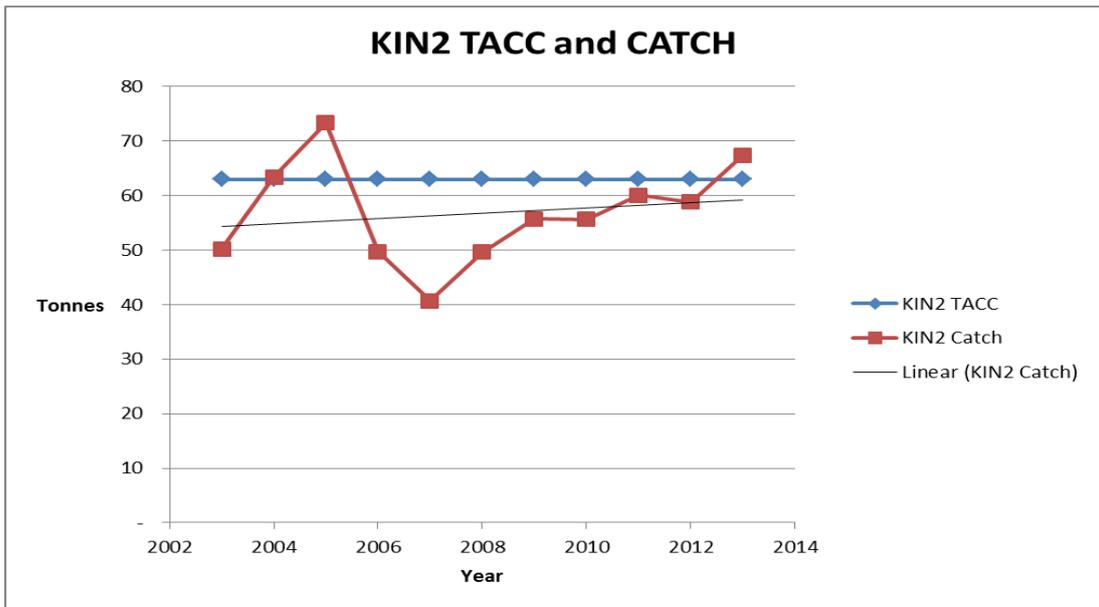
An increase of 190 tonnes in the TACC is estimated to generate GDP benefits of \$1.4m per year (\$17.7m in real long term GDP growth), as against the current annual transfer of deemed values from the fishing sector to the Crown

## KIN2

Introduced into the QMS in 2003, the initial TACC of 63 tonnes was set significantly below the catch history of the previous five years (average annual catch of 77 t) or the previous decade (86 t) to remove any incentive to target kingfish.

While kingfish is not a target for FMA2 fishers, catch levels have steadily increased in recent years to the point where the TACC is now being exceeded and will continue to be so for the foreseeable future. As a Group 6 stock, KIN2 is managed in a low knowledge regime. With low value attached to the stock, a less cautious approach to management is appropriate.

KIN2 TACC and Catch History							
Year	2007	2008	2009	2010	2011	2012	2013
KIN2 TACC	63	63	63	63	63	63	63
KIN2 Catch	40.7	49.6	55.7	55.6	60.0	58.8	67.4
%age TACC caught	64.6%	78.8%	88.5%	88.3%	95.3%	93.3%	107.0%



As a Group 6 stock, KIN2 is not considered by MPI to be a desired fishery for recreational fishers in FMA2. The recent survey of recreational catch indicates that the level of recreational catch is nearer 43t compared with the existing recreational allowance of 65 tonnes. A small increase in the TACC for KIN2 is unlikely to impact significantly on the recreational sector.

There are no known or perceived sustainability issues for KIN2.

Given the high deemed value rate applying to KIN2, a modest increase of 15% to 73t is sought to ensure there are no unnecessary constraints on the fishery.

The additional TACC is estimated to have an annual increase in the contribution to GDP of \$152,000 and to a real long-term gain of approximately \$2m.

**KIN3**

Introduced into the QMS in 2003 with a nominal TACC of 1 tonne, recent catches are exceeding the TACC incurring unnecessary deemed values. There are no indications of sustainability issues and no indications of any concerns from recreational fishers.

A TACC increase to 3t is sought. The increased fishing opportunities are expected to provide a real long-term gain to the economy of \$760,000.

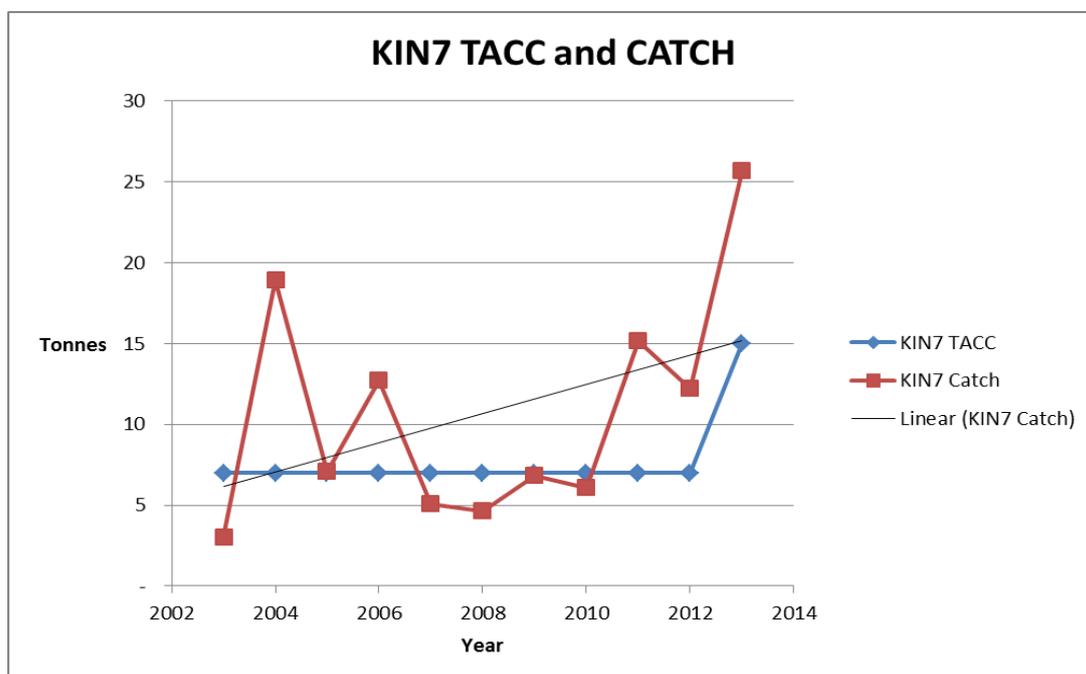
**KIN7**

Introduced into the QMS in 2003 with a TAC of 21t and a TACC of 7 tonnes, the TACC was reviewed in 2013 and was increased to 15 tonnes.

Prior to its QMS introduction, kingfish may have been targeted in FMA7 with the commercial catch being in excess of 20t in some years. The initial setting of 7 tonnes was to remove any incentive to target kingfish. At the time of introduction to the QMS, MPI had no indication as to the extent of targeting of KIN7 or what might have been an appropriate decrease in catch levels to allow for decreased targeting.

The robust reporting of catch levels under the QMS allows for better information to be available for the setting of TACCs, rather than the assumptions used in the 2002 consultation.

Year	2007	2008	2009	2010	2011	2012	2013
KIN7 TACC	7	7	7	7	7	7	15
KIN7 Catch	5.09	4.63	6.82	6.07	15.15	12.22	25.69
%age catch	72.7%	66.1%	97.5%	86.7%	216.5%	174.5%	171.3%



As the above table shows, the level of commercial catch has generally exceeded the TACC. The rise in catch in 2011 can be attributed to a change in catching patterns of the jack mackerel fleet which moved its activities further south into FMA7 to escape some of the levy impost in FMA8. For the jack mackerel fleet, the capture of kingfish is entirely an incidental by-catch with kingfish and fishers targeting the jack mackerel schools. Kingfish (KIN7 and KIN8) make up approximately 0.3% of the JMA7 catch. Notwithstanding a Schedule 6 provision to return live kingfish to the sea, the majority of kingfish landed by the jack mackerel fleet are so bruised, or are already dead, that they cannot be released alive. For the jack mackerel fleet, to minimise the over-catch, identifying kingfish that can be returned to the sea alive is the priority task once nets are hauled. Catch statistics indicate only 26% of kingfish (KIN7 and KIN8) caught in jack mackerel operations can be returned to the sea alive, the rest must be retained and landed. Those kingfish that are retained and landed have an average port price of approximately \$2.80 per kg compared to an annual deemed value rate of \$8.90 per kg.

While the TACC was increased in 2013, the increase was insufficient and the catch has exceeded the TACC. While the deemed value regime for KIN7 was reviewed at the time and an accelerated ramping of differential deemed values implemented, the appropriate fisheries management response would be to again raise the TACC based on the catch information.

KIN7 is considered by MPI to be a Group 6 stock, not highly valued by all sectors. The recently released recreational fishing survey confirms kingfish is not a highly desired or targeted recreational fish, accounting for only 0.3% of recreational finfish retained. It appears that the recreational catch of KIN7 is nearer 20 tonnes than the 10t allocated. Notwithstanding an increase in the commercial TACC, there would be no detrimental impact on the recreational catch of KIN7 since any TACC increase would only reflect the level of fish already being taken.

There are no known or perceived sustainability issues for KIN7.

Until the TACCs for KIN7 and KIN8 are properly addressed, over-catches will continue. With the high deemed value rate for kingfish, the level of over-catch is impacting unnecessarily on the economics of the fishery. In the past 5 years, KIN7 deemed value payments have totalled nearly \$400,000 and if they continue at the current level will total over \$1.7m in the next 10 years. The KIN7 quota-holders are denied revenue of over \$50,000 each year under the current TACC setting. While the deemed value regime may be reviewed as a response to the over-fishing, the more appropriate fisheries management approach in the absence of sustainability issues is to increase the TACC. Under the current settings, kingfish impose a cost on fishing activity and returns and are actively constraining the activity of the jack mackerel fleet.

A modest increase in the TACC to 25 tonnes is requested.

### **KIN8**

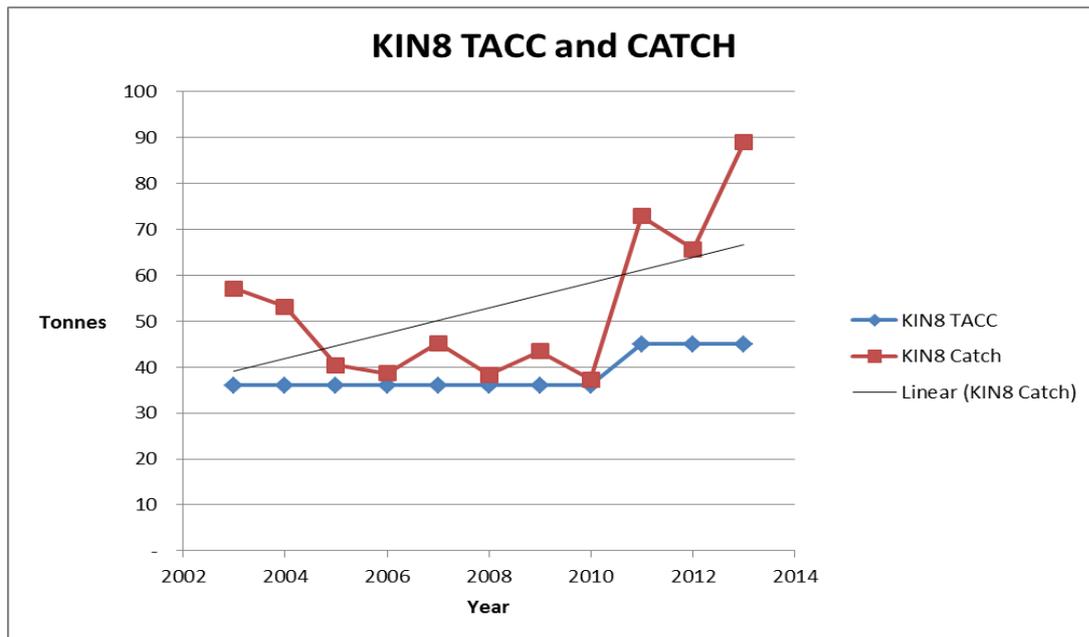
Introduced into the QMS in 2003 with an initial TACC of 36 tonnes, the TACC was increased to 45 tonnes in 2011.

Prior to its QMS introduction, kingfish may have been targeted in FMA8 with the commercial catch being in excess of 50t in some years. The initial setting of 36 tonnes was to remove any incentive to target kingfish. At the time of introduction to the QMS, MPI had no indication as to the extent of targeting of KIN8 or what might have been an appropriate decrease in catch levels to allow for decreased targeting.

The robust reporting of catch levels under the QMS allows for better information to be available for the setting of TACCs, rather than the assumptions used in the 2002 consultation.

The commercial catch of KIN8 has averaged approximately 54 tonnes annually in the past two decades with a significant lift in catch in the last 5 years. Kingfish catch in FMA8 is an incidental by-catch, primarily of the mackerel trawl fishery, with 90% of the commercially caught kingfish taken by that method. Kingfish accounts for approximately 0.3% of the jack mackerel catch. Kingfish are generally difficult to catch in trawl nets but are captured in the mackerel fishery as they target the same schools as commercial fishers. While KIN8 can be returned to the sea live under Schedule 6 provisions, the survival of most of the KIN8 catch in the mackerel trawl fishery is compromised by trawling and cannot be released alive. With only 26% of the fish being able to be returned to the sea alive, fishers have no option but to retain the bulk of their kingfish catch.

With the shortage of ACE, deemed values are being incurred, averaging \$356,000 per year in the past five years and being \$860,000 in 2013/14. Landed KIN8 fish receive an average port price of approximately \$4.15 per kg as against an annual deemed value rate of \$8.90 and a differential rate of \$17.80 per kg for catch in excess of 70% of the ACE held. Such a deemed value regime unnecessarily extracts value from the fishstock when there are no sustainability issues for the stock.



MPI has classified KIN8 as a Group 3 stock, highly valued by all sectors. MPI has indicated that KIN8 will be subject to MPI’s yet- to-be-announced shared fisheries stakeholder process. FINZ consider there is no justification for including KIN8 in that initiative.

The recent recreational survey indicated that recreational fishers in FMA8 do not perceive kingfish as a premium target fish with kingfish being the 18<sup>th</sup> most retained species (0.5% of the catch numbers) and with an estimated catch of only 62 tonnes (as against 535 tonnes in FMA1). With an absence of reef features in FMA8, the recreational catch is primarily taken as a pelagic fish or by-catch to snapper – it is not the targeted sportfish as in FMA1.

From the commercial perspective, the majority of KIN8 catch is an incidental by-catch to other fisheries. While some KIN8 product may be valued highly as a fresh or chilled product, the majority of the landings are of low quality and cost industry rather than provide a positive cash-flow to the sector.

KIN8 has been classified as a Group 3 fishstock by the Ministry. While the management of the stock should be based on relative abundance estimates, there is insufficient information available to inform such an assessment. As a consequence, the only management available is catch history.

Notwithstanding the TACC increase in 2011, the TACC has always been lower than average catch levels. While the initial TACC was set at low levels to reflect the absence of targeting kingfish, the growth in the mackerel fishery (now our 5<sup>th</sup> largest export fishery) was not anticipated. With the improvements in the quality of catch reporting in the QMS and the high level of observer monitoring in the fishery, the reported catch levels can be taken to be reliable.

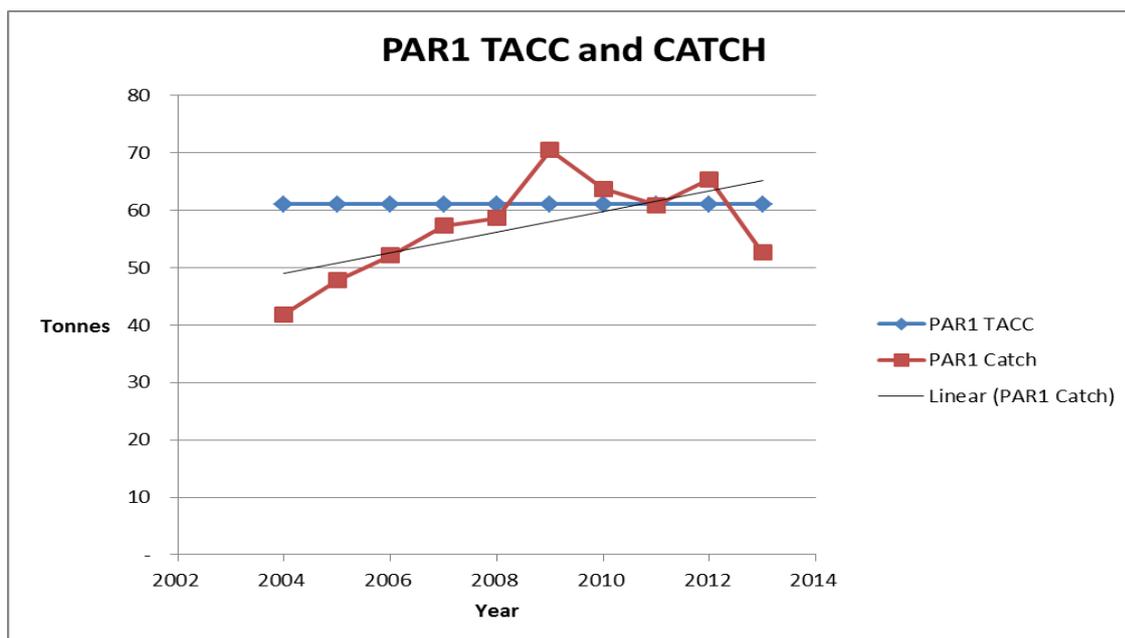
Increasing the TACC will not adversely impact on recreational fishing since the catch levels are already being incurred and reported under the QMS. Increasing the TACC will have the primary effect of providing the quota holders with the benefits they are entitled under the Fisheries Act and reduce unnecessary and unavoidable costs through deemed value payments.

A significant increase to the TACC is sought to 75t to reflect the current and likely future commercial by-catch in the jack mackerel fishery. That increase will ensure that the quota-holders and fishers of KIN8 stock do not have their revenues unnecessarily reduced.

## PAR1

PAR1 was introduced into the QMS in 2004 with a TACC of 61 tonnes. The reported catches in the seven years before its introduction had averaged 74.5 tonnes annually. In the advice to the Minister regarding introduction to the QMS, there was no explanation of why the TACC was set below that level of catch.

The TACC has been over-caught by an average of 3% over the last 5 years but with one exceeding catch by 15%. While the volume of over-catch and the deemed values incurred annually are not large, the current TACC is unnecessarily low and is constraining catching opportunities. Catches show an increasing trend and it is probable that the TACC will be regularly exceeded in the future, as shown in the following graph.



Parore is a low value recreational species and made up 0.08% of catches in FMA1 in the recent recreational catch survey.

There are no known or perceived sustainability issues.

PAR1 is a by-catch of the grey mullet, flatfish and trevally setnet fisheries in northern New Zealand. Most of the catch comes from eastern Northland and the Firth of Thames (FMA 1) and the Kaipara and Manukau Harbours (FMA 9). Highest catch rates occur during September to October. The increase in PAR1 catch levels appears to be a consequence of changed fishing activity in response to the closure of fishing areas for setnetting to protect Maui dolphins. A number of setnetters who formerly fished the Manukau and Waikato harbours are known to have transferred activity to the Kaipara Harbour, the Hauraki Gulf and the Firth of Thames.

An increase in the TACC of 15% to 70 tonnes is sought.

## The Skates – SSK1,RSK7, SSK7, RSK8 and SSK8

Skates were introduced into the QMS in 2003.

Owing to problems associated with identification of rough and smooth skates, the historical reporting of catch included both rough and smooth skate and a generic skate. In the introduction to

the QMS, the generic skate catch was divided into rough and smooth skate based on the relative reportings of those species.

The TACCs set for skates on their introduction to the QMS were set significantly below the level of catch reported prior to the introduction. The total of TACCs for RSK and SSK in all QMAs was set at 2,835 tonnes compared with reported catches, as shown in the following table:

<b>Skate Catch prior to QMS - all FMAs</b>				
<b>Year</b>	<b>SSK</b>	<b>RSK</b>	<b>SKA</b>	<b>Total</b>
1998/99	1,031	666	1,054	2,751
1999/00	1,131	779	1,128	3,038
2000/01	979	642	1,334	2,955
2001/02	907	659	1,248	2,814
2002/03	893	1,118	1,303	3,314
QMS Introduction	849	1,986	-	2,835

Since their introduction to the QMS, there have been initiatives implemented to achieve an improved identification of the two species, e.g. Fish guides and MPI observers. Additionally, serious overcatches have emerged in SSK1, RSK7, RSK8, SSK7 and SSK8. A major review of the species is now proposed to address the problems in the stocks.

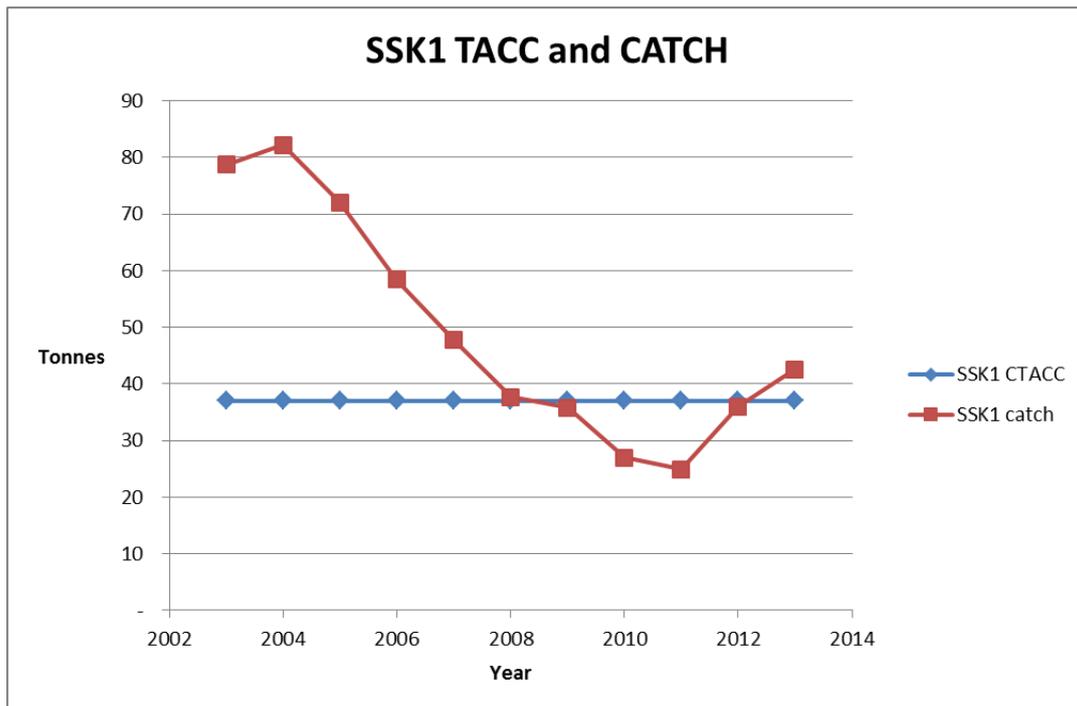
Skates are widely and thinly distributed, and are difficult for trawlers to avoid or predict. A certain level of incidental bycatch is therefore inevitable. Skates may be returned to the sea under Schedule 6 provisions. While they are relatively hardy and frequently survive being caught in trawls, fishers are unable to return sufficient skates to the sea under Schedule 6 to avoid the over-catch situation.

While the panel for the recent risk assessment for sharks, skates and chimaera recognised that skates were widespread and were caught in trawls, they had no certainty as to level of abundance. While no CPUE has been undertaken, the level of aggregate RSK and SSK catch has remained relatively consistent since 2003 and gives no indication of a sustainability issue. While skates were assessed to have high scores in the current risk assessment, the assessment did not place them as having such a high risk that current fishing levels were unsustainable.

### **SSK1**

SSK1 was introduced to the QMS in 2003. Like other FMAs, the FMA1 skate TACCs were lower than the combined pre-QMS totals of RSK, SSK and SKA in FMA1.

The SSK1 TACC has been over-caught by an average 33% in the past ten years, with the maximum being 122%. It is uncertain as to the reasons for the decreased catch of SSK catch in the 2009-2012 period but it is believed that need to avoid snapper catch means fishers are now incurring larger catches of SSK1.

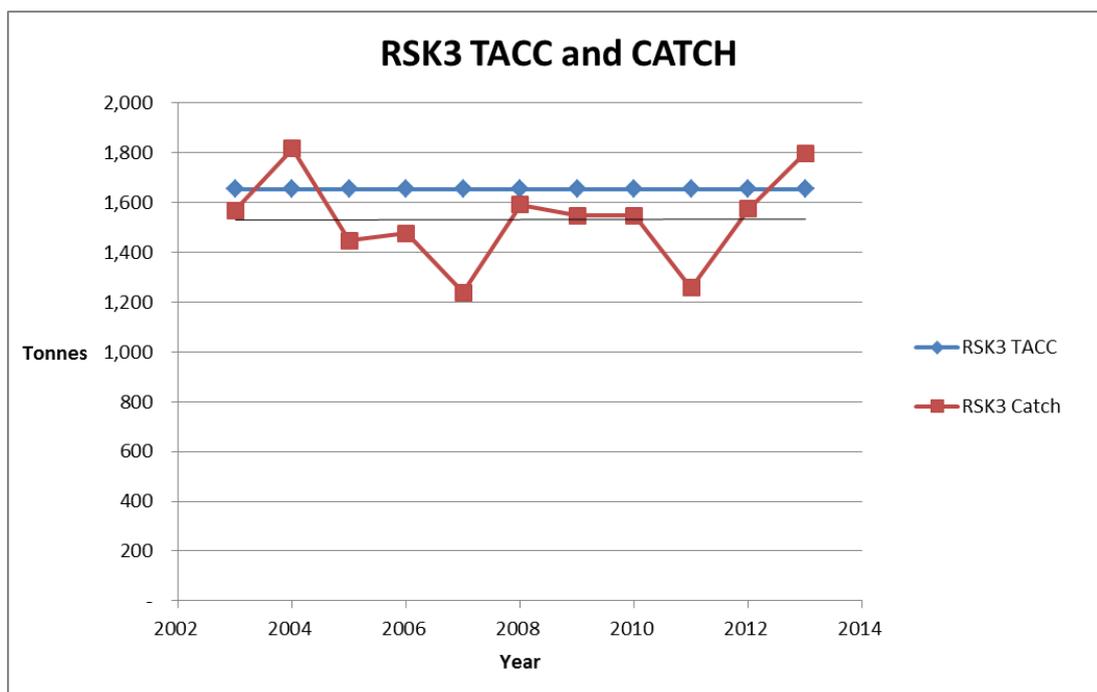


An increase of 33% in the TACC to 49t is considered appropriate.

### RSK3

RSK3 was introduced into the QMS in 2003 with a TACC of 1,653 tonnes.

The RSK3 TACC has been over-caught in two of the years since its QMS introduction. Indications are that it will be over-caught again this year. While the TACC has not been caught in full in most years, the catch levels average 94% of the TACC. Where the TACC has been over-caught, the catch has exceeded the TACC by 10%. Where it has not been over-caught, the catch level is close to the TACC.

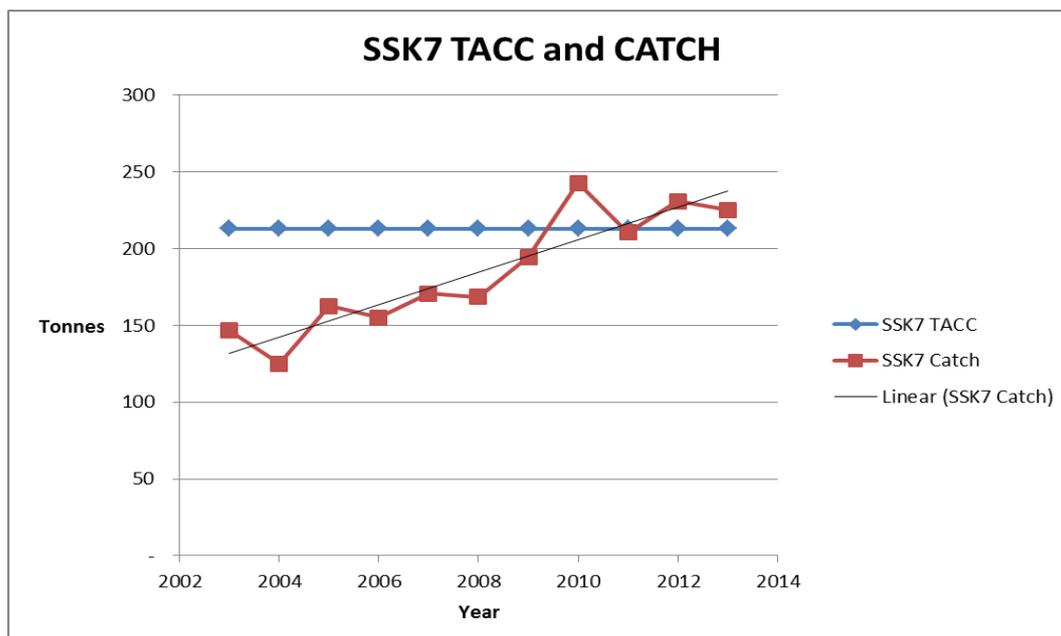
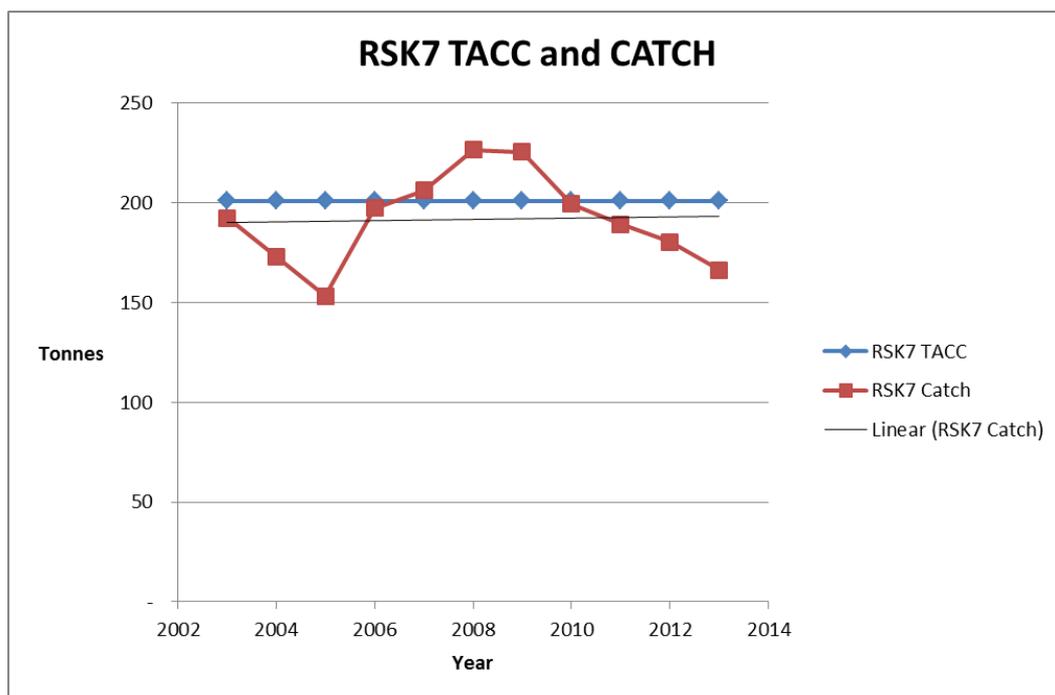


An increase in the TACC to 1,700 tonnes is sought.

## RSK7 and SSK7

SSK7 was introduced to the QMS in 2003. The FMA7 skate TACCs were lower than the combined pre-QMS totals of RSK, SSK and SKA in FMA7.

The RSK7 TACC has been over-caught in 3 years since 2003. While the TACC has not been caught in full in most years, the catch levels average 96% of the TACC. The SSK7 TACC has been over-caught by an average 4% in the past five years, with the maximum being 14% and shows a strongly increasing catch level over the last decade.



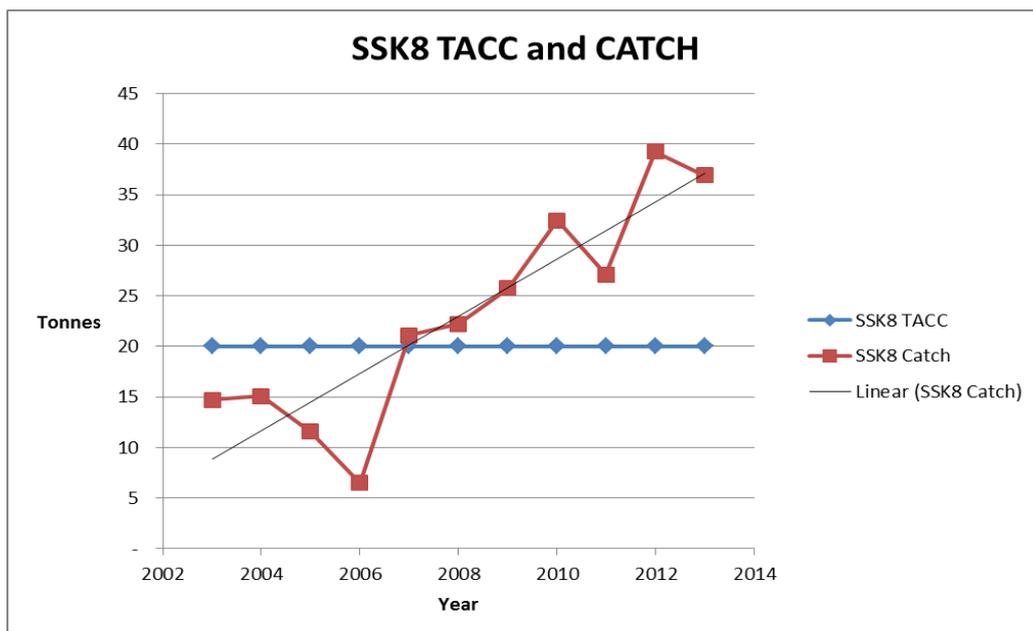
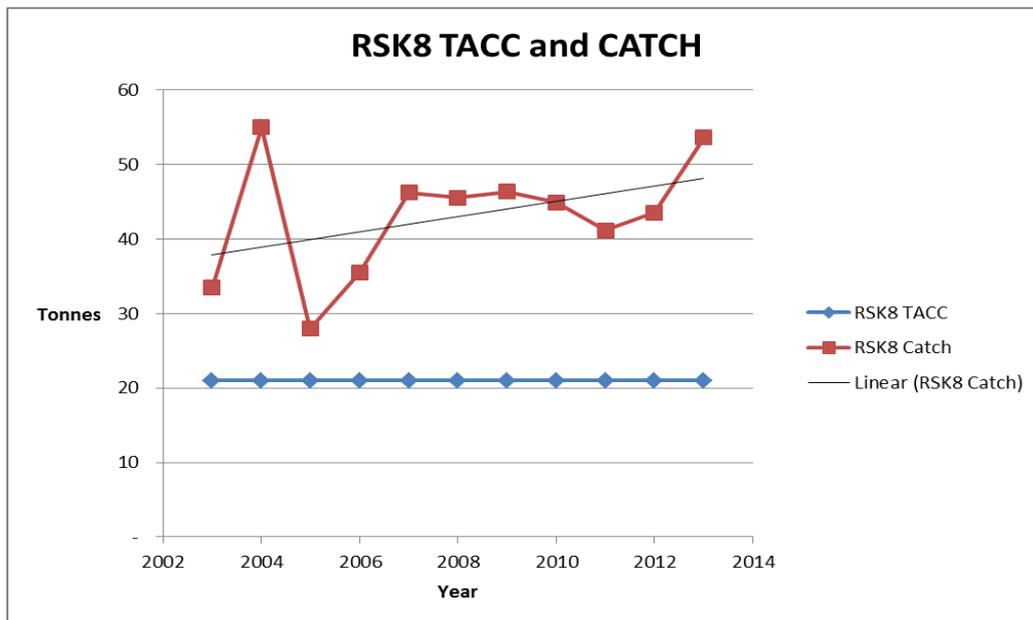
An increase of 12% in the RSK7 TACC to 225t and in the SSK7 TACC to 2240t is considered appropriate.

## RSK8 and SSK8

Like other skate stocks, when RSK8 and SSK8 entered the QMS, the TACCs were set at a combined total that was less than the previously reported catch. The combined RSK and SSK8 TACC was set at 41 tonnes (21 t and 20 t respectively) despite the total of FMA8 SSK, RSK and SKA pre-QMS catch averaging over 47 tonnes and the 2002/03 combined catch being 68 tonnes. Since the introduction to the QMS, RSK8 and SSK8 have had no TACC increase and both have been consistently over-caught.

The RSK8 TACC has been over-caught on average by 105% since the introduction of RSK into the QMS. Deemed values have averaged \$13,000 each year since 2003.

SSK8 has been over-caught by 65% on average over the past five years, the highest being 95%. Deemed values have averaged \$4,300 each year since 2003.



The deemed values for RSK8 and SSK8 are reasonably set at 70% of the port price and should not be incentivising any over-catching of the TACC.

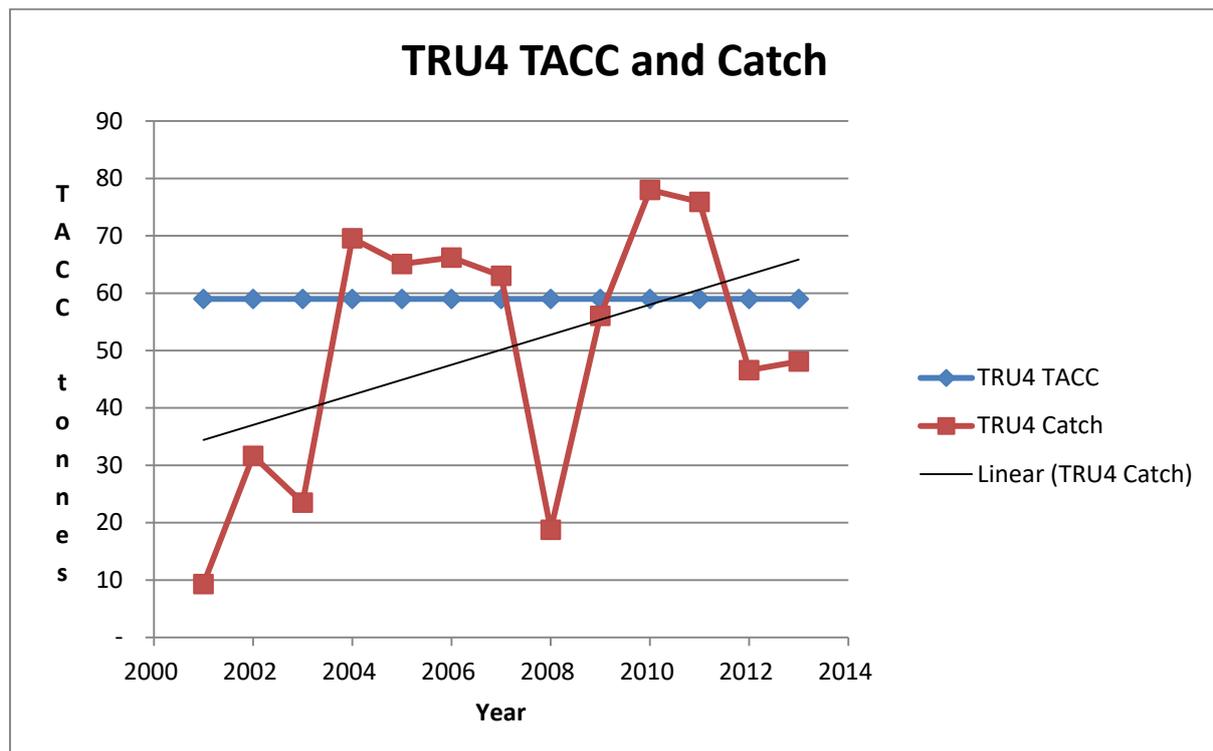
The TACCs set for RSK8 and SSK8 on their introduction to the QMS contained an inappropriate split of the pre-QMS SKA catch and in aggregate were too low. Given the improved quality of reporting under the QMS, the TACC should be amended to reflect the catch levels since 2003 rather than the assumed division of pre QMS skate into rough and smooth skate.

An increase in the RSK8 TACC to 45 tonnes and an increase to 40 tonnes for SSK8 would be appropriate.

#### TRU4

Introduced into the QMS in 1998, the initial TACC was set at 42 tonnes but was increased in 2000 to 59t in a review of all trumpeter stocks.

Trumpeter is a by-catch of both line and trawl fishing and is subject to significant variations in catch levels. The initial TACC setting was lower than the catch reported in a number of years preceding the QMS introduction. However as shown in the following figure, the trend in catch is increasing with the likelihood that the TACC will be exceeded more frequently in the future. Given this is a by-catch fishery the steadily increasing trend in catches is likely to reflect an increase in TRU4 biomass.



Trumpeter is not a recreational target or valued fish. There are no known or perceived sustainability issues.

A TACC increase of 25% to 75 tonnes is sought.