

## Section Two -

# INITIAL POSITION PAPER - PROPOSAL TO REVIEW THE TAC FOR THE COROMANDEL SCALLOP FISHERY FOR 2009-10



## Executive Summary

- 1 This paper proposes an adjustment to the Total Allowable Catch (TAC) for the Coromandel scallop fishery (SCACS) for the 2009-10 fishing year.
- 2 Scallops have a number of biological characteristics that can contribute to marked fluctuations in scallop numbers and biomass from year to year. These fluctuations are thought to be driven by environmental influences and are largely independent of fishing pressure. Accordingly, the Coromandel scallop fishery has an established baseline TAC which is set at a deliberately low level to provide for utilization and ensure sustainability even in years of low abundance.
- 3 In years when scallop abundance is thought to be relatively high, an independent scientific survey is done to assess the biomass and sustainable yield from the commercial scallop beds for the survey year. NIWA has completed the survey for 2009 and has estimated that for the commercial areas of the fishery:
  - absolute recruited biomass at the start of the commercial season (15 July) will be **595 tonnes meatweight<sup>1</sup>**;
  - the sustainable Current Annual Yield (CAY<sup>2</sup>) for 2009 -10 will be **190 tonnes**.

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<sup>1</sup> Meatweight refers to the weight of the edible part of the scallop (the adductor muscle and roe) once it has been shucked from its shell.

<sup>2</sup> 'CAY' is an estimate of sustainable catches from a fishery. It is based on the concept of harvesting the same proportion of the total scallop population every year. Because scallop numbers can change significantly from year to year, the CAY estimate may be different each year. For the Coromandel scallop fishery, biomass surveys are done every year to give us

- 4 The biomass estimate represents a decrease of 31% from the 2008 start-of-season biomass. The CAY is calculated as a fixed proportion of the biomass, and is therefore also 31% lower than in 2008 to reflect the decreased biomass. However, the 2009 estimated CAY represents a level of sustainable catch over eight times higher than the baseline TACC of 22 tonnes.
- 5 In drafting this Initial Position Paper, the Ministry of Fisheries (MFish) has sought the views of the Coromandel Scallop Fishermen's Association (CSFA), the Environment and Conservation Organisations of Aotearoa/New Zealand (ECO) and the New Zealand Recreational Fishing Council (NZRFC). MFish's initial proposal is that the Minister of Fisheries (the Minister) agrees to one of the two management options in Table 1.

**Table 1: TAC, TACC/ACE<sup>3</sup> and allowance proposals for the Coromandel scallop fishery for the 2009-10 fishing season. Note that all figures are given in meatweight tonnes.**

	<b>TAC</b>	<b>TACC/ACE</b>	<b>Recreational Allowance</b>	<b>Customary Allowance</b>	<b>Allowance for Other Sources of Fishing-related Mortality</b>
<b>Baseline</b>	48	22/22	7.5	7.5	11
<b>Option 1</b>	155	22/100	10	10	35
<b>Option 2</b>	150	22/100	7.5	7.5	35

- 6 The proposed in-season ACE adjustment represents 52.6% of the CAY estimate which MFish recognises as a cautious catch level well below the CAY estimate of sustainable yield for the season. This is consistent with the 'cautious, respectful approach' previously agreed to by parties having an interest in the fishery. In order to further support the cautious approach, should the Minister agree to the 100 tonne TACC, quota owners propose to shelve 35 tonnes of the available ACE until a mid-season review of the fishery's performance.
- 7 MFish notes that the survey estimate of biomass is in itself cautious and that:
- it represents only the commercial beds that were surveyed, and therefore the absolute biomass for all scallop beds within the Coromandel Scallop fishery is greater than the survey estimate as we know there is other scallop habitat within the area and further biomass is available to recreational and customary fishers within commercial exclusion zones. The estimate can therefore be regarded as a minimum estimate of biomass;
  - the CAY is calculated using an appropriate fishing mortality rate to estimate a safe yield;
  - the proposed TACC is well below the CAY and represents less than 1% risk that catch at that level might exceed the 'true CAY', taking into account the uncertainties of survey methodology. Even if the poorly-understood habitat effects are taken into account, the risk of exceeding the 'real' CAY is only 15%.
- 8 At the conclusion of the fishing year (31 March 2010), the TAC, TACC, and allowances will revert back to baseline levels.
- 9 MFish is seeking submissions on the management measures proposed in this paper from interested parties. Submissions should be received by **Friday 31 July 2009** and can be sent to Tracey Steel, Ministry of Fisheries, PO Box 1020, Wellington 6140 [tracey.steel@fish.govt.nz](mailto:tracey.steel@fish.govt.nz)

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this information. Matching catches to the CAY estimate each year is one way of ensuring that, over time, the stock stays at or above the biomass level that can support the maximum sustainable yield.

<sup>3</sup> ACE = Annual Catch Entitlement

# Reasons for Reviewing the Catch Limits

## Biological reasons

- 10 The abundance of scallops in the Coromandel fishery area is known to vary considerably from year to year. This is a feature of many scallop populations around the world. This variable abundance arises from the relatively short lifespan of scallops and the few age classes that typically make up the population. Environmental factors can strongly influence the growth and natural mortality of young scallops, which in turn contribute to variability in abundance.
- 11 These fluctuations in abundance are thought to be driven by environmental influences on scallop biological processes and are largely independent of fishing pressure. Biological factors include:
- Recruitment to the population (the number of new scallops in a given year) varies greatly between years. This is because recruitment is sensitive to environmental factors e.g. water temperature, phytoplankton. Scallops are very productive, producing up to 40 million eggs per spawning individual. Scallops may spawn several times each year (although not all of these spawning events lead to successful spat settlement). Spawning from September to late December is thought to account for most new scallops entering the fishery;
  - Scallops grow rapidly (although with considerable variation between sites and over time) and generally take 1.5 to 3.5 years to reach the commercial size limit of 90<sup>4</sup> mm. In unfished populations, the maximum age is thought to be about 6 or 7 years. Some scallops may become sexually mature at about 40 mm, but most individuals are sexually mature at about 60 mm. The minimum size limit (90 mm for commercial fishers; 100 mm for recreational fishers) ensures that most scallops have at least one spawning season before reaching the size limit. Larger scallops produce substantially more eggs and sperm than smaller scallops;
  - Natural mortality is high. That is, high numbers of scallops die from causes other than fishing, such as predation, storms, and 'old age'.

## Scallop management reasons

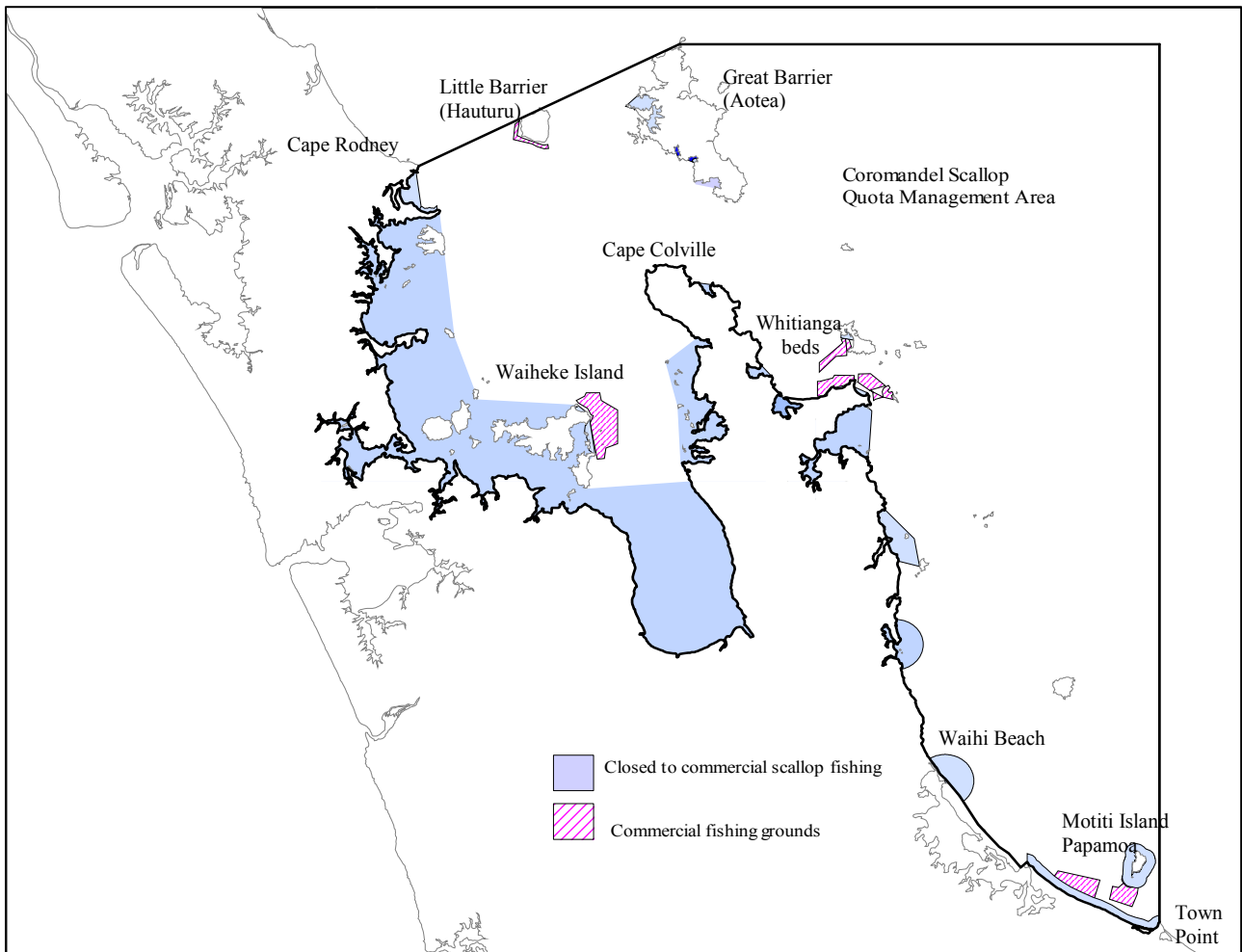
- 12 The management arrangements for commercial and non-commercial fishers differ substantially. Extensive parts of the Hauraki Gulf and many of the recreationally-preferred inshore scallop beds within the Coromandel fishery are closed by regulation to commercial scallop fishing. Therefore, there is a degree of spatial separation of the non-commercial and commercial fishing sectors. The main beds in the commercial scallop fishery are found north of Whitianga (at the Mercury Islands), east of Waiheke Island, around Little Barrier, Cape Colville, and in the Bay of Plenty principally around Motiti Island and Papamoa Beach (see Map 1 below). Those beds are open to non-commercial fishers.
- 13 When the Coromandel fishery was introduced into the Quota Management System in 2002, the fishery had been at an unusually low level for several seasons (1999-00 remains the lowest biomass estimate since surveys began in 1980). While factors such as the black-gill disease and the tubeworm infestation might have contributed to these poor seasons, the root causes of this downturn are poorly understood. Accordingly, the Coromandel fishery has an established baseline TAC which is set at a deliberately low level to provide for utilisation and ensure sustainability even in years of low abundance. In years where a pre-season survey shows scallop numbers are comparatively high, s 13(7) of the Fisheries Act 1996 (the Act) allows the total allowable catch, ACE and allowances to be increased within the fishing year.
- 14 Within the Coromandel fishery, the fishing season differs depending on the sector, with commercial fishers operating from 15 July to 21 December (inclusive) and non-commercial fishers now able to fish for scallops between 1 September and 31 March (inclusive) of the following year. The commercial fishing season closes in December to reduce fishing pressure during the summer period when the main scallop spat settlement occurs.

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<sup>4</sup> Fishers must not take or possess scallops if the shell, whether entire, chipped, or broken, is less than the length specified.

- 15 Different minimum legal size limits also apply to different sectors. The commercial sector cannot take scallops smaller than 90mm, while non-commercial fishers cannot take scallops smaller than 100m. The primary purpose of the size limits is to provide opportunities for individual scallops to spawn before being available to the fishery. The commercial limit is smaller to reduce the incidental mortality of scallops in the fishery. The 90mm limit was determined as the optimum limit for finding a balance between scallops of a marketable size and reducing incidental mortality. Recent research confirms that non-commercial catch is taken mostly by diving, and that more selective fishing method better supports the larger size limit. This delivers, on average, a better return for non-commercial fishing effort<sup>5</sup>.

**Map 1: Boundary of the Coromandel scallop quota management area, areas closed to commercial scallop fishing, and the location of the main beds fished by commercial scallop fishers. Some commercial fishing has also occurred off Cape Colville and off Waihi Beach.**



### Commercial Sector

- 16 The Coromandel fishery is listed on the Second Schedule of the Act which applies to stocks whose abundance is highly variable within and between years. This enables the fishery to be managed under s 13(7) of the Act. In turn, this section allows the Minister to increase a stock's TAC within the fishing season, after considering scallop abundance in the current fishing year and having regard to the

<sup>5</sup> Different size limits for the commercial and non-commercial sectors reflects the different harvesting methods employed by the respective sectors. Modelling work in SCACS suggests that given the nature of the dredges used in the commercial fishery, a size limit of 90mm optimises fishing effort and minimises incidental mortality. However, the same logic does not apply to the non-commercial fishery where the primary mode of harvest is diving and the dredges that are used are lighter and thought to be significantly less efficient than those used by the commercial sector.

matters specified in ss 13(2), 13(2A) and 13(3). This mechanism allows fishery managers to tailor the level of sustainable utilisation to reflect the abundance of the stock on a year by year basis.

- 17 If commercial fishers wish to harvest more than the baseline TACC, a biomass survey of the commercial areas of the fishery is done to provide evidence of the available biomass and yield as a basis for any increase (commercial fishers have supported a survey in ten of the last eleven years). In 2009 the Coromandel Scallop Fishermen's Association (CSFA) requested a survey and the results of this survey indicate that a greater TAC will be sustainable, therefore an increase to the TAC and ACE can be approved by the Minister for the 2009-10 fishing year.
- 18 Based on the information from this survey, the CSFA again considered it appropriate to adopt a cautious approach towards the in-season TAC increase. The CSFA recommended that the total available ACE should be increased to 100 tonnes meatweight. MFish recognises that this is a cautious catch level well below the CAY estimate and has a less than 1% probability of exceeding the 'true' CAY<sup>6</sup> taking into account the uncertainty associated with the survey estimates (but excluding habitat effects). Even if the poorly-understood habitat effects are taken into account, the risk of exceeding the 'real' CAY is only 15%. As noted above, the CSFA also proposes to shelve 35 tonnes of the ACE until a mid-season review of the fishery's performance. Should commercial catch rates from the main beds of the fishery remain viable at that time, quota owners will consider releasing further ACE to fishers.

### **Non-commercial Sector**

- 19 As surveyed scallop abundance in 2009 is higher than when the baseline was set in 2002, the Minister may consider increasing the recreational allowance. This is in recognition of the likelihood of more daily bag limits being taken over the course of the season as more people go out fishing, and more people catch their bag limit of 20 scallops per fisher per day. Thus, while scallop biomass (in commercial beds) is estimated to be lower than 2008, it is still relatively abundant and it is reasonable to conclude that recreational catch might still exceed the baseline recreational allowance if the allowance is not increased.
- 20 In addition, several decisions made by the Minister in the last few years are likely to have improved recreational access to the Coromandel scallop fishery. Two of these decisions were made in 2005 and addressed long-standing management issues relating to the amateur scallop fishing regulations. The first decision concerned the 'primary taker' issue and allowed a diver to take a scallop bag limit on behalf of up to two 'safety people' on board the vessel during the diving operation. The second decision removed the ban prohibiting scallops from being processed ('shucked') at sea. A third decision altering the timing of the recreational scallop season between Cape Runaway and North Cape came into force in 2007. This change moved the recreational scallop season forward six weeks, so that it now runs 1 September – 31 March (inclusive). This change is expected to have increased recreational catch as the season now coincides with a period in which scallops are in better condition.
- 21 It should be noted that this IPP does not address recreational bag limits as these are set by regulation and any proposed changes would be the subject of a separate review. MFish notes that some concerns have been raised by individual recreational fishers about the impacts of increased take due to the safety boatman allowance. MFish notes that research has been undertaken regarding the recreational catch of scallops from the eastern Coromandel area, however, the final results of this research will not become available until August this year. Research into the relative changes in the abundance of scallops within the non-commercial and commercial areas of the fishery has also been done. MFish considers that it would be advantageous to have those results available before reviewing bag limits.
- 22 In common with many other shellfish, scallops (*tīpa*) are important to Māori as a traditional food. However, no quantitative information on the level of customary take of scallops from the Coromandel fishery is available. In the absence of a quantitative estimate, and in light of the availability of scallops within the fishery and known importance to Maori, MFish believes it is reasonable to expect a customary catch which is higher than the baseline level. Should the Minister decide that the scallop abundance in 2009 is sufficient to support a greater customary catch, this increased allowance is reflected in Option 1. Maori customary fishers are able to take scallops in excess of the daily bag limit

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<sup>6</sup> A more detailed description and analysis of CAY and 'True' CAY is provided in the NIWA survey report.

or under the minimum size limit for hui and tangi purposes in accordance with regulation 27A of the Fisheries (Amateur Fishing) Regulations 1986. Kaitiaki have not yet been gazetted under the Fisheries (Kaimoana Customary Fishing) Regulations 1998 within the Coromandel scallop management area.

## Current Stock Status – NIWA Survey results

- 23 Since 1978, biomass surveys have been used to estimate the abundance of scallops in the Coromandel scallop fishery. Yield estimates derived from these surveys have been used to set limits on catch (including the TAC, ACE, and allowances) for the fishery. A biomass survey was undertaken by NIWA in May 2009 to assess the Coromandel fishery. Commercial beds adjacent to Little Barrier Island, Colville, Mercury Bay, Waihi and Papamoa were surveyed, with Waiheke Island and the northern part of Colville not surveyed this year.
- 24 Scallops were counted at each survey site and converted into numbers per square metre of seabed. The absolute density of scallops is estimated by correcting for the catching efficiency of the dredge. The number of scallops is calculated by multiplying the mean scallop density by the area of each survey stratum. Mean scallop meatweight is then estimated and used to calculate biomass.
- 25 The 2009 survey of commercial scallop beds in the Coromandel fishery estimates for the commercial areas of the fishery that absolute biomass at the start of the commercial season (15 July) will be 595 tonnes meatweight. This represents a 31% decrease in estimated scallop biomass at start of season as compared with the same estimate last year. This variability in biomass between years is a known feature of scallop populations. The important consideration for this review is that the CAY is calculated as a fixed proportion of the biomass.
- 26 The CAY estimate derived from this year's biomass estimate has also decreased 31% from last year's estimate. The Mercury Islands area which comprises the mainstay of the fishery (accounting for more than 80% of commercial catch during 2008) is estimated to have decreased by approximately 29%, however, the biomass of scallops was about 36% higher at Little Barrier and 22% higher at Colville. The biomass in the Bay of Plenty has dropped substantially to about 89% below its long term average and is the lowest on record. There has been a gradual decline in the overall fishery biomass since about 2005–06, and the biomass in 2009 had dropped below the level of the long term average (1980 to present) for the first time since 2003.
- 27 Table 2 below shows the decision table produced by NIWA which relates the risk level involved in exceeding the CAY. For example, if catch limits were set at the level of our best estimate of CAY (e.g., 190 tonnes meatweight, excluding habitat effects) there would be a 50% chance of exceeding the true CAY. In contrast, if catch limits were set to 100 tonnes as proposed, the probability of exceeding the true CAY would be less than 1%. In this way the level of risk to the Coromandel scallop stock of fishing at a variety of potential catch limits can be assessed (Table 2). It is also important to note that in the CAY estimate the allowance for incidental mortality is included so this figure does not need to be deducted. Incidental mortality accounts for those scallops killed by fishing, but not taken in the catch.
- 28 The Shellfish Working Group supports the CAY estimate excluding habitat effects. The working group was less confident in the CAY estimate which included habitat effects because the results were sensitive to assumptions that were required by assessment methodology. The working group accepted that habitat effects were likely to reduce yield, but the extent of these effects is highly uncertain. As a result, this paper provides both CAY estimates (including and excluding habitat effects) for comparative purposes.

**Table 2: Decision table to evaluate the ‘risk’ of exceeding the ‘true’ CAY given a variety of alternative catch limits (TACCs). CAY was estimated using two approaches: excluding and including putative habitat effects.**

Potential TACC for 2009–10 (tonnes meatweight)	Probability of exceeding CAY	
	Excl. habitat effects	Incl. habitat effects
60	0.000	0.001
70	0.000	0.004
80	0.000	0.022
90	0.001	0.072
100	0.004	0.145
110	0.012	0.244
120	0.029	0.376
130	0.064	0.508
140	0.107	0.635
150	0.169	0.728
160	0.240	0.812

170	0.321	0.875
180	0.411	0.919
190	0.504	0.951

- 29 Attached to this IPP is a copy of the draft NIWA survey report which provides much greater detail of the research process, CAY and 'true' CAY estimates, habitat effects, and results obtained during the May 2009 survey.

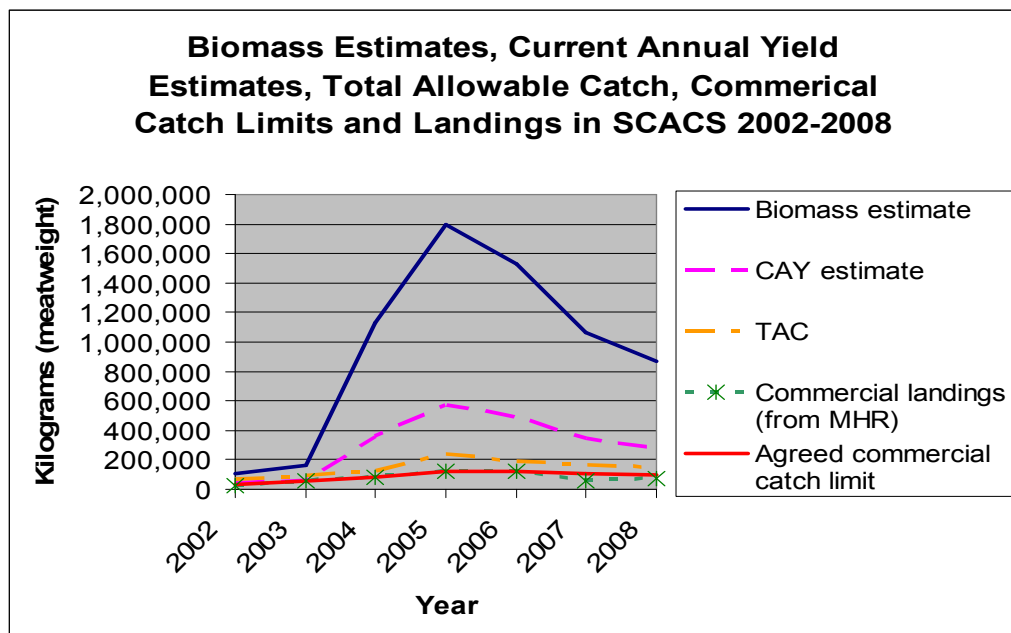
## History of the fishery and its performance

- 30 Commercial scallop fishing has been carried out around the Coromandel Peninsula and in the Hauraki Gulf since the late 1960s. After a rapid escalation of fishing effort during the 1970s, the Coromandel controlled scallop fishery was declared in 1978.<sup>7</sup> Under the controlled fishery, access was determined by the Fisheries Authority, which was independent of the Minister and Ministry. Commercial access was restricted to 21<sup>8</sup> license holders who were permitted to take scallops for sale in the controlled fishery area. Over the past 12 years the number of vessels participating in the Coromandel scallop fishery has declined by over 50% with only 7 vessels now taking part in the fishery.
- 31 Since 1980 when the fishery was considered to be at full capacity, commercial landings have varied more than 30-fold from less than 50 t to over 1500 t greenweight. Scallop biomass can be expected to vary from one year to the next, so the long-run average is difficult to estimate and not necessarily a useful benchmark. However, biomass estimates around the turn of the century (2000) were consistently at or near the lowest on record, and it seems reasonable to conclude that the population was, for unknown reasons, at a very low ebb.
- 32 In contrast, following reasonable increases in biomass, catch rate, and condition of scallops in 2003 and, especially, 2004, the biomass in 2005 (almost regardless of what was assumed about dredge efficiency) was the highest on record and probably higher than in the mid 1980s when not all of the beds were surveyed. This remarkable resurgence was strongest at the Mercury Islands beds, but most beds showed some increase in density. There has been a gradual decline in the overall fishery biomass since 2005–06, and the biomass in 2009 has dropped below the level of the long term average (1980 to present) for the first time since 2003.

**Figure 1: Trends in the Coromandel scallop fishery since its introduction into the Quota Management System**

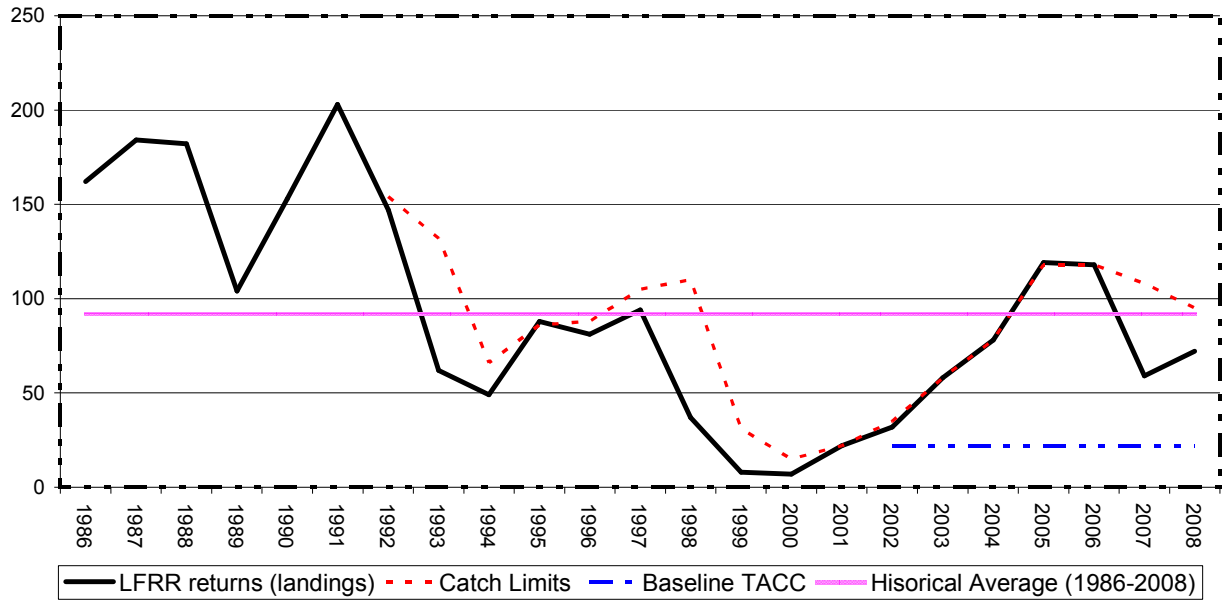
<sup>7</sup> The controlled fishery was defined as the area from Cape Rodney (including the Hauraki Gulf) to Town Point (near Tauranga).

<sup>8</sup> One of the license holders had a double allocation, so there were 22 shares in the fishery. One license was cancelled in the 1990s due to the death of the license holder.



- 33 Since 2002 when Coromandel scallops entered the QMS, landings have been close or equal to the catch limit set, except for in 2007 when landings were only 55% of the agreed catch limit. Commercial fishers reported three main reasons for landing less than the expected catch in 2007: a) frequent easterly storms reduced the number of fishing days, b) scallop meatweight condition was generally poor, possibly as a result of spawning induced by the storms, and c) fishers jointly agreed to end the season early (in November rather than December) because of concerns about the unusually large number of pre-recruit scallops they were catching. Stopping fishing would protect these scallops from potential damage by dredging, with the view that they could survive and grow into the recruited biomass for the 2008 season. Landings in the 2008 season were 71 t meatweight, representing 75% of the agreed available catch limit (95 t), and fishers also reduced their effort from 5 to 4 days per week for a period of three weeks to allow for the scallops to improve their condition in certain beds.
- 34 As there has been a large rationalization of the fleet (which now comprises only 7 vessels), the CSFA notes that, due to the short commercial fishing season and weather patterns affecting fishing frequency, it is not always possible for the fleet to catch the catch limit. Another reason commercial fishers may not catch their full limit is because the TACC is set in meatweight, but the meatweight to greenweight ratio varies throughout the year (i.e. the weight of scallop flesh in relation to the weight of the scallop shell changes over the season). Actual yields depend on scallop condition and scallop growth. Figure 2 on the following page shows the reported commercial landings from licensed fish receiver returns (LFRR) for 1996-2008 and the commercial catch limits.
- 35 Three recreational harvest estimates have been conducted over the previous 15 years. Telephone/diary surveys were undertaken during 1993-1994, 1996 and 1999-2000. The recreational harvest estimate from the 1993-94 survey was 8.8 tonnes meatweight. The 1996 survey estimate of the recreational catch was 7.5 tonnes meatweight. The recreational catch estimate from the survey in 1999-2000 was 3.8 tonnes meatweight. The average of these recreational catch estimates is 6.7 tonnes. However the Marine Recreational Fisheries Technical Working Group (FTWG) reviewed these surveys and recommended “that the telephone-diary estimates be used only with the following qualifications: 1) they may be very inaccurate; 2) the 1996 and earlier surveys contain a methodological error; and 3) the 1999–2000 and 2000–01 estimates are implausibly high for many important fisheries.”
- 36 The recreational diary surveys include catches reported from areas closed to commercial fishing by regulation. These areas include popular recreational and customary fishing areas such as Kawau Bay, Omaha Bay, parts of Waiheke Island and the Firth of Thames, Great Mercury Island, Otama Beach, Opito Bay, Slipper Island, and Motiti Island.

**Figure 2: Reported Commercial Landings in the Coromandel scallop fishery from 1986 to 2008 with commercial catch limits from 1995-2008 and Baseline TACC from 2002-2008**



## Discussion of Management Options

- 37 In developing the options discussed below, MFish has provided a copy of the draft NIWA research report entitled “Biomass surveys and stock assessments for the Coromandel scallop fishery, 2009” (see Appendix) and had discussions with the CSFA and the NZRFC. Their initial views are summarised below.

### TAC setting

- 38 MFish proposes that the Coromandel scallop TAC should be set at either 155 or 150 tonnes meatweight. The proposed options are largely based on the proposal to increase the total available ACE for commercial fishers for the 2009 season from 22 to 100 tonnes meatweight. The difference between the two options is whether or not the allowances for recreational and customary Maori fishing should be increased.

**Table 1: TAC, TACC/ACE and Allowance proposals for the Coromandel Scallop fishery for the 2009-10 fishing season. Note: all figures given in meatweight tonnes.**

	TAC	TACC/ACE	Recreational Allowance	Customary Allowance	Allowance for Other Sources of Fishing-related Mortality
<b>Baseline</b>	48	22/22	7.5	7.5	11
<b>Option 1</b>	155	22/100	10	10	35
<b>Option 2</b>	150	22/100	7.5	7.5	35

- 39 Based on the information from the NIWA report, the CSFA considered it appropriate to adopt a cautious approach towards the in-season TAC increase. The CSFA recommended that the total available ACE should be increased to 100 tonnes meatweight. MFish recognises that the Association has again opted to seek a highly cautious catch level well below the CAY estimate, consistent with the “cautious, respectful approach” agreed to by all parties in the draft fisheries plan.
- 40 The fishery is managed under section 13(2A) because it is impractical to obtain an estimate of BMSY. Obtaining a biomass estimate each season and determining CAY (using a fishing mortality rate of  $F_{0.1}$ ) will deliver MSY over the long run and is not inconsistent with section 13(2). TACs have recently been set substantially below the CAY and this will maintain the long run average biomass at or above BMSY. Section 13(7) of the Act allows the Minister to increase a stock’s TAC within the fishing season, after considering scallop abundance in the current fishing year and having regard to the matters specified in sections 13(2), 13(2A) (if applicable) and 13(3).<sup>9</sup>
- 41 MFish notes the survey results and CAY estimate can be found in the NIWA report attached to this IPP. Readers should note that the proposed TAC, ACE and non-commercial allowances options already take into account the changes in biomass between 2008 and 2009. Those options are based upon CAY estimates which directly correspond to changes in biomass, and the proposed TACs are at levels substantially lower than the sustainable CAY estimate.
- 42 As discussed elsewhere in this paper the CAY estimates clearly show that scallop abundance is sufficient to allow an in-season increase to the TAC of up to 155 tonnes. MFish notes that the TACC proposed is well below the CAY and represents less than 1% risk that a catch of 100 tonnes might exceed the ‘true CAY’, taking into account the uncertainties of survey methodology. Even if the poorly-understood habitat effects are taken into account, the risk of exceeding the ‘real’ CAY is only 15%. Also, the CAY estimate is only indicative of the biomass of the commercial fishing beds and that further biomass is available to recreational and customary fishers within commercial exclusion zones.

<sup>9</sup> Section 13 (2), (2A) (3) and (7) of the Act can be found in the appendix to this paper.

- 43 Representatives from the New Zealand Recreational Fishing Council (NZRFC) have provided comments to MFish on the draft NIWA report and the proposal by the CSFA to seek a TACC of 100t.
- 44 The NZRFC has noted its concerns about the continuing decline in the biomass and they believe a precautionary approach should be maintained. The NZRFC also has strong concerns regarding the 'open ended' options proposed by industry which involve the shelving of ACE and in-season review. As the proposal hasn't been discussed, or any information regarding what reference points and methodology would be used to assess the fishery released, the NZRFC is currently not comfortable with the proposed approach.
- 45 The NZRFC notes that it has had a request for an increase in the daily bag limit; however, with the declining biomass and the uncertainty of the status of stocks in the amateur-only areas, it feels it is generally agreed within the sector that it is not appropriate to seek an increase to the bag limits for this year. The NZRFC believes the allowance made for recreational fishers is insufficient as it feels the recreational take is under-estimated and, as a result, the risk of exceeding the current TAC is high. Therefore the NZRFC supports an increase in the recreational allowance rather than an increase in the bag limit for the 2009/10 fishing year. It also notes disappointment that recreational biomass and harvest information is not yet available and that the assessment on the biomass is taken from the commercial survey. The NZRFC believes, however, that the commercial and recreational biomass are both one and the same biomass and that this should be taken into consideration when addressing the TAC and allowances.
- 46 MFish appreciates the preliminary input of these stakeholders into this initial proposal. These views, and the views of stakeholders who lodge submissions on this proposal before Friday 31 July, will be incorporated into the final advice paper (FAP) to the Minister.

***Hauraki Gulf Marine Park Act 2000:***

- 47 The Minister is required to have regard to ss 7 and 8 of the Hauraki Gulf Marine Park Act (HGMPA) 2000 when setting a TAC for Coromandel scallops. MFish considers that increasing the TAC of the Coromandel scallop fishery in response to information about abundance in the current season appropriately addresses this obligation in providing for the social, economic, recreational and cultural well-being of the people of the Hauraki Gulf.
- 48 It is probable that the Coromandel scallop fishery is of considerable importance to the people of the Hauraki Gulf. MFish is aware of many recreationally fished beds within the Marine Park (e.g. around Kawau Bay or Mercury Bay). While other beds are accessible outside the park (such as in Manukau Harbour or the Bream Bay), it is likely that a significant number of recreational fishers from within the Hauraki Gulf area derive wellbeing through this fishery.
- 49 As a species of considerable importance to recreational fishers, an increase in the allowances could better recognise the value of the Coromandel scallop fishery to the recreational sector and the wellbeing they derive from accessing this fishery. However, in the absence of information to suggest that the current allowances are insufficient for recreational and cultural wellbeing, MFish is not in a position to qualify or quantify the relative benefits of increases to the different sectors.
- 50 The main commercial and non-commercial beds in the Coromandel Scallop fishery all fall within the Hauraki Gulf Marine Park. MFish understands that at present, all landings from the Coromandel scallop fishery are sold on the domestic market and that it is a popular species with consumers. The wellbeing of commercial scallop fishers and of consumers who would purchase commercially caught scallops is likely to benefit from an in-season increase to the TACC. The primary benefit to commercial fishers would be an increase to ACE, which would allow these fishers to benefit from scallop abundance. Given that the increase proposed would increase ACE from 22 to 100 tonnes, this is likely to have a significant effect on fishers' incomes and possibly create temporary employment opportunities in processing sheds. Using port price as an estimator of commercial value, the increase in ACE would represent at least an additional revenue of over a million dollars for the 2009 season.

- 51 MFish invites submitters to provide any additional information that they have on the importance of the Coromandel scallop fishery to the social, economic, recreational and cultural wellbeing of people in the area of the Hauraki Gulf Marine Park.<sup>10</sup>

### ***Allocation of the TAC - Allowances and ACE***

- 52 If a decision is made to adjust the TAC in-season, the Minister can create additional ACE<sup>11</sup> for fishers after following the specified process and increase the allocations for non-commercial fishers and the allowance for other sources of fishing-related mortality
- 53 MFish proposes that the level of ACE for the Coromandel fishery for the 2009-10 fishing year be increased from 22 to 100 tonnes meatweight.
- 54 Based on the 2008-09 port price of \$14.38 per kilogram of meatweight (\$14 380 per tonne), the proposed increase in ACE of 78 tonnes (from the baseline level) equates to an increased gross return to the commercial fishers of \$1,121,640 for the 2009-10 season. However, port prices are known to have various limitations and they tend to underestimate the value of the species. For example, the 2008 average export price for scallops (this figure includes all scallops exported from NZ not only Coromandel Scallops) was \$19.43 per kg of meatweight. Therefore, the proposed increase in ACE of 78 tonnes has a theoretical export value of \$1,515,540 for the 2009 season. However, MFish understands that majority of scallops harvested from the Coromandel fishery are sold on the domestic market. Port and export prices are merely an indicator of value, and MFish believes that the true value of the additional 78 tonnes of ACE will be determined by market and fishery conditions in 2009.
- 55 The level of incidental mortality expected in the commercial dredge fishery has been estimated by NIWA to be 34.4% of the commercial catch level. It should be noted that this estimate is already accounted for in the estimate of CAY, so should not be subtracted from the CAY value, but should be included within the TAC. Individual-based population modelling and yield per recruit analysis suggests there are incidental effects of dredging on scallop growth and mortality rates that are highly influential on the determination of yield from scallop dredge fisheries. Therefore, under both options, MFish proposes to increase the allowance for other sources of fishing-related mortality from 11 tonnes meatweight to 35 tonnes meatweight for 2009-10. Research suggests that incidental mortality from recreational dredging is likely to be minor. Therefore, no additional allowance for other sources of fishing-related mortality is proposed, even if the non-commercial allowances are increased. Further discussion of mortality is contained in the attached NIWA report on pages 21-25. Quantitative information on the level of illegal catch is not available.
- 56 In considering an in-season TAC increase, and having regard to the matters under s 21, MFish proposes two options for the non-commercial allowances and the allowance for other sources of fishing-related mortality. Neither of the two options proposed would change the daily bag limit in the recreational fishery.

### ***Option 1: Increase the non-commercial allowances***

- 57 Option 1 proposes to increase the non-commercial allowances as the 2009 biomass survey suggests a greater biomass level in the fishery than the time at which the baseline allowance was set.
- 58 The draft survey results relate only to the scallop beds fished by the commercial sector. However, MFish considers that trends in scallop abundance in the "non-commercial" beds are likely to be similar to abundance trends for the surveyed beds, although scientific evidence to support this is not yet available. While the survey estimate of scallop biomass has decreased since the same time last year, MFish still considers that scallops are relatively abundant in 2009 compared with when the baselines were set. Given that the recreational and customary catch might increase under the relatively higher abundance, given that non-commercial fishers are able to fish the commercial (surveyed) scallop areas, it is reasonable to propose an increase in the recreational allowance. Therefore, MFish

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<sup>10</sup> The relevant sections of the Hauraki Gulf Marine Park Act can be found in the Appendix to this Initial Position Paper

<sup>11</sup> The TACC during the fishing year does not increase-additional ACE is made available under section 68 of the Fisheries Act 1996-see Appendix 1.

proposes an increase in the allowance to recreational fishing from 7.5 tonnes meatweight to 10 tonnes meatweight for 2009-10. As part of this proposal, the recreational allowance would then decrease to 7.5 tonnes meatweight at the end of the current fishing year for the Coromandel fishery (31 March 2010).

- 59 In common with many other shellfish, scallops (*tīpa*) are important to Māori as a traditional food. However, no quantitative information on the level of customary take of the Coromandel fishery is available. Given that the 2009 abundance is relatively high compared with baselines, MFish considers it is reasonable to expect that customary catch might be greater this season and so to set a higher allowance for customary Maori non-commercial catch.
- 60 Accordingly, Option 1 proposes to increase the customary allowance to the level of the proposed recreational allowance — 10 tonnes meatweight. The customary allowance would then revert to 7.5 tonnes meatweight at the end of the current fishing year for the Coromandel fishery (31 March 2010)..

#### **Option 2: No change to the non-commercial allowances**

- 61 Option 2 proposes no change due to the lack of quantitative information available on yield and harvest levels in the non-commercial scallop fishery areas.
- 62 There is a lack of quantitative information available on the non-commercial scallop fishery. Specifically, no reliable estimates of yield or total harvest levels are available in the areas closed to commercial scallop fishing. This year a report on the Ministry of Fisheries research project, REC2007/11 'Harvest survey from the recreational scallop and rock lobster fisheries in eastern Coromandel, 2007-08' is due to be presented to MFish and peer reviewed. At the time of writing, this paper has not yet been presented.
- 63 While two biomass surveys have been completed on a number of non-commercial beds in 2006 and 2007, this is part of an ongoing project attempting to establish a link between scallop abundance in commercial areas and abundance in recreational areas. As yet, conclusions cannot be drawn from the data, though it is hoped that this project will provide quantitative data on the recreational scallop beds by 2010.
- 64 At present, it cannot be determined whether or not the biomass available to recreational fishers outside of the NIWA survey areas has increased sufficiently from baseline levels to result in higher and more frequent daily bag limits and customary harvesting from these areas. Accordingly, under option 2, MFish proposes no change to the recreational or customary scallop allowances and the level would remain at 7.5 tonnes meatweight for the 09–10 recreational season, thus providing a cautious approach to the management of non-commercial allowances in the absence of quantitative data.

#### **Environmental Issues**

- 65 Section 9 of the Act prescribes the following environmental principles that must be taken into account when exercising powers in relation to utilisation of fisheries resources while ensuring sustainability:
- associated or dependent species (including non-fish by-catch) should be maintained above a level that ensures their long-term viability;
  - biological diversity of the aquatic environment (ie, the variability of living organisms, including diversity within species, between species, and of ecosystems) should be maintained; and
  - habitat of particular significance for fisheries management should be protected.
- 66 The history of commercial dredging in the Coromandel scallop fishery dates back to 1968, and trawling has occurred in the area since the late nineteenth century. There is no doubt that these fishing methods have had an impact on the seabed. There is some information available providing evidence of broad-scale changes in benthic communities that can be directly related to fishing. The seafloor in the area has also been modified by the impact of land-based activities over a much longer period.

However, significant areas of habitat in the Firth of Thames and inner Hauraki Gulf are not open to commercial dredging.

- 67 MFish is not currently aware of any habitat of particular significance for fisheries management that requires additional protection within the Coromandel scallop fishery. Scallop dredging is focussed in the relatively restricted areas where scallops are abundant and research suggests that dredging affects only a modest proportion of most habitat types within the fishery area. Therefore, MFish does not consider that the catch levels proposed below in this paper will put at risk the long term viability of associated species or biological diversity within the area of the fishery.
- 68 As part of this year's pre-season survey NIWA also began to look at the associated by-catch of the scallop fishery. This sampling will continue for the next three years in conjunction with the pre-season survey to further enhance MFish's knowledge of the by-catch issues associated with the Coromandel scallop commercial fishery.

## **MFish's Initial View**

- 69 The proposed management options take into account the survey information showing the 2009 estimated CAY representing a level of sustainable catch over eight times higher than the baseline TACC of 22 tonnes (if habitat effects are excluded).
- 70 Taking into consideration the relative higher abundance of scallops as compared to the baseline, MFish's initial view is that the TAC be increased to 155 tonnes to allow for:
- an ACE increase for commercial fishers from 22 to 100 tonnes;
  - an increase in non-commercial allowances from 7.5 to 10 tonnes; and
  - an increase in the allowance for other sources of fishing-related mortality from 11 to 35 tonnes.
- 71 MFish notes that the TACC proposed is well below the CAY and represents less than 1% risk that a catch of 100 tonnes might exceed the 'true CAY', taking into account the uncertainties of survey methodology. Even if the poorly-understood habitat effects are taken into account, the risk of exceeding the 'real' CAY is 15%. Also, the CAY estimate is only indicative of the biomass of the commercial fishing beds and that further biomass is available to recreational and customary fishers within commercial exclusion zones.
- 72 MFish views this proposed increase as being a cautious approach which allows for increased utilization of the fishery whilst maintaining a high level of certainty that the fishery will remain sustainable.

# Appendix 1: Statutory Considerations

## Fisheries Act 1996:

### 1. Sections 5(a) and 5(b) – Application of international obligations and Treaty of Waitangi (Fisheries Claims) Settlement Act 1992:

There is a wide range of international obligations relating to fishing (including sustainability and utilisation of fishstocks and maintaining biodiversity). MFish considers that the management options for SCACS are consistent with these international obligations.

MFish also considers that the proposed management options are consistent with the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 (s 5 (b)). Ongoing work is being done within the area covered by SCACS to promote policies that help to recognise customary use and management practices. The records of customary catch taken under permit do not show any harvest of scallops, nor is there any information of the importance of scallop fisheries to customary fishers in SCACS. Further information on this topic would be welcomed.

2. **Section 8:** The purpose of the Act is to provide for the utilisation of fisheries resources while ensuring sustainability. The paper discusses the management approach to the Coromandel scallop fishery, which is designed to address the particular characteristics of this naturally variable stock and deliver sustainable utilisation.

3. **Section 9** Environmental Principles—are addressed in the body of the paper.

4. **Section 10 Information principles:** The information principles require that decisions be based on the best available information, taking into account any uncertainty in that information, and applying caution, when information is uncertain, unreliable, or inadequate. In accordance with s 10, the absence of information should not be used as a reason to postpone, or fail to take, any measure to achieve the purpose of the Act, including providing for utilisation at levels considered to be sustainable. The best available information on the status of the commercial SCACS scallop beds is the draft NIWA pre-season survey report (2009). MFish has used the surveys of recreational fishing in 1999-00, and 2000-01 as the basis for estimates of recreational catch in SCACS. Limitations (low sample size causing a high coefficient of valuation – c.v.) are acknowledged with the use of these surveys. However, in the absence of other information on recreational catches, the surveys are nonetheless considered to provide the best available information. MFish has endeavoured to set out the relevant uncertainty in, and inadequacy of, that information so that the appropriate caution can be applied in assessing the proposed management options.

5. **Section 11** Sustainability measures: Before setting or varying any sustainability measure, s 11(1) of the Act requires the Minister to take into account specified matters. These include:

- a/ any effects of fishing on any stock and the aquatic environment;
- b/ any existing controls that apply to the stock or area concerned;
- c/ the natural variation of the stock concerned.

6. Evaluation of the available information on the effects of fishing has led to a number of restrictions that underpin the existing commercial fishery management regime for the Coromandel fishery. These restrictions are consistent with the overriding obligation to avoid, remedy or mitigate the adverse effects of fishing. They are implemented through a combination of regulations and voluntary agreement and include:

- restrictions on dredge size to reduce adverse effects on the seafloor;
- five day fishing week and daylight only fishing (reduces fishing intensity);
- daily catch limits to reduce fishing intensity (Coromandel Scallop Fishers' Association voluntary initiative).

7. The management approach recognises that biological systems can be inherently variable, and stocks are prone to fluctuations in abundance. This is particularly applicable to scallop populations.

- 8. Section 11(2):** Before setting or varying any sustainability measure under subsection (1) of this section, the Minister shall have regard to any provisions of:
- a/ any regional policy statement, regional plan, or proposed regional plan under the Resource Management Act 1991; and
  - b/ any management strategy or management plan under the Conservation Act 1987 that apply to the coastal marine area and are considered by the minister to be relevant; and
  - c/ sections 7 and 8 of the Hauraki Gulf Marine Park Act 2000 (for the Hauraki Gulf as defined in that Act).
- 9.** In relation to s 11(2)(a) and (b) of the Act, 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, which are considered relevant to the setting of sustainability measures for the Coromandel scallop fishery.
- 10.** Under s 11(2)(c), the Minister must have regard to sections 7 and 8 of the Hauraki Gulf Marine Park Act 2000 as part of the Coromandel scallop fishery is part of the area defined as the Hauraki Gulf for the purpose of that legislation. Sections 7 and 8 of the Hauraki Gulf Marine Park Act are addressed in the body of the paper and the exact wording of the sections are reproduced in paragraphs 24-26 on page 16. Section 7 recognises the national significance of the Hauraki Gulf including its capacity to provide for the relationship of tangata whenua and the social, economic, recreational, and cultural wellbeing of people and communities. Section 8 sets out the objectives of the management of the Hauraki Gulf, which include the maintenance of the Hauraki Gulf for the social and economic well-being and its contribution to the recreation and enjoyment of the people and communities of the Hauraki Gulf and New Zealand. The maintenance and enhancement of the physical resources of the Gulf, which include scallops, is also an objective. Setting a sustainable commercial catch limit on a fishery resource, having taken into account the environmental principles of the Act, is consistent with these objectives as it provides for utilisation while ensuring sustainability
- 11. Section 11(2A)** of the Act requires that before varying any sustainability measure the Minister must take into account:
- (a) any conservation services or fisheries services;
  - (b) any relevant approved fisheries plans;
  - (c) any decisions not to require conservation or fisheries services.
- 12.** The current fisheries services applying to the fishery include a pre-season survey to estimate CAY for the fishery. The survey estimate has been considered and forms the basis for the proposals contained in this paper. There are no conservation services applying directly to the fishery. No relevant fisheries plan affecting the Coromandel scallop fishery has been approved.
- 13. Section 13** of the Act provides for the setting of Total Allowable Catch. The Fisheries Act 1996 requires that, for most Quota Management System stocks managed under s 13, TACs are set to maintain or move stock biomass towards or above a biomass level than can produce the maximum sustainable yield (MSY).
- 14. Section 13(2)** requires the Minister to set a TAC that:
- a. maintains the stock at or above a level that can produce the maximum sustainable yield (MSY) having regard to the interdependence of stocks; or
  - b. enables any stock that is currently below a level that can produce the MSY to be altered:
    - (i) in a way and at a rate that will result in the stock being restored to or above a level that can produce the MSY having regard to the interdependence of stocks; and
    - (ii) within a period appropriate to the stock having regard to the biological characteristics of the stock and any environmental conditions affecting the stock; or

- c. enables the level of any stock currently above the biomass that can produce the MSY to be altered in a way and at a rate that will result in the stock moving towards or above a level that can support the MSY.

**15. Section 13(2A)** says that if the Minister considers that the current level of the stock or the level of the stock that can produce the maximum sustainable yield is not able to be estimated reliably using the best available information, the Minister must—

- (a) not use the absence of, or any uncertainty in, that information as a reason for postponing or failing to set a total allowable catch for the stock; and
- (b) have regard to the interdependence of stocks, the biological characteristics of the stock, and any environmental conditions affecting the stock; and
- (c) set a total allowable catch—
  - (i) using the best available information; and
  - (ii) that is not inconsistent with the objective of maintaining the stock at or above, or moving the stock towards or above, a level that can produce the maximum sustainable yield.

**16.** The Act defines the MSY as the greatest yield that can be achieved over time while maintaining the stock's productive capacity, having regard to the population dynamics of the stock and any environmental factors that influence the stock. The level that can produce the MSY may be a dynamic target rather than a fixed point, as is the case for the Coromandel Scallop fishery.

**17.** Section 13(3) says that in considering the way in which and rate at which a stock is moved towards or above a level that can produce maximum sustainable yield under subsection (2)(b) or (c), or (2A) (if applicable), the Minister shall have regard to such social, cultural, and economic factors as he or she considers relevant. Relevant social, cultural, and economic factors are discussed in the body of the paper.

**18.** Section 13(7) provides that after considering information about the abundance during the current fishing year of any stock listed in Schedule 2 (such as scallops), and after having regard to the matters specified in subsections (2) and (3), the Minister may increase the TAC for the stock.

**19.** Having regard to the population dynamics of the Coromandel scallop stock, it has been determined that estimating the MSY as a constant proportion of each season's biomass or abundance is most appropriate. This approach takes account of the varying abundance or biomass and allows catch to be maximised over time while ensuring sustainability for most types of fisheries (including scallops). The constant harvest proportion is determined following international practice by applying a set fishing mortality rate (termed  $F_{0.1}$ ) that has been shown to deliver good yields while ensuring sustainability. Each year's seasonal or annual yield is termed the Current Annual Yield or CAY<sup>12</sup>, and forms the basis for considering any in-season increase to the TAC.

**20.** However, the determination of in-season abundance, yields, and TAC increases depend upon scientific surveys, analyses, and consultation within the season. Experience in the Coromandel fishery has shown that surveys are best done as close as possible to the start of the regulated fishing season in mid-July. A baseline TAC has been applied to the fishery to provide for utilisation and ensure sustainability even in years of low abundance. If a survey is done in a given year, the baseline enables some fishing to start before the in-season survey results are finalised and consultation on any proposed increase to the TAC is completed. The approach has been used for several years.

**21.** If commercial fishers wish to harvest more than 22 tonnes, a biomass survey of the commercial areas of the fishery is done (commercial fishers have supported a survey in nine of the last 10 years). The biomass survey produces estimates of both stock biomass for the year and CAY for the fishery. The CAY estimate provides the basis for considering an in-season increase to the TAC for that year to achieve the maximum sustainable yield from the fishery over time. Taking a catch at the level of the CAY each year would, in

theory, result in the stock being maintained at the (fluctuating) biomass level that can produce the MSY over the longer term. However, in all years since 2004, the TAC has been set at a level well below the CAY, which means that the biomass has been maintained above the  $B_{MSY}$  level.

- 22. Sections 20 and 21** discuss setting and variation of total allowable commercial catch and matters to be taken into account in setting or varying any total allowable commercial catch. The nature of the fishery and the interests of each fishing sector have been considered in proposing the TACC and allowing for customary and recreational interests and other sources of fishing-related mortality (sections 21(1)(a and b), 21(4)(i and ii) and 21(5)). No restrictions have been placed on recreational fishing in any area within the QMA under s 311 of the Fisheries Act.
- 23. Section 68:** Section 68 of the Act says that where a TAC is increased under s 13(7) and the Minister believes, after considering the matters referred to in s 21(1), that he or she would have increased the TACC but for s 20(4), the Minister shall create additional ACE for the stock that equals the amount by which he would have increased the TACC but for section 20(4). The matters referred to in s 21(1) are:
- non-commercial fishing interests (Maori customary non-commercial interests and recreational interests) and
  - all other mortality to the stock caused by fishing.

## **Hauraki Gulf Marine Park Act**

### **24. Section 7: Recognition of national significance of Hauraki Gulf**

(1)The interrelationship between the Hauraki Gulf, its islands, and catchments and the ability of that interrelationship to sustain the life-supporting capacity of the environment of the Hauraki Gulf and its islands are matters of national significance.

(2)The life-supporting capacity of the environment of the Gulf and its islands includes the capacity:

(a) to provide for:

- (i) the historic, traditional, cultural, and spiritual relationship of the tangata whenua of the Gulf with the Gulf and its islands;
- (ii) the social, economic, recreational, and cultural well-being of people and communities;

(b) to use the resources of the Gulf by the people and communities of the Gulf and New Zealand for economic activities and recreation;

(c) to maintain the soil, air, water, and ecosystems of the Gulf.

### **25. Section 8: Management of Hauraki Gulf**

To recognise the national significance of the Hauraki Gulf, its islands, and catchments, the objectives of the management of the Hauraki Gulf, its islands, and catchments are—

- a) the protection and, where appropriate, the enhancement of the life-supporting capacity of the environment of the Hauraki Gulf, its islands, and catchments;
- b) the protection and, where appropriate, the enhancement of the natural, historic, and physical resources of the Hauraki Gulf, its islands, and catchments;
- c) the protection and, where appropriate, the enhancement of those natural, historic, and physical resources (including kaimoana) of the Hauraki Gulf, its islands, and catchments with which tangata whenua have an historic, traditional, cultural, and spiritual relationship;
- d) the protection of the cultural and historic associations of people and communities in and around the Hauraki Gulf with its natural, historic, and physical resources;
- e) the maintenance and, where appropriate, the enhancement of the contribution of the natural, historic, and physical resources of the Hauraki Gulf, its islands, and catchments to the social and economic well-being of the people and communities of the Hauraki Gulf and New Zealand;
- f) the maintenance and, where appropriate, the enhancement of the natural, historic, and physical resources of the Hauraki Gulf, its islands, and catchments, which contribute to the recreation and enjoyment of the Hauraki Gulf for the people and communities of the Hauraki Gulf and New Zealand.

**26. Section 13: Obligation to have particular regard to sections 7 and 8:**

As provided in sections 9 to 12, in order to achieve the purpose of this Act, all persons exercising powers or carrying out functions for the Hauraki Gulf under any Act specified in Schedule 1 [including the Fisheries Act 1996] must, in addition to any other requirement specified in those Acts for the exercise of that power or the carrying out of that function, have particular regard to the provisions of sections 7 and 8 and of this Act.

**Section Three -**

**NIWA survey report**