

# SCALLOPS – PROPOSAL TO AMEND THE SCALLOP FISHING SEASON FOR AMATEUR FISHERS

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## Executive Summary

- 1 As part of the recreational regulation review process, the New Zealand Recreational Fishing Council (NZRFC) requested the Ministry of Fisheries (MFish) to consider shifting the amateur scallop closed season from 15 February - 14 July (inclusive) to 1 April – 31 August (inclusive). MFish included a proposal to change the amateur scallop season nationwide in the Initial Position Paper (IPP) that was released for consultation with stakeholders in July.
- 2 The proposed change was supported by most of the non-commercial submissions from the north-east coast – east Northland, the Hauraki Gulf, Coromandel, and the Bay of Plenty. The proposal was opposed by the Coromandel commercial scallop fishers mainly due to concerns that the proposal may have on the sustainability of the scallop fishery. However, MFish considers that the season change will not present a significant sustainability risk to the fishery because the existing 100mm minimum legal size limit allows scallops to spawn at least once before reaching the legal size limit. In addition, these fisheries are currently in a generally healthy state and are being managed on a conservative basis by both commercial and non-commercial stakeholder groups. Accordingly, MFish recommends that the amateur scallop season be shifted as proposed for the north-east coast.
- 3 For the north-west coast (Kaipara and Manukau Harbours, and the other smaller west coast harbours north of Kawhia), MFish considers there could be merit in shortening the open season. However, because this option could potentially be contentious and because there were few submissions from stakeholders from this area, MFish recommends retaining the status quo for this fishery in the short term. MFish recommends that you direct MFish to consult next year on refining the recreational scallop season for the north-west coast. This would also then allow consultation on the possibility of prohibiting dredging from early January each year to reduce the impact on juvenile scallops settling in January-February.
- 4 Virtually all of the submissions from the Nelson-Marlborough area were opposed to the proposed change, and requested that the status quo should remain for the amateur scallop season for three main reasons. First, most stakeholders considered that scallops were in reasonably good condition early in the season in July and August. Second, the local commercial scallop fishery generally does not start fishing until September for various reasons. Recreational fishers want to maintain the current season opening date in order to gain access to the scallop fishery before the commercial fishers. Third, spat settlement occurs mainly in the late January to April period, and a prolonged open season with increased scallop dredging would be detrimental to the juvenile scallops. Largely on the basis of rationale provided in the submissions received, MFish recommends that the amateur scallop season should remain the same for the Nelson-Marlborough area.

- 5 The amateur scallop season for the Southland Fishery Management Area (FMA) was adjusted in 1994, as scallops in the area spawn in July and August. In the IPP, no changes were proposed to any scallop seasons in regions that were different to the national scallop season. Accordingly, the amateur scallop closed season for the Southland FMA (primarily the small scallop fisheries at Paterson Inlet (Stewart Island) and Fiordland) will remain unchanged from 16 March – 30 September.
- 6 There are also a few other small discrete (eg. Wellington Harbour) amateur scallop fisheries sprinkled around parts of the coastline. For administrative reasons due to the structure of the amateur fishing regulations and for consistency with the large Nelson-Marlborough fishery, MFish recommends that the amateur scallop closed season should remain unchanged from 15 February to 14 July in all the remaining areas around NZ.

## Summary of Proposed Options

- 7 It was proposed in the IPP to either:
  - a) Amend regulation 24 of the Fisheries (Amateur Fishing) Regulations 1986 to shift the closed season for the amateur scallop fishery from 15 February - 14 July (inclusive) to 1 April – 31 August (inclusive); or
  - b) Maintain the existing closed season for amateur scallop fisheries (15 February - 14 July (inclusive)).

## Submissions Received

- 8 MFish received 34 submissions on the scallop season proposal from:

- Stu Marsh
- Bob Rosemergy (Freediving NZ (Chairman))
- Grant Shaw
- KB Turner
- Dennis Petty (ProDive NZ)
- Bryn Jamieson
- Hilton Leith
- John Robertson
- Piako UnderWater Club
- Kaikoura Boating Club
- Hartley family
- Murray Little
- WJ Waugh (Tarakohe Sea Anglers)
- Coromandel commercial scallop fishers
- Kevyn and Corinne Moore

- Trevor Collings
- Mark Iggo
- Peter Saul
- John Duncan
- Challenger Scallop & Dredge Oyster Recreational Advisory Group
- Tasman & Sounds Fishers Association
- Pohara Boat Club
- Te Runanga o Ngati Whatua
- Ngati Whatua Fisheries Ltd
- Seafood Industry Council
- Whangamata Seafoods Ltd
- Collingwood Boat Club
- NZ Big Game Fishing Council and option4
- North Island South-West Recreational Fishing Forum
- North Island South-East Recreational Fishing Forum
- Raglan Sport Fishing Club
- Keith Ingram
- John Forest / Wanderers Surfcasting and Angling Club
- Top of the South Recreational Fishing Forum
- Bridget and Tony Orman

## Rationale for Management Options

- 9 The closed season for recreational scallop fishers is set by regulation from 15 February to 14 July each year<sup>1</sup>. This general closure is provided for in regulation 24 of the Fisheries (Amateur Fishing) Regulations 1986 (the Regulations) and means that scallops can only be taken recreational fishers during the open season between 15 July and 14 February (both days inclusive).
- 10 The NZRFC advised MFish that scallops at the start of the open season are, on average, small and in very poor condition in some areas. Further, the NZRFC advised MFish that scallops tend to be in good condition as late as Easter each year, which the NZRFC considered is likely to be due to a significant scallop spawning event that generally occurs in autumn.

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<sup>1</sup> Except for the Southland Fishery Management Area where the amateur scallop fishery is closed from 16 March to 30 September.

- 11 In order to leave the early season scallops to improve condition and potentially spawn again prior to being harvested, as well as take advantage of those scallops in good condition in late February and March, the NZRFC requested that MFish consult with stakeholders on an option to change the recreational scallop open season from 15 July – 14 February to 1 September – 31 March. This change would mark a seven week shift in the season, but would not change the actual number of days that the recreational season is open for.
- 12 The alternative management option was to maintain the status quo and not change the regulation. MFish recognised that as the recreational scallop season has been in place for over 30 years, there is an “opening season” tradition in many areas. In addition, there may be some areas where particular regional fishery characteristics would not suit a shift in the current season.

## Assessment of Management Options

### *Key issues*

- 13 The key issues to be considered for the amateur scallop season are:
  - a) whether or not the proposed change to the scallop season should be applied to any or all regions around NZ;
  - b) whether or not the proposed change would create a sustainability risk to the scallop fishery.

### *Regional variation for the scallop season*

#### *North-east coast scallop fishery (east Northland, Hauraki Gulf, Coromandel, Bay of Plenty)*

- 14 The rationale for the proposed change to the season length was largely based on observations reported to the NZRFC and MFish of scallop condition by non-commercial scallop fishers fishing on the north-east coast (east Northland, the Hauraki Gulf, and Bay of Plenty). These fishers commented that scallops are generally in poor condition with small gonads (also known as roes) in July and August, and were often in good condition in mid February when the scallop fishery is closed.
- 15 These anecdotal observations for the north-east coast are also generally supported by quantitative scientific information on scallop condition by recent research conducted in the western Hauraki Gulf. This research showed that scallop gonad condition varied between sites within the western Gulf, but that some generalisations could be made. Scallop gonads were generally in peak condition in November-December, were reasonably good from October to March, and were generally in poor condition from May to August.
- 16 The majority of submissions from non-commercial fishers based on the north-east coast favoured the proposed change to the later season for scallop fishing (1 September – 31 March). NZ Big Game Fishing Council (NZBGFC) / option4 favoured delaying the season change to 2008 to allow for more consultation with fishers. SeaFIC was supportive of aspects of the proposed change, but raised a number of concerns and considered there was insufficient information available at this

time to support the change. The submissions from the Coromandel commercial scallop fishers and Whangamata Seafoods were opposed to the proposed change.

### Impact on sustainability

- 17 The main concern raised by the commercial sector was that there was insufficient information to adequately assess how the proposed change would impact on the sustainability of the scallop fishery. MFish recognises the general difficulties that exist for obtaining better information on recreational fishing. However, MFish considers that the proposed season shift for the north-east coast scallop fisheries is likely to have only a minor impact on the sustainability of these fisheries for a number of reasons. Firstly, both the Northland and Coromandel scallop fisheries have dramatically improved in abundance from 2000 and are now in a much more healthy state. Scientific surveys (Attachment 1) show that scallop abundance in both areas over the last two years is considerably more than at any other period going back to 1990 when the surveys began.
- 18 Secondly, in both fisheries, both the commercial and non-commercial sectors have taken a conservative approach to the in-season TAC increase process. Specifically, the amount of the TAC increase has been considerably less than the Current Annual Yield (CAY) estimated for the fishery in recent years. In a Maximum Sustainable Yield (MSY) context, the management approach has been akin to managing both fisheries at a biomass level well above the level that can produce the MSY. Much of the rationale for this management approach is that stakeholders want to build a greater level of scallop biomass to form a “buffer” as a way of reducing the high natural variability of scallop populations.
- 19 Thirdly, MFish notes that the current baseline recreational allowance in both the Northland and Coromandel fisheries is 7.5 tonnes. Both allowances were at levels that would allow for an increase in the recreational catch as the stock biomass improved. Furthermore, increases in the non-commercial catch during periods of high scallop abundance (such as the current situation) can be allowed for under the current management approach by increasing the non-commercial allowances in-season on a proportional basis relative to the level of the ACE increase. For Coromandel, you agreed with MFish’s recommendation for an in-season increase to the recreational allowance to 15 tonnes. For Northland, MFish has recommended increasing the recreational allowance for the current season to 13 tonnes. At the end of the scallop “fishing year”, both allowances will revert back to 7.5 tonnes.
- 20 Finally, it is possible that in the future, both scallop populations will decline below the current high level due to natural environmental factors and the inherent high variability of scallop populations. However, MFish considers that the season shift will not have a significant impact on the overall sustainability of the scallop populations. This is because MFish considers that the 100mm minimum legal size limit<sup>2</sup> for amateur fishers for the north-east coast provides the critical sustainability measure for scallops. Some scallops reach sexual maturity at 40mm, but most individuals are sexually mature at about 60 mm. The size limit therefore ensures that most scallops have at least one spawning season before reaching the size limit.

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<sup>2</sup> The minimum legal size limit for commercial fishers is 90mm for the Coromandel fishery and 100mm for the Northland fishery.

## Other commercial sector concerns

- 21 Other concerns raised by the industry were that the proposed season change should have been considered as part of the Coromandel scallops Fisheries Plan, the proposal should have been put through the Stock Assessment Working Group process, and that the season should also be changed for the commercial sector.
- 22 MFish does not agree that the proposed season change had to be included in the Coromandel Fisheries Plan because the proposal was to make a nationwide change to the amateur scallop season. In addition, the Coromandel scallops Fisheries Plan is still in a draft stage and has not yet been released for statutory consultation with stakeholders as required by section 12 of the Fisheries Act. Therefore, the Plan has not been reviewed or approved by you under section 11(2A) of the Act.
- 23 MFish also considers that the industry's proposal is inappropriate because it is essentially suggesting that fisheries management in a particular fishery should be put on hold while a Fisheries Plan is developed. An extension of this argument is that the annual in-season TAC increase process should also be delayed for the Coromandel scallop fishery while the Fisheries Plan is developed; it is unlikely this sort of proposal would be acceptable to the commercial scallop fishers.
- 24 The Fisheries Act 1996 does not contain any reference or mention of the Stock Assessment Working Group (SAWG) process. There is therefore no statutory requirement that proposed regulation changes must first be considered by the SAWG. MFish mainly operates the Working Group process as a prelude to considering TAC changes as part of the Quota Management System. The Working Groups are primarily a scientific forum to evaluate and discuss stock assessment analyses involving detailed research from tagging programmes, Catch Per Unit Effort (CPUE), and trawl surveys. Accordingly, due to the absence of scientific information about the proposed scallop season change, MFish did not consider it necessary to consider the proposal as part of the Working Group process.
- 25 The submission from Whangamata Seafoods (scallop processor) was the only submission suggesting that the scallop season should also be changed for the commercial sector, mainly for marketing reasons. Notably, the submissions from the Coromandel commercial scallop fishers and SeaFIC did not request a season change. From discussions with Coromandel and Northland scallop fishers and quotaholders over the last two years, MFish understands that most fishers and quotaholders are generally satisfied with the current duration of the commercial season. The Coromandel fishery closes by regulation on 21 December. The Northland and Nelson fishers attempt to catch most of their quota by Christmas each year; both of these fisheries are closed by regulation on 14 February.
- 26 For various reasons, the northern commercial scallop fishers prefer to not fish after Christmas. First, many fishers prefer to go tuna fishing in the summer – autumn period. Second, the fishers recognise that if they continue scallop fishing after Christmas, then there would be a greater likelihood of resource and physical conflict on-the-water when most of the recreational diving (mainly) and dredging occurs for scallops. Finally, many fishers consider that January – February is the main period when scallop larvae (also termed “spat”) are settling from the plankton to the seafloor and metamorphosing into small (5-10mm) juvenile scallops. Many fishers consider

that the disturbance from dredging at this time could be detrimental to juvenile scallops.

*North-west coast scallop fishery (Manukau Harbour, Kaipara Harbour, and the other smaller west coast harbours from Hokianga to Kawhia)*

- 27 Most of the submissions with a north-west coast affinity (Trevor Collings, Ngati Whatua, John Forrest / Wanderers Surfcasting and Angling Club) favoured retaining the status quo. The Raglan Sport Fishing Club agreed with the proposal to shift the open season to the later opening and closing days.
- 28 Trevor Collings (an experienced Honorary Fishery Officer (HFO)) provided a detailed submission documenting his concerns mainly about the Clarks Beach scallop fishery. Clarks Beach is on the southern side of the Manukau Harbour, and has been the main “walk-out” beach for handgathering scallops at low tide. Collings makes four key points. First, scallops are in poor condition for the first month or so of the season. Second, scallops peak in condition in October – December, and then condition declines in January – February. Third, in January – February, most of the scallops taken by fishers are undersize, which creates a significant drain on MFish compliance resources. Fourth, similar patterns occur in the North Manukau and Kaipara Harbour.
- 29 The following comments are relevant for providing some background information on the north-west coast scallop fishery. Commercial scallop fishing has been banned by regulation from all of the west coast harbours since at least the 1970s, and there is no commercial scallop fishing on the open coast outside the harbours. Virtually all of the amateur scallop fishing occurs inside the west coast harbours. From the recreational survey information, it is known that the recreational scallop catch in the Manukau is twice the amount from the Kaipara, and that there is a very small scallop catch taken from the other west coast harbours. Most of the recreational catch is taken by dredging: Manukau Harbour - 72%; Kaipara Harbour - 91%.
- 30 As noted in the submission by Ngati Whatua, largely at the instigation of tangata whenua and the local community, a two-year closure by *Gazette* Notice has been placed on scallop fishing in the Kaipara Harbour due to low scallop abundance. The closure is due to expire in July 2007. However, if scallop abundance has not improved in the Kaipara, then local fishers could propose that the closure be continued for a further two years.
- 31 Prior to the implementation of the two-year closure, MFish had discussions with the local Kaipara community about the state of the scallop resource. One of the other management options that attracted a lot of support from the community was that the season should be shortened. The local Kaipara people favoured opening the season later around September, and felt that the season should finish earlier around the New Year. The rationale was that Kaipara scallops were in poor condition in July and August, and that there was excessive fishing pressure from holiday makers starting around Christmas and continuing through into January-February. This proposal did not proceed largely because the community felt that the scallop beds needed a complete closure in the short term, rather than changing the season.
- 32 MFish notes that an additional reason for not extending the season for the north-west coast is that recreational scallop fishing on the north-west coast is mainly based on dredging. Continued dredging in the remainder of February and March could be

detrimental to recently settled juvenile scallops, as noted earlier concerning commercial scallop dredging on the north-east coast.

- 33 Based on the above considerations, MFish considers that there may be merit in shortening the scallop season for the north-west coast with an opening day on 1 September and a closing day possibly before 14 February. However, MFish notes that this outcome would be somewhat different to the options proposed in the IPP. In addition, in contrast to the north-east coast and the Nelson-Marlborough fishery, MFish did not receive many submissions on the proposal. Accordingly, MFish recommends retaining the status quo for the north-west coast recreational scallop fishery. MFish recommends that you direct MFish to consult further on the timing of the amateur scallop season for the north-west coast. This would also then allow consultation on the Clarks Beach situation and the possibility of prohibiting dredging from early January each year to reduce the impact on juvenile scallops settling in January-February.

### *Nelson-Marlborough scallop fishery*

- 34 Virtually all of the submissions received from Nelson-Marlborough were opposed to the proposed change and supported retention of the existing scallop season for this area. Three main reasons were stated by stakeholders for retaining the status quo.
- Most stakeholders considered that scallops in many areas of the fishery were in reasonably good condition early in the open season in July and August.
  - The Area 7 commercial scallop fishery generally does not start fishing until September for various reasons. Recreational fishers want to maintain the current season opening date in order to gain access to the scallop fishery before the commercial fishers.
  - Spat settlement occurs mainly in the late January to April period, and a prolonged season with increased scallop dredging would be detrimental to the juvenile scallops.
- 35 As noted earlier, the rationale for the proposed change to the season length was largely based on scallop condition on the north-east coast (east Northland, the Hauraki Gulf, and Bay of Plenty). Prior to the IPP, MFish and the NZRFC had not had the opportunity to discuss the issue in detail with Nelson-Marlborough scallop fishers. MFish is not aware of any scientific or quantitative information that would refute the information provided in submissions by the Nelson-Marlborough scallop fishers. Accordingly, based mainly on the reasons provided in the large number of submissions opposing the season change, MFish recommends that the status quo should remain regarding the scallop season for the Nelson-Marlborough area.

### *Lower North Island*

- 36 Few submissions were received from the lower half of the North Island. MFish believes this is because large scallop beds are generally rare in this area. However, MFish is aware that there are small scallop beds in Wellington Harbour. Because fishers from Wellington often fish in the Tasman Bay / Marlborough Sounds area, MFish considers that the status quo for the existing scallop season should remain for the lower half of the North Island to ensure a consistent season with the top half of the South Island.



### *Southern South Island (Southland Fishery Management Area)*

- 37 There is a small recreational scallop fishery in the fiords of Fiordland and around Stewart Island, particularly in Paterson Inlet. The Patterson Inlet scallop fishery has been closed since the early 2000s due to concerns about the sustainability of the fishery.
- 38 In the 1990s, MFish reviewed the management of the Stewart Island and Fiordland recreational fisheries. As a result, it was recognised there was a seasonal difference in this fishery, with scallops spawning in July and August. Accordingly, the closed season was adjusted to 16 March – 30 September commencing from 1 October 1994<sup>3</sup>.
- 39 The Southland scallop season was not included in the scallop season review as MFish and southern stakeholders are satisfied that the southern season is appropriate for the management of the southern scallop fisheries.

### *Remainder of the South Island*

- 40 No submissions were received from fishers from other parts of the South Island. MFish is not aware of any significant scallop fisheries in other parts of the South Island. MFish recommends the retention of the status quo concerning the amateur scallop season for all other areas in the South Island. This will ensure a consistent scallop season with the large Nelson-Marlborough amateur scallop fishery.

## **Statutory Considerations**

- 41 The management options proposed relate to changing the scallop season by regulation. The options do not set or vary catch limits (s 13 and s 21) or sustainability measures (s11). In forming the management options, the following statutory considerations have been taken into account.
- a. **Section 5 (a):** A wide range of international obligations relate to fishing. MFish is unaware of any international obligation that would be affected by the management options. MFish believes the provisions of general international instruments such as the United Nations convention on the Law of the Sea (UNCLOS) and the United Nations Fish Stocks Agreement (UNFSA) have been implemented through the provisions of the Fisheries Act 1996 and given effect to under all the management options.
  - b. **Section 5 (b): Scallops** (tupa) are an important customary species, and all of the options will continue to provide for Maori customary fishing.
  - c. **Section 8:** None of the management options are contrary to the purpose of the Act, which is to provide for the utilisation of fisheries resources while ensuring sustainability. MFish does not consider that any of the options present a sustainability risk to the scallop fisheries. MFish considers that MFish's recommended options will further improve the utilisation of these fisheries. The other options will continue to provide for a reasonable level of utilisation of the scallop resource.

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<sup>3</sup> Regulation 5(1) of the Fisheries (Southland and Sub-Antarctic Areas Amateur Fishing) Regulations 1991.

- d. **Section 9:** None of the management options are likely to have any significant impact on associated and dependent species, biological diversity, and habitats of particular significance to fisheries management.
- e. **Section 11(2A)(a) and (c):** No relevant conservation services or fisheries services exist in the scallop fishery relating to the proposed season change.
- f. **Section 11(2A)(b):** No approved Fisheries Plan exists for the scallop fishery.

## Final Recommendations

42 MFish recommends that you:

### Southland Fishery Management Area

- a) **note** that the closed season for the Southland Fishery Management Area will remain unchanged from 16 March – 30 September (inclusive) for the amateur scallop fishery;

### North-east coast (North Cape – Cape Runaway)

EITHER (MFish's recommended option)

- b) **agree** to shift the closed scallop season for the north-east coast (North Cape – Cape Runaway) amateur fishery to 1 April – 31 August (inclusive);

OR

- c) **agree** to retain the existing closed scallop season for the north-east coast (North Cape – Cape Runaway) amateur fishery from 15 February - 14 July (inclusive);

### North-west coast (North Cape – Tirua Point)

EITHER (MFish's recommended option)

- d) **agree** to retain the existing closed scallop season for the north-west coast (North Cape – Tirua Point) amateur fishery from 15 February - 14 July (inclusive); and
- e) **direct** MFish to consult further in 2007 on the merit of refining the scallop closed season for the north-west coast;

OR

- f) **agree** to shift the existing closed scallop season for the north-west coast (North Cape – Tirua Point) amateur fishery to 1 April – 31 August (inclusive);

### All remaining areas of NZ

EITHER (MFish's recommended option)

g) **agree** to retain the existing closed scallop season for all remaining areas of NZ for the amateur fishery from 15 February - 14 July (inclusive);

OR

h) **agree** to shift the existing closed scallop season for all remaining areas of NZ for the amateur fishery to 1 April – 31 August (inclusive).

Attachment 1: Scallop abundance for the surveyed areas in the Northland and Coromandel scallop fisheries.

**Table 1: Millions of scallops (95 mm or greater shell length) estimated at the time of the survey in the main areas of the Northland scallop fishery since 1992. The same dredge efficiency correction (64%) has been assumed for all sizes and years. Totals include data from all surveyed beds and are not directly comparable among years. Asterisks (\*) indicate unreliable results, dashes (–) indicate no survey. Surveys in 2002 and 2003 were completed very close to the start of the season, and are positively biased compared to other years.**

| Year | Spirits | Rangaunu | Doubtless | Whangaroa | Cavalli | Bream | Pakiri | Total |
|------|---------|----------|-----------|-----------|---------|-------|--------|-------|
| 1992 | –       | 7.0      | 0.7       | –         | 0.4     | 16.8  | 4.0    | 28.9  |
| 1993 | –       | *1.5     | 0.7       | 1.7       | 0.4     | 5.5   | –      | *9.8  |
| 1994 | –       | 8.5      | 1.3       | 0.6       | –       | 4.2   | 0.2    | 14.8  |
| 1995 | –       | 9.0      | 1.0       | 2.3       | 1.2     | 3.5   | 0.1    | 18.2  |
| 1996 | 24.4    | 7.7      | 0.3       | 1.2       | 0.9     | 2.2   | –      | 37.6  |
| 1997 | 15.8    | 9.9      | 0.7       | 1.1       | 0.7     | *5.7  | 0.4    | 35.3  |
| 1998 | 4.7     | 6.0      | 0.3       | 0.5       | 0.9     | 0.2   | <0.1   | 14.0  |
| 1999 | –       | –        | –         | –         | –       | –     | –      | –     |
| 2000 | –       | –        | –         | –         | –       | –     | –      | –     |
| 2001 | 5.4     | 6.6      | 0.0       | 0.1       | –       | 1.1   | –      | 13.2  |
| 2002 | 10.5    | 9.3      | –         | 0.1       | –       | 5.4   | –      | 26.6  |
| 2003 | 8.3     | 7.5      | 0.1       | 0.4       | 0.0     | 1.6   | –      | 18.0  |
| 2004 | –       | –        | –         | –         | –       | –     | –      | –     |
| 2005 | 4.9     | 7.2      | –         | –         | –       | 46.7  | 4.9    | 66.1  |
| 2006 | 3.0     | 12.3     | –         | –         | –       | 51.0  | 5.5    | 71.8  |

NB. For 2006, other areas (Doubtless Bay, Whangaroa, Cavalli Islands) that have supported commercial scallop fishing and have been surveyed in previous years, were not surveyed in 2006 as quota owners believed scallop numbers were likely to be low in these areas.

**Table 2: Millions of scallops (95 mm or larger) estimated at the time of the survey in the main areas of the Coromandel commercial fishery since 1990. Historical average dredge efficiency has been assumed for all years, including 2001–03 when different vessels were used. Totals include data from all surveyed beds and are not directly comparable among years. Dashes (–) indicate no survey in an area or year.**

| Year | Whitianga / Mercury Is | Waihi Beach | Motiti / Papamoa | Little Barrier | Cape Colville | Waiheke Island | Total |
|------|------------------------|-------------|------------------|----------------|---------------|----------------|-------|
| 1990 | 7.4                    | –           | –                | –              | –             | 6.4            | 13.8  |
| 1991 | 11.1                   | –           | –                | –              | –             | 2.8            | 13.9  |
| 1992 | 10.7                   | –           | –                | –              | –             | 0.7            | 11.4  |
| 1993 | 6.6                    | 7.1         | –                | –              | 0.3           | 0.4            | 14.4  |
| 1994 | 4.8                    | 1.5         | –                | –              | –             | 0.0            | 6.3   |
| 1995 | 4.4                    | 0.6         | 4.5              | 2.5            | 0.1           | 0.3            | 12.5  |
| 1996 | 6.1                    | 0.2         | 2.2              | 3.3            | 0.1           | 0.3            | 12.6  |
| 1997 | 6.1                    | 0.7         | 1.9              | 4.0            | 0.3           | 5.4            | 18.4  |
| 1998 | 6.4                    | 0.1         | 1.2              | 1.0            | 0.2           | 5.3            | 14.2  |
| 1999 | 1.8                    | 0.2         | 0.9              | 0.2            | 0.0           | 0.2            | 3.3   |
| 2000 | –                      | –           | –                | –              | –             | –              | –     |
| 2001 | 1.5                    | –           | 0.7              | 1.6            | –             | 0.2            | 4.2   |
| 2002 | 2.7                    | –           | 0.7              | 0.8            | –             | 1.0            | 5.3   |
| 2003 | 4.2                    | –           | 2.1              | 1.4            | 3.5           | 1.7            | 12.9  |
| 2004 | 23.5                   | 1.0         | 2.4              | 1.2            | 0.3           | 4.7            | 33.2  |
| 2005 | 53.2                   | 3.7         | 1.8              | 2.8            | 2.5           | 2.4            | 66.6  |
| 2006 | 36.3                   | –           | 1.8              | 3.1            | 7.3           | –              | 48.6  |

