

PROPOSAL TO LIST DEEPWATER CRABS ON SCHEDULE SIX OF THE FISHERIES ACT 1996 - FINAL ADVICE

Executive Summary

- 1 This paper provides final advice on your decision whether to allow commercial fishers to return deepwater crabs to sea following capture. Deepwater red crabs (CHC), giant spider crabs (GSC) and king crabs (KIC) are collectively known as deepwater crabs.
- 2 Section 72 (1) of the Fisheries Act 1996 (the Act) requires that all commercial catch of Quota Management System (QMS) fishstocks be landed and reported. Species listed on the Act's Sixth Schedule are exempt from this requirement under section 72 (2). 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 The commercial fishing industry requested the addition of deepwater crabs to the Sixth Schedule to provide vessels with additional operational flexibility and to enable quota holders to maximise the value of deepwater crabs annual catch entitlement (ACE). MFish is unable to quantify the degree to which operations and fishery values are constrained by the status quo.
- 4 An Initial Position Paper (IPP), released 29 June 2007, presented the status quo (Option 1) and two options for adding deepwater crabs to the Sixth Schedule. The options proposed in the IPP remain unchanged for your consideration.
- 5 Option 2 proposes to add deepwater crabs that are likely to survive to the Sixth Schedule without regard to fishing method.
- 6 Option 3 takes account of the uncertainty of information regarding crab survivability after capture in fishing gear and proposes to limit Sixth Schedule inclusion to crabs likely to survive and caught with potting gear. Option 3 continues to require fishers to land trawl-caught crabs and balance the catch with ACE or deemed values.
- 7 Information is limited on the survivability of crabs returned to the sea after capture in fishing gear. Available research suggests the survivability of crabs caught in pots may be good but survival rates for trawl-caught crabs may be significantly lower. Stakeholders were invited to provide information relevant to trawl-caught crab survivability.
- 8 MFish recommends Option 3. At this point, the evidence of survivability of pot-caught deepwater crabs is sufficient to warrant the addition of crabs caught using this method to the Sixth Schedule. This addition will further the purpose of the Act, by enabling greater utilisation, with little to no increased sustainability risk. MFish would reassess trawl-caught deepwater crabs for addition to the Sixth Schedule in the future if compelling evidence is presented to support a high likelihood of survival.

The Issue

- 9 Some participants in the commercial fishing industry consider the status quo with respect to deepwater crab QMS stocks is constraining utilisation. The current requirement to retain, land and balance all deepwater crab catch with ACE affects commercial fishers in the targeted crab potting fishery and fishers in the squid and scampi trawl fisheries who catch deepwater crabs incidentally. In both instances, operators must utilise ACE or pay deemed values for unmarketable crabs. Listing deepwater crabs on the Sixth Schedule would allow the operator to decide whether to land the crabs and balance with ACE, or return them to the sea if they are likely to survive.
- 10 Section 72 (1) of the Act prohibits dumping of commercially harvested QMS stocks of legal size or for which no legal size is set. The Sixth Schedule provides an exemption to the dumping prohibition for some stocks and allows operators to return fish to the waters from which they were taken in certain situations.
- 11 The Sixth Schedule exemption provides operators the opportunity to maximise the efficiency of their operations and the value of their catch by returning some fish to the sea. For most species listed on the Sixth Schedule, fish may be returned to the sea only if they are likely to survive.¹ Commercial fishers are required by the Fisheries (Reporting) Regulations 2001 to report fish returned to the sea in accordance with the provisions of the Sixth Schedule.
- 12 The commercial fishing industry requested the addition of deepwater crab stocks to the Sixth Schedule for two reasons:
 - a) Some deepwater crabs caught in the exploratory target potting fishery will likely be too small to market and operators would prefer to return these small crabs to the sea and maximise the value of targeted catch.
 - b) Deepwater crabs caught incidentally in trawls are generally unmarketable, and under the status quo operators must retain, land, and balance this low-value catch with ACE.
- 13 Regarding point 12 (a), existing crab markets generally have a minimum marketable size, and deepwater crabs will likely be held to a similar standard. Adding deepwater crabs to the Sixth Schedule would permit operators to return unmarketable crabs, thereby maximising the economic value of landed catch. Undersize crabs take up valuable hold space and limit the number of marketable crabs that can be landed.
- 14 Regarding point 12 (b), trawl vessels are not equipped to appropriately store, handle or process the crabs in order to attract a high market price for those crabs that are in good condition.
- 15 The deepwater crab fisheries entered the QMS on 1 April 2004. Deepwater crab target fisheries are not yet developed but exploratory fishing is currently underway to determine the feasibility of a target fishery. The IPP submission by Crabco Limited, a joint venture company undertaking exploratory crab fishing, indicates that targeted

¹ Of the 20 stocks listed on the Sixth Schedule, all but three (dredge oysters, spiny dogfish and scallops) may only be returned to the sea if likely to survive.

crab catches are currently increasing and the company expects to catch the entire total allowable commercial catch (TACC) in some quota management areas by the end of the 2007-08 fishing year.

- 16 GSC is caught incidentally in the squid and scampi trawl fisheries in areas GSC5 and GSC6A. CHC and KIC are minor bycatch species in the ORH2A, ORH2B and ORH3B trawl fisheries.
- 17 Based on reported catches from previous years, the TACC has not yet been fully harvested for any of the deepwater crab stocks. In the 2005-06 fishing year, commercial catch of GSC was approximately 74 tonnes for all areas, which is just over 17% of the total TACC. Reported catch of CHC has been less than 1% of the TACC, and reported harvest of KIC has been around 10% of the TACC since 2004. It is possible that landing information is incomplete if deepwater crabs are reported under different species codes or discarded without being reported.
- 18 Information on deepwater crab stocks is limited and there are currently no estimates of biomass for any of the deepwater crab species. It is not known whether these stocks are at, above, or below a level that can produce maximum sustainable yield (MSY).
- 19 Information on crab stocks found in waters around other countries suggests that caution is warranted for deepwater crab fishery development and management as CHC and KIC are thought to have, in general, late onset of maturity and low productivity.² MFish has expressed concern about deepwater crab fishery development in New Zealand since populations similar to CHC and KIC elsewhere were targeted for developing fisheries, fished down in the early 1980s, and currently exhibit no signs of recovery.³
- 20 Maintenance of the status quo provides little to no risk to stock sustainability as the TACCs for deepwater crabs were set at a level to ensure sustainability of the stocks. The cost of maintaining the status quo is borne by fishers who must utilise ACE or pay deemed values for unmarketable crabs.
- 21 The National Fisheries Outcome is “*the value New Zealanders obtain through the sustainable use of fisheries resources and protection of the aquatic environment is maximised*”. Adding deepwater stocks to the Sixth Schedule would provide fishers catching deepwater crabs with increased flexibility regarding operations and could increase the value of their fishing efforts if unmarketable crabs could be returned to sea. The economic benefits of adding deepwater crabs to the Sixth Schedule may have a significant positive effect on profitability for the developing target crab fishery if a large number of small or otherwise unmarketable crabs are harvested.
- 22 You should approve the addition of deepwater crabs to the Sixth Schedule if you determine the increased value from more efficient utilisation is warranted after considering the uncertainties regarding deepwater crab stocks and the survivability of crabs caught in fishing gear.

² Final Advice Paper, Setting of Sustainability and Other Management Controls for Stocks to be Introduced into the QMS on 1 April 2004, dated 18 November 2003, para. 39, pp. 60-61 for KIC and para. 41, p. 81 for CHC.

³ Final Advice Paper, Setting of Sustainability and Other Management Controls for Stocks to be Introduced into the QMS on 1 April 2004, dated 18 November 2003, para. 40, p. 61 for KIC and para. 42, p. 81 for CHC.

Summary of Options

Initial Proposals

23 The IPP proposed the following options:

- a) *Option one*: Retain the status quo – deepwater crabs are not included on the Sixth Schedule of the Act.
- b) *Option two*: Add deepwater crabs caught by any fishing method to the Sixth Schedule. Option 2 proposed to amend the Sixth Schedule of the Act to enable fishers to legally return deepwater crabs to the sea if the crabs are likely to survive after release.
- c) *Option three* – MFish preferred option: Add deepwater crabs caught with potting gear to the Sixth Schedule. Option 3 proposed to amend the Sixth Schedule of the Act to enable fishers to legally return deepwater crabs to the sea if the crabs were caught using potting gear and were likely to survive after release.

Final Proposal

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

AGREE to:

- a) Retain the status quo – deepwater crabs are not included on the Sixth Schedule.

OR:

- b) Add deepwater crabs caught by any fishing method to the Sixth Schedule subject to the condition that any crab must be likely to survive after release.

OR:

- c) Add deepwater crabs caught with potting gear to the Sixth Schedule subject to the condition that any crab must be likely to survive after release.

(MFish preferred option)

Consultation

25 MFish consulted on the proposals to list deepwater crabs on the Act's Sixth Schedule. The consultation was carried out with the persons and organisations considered by you to be representative of those classes of persons having an interest in the stock or the effects of fishing on the aquatic environment in the area concerned including Maori, recreational, commercial and environmental interests.

Submissions Received

26 Submissions regarding this proposal were received from:

- Crabco Limited, a joint venture between Aotearoa Fisheries Limited, New Zealand Longline, Te Ohu Kaimoana Trustee Limited and Live Fish NZ (Crabco)

- New Zealand Recreational Fishing Council (NZRFC)
 - Sanford Limited (Sanford)
 - Seafood Industry Council (SeaFIC)
 - Te Ohu Kaimoana Trustee Limited (TOKM)
- 27 A summary of submissions and copies of the complete submissions are included in Volume 2.
- 28 NZRFC supports the status quo (Option 1) given the limited amount of information regarding the survivability of deepwater crabs that are returned to sea. Sanford supports Option 2, which would add deepwater crabs likely to survive to the Sixth Schedule of the Act for all fishing methods. Sanford deems that a large percentage of trawl-caught crabs are currently landed alive and seem likely to survive if released immediately and inclusion of deepwater crab stocks on the Sixth Schedule would eliminate the unnecessary landing of these crabs where no current market exists.
- 29 Crabco, SeaFIC and TOKM support Option 3, which would add deepwater crabs to the Sixth Schedule but restrict the allowable returns to those crabs caught with potting gear and likely to survive. The submissions noted that information suggests the survivability of pot-caught crabs is likely quite good but there is a great deal of uncertainty regarding the survivability of trawl-caught crabs.
- 30 SeaFIC and TOKM recommended that MFish consider listing trawl-caught crabs on the Sixth Schedule if evidence of a high likelihood of survival is presented.

Rationale for Management Options

- 31 The proposal for a regulatory change to add deepwater crabs to the Sixth Schedule of the Act arises from an economic, rather than sustainability, concern. Sanford made the Sixth Schedule request in respect to its incidental catch of deepwater crabs. Sanford's request indicated a high likelihood of survival for trawl-caught crabs⁴, so the addition of deepwater crabs caught in all fishing gear and likely to survive was included in the IPP in an effort to gather information on trawl-caught crab survivability.
- 32 It is generally thought that deepwater crabs are hardy and the survival rate of released crabs caught in potting gear is fairly high, but no information has been collected for the deepwater species under consideration. A research study in South Africa found that the survival rate of crabs caught in pots varied from 78% to 89% if there was limited handling before return to sea. Expected survival rates declined to a range of 38% to 58% with rougher handling or if the crabs were injured.⁵

⁴ The Sanford Limited submission to the Review of Deemed Value Rates for Deepwater Crabs IPP, dated 6 March 2007, at paragraphs 10-13.

⁵ Purves, M.G., Agnew, D.J., Daw, T., Yau, C., Pilling, G. 2003. Distribution, demography, and discard mortality of crabs caught in an experimental pot fishery for toothfish (*Dissostichus eleginoides*) in the South Atlantic. Fishery Bulletin, 10(4): 874-888.

- 33 Research study results suggest trawl-caught crabs may have a lower survival rate than crabs caught with potting gear. A study to assess the short-term mortality of crab bycatch in the *Nephrops* (Norway lobster or scampi) fishery in Scotland found that on-deck survival rates ranged from 75% to 98%. However, 57% of the crab bycatch was considered damaged and these injured crabs had a significantly lower longer-term survival in further experiments, suggesting that overall post-trawling survival may range from 51% to 84%.⁶ In Alaska, trawl-caught crabs are assumed to have just a 20% survival rate.⁷
- 34 The rates of crab mortality and injury likely vary between the squid and scampi target fisheries. Scampi is a high-quality product so trawl tows and onboard handling are carried out to ensure that product standards are maintained. Like scampi, deepwater crabs have hard shells and it is possible that incidentally-caught crabs could have a good survival rate in that fishery, depending on how the crabs are handled. Crab mortality and injury rates may be higher in the squid fishery if trawl tow times or speeds are greater.
- 35 Based on this information, MFish included an option to limit the Sixth Schedule addition to deepwater crabs caught with potting gear and likely to survive. This option was considered more cautious in terms of sustainability given the evidence available on the survivability of trawl-caught crabs.

Assessment of Management Options

Option 1 – Status quo – deepwater crabs are not included on the Sixth Schedule

Impact

- 36 The current requirements to retain deepwater crabs and balance the catch with ACE will negatively impact on efficient utilisation by deepwater crab target and bycatch fishers.

Costs

- 37 MFish is unable to determine the degree to which efficient utilisation is restricted since neither export prices nor ACE trading information is available for deepwater crabs.
- 38 Maintenance of the status quo may be inconsistent with the MFish fisheries outcome to realise the best value from sustainable and efficient use of fisheries. The current requirement to land and report unmarketable crab could have a significant negative impact on profitability for the developing target deepwater crab fishery.
- 39 MFish considers the status quo does provide an incentive for commercial fishers to dump unmarketable deepwater crabs since they must utilise hold space to store and

⁶ Bergmann, M., and Moore, P.G. 2001. Survival of decapod crustaceans discarded in the *Nephrops* fishery of the Clyde Sea area, Scotland. ICES Journal of Marine Science, 58(1): 163-171.

⁷ North Pacific Fishery Management Council, 2005. Salmon and crab bycatch measures for GOA groundfish fisheries. Anchorage, p 3.

land the crabs. Operators must also balance the catch with ACE or pay deemed values.

Benefits

- 40 The status quo provides little to no risk for the sustainability of deepwater crab stocks since the TACCs were set at levels considered sustainable. In addition, deepwater crabs TACCs have not been fully harvested in any year since the stocks were introduced to the QMS in 2004. Stock sustainability issues should be examined in more depth if, as Crabco indicated in its submission, the harvest rates in the target fishery increase significantly.
- 41 MFish notes current annual deemed value rates were recently increased to relatively high levels and are set at a level designed to provide fishers with an incentive to report and balance catch with ACE. However, some fishers not holding ACE may choose to avoid payment of deemed value invoices by dumping deepwater crabs caught in the squid and scampi fisheries. Under the status quo, dumping of deepwater crabs is an offence and, where detected, can lead to prosecution.
- 42 Differential (ramped) deemed value rates under the status quo are likely to have the greatest impact on those operators who do not hold ACE and choose to target deepwater crabs. Some of these operators may dump catch in an effort to avoid higher deemed value rates.
- 43 From a management perspective, maintaining the status quo is reasonable given MFish's concern over the survivability of deepwater crabs caught in the squid and scampi trawl fisheries, lack of a developed deepwater crab target fishery, and uncertainty regarding sustainability of the stocks.
- 44 If the status quo is maintained, MFish could work with industry to gather additional information regarding crab survivability following capture. MFish could also closely monitor the developing crab fishery in an effort to determine the degree to which it is constrained by the requirement to land all deepwater crabs and balance with ACE.

Option 2 – Add deepwater crabs caught by all fishing methods to the Sixth Schedule

Impact

- 45 Option 2 provides all fishers with the ability to return deepwater crabs likely to survive to the sea regardless of the fishing method. This will provide some economic relief for all affected fishers since they will not have to source ACE or pay deemed values for unmarketable crabs.

Costs

- 46 Option 2 results in an unknown level of risk to the sustainability of deepwater crab stocks but the risk may be low if catch levels remain below or at the TACC for all stocks. Stock sustainability issues should be examined in more depth if, as Crabco indicated in its submission, the harvest rates in the target fishery increase significantly.

- 47 Option 2 assumes fishers can identify deepwater crabs that are likely to survive upon release and will retain all other catch as required. MFish has no evidence to support the assumption that operators can effectively judge a crab's likelihood of survival. This introduces a compliance difficulty since MFish currently has no information to assess whether a damaged crab is likely to survive after return to sea. The likely to survive rule is difficult to enforce and it is expected operators would choose to discard crabs if there is an economic incentive to do so, regardless of the crab's condition.
- 48 Sanford submitted that its fishers are very experienced and have the ability to identify crabs that are likely to survive upon release. In addition, Sanford suggested the development of robust assessment criteria to guide fishers in determining survivability before crabs are returned to sea. Sanford suggests this initiative could be led by the commercial stakeholder organisation, Deepwater Group Limited, and assisted by MFish scientific observers. MFish would work with stakeholders to develop appropriate assessment criteria for determining crab survivability if you select Option 2.

Benefits

- 49 For the exploratory target fishery using potting gear, fishers would prefer to return undersize or otherwise unmarketable crabs to the sea since they have a low market value. MFish is unable to estimate the additional gain in value for the exploratory target fishers if they are allowed to return unmarketable crabs to sea since the market is currently undeveloped and export prices are not available. However, the ability to return unmarketable crab to the sea could significantly improve profitability for the developing target deepwater crab fishery.
- 50 For the squid and scampi trawl fisheries in which deepwater crabs are caught incidentally, operators propose to return live crabs to the sea since the vessels are not equipped to adequately store the crabs for processing into a high-value product. Storage and factory constraints generally restrict processing to crab meal or uncooked and frozen crabs, both of which are low-value products. The addition of deepwater crab stocks to the Sixth Schedule would provide these operators with flexibility to utilise their processing facilities and ACE for maximum economic benefit. No information is available to determine the approximate cost savings to operators if deepwater crabs caught incidentally on squid and scampi vessels were returned to the sea instead of retained.
- 51 Option 2 may reduce the incentive for squid and scampi harvesters to unlawfully dump deepwater crabs compared to the status quo and Option 3 since Sixth Schedule inclusion would permit the return of crabs to the sea if they are likely to survive. However, there will still be an incentive for operators in the squid and scampi fisheries to dump crabs illegally if, as available research suggests, a significant portion of the crabs are dead or unlikely to survive.

Option 3 – Add deepwater crabs caught with potting gear to the Sixth Schedule

Impact

- 52 Option 3 restricts the ability to lawfully return deepwater crabs likely to survive to fishers using potting gear, which provides economic relief only to target crab fishers.

Fishers catching deepwater crabs incidentally in trawl fisheries will continue to be required to source ACE for unmarketable crabs.

Costs

- 53 MFish considers Option 3 provides an incentive similar to the status quo for commercial fishers to dump deepwater crabs caught in the squid and scampi fisheries, since deepwater crabs caught incidentally have a low market value and operators must utilise hold space to store and land the crabs in both options. They must also balance the deepwater crab catch with ACE or pay deemed values. Under Option 3, dumping of trawl-caught deepwater crabs is an offence and, where detected, can lead to prosecution.
- 54 Option 3 assumes (like Option 2) that fishers can identify pot-caught deepwater crabs that are likely to survive after release, which creates a compliance difficulty. Although international studies have confirmed relatively high survival rates for crabs caught with potting gear, MFish has no information on New Zealand deepwater crabs to assess whether a damaged crab is likely to survive after return to sea. MFish would work with stakeholders to develop appropriate assessment criteria for crab survivability if you select Option 3.
- 55 Regardless of survivability, there would be no sustainability risk at the current level of targeted deepwater crab fishing. Stock sustainability issues would become more critical should the target fishery develop further and exploitation rates increase significantly.

Benefits

- 56 The addition of deepwater crab stocks harvested with potting gear to the Sixth Schedule would enable operators targeting deepwater crabs to maximise the value of their catch. MFish is unable to estimate the gain in value for the exploratory target fishery operators if Option 3 is implemented owing to a lack of available market information, such as export prices. However, the ability to return unmarketable crab to sea could significantly improve profitability for the developing target deepwater crab fishery.
- 57 Option 3 may reduce sustainability risks when compared to Option 2 since it restricts the Sixth Schedule addition to deepwater crabs caught with potting gear, a method for which the likelihood of crab survival may be good (as discussed in the Rationale For Management Options section). However, there is still uncertainty regarding crab survival so the sustainability risk increases marginally compared to the status quo.
- 58 Option 3 recognises the uncertainty of trawl-caught crab survivability and the potential risk to sustainability by excluding this deepwater crab capture method from inclusion on the Sixth Schedule.

MFish recommendation

- 59 MFish recommends Option 3.
- 60 At this point, the evidence of survivability of pot-caught crabs is sufficient to warrant the addition of crabs caught in this method to the Sixth Schedule. This addition will

further the purpose of the Act, by enabling greater utilisation, with little to no increased sustainability risk.

- 61 MFish would reassess trawl-caught crabs for addition to the Sixth Schedule in the future if compelling evidence is presented to support a high likelihood of survival. The NZRFC, SeaFIC and TOKM submissions suggested more research be gathered regarding the survivability of trawl-caught crabs. In addition, SeaFIC encouraged relevant stakeholder organisations to engage with MFish should they support listing of trawl-caught crabs on the Sixth Schedule.
- 62 Crabs should only be returned if they are likely to survive. If you select Option 3, MFish would work with the crab potting industry to develop protocols for handling and guidelines to assess condition and survivability. All crabs whose condition is such that survival is unlikely, or are handled in such a way that diminishes survivability must be retained, landed, and balanced with ACE or deemed values.

Statutory Considerations

- 63 **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.
- 64 **Section 8:** MFish considers Options 1 and 3 presented in this paper provide for utilisation in the deepwater crab fisheries while ensuring stock sustainability, which would further the purpose of the Act. The risks to sustainability under Option 2 are uncertain given the limited amount of available information on the survivability of trawl-caught crabs after return to sea.
- 65 Members of industry requested the addition of deepwater crabs to the Sixth Schedule to provide operational flexibility and the opportunity to maximise the value of targeted deepwater crab catch. In the case of pot-caught crabs, this management change would likely provide industry with economic benefits without raising sustainability concerns, provided commercial catch does not increase substantially. The risks to sustainability from including trawl-caught crabs in the Sixth Schedule addition are highly uncertain.
- 66 You should consider whether enabling additional operational flexibility and ACE value maximisation is consistent with the purpose of the Act given the lack of knowledge about the survivability of deepwater crabs and the absence of a developed target fishery.
- 67 **Section 9 (a) and (b):** It is unlikely any of the management options proposed would materially affect associated or dependent species or the biological diversity of the aquatic environment.

- 68 **Section 9 (c):** No habits of particular significance for fisheries management were identified. It is unlikely that the management options proposed would affect relevant habitats of particular significance. Deepwater crabs are currently caught with potting and bottom trawl gear and the methods and level of total commercial harvest would not change with this action.
- 69 **Section 10:** The information principles of the Act require that decisions be based on the best available information, taking into account any uncertainty in the available information and applying caution when information is uncertain, unreliable, or inadequate. The management options proposed have been developed based on the best available scientific information for deepwater crab stocks.
- 70 The Act also requires that the absence or uncertainty of information should not be used as a reason to postpone, or fail to take, any measure to achieve the purpose of the Act. Uncertainty regarding survivability of deepwater crabs returned to sea following capture in fishing gear was considered and reflected in the management options presented.
- 71 **Section 11 (1) (a) and (b):** The effects of fishing on the deepwater crab stocks were considered and discussed. Reported commercial catch has been well below the TACC for all stocks. The status quo, or Option 1, in which all deepwater crabs must be landed and balanced with ACE, was discussed and is the impetus for the request from industry to add deepwater crabs to the Sixth Schedule of the Act.
- 72 **Section 11 (1) (c):** The natural variability of deepwater crab stocks is largely due to the impact of changes in environmental conditions and does not directly affect this proposal.
- 73 **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 of 1991, or any management strategy or plan under the Conservation Act 1987 that are relevant to the management options proposed.
- 74 **Section 11 (2) (c):** The options are discussed in a manner consistent with the Hauraki Gulf Marine Park Act 2000.
- 75 **Section 11 (2A) (a):** All relevant fisheries services were discussed, including the effects of the management options on compliance efforts and potential need for additional management and research services should the harvest of deepwater crabs in the target fishery increase significantly. No conservation services are required for this action.
- 76 **Section 11 (2A) (c):** No decision has been made not to require a service in this fishery.

