

## Use and value information

- 67 This section looks at the current 'best value' status in the fishery by providing information on the following:
- Sector allocations;
  - Profile, use and value of each sector.

### **Sector allocations**

- 68 Efficient use of a fishery is achieved by enabling access for those who value the fishery the most. Users are defined as: extractive users, who derive value by harvesting the fish; and non-extractive users, who derive value from knowing that a healthy aquatic environment exists for generations to come. The main responsibility of government is to ensure the fair allocation of user rights. For non-extractive users it is achieved in its simplest form through a sustainable fisheries management regime.
- 69 The stocks and quota management areas for New Zealand eel stocks are depicted in Figure 1. Quota management areas provide stock boundaries for setting total allowable catch limits, and making quantitative allowances for customary Maori purposes, recreational fishing, other sources of fishing related mortality, and total allowable commercial catch limits. The quota management areas are divided into statistical areas which provide a finer scale tool for reporting commercial catch. There are 25 eel statistical areas (ESAs) in New Zealand (Figure 2).

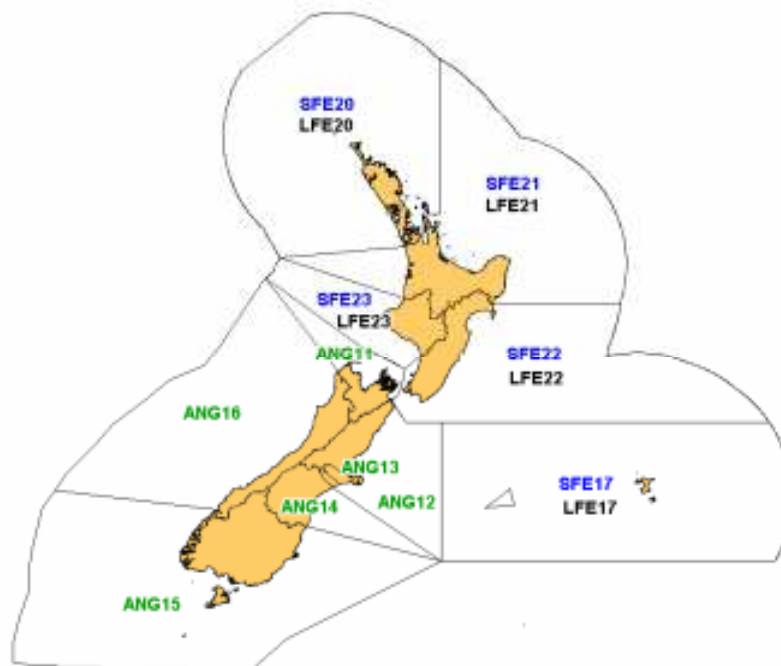


Figure 1: Quota management areas for shortfin and longfin eel stocks of New Zealand, as from 1 October 2004. SFE: shortfin eel, LFE: longfin eel, ANG: Combined shortfin and longfin eel stocks.

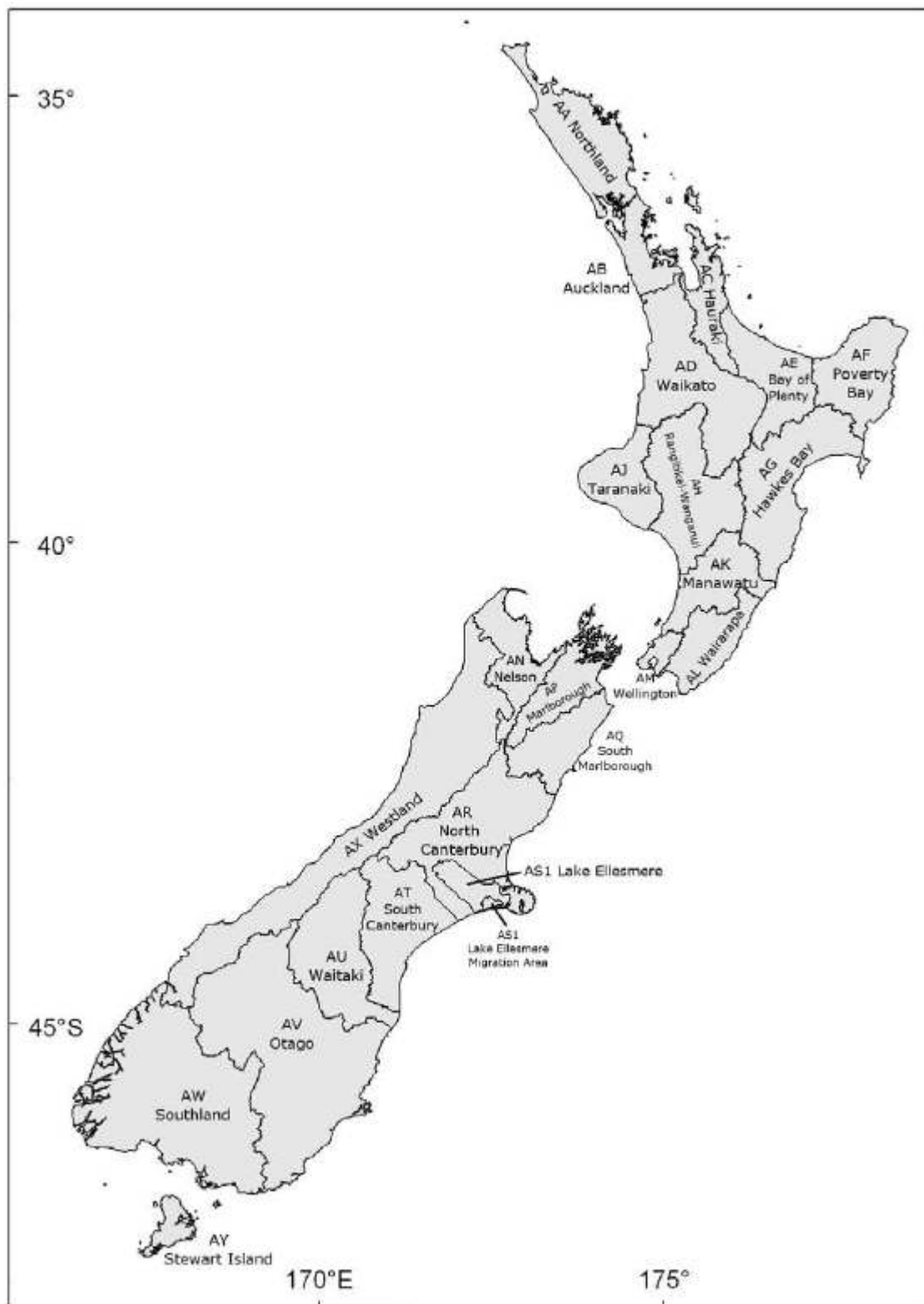


Figure 2: Eel statistical areas (ESAs) used for the reporting of commercial catch (Chatham Islands not shown).

### *Quota Management System*

70 The South Island eel fishery was introduced into the Quota Management System (QMS) on 1 October 2000 with shortfin and longfin species combined into six fishstocks (codes ANG 11 to

- ANG 16). Originally shortfin and longfin stocks in the South Island were to have been separately defined, but the limited timeframe for QMS introduction prevented this from occurring at that time. The Chatham Island fishery was introduced into the QMS on 1 October 2003 with two fishstocks (shortfin and longfin separated into SFE 17 and LFE 17, respectively). Considerable technical analysis of commercial catch information carried out prior to QMS introduction enabled the definition and allocation of stocks and harvesting rights by species in remaining areas of the country.
- 71 North Island eels stocks were introduced into the QMS on 1 October 2004. There are four stocks of shortfin eel (SFE 20-23) and four stocks of longfin eel (LFE 20-23) in the North Island.
- 72 The Australian longfin eel is combined as part of the shortfin eel stocks in the Chatham and North Islands, as this species has productivity characteristics closer to shortfins than longfins, and because the small quantity of catch is not sufficient to justify its own separate stocks.
- 73 Total allowable catches (TACs) were originally set under section 13 of the Act for the six South Island (Table 1) and two Chatham Island eel stocks. TACs for the North Island stocks were set under section 14 of the Act (Table 2), instead of section 13 on the basis that, because of the biological characteristics of eel species, it was not considered feasible to calculate maximum sustainable yield at that time.
- 74 The Minister of Fisheries determined the high level management objective for the North Island eel fishery on its introduction into the QMS on 1 October 2004. Initial catch limits for the North Island stocks were less than the average catch made in the period 1990-2002. In setting TACs under section 14 of the Fisheries Act 1996, the management objective is to improve the stock structure (ie, size composition) and abundance over the medium term (being 10 years), while bringing to a halt any decline in the fishery over the short term. The intention is to ensure that:
- a) the fishery is sustainably managed;
  - b) the fishery's availability to non-commercial fishers is improved;
  - c) the relationship with interdependent stocks is improved.
- 75 MFish continues to refine management settings to ensure that the best possible outcomes consistent with the purpose of the Act are produced. To further ensure that the eel fishery is sustainably used, commercial fishers have been prohibited from taking or possessing eels above 4 kg on a nationwide basis since April 2007. The same measure was previously introduced in the South Island in 1995. Further, a review of catch limits applying to North Island eel stocks was conducted in mid-2007 in order to ensure that both sustainability and utilisation outcomes were addressed with more certainty. The 2004 management strategy was reconfirmed by the subsequent Minister in September 2007 in undertaking a review of catch limits for the 2007-08 fishing year. The outcome from that review was to further reduce catch limits for the start of the 2007-08 fishing year.
- 76 In setting or varying any total allowable commercial catch (TACC) under section 21 of the Act, the Minister of Fisheries shall have regard to the TAC for that stock and shall allow for:
- a) Maori customary non-commercial fishing interests; and
  - b) Recreational interests; and,
  - c) All other mortality to that stock caused by fishing.
- 77 In setting the customary allowance for eels in the South Island stocks, the Minister took particular notice of the advice contained in the eel management plans. The Minister agreed with TWM that

the customary allowance be a fixed percentage of twenty percent of the TAC. Approximately two percent of the TAC is allocated to recreational fishing with the remainder constituting the TACC (Tables 1 and 2).

78 Table 1 and 2 outline the catch limits and allowances that apply to South, Chatham and North Island eel stocks.

Table 1: TAC, customary, recreational, TACC and other sources of fishing related mortality allowances for South Island eel stocks. Quantities expressed in tonnes (t).

Stock	TAC (t)	Customary allowance (t)	Recreational allowance (t)	Other sources of fishing-related mortality (t)	TACC (t)
ANG 11	51	10	1	Not set	40
ANG 12	55	11	1	Not set	43
ANG 13	156	31	3	Not set	122
ANG 14	45	9	1	Not set	35
ANG 15	151	30	3	Not set	118
ANG 16	80	16	2	Not set	63

Table 2: TAC, customary, recreational and other sources of fishing-related mortality allowances for North Island and Chatham Island eel stocks. Quantities expressed in tonnes (t).

Stock	TAC (t)	Customary allowance (t)	Recreational allowance (t)	Other sources of fishing-related mortality (t)	TACC (t)
SFE 20	148	30	28	4	86
LFE 20	39	10	8	2	19
SFE 21	181	24	19	4	134
LFE 21	60	16	10	2	32
SFE 22	121	14	11	2	94
LFE 22	34	6	5	2	21
SFE 23	36	6	5	2	23
LFE 23	34	14	9	2	9
SFE 17	15	3	1	1	10
LFE 17	3	1	1	0	1

## **Profile, use and value of each sector**

### **Customary Fishing**

#### **Profile of customary sector**

79 Eels (tuna) have been prized by Maori whānui since their ancestors first inhabited New Zealand, and are considered taonga. Eels are a very important food source for Maori. Maori developed

simple and effective methods of harvesting and a good understanding of the habits and life history of eels. Maori exercised conservation and management methods, which included seeding areas with juvenile eels and imposing restrictions on harvest times and methods.

- 80 Individual whānau regulated the harvest of eels and controlled access to their preferred or allocated fishing areas (rohe/takiwā) through rāhui (a temporary restriction) or tapu.
- 81 Traditional customary fishing methods included gaffing, patu (clubbing), matarau (spearing), pa tuna and rauiri (eel weirs), rau-matangi (temporary weirs), hīnaki, kaitara, kairere, and paka (eel pots), rohe (eel net), kōumu and awahakaheke (channel trap), pārua (dry channel), kohao (scoop net), toi, whakarino and moenu (bobbing using frayed flax with worms threaded on), rapu (groping with feet then catching with hands), rapu tuna (digging for tuna), and hau uruao (collecting stranded eels). Today, due to sociological, legal, environmental and technological changes, many of the traditional methods of eel fishing are not commonly used, or have been progressed through modern materials and production methods.
- 82 The tangata whenua who have manawhenua/manamoana over respective areas within the South Island fishery waters are Ngati Apa, Ngati Koata, Ngati Rarua, Ngati Tama, Ngati Toa, Te Atiawa, Rangitane o Wairau, and Ngati Kuia (collectively known as the Iwi of Te Tau Ihu), and Ngai Tahu.
- 83 The tribal structure and governance of Ngai Tahu is centered on Te Runanga o Ngai Tahu (tribal council). One elected official from each of eighteen papatipu runanga (local councils) make up Te Runanga o Ngai Tahu. Te Runanga o Ngai Tahu is representative of all Ngai Tahu whānui for all purposes and is responsible for the protection of the beneficial interests of all members of Ngai Tahu.
- 84 All of the eight iwi of Te Tau Ihu elect tribal councils. These act as authorised representatives on behalf other respective tangata whenua.
- 85 The existing South Island eel plans make the following points in relation to traditional eel fishing:
- Sustainable management was achieved by linking the harvesting of eels and access to eels to the life cycle of the eel and its migratory habits;
  - Harvesting rights were ascribed by an authority appointed by the people;<sup>3</sup>
  - Eels were a staple food of Maori;
  - The areas where eels were harvested are important tribal resources;
  - Eels were a valuable resources that played a significant part in social order;
  - Harvesting of eels is an expression of manaakitanga (hospitality), provides koha for visitors, and enhances of the mana of the hosts;
  - Eels were preserved and placed in hakiri (storage) for winter months;
  - Eels were collected for kaihaukai (exchange) with other Maori communities;
  - Certain Maori communities have specific cultural practices that must be adhered to before collecting eels. For example, feet had to be washed before catching eels at Okitika (Hokitika) and Okaritu (Okarito); and
  - Eels are collected to decorate tables for special occasions and particular ceremonies.

## Customary use

### *Customary regulations*

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<sup>3</sup> A form of regulation currently recognised by the nomination tangata tiaki under the Fisheries (South Island Customary Fishing) Regulations 1998.

- 86 Under s 10 of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992, the Minister has an obligation to recognise and provide for customary food gathering by Maori and the special relationship between tangata whenua and those places which are of customary food gathering importance (including tauranga ika and mahinga mātaitai).
- 87 Under the Fisheries (South Island Customary Fishing) Regulations 1999, tangata whenua may nominate persons to be appointed tangata tiaki/kaitiaki. Once a nomination is confirmed by the Minister, a tangata tiaki/kaitiaki may authorise any individual to gather food for customary purposes within the area (rohe) for which they have been appointed and gazetted.
- 88 Where no tangata tiaki/kaitiaki has been appointed, regulation 27A of the Fisheries (Amateur Fishing) Regulations 1986 prevails. This regulation allows an authorised representative of a Marae committee, Runanga or Maori Trust Board to authorise customary food gathering for a hui or tangi within the area they represent.
- 89 MFish has been actively involved in assisting iwi to utilise the Fisheries (South Island Customary Fishing) Regulations 1999 and 99.5% of the Ngai Tahu takiwā is currently gazetted (only a small part of North Canterbury is not gazetted).
- 90 There are 42 authorised representatives, under regulation 27A of the Fisheries (Amateur Fishing) Regulations 1986, in Te Tau Ihu. Te Tau Ihu has applied to gazetted these representatives as tangata tiaki/kaitiaki under the Fisheries (South Island Customary Fishing) Regulations 1999.
- 91 Maori in the North Island currently manage non-commercial customary food gathering for eel under regulation 27A of the amateur fishing regulations (the Crown has a legal obligation to recognise and provide for customary food gathering by Maori). The Fisheries (Kaimoana Customary Fishing) Regulations 1998, which Maori use to manage non-commercial customary fishing in the marine environment, did not previously apply to aquatic life taken from freshwater in the North Island.
- 92 A proposal to amend the Fisheries (Kaimoana Customary Fishing) Regulations 1998 so that the regulations extend to all waters, including freshwater, was released on 29 August 2007. The regulatory amendment was effective from 20 November 2008. Maori may now elect to better manage their customary fishing activities within the broader customary framework provided, instead of limited activities under regulation 27A of the amateur fishing regulations.
- 93 The range of fishing activities encompassed within the definition of customary fishing in the North Island is dependent on the regulatory framework that tangata whenua may elect to work under. Regulation 27A of the Fisheries (Amateur Fishing) Regulations 1986 limits the customary fishing activities to the taking of aquatic life for traditional hui and tangi only.

### *Allocations*

- 94 The allowances made for customary fishing purposes prior to the setting of a TACC for each stock are set out in Tables 1 and 2. These allowances have not changed since introduction of each of the respective eel stocks into the QMS.
- 95 Specific estimates of eel catch for customary fishing purposes (eg. hui and tangi) at the scale of a stock are not known. Fishing for customary fishing purposes is of on-going significance in several areas. Research has been commissioned to further ascertain the nature and extent of eel fishing for customary purposes.

96 Information provided to MFish about customary authorisations is used for the purposes of setting and varying sustainability measures or developing management controls. Table 3 below shows the customary harvest or landings from 1998 to 2006.

Table 3: Customary take as reported under the Fisheries (South Island Customary Fishing) Regulations 1999.

Fishing Year	Period	Unit Type	Quantity Approved	Actual Quantity Harvested
1997-98	January – March 1998	Unknown	287	287
1998-99	July – September 1999	Unknown	520	447
1999-00	April – June 2000	Unknown	3	3
2000-01	October – December 2000	Unknown	12	12
	January – March 2001	Unknown	50	0
	July – September 2001	Number	10	10
2001-02	October – December 2001	Number	6	6
2002-03	January – March 2003	Number	500	140
	April – June 2003	Unknown	120	27
2005-06	October – December 2005	Unknown	1750	46
	April – June 2006	Number	430	407
	April – June 2006	KG	1000	500
	July – September 2006	Number	15240	4901
	July – September 2006	Unknown	Unknown	149

97 The annual level of eel fishing in the North and Chatham Islands, for the purpose of supplying traditional hui and tangi, as authorised under regulation 27A of the Fisheries (Amateur Fishing) Regulations 1986, is not known.

98 Maori would often undertake eel fishing according to the lunar cycle. In such instances, fishing may be undertaken in only a few nights each month. Maori in several areas would also focus their collection activities around the hekē or migratory season, when adult eels in breeding condition made their way back to the sea. Traditionally, ceremonies were held following the first catch of the heke. However, Maori representatives from the Hauraki whānui observe that, in the Waihou River catchment, there was no need to target eels during the heke traditionally (prior to the 1940s), because they were always abundant and in good quality.

### Customary value indicators

99 Eels are a taonga species for Maori. Eels were used in traditional customary practices and represented many of their beliefs, whether this was an ancestor to a particular people, or as a taniwha, kaitiaki, or spiritual representation of wairua or mana for a particular waterway. In

several instances, particular rivers are the home to taniwha, some of which are said to be the ancestors, or tipuna, of the current generation. These taniwha may take the form of eels.

100 Elements of the river, including aquatic life, are regarded as taonga, as they identify that person's association with a particular place. It is a customary practice for Maori to identify themselves with a local mountain, river, and a key ancestral line, such as a chief or hapu. Rivers were also used for conducting certain rituals, and were used in some areas as demarcation lines between adjacent hapu. Accordingly, there is a collective responsibility amongst tangata whenua to ensure that taonga, such as eels, are managed in such a way that particular customs are observed and respected. This includes the obligation to ensure that sufficient fishery resources are available for future generations.

101 One of the customary practices of Maori is to provide food to marae visitors. Eels were highly prized as a food source on such occasions, but this practice today has now reduced. In the past these food sources were acquired locally, and the mana of the marae was held in high regard when such food was presented to visitors. Eels of a range of sizes were harvested, but Maori prefer larger eels. Some Maori have expressed the view that they would also like to see catch rates improve to levels they experienced in the 1960s. This would make harvest activities easier in readiness for marae functions, and would serve to restore or maintain the customary practices of the past.

### *Customary use*

102 In the existing South Island plans, representatives of customary and commercial fishers mutually agreed on what factors were valued from the fishery. These were:

- The return and maintenance of eel habitats to a state where the fishery can provide for the needs of future generations, and customary and commercial fishers;
- Eels in good numbers to satisfy cultural requirements;
- Eel as an integral element of customary food resources;
- The active involvement of local Maori communities in management of their prized taonga;
- The recognition of tikanga Maori in the management of the eel fishery;
- The restoration of the mauri and mana of the eel fishery and of the South Island Maori peoples;
- The protection of migrating eels, with a particular focus on the protection of migrating long-finned female eels; and
- The recognition of the places where eels were harvested as an important tribal resource.

103 Any changes to the factors valued from the fishery by customary fisheries or any additional values will need to be discussed with the customary sector during the review process.

104 The existing South Island eel plans noted that, without exception, customary eel fishers within the South Island regarded customary harvests to be in a better state historically than at present.



### Taiapure-local fishery

- 105 Taiapure-local fisheries only apply to littoral and estuarine areas, and do not extend to freshwater. Eels do spend some of their time in estuarine areas. There are no taiapure-local fisheries in the North Island that typically extend to estuarine waters where eels are a significant component of the fisheries resources in the taiapure-local fishery. However, the taiapure-local fisheries area in the Waikare Inlet of the Bay of Islands would contain some suitable eel habitat, as would the Kawhia Aotea Harbour taiapure-local fishery.
- 106 Huakina Development Trust made an application dated 29 February 1992 for a taiapure-local fishery for the lower Waikato River delta area up to the confluence with the Mangatawhiri River (downstream from Mercer). This application has been inactive since 1995 when MFish sought clarification as to whether the applicant wished to continue with the application. MFish advised at the time that it was likely the application for a taiapure-local fishery for the Manukau Harbour would be recommended for decline. There were some similarities between these two applications.

### Deeds of settlement and fisheries protocols

- 107 The Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 (Settlement Act) gave effect to recognised Maori fishing rights as set out in the Treaty of Waitangi. Specifically, Sections 9 and 10 set out final settlement of commercial rights, and ongoing obligation for customary non-commercial rights through customary regulations and associated policy.
- 108 Many of the recommendations in the existing South Island eel plans that directly addressed Maori concerns relating to the introduction of eels into the QMS are contained in the Ngai Tahu Deed of Settlement (the Deed of Settlement), entered into by Ngai Tahu and the Crown in 1997. The Ngai Tahu Settlement area is detailed in Figure 3 (this is not the Ngai Tahu Settlement map). Certain provisions of the Deed of Settlement were given effect by the Ngai Tahu Claims Settlement Act 1998. Legislative obligations on the Ministry of Fisheries arise from the general obligation placed on the Crown under the Deed of Settlement, Settlement Act and associated legislation.
- 109 Te Tau Ihu Iwi have yet to settle with the Crown.

Figure 3:



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- 111 The Crown recognises the importance of eels to iwi/hapu through a range of other individual Treaty settlements. MFish has recognised that certain iwi/hapū have a customary non-commercial interest in the eel fishery within a fisheries protocol area relevant to that hapū/iwi. In particular, the possibility of the enhancement of the eel fishery through the transfer of elvers, and the possibility of facilitating the farming of eels, is provided for in some fisheries protocols (i.e. the Ngāti Mutunga, Ngāti Ruanui, Ngāa Rauru Kaitahi, Ngati Tama, and Te Uri o Hau fisheries protocols).
- 112 The Te Arawa Lakes Settlement Act 2006 provides for the management of certain indigenous species ("included species"), including eel, in the Te Arawa fisheries area for the purpose of non-commercial food gathering. The Te Arawa Lakes (Fisheries) Regulations 2006 enable the Trustees to undertake specified management functions, including:
- Making certain appointments relevant to the management of specified fisheries; and
  - Making bylaws, including bylaws to prohibit or restrict fishing as necessary for the sustainable utilisation of included species.
- 113 In further Treaty settlements, MFish has agreed to meet with Ngati Tuwharetoa (Bay of Plenty) and Ngati Awa to report to both iwi on the management of the eel fishery in their respective Protocol Area. The intent of such a meeting is to discuss any matters raised by both iwi about the management of the eel fishery in the Protocol Area, including the possibility of enhancing the fishery by the transfer of elvers.

## *Recreational Fishing*

### Profile of the recreational sector

- 114 Maori are the principal ethnic group that fish for eels. The present legal distinction between fishing activities for customary purposes (ie, traditional hui and tangi only) and recreational purposes (general sustenance, fun) in the North and Chatham Islands means that much of the contact MFish has with recreational fishing interests are people who are of Maori descent.

- 115 Due to ease of access, recreational eel fishing is likely to be concentrated near centres of population. It is likely that tangata whenua take eels recreationally, perhaps to a greater extent than under customary authorisation.
- 116 The allowance (in tonnes) made for recreational interests in each eel stock are set out in Tables 1 and 2. Fishing activities extend from high country streams to estuarine and harbour areas.
- 117 Non-commercial fishers use a wide variety of fishing methods including hand-gathering (including rama tuna, gaffing, rippie), lines, spear, hīnaki (eel pots), toke or bobbing, and eel weirs. Eels (also known as tuna) are a very important food source for Maori. Maori developed simple and effective methods of harvesting and a good understanding of the habits and life history of eels. Fishing methods included ahuriri (eel weirs), hinaki (eel pots) and other methods of capture. Maori exercised harvest management methods, which included seeding areas with juvenile eels and imposing restrictions on harvest times and methods.
- 118 For many, eel fishing principally forms a recreational activity in learning about the natural environment and self-sufficiency in the great outdoors. Eel fishing competitions are also held in particular areas. During the 1990s, new immigrants within the Auckland metropolitan area took a greater interest in the harvest of eels for food. This interest has continued through to the present day.
- 119 Eel fishing by Maori was widespread in the North Island except in Lake Taupo, Lake Rotorua and the catchment areas around Ruatahuna (Urewera high country) where the species did not naturally occur. Maori would carry out kaitiaki duties over waterways within their rohe for their sustenance and benefit. In several localities, marae were sited adjacent to such fishing grounds (eg. Lake Waahi (Waikato), and Lake Poukawa (Te Hauke, Hastings)), or fishing parties would occupy a particular location on a seasonal basis. The use of sizable eel weirs was evident on several river systems (e.g. Whanganui, Mohaka and Waikare (Hawke Bay)), although the use of such methods was almost entirely discontinued during the early 20th century. Fishing locations were highly prized. The waterways and eels are said to be integral to the mana of local Maori in such areas (eg. the interest of Te Ika Whenua in the Rangitaiki, Wheao, and Whirinaki Rivers).
- 120 The quantity of eels taken by Maori decreased in the 1900s as lifestyles associated with the development of a modern society were gradually adopted. However, the traditional use of the eel resource would also have been affected by the major hydro-electric and land development practices of the early 20th century. These practices led to what is understood to be the loss of approximately 90% of wetland areas across New Zealand. The effects of these non-fishing related activities have been identified by Maori as contributing factors to the decline in the state of the eel fishery and its underlying aquatic environment (e.g. Wanganui River, Waimiha River).
- 121 This is partly illustrated in the Hauraki Plains where river channelling and drainage activities of the late 19th century and early 20th century were followed with intensive pastoral development and mining activities (e.g. Ohinemuri River catchment). Many wetland areas were lost and deforested, or affected by run-off. Despite this, representatives of Maori from the Hauraki rohe advise that eels were one of the main species taken in significant quantity for a broad range of purposes up until the Second World War. These representatives also indicate that eels were able to adapt to these modified environments until the advent of further drainage schemes (e.g. Waihou catchment), and commercial fishing for these species, from the 1960s. Changing lifestyles, and the reduced availability of eels given the cumulative impacts of land development practices and overall fishing pressure, has meant that Hauraki Maori do not harvest eels as much as historical times.

- 122 A survey of Maori within the Ngati Maniapoto rohe conducted in 1997 indicated that the quantity of eels taken for whanau, hapu and personal use purposes by survey participants was estimated at 9.0 tonnes per annum prior to 1965 (based on information provided by 54 fisher responses) compared to 5.3 tonnes per annum for the period following 1965 (based on information provided by 60 fisher responses). The average catch by a fisher when taking eel for this purpose was 167 kg in the period prior to 1965, and 88 kg for the period after 1965 through to the time of the survey (1997). Responses at the hui held to collect this research information also indicate that these fishery interests are finding it difficult to catch eels for personal requirements.

### Recreational use

- 123 There is no minimum legal size for eels taken recreationally or requirement to have escapement tubes incorporated into fyke nets or hinaki. The main restrictions on recreational fishing for eels are:
- Daily bag limit of six eels per person<sup>4</sup>;
  - A minimum net mesh size of 12 mm<sup>5</sup>;
  - Fishers may use only one fyke net or hinaki (other methods are allowed).
- 124 Recreational fishers do not have to report catch, and there is no monitoring system to estimate catch. There have been national recreational fishing surveys in a number of years, however eel fishing has not been included in these surveys. The number and location of eel fishers, together with quantitative estimates of the recreational eel catch is unknown.
- 125 The existing South Island plans assumed that recreational eel fishing occurred at very low levels, but concerns were expressed that with the increasing ethnic diversity in New Zealand and the ease of access to eels, this situation may change. The recreational use of the eel resource in the North Island is well known among the various provincial communities.
- 126 National recreational fishing surveys do not include fishing in freshwater. Any surveying of recreational eel catch is likely to require a survey specifically designed for that purpose.

### Recreational value indicators

- 127 Factors that recreational fishers value from the fishery can be determined from collaboration with the recreational sector, but are likely to include good catch rates, good sized fish, available in good quantities, good condition fish, easy access, outdoor experience and low participation costs.
- 128 The taking of eels for food continues to be of importance for Maori, particularly in rural areas. Maori have a number of names for eels, and commonly refer to eels as tuna. There are a significant number of Maori in the North Island, some of which continue to use this resource.
- 129 There are several areas where eel fishing continues to play a significant role in the subsistence of rural communities. There is also an awareness that some fishery interests do not fish as often as they would like because they find it difficult to catch sufficient eels in the time available. Maori have indicated a desire to see better catch rates than recently experienced so they can more easily catch what they need for the sustenance of their whanau.

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<sup>4</sup> Regulation 6A of the Fisheries (Amateur Fishing) Regulations 1986

<sup>5</sup> Regulation 6A of the Fisheries (Amateur Fishing) Regulations 1986

- 130 A survey made available to the Waitangi Tribunal for the Mohaka River Report (1992) concluded that fishing from the river (principally eels and kahawai) was worth about \$62,000 per year, with families fishing on average 2.8 times per week. Survey participants noted that they viewed the fishery resources as gifts from the river, rather than as commodities to be expressed in monetary terms.
- 131 Eels are also valued as a species to catch by enthusiasts involved in outdoor pursuits (ie, bushcraft, camping). In addition, competitions are held in various provincial communities aimed at catching the largest eel. MFish encourages participants to return large eels in a live state if they are not wanted for food. An MFish brochure has been produced in October 2008 for this purpose.

## *Commercial Fishing*

### Profile of Commercial sector

- 132 The commercial eel fishery has undergone a considerable change in participation levels as commercial fishers elected whether to continue with their fishing interests following QMS introduction.
- 133 In the fishing year following QMS introduction (2000-01 South Island; 2004-05 North Island), a number of commercial eel fishers elected to sell their harvesting rights, and retire from the commercial fishery. The number of quota share holders at the time the stocks were introduced is shown in Table 4. The number of quota share holders has gradually reduced over time, with some further attrition evident in the 2007-2008 fishing year, following reductions to the commercial catch limits (ie, the TACCs) applicable to North Island stocks from 1 October 2007.
- 134 Some quota share holders have elected to sell a portion or all of their annual catch entitlement (ACE) to third parties, meaning that the number of people who have undertaken commercial fishing before the end of a fishing year may exceed the number of quota share holders. However, some of the people who have purchased eel stock ACE have limited holdings. Consequently, these fishers have little potential to undertake eel fishing activity for any sustained period of time (ie, a matter of weeks or months only) within a fishing year.

### Commercial use

#### *Allocation of commercial harvesting rights*

- 135 Commercial harvesting rights were allocated in the form of quota shares upon entry into the QMS. Quota holders are allocated annual catch entitlement (ACE) based on the amount of quota they hold and the TACC, which can then be leased for the year. The number of New Zealand eel stock quota share owners and ACE holders at entry into the QMS and in 2006 and 2008 are shown in Table 4.

Table 4: Number of New Zealand eel stock quota share owners, and number of annual catch entitlement (ACE) holders, at entry into QMS (North Island stocks, 1 October 2004; South Island stocks, 1 October 2001 (entered QMS 1 October 2000 but ACE not introduced until 1 October 2001); Chatham Islands, 1 October 2003); and at the intervals of 1 October 2006, and 1 October 2008.

Eel Stock	Number of quota share owners at entry into the QMS	Number of quota share owners as at 1 October 2006	Number of quota share owners as at 1 October 2008	Number of quota share owners as at 1 October 2009
LFE17	3	4	4	4
LFE 20	33	18	14	14

LFE 21	28	13	10	10
LFE 22	18	15	13	13
LFE 23	17	8	7	7
SFE17	3	3	3	3
SFE 20	33	18	14	15
SFE 21	28	13	10	10
SFE 22	18	16	14	14
SFE 23	19	9	7	7
ANG 11	8	5	5	5
ANG 12	11	10	10	10
ANG 13	9	7	7	7
ANG 14	11	9	9	8
ANG 15	21	18	16	16
ANG 16	11	8	8	8

Eel Stock	Number of ACE holders at entry into the QMS	Number of ACE holders as at 1 October 2006	Number of ACE holders as at 1 October 2008	Number of ACE holders as at 1 October 2009
LFE17	3	4	4	4
LFE 20	33	18	14	14
LFE 21	28	13	10	10
LFE 22	18	15	13	13
LFE 23	17	8	7	7
SFE17	3	3	3	1
SFE 20	33	18	14	10
SFE 21	28	13	10	9
SFE 22	18	16	14	7
SFE 23	19	9	7	2
ANG 11	9	5	6	5
ANG 12	12	10	11	10
ANG 13	10	5	12	7
ANG 14	12	9	10	8
ANG 15	22	18	17	16
ANG 16	13	8	10	8

136 There are two main licensed fish receivers (LFRs) involved in the commercial eel fishery in the North Island. One of these LFRs has a processing plant in the Waikato, and the other uses a processing plant in Levin. For reasons of economic viability, an Auckland processing plant was closed by May 2008. Both the main LFRs receive eels from across the North Island. Both companies have significant quota share holdings for most stocks across the North Island, so there is a reasonable amount of vertical integration of catching and processing capability.

137 The South Island eel fishery consists of a relatively small number of quota share and ACE holders (Table 4). The commercial eel fishery in the South Island predominantly revolves around two licensed fish receivers (LFRs). One of these has significant quota share holdings for most South Island eel stocks indicating a reasonable level of vertical integration in this industry. The South Island Eel Industry Association represents a number of commercial fishers, and was recently reactivated after a few years when membership had lapsed.

### *Aggregation limits*

- 138 Under the Act, various aggregation limits apply to the holding of quota shares for a stock. For eel stocks, no person is entitled to own a number of quota shares for any one stock the total quota weight equivalent of which is more than 35% of the combined TACCs for every stock of that species.

### *Fishing year*

- 139 The fishing year for all eel stocks starts on the 1 October except for Lake Ellesmere which has a fishing year start date of 1 February.

### *Other controls*

- 140 Commercial eel fishers in the North Island have voluntarily agreed to a 300g minimum size limit, this was scheduled for full implementation from 1 October 2009. There are several areas closed to commercial fishing. A range of other controls on commercial eel fishing are outlined in later sections of this document.

### *Fishing Methods*

- 141 A commercial fisher will set several fyke nets overnight and check them usually on a daily basis. Eel catch may be gathered up and stored in a labelled holding net for several days in the event that the commercial fisher travels to the fish receiver only periodically. Alternatively, the catch may be picked up in a specially built eel tanker. Commercial fishers look to fish an area for a few nights before moving to a new area, and will typically only return to the area when the eel numbers in the area have replenished – this may be a period of once every six months to every two years. Fishing over a short period at one site has the potential to significantly reduce the population of resident fish.

### *Commercial access to conservation areas*

- 142 Commercial eel fishing is done within certain conservation areas, but a concession from the Department of Conservation is required (s 170, Conservation Act 1987). A conservation area means any land or foreshore that is land or foreshore for the time being held under the Conservation Act 1987 for conservation purposes or land in respect of which an interest is held under the Conservation Act 1987 for conservation purposes.

### *Aquaculture interests*

- 143 Commercial interests have expressed a desire to collect small eels for the purpose of aquaculture. Previous aquaculture ventures in the mid to late 1970s were not successful. As commercial fishers are not able to take or possess eels less than a minimum legal size (i.e. 220 gm), aquaculture interests may only obtain eels of that size or greater to farm at present. Aquaculture operations would be reliant on eels caught from the wild fishery for the foreseeable future because it is not possible at present to breed eels in captivity and grow them on to a marketable size. One captive breeding program in New Zealand has been successful in breeding eels recently, but the larvae die at several days of age.
- 144 Prior to the introduction of a minimum legal size for commercial fishing in 1981, juvenile eels, mainly elvers, were collected for the purpose of aquaculture. Unpigmented 'glass eels' are the juvenile lifestage prior to becoming (pigmented) elvers, and then small eels, upon feeding in freshwater environments. Glass eels are valued for aquaculture purposes because they are

disease-free. Similarly, both glass eels and elvers are relatively numerous per unit weight caught. These early life stages are relatively easy to catch as they migrate upstream in numbers. However, any such use of this resource has implications for the sustainable use of the wild fishery.

- 145 Elvers are observed congregating beneath obstructions to fish passage. Where fish passage is not possible at these sites, permission has been granted to enhance the wild fishery through their collection and release, usually above the obstruction in the waterway. At sites where elvers are not able to take refuge or migrate further upstream, they are likely to be lost to the fishery.

### Commercial use

- 146 The national commercial fishery expanded from the early 1960s (first exports in 1965), peaking in 1975 at 2,434 tonnes (Fishing Industry Board export figures). Practically, the entire fishery has been export driven with predominant markets in Europe and increasingly Asia.
- 147 At its peak in the 1970s, there were up to 35 factories processing eels. Today, that number has dropped significantly. In the North Island, two main companies use two facilities (Te Kauwhata and Levin). The Whenuapai (Auckland) plant was closed by May 2008, and a Stratford plant closed in 2003. The commercial eel fishery in the South Island predominately revolves around two licensed fish receivers (LFRs). One of these has significant quota share holdings for most South Island eel stocks indicating a reasonable level of vertical integration in this industry. The South Island Eel Industry Association represents a number of commercial fishers, and was recently reactivated in 2008 after a few years when membership had lapsed.
- 148 Freshwater eels are listed on Schedule 6 of the Fisheries Act 1996. This enables a commercial fisher to return eel catch to the waters from which they are taken if they are likely to survive and the return takes place as soon as practicable. This allows catch to be matched to the demands of LFRs and allows fishers to return eels that are not of a high quality and to ensure sustainability of a population (ie. fishers have a voluntary agreement to return longfin in a spawning migrating condition).
- 149 Unlike most other species, eels are almost always landed to LFRs in a green (unprocessed) state. Therefore, the applicable conversion factor for eels is 1.
- 150 Commercial fishing activity in the Northland, Auckland and Waikato areas contributes a significant proportion of the overall commercial catch from the fishery. The commercial fishery is seasonal south of, and including, the central North Island given the cooler water temperatures experienced during winter, and the inactivity of eels in such conditions. In the upper North Island, fishing occurs throughout the year, although fishing success is likely to be more productive during the extended summer period.
- 151 The national catch has been relatively stable over the 1980s and 1990s at an average of 1370 tonnes (Figure 4). Overall catch has not reached that level in more recent times, mainly as a result of the progressive introduction of all eel stocks into the QMS in October 2000, October 2003, and October 2004, and further reductions to the commercial catch limits in the North Island from 1 October 2007.
- 152 With the changing nature and extent of the eel industry, the national catch has reduced to an annual level of less than 700 tonnes. In addition, commercial catch in some fishing years was affected by drought conditions (e.g. 1997-98, 2007-08), and difficult international market conditions, as experienced in the 2001-02 fishing year. There is also some evidence that the



global economic recession affected export sales for eel products for the first six weeks of the 2008-09 fishing year.

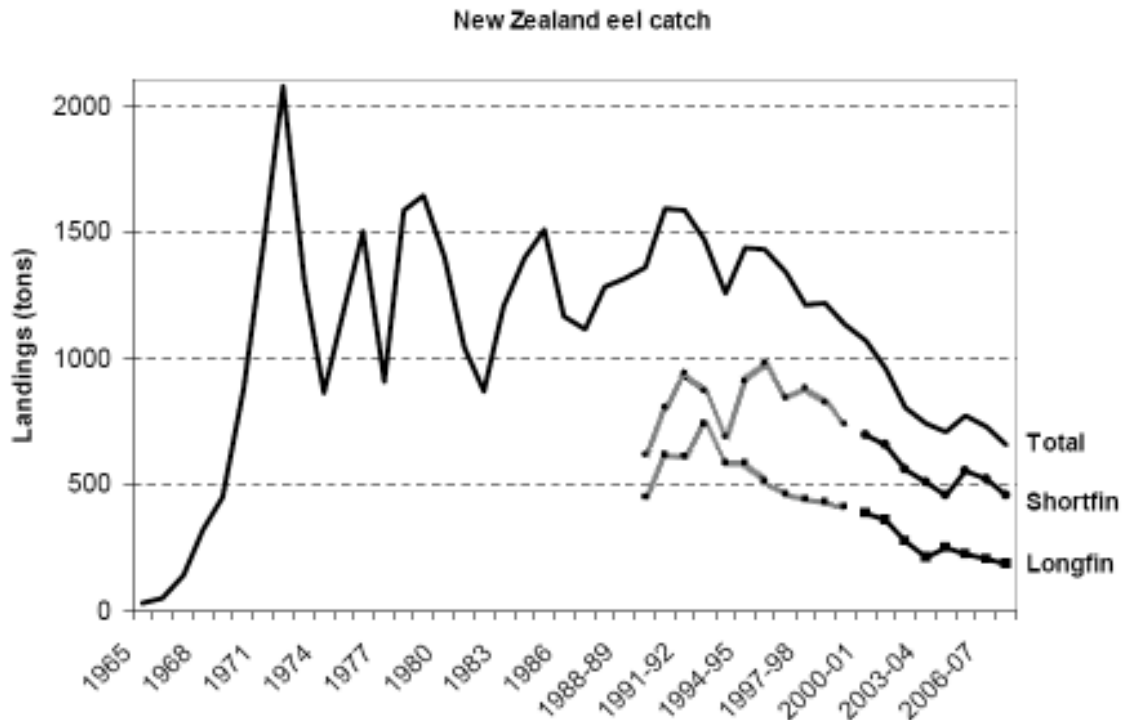


Figure 4: Total eel landings from 1965-2007/08, as well as separate shortfin and longfin landings from 1989-90 to 2007-08. The grey lines represent estimates for the period prior to the introduction of Eel Catch Landing Return (ECLR) forms, and were generated by pro-rating the unidentified eel catch by the LFE:SFE ratio.

153 Approximately a half to two-thirds of the national commercial fishery, by tonnage landed, is taken from the North Island. This relative proportion has since reduced following introduction and refinement of sustainability measures (ie. 2007-08 catch limits) applicable in the North Island. The processors’ estimates of the tonnage of eels received from North Island waters between 1991-92 and 1999-00 are outlined in Table 3. Since the introduction of eel stocks into the QMS, data quality has improved significantly.

Table 5: Fishing year estimates of commercial eel catch (tonnes) from North Island and nationally, using data compiled from data from individual processors during the fishing years 1991-1992 to 1999-00, and statutory returns (i.e. Monthly Harvest Returns and Licensed Fish Receiver Returns). Data for 2000-2001 fishing year (^) derived from Licensed Fish Receiver Returns (LFRR). Data marked with # may contain a small quantity of catch from the Chatham Islands.

Fishing Year	North Island eel landings – Monthly Harvest Returns	North Island eel landings – processor records	Processor total for New Zealand	Licensed Fish Receiver Return total for New Zealand (not corrected to take into account different fishing year for ANG 13 (Ellesmere))
1991-92	-	989.2	1620.9	1585.2
1992-93	-	865.3	1462.3	1465.9
1993-94	-	744.1	1333.8	1255.0
1994-95	-	1004.4	1515.2	1438.3

1995-96	-	962.4	1480.9	1429.0
1996-97	-	830.3	1248.7	1342.1
1997-98	-	794.6	1153.1	1209.9
1998-99	-	804.2	1185.4	1218.9
1999-00	-	723.2	1119.2	1133.5
2000-01	767.5^	-	-	1070.9
2001-02	671.2#	-	-	1018.2
2002-03	506.7	-	-	848.0
2003-04	454.8	-	-	728.7
2004-05	426.4	-	-	709.0
2005-06	495.9	-	-	787.2
2006-07	440.1	-	-	738.6
2007-08	372.3	-	-	647.1
2008-09	301.9	-	-	474.1

### *Commercial catch*

154 Figures 5 and 6 illustrate the quantity of commercial catch taken from each eel stock in the North Island from the 1990-91 fishing year (1 October 1990) through to the end of the 2008-2009 fishing year (30 September 2009). The data (up until 2007-08) used in Figures 5 and 6 is tabulated in an Appendix to section 1.

155 The decline in North Island commercial eel catch in the 2000s is likely to have been affected by several factors of consequence, including:

- a) the relatively low international market price for eels in the early 2000s;
- b) the catch restrictions introduced to lower the commercial eel catch in the North Island (October 2004), with further reductions from October 2007; and,
- c) the industry rationalisation (both fishers and processors) that has occurred, with many fishers opting to leave the fishery.

156 A small increase in commercial eel catch in the North Island is evident in the 2005-06 fishing year. A large part of the industry's rationalisation had passed by this time as many fishers retired once eel stocks were introduced into the QMS. However, some further industry rationalisation, in terms of number of quota share holders, has been evident following further reductions in commercial catch limits from the start of the 2007-08 fishing year. In addition, some quota share holders in some areas may have elected not to fish their Annual Catch Entitlement for a particular stock or stocks.

157 The Chatham Island commercial fishery is very small with less than one tonne harvested annually.

Figure 5: Estimated commercial catch (tonnes) of shortfin eel (SFE) stocks of the North Island between 1990-91 and 2008-09 for each quota management area (QMA). The QMA entitled SFE 20 is Northland/Auckland; QMA SFE 21 is Waikato/Poverty Bay; QMA SFE 22 is Hawke Bay/Wellington; QMA SFE 23 is Taranaki/Rangitikei-Wanganui. The red line represents introduction of total allowable commercial catch (TACC) from 2004-05, as reduced in 2007-08. Refer to Appendix 1 for data source and calculation.

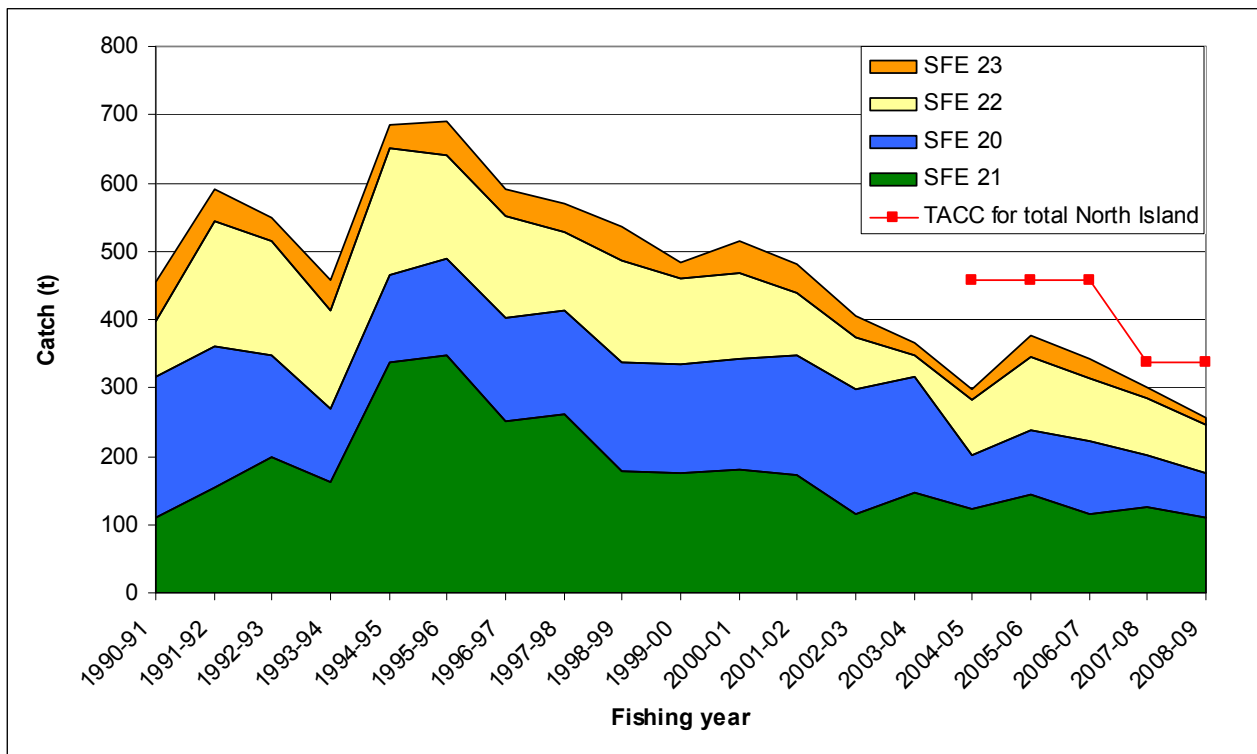
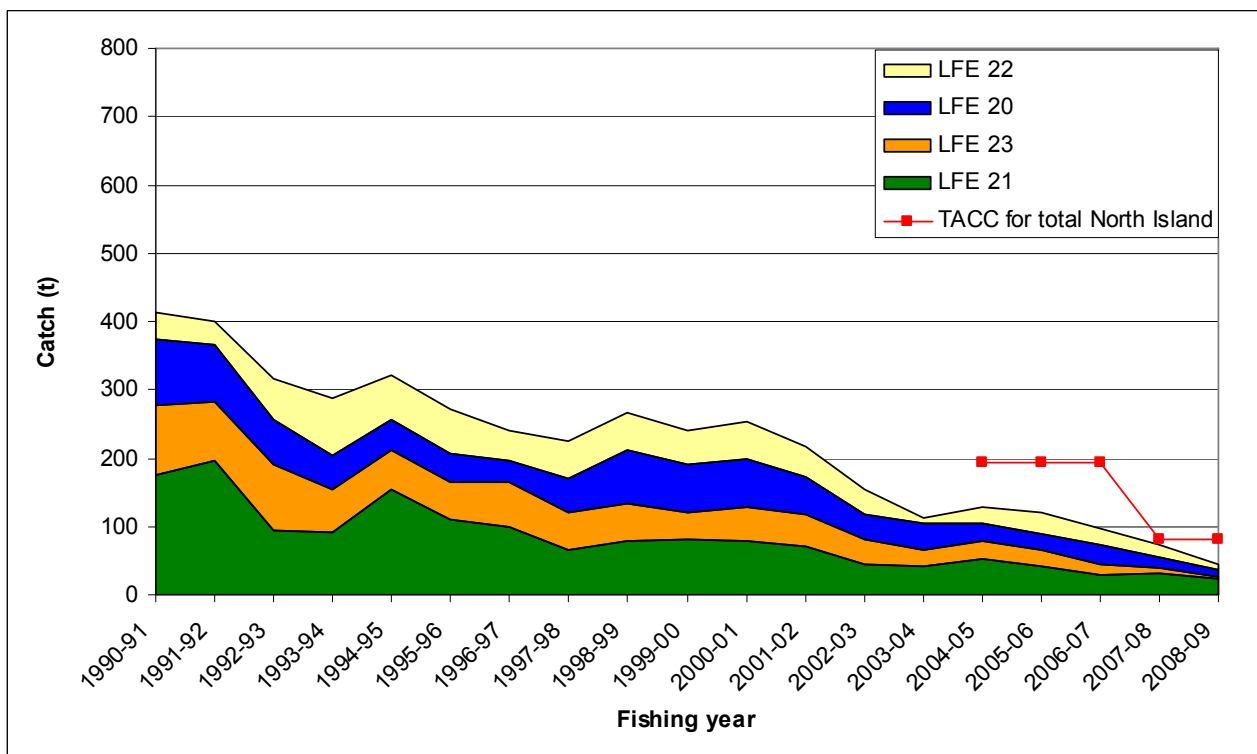
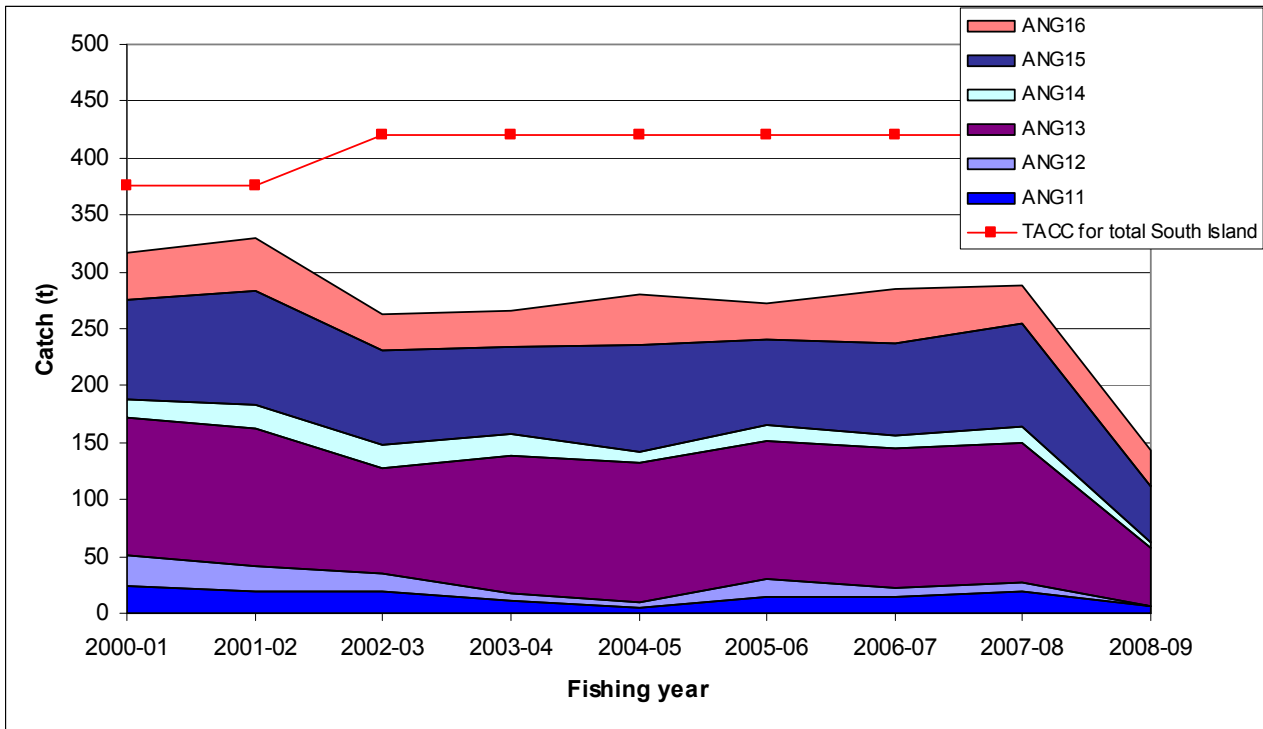


Figure 6: Estimated commercial catch (tonnes) of longfin eel (LFE) stocks of the North Island between 1990-91 and 2008-09 for each quota management area (QMA). The QMA entitled LFE 20 is Northland/Auckland; QMA LFE 21 is Waikato/Poverty Bay; QMA LFE 22 is Hawke Bay/Wellington; QMA LFE 23 is Taranaki/Rangitikei-Wanganui. The dotted line represents introduction of total allowable commercial catch (TACC) from 2004-05, as reduced in 2007-08. Refer to Appendix 1 for data source and calculation.



158 Figure 7 illustrates the quantity of commercial catch taken from each eel stock in the South Island for the period beginning with the start of the 2000-01 fishing year (1 October 2000) through to the end of September 2009. Commercial eel fishers in the South Island are almost entirely reliant on the use of fyke nets or hīnaki (eel pots). A very small amount of fishing effort (less than 1 %) targeting eels uses set nets, however, this catch is not significant in the overall commercial eel fishery.

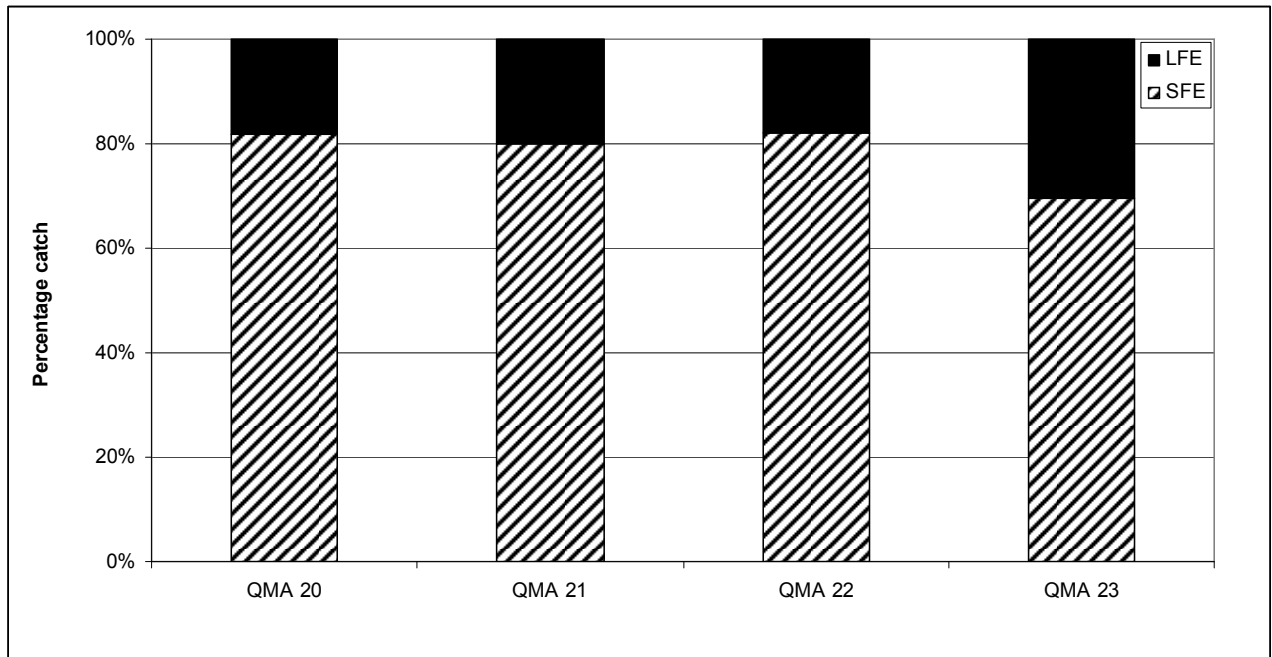
Figure 7: Commercial catch (tonnes) in each of the QMAs in the South Island from 2000-01 to 2008-09.



### Species composition

159 Overall North Island species composition in 2006-07 was 23% longfin and 77% shortfin. Species composition expressed by ESA indicates that shortfin dominated catches in all areas except ESA AJ (Taranaki), where longfin made up 82% of the catch. In all other ESAs shortfin made up between 71% and 86% of the catch (Figure 8). Records from South Island catches are under one code ANG, so species composition cannot be determined based on catch recorded against the stock code. This information has been derived through other analyses, which are not presented here.

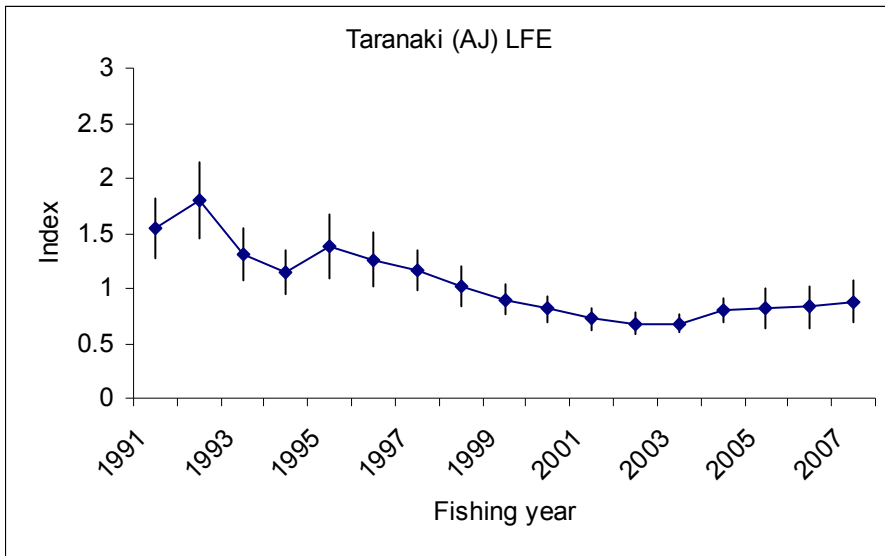
Figure 8: Commercial catch of shortfin (SFE), longfin (LFE), and landings in 2006-07, grouped by statistical area. Data are from North Island processors records.



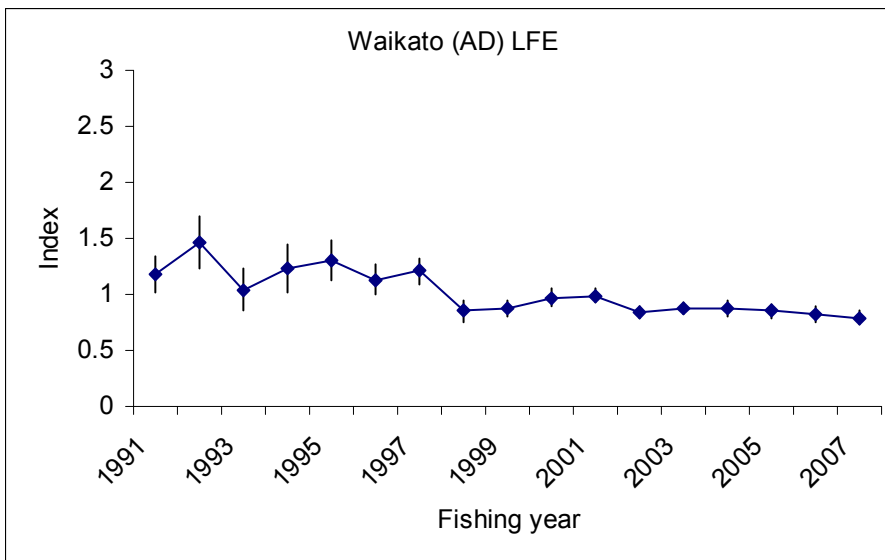
- 160 An analysis of catch per unit effort (CPUE) for the commercial fishery has recently been updated for shortfin (*Anguilla australis*) and longfin (*A. dieffenbachii*) for all North Island ESA's for the fishing years 1990-91 to 2007-08. Shortfin showed:
- no trends in CPUE for four areas (Auckland; Hauraki; Waikato; Taranaki),
  - declines followed by recent increases for four areas (Bay of Plenty- Poverty Bay; Hawkes Bay; Manawatu; Wairarapa),
  - And general increases for two areas (Northland and Rangitikei-Wanganui) (graphs available).
- 161 Longfin showed a history of declining CPUE for all 10 statistical areas analysed with a flattening of CPUE in recent years and in Taranaki (Figure 9a) a slight increase. The historical decline was steep for Hauraki, and Hawke Bay, and moderate for all other areas except Waikato (Figure 9b), where the decline was slight. In the South Island, both Westland and Otago show an increasing CPUE over the last 5 to 7 years although Otago shows a slight decline in 2006 (Figures 9c & d).
- 162 The trend of an increase in CPUE for shortfin and a flattening off for longfin occurs since the introduction of North Island eel stocks in to the QMS in 2004.

Figure 9: CPUE indices for longfin eels in Taranaki and Waikato.

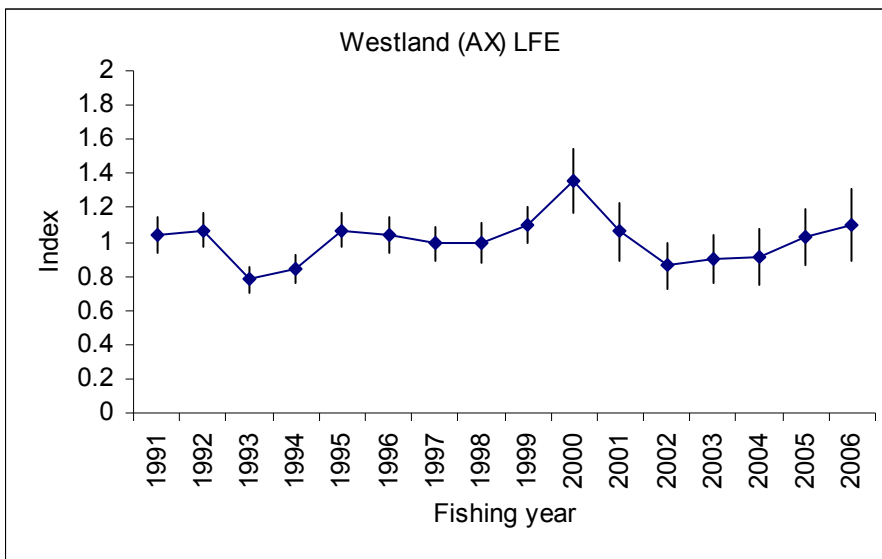
a)



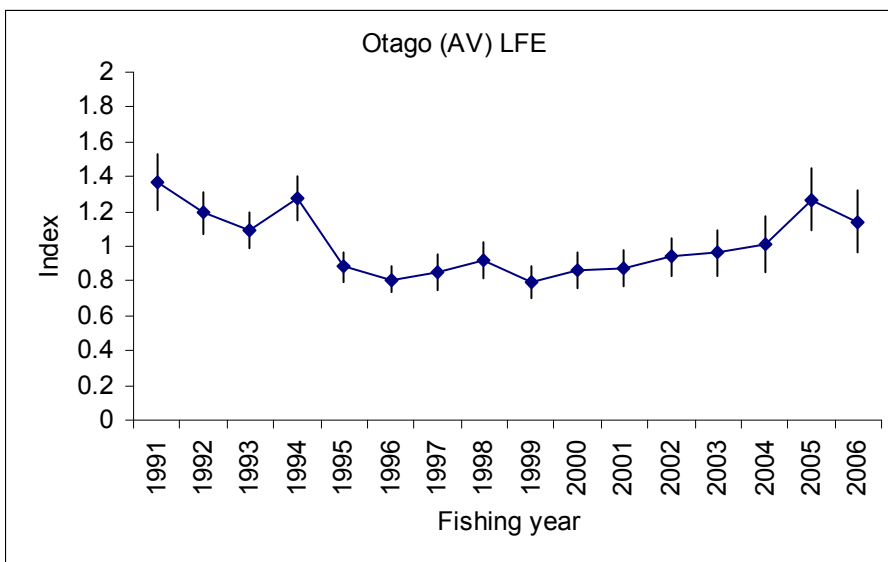
b)



c)



d)



### *Management controls on commercial use*

- 163 The commercial eel fishery has been considered fully developed since at least the early to mid-1980s. Access to the commercial fishery through the issue of a fishing permit had been progressively restricted, through to QMS introduction, in response to sustainability concerns. Part-time fishers were excluded from the fishery in 1984, and a statutory moratorium on access to the fishery by new commercial fishers was introduced in late 1988 (s 65, Fisheries Act 1983). This was further strengthened by the broader statutory moratorium on access to fisheries not subject to the QMS, passed through Parliament in late 1992.
- 164 The use of agents or employees fishing under the authority of permit holders was clarified after 1991. The intent was to further restrict fishing effort to no more than that experienced during the late 1980s (particularly the 1989-90 fishing year). This restriction on the number of agents or employees fishing under the authority of a fishing permit does not continue to apply to eel stocks as they are managed in the QMS and the level of catch is directly constrained, regardless of the number of people involved in their harvest.

- 165 Permit holders were also restricted to areas of historical activity throughout the 1990s, with permit conditions specifying Eel Statistical Areas (ESAs) where fishing could be undertaken. This restriction became redundant on entry of eel stocks into the QMS. This is because commercial catch within a QMA is constrained through the TACC for the stock, and commercial fishers have access to QMAs based on the quantity of harvesting rights held for the particular stock.
- 166 Further effort restrictions introduced in the early 1990s included a limitation on the use of additional fishing vessels within Fishery Management Areas 1 and 9 for shortfin and longfin stocks. There was a concern that the use of additional vessels in these areas would increase fishing effort in waterways not easily accessed by foot, in addition to the general risk that some permit holders might register further vessels to increase their catching potential. This restriction was removed on entry of northern eel stocks into the QMS from 1 October 2004.
- 167 Access to undertake a commercial activity is restricted on a formal basis in areas managed as Government Purpose Reserves, Wildlife Refuges, or other stewardship areas, as typically administered by the Department of Conservation (eg, Reserves Act 1977).
- 168 Commercial fishing is prohibited in National Parks. In the North Island, this includes Egmont, Wanganui, Urewera, and Tongariro, although eels are likely to be absent from much of Tongariro National Park. The location of National Parks, largely in the upper catchment areas, is likely to provide a refuge for longfin in particular given their habitat preferences. The Whanganui National Park does not actually include the waters of the Wanganui River and some of the larger tributaries, but it does include some of the smaller tributaries. The headwaters of the adjacent Waitotara River are within the Waitotara Conservation Area.
- 169 When North Island eel stocks were introduced into the QMS on 1 October 2004 most of the former permit holders were allocated quota shares. Te Ohu Kai Moana Trustee Ltd is a new entity receiving quota shares at QMS introduction that had not previously been a commercial fisher. The number of quota share holders in each North Island eel stock has reduced. Annual catch entitlements (ACE) are derived from quota shares. Commercial fishers can balance their catch against the ACE they hold for each stock. Following a reduction in TACCs for the 2007-08 fishing year, the number of people who held ACE for each of the eel stocks has reduced.

### Commercial value indicators

- 170 Average quota share prices (expressed as \$/tonne) for quota shares in eel stocks since QMS introduction are shown in Table 6. The transfer price is reasonably consistent, although prices for the Quota Management Area 22 stocks are slightly less. This may relate to the number of transactions involved in the calculation. There are insufficient trades to illustrate trading activity separately for each completed fishing year since the introduction of North Island eel stocks into the QMS. There have only been 30 South Island eel quota trades over the past five years.
- 171 MFish envisages that over time the transfer prices will more accurately reflect the relative costs and benefits of undertaking commercial fishing in each of the respective stocks. For example, transport costs to processing facilities are a factor affecting the value of the quota share price in some areas.



Table 6: Average quota share transfer price as at 15 September 2009 for all eel stocks since their introduction into the Quota Management System (on 1 October 2001 for South Island and 2004 for North Island).

Stock	Average quota share transfer price (expressed as \$/tonne)
LFE 20	\$12,288
LFE 21	\$13,256
LFE 22	\$ 8,793
LFE 23	\$10,256
SFE 20	\$11,326
SFE 21	\$12,251
SFE 22	\$ 9,242
SFE 23	\$11,094
ANG 11	\$24,193
ANG 12	\$15,226
ANG 13	\$20,000
ANG 14	\$15,382
ANG 15	\$12,493

172 Average ACE trade prices for the 2004-05, 2005-06, 2006-07 and 2007-08 fishing years, for each North Island eel stock, are provided in Table 7. The average ACE trade price noted for the 2006-07 fishing year is seemingly high, but is more likely to be an artefact of the way information on ACE trade prices is submitted.

173 MFish is unable to establish any trends in the value of the South Island eel annual catch entitlement (ACE) because the fishery has stabilised since 2001-02 and there is insufficient trading information in recent years upon which to calculate the average ACE price (despite 596 individual trades between October 2001 and September 2006). Table 8, below, shows the average ACE price for South Island eels determined by ACE trading between October 2001 and September 2006.

Table 7: Average Annual Catch Entitlement (ACE) trade price (expressed as \$/tonne) for North Island eel stocks for the fishing years ending 30 September 2005, 30 September 2006 and 30 September 2007. Some ACE trade prices were removed from the average calculation for each stock as they did not represent the range of normal trade prices, or price information was not supplied.

Stock	Average ACE trade price for year ending 30 September (\$/tonne)	Average ACE trade price for year ending 30 September (\$/tonne)	Average ACE trade price for year ending 30 September (\$/tonne)	Average ACE trade price for year ending September 2008 (\$/tonne)
LFE 20	\$ 586	\$ 420	\$ 5,780	Not available
LFE 21	\$ 529	\$ 562	\$ 1,013	Not available
LFE 22	\$ 416	\$ 663	\$ 1,000	Not available
LFE 23	\$ 588	\$ 625	\$ 909	Not available
SFE 20	\$ 562	\$ 399	\$ 3,667	Not available
SFE 21	\$ 518	\$ 496	Not available	Not available
SFE 22	\$ 1,000	\$ 671	Not available	Not available
SFE 23	\$ 568	\$ 604	\$ 1,091	Not available

Table 8: Average Annual Catch Entitlement (ACE) trade price (expressed as \$/tonne) for South Island eel stocks for the fishing years 2001-02 and 2002-03. Some ACE trade prices were removed from the average calculation for each stock as they did not represent the range of normal trade prices, or price information was not supplied.

Stock	Average ACE trade price for year ending 2001-02 (\$/tonne)	Average ACE trade price for year 2002-03 (\$/tonne)
ANG 11	\$1,262	\$724
ANG 12	\$472	-
ANG 13	\$600	-
ANG 14	\$486	-
ANG 15	\$1,180	-
ANG 16	\$502	-

174 The port price has fluctuated over the years in response to international market conditions, but has been relatively stable in recent years (Table 9). The port price for South Island stocks is slightly less than other stocks. The port price information is used to calculate the 'deemed value' for the fishery – the rate at which a commercial fisher is penalised for taking and landing eels in excess of ACE holdings. Port price information is also used when setting levies for various services provided by the Crown to ensure the fishery is sustained.

Table 9: Port price (\$/kg) for the three generically different eel stocks over the fishing years 1995-96 to 2006-07: SFE (shortfin and Australian longfin), LFE (longfin) and ANG (combined shortfin and longfin) prior to and after QMS introduction. There is some uncertainty as to whether one of the port prices listed for 2003-04 fishing year is incorrect.

Fishing Year	Port price (\$/kg) for North Island SFE and LFE stocks, pre-QMS	Port price (\$/kg) for SFE stocks once in QMS	Port price (\$/kg) for LFE stocks once in QMS	Port price (\$/kg) for South Island eel stocks.
2008-09		\$3.87	\$3.88	\$3.50
2007-08		\$3.87	\$3.88	\$3.50
2006-07		\$3.87	\$3.88	\$3.50
2005-06		\$3.87	\$3.88	\$3.50
2004-05		\$3.87	\$3.88	\$3.50
2003-04		\$5.74	\$4.74	\$5.8689
2002-03	\$4.74			\$5.8689
2001-02	\$4.22			

175 Export values for several different product states are available by country of destination for the fishing years 1996-97 through to 2006-07. A summary of some of these trends for more recent fishing years is given in Table 10, as sourced from Statistics New Zealand. Key countries importing eel products from New Zealand are Belgium, Germany, Hong Kong (Special Administrative District), Italy, Korea (Republic of), Netherlands, Taiwan, United States of America, and the United Kingdom.

**Table 10: Export quantity (expressed in kilograms (kg)) and value (Free on Board (FOB), NZ\$, in italics) for various product states for the fishing years 2003-04 through to 2006-07.**

State of exported product	2003-04		2004-05		2005-06		2006-07	
	Quantity (kg)	FOB (\$NZ)	Quantity (kg)	FOB (\$NZ)	Quantity (kg)	FOB (\$NZ)	Quantity (kg)	FOB (\$NZ)
Live	207,006	1,802,151	212,657	1,758,286	178,356	1,557,813	171,968	1,612,240
Fresh or chilled whole	1,572	13,357	3,550	43,347	2,200	21,561	932	7,777
Fresh or chilled, head & gutted	-	-	-	-	-	-	15	101
Fresh or chilled, other than whole or head & gutted	2,008	11,668	1,941	13,076	415	4,156	396	4,692
Frozen, whole	158,986	877,377	162,933	1,052,706	114,624	879,255	385,438	1,354,523
Frozen, head & gutted	19,544	138,877	24,246	129,391	153,074	1,309,949	113,680	922,496
Frozen, other than head & gutted	178,086	2,341,643	165,898	1,567,932	174,009	2,087,153	155,874	2,216,433
Fillets, smoked	1,543	39,395	900	20,374	691	18,140	60	1,999
Whole, smoked	7,265	93,892	5,247	57,963	1,883	17,319	1,397	13,091
<b>Total</b>	576,010	5,318,370	577,372	4,643,075	625,252	5,895,346	829,730	6,133,352