



Review of sustainability and other management controls for kingfish (KIN 7)

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SUSTAINABILITY REVIEW OF FISH STOCKS 2013

This Initial Position Paper (IPP) provides the Ministry for Primary Industries' (MPI's) initial views on proposals for inshore fish stock sustainability measures and other management controls for the 01 October 2013/14 fishing year.

MPI has developed this IPP for the purpose of consultation as required under the Fisheries Act 1996 (the Act). MPI emphasises the views and recommendations outlined in the paper are preliminary and are provided as a basis for consultation with stakeholders.

In August 2013, MPI will compile the Final Advice Paper (FAP) for the attached proposal. This document will summarise MPI's and stakeholder's views on the issues being reviewed, and provide final advice and recommendations to the Minister for Primary Industries. A copy of the FAP and the Minister's letter setting out his final decisions will be posted on the MPI website as soon as these become available. Hard copies will be available on request.

DEADLINE FOR SUBMISSIONS

MPI welcomes written submissions on the proposals contained in the IPP. All written submissions must be received by MPI no later than 4pm on Friday, 2 August 2013.

Written submissions should be sent directly to:

Inshore Fisheries Management

Ministry for Primary Industries

P O Box 2526

Wellington 6011

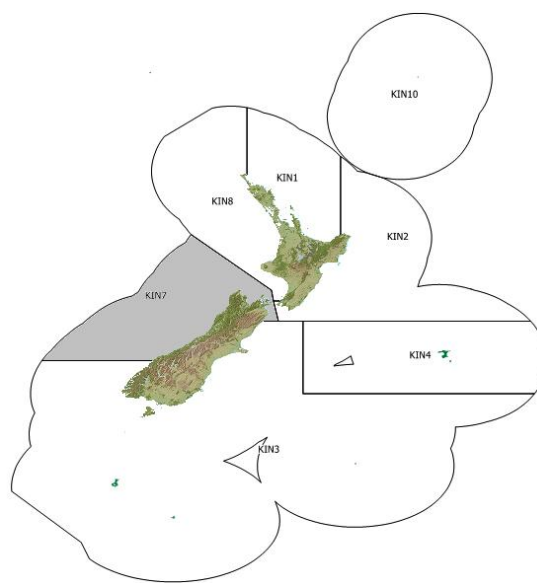
or emailed to FMsubmissions@mpi.govt.nz

OFFICIAL INFORMATION ACT 1982

All submissions are subject to the Official Information Act and can be released (along with the personal details of the submitter) under the Act. If you have specific reasons for wanting to have your submission or personal details withheld, please set out your reasons in the submission. MPI will consider those reasons when making any assessment under the Act.

REVIEW OF SUSTAINABILITY AND OTHER MANAGEMENT CONTROLS FOR KINGFISH (KIN 7)

Figure 1: Quota Management Areas (QMAs) for Kingfish (KIN)



INTRODUCTION

- 1 The Ministry for Primary Industries (MPI) is seeking tangata whenua and stakeholder views on a proposal to change the Total Allowable Catch (TAC), Total Allowable Commercial Catch (TACC), recreational allowance and other sources of fishing-related mortality allowance levels for kingfish in Quota Management Area 7 (KIN 7, see Figure 1).
- 2 For KIN 7, it is proposed that the Minister for Primary Industries (the Minister) consider the options set out in Table 1.1. Options are based on the best available information about the sustainability of the stock and the current catch levels of each sector.

Table 1: Proposed TAC, TACC and allowances for KIN 7

Option	TAC (t)	TACC (t)	Allowances		
			Customary Māori (t)	Recreational (t)	Other sources of fishing-related mortality (t)
Option 1 (Status Quo) This option could include decreasing the recreational daily bag limit from 3 to 2 kingfish per day.	21	7	2	10	2
Option 2	41	15	2	20	4

- 3 In addition, MPI has reviewed the deemed value rates for KIN 7 and is proposing some changes to the current settings. For further information, please refer to the Deemed Value Initial Position Paper (IPP).

Context

- 4 The KIN 7 TAC is small – only 21 tonnes – with a TACC of 7 tonnes. Since the introduction of KIN 7 to the QMS in 2003, the commercial catch of KIN 7 has exceeded the TACC for three of the nine fishing years. This has occurred despite high deemed values and the ability to use the Sixth Schedule (Fisheries Act 1996 – ‘the Act’) to return live kingfish to the sea. KIN 7 is not a target fishery and the majority of this over-catch is bycatch of the jack mackerel mid-water trawl fishery.
- 5 New information is available regarding the recreational catch in KIN 7 indicating that current recreational catch is significantly in excess of the recreational allowance. Recreational fishers are reporting increasing availability of kingfish.
- 6 We have no information as to whether current catch levels are sustainable. However, commercial kingfish targeting effectively ceased during the mid 1990s and the KIN 7 TACC is significantly below the pre-QMS average.
- 7 Kingfish has traditionally been managed as a commercial bycatch fishery (by policy rather than by law) because of its value to the recreational sector.
- 8 It is difficult to determine accurately the level of unavoidable bycatch. However, fishers continue to land kingfish in KIN 7 despite relatively high deemed values and their ability to return live kingfish to the sea. If current catch is sustainable, then the current TAC is unnecessarily constraining utilisation and imposing unnecessary costs on the commercial sector.
- 9 The TAC for KIN 7 is set by the Minister under section 13 of the Fisheries Act 1996 (the Act).
- 10 Before a TAC can be set under section 13(2) of the Act, an assessment of B_{CURRENT}^1 and B_{MSY}^2 is required. The best available information that MPI currently has on KIN 7 is insufficient to enable reliable estimates of B_{CURRENT} and B_{MSY} .
- 11 Where estimates of B_{CURRENT} and B_{MSY} are not available, section 13(2A) of the Act provides for the Minister to use the best available information to set a TAC that is not inconsistent with the objective of maintaining the stock at or above B_{MSY} , or moving the stock towards or above, B_{MSY} .
- 12 Under the Act there is a requirement to act on the best available information and not postpone or fail to set a TAC due to the absence of, or uncertainty in, information.
- 13 Best available information on abundance to inform TAC setting for KIN 7 at this time is the increase in commercial catch (which is greater than 99% bycatch) and anecdotal information from recreational fishers that KIN 7 abundance is increasing.

¹ Current biomass. Biomass refers to the size of the stock in units of weight.

² The average stock biomass that results from taking an average catch of maximum sustainable yield (MSY). Maximum sustainable yield is defined in s 2 of the Act as: ‘...the greatest yield that can be achieved over time while maintaining the stock’s productive capacity, having regard to the population dynamics of the stock and any environmental factors that influence the stock’

- 14 Estimates of current and reference biomass are not available.
- 15 It is unlikely that either option would be inconsistent with enabling the Minister to set a TAC that is not inconsistent with the objective of maintaining the stock at or above B_{MSY} , or moving the stock towards or above, B_{MSY} .

Management Approach

- 16 Upon introduction to the QMS, the initial TACC for KIN 7 was calculated by averaging annual commercial catch quantities over the previous 11 years and then reducing the average catch by 20%. This decrease applied to all KIN stocks to achieve the management objective of a bycatch-only commercial fishery by discouraging targeting.
- 17 On 1 July 2011, MPI published a draft National Fisheries Plan (the Finfish Plan) for Inshore Finfish.³ The Finfish Plan is being trialled for two years before it is refined and improved. Once this has been done, formal approval of the plan will be sought from the Minister. The application of the draft Finfish Plan to KIN 7 stocks is discussed below.
- 18 Within the Finfish Plan stocks are grouped, with management approaches and objectives tailored accordingly for each group. KIN 7 is in Group 6. The management approach for group 6 stocks is to provide opportunities for stakeholders to develop the potential of these fisheries to achieve greater benefits, while minimising costs. Because of the high value of kingfish to the recreational sector, MPI has had a policy of providing benefit to recreational fishers, continuing the approach taken on QMS introduction.

Biological Characteristics of Kingfish

- 19 Kingfish (*Seriola lalandi*) is a fast growing, medium-lived species. Kingfish are known to be robust and, when handled appropriately, they are likely to survive catch and release by fishers. Kingfish reach sexual maturity between 3 – 5 years of age, when they are between 7 – 83 cm fork length. These characteristics mean that kingfish are a productive species, likely to recover quickly from reductions in abundance.

Stock Status

- 20 No estimates of current and reference biomass levels or relative abundance indicators are available for KIN 7. Catch has fluctuated without trend prior to and since introduction into the Quota Management System (QMS).

KIN 7 Fishery

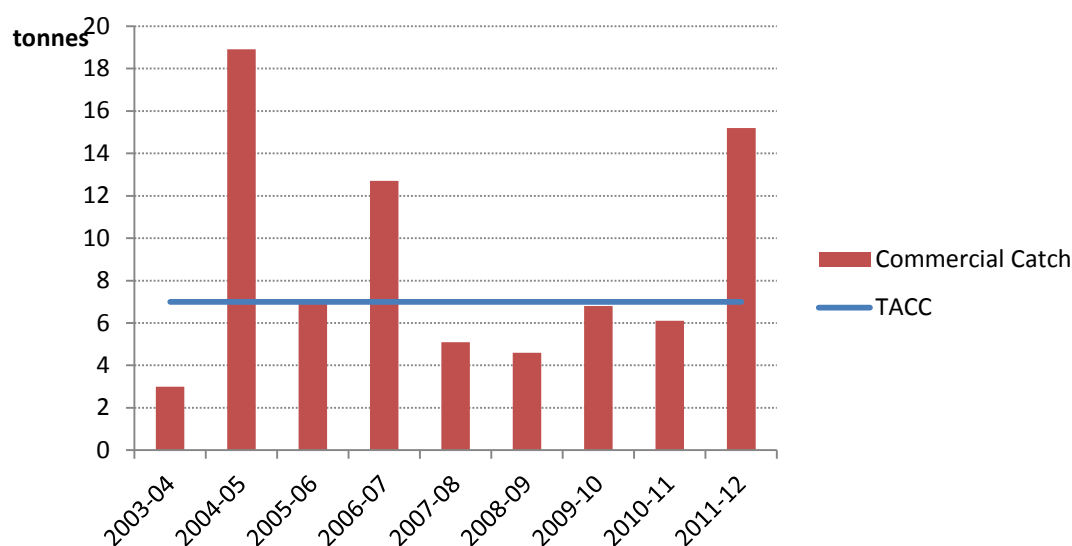
- 21 The KIN 7 stock is on the margins of the distribution of kingfish and landings and catches are small.
- 22 Kingfish was introduced into the QMS on 1 October 2003. In addition to the TAC, TACC, and allowances, the KIN 7 fishery is managed by way of a recreational maximum daily bag limit of 3 kingfish and a recreational minimum legal size (MLS) of 75cm, and a commercial MLS of 65cm, annual deemed values, and kingfish is on the Sixth Schedule of the Act allowing release of live kingfish back to the sea.

³ Link Inshore Finfish Fisheries Plan: <http://www.fish.govt.nz/en-nz/Fisheries+Planning>

Commercial

- 23 Figure 2 shows commercial catch of KIN 7 from 2003/04 (the date of introduction to QMS) to 2011/12. The graph shows that KIN 7 has been substantially fished in excess of the TACC in three of the nine fishing years.

Figure 2: Commercial catch limits (TACC) and catches 2003/04-2011/12



- 24 Between October 2009 and September 2012 (the last three fishing years), commercial fishers reported over 99% of KIN 7 as bycatch (note: this is subject to the accuracy of fishers' recording on the reporting forms). Only 34 kg of KIN 7 was recorded as target catch over this three-year period.
- 25 The available information shows that kingfish in KIN 7 are taken as bycatch predominantly in the target mid-water trawl fishery for jack mackerel (62%), with some also taken in the bottom trawl fisheries for barracouta, tarakihi and warehou (around 20%), and some in the school shark and rig set net fisheries (around 10%).
- 26 Since 2003, management controls to reduce KIN 7 commercial catch have been successful for 6 of the 9 years. Controls include high deemed value rates and the inclusion of KIN 7 on the Sixth Schedule of the Act.
- 27 High deemed value rates are set to incentivise catch within the TACC and to reflect the significance of KIN 7 to non-commercial users. This approach is consistent with the High Value Stocks section of the Deemed Value Standard.
- 28 Considering the small size of the KIN 7 commercial fishery, payments of deemed values have been substantial in 3 of the 9 years since the introduction of KIN 7 to the QMS - Table 1.2.

Table 2: Commercial catch limits (TACC), catches and deemed value payments 2003/04 to 2009/10

Fishing Year	TACC (t)	Commercial Catch (t)	Deemed Value Payments
2003-2004	7	3.0	\$819
2004-2005	7	18.9	\$192 613
2005-2006	7	7.1	\$10 439
2006-2007	7	12.7	\$71 292
2007-2008	7	5.1	0
2008-2009	7	4.6	\$113
2009-2010	7	6.8	0
2010-2011	7	6.1	\$742
2011-2012	7	15.2	\$110 228

- 29 Kingfish was placed on the Sixth Schedule of the Act in October 2005, becoming effective from January 2006. The Sixth Schedule allows commercial fishers to return to the sea listed fish stocks if they meet certain conditions. Release of live kingfish back to the sea provides another tool to assist commercial fishers in limiting landings. There is evidence from reporting data that fishers do use the provisions of the Sixth Schedule for KIN 7 catch. Over the most recent fishing year, 21 % of all reported KIN 7 was released under the Sixth Schedule. Despite this provision, over-catch has occurred. In light of the high deemed values, this suggests that fishers are complying with the rules for the use of the Sixth Schedule.
- 30 Much of the KIN 7 bycatch is taken in large volume trawls targeting jack mackerel. The proportion of kingfish in the catch is relatively small. The opportunity to sort the catch and release any kingfish while alive is limited. Reporting this bycatch of dead kingfish provides important information for management.

Recreational

- 31 KIN 7 is acknowledged as an important fishery for recreational fishers and the management strategy has attempted to reflect this value.
- 32 The FMA 7 Recreational Fishing Forum has identified KIN 7 as an important species and one of their most valued fish. In recent consultation with MPI, recreational forum representatives expressed their views that the size and abundance of kingfish in the KIN 7 area has been increasing over recent years.
- 33 Recreational fishing for kingfish is generally based around the species' value as a sport fish, with large kingfish being a prized trophy catch. Some recreational fishers practice catch and release fishing in KIN 7. The recreational minimum legal size for kingfish is 75cm, and the daily bag limit in KIN 7 is a maximum of 3 kingfish per person per day.
- 34 Due to the need for better information on recreational harvests, in 2011/12 MPI commissioned new recreational research (a large-scale, multi-species study, LSMS) to obtain better harvest estimates for a range of stocks. Estimates from the LSMS are available, but have yet to be

finalised and are subject to change. The estimates for kingfish are based on a relatively small number of events and fishers and, as a result, are subject to a relatively high uncertainty. They also do not include amateur catch taken on charter vessels or by commercial fishers under s111 approvals. The interim estimates have been released at this time only for use as background information for the purposes of this discussion paper and should not be used for any other purposes.

- 35 The interim LSMS estimate for KIN 7 is 20.73 tonnes (C.V. of 0.38).

Māori Customary

- 36 Kingfish (haku) is not identified by Te Waka a Māui me Ōna Toka iwi forum⁴ as a tāonga species in the Te Waipounamu Iwi Fisheries Plan. This plan includes objectives relating to supporting and providing for the customary and commercial interests of South Island iwi.
- 37 Information currently held by MPI on Māori customary catch of KIN 7 is uncertain. For those tangata whenua groups operating under the customary fishing regulations,⁵ there is a requirement for Tangata Kaitiaki/Tiaki to provide MPI with information on Māori customary harvest of fish. However, most tangata whenua in KIN 7 are still operating under regulations 27 and 27A of the Fisheries (Amateur Fishing) Regulations 1986 (the Amateur Regulations), and it is not mandatory to report permits that are issued.

Other Sources of Fishing-Related Mortality

- 38 There are various potential other sources of fishing-related mortality of KIN 7, including mortality from the commercial fishery (incidental mortality from discarding via the sixth schedule and incidental mortality caused by the trawling method). Handling mortality for sub-MLS size fish is likely to occur in both the commercial and recreational fisheries. However, the level of this mortality is not able to be quantified precisely.
- 39 MPI proposes setting an allowance for other sources of fishing-related mortality of 10% of the TAC.

Other Key Considerations

- 40 MPI is unaware of any environmental conditions affecting kingfish stocks that are of relevance to the Minister's decision.

⁴ The Te Waka a Māui me ōna toka iwi forum represents the nine iwi of the South Island, each holding mana moana and significant interests (both commercial and non-commercial) in South Island fisheries.

⁵ Fisheries (Kaimoana Customary Fishing) Regulations 1998 and/or Fisheries (South Island Customary Fishing) Regulations 1999.

PROPOSED RESPONSE

41 MPI is consulting on the following management options for the Minister to set the TAC, TACC and associated allowances for KIN 7 (Table 1.3).

Table 3: Proposed TACs, TACCs, and allowances for KIN 7

Option	TAC (t)	TACC (t)	Allowances		
			Customary Māori (t)	Recreational (t)	Other sources of fishing-related mortality (t)
Option 1 (Status Quo) This option could include decreasing the recreational daily bag limit from 3 to 2 kingfish per day	21	7	2	10	2
Option 2	41	15	2	20	4

Option 1 (Status Quo)

- 42 Under Option 1, the existing TAC for KIN 7 would be retained. The current TAC is not inconsistent with the objective of maintaining the stock at or above, or moving the stock towards or above, a level that can produce the maximum sustainable yield. This option reflects a cautious approach to change, reflecting the uncertainty in information about the KIN 7 stock status relative to target levels and the uncertain level of any increase in biomass.
- 43 At the time of KIN 7 introduction into the QMS, the management objective was to constrain commercial catch of kingfish in KIN 7 to a bycatch-only fishery. Achieving this objective is why the TACC was set at a level 20% lower than average landings when introduced into the QMS. Option 1 may be the appropriate option if current catches do not reflect a bycatch-only commercial fishery or if further efforts to constrain commercial catches to the TACC are considered necessary or desirable (by the Minister) for sustainability reasons.
- 44 On-the-other- hand, the economic implications of choosing Option 1 are to impose a cost on commercial fishers for the excess catch taken in target fisheries for other species. Since the KIN 7 TACC was introduced in 2003, commercial stakeholders have paid total annual deemed values ranging from nil to \$192 613, with a total over the nine years of \$386 246 or an average of \$21 401 per fishing year.
- 45 Maintaining the KIN 7 catch within the TAC and existing allowances would require further constraints to be introduced. These could include a review of deemed value rates with a view to further increasing incentives to avoid kingfish bycatch; amendments to the TACs and TACCs of one or more of the associated target fisheries to reduce total kingfish bycatch; review of the recreational daily bag limit, from 3 kingfish per day to 2 kingfish per day, with a view to restraining recreational catch within the recreational allowance⁶.

⁶ MPI notes that such a regulation change would not be able to be implemented until 2014 because of the timeframes required by the regulatory process.

- 46 Current information does not suggest a need to change the customary allowance under Option 1; however, available information is sparse and uncertain. Further information on harvest using customary permits is invited from tangata whenua to ensure the allowance is set appropriately.
- 47 Under Option 1, no changes are proposed to the allowance for other sources of fishing-related mortality. There has been no new information that alters the original method used to calculate the allowance for other sources of fishing-related mortality.

Option 2

- 48 Option 2 proposes:
- The TAC be increased from 21 tonnes to 41 tonnes.
 - The TACC be increased from 7 tonnes to 15 tonnes (an increase of approximately 114%).
 - The allowance for other sources of fishing-related mortality be increased from 2 tonnes to 4 tonnes (maintaining its level at around 10% of the TAC).
 - The recreational allowance be increased from 10 tonnes to 20 tonnes (an increase of approximately 100%).
 - No change to the customary Māori allowance.
- 49 The proposed TAC under Option 2 is based on current levels of KIN 7 catch. Option 2 takes a cautious approach to increasing the TAC and reflects that there is little information to assess the status of the KIN 7 stock. Estimates of current and reference biomass are not available and we have no information as to whether current catch levels are sustainable. However, kingfish targeting effectively ceased during the mid 1990s and the KIN 7 TACC is significantly below the pre-QMS average.
- 50 The current TAC for KIN 7 is small and the proposed increase in the TAC under Option 2 is also small. It is unlikely that this option would be inconsistent with enabling the Minister to set a TAC that is not inconsistent with the objective of maintaining the stock at or above B_{MSY} , or moving the stock towards or above, B_{MSY} .
- 51 When KIN 7 was introduced into the QMS, an objective was to manage the commercial KIN 7 fishery as bycatch-only fishery and to increase benefits to recreational fishers.
- 52 At the time of QMS introduction, the Minister believed that the available information suggested an overall increase in utility would result from providing greater opportunity for recreational catch of kingfish. However, the Minister also recognised the competing demands for the use of kingfish and did not support fully allocating the fishery to recreational fishers or endeavouring to provide for the needs of recreational fishers in full. Such a situation would have ignored the inevitable bycatch of kingfish in associated target commercial fisheries and would have potentially lead to excessive waste of catch and other socio-economic impacts.
- 53 Option 2 may be the appropriate option if sufficient incentives have been applied to reduce commercial catch of KIN 7 to a bycatch-only fishery and the Minister does not consider current commercial and recreational catch levels to pose a sustainability issue. The proposed increases to

the TAC, TACC, and recreational allowance reflect what is already being caught in some years and does not provide for significant increased harvest by commercial or recreational fishers.

- 54 The current KIN 7 TACC is resulting in deemed value costs to commercial fishers targeting other species and taking kingfish as bycatch. Since the KIN 7 TACC was introduced in 2003, commercial stakeholders have paid total annual deemed values ranging from nil to \$192 613, or an average of \$21 401 per fishing year.
- 55 The Sixth Schedule provisions and high deemed value rates appear to have achieved the aim of largely reducing KIN 7 to a bycatch-only fishery, but catch in excess of the TACC is being taken.
- 56 Given that much of the KIN 7 bycatch is taken in trawls targeting jack mackerel (62%), it is likely that many kingfish in those catches will be dead by the time they are sorted from large volume catches of mackerel. As large predatory fish, kingfish are likely to be feeding on the jack mackerel schools and hence taken incidentally to the target species. This supports the view that kingfish bycatch is difficult to avoid in those fisheries.
- 57 The extremely small amount of kingfish reported as targeted leads us to believe a proposed increase to the TACC will not have an adverse or significant effect on associated fisheries. As long as the fishery remains a bycatch fishery, as it has since 1992, there is no information that would suggest associated target species will be adversely affected by the proposal.
- 58 The current recreational allowance for KIN 7 is 10 tonnes. This allowance has remained unchanged since KIN 7 was introduced to the QMS in 2003. Kingfish is an important target species for recreational fishers and the recent draft LSMS survey indicates that the recreational catch is significantly greater than this current recreational allowance.
- 59 Current information does not suggest a need to change the customary Māori allowance.

FUTURE CONSIDERATIONS

- 60 As KIN 7 is a Fisheries Plan Group 6 stock, the information requirements for management are less than more heavily fished stocks. The KIN 7 fishery should continue to be monitored by way of commercial catch.

INITIAL CONSULTATION

- 61 During March and May 2013, MPI had preliminary discussions with some stakeholder representatives. MPI sought views on the options to be included in this paper.
- 62 South Island commercial representatives support an increase in the TACC of KIN 7.
- 63 The FMA 7 Recreational Fishers Forum supports a conservative approach to any changes to the KIN 7 TAC and allowances because they are concerned that there is insufficient information available to support a higher TAC and TACC. The FMA 7 Recreational Fishers Forum also supports consideration of a reduction in the recreational bag limit to constrain recreational catch to a reduced level.

CONCLUSION

- 64 The KIN 7 TAC is small – only 21 tonnes – with a TACC of 7 tonnes. Since the introduction of KIN 7 to the QMS in 2003, the commercial catch of KIN 7 has exceeded the TACC for three of the nine fishing years. This has occurred despite high deemed values and the ability to use the Sixth Schedule of the Act to return live kingfish to the sea. KIN 7 is not a target fishery and the majority of this over-catch is bycatch of the jack mackerel mid-water trawl fishery.
- 65 New information is available regarding the recreational catch in KIN 7 indicating that current recreational catch is significantly in excess of the recreational allowance.
- 66 We have no information as to whether current catch levels are sustainable. However, commercial kingfish targeting effectively ceased during the mid 1990s and the KIN 7 TACC is significantly below the pre-QMS average.
- 67 Kingfish has traditionally been managed as a commercial bycatch fishery (by policy rather than by law) because of its value to the recreational sector.
- 68 Option 1 (the status quo) reflects a cautious approach, reflecting the uncertainty in information about the KIN 7 stock status relative to target levels and the uncertain level of any increase in biomass. This option proposes retaining the current TAC, TACC and allowances.
- 69 Maintaining the KIN 7 catch within the TAC and existing allowances would require further constraints to be introduced. These could include a review of deemed value rates with a view to further increasing incentives to avoid kingfish bycatch; amendments to the TACs and TACCs of one or more of the associated target fisheries to reduce total kingfish bycatch; review of the recreational daily bag limit, from 3 kingfish per day to 2 kingfish per day, with a view to restraining recreational catch within the recreational allowance. (MPI notes that alteration of the recreational bag limit would require an additional regulatory process and changes would not be implemented until 2014.)
- 70 Option 2 proposes changes to the TAC that are intended to accommodate what is currently taken as commercial bycatch and recreational catch. To support this option, MPI proposes introducing a revised differential deemed value rates schedule for KIN 7 to further encourage fishers to remain within the proposed new TACC limits (refer to *Deemed Value IPP*) (kingfish is on the Sixth Schedule and live fish may be returned to the sea).
- 71 Option 2 is unlikely to encourage development of a KIN 7 target fishery, consistent with the decisions made on introduction of the stock into the QMS in 2003.
- 72 It is noted that the Minister has broad discretion when deciding the TAC and allowances for commercial, customary, recreational and other sources of fishing-related mortality. He will make his own independent assessment of the information presented to him by both MPI and stakeholders before making his decision.