

## Kingfish (KIN 3)

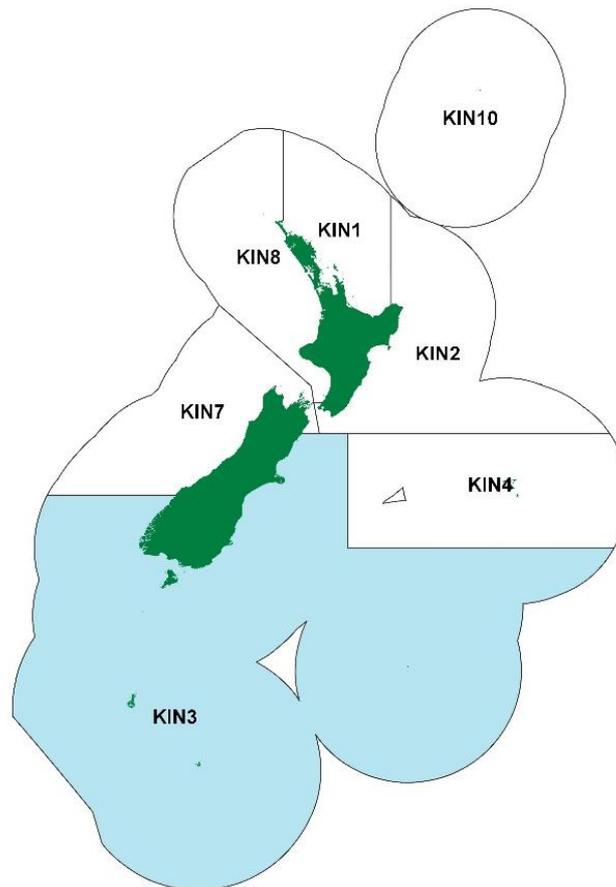


Figure 1: Quota Management Areas (QMAs) for kingfish (KIN), with KIN 3 highlighted in blue.

### 1. What is proposed?

721. Fisheries New Zealand is reviewing the total allowable catch (TAC), allowance for Māori customary fishing, allowance for recreational fishing, allowance for all other mortality to the stock caused by fishing, and the total allowable commercial catch (TACC) for kingfish (*Seriola lalandi*, haku) in the quota management area KIN 3 off the east and southern coast of the South Island (see Figure 1). Fisheries New Zealand proposes that the following initial options be considered, and seeks information and views from tangata whenua and stakeholders (Table 1):

Table 1: Proposed management settings in tonnes for KIN 3 from 1 October 2018, with the percentage change relative to the *status quo* in brackets.

Option	Total Allowable Catch (TAC)	Total Allowable Commercial Catch (TACC)	Allowances		
			Customary Māori	Recreational	All other mortality to the stock caused by fishing
Option 1 ( <i>Status quo</i> )	3	1	1	1	0
Option 2	9 ↑ (200%)	3 ↑ (200%)	2 ↑ (100%)	3 ↑ (200%)	1 ↑
Option 3	17 ↑ (467%)	6 ↑ (500%)	4 ↑ (300%)	6 ↑ (500%)	1 ↑

**Table 2: Current standard deemed value rates (\$/kg) for KIN 3**

	Interim Rate (\$/kg)	Annual Differential Rates (\$/kg) for excess catch (% of ACE)					
		100-120%	120-140%	140-160%	160-180%	180-200%	200%+
<i>Status quo</i>	8.00	8.90	10.68	12.46	14.24	16.02	17.80

722. Fisheries New Zealand is not proposing to alter the deemed value rates and schedules for KIN 3 as part of this review of catch allowances (Table 2). Fisheries New Zealand seeks input from tangata whenua and stakeholders on deemed value settings for KIN 3 for consideration in a future review of approaches to setting deemed value rates for all kingfish stocks.

## 2. Why the need for change?

723. Kingfish are largely a warm water fish and are found predominantly in the Northern half of the North Island. From catch effort reporting by commercial fishers and anecdotal accounts from all fishing sectors it is apparent that kingfish are being observed more frequently in southern regions in recent years, especially over the summer months when inshore waters are warmer.

724. The TACC and catch allowances for all kingfish stocks are set at low levels to discourage the targeting of kingfish by commercial fishers. Kingfish therefore is principally taken as unintentional bycatch by commercial fishers.

725. Over the most recent 5 year period, the average commercial catch of kingfish in KIN 3 has been near 190% of the TACC of 1 tonne with the most recent fishing year (2016/17) being at 353% of the TACC. Prior to the 2011/12 fishing year, the TACC of 1 tonne had never been fully caught. However, since 2011/12 landings of KIN 3 have consistently exceeded the TACC each year, and at increasingly higher rates, with no evidence of any increased targeting of kingfish by commercial fishers over this period.

726. It is likely that the observed increase in the abundance of kingfish in KIN 3 will continue to be reflected in an increase in kingfish bycatch by commercial fishers. In addition this increase in abundance will likely provide for an increase in available kingfish catch for non-commercial fishers. Options are proposed to provide for increases in kingfish catch allowances in KIN 3 for all sectors.

## 3. Background

### 3.1 FISHERY CHARACTERISATION

727. Kingfish is highly regarded by recreational and Māori customary fishers in New Zealand and a management strategy has been developed to reflect this. As a reflection of the value of kingfish to non-commercial fishers, kingfish was introduced into the Quota Management System (QMS) in 2003 with the TAC, TACC and allowances initially set to discourage commercial fishers targeting kingfish. The KIN 3 TAC is set at a nominal 3 tonnes, comprising of 1 tonne allowances for each of the commercial, recreational and Māori customary sectors.

728. Both commercial and non-commercial catch of kingfish is constrained by minimum legal size limits, set at 65 cm for commercial fishers and at 75 cm for non-commercial fishers, in addition to a non-commercial daily bag limit of three per person per day, as part of a mixed daily bag limit.

### **Customary Māori fishery**

729. Kingfish (haku) is an important taonga species for Māori customary groups. Kingfish is not specifically identified by the Te Waka a Māui me Ōna Toka Iwi Forum as a taonga species in the Te Waipounamu Iwi Fisheries Plan, but that Forum consider all species taonga, and Fisheries New Zealand has information that indicates that kingfish is an important species for tangata whenua.
730. The KIN 3 QMA falls under one regulation for customary catch, the Fisheries (South Island Customary Fishing) Regulations 1999 (the South Island Regulations). The South Island Regulations apply south of the Kahurangi River down the west coast of the South Island, including the southwest coast of the South Island.
731. For tangata whenua groups in KIN 3 under the South Island Regulations, there is a requirement for Tangata Kaitiaki/Tiaki to provide information on Māori customary harvest of fish. Information currently held by Fisheries New Zealand on Māori customary catch shows that there have been zero confirmed customary permits issued for kingfish. This indicates that there are negligible levels of take of kingfish in KIN 3 for Māori customary purposes with the majority of customary take of kingfish likely to be within the recreational catch allowance and daily bag limits for kingfish.
732. The Te Waipounamu Iwi Fisheries Plan contains objectives to support and provide for the interests of South Island iwi. Consistent with the objectives of this plan, Fisheries New Zealand is supporting and providing for the interests of South Island iwi by providing allowances that adequately allow for the utilisation of customary resources.

### **Recreational fishery**

733. Kingfish is an important species for recreational fishing and has been managed since QMS entry to recognise this importance. Nationwide, the majority of kingfish is targeted recreationally for its sporting attributes and large size, with 662 tonnes taken in the 2011/12 fishing year,<sup>1</sup> equating to approximately 75% of the nationwide catch, with the remaining 25% (217 tonnes) taken by commercial fishers. The main methods to manage recreational harvest of kingfish are minimum legal size limits (MLS), method restrictions, and daily bag limits. Fishers can take up to three kingfish as part of the Hapuku/kingfish daily limit, at a length above 75cm MLS. The main methods to manage recreational harvest of kingfish are minimum legal size limits (MLS), method restrictions, and daily bag limits. Fishers can take up to three kingfish as part of the Hapuku/kingfish daily limit, at a length above 75cm MLS.
734. Anecdotal evidence suggests recreational fishers are encountering kingfish more often and some fishers are beginning to target kingfish around East Otago. Given the increases in average sea surface temperatures in southern regions observed in recent years, it is

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<sup>1</sup> Wynne-Jones, J.; Gray, A.; Hill, L.; Heinemann, A. (2014). National Panel Survey of Marine Recreational Fishers 2011–12: Harvest Estimates. New Zealand Fisheries Assessment Report 2014/67. 139p. Accessible at: <https://www.mpi.govt.nz/dmsdocument/4719/send>

likely that the further spread of kingfish southwards will lead to higher availability and catch of kingfish by recreational fishers in KIN 3.

735. The National Panel Survey of Marine Recreational Fishers (NPS) from 2011/12 is the best information on recreational harvest for KIN 3. The NPS estimated 2.89 tonnes of kingfish were caught in KIN 3 in the 2011/12 fishing year.<sup>2</sup> Fisheries New Zealand acknowledges that recreational harvests can fluctuate from year to year. While the estimate of recreational kingfish catch is uncertain, the most recent estimate is greater than the current recreational allowance of 1 tonne.

## Commercial fishery

736. The majority of kingfish commercially caught in KIN 3 has been reported as bycatch of trawl, set net and longline fisheries targeting rig (SPO) and school shark (SCH). The KIN 3 TACC has not been increased since the introduction of kingfish into the QMS in 2003, however, landings of KIN 3 have consistently exceeded the TACC in recent years (Figure 2), with the most recent 2016/17 fishing year being the highest on record at approximately 3.5 tonnes.

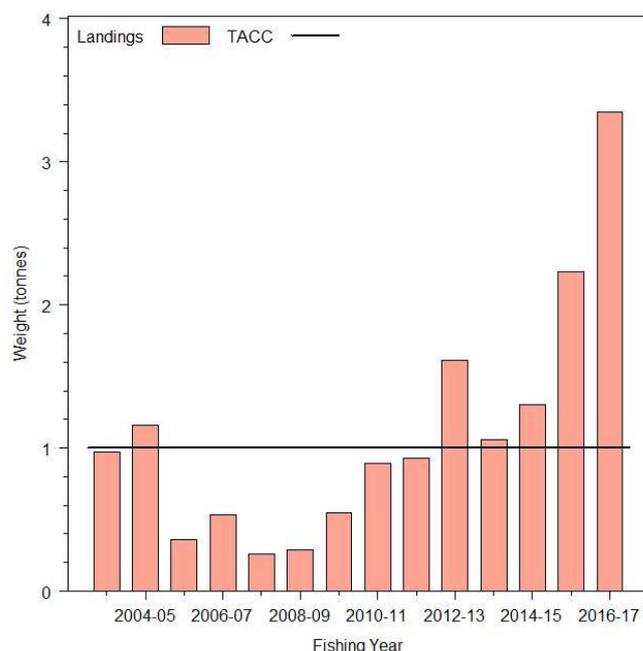


Figure 2: Landings vs TACC for KIN 3 from 2004/05 to 2016/17.

737. Historically kingfish have been low in numbers in KIN 3 due to their preference for warmer waters, however, anecdotal accounts and observed catches of kingfish in KIN 3 over more recent years indicate an increasing abundance, which may continue if average sea surface temperatures continue to rise.
738. The return of kingfish back to the water under Schedule Six of the Act provides commercial fishers an ability to limit their landings of kingfish catch, and so provides a means for commercial fishers to constrain the landings of kingfish catch to within the

<sup>2</sup> Wynne-Jones, J.; Gray, A.; Hill, L.; Heinemann, A. (2014). National Panel Survey of Marine Recreational Fishers 2011–12: Harvest Estimates. New Zealand Fisheries Assessment Report 2014/67. 139p. Accessible at: <https://www.mpi.govt.nz/dmsdocument/4719/send>

KIN 3 TACC. However, the use of Schedule Six is only applicable if kingfish are likely to survive on return and does not apply to landings of kingfish caught by set nets.

## 3.2 STATUS OF THE STOCK

### Management target

739. Catch data alone is used to monitor the stock and the best available information on current catch of kingfish in KIN 3 comes from commercial landing records. As kingfish are principally taken as bycatch by commercial fishers, there are no accepted reference points to determine the status of kingfish stocks in relation to management targets, and a level of stock biomass that would support MSY for KIN 3 is not known.

## 4. Why are these options proposed?

740. The options proposed for KIN 3 are given in Table 3 and discussed below.

**Table 3: Proposed management settings in tonnes for KIN 3 from 1 October 2018, with the percentage change relative to the *status quo* in brackets.**

Option	Total Allowable Catch (TAC)	Total Allowable Commercial Catch (TACC)	Allowances		
			Customary Māori	Recreational	All other mortality to the stock caused by fishing
Option 1 ( <i>Status quo</i> )	3	1	1	1	0
Option 2	9 ↑ (300%)	3 ↑ (300%)	2 ↑ (200%)	3 ↑ (300%)	1 ↑
Option 3	17 ↑ (567%)	6 ↑ (600%)	4 ↑ (400%)	6 ↑ (600%)	1 ↑

### 4.1 VARYING THE TAC

741. To reflect the increased abundance of kingfish available to catch in KIN 3, Option 2 and Option 3 propose an increase from the current 3 tonne TAC, to 9 tonnes and 17 tonnes, respectively, and include increases in catch allowances for all sectors. Further information on non-commercial allowances and commercial catch settings are outlined in section

742. The Minister must use the best available information to set a TAC for kingfish that is not inconsistent with the objective of maintaining the stock at or above or moving the stock towards or above the level that would produce the maximum sustainable yield ( $B_{MSY}$ ) pursuant to Section 13(2A)(c) of the Act.

743. In the case of KIN 3, there is no information to determine whether or not the KIN 3 stock is at, above, or below  $B_{MSY}$ , and there are no established stock biomass reference points associated with the current catch levels for kingfish in KIN 3. However, Fisheries New Zealand considers the options presented are not inconsistent with the objectives of Section 13(2A)(c) of the Act. This is because the best available information suggests that the current ‘nominal’ TAC does not respond to information suggesting there has been an increase in the abundance of kingfish in KIN 3.

744. Section 13 (2A)(b) of the Act also requires the Minister to consider the interdependence of stocks and environmental conditions in setting or varying the TAC. The increase in abundance of kingfish in KIN 3 may be having an impact on other species in the ecosystem, however, the size of the kingfish stock in KIN 3 is likely to be small relative to other fish stocks and Fisheries New Zealand cannot quantify the scale of increase in abundance of kingfish, or the impact on the ecosystem from any increase in abundance.

## **4.2 VARYING ALLOWANCES AND THE TACC**

745. In setting or varying the TAC, the Minister must make allowances for Māori customary non-commercial fishing interests, recreational fishing interests, and all other mortality to the stock caused by fishing (s20 & 21 of the Act).

746. Anecdotal accounts suggest that kingfish are becoming more abundant in southern regions and available to non-commercial fishing sectors. Recreational and Māori customary catch is uncertain but may be increasing given the increased abundance of kingfish in KIN 3.

### **Allowance for Māori customary fishing**

747. The current allowance for Māori customary take of kingfish in KIN 3 is set at 1 tonne. Fisheries New Zealand notes the increased likelihood of catch by all sectors in the future and, given increased availability of kingfish in KIN 3, proposes that the allowance for Māori customary fishing also be increased. Fisheries New Zealand seeks feedback on a representative allowance for Māori customary catch of kingfish in KIN 3.

### **Allowance for recreational fishing**

748. The current recreational allowance for KIN 3 is 1 tonne, whereas Fisheries New Zealand considers that the estimate from the NPS of 2.89 tonnes of kingfish taken in 2011/12 as providing the best available information on recreational kingfish catch in KIN 3. As such, Fisheries New Zealand is proposing that the recreational catch allowance be increased under Option 2 and Option 3.

749. An update of the 2011/12 NPS is underway for 2017/18, and any estimates for recreational catch of KIN 3 will be used to inform future recreational allowance settings. There is no information to suggest a change of recreational controls would be needed and no changes to the recreational minimum legal size or the daily bag limit combination are proposed.

### **Allowance for all other sources of mortality caused by fishing**

750. There is currently no allowance set for all other mortality caused by fishing and there is no information available to quantify the level of mortality, or provide an estimate of a level of mortality based on current or proposed fishing allowances. Given that under Option 2 and Option 3 it is proposed that the TAC, TACC and recreational and Māori customary allowances be increased, it is also proposed in those options to set a one tonne allowance for all other mortality caused by fishing.

## TACC

### Option 1 (*Status quo*)

751. Option 1 retains the current nominal TACC of 1 tonne and constrains commercial catch to strongly discourage the commercial targeting of kingfish in KIN 3. However, despite high deemed value rates, recent commercial landings have exceeded the TACC and suggest that there is an abundance of kingfish in KIN 3 that is unable to be legally returned under the Schedule Six provision of the Act,<sup>3</sup> or could indicate that the right incentives to avoid landing kingfish are not provided for.

### Option 2

752. Option 2 takes account of anecdotal information of an increase in abundance of kingfish in KIN 3 and reflects the current commercial and recreational landings of KIN 3 and proposes increasing the TAC from 3 tonnes to 9 tonnes. This includes increasing the TACC and recreational allowance from 1 tonne each to 3 tonnes each, to reflect current commercial and recreational landings, an increase to Māori customary allowance to 2 tonnes and an allowance for other sources of mortality related to fishing set at 1 tonne.

### Option 3

753. Under Option 3, Fisheries New Zealand considers the increasing abundance of kingfish in KIN 3 and proposes increasing the TAC to from 3 tonnes to 17 tonnes. This includes a TACC set at just under twice the current commercial landings, with an increase from 1 tonne to 6 tonnes. In consideration of increasing kingfish abundance in KIN 3 and catch available to non-commercial fishers, Fisheries New Zealand also proposes increasing the Māori customary fishing allowance to 4 tonnes and increasing the recreational fishing allowance to 6 tonnes, as well as setting an allowance for other sources of mortality related to fishing at 1 tonne.

## 4.4 EVALUATION OF OPTIONS

754. Option 1 (*status quo*) reflects the most cautious approach to the increase in KIN 3 abundance. The current TAC may unnecessarily constrain catches and does not enable industry to respond to the increased biomass in a way that would allow them to maximise value from landing all kingfish caught in KIN 3.

755. Fisheries New Zealand considers that the allowances proposed under Option 1 may not reflect the increased abundance and likely catch of kingfish in KIN 3, or provide the right incentives for commercial fishers to land all kingfish of legal size that cannot be returned to the water under Schedule Six of the Act.

756. Option 2 and 3 outlined below are proposed to provide for increased kingfish catch allowances for all sectors. While we are unable to determine whether or not the KIN 3 stock is at, above, or below a level that would produce BMSY, available information suggests that the biomass abundance of kingfish in KIN 3 has increased, and the modest

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<sup>3</sup> Under section 72(2) of the Fisheries Act 1996 (the Act), for stocks listed on Schedule Six of the Act, including all kingfish stocks, a commercial fisher may return a kingfish of legal size to the waters from which it was taken if the commercial fisher complies with statutory requirements set out in the schedule.

increases in the TAC, TACC and allowances will provide for utilisation while still meeting the Minister's statutory obligation under s 13 of the Act.

757. To reflect the likely increase in abundance of kingfish in KIN 3, and to allow fishers to legally retain and land kingfish of legal size that cannot be lawfully returned to the sea under Schedule Six, an increase in the TACC is proposed under both Options 2 and 3. These options will provide for an increase in the amount of KIN 3 ACE available for commercial fishers to cover catch and landing of kingfish in the future.
758. Allowances proposed under Option 2 are set to reflect current catches for all sectors given catch reporting and anecdotal accounts of an increased abundance of kingfish in KIN 3 and proposes the KIN 3 TAC increased to 9 tonnes.
759. Under Option 2, Fisheries New Zealand proposes an increase to the TACC to three tonnes, which is near the level of landings observed in the most recent fishing year. It is also proposed that the recreational fishing allowance be increased by two tonnes, to three tonnes, to reflect the best available information on estimated recreational catch of kingfish in KIN 3 from the 2011/12 NPS. Option 2 proposes that the Māori customary fishing allowance be increased by one tonne, to two tonnes, and proposes that a 1 tonne allowance be set for all other sources of mortality related to fishing.
760. Allowances proposed under Option 3 are set higher than Option 2, and provide for anticipated catch for all sectors given consideration of increasing abundance of kingfish in KIN 3 in the coming years, with the KIN 3 TAC increased to 17 tonnes.
761. Under Option 3, Fisheries New Zealand proposes an increase in the TACC to six tonnes. Option 3 places greater weight on the information showing increasing abundance of kingfish in KIN 3 and further opportunities for sustainable utilisation of kingfish by commercial fishers in future years. It is also proposed that the recreational fishing allowance be increased to six tonnes Option 3 proposes that the Māori customary fishing allowance be increased to four tonnes, and proposes that a 1 tonne allowance be set for all other sources of mortality related to fishing.
762. Fisheries New Zealand considers that both Option 2 and Option 3 will provide for likely additional catch by all sectors resulting from greater abundance in KIN 3. Fisheries New Zealand also considers that it is unlikely that an increase in TACC for kingfish will lead to an increase in commercial fishing effort targeting kingfish in KIN 3. This is due to KIN 3 comprising only a small component of commercial catches, as being principally taken as unintended bycatch, and that the price that commercial fishers receive for landing KIN 3 is low, relative the current deemed value rates incurred for landing. Fisheries New Zealand will continue to monitor the market value of KIN 3 in relation to deemed value rates to ensure that fishers are discouraged from targeting of kingfish in KIN 3.
763. Fisheries New Zealand considers that any increase to the KIN 3 TACC under Option 2 and Option 3 will not impact on the ability of recreational and Māori customary fishers to catch kingfish in KIN 3.
764. There is no information to indicate that the current catch level of kingfish in KIN 3, or an increase in the KIN 3 TAC would pose a risk to the sustainability of the stock. However, Fisheries New Zealand will continue to monitor the state of the KIN 3 fishery via total landings for the fishery, and may consider reviewing the TAC when this information is updated.

765. Fisheries New Zealand welcomes information and views of tangata whenua and stakeholders regarding these proposed options, including any other information to support alternate options.

## **5. Other Relevant Matters**

### **5.1 ENVIRONMENTAL PRINCIPLES AND SUSTAINABILITY MEASURES**

766. The proposals are not expected to significantly change the environmental impacts and interactions of the KIN 3 fishery (s9 of the Act). The proposals will provide for likely additional catch resulting from greater abundance in KIN 3, and additional targeted fishing effort is not expected. As kingfish is not targeted, no additional impacts on bycatch species, protected species and the benthic environment are likely. The proposals are not considered likely to pose a risk to the sustainability of the stock adequately address the requirements of s11(2)(a) of the Act.

### **5.2 INPUT AND PARTICIPATION OF TANGATA WHENUA**

767. The proposal to consult on a sustainability review covering a range of South Island stocks was presented to the Iwi Fisheries Forum relating to South Island iwi, the Te Waka a Māui me Ōna Toka Iwi Forum. This forum represents the iwi of the South Island, each holding mana moana and significant interests (both commercial and non-commercial) in South Island fisheries. The forum supported a review of KIN 3 and the potential for an increased TAC.

#### **Kaitiakitanga**

768. Under Section 12(1)(b) the Minister must also have particular regard to kaitiakitanga before setting or varying a TAC. Under the Act, kaitiakitanga is the exercise of guardianship, and in relation to any fisheries resources, includes the ethic of stewardship based on the nature of the resources, as exercised by the appropriate tangata whenua in accordance with tikanga Māori.

769. Relevant Iwi or Forum Fish Plans provide a view of the objectives and outcomes iwi seek from the management of the fishery and can provide an indication of how iwi exercise kaitiakitanga over fisheries resources. Iwi views from Forum meetings and submissions received from iwi can also provide an indication.

770. As stated above, kingfish (haku) is not identified as a taonga species in the Te Waipounamu Iwi Fisheries Plan. This plan contains objectives to support and provide for the interests of South Island iwi. That Forum Fisheries Plan contains three objectives which are relevant to the management options proposed for KIN 3:

- a) Management objective 1: to create thriving customary non-commercial fisheries that support the cultural wellbeing of South Island iwi and our whānau;
- b) Management objective 3: to develop environmentally responsible, productive, sustainable and culturally appropriate commercial fisheries that create long-term commercial benefits and economic development opportunities for South Island iwi; and

- c) Management objective 5: to restore, maintain and enhance the mauri and wairua of fisheries throughout the South Island.

771. Fisheries New Zealand considers that the management options presented in this advice paper will contribute towards the achievement of these three management objectives in ensuring that appropriate allowances are made for customary non-commercial fishing, the fishery remains sustainable, and that environmental impacts are minimised.

## 6. Further Information

Should you require further information, please see:

*Fisheries Act (1996)*

<http://www.legislation.govt.nz/act/public/1996/0088/latest/DLM394192.html>

*Fisheries New Zealand Plenary document*

Fisheries New Zealand (2018). Fisheries Assessment Plenary, May 2018: stock assessments and stock status. Compiled by the Fisheries Science Group, Fisheries New Zealand, Wellington, New Zealand.

*Fisheries New Zealand recreational fisheries species page*

<https://fs.fish.govt.nz/Page.aspx?pk=8&tk=31&stock=KIN3>