

# **National marine recreational fishing survey 1996: catch and effort results by fishing zone**

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## Abstract

**Fisher, D. & Bradford, E. 1989: National marine recreational fishing survey 1996: catch and effort results by fishing zone. NIWA Technical Report 67. 44 p.**

The first national telephone and diary survey of marine recreational fishing in New Zealand was run in 1996. The survey used a random sample of recreational fishers, and the figures provided by the diarists can be scaled to give estimates for the total marine recreational fishing population of New Zealand.

In this report, the numbers of fishing trips and catches are totals of the data given by the diarists. The numbers given by South region residents are adjusted to be comparable with the numbers from the rest of the country because a different sampling fraction was used in the South when selecting the diarists. The report first considers the distribution of fishing effort (methods used, spatial and seasonal patterns, and length of trip) and the species caught and targeted by recreational fishers. The recreational catches of snapper, kahawai, blue cod, tarakihi, red gumard, flatfish, trevally, red cod, rock lobster, and paua are discussed.

Nationally, marine recreational fishing is dominated by the snapper fishers in Quota Management Area SNA 1, with snapper the species caught in the greatest numbers and the most targeted. There are other important recreational fisheries, including kahawai in QMA 1, blue cod in the South Island, and rock lobster in CRA 2. Most fishing trips are in the summer months, with January being the most popular month for fishing. Line methods dominate and fishing from a boat is the preferred option in most parts of the country. However, line fishing from the shore is more frequent in many areas of the South Island. Most diarists fish near where they live, with the main exceptions being fishing zones Eastern Coromandel, and the Marlborough Sounds, which are popular fishing areas for diarists residing outside these areas. Eastern Coromandel recorded the highest number of fishing trips, in contrast to the 1993–94 North region survey when most trips were made in the Inner Hauraki Gulf.

## Introduction

The lack of quantitative catch and effort information for marine recreational fishing in New Zealand has been a serious shortcoming for stock assessment. In 1991, MAF Fisheries (now the Ministry of Fisheries) initiated marine recreational fishing catch and effort telephone and diary surveys. The first survey, in 1991–92, was of fishers living in the South region (Bell *et al.*), the second, in 1992–93, was of fishers living in the Central region (A. Kilner & E. Coddington, Ministry of Fisheries, Dunedin, unpublished results), and the third, from December 1993 to November 1994, was of fishers in the North region (Bradford 1996). Recreational fishing activity probably changes from year to year and so these regional surveys may not be comparable. Also, a few fishers go fishing in a different area from the one in which they live and so may not be captured by a regional survey.

A national survey was run in 1996 (Bell & Associates 1996, Bradford 1998a, 1998b, 1998c, Bradford *et al.* 1998a, 1988b) to collect quantitative and representative information on the distribution of fishing effort, methods used, species caught, and total harvest in the Ministry of Fisheries management regions. This report examines the recreational catch and effort by fishing zone (*see* Table 1 and Appendix 1) for the main recreational species recorded by the diarists.

All the data are stored on the *rec\_data* database (Fisher 1998) and managed by NIWA for the Ministry of Fisheries.

## **Programme objectives**

To estimate recreational catch taken in 1996 by Quota Management Area (QMA) for all Quota Management System (QMS) species and kahawai, kingfish, butterfish, kina, and scallop, and present data tabulated by fishing zone.

## **Survey methods**

The diary surveys used a preliminary telephone survey to determine the number of households containing marine recreational fishers from a random sample of households with telephones. One randomly selected fisher from each of these households is asked to keep a diary of their recreational fishing trips during a year. The selection of the diarists and the telephone survey was described by Bell & Associates (1996).

The telephone survey was conducted in October and November 1995 and used the 18 New Zealand telephone directories (Table 2 & Figure 1) published by Telecom at that time as the sampling frame. A total of 31 000 households were selected at random from the 18 directories. To overcome the problem of small sample size for the South region an additional 4000 households were randomly selected from the South region.

The people who agreed to participate in the survey were sent diaries in which they were asked to record details about their fishing trips, including date, fishing locality, hours fishing, fishing method, boat departure point, species targeted, species caught, and number caught. The New Zealand coastline was divided into 40 fishing zones (*see* Table 1) and diarists were asked to allocate their fishing trips to one of these zones. Fifteen fishing methods were defined (Table 3). The diary survey was described by Bradford *et al.* (1998a).

## **Scaling the survey data**

The origins of the scaling factors to scale the diary survey results to the total recreational harvest were given by Bradford (1998a). For this national survey, the sampling fraction used for residents of the South region was different from that for residents in other parts of the country to ensure a sufficient sample size for the South region. Allowance has to be made for this when estimating total harvests, or when combining the catches made by diarists when the diarists come from both the South region and the rest of the country. The scaling factor used with catches by South region residents is 80.25 and for other residents is 139.99. This report uses the catch and trip information supplied by the diarists. When reporting catch and trip totals, the numbers from South region residents have been scaled down by 80.25/139.99 to be compatible with the totals from the rest of the country. No scaling has been applied when reporting results such as the average length of trips.

## **Distribution of fishing effort**

For this survey the New Zealand coastline was divided into 40 fishing zones (*see* Table 1 and Appendix 1). Nineteen zones were in the North region, with zones 1 to 13 covering QMA 1 (Auckland East) and zones 20 to 25 covering QMA 9 (Auckland West). The central region was divided into 11 zones, with

zones 14 to 17 covering QMA 2 (Central East), zones 18 and 19 covering QMA 8 (Central West), and zones 26 to 28, 39 and 40 covering QMA 7 (Challenger). The South region was divided into 11 zones, with zones 29 to 34 covering QMA 3 (South East Coast), and zones 35 to 38 covering QMA 5 (Southland). Figure 2 shows the QMAs.

When fishing zones (*see* Table 1) are referred to in this report they are identified by the place name followed by the zone number in parentheses, e.g., Kaikoura (29), as opposed to discussion on an area, e.g., Marlborough Sounds.

A few of the diarist's trip records contained incomplete data and were excluded from the respective analysis.

## Trips and methods

Diarists recorded over 18 300 trips between 1 January and 31 December 1996. Due to the scaling down and then rounding of the number of trips by South region residents, grand totals in the tables are less than 18 300. Rounding and some missing data lead to minor inconsistencies in the number of trips. Tables 1–4 define the codes for variables tabulated in this report

The number of trips made by diarists by fishing zone and month are given in Table 5. General seasonal patterns were discussed by Bradford *et al.* (1998a). January is the most popular month for fishing. Public holidays that make long weekends tend to boost the monthly effort, particularly when the weather is favourable for fishing. Fishing zone Eastern Coromandel (10) had the greatest number of trips overall. This contrasts with the previous diary survey, the 1993–94 North region survey, when the greatest number of trips were made in the Inner Hauraki Gulf (7) (Bradford 1996, Bradford 1998b).

Diarists were asked to record the type of fishing method as one of 15 categories defined in Table 3. The number of trips made by diarists using each of the fishing methods by fishing zone is given in Table 6. The popularity of each fishing method varies around the country. The greater number of diarists in the North Island and their corresponding number of trips dominate the fishing pattern. Overall, the most common method is line fishing from a private boat, followed by shore fishing with a line. In contrast, in the South Island fishing zones from Kaikoura (29) to the Catlins (34) and Westland (39), line fishing from shore is more frequent than from a boat. Nationally the next most common method is diving from a private boat. For the method diving from the shore, Wellington (17) has the most trips, and for dredging, Nelson (40) has the most trips. Of the methods specified, spearing for flounder is the least common.

Table 7 shows the number of trips by fishing method and month. The main difference from the seasonal pattern of fishing in the summer months shown in Table 5 is for dredging. Table 7 shows a higher proportion of trips in the months from July to December by dredging. These trips are mostly targeting scallops for which the regulation season opens in mid July and runs to mid February. January was still the most popular month for fishing.

The numbers of trips by area of residence (*see* Table 2), in each fishing zone are given in Table 8, which shows that diarists mostly fish near home, though some Auckland diarists fished in Eastern Coromandel (10). The Marlborough Sounds are another popular destination for fishers residing outside that area: diarists from both Wellington and Christchurch made a number of trips to Pelorus Sound (26) and Queen Charlotte Sound (27). There were only a small number of trips by South region residents to the North region.



The average length of a trip naturally varies with the method used (Table 9). Diving methods have relatively short trips, along with hand gathering and dredging trips. Set netting and potting methods have the longest average fishing duration. For these two methods, instructions to diarists were to include the time the net or pot was in the water. It is likely that the times recorded for these methods are sometimes for the time spent attending to this gear and not the actual soak time. For rod or handline fishing from a private boat, the longest average trip was 5.04 hours in Mid Bay of Plenty (11). The shortest average trip was 1.82 hours in Paterson Inlet (37).

## Species caught and targeted

This report discusses the species caught in the greatest numbers. Table 4 gives the species codes and names for species referred to in this report. Diarists do not always identify their catches by names that allow coding to individual species, for example, 'cod', as discussed by Bradford *et al.* (1998b). Table 10 shows the catches of the main finfish species in each fishing zone, and Table 11 shows the number of trips targeting these species. Table 12 shows the catches of the main shellfish species, with Table 13 showing the corresponding number of trips targeting these species by fishing zone. Diarists often recorded more than one target species per trip, so the total number of trips for any one fishing zone, or overall, is greater than that shown in Table 5. The totals in Tables 11 and 13 are greater than in the corresponding tables in Bradford *et al.* (1998a). In these tables, only trips for which the species reported was the only target species are included. Revised tables for those from Bradford *et al.* (1988a) are given in Appendix 2.

Snapper is the species caught in the greatest numbers and the most targeted, particularly in the north, with Eastern Coromandel (10) having the highest total catch and the most target trips. Kahawai is the second most caught and targeted species, with Eastern Bay of Plenty (13) showing the highest total catch for this species, although Eastern Coromandel (10) had the most trips targeting kahawai. Blue cod is the third most caught and targeted species nationally, with the highest catches in the South Island. Pelorus Sound (26) shows the highest blue cod catch slightly above that of Otago (33), which has the highest catch for blue cod in the South region. It is likely that the bag limit of six blue cod in the Marlborough Sounds constrains their catch in this area.

Generally the ranking of the total catch of a species is similar to its ranking of the number of trips targeting that species. Some exceptions include kingfish, which is frequently targeted, particularly in the North region with Eastern Coromandel (10) having the most target trips. The total catch of kingfish, however, ranks considerably lower as the 22<sup>nd</sup> most numerous catch, probably partly due to the bag limit of three. Salmon is the most targeted species in the South region, particularly in Otago (33), South Canterbury (32), and North Canterbury (30): the bag limit of two is likely to lower its ranking in Table 11. Red cod is also a popular target species in the South region, particularly in Banks Peninsula (31).

For the shellfish species shown in Tables 12 and 13, scallops had the greatest total catch, with Nelson (40) having the highest catch by fishing zone. Nelson(40) also has the largest catches by fishing zone for cockles and dredge oysters. Eastern Coromandel (10) had the top catches of rock lobster, mussels, and pipis, and the greatest number of trips for hand gathering and diving from a private boat. These methods are the most popular for harvesting mussels and pipis, and rock lobster respectively. All 10 shellfish species' highest catches by fishing zone correspond to the zone where diarists recorded the most target trips, with the exception of rock and/or Pacific oysters. The most rock and Pacific oysters are caught in Waikato (20), whereas the most trips targeting these species are in Nelson (40). Very few trips are recorded as targeting these oyster species. Paua catches are highest in Wairarapa (16). Rock lobster was the shellfish species most often targeted and the lower bag limit of six for rock lobster compared to the

other shellfish species probably partly explains why this species is not also the shellfish species with the highest catch. No shellfish species were recorded as caught or targeted in Muriwai (23).

## Harvest and harvest rate on target trips

Tables 14–23 present the harvest data and other information on target trips for the more important species. The trips selected are those where the species is either targeted or caught. Some data are omitted for fishing zones where the number of fish caught or the number of target trips were very small.

When the number of diarists in a fishing zone is less than 20, the *c.v.* estimation process becomes suspect, and *c.v.s* are not given. For fishing zones where the *c.v.* is not given or the harvest on target trips is less than five, the statistical estimates are not given because they tend to be invalid for such small sample sizes.

Most snapper are taken on target trips (Table 14), particularly in QMA 1 (SNA 1). Fishing zone Barrier Islands (5), with just over 83%, has the highest percentage of successful target trips and Firth of Thames (8) has the highest catch rate, at just over four snapper per target trip, and the second highest percentage of successful target trips.

For kahawai, Dargaville (24) had the highest percentage of the harvest taken on target trips at approximately 78%, (Table 15). This fishing zone shows the greatest percentage of successful target trips at a little over 68%, and the best catch rate of 2.96 fish caught on a target trip.

Blue cod are mostly caught in the South and Central regions (Table 16). Most trips are target trips, with blue cod specified as a target species in 82 to 100% of the trips in the fishing zones in these regions. Catch rates are generally high, the highest being 9.78 blue cod per target trip in Southland (35). Otago (33) also recorded a high catch rate of about 9.5.

Tarakihi are caught mostly by fishers in the North region in QMA 1 and in the Central region (Table 17). The highest percentage of successful target trips is in Eastern Bay of Plenty (13). The highest catch rate of 6.24 tarakihi per target trip is in Eastern Coromandel (10).

Red gurnard trips show the greatest harvest in Eastern Bay of Plenty (13), and other fishing zones in the North and Central regions (Table 18). The highest catch rate was in Kaipara Harbour (22).

Flatfish (Table 19) are mostly taken on target trips, with 15 fishing zones showing 100% successful target trips. Waikato (20) recorded the highest harvest at 94 000 flatfish, and the highest catch rate of 16 per target trip. Flatfish are mostly caught by set netting or drag netting.

Trevally (Table 20) are mostly caught around the North Island, particularly in fishing zones 1–13 (QMA 1). The highest harvest was in Eastern Coromandel (10).

Red cod (Table 21) are mostly caught in the South and Central regions, Banks Peninsula (31) having the highest harvest with just over half the target trips successful.

Rock lobster (Table 22), is a popular target species, with many fishing zones recording 100% of the harvest on target trips. This is not surprising as rock lobster are mostly caught by diving and fishers are unlikely to take a rock lobster unless they intend doing so. The percentage of successful target trips is generally high.

Paua (Table 23) are mostly caught in the Central and South regions, mainly on target trips which are usually successful. The daily bag limit of 10 paua probably limited the catches.

## **Summary**

This report presents results from the 1996 national diary survey. Overall, the recreational fishery is dominated by the snapper fishery in QMA 1, but there are other important recreational fisheries, for example, kahawai and blue cod. Line methods (rod or handline), particularly from a private boat, are the most frequently used. Fishing zone Eastern Coromandel (10) had the greatest number of trips recorded. This is a change from the 1993–94 North region survey when most trips were made in the Inner Hauraki Gulf (7).

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**Table 1: Definitions of the fishing zones used by diarists**

Zone no.	Short name	Description
1	North–Brett	North Cape to Cape Brett (excluding the Bay of Islands)
2	Bay of Islands	Bay of Islands (Cape Wiwiki to Cape Brett, including the area around the Ninepin and Piercy Island)
3	Brett–Rodney	Cape Brett to Cape Rodney (excluding Whangarei Harbour)
4	Whangarei H	Whangarei Harbour and entrance area (including Mair Bank)
5	Barrier Is	Barrier Islands (including the Mokohinau Islands, Little Barrier Island, and Great Barrier Island)
6	Western Gulf	Western Gulf (Cape Rodney to Piripiri Point)
7	Inner Gulf	Inner Gulf (Piripiri Point to Orere Point)
8	Firth Thames	Firth of Thames (Orere Point to Deadmans Point)
9	Eastern Gulf	Eastern Gulf (Deadmans Point to Cape Colville, including Channel Island)
10	E. Coromandel	Eastern Coromandel (Cape Colville to Waihi Bluffs, Excluding Mayor Island)
11	Mid BOP	Waihi Bluffs to Tarawera River (excluding Tauranga Harbour)
12	Tauranga H	Tauranga Harbour (including both entrance areas)
13	Eastern BOP	Tarawera River to Cape Runaway (including Rurima Islands)
14	Gisborne	Cape Runaway to Whareongaonga
15	Hawke Bay	Whareongaonga to Cape Turnagain
16	Wairarapa	Cape Turnagain to Turakirae Head
17	Wellington	Turakirae Head to Titahi Bay
18	Manawatu	Titahi Bay to Waitotara River
19	Taranaki	Waitotara River to Tirau Point
20	Waikato	Tirau Point to the southern Manukau entrance (excluding the Manukau Harbour)
21	Manukau H	Manukau Harbour and entrance area
22	Kaipara H	Kaipara Harbour and entrance
23	Muriwai	Southern Manukau entrance to northern Kaipara entrance (excluding Manukau and Kaipara Harbours)
24	Dargaville	Northern Kaipara entrance to Reef Point (excluding Kaipara Harbour)
25	Ninety Mile	Reef Point to North Cape
26	Pelorus Sound	Pelorus, Kenepuru, and Mahau Sounds (inside the line from Stephens Island to Cape Jackson)
27	Q.C. Sound	Queen Charlotte Sound and Tory Channel
28	Outer Sounds	Stephens Island to Clarence River (excluding Pelorus and Queen Charlotte Sounds)
29	Kaikoura	Clarence River to Conway River
30	N. Canterbury	Conway River to Sumner Beach
31	Banks Peninsula	Sumner Beach to Rakaia River
32	S. Canterbury	Rakaia River to Waitaki River
33	Otago	Waitaki River to Tokomairiro River
34	Catlins	Tokomairiro River to Slope Point
35	Southland	Slope Point to Te Waewae Point
36	Stewart Island	Stewart Island, Ruapuke Island, and outlying islands (excluding Paterson Inlet)
37	Paterson Inlet	Paterson Inlet
38	Fiordland	Te Waewae Point to Awarau Point
39	Westland	Awarua Point to Kahurangi Point
40	Nelson	Kahurangi Point to Stephens Island

**Table 2: The Telecom telephone directories from which diarists were initially selected**

Number	Directory name / area of residence
1	Northland
2	Auckland
3	Bay of Plenty
4	Waikato
5	Gisborne
6	Hawkes Bay
7	Wanganui
8	Taranaki
9	Manawatu
10	Wairarapa
11	Wellington
12	Marlborough
13	Nelson
14	West Coast
15	Christchurch
16	Timaru–Oamaru
17	Otago
18	Southland

(See also Figure 1.)

**Table 3: Definitions of the fishing method codes used by diarists**

Code	Short name	Definition
1	Lines/private boat	Rod or handline fishing from a privately owned boat (includes bait, jigs, poppers, trolling, etc.)
2	Lines/charter boat	Rod, handline, or longline fishing from a charter boat
3	Longlines/private boat	Longline fishing from a privately owned boat
4	Lines/shore	Shore fishing with a rod or handline
5	Longlines/shore	Shore fishing with a longline (for example kontiki or kite)
6	Diving/private boat	Diving from a privately owned boat
7	Diving/charter boat	Diving from a charter boat
8	Diving/shore	Diving from shore
9	Dredging	Dredging
10	Set/gill netting	Set netting / gill netting
11	Drag netting	Drag netting / beach seining
12	Hand gathering	Hand gathering
13	Potting	Potting
14	Spearing(flounder)	Spearing (for flounder or other flatfish)
15	Other or unspecified	Other (please specify) Also includes unspecified for this report

The short name is used in Table 7; the code is used in other tables due to space constraints.

**Table 4: Species codes and common names for the finfish and shellfish species used in this report**

Species code	Common name	Scientific name
BAR	Barracouta	<i>Thyrsites atun</i>
BCO	Blue cod (may be confused with other cods, including reef cod)	<i>Parapercis colias</i>
BMA	Blue maomao	<i>Scorpius violaceus</i>
BUT	Butterfish	<i>Odax pullus</i>
COD	Cod unspecified (likely to be blue cod or red cod)	
DOG	Dogfish (all types of spiny dogfish)	
EMA	English (blue) mackerel (may be confused with other mackerel)	<i>Scomber australasicus</i>
FLA	Flatfish (all types, mainly flounder, with some sole)	
GAR	Garfish	<i>Hyporhamphus ihi</i>
GMU	Grey mullet	<i>Mugil cephalus</i>
GUR	Red gurnard	<i>Chelidonichthys kumu</i>
HPB	Groper ( hapuku & bass)	<i>Polyprion oxygeneios, P. americanus</i>
JDO	John dory	<i>Zeus faber</i>
JMA	Jack mackerel (may be confused with other mackerel)	<i>Trachurus spp.</i>
KAH	Kahawai	<i>Arripis trutta</i>
KIN	Kingfish (may be called yellowtail and confused with JMA and KOH)	<i>Seriola lalandi lalandi</i>
KOH	Koheru	<i>Decapterus koheru</i>
MAC	Mackerel unspecified	
MAO	Maomao unspecified ( blue or pink maomao)	
MOK	Blue moki	<i>Latridopsis ciliaris</i>
MUU	Mullet unspecified	
PAR	Parore	<i>Girella tricuspidata</i>
PMA	Pink maomao	<i>Caprodon longimanus</i>
RCO	Red cod (may be confused with other cods)	<i>Pseudophycis bachus</i>
SAM	Salmon (assumed to be quinnat salmon)	<i>Oncorhynchus tshawytscha</i>
SCH	School shark (may be confused with other sharks)	<i>Galeorhinus galeus</i>
SHA	Other sharks (includes bronze whaler, carpet, hammerhead, mako, thresher, and unspecified sharks)	
SNA	Snapper	<i>Pagrus auratus</i>
SPE	Sea perch	<i>Helicolenus spp.</i>
SPO	Rig	<i>Mustelus lenticulatus</i>
SPR	Sprats (may be confused with yellow-eyed mullet)	<i>Sprattus antipodum, S. muelleri</i>
STY	Spotty	<i>Notolabrus celidotus</i>
TAR	Tarakihi	<i>Nemadactylus macropterus</i>
TRE	Trevally	<i>Pseudocaranx dentex</i>
TRU	Trumpeter	<i>Latris lineata</i>
TUN	Tuna (mainly albacore and skipjack, with some yellowfin, slender, and bluefin)	<i>Thunnus alalunga, Katsuwonus pelamis, T. albacares, Allothunnus fallai, T. maccoyii</i>
WSE	Wrasses (includes ‘parrotfish’, and scarlet and banded wrasse)	Labridae (Family)
YEL	Yellowtail (probably JMA, KIN, or KOH )	
YEM	Yellow-eyed mullet or herring	<i>Aldrichetta forsteri</i>

**Table 4 — continued**

Species code	Common name	Scientific name
CRA	Rock lobster (crayfish)	assumed to be <i>Jasus edwardsii</i>
MUS	Mussels (all types)	<i>Perna canaliculatus</i> , <i>Mytilus galloprovincialis</i>
OUN	Oysters unspecified (includes Rock and Pacific oysters)	<i>Saccostrea glomerata</i> , <i>Crassostrea gigas</i>
OYS	Dredge oysters	<i>Tiostrea chilensis</i>
PAU	Paua (blackfoot)	assumed to be <i>Haliotis iris</i>
PPI	Pipi	<i>Paphies australis</i>
SCA	Scallops	<i>Pecten novaezelandiae</i>
SUR	Sea urchin (kina)	<i>Evechinus chloroticus</i>
TUA	Tuatua	<i>Paphies subtriangulata</i>



**Table 5: Number of fishing trips made by diarists by fishing zone and month. Z, fishing zone number. The number of trips by South region residents has been scaled down because of the different sampling fraction**

Fishing zone	Z	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
North-Brett	1	123	125	53	86	34	34	30	14	21	36	15	49	620
Bay of Islands	2	112	82	64	56	19	23	29	25	21	21	19	37	508
Brett-Rodney	3	197	92	82	119	30	64	28	37	33	28	26	51	787
Whangarei H	4	72	69	57	39	5	6	4	4	12	11	11	45	335
Barrier Is	5	79	39	27	24	15	8	10	4	16	20	16	23	281
Western Gulf	6	123	95	44	53	22	12	21	17	31	30	40	41	529
Inner Gulf	7	183	151	141	137	60	27	13	19	43	37	32	72	915
Firth Thames	8	78	31	38	44	26	16	5	4	11	14	11	24	302
Eastern Gulf	9	165	61	27	58	23	13	6	4	3	15	9	33	417
E. Coromandel	10	450	212	161	209	44	64	35	61	73	72	68	123	1 572
Mid BOP	11	245	204	152	161	75	64	38	50	64	57	59	52	1 221
Tauranga H	12	126	88	67	26	9	24	14	9	22	22	14	29	450
Eastern BOP	13	264	157	105	77	65	26	19	29	31	54	37	78	942
Gisborne	14	44	21	8	23	6	7	0	2	5	9	9	28	162
Hawke Bay	15	197	60	54	56	28	22	11	9	46	52	43	53	631
Wairarapa	16	148	29	29	21	15	5	5	10	11	36	19	49	377
Wellington	17	132	84	40	61	32	21	6	17	19	22	20	40	494
Manawatu	18	192	86	76	61	25	23	19	12	41	26	12	64	637
Taranaki	19	203	97	70	52	24	25	13	17	27	39	24	63	654
Waikato	20	149	71	36	51	17	17	9	10	26	31	14	25	456
Manukau H	21	99	51	49	50	16	12	5	15	42	23	17	46	425
Kaipara H	22	53	25	21	14	4	4	8	7	11	19	5	21	192
Muriwai	23	22	12	3	1	1	0	0	0	0	3	1	2	45
Dargaville	24	49	26	7	19	7	9	6	4	12	7	13	8	167
Ninety Mile	25	21	28	10	13	4	2	4	2	5	3	4	8	104
Pelorus Sound	26	147	73	50	57	14	19	13	14	21	24	26	44	502
Q.C. Sound	27	118	38	27	41	13	11	3	6	18	20	16	29	340
Outer Sounds	28	16	7	5	10	5	2	2	2	7	2	2	7	67
Kaikoura	29	39	14	4	9	1	1	1	1	0	3	4	11	88
N. Canterbury	30	64	41	40	5	6	2	2	1	5	2	4	22	194
Banks Peninsula	31	63	42	30	34	22	15	17	9	24	17	15	26	314
S. Canterbury	32	58	44	30	15	9	2	2	6	6	13	13	42	240
Otago	33	82	88	64	42	24	11	5	9	13	15	15	60	428
Catlins	34	29	8	7	5	1	2	2	3	7	4	5	13	86
Southland	35	51	18	16	10	3	7	4	5	13	5	3	8	143
Stewart Island	36	10	13	14	18	6	7	3	5	2	7	2	2	89
Paterson Inlet	37	1	8	13	1	0	0	1	0	3	5	1	0	33
Fiordland	38	18	11	9	8	2	3	1	1	4	1	6	5	69
Westland	39	51	23	18	11	4	8	6	3	5	4	11	23	167
Nelson	40	251	112	77	83	34	25	32	29	43	31	34	93	844
Unknown		6	6	3	4	2	0	0	1	0	0	0	2	24
Total		4 530	2 542	1 828	1 864	752	643	432	477	797	840	695	1 451	16 851

**Table 6: Number of fishing trips made by diarists by fishing zone and fishing method. Z, fishing zone number. The number of trips by South region residents has been scaled down. Refer to Table 3 for fishing method definitions. Unknown fishing methods are included in method 15**

Fishing zone	Z	Fishing method														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
North–Brett	1	324	29	2	127	2	30	1	2	10	41	21	23	0	1	14
Bay of Islands	2	322	23	3	30	0	41	3	1	1	41	2	31	3	2	4
Brett–Rodney	3	400	10	2	171	4	117	3	18	1	9	5	25	5	0	0
Whangarei H	4	212	0	3	60	1	11	0	3	1	3	4	41	0	0	0
Barrier Is	5	161	21	3	17	0	34	19	1	1	4	0	6	0	0	0
Western Gulf	6	360	19	5	62	2	55	0	2	14	7	5	14	1	0	0
Inner Gulf	7	651	36	6	159	2	4	0	0	0	32	1	20	0	4	0
Firth Thames	8	201	0	0	78	0	2	0	1	0	7	2	11	0	0	1
Eastern Gulf	9	338	3	4	38	0	11	0	3	3	4	1	10	0	1	0
E. Coromandel	10	869	50	31	168	6	225	8	28	1	51	7	96	14	13	0
Mid BOP	11	628	82	5	306	44	50	8	3	7	3	2	80	0	1	3
Tauranga H	12	273	1	0	146	0	11	0	2	6	7	1	4	0	2	1
Eastern BOP	13	432	42	29	215	66	41	1	15	2	18	11	25	43	3	1
Gisborne	14	84	5	1	37	0	6	0	16	0	4	1	5	7	0	0
Hawke Bay	15	118	5	2	348	6	8	0	9	0	44	0	18	59	0	11
Wairarapa	16	94	4	0	75	2	6	0	77	0	38	11	27	43	0	0
Wellington	17	135	8	3	173	3	40	3	96	0	25	2	6	0	0	1
Manawatu	18	211	10	35	227	29	16	1	9	0	30	33	17	0	0	19
Taranaki	19	168	1	29	403	6	16	0	2	0	10	2	15	0	0	2
Waikato	20	179	10	6	119	3	11	0	1	0	72	27	22	0	5	1
Manukau H	21	162	2	0	134	2	6	1	3	62	12	5	31	0	0	5
Kaipara H	22	75	16	0	26	1	1	0	0	35	23	9	3	0	1	2
Muriwai	23	4	0	0	32	7	0	0	0	0	1	1	0	0	0	0
Dargaville	24	28	0	0	81	5	1	0	3	0	5	3	34	0	7	0
Ninety Mile	25	19	3	0	64	1	0	0	1	0	1	0	11	0	4	1
Pelorus Sound	26	254	34	20	63	0	22	4	2	25	65	0	14	0	0	0
Q.C. Sound	27	232	10	2	39	0	19	7	1	2	17	1	9	0	0	0
Outer Sounds	28	21	2	1	28	0	6	0	0	0	5	1	2	0	0	0
Kaikoura	29	13	0	0	26	0	11	0	14	0	15	0	1	7	0	0
N. Canterbury	30	15	0	1	157	2	2	0	1	0	5	1	10	0	0	0
Banks Peninsula	31	93	1	2	134	0	9	0	10	0	45	9	10	1	1	0
S. Canterbury	32	17	1	1	215	0	1	0	0	0	0	1	0	3	0	1
Otago	33	150	6	0	195	0	12	0	12	0	10	12	26	1	1	2
Catlins	34	17	0	0	31	0	2	0	17	0	6	1	10	0	3	0
Southland	35	38	1	1	15	0	5	1	19	0	10	14	30	3	6	0
Stewart Island	36	38	8	0	1	0	21	4	5	2	5	0	2	2	0	0
Paterson Inlet	37	12	1	0	0	0	10	1	4	0	0	0	3	0	0	1
Fiordland	38	21	10	2	1	0	11	18	5	0	0	0	0	0	0	0
Westland	39	11	0	14	69	2	6	0	0	0	17	3	26	3	1	16
Nelson	40	339	11	62	131	2	25	1	20	135	52	8	51	0	8	0
Unknown		3	0	0	6	2	5	0	2	0	1	0	1	0	0	4
Total		7 722	465	275	4 407	200	910	84	408	308	745	207	769	195	64	90

**Table 7: Number of trips by fishing method and month. The number of trips by South region residents has been scaled down**

Fishing method	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Lines/private boat	2 028	1 236	952	1 005	376	270	179	202	292	325	274	580	7 719
Lines/charter boat	54	91	72	59	24	23	19	18	22	18	38	27	465
Longlines/private boat	95	45	25	26	14	7	4	1	12	11	10	25	275
Lines/shore	1 107	623	480	451	216	201	117	139	218	230	195	429	4 406
Longlines/shore	54	32	14	29	12	10	5	8	11	9	7	10	201
Diving/private boat	290	157	91	73	22	41	16	18	29	48	36	89	910
Diving/charter boat	21	11	8	14	1	4	1	1	4	5	8	5	83
Diving/shore	149	66	35	30	11	9	3	3	23	21	21	38	409
Dredging	85	23	2	2	0	3	22	31	41	34	14	51	308
Set/gill netting	204	80	46	71	28	35	20	20	65	59	37	79	744
Drag netting	62	30	16	23	7	9	11	4	11	12	10	12	207
Hand gathering	267	108	66	66	29	24	15	24	47	31	24	67	768
Potting	91	23	5	5	1	0	5	1	7	20	12	26	196
Spearing(flounder)	13	6	10	7	5	5	7	1	5	2	2	1	64
Other or unspecified	8	9	5	2	5	4	8	3	11	13	8	15	91
<b>Total</b>	<b>4 528</b>	<b>2 540</b>	<b>1 827</b>	<b>1 863</b>	<b>751</b>	<b>645</b>	<b>432</b>	<b>474</b>	<b>798</b>	<b>838</b>	<b>696</b>	<b>1 454</b>	<b>16 846</b>

**Table 8: Number of trips by fishing zone and area of residence (telephone directory). Z, fishing zone number. The number of trips by South region residents has been scaled down. Refer to Table 2 for names of area of residence (telephone directories)**

Fishing zone	Z	Area of residence																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
North-Brett	1	394	139	13	27	11	8	7	15	0	1	5	0	6	0	0	0	1	0
Bay of Islands	2	319	110	11	20	0	0	5	2	3	0	26	0	0	0	11	0	0	0
Brett-Rodney	3	499	230	7	15	0	4	0	8	0	0	3	0	1	0	0	1	1	0
Whangarei H	4	283	21	1	9	0	0	0	2	9	0	11	0	0	0	2	1	0	0
Barrier Is	5	4	190	17	39	0	1	0	15	0	0	1	0	0	0	0	0	0	0
Western Gulf	6	3	500	8	19	0	0	0	11	0	0	1	4	0	0	0	0	0	0
Inner Gulf	7	1	883	4	17	0	1	0	0	3	1	5	0	0	0	0	0	0	0
Firth Thames	8	0	108	14	166	0	0	11	1	0	0	0	0	0	3	0	0	0	0
Eastern Gulf	9	1	144	42	191	0	0	1	35	0	0	2	0	0	0	0	0	0	0
E. Coromandel	10	0	456	127	876	0	15	4	38	13	3	32	0	0	0	2	1	0	0
Mid BOP	11	0	33	851	316	0	2	0	9	8	2	1	0	0	0	0	0	0	0
Tauranga H	12	0	15	324	82	1	1	10	13	1	0	2	3	0	0	1	0	0	0
Eastern BOP	13	2	29	774	56	16	8	1	16	13	0	22	0	0	0	0	2	3	1
Gisborne	14	1	8	8	11	127	3	0	0	2	0	4	0	0	0	0	1	0	0
Hawke Bay	15	0	8	2	4	12	580	8	0	3	4	5	0	0	0	0	0	2	0
Wairarapa	16	9	0	6	0	0	29	7	0	17	212	96	0	0	0	0	0	0	1
Wellington	17	0	4	2	0	2	26	0	0	6	15	439	0	0	0	1	0	0	0
Manawatu	18	0	0	1	3	0	1	152	11	220	15	234	0	0	0	0	0	0	0
Taranaki	19	0	0	1	10	0	4	30	602	7	0	0	0	0	0	0	0	0	0
Waikato	20	0	81	5	349	0	0	0	17	2	0	2	0	0	0	0	0	0	0
Manukau H	21	0	412	0	1	0	0	0	0	0	0	11	0	0	0	1	0	0	0
Kaipara H	22	41	143	0	4	0	2	1	1	0	0	0	0	0	0	0	0	0	0
Muriwai	23	0	40	0	1	0	0	0	0	0	0	3	0	0	0	0	0	1	0
Dargaville	24	126	30	3	5	0	0	1	2	0	0	0	0	0	0	0	0	0	0
Ninety Mile	25	73	24	0	1	0	2	0	0	0	0	2	0	0	0	0	2	0	0
Pelorus Sound	26	0	13	1	1	10	2	9	2	13	3	61	94	177	16	89	4	3	3
Q.C. Sound	27	0	5	0	1	0	0	3	6	9	0	82	102	37	6	79	3	5	1
Outer Sounds	28	0	1	0	0	0	2	0	0	0	1	5	37	6	1	11	0	2	0
Kaikoura	29	0	0	0	0	0	0	0	0	0	0	0	3	0	3	80	1	1	0
N. Canterbury	30	0	1	0	0	0	0	0	0	0	0	6	0	0	0	186	0	0	1
Banks Pen	31	0	1	0	1	0	0	0	0	0	0	3	0	0	1	295	5	1	7
S. Canterbury	32	0	0	0	0	0	0	0	0	0	0	0	8	0	0	41	178	7	4
Otago	33	0	0	0	0	0	0	0	0	0	0	5	4	0	0	7	49	358	5
Catlins	34	0	0	0	0	0	0	1	0	0	0	0	0	0	0	8	0	47	31
Southland	35	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	6	135
Stewart Island	36	0	0	0	0	0	1	0	0	0	0	0	0	0	0	8	0	19	58
Paterson Inlet	37	0	8	0	0	0	0	0	0	0	0	0	0	0	0	1	6	18	
Fiordland	38	3	0	0	0	0	0	0	0	0	0	0	0	0	0	9	2	22	31
Westland	39	0	0	2	0	0	0	0	0	0	0	1	1	0	126	22	3	11	1
Nelson	40	0	17	0	4	0	0	4	3	6	0	30	7	710	1	53	4	2	3
Unknown		2	2	3	5	1	0	0	1	0	0	4	0	0	0	0	1	2	2
Total		1761	3656	2228	2234	180	693	255	810	335	257	1104	263	937	157	907	259	500	302

**Table 9: Average length of fishing trips, in hours, by fishing zone and fishing method. Z, fishing zone number. Trips with unknown times are omitted. - indicates no data. Refer to Table 3 for fishing method definitions. Refer to Table 6 for the number of trips contributing to each of these average times**

Fishing zone	Z	Fishing method															All
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
North–Brett	1	4.02	5.33	5.00	3.04	4.00	1.56	1.00	2.00	0.83	7.00	1.95	1.20	-	2.00	2.29	3.69
Bay of Islands	2	3.74	3.98	6.83	3.13	-	1.21	1.27	2.00	1.00	8.11	0.75	0.90	0.50	1.15	3.75	3.65
Brett–Rodney	3	3.75	5.45	2.25	2.93	2.50	1.34	2.33	1.69	0.50	7.57	2.10	0.87	1.20	-	-	3.08
Whangarei H	4	2.85	-	1.33	3.34	3.00	1.25	-	1.17	1.00	9.33	1.38	0.80	-	-	-	2.64
Barrier Is	5	3.94	6.02	2.00	2.94	-	1.44	1.89	1.00	2.00	9.50	-	1.03	-	-	-	3.56
Western Gulf	6	3.36	5.25	3.00	3.32	2.50	1.09	-	0.50	1.39	6.43	0.90	1.09	-	-	-	3.08
Inner Gulf	7	3.50	6.06	4.00	2.92	12.00	1.88	-	-	-	4.58	3.00	1.15	-	1.75	-	3.49
Firth Thames	8	3.54	-	-	2.98	-	2.00	-	0.80	-	5.67	3.50	0.55	-	-	4.00	3.31
Eastern Gulf	9	3.71	4.00	1.88	3.23	-	1.08	-	0.77	4.33	11.75	0.30	0.47	-	2.00	-	3.55
E. Coromandel	10	3.62	5.12	3.06	2.70	2.17	1.54	1.69	1.18	4.00	10.05	1.47	0.68	8.96	1.27	-	3.24
Mid BOP	11	5.04	6.60	3.20	3.75	2.88	1.98	1.45	1.83	1.71	2.00	2.75	0.71	-	3.00	3.33	4.27
Tauranga H	12	3.40	4.00	-	3.18	-	1.30	-	2.00	1.67	2.29	1.50	1.25	-	2.25	2.00	3.20
Eastern BOP	13	4.24	6.02	2.00	3.45	3.86	1.23	1.00	1.44	2.50	14.08	1.82	1.22	7.12	1.17	2.00	4.06
Gisborne	14	4.45	4.20	2.50	3.18	-	1.08	-	1.46	-	12.00	1.00	1.70	2.97	-	-	3.75
Hawke Bay	15	4.16	3.44	3.50	3.17	3.75	0.79	-	2.06	-	7.71	-	0.83	11.93	-	1.82	4.41
Wairarapa	16	4.24	3.63	-	3.32	2.50	1.53	-	1.65	-	2.39	2.68	1.92	3.62	-	-	3.00
Wellington	17	3.80	3.50	3.33	2.42	3.33	2.51	2.67	1.16	-	7.48	3.00	1.04	-	-	2.00	2.84
Manawatu	18	4.18	6.25	4.08	3.03	3.27	4.33	0.70	1.98	-	7.31	2.55	1.15	-	-	3.20	3.69
Taranaki	19	4.10	8.00	3.62	3.32	2.68	2.77	-	1.85	-	7.50	1.25	1.84	-	-	3.25	3.51
Waikato	20	4.23	6.15	5.42	3.70	4.00	1.07	-	3.00	-	11.65	2.09	1.66	-	2.50	6.00	4.98
Manukau H	21	3.70	7.00	-	3.56	3.50	1.83	1.00	2.50	1.77	7.25	1.90	1.07	-	-	3.20	3.19
Kaipara H	22	3.92	5.46	-	2.37	5.00	1.50	-	-	1.71	1.98	3.61	0.73	-	0.50	4.50	3.14
Muriwai	23	4.63	-	-	4.12	3.79	-	-	-	-	4.00	2.50	-	-	-	-	4.07
Dargaville	24	4.75	-	-	3.90	3.88	2.00	-	1.77	-	4.92	5.83	1.36	-	2.43	-	3.47
Ninety Mile	25	4.99	7.50	-	3.98	2.00	-	-	4.50	-	6.00	-	1.23	-	1.63	2.00	3.83
Pelorus Sound	26	3.20	5.02	4.88	3.54	-	1.41	1.63	0.90	1.67	8.74	-	1.76	-	-	-	3.95
Q.C. Sound	27	2.70	4.86	2.10	1.95	-	3.20	1.31	1.00	1.83	6.18	0.20	0.95	-	-	-	2.80
Outer Sounds	28	3.18	2.08	5.50	2.85	-	0.83	-	-	-	3.20	3.00	1.75	-	-	-	2.83
Kaikoura	29	3.02	-	-	2.76	-	1.25	-	1.15	-	5.39	-	2.00	8.00	-	-	3.25
N. Canterbury	30	3.08	-	6.00	3.85	4.33	0.93	-	1.25	-	10.57	3.50	1.26	-	-	-	3.76
Banks Peninsula	31	2.70	4.00	14.00	3.52	-	1.73	-	2.32	-	4.55	2.13	0.97	44.00	1.50	-	3.35
S. Canterbury	32	3.60	2.00	3.00	3.90	-	1.00	-	-	-	-	1.00	-	2.53	-	4.00	3.83
Otago	33	3.54	4.55	-	4.40	-	1.23	-	1.41	-	5.93	2.75	1.50	2.50	2.50	3.50	3.72
Catlins	34	3.69	-	-	3.04	-	0.70	-	1.33	-	6.91	1.50	1.29	-	1.60	-	2.79
Southland	35	3.56	3.00	3.50	3.31	-	1.67	1.50	1.29	-	16.12	1.58	1.25	3.92	1.91	-	3.26
Stewart Island	36	2.64	4.28	-	2.25	-	1.28	1.66	1.19	3.00	5.75	-	0.83	16.17	-	-	2.73
Paterson Inlet	37	1.82	3.50	-	-	-	0.98	0.35	0.53	-	-	-	1.33	-	-	0.75	1.32
Fiordland	38	2.26	2.09	3.07	2.00	-	1.35	0.99	1.53	-	-	-	-	-	-	-	1.69
Westland	39	3.50	-	3.50	2.52	3.75	2.40	-	-	-	3.18	2.38	0.91	2.67	1.50	1.99	2.44
Nelson	40	2.84	3.14	3.15	2.39	3.50	1.35	0.80	1.80	1.82	3.63	1.79	0.68	-	2.04	-	2.46
Total		3.70	5.26	3.52	3.36	3.47	1.57	1.43	1.45	1.77	7.14	2.20	1.06	7.72	1.81	2.66	3.47

**Table 10: Numbers of the main finfish species caught in each fishing zone. Catches by South region residents have been scaled down**

Fishing zone	Z	BAR	BCO	BMA	BUT	COD	DOG	EMA	FLA	GAR	GMU	GUR	HPB	JDO	JMA	KAH	KIN	KOH	MAC	MAO	MOK
North—Brett	1	12	34	67	12	3	0	6	52	532	63	11	4	58	28	297	40	66	12	17	10
Bay of Islands	2	9	30	39	0	2	1	31	371	10	3	23	7	39	13	231	21	97	0	23	0
Brett—Rodney	3	45	23	91	0	2	0	10	43	4	2	12	5	25	19	392	36	47	0	39	0
Whangarei H	4	0	0	1	0	5	2	20	0	4	1	2	0	6	12	83	17	55	12	0	0
Barrier Is	5	11	3	21	0	3	0	1	2	0	0	1	10	13	7	99	42	1	0	42	5
Western Gulf	6	8	13	39	0	0	1	30	2	50	0	5	0	31	70	276	16	78	1	30	2
Inner Gulf	7	3	7	4	0	0	3	31	123	0	6	8	0	10	25	441	57	40	5	0	0
Firth Thames	8	0	0	0	0	0	4	58	60	1	1	7	0	2	51	160	3	20	34	0	2
Eastern Gulf	9	4	5	58	1	0	0	48	0	0	0	6	0	8	33	160	15	105	3	12	0
E. Coromandel	10	83	33	113	31	8	2	49	211	1	0	299	7	77	84	708	42	24	34	4	1
Mid BOP	11	61	44	121	20	14	0	32	24	24	0	337	29	44	13	739	64	15	10	59	8
Tauranga H	12	6	0	0	12	0	1	0	36	26	6	47	0	7	44	203	17	19	5	0	0
Eastern BOP	13	28	38	51	3	3	2	21	273	8	3	365	17	4	28	902	73	15	59	37	9
Gisborne	14	10	21	12	0	3	18	0	0	28	0	8	94	0	0	86	12	0	0	15	0
Hawke Bay	15	34	85	0	27	9	19	4	2	0	0	237	45	0	128	512	18	0	9	0	30
Wairarapa	16	18	582	4	26	24	21	0	118	0	0	12	18	1	1	185	2	0	5	0	54
Wellington	17	53	348	0	225	4	3	1	23	7	2	13	8	2	10	236	2	1	14	0	61
Manawatu	18	36	690	4	66	4	120	5	313	0	7	176	2	1	0	565	8	0	0	0	14
Taranaki	19	273	451	24	1	4	6	11	22	168	0	319	1	3	138	535	7	0	43	18	3
Waikato	20	4	1	12	0	0	8	16	668	0	85	214	2	0	0	391	5	0	4	4	3
Manukau H	21	0	0	0	0	0	2	9	53	43	0	173	0	0	10	455	1	9	0	0	0
Kaipara H	22	0	2	4	0	0	5	0	128	0	495	129	0	0	2	127	2	1	0	0	0
Muriwai	23	0	0	0	0	0	4	0	14	0	30	31	0	0	0	52	2	0	0	0	0
Dargaville	24	0	0	0	0	0	0	0	129	0	74	49	0	0	0	267	2	0	0	0	0
Ninety Mile	25	0	9	0	0	0	0	0	10	0	18	10	1	1	0	144	2	0	0	0	0
Pelorus Sound	26	64	1140	0	10	44	24	3	129	10	0	20	15	0	0	88	4	1	3	0	17
Q.C. Sound	27	62	767	0	19	15	9	1	1	11	0	32	14	1	0	49	0	0	0	0	101
Outer Sounds	28	0	124	0	12	1	39	0	0	0	0	5	4	2	0	44	2	0	0	0	71
Kaikoura	29	6	34	0	61	0	2	0	0	0	0	3	1	0	1	17	0	0	0	0	22
N. Canterbury	30	5	47	0	0	3	22	0	24	0	1	2	0	0	0	43	0	0	0	0	0
Banks Peninsula	31	12	76	0	16	21	153	0	380	0	0	3	0	0	1	30	0	0	0	0	42
S. Canterbury	32	6	21	0	1	13	25	0	3	0	0	0	0	0	0	27	0	2	0	0	2
Otago	33	74	1044	0	34	0	75	0	135	0	0	0	28	0	0	10	0	0	0	0	38
Catlins	34	1	329	0	5	7	0	0	17	0	1	0	0	0	0	0	0	0	0	0	11
Southland	35	1	530	0	29	2	71	0	243	0	0	0	2	0	0	3	0	0	0	0	36
Stewart Island	36	2	393	0	80	1	2	0	0	0	0	2	0	0	0	2	0	0	0	0	21
Paterson Inlet	37	1	99	0	17	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	3
Fiordland	38	3	196	0	0	0	21	0	1	0	0	0	9	0	0	0	0	0	0	0	5
Westland	39	0	24	0	0	0	42	0	52	0	0	4	0	0	1	78	0	0	0	0	0
Nelson	40	87	486	0	2	93	69	8	132	0	1	124	31	0	1	125	2	0	0	0	58
Unknown		0	8	0	1	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	7
Total		1 022	7 737	665	711	288	777	395	3 797	927	799	2 689	354	335	720	8 772	514	596	253	308	636

Table 10 — continued

Fishing zone	Z	MUU	PAR	PMA	RCO	SAM	SCH	SHA	SNA	SPE	SPO	SPR	STY	TAR	TRE	TRU	TUN	WSE	YEL	YEM
North-Brett	1	196	16	4	1	0	8	6	968	0	6	0	12	32	77	0	57	16	12	18
Bay of Islands	2	12	22	10	0	0	0	13	998	1	0	30	0	154	101	0	10	21	7	50
Brett-Rodney	3	2	14	13	2	0	0	4	1185	0	3	12	5	73	135	1	51	12	4	100
Whangarei H	4	9	0	0	0	0	0	2	724	0	0	0	6	4	31	0	0	4	3	10
Barrier Is	5	0	0	1	8	0	3	1	721	1	0	0	0	62	95	0	6	3	0	1
Western Gulf	6	24	14	0	6	0	0	2	1224	5	0	60	0	7	77	0	0	4	14	124
Inner Gulf	7	0	30	0	0	0	10	10	1985	8	1	50	86	0	22	0	0	0	28	65
Firth Thames	8	5	1	0	1	0	14	23	1063	0	2	2	0	0	8	0	0	0	3	0
Eastern Gulf	9	0	21	0	1	0	4	3	1381	0	3	50	0	11	26	0	0	1	5	0
E. Coromandel	10	2	45	31	19	0	3	15	2628	2	0	11	2	1259	293	0	106	24	28	20
Mid BOP	11	8	5	151	32	0	2	11	2152	6	1	3	1	1379	228	0	292	20	3	142
Tauranga H	12	47	2	0	0	0	0	1	438	0	0	25	9	28	77	0	5	0	0	65
Eastern BOP	13	0	5	0	4	0	3	61	1620	2	7	6	0	541	214	0	273	0	0	55
Gisborne	14	0	1	1	13	0	1	7	88	0	4	0	4	156	8	1	61	0	0	30
Hawke Bay	15	0	0	0	57	1	25	15	107	2	16	27	1	197	47	2	63	6	0	400
Wairapa	16	5	0	0	112	1	9	33	4	46	6	0	3	99	3	1	45	19	0	23
Wellington	17	0	0	0	82	4	0	2	26	134	1	8	92	363	5	1	0	24	0	118
Manawatu	18	1	1	0	302	0	54	74	166	78	38	6	0	295	21	0	2	26	0	111
Taranaki	19	35	0	0	64	0	28	19	320	2	18	0	14	33	176	0	40	9	0	420
Waikato	20	44	2	0	0	0	25	28	486	2	172	1	0	3	134	0	53	1	9	70
Manukau H	21	34	7	0	0	0	6	3	331	0	0	9	0	2	39	0	6	0	0	112
Kaipara H	22	95	7	0	0	0	55	1	406	0	3	0	0	0	13	0	0	0	3	0
Muriwai	23	1	0	0	0	0	0	3	9	0	0	24	0	0	10	0	8	0	0	0
Dargaville	24	24	2	0	2	0	31	0	137	0	0	0	4	2	51	0	1	0	0	48
Ninety Mile	25	0	12	0	0	0	0	1	129	0	0	0	0	3	10	0	1	0	0	1
Pelorus Sound	26	29	0	0	91	0	2	1	157	40	7	0	78	54	6	1	0	10	0	62
Q.C. Sound	27	0	0	0	15	0	9	0	12	125	6	0	86	166	0	15	0	19	0	22
Outer Sounds	28	0	0	0	11	1	0	2	0	7	4	0	0	24	0	2	0	11	0	3
Kaikoura	29	0	0	0	22	0	0	2	0	36	3	0	1	0	0	0	1	5	0	14
N. Canterbury	30	5	0	0	32	15	2	0	0	2	1	0	2	0	0	1	0	0	0	120
Banks Peninsula	31	18	0	0	424	6	21	3	1	11	38	2	19	12	7	19	0	27	0	107
S. Canterbury	32	6	0	0	153	58	0	2	0	3	7	0	0	0	0	0	0	2	0	6
Otago	33	10	0	0	51	56	1	1	0	105	21	22	3	11	5	34	1	73	0	25
Catlins	34	2	0	0	10	0	0	1	0	41	0	0	1	0	1	40	0	23	0	0
Southland	35	1	0	0	11	1	2	0	7	1	9	0	0	3	1	31	0	21	0	0
Stewart Island	36	0	0	0	5	0	2	0	0	7	1	0	2	9	0	95	0	15	0	12
Paterson Inlet	37	0	0	0	1	1	0	0	0	0	2	0	0	2	0	17	0	7	0	0
Fiordland	38	0	0	0	0	0	1	1	0	17	6	0	0	10	0	6	11	5	0	0
Westland	39	0	0	0	27	0	13	4	50	2	60	0	0	2	8	2	0	2	0	140
Nelson	40	30	0	0	130	0	36	29	309	115	62	0	101	249	8	2	0	25	0	242
Unknown		0	0	0	0	0	1	0	10	0	0	0	0	0	1	0	0	0	0	0
Total		645	207	211	1689	144	371	384	19842	799	508	348	532	5245	1938	271	1093	435	119	2736

**Table 11: Numbers of trips targeting the main finfish species by fishing zone. The number of trips by South region residents has been scaled down**

Fishing zone	Z	BAR	BCO	BMA	BUT	COD	DOG	EMA	FLA	GAR	GMU	GUR	HPB	JDO	JMA	KAH	KIN	KOH	MAC	MAO	MOK
North-Brett	1	1	3	2	1	0	0	0	20	4	6	4	5	24	1	68	70	4	0	2	0
Bay of Islands	2	1	5	4	0	0	0	2	40	1	0	1	4	13	1	58	27	1	2	1	0
Brett-Rodney	3	0	2	2	0	0	0	0	6	4	1	1	11	3	0	142	65	1	0	0	0
Whangarei H	4	0	0	0	0	2	0	0	0	1	0	0	0	6	0	41	36	5	0	0	0
Barrier Is	5	0	0	0	0	0	0	0	1	0	0	0	12	9	0	20	43	0	0	0	0
Western Gulf	6	0	1	1	0	0	0	2	3	3	0	0	0	26	0	63	59	0	1	0	0
Inner Gulf	7	0	0	0	0	0	0	0	29	1	6	3	0	1	2	153	46	0	0	0	0
Firth Thames	8	0	0	0	0	0	0	0	6	0	0	2	0	1	0	20	7	0	0	0	0
Eastern Gulf	9	0	0	6	0	0	0	2	3	0	0	0	0	3	3	37	20	1	0	1	0
E. Coromandel	10	0	2	7	11	0	0	0	29	0	0	99	9	24	5	244	98	1	1	4	1
Mid BOP	11	2	3	2	2	0	0	2	5	0	0	68	33	5	0	174	64	1	0	1	0
Tauranga H	12	1	1	0	0	0	0	0	9	6	0	10	0	12	1	101	65	0	1	0	0
Eastern BOP	13	2	2	2	0	0	0	1	28	1	0	74	22	0	0	194	51	0	1	2	0
Gisborne	14	0	1	0	0	0	1	0	0	1	0	4	38	0	0	16	18	0	1	2	2
Hawke Bay	15	2	9	0	9	20	0	0	7	0	7	90	24	0	17	222	6	0	0	0	58
Wairarapa	16	0	69	0	18	5	0	0	10	0	0	11	35	0	0	60	2	0	0	0	21
Wellington	17	1	80	0	50	11	0	1	1	0	0	19	12	0	2	116	13	0	2	0	37
Manawatu	18	0	127	0	12	15	6	0	36	0	0	53	5	0	2	201	15	0	2	0	2
Taranaki	19	2	34	2	0	26	5	0	8	9	0	109	2	4	2	233	25	0	2	3	0
Waikato	20	0	0	0	0	1	0	0	40	0	7	24	1	0	0	137	24	0	0	0	0
Manukau H	21	0	0	0	0	0	0	0	8	1	0	35	0	0	0	158	39	0	0	0	0
Kaipara H	22	0	0	0	0	0	0	0	8	0	11	31	0	0	0	29	14	0	0	0	0
Muriwai	23	0	0	0	0	0	0	0	1	0	2	9	0	0	0	13	9	0	0	0	0
Dargaville	24	0	0	0	0	0	0	0	9	0	1	7	0	0	0	69	3	0	0	0	0
Ninety Mile	25	0	0	0	0	0	0	0	5	0	1	2	0	1	0	21	3	0	0	0	0
Pelorus Sound	26	0	197	0	12	22	0	0	41	1	0	4	19	0	0	24	8	0	0	0	6
Q.C. Sound	27	0	218	0	11	8	1	0	0	2	0	13	5	0	0	28	6	0	0	0	15
Outer Sounds	28	0	18	0	4	1	0	0	1	0	0	0	5	0	0	21	2	0	0	0	10
Kaikoura	29	1	12	0	18	3	0	0	0	0	0	0	1	0	0	10	0	0	0	0	15
N. Canterbury	30	0	5	0	0	10	2	0	14	0	0	1	0	0	0	68	1	0	0	0	2
Banks Peninsula	31	1	35	0	10	25	3	0	40	0	0	0	1	0	0	22	1	0	0	0	20
S. Canterbury	32	0	2	0	1	2	1	0	0	0	0	0	1	0	0	19	1	0	0	0	2
Otago	33	1	104	0	19	3	1	0	16	0	0	1	11	0	0	6	0	0	0	0	17
Catlins	34	0	43	0	4	1	0	0	5	0	0	0	3	0	0	1	0	0	0	0	7
Southland	35	1	50	0	4	9	1	0	22	0	0	0	5	0	0	1	0	0	0	0	9
Stewart Island	36	0	47	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Paterson Inlet	37	0	16	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Fiordland	38	0	30	0	1	0	0	0	1	0	0	0	8	0	0	0	0	0	0	0	1
Westland	39	0	5	0	1	3	4	0	7	0	1	0	0	0	0	22	0	0	0	0	0
Nelson	40	0	123	0	0	60	1	2	31	0	0	27	16	0	0	58	1	0	0	0	18
Unknown		0	0	0	1	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
Total	16	1	242	28	196	228	26	12	491	35	43	702	288	132	36	2 875	842	14	13	16	247



Table 11 — continued

Fishing zone	Z	MUU	PAR	PMA	RCO	SAM	SCH	SHA	SNA	SPE	SPO	SPR	STY	TAR	TRE	TRU	TUN	WSE	YEL	YEM
North—Brett	1	24	3	0	0	0	0	8	370	0	0	0	0	5	11	0	35	1	3	1
Bay of Islands	2	2	0	1	2	0	0	5	311	0	0	0	0	47	27	0	12	0	0	1
Brett—Rodney	3	1	9	1	0	0	0	2	457	0	2	1	0	16	30	0	20	0	0	4
Whangarei H	4	4	0	0	0	0	0	1	248	0	0	0	0	0	6	0	0	0	1	1
Barrier Is	5	0	0	0	0	0	0	0	190	0	0	0	0	7	3	0	4	0	0	0
Western Gulf	6	2	0	0	0	0	0	0	408	0	0	0	0	5	15	0	0	0	0	1
Inner Gulf	7	9	1	0	0	0	2	1	795	0	0	3	0	1	8	0	0	0	0	8
Firth Thames	8	2	0	0	0	0	0	0	256	0	3	0	0	0	0	0	1	0	0	0
Eastern Gulf	9	0	0	0	0	0	0	0	334	0	0	1	0	3	2	0	0	0	0	0
E. Coromandel	10	2	0	3	3	0	0	1	853	0	0	8	0	163	33	0	49	4	3	9
Mid BOP	11	0	1	1	1	0	2	7	723	0	0	3	0	217	30	0	74	0	0	4
Tauranga H	12	6	0	0	0	0	0	1	292	0	0	2	0	5	23	0	0	0	0	6
Eastern BOP	13	0	0	0	1	0	0	13	530	0	0	0	0	73	21	0	99	1	0	1
Gisborne	14	0	0	0	0	0	0	1	58	0	0	0	0	36	2	0	8	0	0	3
Hawke Bay	15	0	3	0	8	0	0	14	260	0	4	2	0	27	22	0	11	0	0	33
Wairarapa	16	0	0	0	19	0	4	4	21	1	4	0	0	22	0	2	4	1	0	2
Wellington	17	1	0	0	24	0	1	0	46	0	1	1	5	72	1	0	1	1	0	3
Manawatu	18	1	1	0	37	2	7	6	182	0	3	0	0	50	1	0	0	1	0	18
Taranaki	19	2	0	0	6	0	1	13	374	0	10	0	1	17	45	0	18	0	0	26
Waikato	20	8	0	0	0	0	0	4	224	0	31	0	0	0	76	0	11	0	0	0
Manukau H	21	13	2	0	0	0	1	2	184	0	0	0	0	19	79	0	3	0	0	3
Kaipara H	22	11	0	0	0	0	0	0	102	0	0	0	0	0	8	0	0	0	0	0
Muriwai	23	0	0	0	0	0	0	0	21	0	0	2	0	0	11	0	3	0	0	0
Dargaville	24	3	0	0	0	0	0	0	64	0	0	0	1	0	23	0	0	0	0	2
Ninety Mile	25	0	0	0	0	0	0	2	63	0	0	0	0	0	1	0	3	0	0	0
Pelorus Sound	26	2	0	0	11	0	0	0	234	0	0	0	2	19	1	0	0	1	0	3
Q.C. Sound	27	1	0	0	0	1	0	1	40	1	0	0	5	41	1	0	0	0	0	1
Outer Sounds	28	0	0	0	8	2	3	7	2	0	7	0	0	0	0	0	0	0	0	1
Kaikoura	29	0	0	0	12	0	0	1	0	2	5	0	0	0	0	0	1	0	0	0
N. Canterbury	30	0	0	0	21	111	2	1	3	1	7	0	1	0	0	0	0	0	0	13
Banks Peninsula	31	5	0	0	119	9	2	5	3	1	8	0	2	2	1	3	0	0	0	13
S. Canterbury	32	1	0	0	49	166	1	0	0	0	4	0	0	0	0	0	0	1	0	1
Otago	33	2	0	0	12	201	0	2	0	3	0	3	1	1	0	9	0	6	0	2
Catkins	34	0	0	0	2	2	0	0	1	0	0	0	0	0	0	6	0	1	0	0
Southland	35	1	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0	1	0	0
Stewart Island	36	0	0	0	0	0	0	0	0	0	0	0	0	6	0	14	0	0	0	1
Paterson Inlet	37	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1	0	0
Fiordland	38	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	0	0	0
Westland	39	0	0	0	1	1	0	3	60	0	24	0	0	0	1	0	0	1	0	11
Nelson	40	3	0	0	3	0	0	1	366	3	10	0	0	64	0	0	2	2	0	19
Unknown		0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Total		106	20	6	340	496	26	105	8 078	12	125	33	18	920	482	36	361	23	7	191

**Table 12: Numbers of the main shellfish species caught by diarists in each fishing zone. Z, fishing zone number. Catches by South region residents have been scaled down**

Fishing zone	Z	COC	CRA	MUS	OUN	OYS	PAU	PPI	SCA	SUR	TUA
North–Brett	1	30	36	50	200	0	20	420	685	22	370
Bay of Islands	2	300	59	980	130	0	6	1 325	658	50	45
Brett–Rodney	3	370	443	364	1	0	90	1 664	351	1019	565
Whangarei H	4	1 100	3	0	175	0	0	2 881	250	0	649
Barrier Is	5	100	182	200	0	0	18	0	616	15	0
Western Gulf	6	585	61	50	0	0	0	885	1 055	0	0
Inner Gulf	7	449	0	590	32	0	0	154	0	156	510
Firth Thames	8	0	0	569	0	0	0	122	20	50	50
Eastern Gulf	9	0	27	106	0	0	4	430	312	0	75
E. Coromandel	10	413	750	1 339	689	0	85	3 570	1 886	141	1 549
Mid BOP	11	70	218	212	0	0	8	2 374	198	0	4 311
Tauranga H	12	0	2	0	0	0	0	458	291	0	0
Eastern BOP	13	650	282	1 384	236	0	78	1 420	60	803	30
Gisborne	14	0	127	0	30	0	108	45	0	295	0
Hawke Bay	15	106	313	378	0	0	182	240	0	92	20
Wairarapa	16	45	359	165	0	0	738	0	0	24	0
Wellington	17	64	246	25	0	0	201	148	0	22	0
Manawatu	18	253	27	0	0	0	122	412	0	94	0
Taranaki	19	0	86	308	0	0	141	0	0	213	0
Waikato	20	250	39	230	1 200	0	22	695	0	244	0
Manukau H	21	0	3	614	140	0	24	972	1 728	0	0
Kaipara H	22	0	0	316	98	0	0	0	788	0	0
Dargaville	24	100	11	725	255	0	25	100	0	82	1 907
Ninety Mile	25	0	6	50	0	0	10	295	0	20	880
Pelorus Sound	26	110	73	264	24	0	36	80	1 159	0	0
Q. C. Sound	27	35	27	219	0	0	16	70	593	6	0
Outer Sounds	28	0	37	15	14	0	0	0	0	0	0
Kaikoura	29	0	65	46	0	0	109	0	0	23	0
N. Canterbury	30	0	9	26	0	0	25	263	0	0	621
Banks Peninsula	31	1	29	246	0	0	136	105	0	50	0
S. Canterbury	32	0	3	0	0	0	0	0	0	0	0
Otago	33	795	22	130	0	834	142	20	0	15	0
Catlins	34	233	10	92	58	9	172	3	0	10	0
Southland	35	322	3	467	1	0	321	37	0	108	0
Stewart Island	36	0	13	0	0	697	67	0	6	2	0
Paterson Inlet	37	200	5	0	0	57	41	0	120	0	0
Fiordland	38	0	121	40	0	0	11	0	46	29	0
Westland	39	89	48	1 216	0	0	0	50	0	0	0
Nelson	40	2 091	62	639	452	1221	112	425	10 251	10	0
Unknown		17	12	0	0	0	0	0	0	0	0
Total		8 778	3 819	12 055	3 735	2 818	3 070	19 663	21 073	3 595	11 582

**Table 13: Number of trips targeting the main shellfish species in each fishing zone. Z, fishing zone number. The number of trips by South region residents has been scaled down**

Fishing zone	Z	COC	CRA	MUS	OUN	OYS	PAU	PPI	SCA	SUR	TUA
North–Brett	1	2	12	1	2	0	3	6	31	2	3
Bay of Islands	2	3	19	22	2	0	1	12	26	1	1
Brett–Rodney	3	4	106	8	0	0	6	19	19	21	6
Whangarei H	4	9	1	0	3	0	0	24	14	0	6
Barrier Is	5	1	51	5	0	0	2	0	17	0	0
Western Gulf	6	6	38	1	0	0	0	7	42	0	0
Inner Gulf	7	4	1	14	3	0	0	2	0	3	6
Firth Thames	8	0	1	12	0	0	0	2	1	1	1
Eastern Gulf	9	0	7	3	0	0	2	6	12	0	2
E. Coromandel	10	4	206	38	5	0	16	41	81	6	25
Mid BOP	11	3	50	9	0	0	0	24	11	0	48
Tauranga H	12	0	1	0	0	0	0	3	15	0	0
Eastern BOP	13	6	72	25	2	0	10	17	4	10	1
Gisborne	14	0	23	0	1	0	11	3	0	10	0
Hawke Bay	15	2	69	11	0	0	12	2	0	3	1
Wairarapa	16	2	87	7	0	0	82	0	0	1	0
Wellington	17	3	94	2	0	0	17	2	0	0	0
Manawatu	18	6	14	0	0	0	11	9	0	3	0
Taranaki	19	0	19	7	0	0	10	0	0	4	0
Waikato	20	4	11	5	5	0	2	7	0	4	0
Manukau H	21	0	1	13	3	0	4	8	74	0	0
Kaipara H	22	0	0	3	2	0	0	0	36	0	0
Dargaville	24	0	2	13	3	0	3	1	0	2	15
Ninety Mile	25	0	1	2	0	0	1	3	0	1	6
Pelorus Sound	26	3	26	12	2	0	6	1	31	0	0
Q. C. Sound	27	1	12	7	0	0	2	2	14	1	0
Outer Sounds	28	0	6	1	1	0	1	0	0	0	0
Kaikoura	29	0	19	0	0	0	13	0	0	1	0
N. Canterbury	30	0	2	1	0	0	2	5	0	0	5
Banks Peninsula	31	0	10	8	0	0	11	3	0	4	0
S. Canterbury	32	0	1	0	0	0	0	0	0	0	0
Otago	33	13	12	2	1	8	17	2	0	0	0
Catlins	34	2	2	3	1	1	18	0	0	1	0
Southland	35	3	3	17	0	0	36	1	0	6	0
Stewart Island	36	0	13	0	0	13	7	0	1	0	0
Paterson Inlet	37	3	2	0	0	1	5	0	8	0	0
Fiordland	38	0	28	2	0	0	2	0	1	3	0
Westland	39	2	22	20	0	0	0	1	0	0	0
Nelson	40	25	27	17	8	35	12	9	133	1	0
Unknown		1	7	0	0	0	0	0	0	0	0
Total		112	1 078	291	44	58	325	222	571	89	126

**Table 14: Targeting of snapper by fishing zone.  $Z$ , fishing zone number;  $H$  (and *c.v.*) total harvest in thousands of fish;  $H_T$ , harvest on target trips;  $\%H_T$ , percentage of harvest taken on target trips;  $\%T$ , percentage of trips on which the species was specified as a target species (trips are included if the species was targeted or caught);  $\%S_T$ , percentage of successful target trips;  $\hat{C}_T$ , average number of fish caught on a target trip. -, estimates not given**

Fishing zone	$Z$	$H$	<i>c.v.</i>	$H_T$	$\%H_T$	$\%T$	$\%S_T$	$\hat{C}_T$
North–Brett	1	136	12	130	95.6	96.6	61.1	2.50
Bay of Islands	2	140	13	127	90.7	92.4	72.4	2.90
Brett–Rodney	3	166	11	152	91.6	93.7	62.2	2.37
Whangarei H	4	101	16	101	100.0	98.0	74.4	2.90
Barrier Is	5	101	14	99	98.0	96.9	83.2	3.73
Western Gulf	6	171	11	166	97.1	97.6	73.3	2.91
Inner Gulf	7	278	9	276	99.3	98.9	66.8	2.48
Firth Thames	8	149	15	145	97.3	96.6	78.9	4.06
Eastern Gulf	9	193	12	175	90.7	93.6	78.1	3.75
E. Coromandel	10	368	9	331	89.9	91.3	65.4	2.77
Mid BOP	11	301	9	253	84.1	89.5	62.9	2.50
Tauranga H	12	61	14	57	93.4	97.3	39.7	1.40
Eastern BOP	13	227	11	196	86.3	90.0	61.4	2.65
Gisborne	14	12	-	9	75.0	81.7	34.5	1.07
Hawke Bay	15	15	-	12	80.0	96.3	12.3	0.33
Wairarapa	16	1	-	1	-	-	-	-
Wellington	17	4	-	3	-	-	-	-
Manawatu	18	23	18	19	82.6	90.5	31.3	0.75
Taranaki	19	45	17	38	84.4	94.7	30.5	0.72
Waikato	20	68	16	65	95.6	96.1	50.0	2.08
Manukau H	21	46	17	34	73.9	88.9	43.5	1.30
Kaipara H	22	57	18	55	96.5	95.3	72.5	3.82
Muriwai	23	1	-	1	-	-	-	-
Dargaville	24	19	-	16	84.2	90.1	42.2	1.81
Ninety Mile	25	18	-	18	100.0	100.0	41.3	2.05
Pelorus Sound	26	22	17	21	95.5	97.9	32.0	0.60
Q.C. Sound	27	2	-	1	-	-	-	-
Westland	39	7	-	7	100.0	100.0	31.8	0.76
Nelson	40	43	18	42	97.7	97.2	30.5	0.80

**Table 15: Targeting of kahawai by fishing zone.  $Z$ , fishing zone number;  $H$  (and *c.v.*) total harvest in thousands of fish;  $H_T$ , harvest on target trips;  $\%H_T$ , percentage of harvest taken on target trips;  $\%T$ , percentage of trips on which the species was specified as a target species (trips are included if the species was targeted or caught);  $\%S_T$ , percentage of successful target trips;  $\hat{C}_T$ , average number of fish caught on a target trip. -, estimates not given**

Fishing zone	$Z$	$H$	<i>c.v.</i>	$H_T$	$\%H_T$	$\%T$	$\%S_T$	$\hat{C}_T$
North–Brett	1	42	15	12	28.6	44.7	52.9	1.22
Bay of Islands	2	32	15	9	28.1	42.3	46.7	1.13
Brett–Rodney	3	55	13	27	49.1	63.4	52.8	1.36
Whangarei H	4	12	22	8	66.7	68.3	48.8	1.37
Barrier Is	5	14	20	6	42.9	39.2	65.0	2.05
Western Gulf	6	39	16	16	41.0	54.8	50.8	1.81
Inner Gulf	7	62	12	34	54.8	60.5	46.4	1.61
Firth Thames	8	22	19	5	22.7	23.8	50.0	1.65
Eastern Gulf	9	22	15	9	40.9	42.0	67.6	1.76
E. Coromandel	10	99	11	45	45.5	60.4	49.2	1.32
Mid BOP	11	103	10	43	41.7	46.5	60.9	1.76
Tauranga H	12	28	15	14	50.0	66.0	39.6	0.96
Eastern BOP	13	126	11	48	38.1	49.6	55.9	1.77
Gisborne	14	12	-	3	-	-	-	-
Hawke Bay	15	72	16	33	45.8	73.3	44.1	1.05
Wairarapa	16	26	18	6	23.1	55.0	36.7	0.68
Wellington	17	33	16	20	60.6	72.0	42.2	1.25
Manawatu	18	79	13	36	45.6	59.5	43.8	1.27
Taranaki	19	75	15	39	52.0	68.9	47.2	1.20
Waikato	20	55	15	30	54.5	70.3	53.3	1.55
Manukau H	21	64	19	37	57.8	80.6	51.3	1.68
Kaipara H	22	18	20	9	50.0	51.8	55.2	2.28
Muriwai	23	7	-	3	-	-	-	-
Dargaville	24	37	-	29	78.4	79.3	68.1	2.96
Ninety Mile	25	20	-	6	30.0	40.4	57.1	2.00
Pelorus Sound	26	12	-	4	-	-	-	-
Q.C. Sound	27	7	-	3	-	-	-	-
Outer Sounds	28	6	-	2	-	-	-	-
Kaikoura	29	2	-	1	-	-	-	-
N. Canterbury	30	6	-	3	-	-	-	-
Banks Peninsula	31	4	-	3	-	-	-	-
S. Canterbury	32	4	-	1	-	-	-	-
Westland	39	11	-	3	-	-	-	-
Nelson	40	18	16	6	33.3	55.4	30.6	0.69

**Table 16: Targeting of blue cod by fishing zone.  $Z$ , fishing zone number;  $H$  (and *c.v.*) total harvest in thousands of fish;  $H_T$ , harvest on target trips;  $\%H_T$ , percentage of harvest taken on target trips;  $\%T$ , percentage of trips on which the species was specified as a target species (trips are included if the species was targeted or caught);  $\%S_T$ , percentage of successful target trips;  $\hat{C}_T$ , average number of fish caught on a target trip. -, estimates not given**

Fishing zone	$Z$	$H$	<i>c.v.</i>	$H_T$	$\%H_T$	$\%T$	$\%S_T$	$\hat{C}_T$
North–Brett	1	5	-	< 0.5	-	-	-	-
Bay of Islands	2	4	-	3	-	-	-	-
Brett–Rodney	3	3	-	< 0.5	-	-	-	-
E. Coromandel	10	5	-	< 0.5	-	-	-	-
Mid BOP	11	6	21	1	16.7	9.7	100.0	1.67
Hawke Bay	15	12	-	3	-	-	-	-
Wairarapa	16	81	22	69	85.2	84.1	92.8	7.14
Wellington	17	49	18	33	67.3	73.4	62.5	2.95
Manawatu	18	97	15	68	70.1	77.9	77.2	3.82
Taranaki	19	63	21	35	55.6	49.3	79.4	7.44
Pelorus Sound	26	160	13	143	89.4	86.3	88.0	5.05
Q.C. Sound	27	107	13	98	91.6	93.2	67.6	3.13
Outer Sounds	28	17	-	15	88.2	92.3	87.5	5.54
Kaikoura	29	5	-	4	-	-	-	-
N. Canterbury	30	7	-	7	100.0	100.0	87.5	9.75
Banks Peninsula	31	11	-	10	90.9	92.2	55.9	2.08
S. Canterbury	32	3	-	2	-	-	-	-
Otago	33	146	14	137	93.8	92.3	85.6	9.49
Catlins	34	46	23	46	100.0	98.7	89.2	7.73
Southland	35	74	19	68	91.9	91.5	77.9	9.78
Stewart Island	36	55	19	53	96.4	93.1	84.0	8.09
Paterson Inlet	37	14	-	14	100.0	100.0	88.0	6.12
Fiordland	38	27	-	26	96.3	92.6	94.0	6.40
Westland	39	3	-	3	-	-	-	-
Nelson	40	68	17	57	83.8	82.2	66.4	3.34

**Table 17: Targeting of tarakihi by fishing zone.  $Z$ , fishing zone number;  $H$  (and *c.v.*) total harvest in thousands of fish;  $H_T$ , harvest on target trips;  $\%H_T$ , percentage of harvest taken on target trips;  $\%T$ , percentage of trips on which the species was specified as a target species (trips are included if the species was targeted or caught);  $\%S_T$ , percentage of successful target trips;  $\hat{C}_T$ , average number of fish caught on a target trip. -, estimates not given**

Fishing zone	$Z$	$H$	<i>c.v.</i>	$H_T$	$\%H_T$	$\%T$	$\%S_T$	$\hat{C}_T$
North–Brett	1	4	-	3	-	-	-	-
Bay of Islands	2	21	-	13	61.9	72.3	55.3	2.02
Brett–Rodney	3	10	-	4	-	-	-	-
Barrier Is	5	9	-	3	-	-	-	-
Western Gulf	6	1	-	< 0.5	-	-	-	-
Eastern Gulf	9	2	-	1	-	-	-	-
E. Coromandel	10	176	15	142	80.7	68.9	68.5	6.24
Mid BOP	11	193	12	154	79.8	78.9	70.5	5.08
Tauranga H	12	4	-	4	-	-	-	-
Eastern BOP	13	76	16	59	77.6	70.9	76.7	5.73
Gisborne	14	22	-	20	90.9	85.7	69.4	4.03
Hawke Bay	15	28	-	20	71.4	60.0	63.0	5.37
Wairarapa	16	14	-	6	42.9	55.0	45.5	1.86
Wellington	17	51	20	41	80.4	76.6	75.0	4.08
Manawatu	18	41	19	23	56.1	61.0	68.0	3.34
Taranaki	19	5	-	2	-	-	-	-
Pelorus Sound	26	8	-	3	-	-	-	-
Q.C. Sound	27	23	18	11	47.8	50.6	54.5	1.98
Nelson	40	35	23	24	68.6	68.1	75.0	2.69

**Table 18: Targeting of red gurnard by fishing zone.  $Z$ , fishing zone number;  $H$  (and *c.v.*) total harvest in thousands of fish;  $H_T$ , harvest on target trips;  $\%H_T$ , percentage of harvest taken on target trips;  $\%T$ , percentage of trips on which the species was specified as a target species (trips are included if the species was targeted or caught);  $\%S_T$ , percentage of successful target trips;  $\hat{C}_T$ , average number of fish caught on a target trip. -, estimates not given**

Fishing zone	$Z$	$H$	<i>c.v.</i>	$H_T$	$\%H_T$	$\%T$	$\%S_T$	$\hat{C}_T$
North–Brett	1	2	-	< 0.5	-	-	-	-
E. Coromandel	10	42	15	20	47.6	56.6	44.4	1.44
Mid BOP	11	47	14	18	38.3	44.2	47.1	1.94
Tauranga H	12	7	-	2	-	-	-	-
Eastern BOP	13	51	18	17	33.3	45.7	58.1	1.65
Hawke Bay	15	33	24	14	42.4	73.8	27.8	1.10
Wellington	17	2	-	1	-	-	-	-
Manawatu	18	25	19	13	52.0	55.2	58.5	1.81
Taranaki	19	45	21	29	64.4	72.7	40.4	1.93
Waikato	20	30	22	6	20.0	40.0	45.8	1.71
Manukau H	21	24	23	8	33.3	47.3	51.4	1.74
Kaipara H	22	18	24	13	72.2	62.0	54.8	3.10
Muriwai	23	4	-	3	-	-	-	-
Dargaville	24	7	-	1	-	-	-	-
Pelorus Sound	26	3	-	1	-	-	-	-
Q.C. Sound	27	4	-	2	-	-	-	-
Nelson	40	17	21	3	17.6	36.8	46.4	0.79

**Table 19: Targeting of flatfish by fishing zone.  $Z$ , fishing zone number;  $H$  (and *c.v.*) total harvest in thousands of fish;  $H_T$ , harvest on target trips;  $\%H_T$ , percentage of harvest taken on target trips;  $\%T$ , percentage of trips on which the species was specified as a target species (trips are included if the species was targeted or caught);  $\%S_T$ , percentage of successful target trips;  $\hat{C}_T$ , average number of fish caught on a target trip. -, estimates not given**

Fishing zone	$Z$	$H$	<i>c.v.</i>	$H_T$	$\%H_T$	$\%T$	$\%S_T$	$\hat{C}_T$
North–Brett	1	7	-	7	100.0	83.3	100.0	10.20
Bay of Islands	2	52	-	48	92.3	92.9	89.7	8.72
Brett–Rodney	3	6	-	6	100.0	100.0	100.0	7.17
Inner Gulf	7	17	-	17	100.0	100.0	78.3	5.35
Firth Thames	8	8	-	8	100.0	100.0	100.0	12.00
E. Coromandel	10	30	-	29	96.7	89.3	100.0	8.32
Mid BOP	11	3	-	3	-	-	-	-
Tauranga H	12	5	-	5	100.0	100.0	88.9	4.00
Eastern BOP	13	38	-	38	100.0	96.6	89.3	9.71
Wairarapa	16	17	-	11	64.7	64.3	100.0	9.11
Manawatu	18	44	-	28	63.6	72.9	94.3	5.63
Taranaki	19	3	-	2	-	-	-	-
Waikato	20	94	-	85	90.4	80.9	100.0	16.00
Manukau H	21	7	-	5	71.4	55.6	100.0	7.40
Kaipara H	22	18	-	13	72.2	53.8	100.0	13.00
Dargaville	24	18	-	12	66.7	69.2	100.0	9.89
Ninety Mile	25	1	-	1	-	-	-	-
Pelorus Sound	26	18	-	14	77.8	73.2	87.8	2.90
N. Canterbury	30	3	-	3	-	-	-	-
Banks Peninsula	31	53	-	53	100.0	95.3	98.4	10.82
Otago	33	19	-	18	94.7	92.3	95.8	9.08
Catlins	34	2	-	2	-	-	-	-
Southland	35	34	-	33	97.1	91.9	100.0	12.12
Westland	39	7	-	7	100.0	87.5	85.7	7.71
Nelson	40	18	24	14	77.8	51.3	95.0	5.15



**Table 20:** Targeting of trevally by fishing zone.  $Z$ , fishing zone number;  $H$  (and *c.v.*) total harvest in thousands of fish;  $H_T$ , harvest on target trips;  $\%H_T$ , percentage of harvest taken on target trips;  $\%T$ , percentage of trips on which the species was specified as a target species (trips are included if the species was targeted or caught);  $\%S_T$ , percentage of successful target trips;  $\hat{C}_T$ , average number of fish caught on a target trip. -, estimates not given

Fishing zone	$Z$	$H$	<i>c.v.</i>	$H_T$	$\%H_T$	$\%T$	$\%S_T$	$\hat{C}_T$
North–Brett	1	11	22	2	18.2	29.7	45.5	1.45
Bay of Islands	2	14	22	4	28.6	42.9	55.6	1.11
Brett–Rodney	3	19	17	3	15.8	34.9	30.0	0.63
Whangarei H	4	4	-	1	-	-	-	-
Western Gulf	6	11	22	2	18.2	33.3	26.7	1.13
Inner Gulf	7	3	-	< 0.5	-	-	-	-
Eastern Gulf	9	4	-	< 0.5	-	-	-	-
E. Coromandel	10	41	14	4	-	-	-	-
Mid BOP	11	32	14	5	-	-	-	-
Tauranga H	12	11	21	4	-	-	-	-
Eastern BOP	13	30	15	2	-	-	-	-
Hawke Bay	15	7	-	3	-	-	-	-
Taranaki	19	25	-	13	52.0	71.4	24.4	2.13
Waikato	20	19	21	12	63.2	74.5	44.7	1.09
Manukau H	21	5	-	3	-	-	-	-
Kaipara H	22	2	-	1	-	-	-	-
Muriwai	23	1	-	1	-	-	-	-
Dargaville	24	7	-	2	-	-	-	-

**Table 21:** Targeting of red cod by fishing zone.  $Z$ , fishing zone number;  $H$  (and *c.v.*) total harvest in thousands of fish;  $H_T$ , harvest on target trips;  $\%H_T$ , percentage of harvest taken on target trips;  $\%T$ , percentage of trips on which the species was specified as a target species (trips are included if the species was targeted or caught);  $\%S_T$ , percentage of successful target trips;  $\hat{C}_T$ , average number of fish caught on a target trip. -, estimates not given

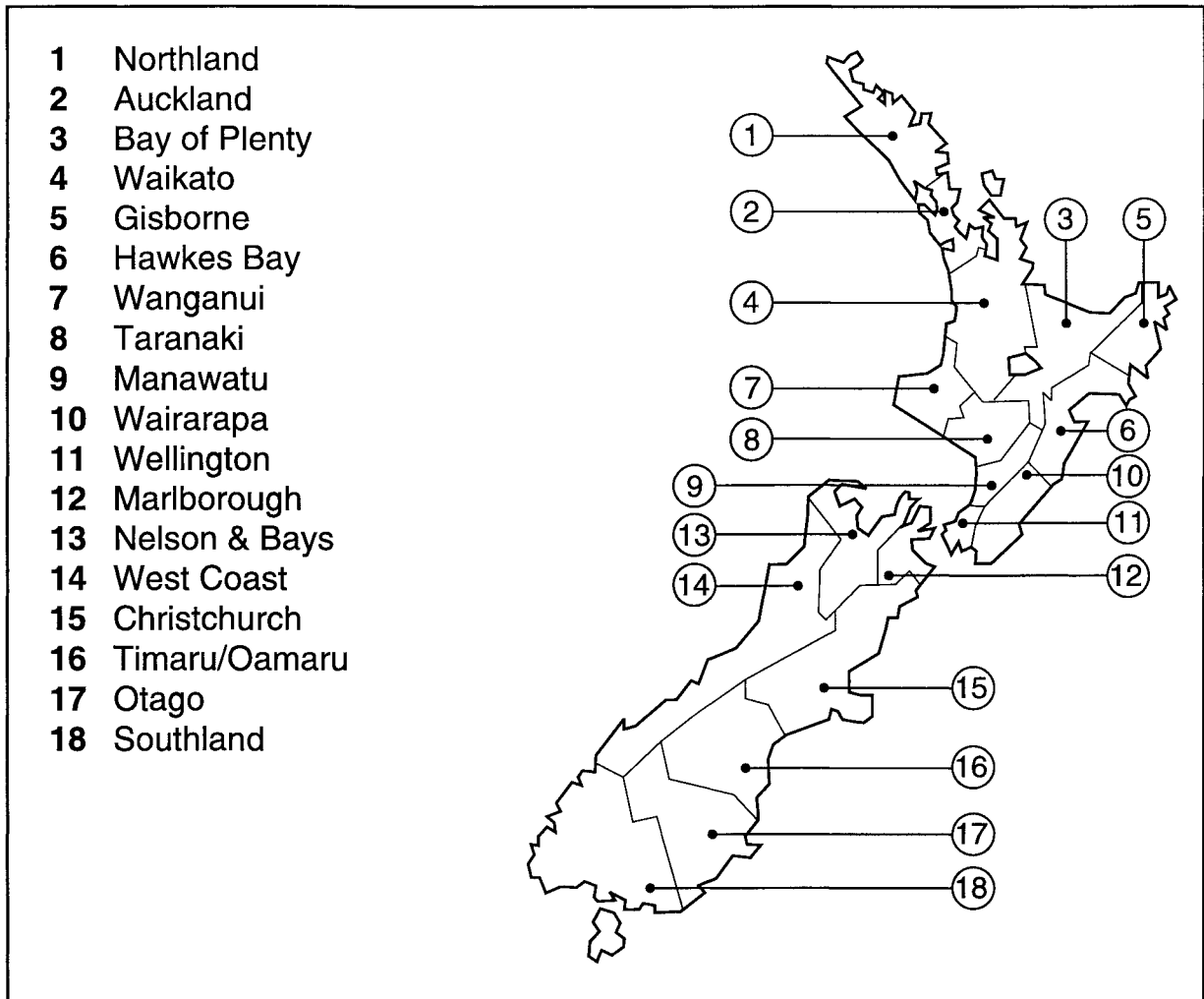
Fishing zone	$Z$	$H$	<i>c.v.</i>	$H_T$	$\%H_T$	$\%T$	$\%S_T$	$\hat{C}_T$
Hawke Bay	15	8	-	1	-	-	-	-
Wairarapa	16	16	22	7	43.8	38.8	52.6	2.47
Wellington	17	11	-	2	-	-	-	-
Manawatu	18	42	22	4	9.5	36.3	24.3	0.70
Taranaki	19	9	-	2	-	-	-	-
Pelorus Sound	26	13	-	4	-	-	-	-
Kaikoura	29	3	-	<0.5	-	-	-	-
N. Canterbury	30	4	-	3	-	-	-	-
Banks Peninsula	31	59	14	44	74.6	79.0	51.2	2.61
S. Canterbury	32	21	-	20	95.2	91.4	56.5	2.92
Otago	33	7	-	4	-	-	-	-
Catlins	34	1	-	<0.5	-	-	-	-
Nelson	40	18	25	<0.5	0.0	6.8	66.7	1.00

**Table 22: Targeting of rock lobster by fishing zone.  $Z$ , fishing zone number;  $H$  (and *c.v.*) total harvest in thousands of fish;  $H_T$ , harvest on target trips;  $\%H_T$ , percentage of harvest taken on target trips;  $\%T$ , percentage of trips on which the species was specified as a target species (trips are included if the species was targeted or caught);  $\%S_T$ , percentage of successful target trips;  $\hat{C}_T$ , average number of fish caught on a target trip. -, estimates not given**

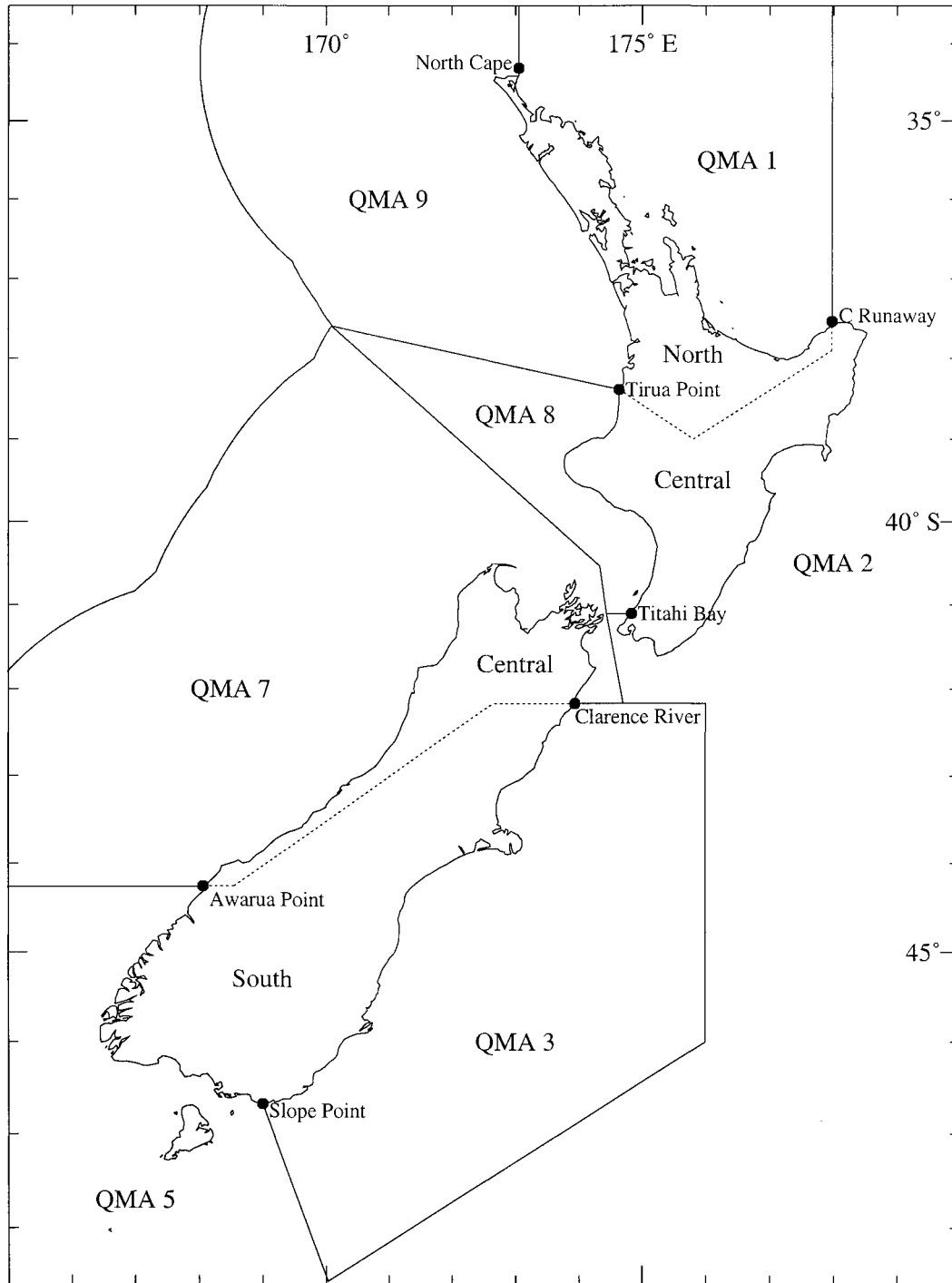
Fishing zone	$Z$	$H$	<i>c.v.</i>	$H_T$	$\%H_T$	$\%T$	$\%S_T$	$\hat{C}_T$
North–Brett	1	5	-	5	100.0	100.0	75.0	3.00
Bay of Islands	2	8	-	8	100.0	95	78.9	3.05
Brett–Rodney	3	62	-	61	98.4	99.1	84.0	4.12
Barrier Is	5	25	-	25	100.0	100.0	88.2	3.57
Western Gulf	6	9	-	9	100.0	100.0	71.1	1.61
Eastern Gulf	9	4	-	3	-	-	-	-
E. Coromandel	10	105	15	104	99	98.1	89.8	3.62
Mid BOP	11	31	22	25	80.6	87.7	82.0	3.60
Eastern BOP	13	39	23	37	94.9	94.7	84.7	3.68
Gisborne	14	18	-	18	100.0	100.0	95.7	5.57
Hawke Bay	15	44	-	39	88.6	92.1	82.9	4.03
Wairarapa	16	50	20	48	96	94.6	81.6	3.94
Wellington	17	34	23	34	100.0	97.9	81.9	2.57
Manawatu	18	4	-	3	-	-	-	-
Taranaki	19	12	-	12	100.0	100.0	84.2	4.53
Waikato	20	5	-	5	100.0	100.0	63.6	3.55
Dargaville	24	2	-	2	-	-	-	-
Pelorus Sound	26	10	-	10	100.0	96.4	81.5	2.74
Q.C. Sound	27	4	-	3	-	-	-	-
Outer Sounds	28	5	-	5	100.0	100.0	100.0	6.17
Kaikoura	29	9	-	9	100.0	97.1	84.8	3.30
N. Canterbury	30	1	-	1	-	-	-	-
Banks Peninsula	31	4	-	4	-	-	-	-
Otago	33	3	-	3	-	-	-	-
Catlins	34	1	-	1	-	-	-	-
Southland	35	0	-	< 0.5	-	-	-	-
Stewart Island	36	2	-	2	-	-	-	-
Paterson Inlet	37	1	-	1	-	-	-	-
Fiordland	38	17	-	16	94.1	94.2	89.8	3.98
Westland	39	7	-	6	85.7	91.7	59.1	2.09
Nelson	40	9	-	8	88.9	96.7	75.9	2.31

**Table 23: Targeting of paua by fishing zone.  $Z$ , fishing zone number;  $H$  (and *c.v.*) total harvest in thousands of fish;  $H_T$ , harvest on target trips;  $\%H_T$ , percentage of harvest taken on target trips;  $\%T$ , percentage of trips on which the species was specified as a target species (trips are included if the species was targeted or caught);  $\%S_T$ , percentage of successful target trips;  $\hat{C}_T$ , average number of fish caught on a target trip. -, estimates not given**

Fishing zone	$Z$	$H$	<i>c.v.</i>	$H_T$	$\%H_T$	$\%T$	$\%S_T$	$\hat{C}_T$
North–Brett	1	3	-	3	-	-	-	-
Brett–Rodney	3	13	-	8	61.5	66.7	100.0	10.00
Barrier Is	5	3	-	3	-	-	-	-
Eastern Gulf	9	1	-	1	-	-	-	-
E. Coromandel	10	12	-	12	100.0	100.0	87.5	5.31
Eastern BOP	13	11	-	11	100.0	100.0	90.9	7.27
Gisborne	14	15	-	13	86.7	91.7	72.7	8.45
Hawke Bay	15	25	-	25	100.0	100.0	100.0	15.17
Wairarapa	16	103	21	90	87.4	93.2	91.5	7.88
Wellington	17	28	-	27	96.4	94.4	88.2	11.35
Manawatu	18	17	-	16	94.1	91.7	90.9	10.18
Taranaki	19	20	-	20	100.0	100.0	90.0	14.10
Waikato	20	3	-	3	-	-	-	-
Manukau H	21	3	-	3	-	-	-	-
Dargaville	24	3	-	3	-	-	-	-
Pelorus Sound	26	5	-	5	100.0	100.0	83.3	6.00
Q.C. Sound	27	2	-	2	-	-	-	-
Kaikoura	29	15	-	14	93.3	86.4	100.0	8.05
N. Canterbury	30	4	-	4	-	-	-	-
Banks Peninsula	31	19	-	19	100.0	100.0	85.0	11.85
Otago	33	20	-	18	90.0	90.6	86.2	7.90
Catlins	34	24	-	23	95.8	97.0	93.8	9.09
Southland	35	45	21	42	93.3	92.5	93.5	8.44
Stewart Island	36	9	-	9	100.0	92.3	100.0	8.92
Paterson Inlet	37	6	-	6	100.0	100.0	100.0	8.86
Fiordland	38	2	-	2	-	-	-	-
Nelson	40	16	-	16	100.0	100.0	100.0	9.33



*Figure 1: The Telecom telephone book coverage areas and their numbers as used in this survey.*

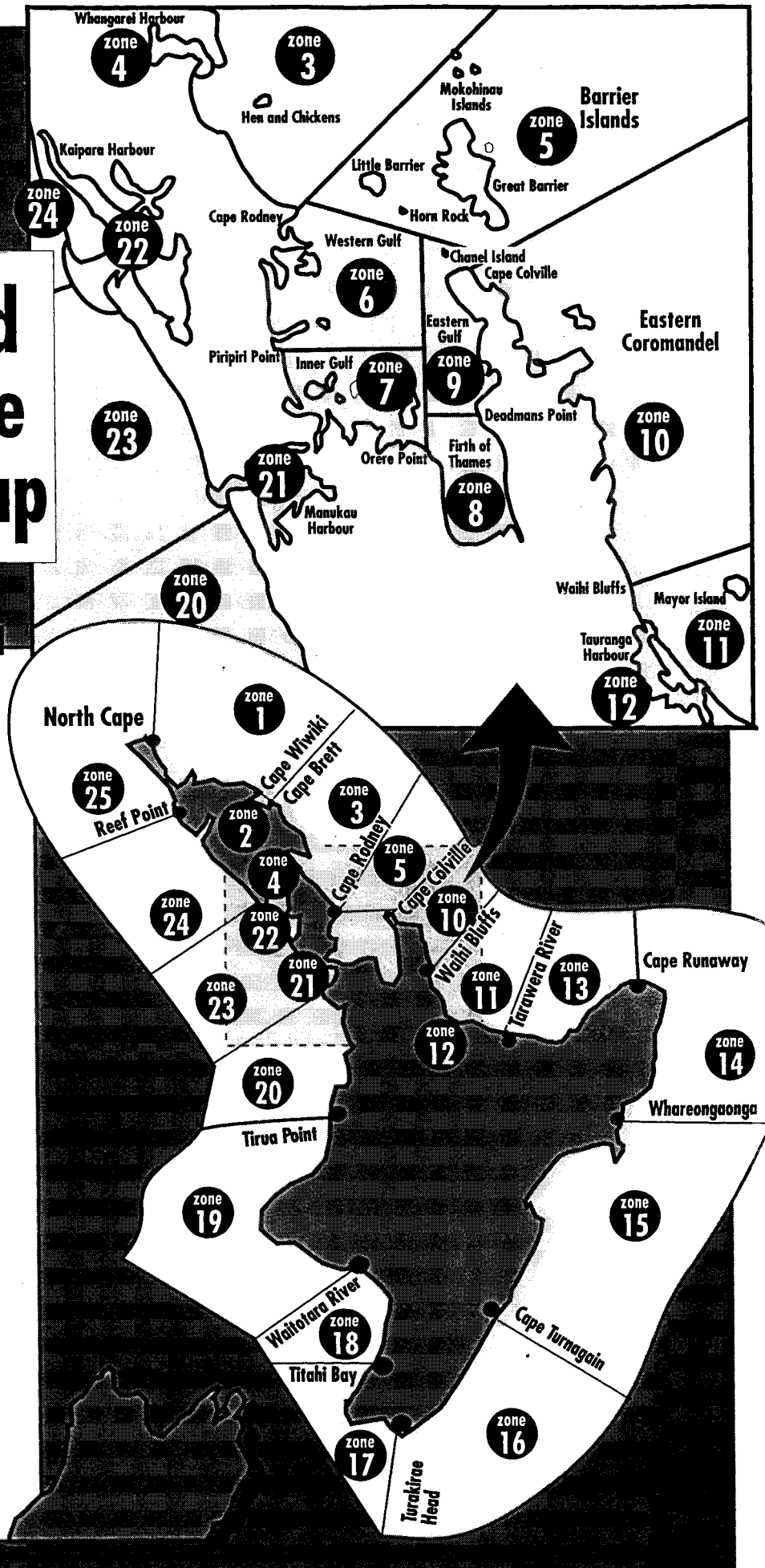


**Figure 2: Map of New Zealand showing the land areas taken to be associated with the North, Central, and South regions and the Quota Management Areas (QMAs) which adjoin the coastline.**

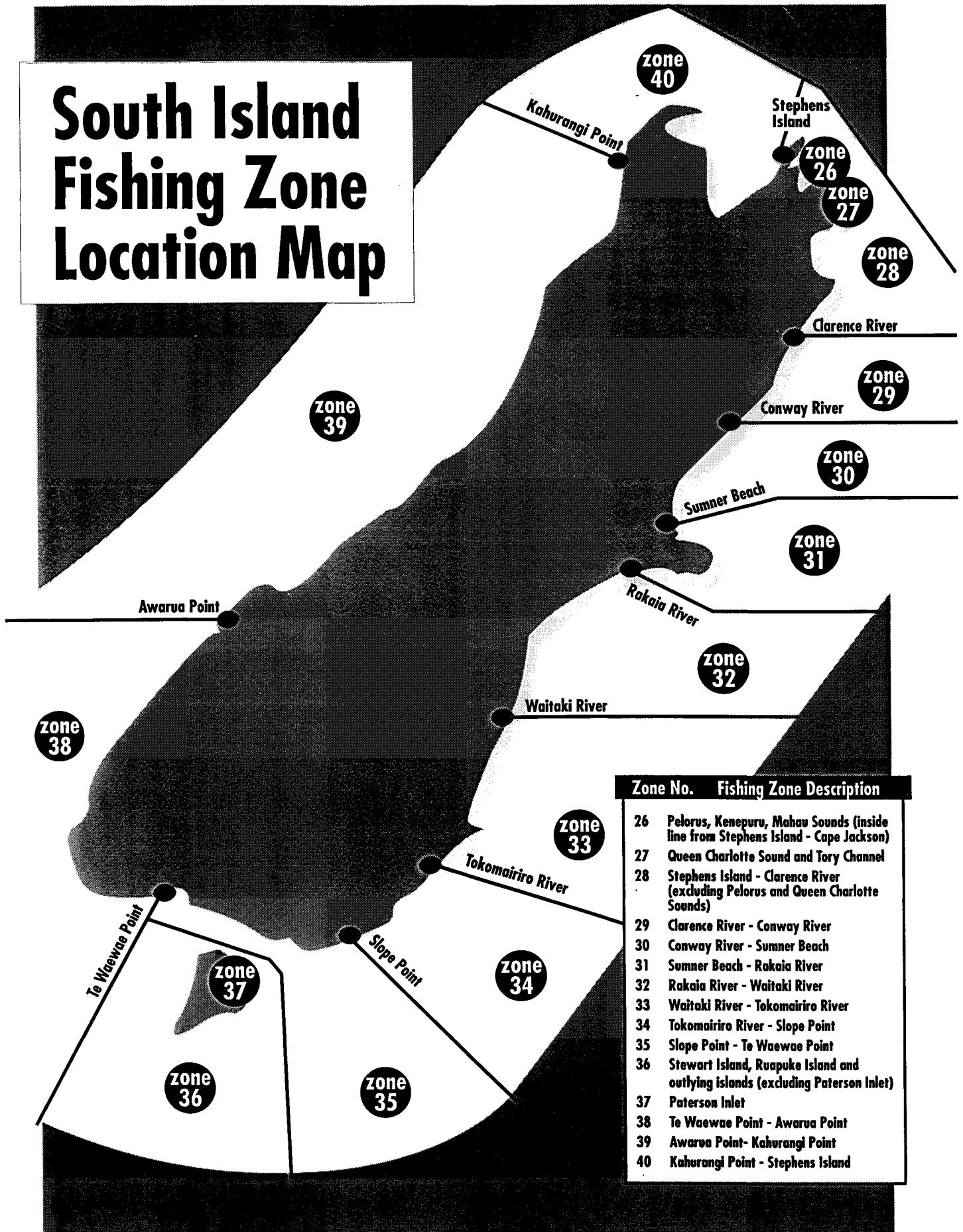
# North Island Fishing Zone Location Map

**Zone No. Fishing Zone Description**

- 1 North Cape - Cape Brett (excluding the Bay of Islands)
- 2 Bay of Islands (Cape Wiwiki - Cape Brett including the area around the Ninepin and Piery Island))
- 3 Cape Brett - Cape Rodney (excluding Whangarei Harbour)
- 4 Whangarei Harbour and entrance area (including Mair Bank)
- 5 Barrier Islands (including the Mokohinau Islands, Little Barrier and Great Barrier)
- 6 Western Gulf (Cape Rodney - Piripiri Point)
- 7 Inner Gulf (Piripiri Point - Orere Point)
- 8 Firth of Thames (Orere Point - Deadmans Point)
- 9 Eastern Gulf (Deadmans Point to Cape Colville, including Chanel Island)
- 10 Eastern Coromandel (Cape Colville to Waihi Bluffs, excluding Mayor Island)
- 11 Waihi Bluffs to Tarawera River (excluding Tauranga Harbour)
- 12 Tauranga Harbour (including both entrance areas)
- 13 Tarawera River - Cape Runaway (including Rurima Islands)
- 14 Cape Runaway - Whareongaonga
- 15 Whareongaonga - Cape Turnagain
- 16 Cape Turnagain - Turakirae Head
- 17 Turakirae Head - Titahi Bay
- 18 Titahi Bay - Waitotara River
- 19 Waitotara River - Tirua Point
- 20 Tirua Point - entrance area of Manukau Harbour
- 21 Manukau Harbour and entrance area
- 22 Kaipara Harbour and entrance area
- 23 Southern Manukau entrance to the northern Kaipara entrance (excluding the Manukau and Kaipara Harbours)
- 24 Northern Kaipara entrance - Reef Point (excluding the Kaipara Harbour)
- 25 Reef Point - North Cape



# South Island Fishing Zone Location Map



Zone No.	Fishing Zone Description
26	Pelorus, Kenepuru, Mahau Sounds (inside line from Stephens Island - Cape Jackson)
27	Queen Charlotte Sound and Tory Channel
28	Stephens Island - Clarence River (excluding Pelorus and Queen Charlotte Sounds)
29	Clarence River - Conway River
30	Conway River - Sumner Beach
31	Sumner Beach - Rakaia River
32	Rakaia River - Waitaki River
33	Waitaki River - Tokomairiro River
34	Tokomairiro River - Slope Point
35	Slope Point - Te Waewae Point
36	Stewart Island, Ruapuke Island and outlying islands (excluding Paterson Inlet)
37	Paterson Inlet
38	Te Waewae Point - Awarua Point
39	Awarua Point - Kahurangi Point
40	Kahurangi Point - Stephens Island

## Appendix 2: Target trips by QMA

The tables and figures in Bradford *et al.* (1998a) (except figures 21 and 22) involving target trips were calculated using the number of trips for which a species was given as the sole target species. In this report, a more correct definition of targeting was used, that is, the numbers of target trips were estimated using the trips when the species was in the list of target species. New versions of several of the tables in Bradford *et al.* (1998a) using this definition of target trips are given (Tables A1–A5).

Table A1 reestimates the numbers in tables 8 and 10 of Bradford *et al.* (1998a). The new tabulation is only for the species given in Bradford *et al.* (1998a). Data were not available for all species when that paper was written. Estimates for other species in larger areas can be made by adding the numbers by zone in Table 11 or 13. Rounding errors and the exclusion of trips for which no location was given should account for any differences between Table A1 and Tables 11 and 13.

Tables 12, 14, 16, and 18 of Bradford *et al.* (1998a) giving the numbers of trips by fishing method and Fishstock for the main species are replaced by Tables A2, A3, A4, and A5. The new tables give the numbers of trips in which (a) the species was targeted; (b) the species was caught; and (c) the species was targeted or caught. Only tabulation (c) was given in Bradford *et al.* (1998a).



**Table A1: Numbers of trips targeting the main species made by diarists in each QMA and the total number of trips for the species. The numbers of trips by South region residents have been scaled down because of the different sampling fraction. Trips with unknown location are omitted. This table updates tables 8 and 10 in Bradford *et al.* (1998a) to include all trips where the species was among the list of target species**

Species	QMA 1	QMA 2	QMA 3	QMA 5	QMA 7	QMA 8	QMA 9	Total
BAR	7	3	3	1	0	2	0	16
BCO	17	159	200	143	562	161	0	1 242
BMA	26	0	0	0	0	2	0	28
BUT	14	77	52	11	27	12	0	193
DOG	0	1	7	1	6	11	0	26
EMA	9	1	0	0	2	0	0	12
FLA	179	18	74	24	79	44	71	489
GMU	13	7	0	0	1	0	22	43
GUR	262	124	1	0	44	162	108	701
HPB	96	109	16	13	45	7	1	287
JMA	13	19	0	0	0	4	0	36
KAH	1 316	414	126	1	153	434	425	2 869
KIN	651	39	3	0	16	40	92	841
KOH	14	0	0	0	0	0	0	14
MOK	1	118	63	14	49	2	0	247
PAR	14	3	0	0	0	1	2	20
RCO	7	51	215	1	23	43	0	340
SAM	0	0	489	1	4	2	0	496
SCH	4	5	5	0	3	8	1	26
SHA	31	18	8	0	12	19	8	96
SNA	5 768	384	7	0	703	556	656	8 074
SPE	0	1	7	0	4	0	0	12
SPO	5	8	23	3	40	13	31	123
TAR	542	157	2	7	124	67	19	918
TRE	209	25	1	0	3	46	198	482
TUN	294	24	1	1	2	18	20	360
YEM	36	41	29	1	35	44	5	191
COC	42	7	15	6	30	6	4	110
CRA	570	273	47	46	92	33	15	1 076
MUS	138	20	15	18	57	7	36	291
PAU	40	122	61	49	21	21	10	324
PPI	162	7	10	1	13	9	19	221
SCA	273	0	0	10	178	0	110	571

**Table A2: Numbers of trips made by diarists by fishing method and Fishstock. The numbers of trips by South region residents have been scaled down because of the different sampling fraction. This table updates table 12 in Bradford *et al.* (1998a)**

Method	SNA 1	SNA 2	SNA 3	SNA 7	SNA 8
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**Trips on which snapper were targeted**

Lines/private boat	4 193	97	2	366	569
Lines/charter boat	230	6	0	21	33
Longlines/priv. boat	79	0	0	82	51
Lines/shore	1 103	275	4	162	498
Longlines/shore	87	4	1	3	44
Diving/private boat	9	0	0	0	1
Other	68	2	0	70	17

**Trips on which snapper were caught**

Lines/private boat	3 295	46	1	120	385
Lines/charter boat	176	6	0	7	24
Longlines/priv. boat	72	0	0	51	28
Lines/shore	487	35	0	39	110
Longlines/shore	91	0	0	0	13
Diving/private boat	3	1	0	0	0
Other	68	2	1	20	21

**Trips on which snapper was either targeted or caught**

Lines/private boat	4 447	114	3	379	608
Lines/charter boat	244	7	0	23	33
Longlines/priv. boat	88	0	0	87	54
Lines/shore	1 129	281	4	163	525
Longlines/shore	113	4	1	3	46
Diving/private boat	9	1	0	0	1
Other	104	4	1	70	34

**Table A3: Numbers of trips made by diarists by fishing method and Fishstock. The numbers of trips by South region residents have been scaled down because of the different sampling fraction. This table updates table 14 in Bradford *et al.* (1998a)**

Method	KAH 1	KAH 2	KAH 3	KAH 9
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**Trips on which kahawai were targeted**

Lines/private boat	678	85	131	113
Lines/charter boat	26	3	6	17
Longlines/priv boat	22	1	14	0
Lines/shore	541	306	501	262
Longlines/shore	18	6	25	6
Set/gill netting	30	11	30	20
Other	1	2	7	8

**Trips on which kahawai were caught**

Lines/private boat	1 241	166	260	151
Lines/charter boat	45	10	11	14
Longlines/priv boat	18	1	20	1
Lines/shore	469	153	282	219
Longlines/shore	33	5	16	9
Set/gill netting	47	36	51	25
Other	4	6	19	6

**Trips on which kahawai were either targeted or caught**

Lines/private boat	1 538	196	314	199
Lines/charter boat	59	11	12	20
Longlines/priv boat	32	1	28	1
Lines/shore	748	356	621	338
Longlines/shore	45	6	30	14
Set/gill netting	62	40	70	33
Other	5	7	25	10

**Table A4: Numbers of trips made by diarists by fishing method and Fishstock. The numbers of trips by South region residents have been scaled down because of the different sampling fraction. This table updates table 16 in Bradford *et al.* (1998a)**

Method	BCO 1	BCO 2	BCO 3	BCO 5	BCO 7	BCO 8
<b>Trips on which blue cod were targeted</b>						
Lines/private boat	16	126	136	100	464	133
Lines/charter boat	1	11	6	19	46	7
Longlines/priv boat	0	0	0	3	9	16
Lines/shore	0	18	52	11	38	1
Diving/private boat	0	1	1	3	0	0
Set/gill netting	0	0	2	1	5	4
Other	0	3	4	6	1	0
<b>Trips on which blue cod were caught</b>						
Lines/private boat	106	159	124	90	415	170
Lines/charter boat	12	11	6	18	49	8
Longlines/priv boat	3	0	0	3	9	12
Lines/shore	14	15	40	6	22	3
Diving/private boat	0	1	1	5	2	1
Set/gill netting	0	1	3	1	7	2
Other	1	2	3	8	1	0
<b>Trips on which blue cod were targeted or caught</b>						
Lines/private boat	111	181	146	104	524	197
Lines/charter boat	12	11	6	19	51	8
Longlines/priv boat	3	0	0	3	10	19
Lines/shore	14	27	55	12	43	3
Diving/private boat	0	1	1	5	2	1
Set/gill netting	0	1	5	2	10	4
Other	1	5	5	8	2	0

**Table A5: Numbers of trips made by diarists by fishing method and Fishstock. The numbers of trips by South region residents have been scaled down because of the different sampling fraction. This table updates table 18 in Bradford *et al.* (1998a)**

Method	CRA 1	CRA 2	CRA 3	CRA 4	CRA 5	CRA 7	CRA 8	CRA 9
<b>Trips on which rock lobster were targeted</b>								
Diving/private boat	111	318	2	57	62	10	23	30
Diving/charter boat	5	33	0	1	11	0	17	1
Diving/shore	6	20	8	103	8	0	6	8
Potting	8	55	31	74	8	1	4	1
Other	8	43	8	107	15	0	8	26
<b>Trips on which rock lobster were caught</b>								
Diving/private boat	103	276	1	48	54	9	17	25
Diving/charter boat	2	30	0	1	5	0	15	1
Diving/shore	4	18	6	85	5	0	6	7
Potting	1	50	26	65	6	0	1	1
Other	2	25	0	10	8	0	1	11
<b>Trips on which rock lobster were targeted or caught</b>								
Diving/private boat	112	328	2	59	63	10	23	30
Diving/charter boat	5	33	0	1	11	0	18	1
Diving/shore	6	20	8	103	8	0	6	8
Potting	8	56	31	77	8	1	4	1
Other	3	28	0	13	10	0	1	20