

PROPOSAL TO LIST PRAWN KILLER (PRK) ON THE SIXTH SCHEDULE OF THE FISHERIES ACT 1996- FINAL ADVICE

Executive Summary

- 1 This paper provides final advice for your decision regarding whether or not to list prawn killer *Ibacus alticrenatus* on the Sixth Schedule of the Fisheries Act 1996 (the Act).
- 2 An Initial Position Paper (IPP) released 12 March 2008 proposed two options. Option 1 was to maintain the status quo, where commercial fishers are required to land and report all prawn killer caught. Option 2 proposed to list prawn killer on the Sixth Schedule enabling commercial fishers to return prawn killer to the water following capture if they are likely to survive and are reported. The addition of any stock to the Sixth Schedule is permitted by Order in Council made upon your recommendation under section 72 (7) of the Act.
- 3 Industry has requested prawn killer be included on the Sixth Schedule to provide additional operational flexibility so that commercial fishers can choose whether or not to land prawn killer and balance catches with annual catch entitlement (ACE).
- 4 Prawn killer was introduced into the quota management system (QMS) in October 2007 and limited information is available regarding prawn killer stocks or their survivability when returned to the sea. Currently there is a limited market for prawn killer and catch reports suggest that past and recent catches were taken mostly as bycatch of targeted scampi trawling.
- 5 In the IPP, MFish requested more information to assess whether prawn killer should be added to the Sixth Schedule and invited stakeholders to provide information on the survivability of prawn killer and the likely benefits the proposed increase in operational flexibility may provide to industry.
- 6 No relevant research has been conducted on *I. alticrenatus* in New Zealand. Information provided by stakeholders relates to work in Australia on related *Ibacus* species which are found at shallower depths than New Zealand prawn killer. This information suggests reasonable survival of prawn killer might be expected assuming that the animals are in good condition following capture (no damage to the carapace), are held in water prior to release, are released relatively quickly, and can return to the seabed avoiding predation and excess stress in the water column.
- 7 Given the lack of information available on *I. alticrenatus* survivability, MFish recommends Option 1, to maintain the status quo at this time, but considers it may be appropriate to revisit this proposal in the future once further information relating to prawn killer *I. alticrenatus* has become available.

- 8 No further information was provided through the IPP process on the costs to industry of continuing the status quo except for explanation that costs are incurred through the requirements to transport, land and dispose of unwanted fish until a market is developed.

The Issue

- 9 Prawn killer *I. alticrenatus* is a relatively small lobster, currently caught as bycatch in trawl fisheries in New Zealand.
- 10 Prawn killer entered the QMS on 1 October 2007, with catch limits set for all stocks to constrain use to previously recorded levels of catch. One rationale for introducing prawn killer into the QMS was the improved information that could be obtained through the requirement for commercial fishers to land and report catch. This is particularly important in the case of prawn killer as there is currently no information on the abundance, yield, or stock status of any prawn killer stock.
- 11 Section 72 of the Act prohibits QMS species being returned to the water following capture unless the stock is listed in the Sixth Schedule and the commercial fisher complies with the requirements set out in that Schedule.
- 12 The issue of whether or not prawn killer may be suitable for inclusion on the Sixth Schedule of the Act was raised during consultation leading to the decision to introduce prawn killer stocks into the QMS. The possibility of considering the listing of prawn killer stocks on the Sixth Schedule was acknowledged by MFish at that time as an issue for the future.
- 13 Industry has recently raised the issue again and requests that prawn killer be added to the stocks listed on the Sixth Schedule to enable commercial fishers to choose whether to land prawn killer, which they advise is currently of limited commercial value, or to return it to the water if it is likely to survive.
- 14 The proposal for a regulatory change to add prawn killer to the Sixth Schedule of the Act arises from an economic concern, rather than a sustainability concern. Industry made the Sixth Schedule request in respect to prawn killer caught incidentally in scampi trawls. Industry believes that prawn killer would have a high likelihood of survival if returned to the sea. The IPP requested more information in order to consider this proposal.

Summary of Options

Initial Proposal

- 15 The IPP proposed the following options:
- a) *Option one - status quo* (no action): Commercial fishers are not permitted to return prawn killer to the water. Fishers must land and report all prawn killer taken, and balance the catch with ACE or pay the deemed value. The annual deemed value is currently set at \$0.20 per kilogram;

- b) *Option two*: List prawn killer on the Sixth Schedule of the Act to enable commercial fishers to legally return prawn killer to the water if they are likely to survive and are reported.

Final Proposal

16 The options from the IPP remain unchanged and MFish recommends that you either:

- a) **Agree** to retain the status quo- prawn killer is not included in the Sixth Schedule of the Act.

(MFish preferred option)

OR

- b) **Agree** to add prawn killer to the Sixth Schedule subject to the conditions that any prawn killer must be likely to survive after release and that return to the water take place as soon as possible.

Consultation

17 MFish consulted on the proposal to list prawn killer on the Sixth Schedule of the Act.

Submissions Received

18 Submissions regarding this proposal were received from:

- New Zealand Seafood Industry Council (SeaFIC);
- Sanford Limited (Sanford);
- Scampi Fishery Development Company Limited (SFDCL).

19 A summary of submissions and copies of the complete submissions are included in Volume 2 and Volume 3 of the FAP.

MFish Discussion

20 Sanford, SFDCL and SeaFIC support Option 2, to add prawn killer to the Sixth Schedule of the Act.

21 Information was requested by MFish in the IPP regarding the survivability of prawn killer, the likely benefits that the proposed increase in operational flexibility may provide to the industry and any other information or views in relation to either management option.

Survivability

22 SFDCL provided comment from a recent observer trip report to support assertions that prawn killer are landed on board in a healthy condition. The comment stated "On this trip the observer can confirm that PRK are brought

up alive and remain alive for sometime up to (1-2 hours) once brought up on deck”. Further to this SFDCL provided video footage from a recent fishing trip targeting scampi in the north-east of the North Island. Footage showed that prawn killer was alive and moving after it had been taken from the sea and sorted from the rest of the catch.

- 23 SFDCL asked Ian Tuck, a crustacean biologist at NIWA, to comment on the survivability of prawn killer. Ian Tuck confirmed that no relevant research has been conducted on *Ibacus* in New Zealand, but that commercial interest has led to work in Australia on related *Ibacus* and *Thenus* species. As acknowledged in Ian Tuck’s assessment, it is important to note that the species in the Australian studies are typically found in depths between 80 -150m whereas prawn killer *Ibacus alticrenatus* is found in depths up to 450 m in New Zealand.
- 24 In review of mark recapture studies in Australia, Ian Tuck concluded that “Overall, it would appear that reasonable survival of returned animals might be expected assuming that the animals are in good condition following capture (no damage to the carapace), are held in water prior to release, are released relatively quickly, and can be returned to the seabed avoiding predation and excess stress in the water column”.
- 25 A range of factors were identified by Ian Tuck as expected to reduce survival. These included:
- Any punctures in the carapace;
 - Any crush damage to the carapace;
 - Delay in returning animal to seawater;
 - Delay in returning animal to sea;
 - Very long trawl tows;
 - Light damage to eyes;
 - Predation in the water column.
- 26 SFDCL stated that fishers on scampi vessels are very experienced, have the ability to identify prawn killer likely to survive on release, and would retain all other catches unlikely to survive as required. SFDCL proposed that a “Code of Practice” could be prepared with assistance from Ian Tuck for their fishers. Sanford acknowledged support for this “Code of Practice”.
- 27 SeaFIC expressed concern regarding the lack of information provided by MFish in the IPP.
- 28 A project (ENV2007/02) is currently being undertaken for MFish on bycatch and discards in scampi trawl fisheries. This project is an assessment of observer data up to the 2005/06 fishing year. This analysis is due to be completed June 2008.

- 29 Further proposals could be made by MFish for additional research and specific observations of prawn killer survivability, but these would be subject to the research and prioritisation process.
- 30 SeaFIC suggested that analysis in the IPP should have drawn on comparisons with other species listed on the Sixth Schedule. MFish considers prawn killer taken incidentally by trawl differ markedly from other species currently listed on the Sixth Schedule in terms of the biology of the species, the depth and method by which it is taken and its survivability.

Costs

- 31 SeaFIC stated that the costs borne by fishers required to land prawn killer and balance catches with ACE do not create an incentive for fishers to develop a market for prawn killer and that a market can only be created with increased demand. No further detail regarding the market for prawn killer was provided.
- 32 No further information was provided through the IPP process on the costs to industry of continuing the status quo except for explanation that costs are incurred through the requirements to transport, land and dispose of unwanted fish until a market is developed.

Rationale for Management Options

- 33 Commercial fishers advise prawn killer is currently of limited commercial value, and seek the flexibility to choose whether to land prawn killer or return it to the water if it is likely to survive.

Assessment of Management Options

- 34 In your decision regarding whether or not to list prawn killer *I. alticrenatus* on the Sixth Schedule of the Act you must consider the costs that the requirement to land prawn killer pose for industry against the uncertainty that remains in regard to the survivability of prawn killer if returned to sea after capture.

Option 1 – Status Quo

Impact

- 35 Previously reported commercial landings of prawn killer were considered in setting the initial catch limits when prawn killer entered the QMS on 1 October 2007.
- 36 As prawn killer have not been managed in the QMS for a full fishing year, no assessment can be made of current catches against the total allowable commercial catch (TACC). Given the rationale in setting catch limits, landings are expected to fall within these limits as a target fishery has yet to be developed.

Costs

- 37 The incidental catch of prawn killer in scampi trawl decreases operational flexibility for industry. While a market exists for similar species in Australia, industry informs us that there is currently a limited market for prawn killer in

New Zealand. Under the current regime all prawn killer must be landed creating costs for industry in the requirements to transport, land and dispose of unwanted fish. No detailed information was provided in submissions on the cost of the status quo to industry.

- 38 The current regime may create an incentive for commercial fishers to unlawfully dump prawn killer to avoid the requirement of balancing the catch with ACE or paying the deemed value.

Benefits

- 39 The requirement to land and report all QMS stocks improves information and understanding of the fishery.
- 40 Maintaining the status quo would provide additional time to collect information in relation to uncertainties surrounding the status of prawn killer and its survivability, to assist management decisions.

Option 2– Inclusion of Prawn Killer on the Sixth Schedule

Impact

- 41 As there is limited information concerning the survivability of prawn killer, there is uncertainty in regard to the level of risk that allowing the return of prawn killer likely to survive would pose for the sustainability of prawn killer stocks.
- 42 An assessment provided from NIWA scientist Ian Tuck identified factors likely to reduce survival based on mark recapture studies of related *Ibacus* species in Australia. The species in the Australian studies are typically found in depths between 80 -150m whereas prawn killer *Ibacus alticrenatus* is found in depths up to 450 m in New Zealand. Given the range of factors identified that may reduce prawn killer survival and that no relevant research has been undertaken on *Ibacus* in New Zealand MFish considers more information is required to assess survivability.
- 43 Option 2 would result in problematic compliance implications as, based on the information known, there are a large number of criteria that need to be fulfilled just to ensure that reasonable survival of returned animals might be expected. Some factors may be relatively straight forward to assess such as ensuring that the prawn killer have no damage to the carapace, are held in water prior to release and are released relatively quickly. Other conditions are more difficult to judge, such as ensuring that the prawn killer can return to the seabed avoiding predation and excess stress in the water column.

Costs

- 44 Option 2 may reduce the incentive for unlawful discard since Sixth Schedule inclusion would allow return to the water if prawn killer are likely to survive. However there is still potentially an incentive and opportunity for commercial fishers to discard prawn killer if they are dead or unlikely to survive, such as those that are damaged and less marketable.

- 45 Listing aquatic life caught commonly as bycatch on the Sixth Schedule may reduce the incentive for commercial fishers to reduce and avoid bycatch.

Benefits

- 46 The addition of prawn killer would offer industry more flexibility. Costs currently incurred by fishers in the requirements to transport, land and dispose of unwanted fish could be avoided.

Statutory Considerations

- 47 **Section 8:** The status quo described as Option 1 in this paper was set in October 2007 with the objective of providing for utilisation of prawn killer fisheries while ensuring sustainability. The risks to sustainability under Option 2 are uncertain given the limited amount of information available on the stock status and survivability of prawn killer.
- 48 **Section 10:** You are are required to take account of the information principles of the Act which direct that decisions are based on best available information, that any uncertainty in the information be considered and that caution is taken when information is uncertain or unreliable.
- 49 There is little information available to support whether change from the status quo is required to achieve the purpose of the Act. There is also limited information on prawn killer *Ibacus alticrenatus* and its survivability, as discussed.
- 50 A full assessment of the statutory considerations is provided in Appendix One.

Appendix 1

Statutory Considerations

- 51 **Section 5 (a):** You are required to act in a manner consistent with New Zealand's international obligations relating to fishing, including the Law of the Sea and the Fish Stocks agreement as well as regional fishery management agreements. You must also act in a manner consistent with the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992. MFish considers that issues arising under international obligations relating to fishing and the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 are adequately addressed in the proposed management options.
- 52 **Section 8:** The status quo described as Option 1 in this paper was set in October 2007 with the objective of providing for utilisation of prawn killer fisheries while ensuring sustainability. The risks to sustainability under Option 2 are uncertain given the limited amount of information available on the stock status and survivability of prawn killer.
- 53 **Section 9:** No habitats of particular significance for fisheries management were identified. It is unlikely that the management options proposed would affect relevant habitats of particular significance. Prawn killer is currently caught by trawl fishing and the methods and level of harvest will not change as a result of either option.
- 54 **Section 10:** You are required to take account of the information principles of the Act, which direct that decisions are based on best available information, that any uncertainty in the information be considered and that caution is taken when information is uncertain or unreliable.
- 55 There is little information available to support whether change from the status quo is required to achieve the purpose of the Act. There is also limited information on prawn killer *Ibacus alticrenatus* and its survivability, as discussed.
- 56 **Section 11 (1) (a) and (b):** The effects of fishing on prawn killer were considered. The status quo in which all prawn killer must be landed and balanced with ACE, was discussed and is the impetus for the request from industry to add prawn killer to the Sixth Schedule of the Act.
- 57 **Section 11 (1) (c):** The effect of natural variability of prawn killer stocks on either management option is unknown.
- 58 **Section 11 (2) (a) and (b):** There are no provisions applicable to the coastal marine area known to exist in any policy statement or plan under the Resource Management Act 1991, or any management strategy or plan under the Conservation Act 1987 that are relevant to the management options proposed.
- 59 **Section 72** prohibits QMS species being returned to the water following capture unless the stock is listed in the Sixth Schedule and the commercial fisher complies with the requirements set out in that Schedule. Section 72(7)

allows the Governor-General to from time to time, on the recommendation of the Minister, add or omit stocks to the Sixth Schedule.