MOTIVATIONS AND PERCEPTIONS OF SEAWATER RECREATIONAL FISHERS IN NEW ZEALAND

Kim Walshe & Jo Akroyd, In Association With
National Research Bureau Ltd

Ministry of Fisheries Project REC9802

Akroyd Walshe Ltd

March 2000

Contractors' Contact Details:

Akroyd Walshe Ltd ph 64-9-480-9620, kwalshe@attglobal.net

National Research Bureau Ltd ph 64-9-630-0655, support@nrb.co.nz

Contents

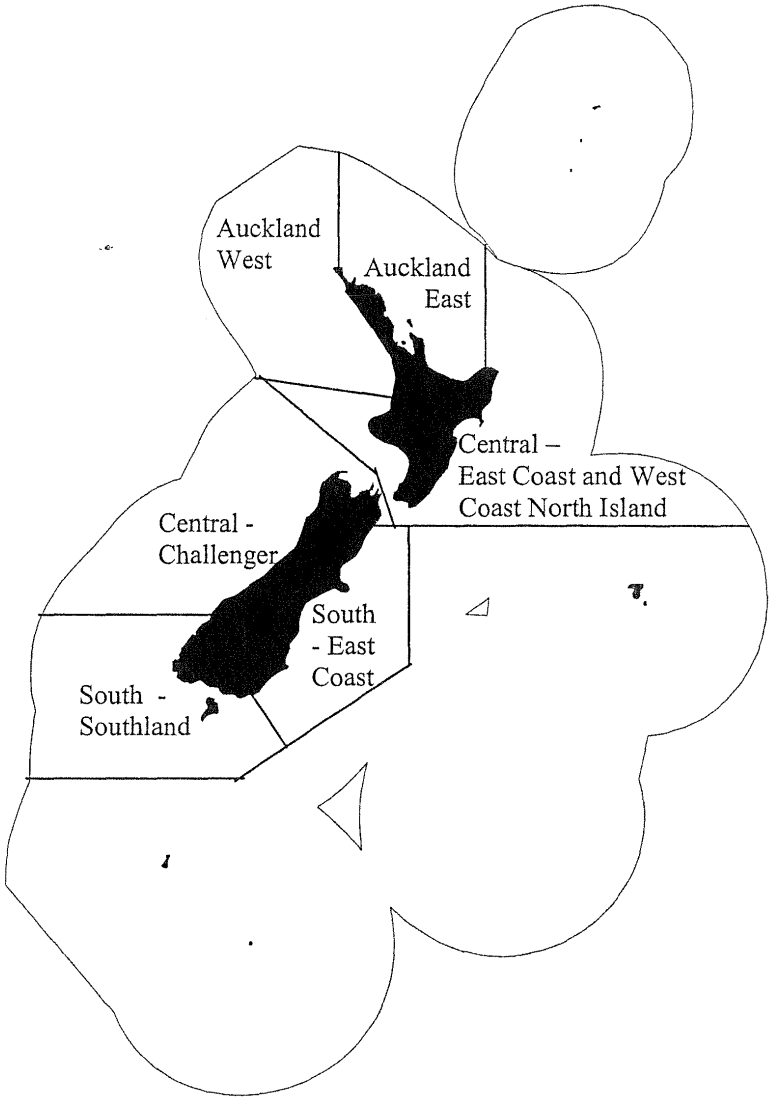
Contents *(continued)*

Page No.

Contents *(continued)*

Page No.

Fisheries Management Areas referred to in the report



A. EXECUTIVE SUMMARY

During January and February 1999, 10 meetings at eight locations from Whangarei to Christchurch were held to conduct focus group sessions probing for questions to be used in the survey questionnaire. A range of fishers were chosen to gain a spectrum of fishing methods and activities.

A further pilot of the draft questionnaire was undertaken from a subsample of the focus group fishers to further refine the questionnaire and question interpretation.

A national telephone survey of marine recreational fishes was undertaken during July 1999. To gain a net fisher sample of 612 fishers who classified themselves as seawater anglers, 2,773 people were interviewed out of a total of 7,536 telephone calls made.

The survey collected information on six topics. A summary of the main findings of the survey by topic are as follows:

1: To identify the reasons why people go marine fishing and determine their relative importance

Motivations for fishing are varied. Forty six percent of responses stated the purpose of fishing was enjoyment, pleasure and fun. Thirty three percent identified relaxation and leisure. Twenty two percent of responses stated their motivation was recreation. Eighteen percent stated getting fresh fish or a food supply as their motivation. Being in the outdoors and the environment was the motivation for 17 percent. Solitude or an opportunity to get away was mentioned by 11 percent of responses. Fishing as a sport, or exercise was identified by ten percent.

Motivations were also assessed by comparing the satisfactions and needs connected specifically with fishing against the associated benefits gained from fishing but readily available from other activities.

For many fishers, fishing is undertaken in spite of the cost of the alternative purchase of fish. The majority of fishers (53%) would definitely go fishing even though the cost of fishing was dearer than buying the same fish from a shop. Thirty nine percent stated fishing was cheaper than purchasing fish. Ninety four percent of fishers stated they would go fishing even if the fish was available in shops and they had sufficient money to purchase it.

The majority of fishers (52%) would definitely go fishing if they didn't enjoy the fish species they caught, or gifting the fish to others.

The majority of fishers (54%) would definitely go fishing if the weather and seas were safe but not pleasant.

The majority of fishers (61%) would definitely go fishing if the fish had to be released back to the water.

Only 36 percent of fishers would definitely go fishing if the other fisher companions were unknown to them and there would not be any good in socialising with them.

Only 44 percent of fishers would definitely go fishing if the gear, area, species and size of fish were standardised and known in advance of fishing.

2: To determine marine recreational fishers' attitudes towards specific aspects of fisheries management controls

The main target species for finfish anglers were snapper, followed by blue cod. All other species were each targeted by less than five percent of fishers.

Fourteen percent of finfish anglers caught their perceived daily limit of the target species on most days, 43 percent stated they rarely or never achieved the daily limit.

Eighty six percent of finfish anglers believed the daily limit to be fair. Forty seven percent of responses stated the limits were fair because the limits were a fish conservation measure. Another 44 percent believed the limits were fair because the bag limit allowed fishers to get a reasonable catch, or gave everyone a chance to catch fish, or that more than this limit could lead to wastage.

For finfish anglers, 28 percent of fishers were unaware of a daily limit for their target species, and 19 percent knew there was a limit but could not state it.

With regard to the combined bag limit, 42 percent of finfish anglers were unaware of the daily limit, and 41 percent knew there was a limit but could not state it.

The main target species for shellfish/ rock lobster fishers were rock lobster (39%), paua (21%) and scallops (19%). All other species were each targeted by less than 10 percent of fishers.

Thirteen percent of fishers were unaware of a daily limit for their target shellfish/rock lobster species. Twenty eight percent knew there was a limit but could not state it.

All shellfish/ rock lobster fishers who knew there was a daily limit and stated what they believed the limit to be, were asked about their fishing success. More than a third of these fishers stated they achieved their perceived daily limit on most days, and one in five of these fishers stated they rarely or never achieved the daily limit.

Almost ninety percent of shellfish/ rock lobster fishers believed the daily limit was a fair limit. Of these fishers, 41 percent of responses stated the limits were a fish conservation measure. Another 50 percent believed the limits were fair because the bag limit allowed fishers to get a reasonable catch or gave everyone a chance to catch fish, or that more than this limit could lead to wastage.

3: To identify the issues of concern to marine recreational fishers

Finfish anglers were asked what additional controls (apart from bag limts) were needed to stop overfishing. Half the fishers stated no other controls were required, or they could not think of any or they did not know. The two most common responses to the need for other controls were restriction on commercial fishing (16%), size or weight restrictions (11%), better control and enforcement (8%) and closed areas (7%).

For the group of fishers who identified a control(s), most of these finfish anglers (78%) believed the current controls on fish length, season or condition did not require further change. The most often stated change required was increasing the size of fish to allow them to breed.

On the issue of further banning of a method, equipment or technique, 47 percent did not want a change, could not think of any or did not know. However 15 percent of responses identified netting as a method that should be banned.

In considering the trends in catches of fish, finfish anglers believed their fisheries were either stable or showed no trend (41%), or that catch was decreasing (38%). Eighteen percent of fishers stated catches in their fisheries were increasing.

Over a third of finfish fishers believed grounds were being lost to them or were no longer worth visiting. Overfishing, commercial fishing and pollution was seen as the main cause for the loss of grounds.

Shellfish/ rock lobster fishers were asked to identify controls in their fishery other than the daily limits. Those who identified controls were asked if these controls were right or could they usefully be changed. Most fishers (84%) believed the current controls on fish length, season or condition did not require further change.

In considering the need for additional controls other than bag limits to address overfishing, many of the shellfish/ rock lobster responses (49%) stated none were required, or the fisher could not think of any or did not know. Similarly when asked about the banning of methods, equipment or technique, the majority of shellfish/ rock lobster fishers (59%) did not want a change, could not think of any or did not know.

In considering the trends in catches of shellfish/ rock lobster, fishers believed their fisheries were either stable or showed no trend (45%), or that catch was decreasing (41%). Few fishers (9%) stated catches in their fisheries were increasing.

More than a third of finfish fishers believed grounds were being lost to them or were no longer worth visiting. This view is most strongly held in the north east of the North Island. Fifty seven percent of finfish anglers and 44 percent of shellfish/rock lobster fishers stated the fishing grounds in the north east of the North Island are being lost to them. Overfishing, deletion of fishing beds and too many harvesters was seen as the main cause for the loss of grounds.

4: To identify fishers views on compliance with recreational fishing regulations

A third of fishers stated they had seen in the last 12 months other fishers exceeding the species limit or taking undersize fish or shellfish. The most often stated reason for the abuse was that fishers knew the rules but abused them (82%) or the fishers were beginners (13%).

In the last 12 months, 27 percent of fishers had seen a Fisheries Officer inspecting catches. The majority of fishers (52%) believed more Fisheries Officers were needed, 23 percent believed the number of Fisheries Officers were sufficient.

5: To identify fishers educational and information needs of marine recreational fishers

More than a third of fishers had pamphlets obtained in the last two years. A further thirty percent of fishers did not currently have pamphlets, but had read in the past a fisheries pamphlet on the rules. Seventeen percent had never seen or heard of a fisheries pamphlet, and a further 16 percent had not read a pamphlet but had got information from someone who had.

With regard to sources of information on fishing gathered in the last two years, most fishers (55%) got most of their information from other fishers, from specialist fishing magazines (28%), or from fishing or boating club newsletters (12%). Other sources included general information sources such as newspapers (12%), and television or radio (14%). Fifteen percent got most of their information from the Ministry of Fisheries. Only two percent had used an internet website to gather most of their information.

6. To determine how recreational fishers feel they could contribute to the management of their fishery

Several options for the future management of fisheries were canvassed during the survey.

The option of recreational fishers taking over some the control and management of marine fishing areas was considered to have benefit by 37 percent of the fishers. Twenty five percent considered it would be disadvantageous, and 19 percent considered the benefit would be neutral.

The option of fisheries in each area managed by an association of recreational fishing people was supported by 38 precent of fishers. Forty one percent of fishers supported the status quo of management by the Ministry of Fisheries, and 6 percent supported management by both the associations and the Ministry.

The option of paying a fee or licence was considered beneficial by 29 percent of fishers, disadvantageous by 42 percent of fishers, and neutral by 16 percent of fishers.

The option of temporary closures to fishing areas to encourage restocking was considered beneficial by 76 percent of fishers.

Interest by fishers in personal participation and support for self-management was canvassed. There was general a low level of support for the voluntary role a fisher could take in assisting the management of fisheries.

Fifty three percent of fishers would definitely not undertake a voluntary Fisheries Officer role, while 17 percent stated they definitely would undertake the role.

Forty four percent would definitely not undertake a role of assisting a fishing association, while 19 percent state they definitely would undertake the role.

Fifty six percent would definitely not undertake a role of surveying fishing catch and effort, or stock levels, while 13 percent stated they definitely would undertake the role.

Fifty six percent stated they definitely would not pay a $50 levy to fund management and research activities by paid staff, while 15 percent definitely would pay such a fee.

Support for maintaining a fishing diary was much higher than for the other options. Forty six percent definitely would maintain a diary of fishing times to monitor recreational fishing compared with 22 percent who definitely would not.

B. INTRODUCTION

In any one year more than 10 % of New Zealand's population participate in marine recreational fishing, making it one of the country's most popular participant activities. It is an activity that people feel is theirs to undertake "as of right", one which has a high profile, and which involves a highly valued resource.

Recent research on recreational fishing has provided information on the recreational fishing patterns and harvest estimates. However, what has not been surveyed are the social, cultural and economic factors that underlie recreational fishing. With the introduction of the Fisheries Act 1996, the Minister in setting the TAC has to have regard to such social, cultural and economic factors as he/she considers relevant. The reasons why recreational fishers go fishing is a particular aspect that has not been investigated. Social and cultural factors can have a strong influence on motivation to go fishing. Such factors may include a desire to be on the water but not catch many fish (for the experience), a desire to catch a meal, subsistence fishing to support self or a family, or other reasons. An understanding of the motivation of recreational fishers will enhance the effective and efficient management of the recreational fishery.

Of equal importance is an understanding of recreational fishers perceptions, attitudes and responses to management options and decisions. As with the commercial and customary sectors, input should be obtained from the recreational sector on how they feel their fishery should be managed. Views and attitudes expressed on factors such as daily bag limits, minimum legal sizes, use of closed areas, method controls and status of fish stocks are all extremely important to fisheries managers. Satisfaction of recreational fishers with such management measures plays an important role in achieving high levels of voluntary compliance with fisheries regulations. A qualitative study of fishers motivations and attitudes undertaken by MFish South in 1990 provided important information which was used when reviewing daily bag limits and implementing regulations in the South region. As part of the implementation of the 1996 Fisheries Act an extensive regulatory review will be undertaken, which along with the Ministry's intention to better define recreational fishing rights, will benefit from the quantitative information gained in this study.

C. LITERATURE REVIEW

From a review of the New Zealand literature it appears that there has been only three research projects covering the motivation and perceptions of marine recreational fishers. Regional surveys undertaken in early 1990s by the Ministry of Fisheries Central (Kilner and Bell 1992) and South (Teirney *et. al.* 1992) regions, canvassed recreational fishers views on their perceptions of fishing. The Southern study also surveyed the fisher's motivations for fishing. The third research project Davies (1996) covered rock fishers on three Auckland West coast beaches and *inter alia* sought the fishers motivations for fishing.

In 1990 MAF Fisheries South Region undertook a survey of marine recreational fishers covering:

- fishing habits (areas fished, time spent fishing, fishing methods used, species caught),
- perceptions (on availability of species, size changes in species, state of fish stocks, the state of fish stocks, level of poaching and changes in fishing pressure), and
- attitudes (on fishing regulations, daily bag limits, different fishing methods and management practices).

A total of 640 marine recreational fishers participated in the survey.

During 1990 and 1991 Maffisheries Central region undertook a questionnaire survey of marine recreational fisher's:

- fishing habits (areas fished, time spent fishing, fishing methods used, species caught),
- perceptions (availability of species, size changes in species, state of fish stocks, and conflicts), and
- attitudes (fishing regulations, daily bag limits, and different fishing methods).

A total of 1572 marine recreational fishers (estimated to be 1% of fishers in the Central region) participated in the survey.

Davies (1996) surveyed rock fishers at three Auckland region west coast beaches. The sample population was almost exclusively male aged between 18-45 years (in common with Australian research). New Zealanders were the largest ethnic group, followed by Koreans.

A number of overseas studies have been undertaken on fisher motivations and perceptions particularly in the United States. For example Ditton *et. al.* (1978), Spencer and Spangler (1992), Felder and Ditton (1994), and Schramm, Jr. *et. al.* (1998). Felder and Ditton (1994), reviewed seventeen fishers surveys of marine and freshwater anglers for motivational characteristics.

Their research characterised fisher's motivations into five groupings:

1. Fisheries resource.

This motive refers to the challenge or sport of fishing. Competition fishers in particular rated this motive highly. However catching a trophy fish was of low importance to most angling groups.

2. Natural environment.

Environment motives were rated moderate to very high by most of the studies. Being outdoors was for all groups one of the most important motives, while the motivation 'to experience natural surroundings' showed greater variability of importance.

3. Psychological and physiological.

The motivation of relaxing and getting away from daily routines was rated very important across the studies, while the motivation for physical exercise was usually rated low.

4. Social.

Social motives relate to the desire or otherwise of people to interact with others. Generally the fishers surveyed reported that solitude was an important motivation, although being with family and friends was also rated highly.

5. Skill and equipment

Skill development and testing of equipment were generally rated of moderate to low importance to most angling groups.

D. SURVEY OBJECTIVES

This was not a survey aimed at updating information on seawater fishing or proportions - nor aimed at drawing comparisons with various other regional or national surveys that may have been done in the past. Hence, it was not a trending or tracking survey. The main objectives of this survey were:

Objective	Scope
1. Identify reasons why people go seawater fishing and determine their relative importance.	To identify the fisher profile, after due investigation of population involvement with fishing. Analyse motivation for seawater fishing -- both claimed and identified. Inspect connections with other hunting sports.
2. Determine fisher pressure on fisheries for management investigation.	Determine recreational seawater fishers' perceptions and attitude towards specific aspects of fisheries management, including bag limits, minimum legal sizes, closed areas and method control.
3. Identify seawater fishers' views on compliance with recreational fishing regulations.	Collect impressions of non-compliance and its interpretations, reasons for having limits on certain species, perceived fairness of regulations, visibility of inspectors.
4. Identfy seawater fishers' educational and information needs.	Evaluate reach of pamphlets amongst fishers. Identify sources of their information, including Internet access.
5. Determine how recreational seawater fishers feel they could contribute to the management of their fishery.	Ascertain comfort levels with volunteering for inspection duties, administration activities, research involvement, levy in lieu of time and diary maintenance.
6. Identify issues of concern to recreational seawater fishers.	Query perceptions of fairness of limits and alternative restraints desired, both for finned and shellfish. Investigate appeal of self management of fishery, closures, feè or licence options. Determine preference for decentralisation of recreational fishery management. Capture viewpoints on Maori customary seawater fishing rights.

E. METHOD

i. *QUALITATIVE PREVIEW*

Purpose

The objectives were canvassed in the pre-survey qualitative step to preview what the fishers were able to talk about or terminologies they used. It explored what patterns of fishing behaviour emerged, what the range of responses tended to be, and their character. In summation, the purpose was to ensure that the survey provided a workable and valid fit to the way fishers speak and think about their recreation. It also provided qualifying material to help comment on the statistical numbers that were produced by the survey, i.e. gave a "feel" for the thinking and behaviour measured under each objective.

How was it done?

The procedure used was that of qualitative focus groups. A set of probes or "discussion starters" were used for each of the Ministry's six objectives. These stimulated discussion in the groups, and elicited opinion and comment. This in turn sparked off further discussion as participants reacted to thoughts and experiences raised by others in the group. Focus groups have often been used to canvas the range of behaviour and motivation involved in a topic, and are in frequent use in social and market research.

Spectrum Detail

Groups covered the spectrum of different interest or activity segments within recreational seawater fishing, and were spread nationwide. Following is the geographical and activity spread achieved.

Region	Fisher Type
Whangarei	Game and general
Auckland	Mixed scuba/kites/etc.
Auckland	Boaters – medium to large
Wellington	Divers and small boats
Nelson	General/Mixed
	Boat/Scuba/Shore
Christchurch	Rivermouth fishers
Napier/Hastings	General/Mixed
	Boat/Scuba/Shore
Tauranga	General/Mixed
	Boat/Scuba/Shore

Implementation

Eight groups of eight respondents each were conducted in January and February 1999. The discussions were tape recorded and transcribed. These were read and reflected upon, and the findings contributed towards an effective construction of the questionnaire. Observations and comment from the focus groups appear as Appendix 1.

Pilot Study

A pilot study was conducted as a pretest of the questionnaire, within the target group it was designed to apply to. This was done in interactive mode by going back to a subsample of respondents who had taken part in the qualitative group discussions. The subsample again included North, Central and South Island respondents. The recruitment of the seawater fisher into the questionnaire was also pretested. Pilot interviews were conducted by telephone during June 1999.

Review

Findings of the pilot were discussed with the Ministry. Reference groups to whom the questionnaire was shown for input and comment included representatives of MFish and the peer review sociologist.

ii. SURVEY SPECIFICATIONS

1. Sample Size

A sample of N=600 (net seawater fishers) was chosen. The maximum margin of error occurs at a 50% finding in the data and for a sample of this size is ±4% at 95% level of confidence. Error margins are smaller where a percentage finding is more extreme, for example at an 80% or a 20% finding this error margin would be ±3.2%. These are acceptable margins for an attitude survey, and reasonable ones with which to guide policy and programmes.

2. Population

All NZ residents aged 16 years plus, connected to a telephone, excluding offshore islands. The 1996 Census reported phone penetration to be close to 95% of all homes.

3. Sample Frame

Since the survey was phone based, telephone owning homes were sampled from the white pages of the phone directory. All 18 phone books, covering all New Zealand, were included in the sample. Homes who had requested exclusion, or had taken up a connection between publication dates (approximately ±10% of homes) were also brought back into the sample frame by the use of random digit dialings.

4. Sampling Procedure

The Census populations covered by each phone book have been determined by overlapping their respective area coverage. This forms the basis for knowing how many households have to be sampled in each phone book.

To get a net fisher sample of 612 (people who classified themselves as seawater fishers), 2,773 people were interviewed. 7,536 phone numbers were drawn for this purpose, and rung. 5,920 of these were found to be connected numbers, while 1,616 were disconnected.

Phone numbers were drawn by dividing the number required across the available number of pages in the directory, or sub directory when a directory contained separate population areas. This led to the selection of every xth number in a particular directory.

"1" was then added to each phone number so chosen - thus producing a new random phone number, but within the number range operative for the area. Specifically this modified Waksberg procedure for random digit dialling brought back the unlisted and between-edition numbers.

5. Respondent Selection

The eligibility criterion or "screen" was agreed with the Ministry. A person was eligible if ...

(a) they have ever fished in New Zealand seawaters by any one of the (nominated) approaches, and

(b) they consider seawater fishing as a recreation they consciously **chose** to be in, and

(c) for seawater recreational fishing, they <u>now</u> regard themselves are ...

- either currently active,
- or temporarily inactive, but definitely still involved.

6. Initial Contact

A structured contact procedure was used to reduce interviewer influence on survey acceptance percentage. An adult in the dwelling was contacted and asked to say how many people aged 16 and over usually lived there. These were then listed by initials, and the person who had the last birthday was selected.

Where resistance was encountered in obtaining initials, the last birthday person was asked for. No substitution within the household was allowed, i.e. a person who refused could not be replaced by another in the home, who was willing. Only one interview per household was taken.

7. Callback Regime

The number of attempts to get the respondent, and the spread of these over times and days is important in achieving a good response rate. Therefore an initial call plus 7 further calls were made (8 calls). Weekends and evenings were used, and callbacks made on different days of the week and at different times of the day. Appointments were asked for, to make participation as full as possible.

8. Quality Management

The fishers survey engaged NRB's nationwide supervisor and interviewer network. A face-to-face briefing was held by each supervisor in each major centre. Interviewers were briefed in the specifics of the sample procedure, and the administration of the questionnaire. Experienced interviewers were used and written "Instruction Notes" designed for focused training.

Each interviewer was provided with a formal sampling sheet upon which all sampled numbers were written, and for which the day, time and outcome of each attempt at contact was recorded. Every sampled number and every questionnaire is traceable for purposes of quality management. Field verification of 15% of each interviewer's work was carried out, to ensure that the interviews were authentic and correctly administered.

Each questionnaire, upon being returned from the field, was checked by a coder. Incomplete items attracted a callback to the respondent for the item to be completed. All quantitative data was entered onto diskette and edited for range and logic.

An integral part of quality management for this survey was the QS approach utilised by NRB, which deals with interviewer quality control systems (IQC's) as well as with the statistical parts of the survey. This entailed an independent statistician with a specialty in survey appraisal undertaking a systematic audit of the quality-assessable steps in the survey.

9. Measurement Instrument

Information was gathered using a structured questionnaire. The survey can be viewed as a "population aged 16+" survey, with a short questionnaire for the non-fishers and a longer questionnaire for the eligible fishers. The questionnaire is included as an appendix.

10. Field Dates

Interviewing took place between Wednesday 14 July and Saturday 31 July 1999.

Some interviewing was undertaken outside these field dates in order to carry out further callbacks to absent respondents and extend the number of fishers.

11. Hours of Work

Weekends: 9.30am - 8pm.
Weekdays: 5pm - 8.30pm
for initial telephone contact.

Some of the callbacks were conducted outside these timeframes at the request of respondents.

12. Weighting

Frequency counts were tabulated for age, gender, area and household size for a two step treatment:

(a) Correction by inverse probability of selection - applied to correct the "one-per-home" design effect, because we interviewed only one person per household.
(b) Benchmarking age, gender and area of respondent against 1996 Census figures.

13. Sampling Outcomes

The disposition of the phone numbers drawn, at the end of the day, wâs as follows:

Code	Field Outcome	Total
I	Total interviews	2,773
-	Total fisher interviews	612
NE	Not eligible (business numbers)	753
AP	Answerphone, fax, engaged	600
NR	No reply	341
U	Unavailable during survey period	91
NA	Not available at time of call	23
R	Refusals	1,230
OTH	Other (language problem, etc.)	109
-	Total connected	5,920
DP	Number not connected	1,616
TC	Total contact numbers sampled	7,536

Derived Outcomes

1. Eligibility not established, ENE (= AP + NR).
2. Eligible respondents not interviewed, ER (= NA + R + OTH + U).
3. DP is scoped out of response rate calculations.

Using the strict application of the response rate algorithm, the response rate is calculated at 55%. The algorithm used for this is shown in Table A.

Some authors use the interview effort rate, being the proportion of interviews achieved to the sum of interviews and refusals obtained. This rate for the survey is 69%. The refusal rate was 20%, calculated as the ratio of refusals to the total connected phone numbers.

TABLE A. PROCEDURE FOR CALCULATING RESPONSE RATE

$$\text{Response Rate} = \frac{\text{Interviews}}{\text{Total Eligible}}$$

Total Eligible = Interviews + Eligible respondents + Proportion of 'Eligibility Not Established' which probably would have been Eligible respondents.

$$\text{Proportion of 'Eligibility Not Established' which probably would have been Eligible respondents} = \frac{\text{Eligibility Not Established} \times (\text{Interviews} + \text{Eligible respondents})}{\text{Interviews} + \text{Eligible respondents} + \text{Non-Eligible respondents}} = \frac{\text{ENE} \times (I + ER)}{(I + ER + NE)}$$

$$\text{Response Rate} = \frac{I}{I + ER + \left[\frac{\text{ENE} \times (I + ER)}{I + ER + NE}\right]} = \frac{I}{(I + ER)\left[1 + \frac{\text{ENE}}{I + ER + NE}\right]}$$

$$= \frac{I}{(I + ER)\left[\frac{I + NE + ER + ENE}{I + ER + NE}\right]} = \frac{I\,(I + ER + NE)}{(I + ER)\,(I + NE + ENE + ER)}$$

Please refer to the previous page for label abbreviations. This is the estimated eligible response rate measure. This response rate attempts to estimate "eligibles" from "eligibility not established" - people with whom we never made contact. The rationale is that failure to account for "ineligibles" among "ENE's" would mean we are understating the achieved response rate. This measure is used as a quality measure - how susceptible is this survey to non-response bias? The smaller the response rate, the larger the potential "bias". This measure is therefore trying to capture the following: *If we had contacted every phone number and determined their eligibility (i.e. it was a household with people aged 16 or over normally living there), what proportion of people would have responded?*

F. RESULTS

Reader's Guide To Sample And Definitions

The objective of the survey was to articulate the motives, opinions and behaviour of people who marine fish in New Zealand. This necessitates identifying who these people are out of the general population of adults. It also requires that we define what we view as recreational fishing.

The flow chart overleaf shows the process by which the sample of fishers was isolated from amongst a nationwide survey of the population aged 16+ years.

Firstly a person "fished" if they ever extracted marine life in any one or more of the five ways in Section 1, Q.1 of the attached questionnaire. These ways were by boat, from land, river-mouth, underwater, or hand collecting/trapping.

The survey then proceeded to step down to what the authors considered to be true fishers by successively removing...

- people who had merely tagged along on fishing trips and did not see it as a recreation of their own choice,

- people who were no longer active in fishing, viz retired.

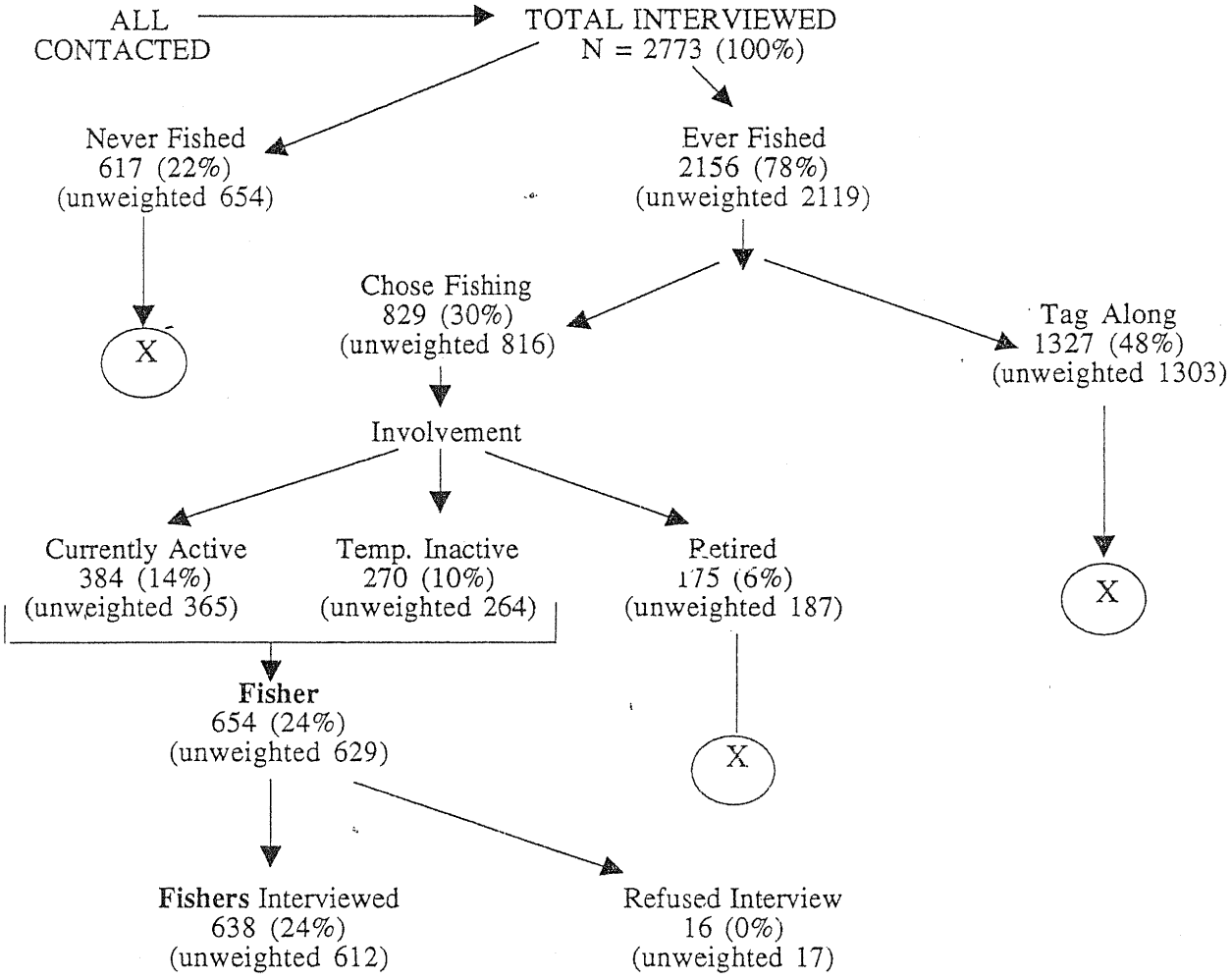
The three qualifications above define a **"fisher"** for this survey. Note that it was not a requirement that they had fished in any stipulated time period.

Readers will note the explanation for providing both unweighted and weighted raw numbers at the foot of the flow chart overleaf. The former are useful to those wishing to make statistical estimates, the latter are appropriate for percentage reporting.

DEFINITION OF THE TERM "FISHER"

The figures below show the way the population aged 16 plus is progressively segmented down to obtain the defined "fisher". The fisher is someone who is currently active or only temporarily inactive in fishing, in any of the five ways checked, and who personally chose fishing as a recreation for themselves, rather than merely tagged along or took up opportunities as offered to them.

Summary Of Steps From Population To Fisher
(Each figure percentaged on total population aged 16+)



Note: The survey source data provides both weighted and unweighted bases. This allows for use of the unweighted for statistical confidence assessment. The unweighted bases are presented in the summary tables for the same reason, ie. they are the appropriate bases for using in looking up confidence intervals. However, percentages need to be calculated on the weighted bases, to correctly reflect the population.

The purpose of weighting is to correct for the "one-per-home" design effect, and also to benchmark the age/gender/area proportions of the achieved sample against those of the 1996 Census. Those corrections ensure that any subsample contributes its proper weight to the overall or total column figures. The original or unweighted sample numbers however, are the correct ones to use for estimation of accuracy or significant difference considerations.

1. Who Is A Fisher? – Population Analysis

1.1 Population Involvement With Fishing

All 2773 respondents were asked if they'd ever done specific types of fishing in New Zealand waters. The following table illustrates the findings.

"Have You Ever Done Each Of These Types Of Fishing In New Zealand Waters?"

Fishing Types	Total %	Gender		Age			Resident Area		
		Male %	Female %	16-34 years %	35-54 years %	55+ years %	Upper North Island %	Lower North Island %	South Island %
In seawater from a boat	**61**	74	49	60	64	59	(67)	54	56
In seawater from land	**59**	72	47	64	62	49	62	57	56
At rivermouth for seagoing species	**27**	36	18	24	31	27	24	28	32
In seawater, underwater	**13**	22	4	17	15	5	15	12	10
In seawater, handcollecting/trapping	**44**	53	35	44	48	40	50	42	34
None of the above	**22**	**13**	(31)	**19**	**21**	**28**	[20]	**25**	**25**
TOTAL (See Footnote)	NA	NA	NA	NA	NA	NA	NA	NA	NA
BASE	**2773**	1298	1475	744	1152	871	1326	689	758

Total: Not applicable in view of None category.
Note: Percentages will not add up to 100. Activities are not mutually exclusive

Reader Guide: 74% of all males and 49% of all females have fished in New Zealand seawaters from a boat, as compared with 61% overall who've fished in seawater from a boat. Base is population aged 16+ years.

Respondents more likely to have fished in New Zealand waters are:

- males,
- those aged less than 55 years,
- those who have ever been members of a fishing/diving club,
- those who live in the upper North Island.

The likelihood of people having fished in seawater from land, and underwater:

- decreases with age,
- increases as we move north.

The likelihood of people having fished at rivermouths for seagoing species increases as we move South. The likelihood of people having fished in seawater, hand collecting or trapping increases as we move north. Also interestingly, the likelihood of people having never fished in New Zealand waters increases with an increase in age.

All respondents who have never fished in New Zealand waters were asked if they had interest in seawater fishing as a recreation or hobby in the next year or two. The following chart illustrates the results.

Those Who Showed Future Interest In New Zealand Seawater Fishing

Note: Percentages on subset of people who have never fished in New Zealand waters. (unweighted base 654)

There is no major latent demand for fishing amongst those who haven't ever fished in New Zealand waters. Put simply, the younger people are, the more likely they might fish in future.

1.2 Recency And Intensity Of Involvement

All respondents who have **ever** fished in New Zealand, ie. 2119 of the population sample of 2773, were asked how recently they'd gone seawater fishing in New Zealand. The following table illustrates the results.

"When Did They Most Recently Go Seawater Fishing Or Gathering In New Zealand Waters?"

Recency Of Involvement	Total %	Gender		Age			Resident Area		
		Male %	Female %	16-34 years %	35-54 years %	55+ years %	Upper North Island %	Lower North Island %	South Island %
In the last 12 months	**45**	55	[34]	50	48	34	[52]	39	38
Over one, but less than two years ago	**11**	11	10	14	11	6	10	12	11
Over two, but less than three years ago	**7**	6	8	10	6	5	7	6	8
More than three years ago	**37**	28	(48)	26	35	55	[31]	43	43
TOTAL	**100**	100	100	100	100	100	100	100	100
BASE	**2119**	1120	999	594	914	608	1062	508	549

Note: Percentages on subset of people who have ever fished in New Zealand. Percentages read down.

Reader Guide: Among those who have "ever" fished, 45% did so in the last 12 months, 37% had not done so within three years.

Females are more likely to have last fished more than three years ago and less likely to have fished in the last 12 months. Males have had a more recent involvement.

The likelihood of people having fished in the last 12 months:

- decreases with age,
- increases as we move north.

Likelihood of people having fished in the last three years also decreases with age. Conversely, the older the population, the more likely that they had last fished more than three years ago. Those living the upper North Island are less likely to have last fished that long ago (since they have more likely fished in the last 12 months).

Everybody who has ever fished in New Zealand was then asked how often they'd gone fishing in the most recent year they went recreational seawater fishing in any way. The following table illustrates the results.

"How Often Did They Go Out In The Most Recent Year They Went Recreational Fishing?"

Intensity Of Involvement	Total %	Gender		Age			Resident Area		
		Male %	Female %	16-34 years %	35-54 years %	55+ years %	Upper North Island %	Lower North Island %	South Island %
Once or twice	48	38	58	51	50	40	45	54	47
Three or four times	17	18	15	18	16	16	16	19	17
Five or six times	10	11	9	11	9	10	11	8	11
Seven or eight times	3	4	2	3	3	3	3	3	3
Nine or ten times	2	4	2	2	3	3	3	2	4
Over ten times	17	22	10	15	17	19	20	12	14
Don't know/Can't say	3	3	4	-	2	9	2	2	4
TOTAL	100	100	100	100	100	100	100	100	100
BASE	2119	1120	999	594	914	608	1062	508	549

Reader Guide: 38% of males and 58% of females have fished just once or twice in the last year they went recreational seawater fishing in New Zealand, as compared with 48% overall who'd just fished once or twice.

The likelihood of having fished just once or twice in the most recent year they went recreational seawater fishing decreases with age. Conversely, the older they are, the more likely that they had fished over ten times in the last year they went fishing.

Those living in the lower North Island are more likely to have fished just once or twice in the last year they went recreational seawater fishing in New Zealand. Those who fished over ten times in the most recent year they had seawater fished in New Zealand are more likely to be:

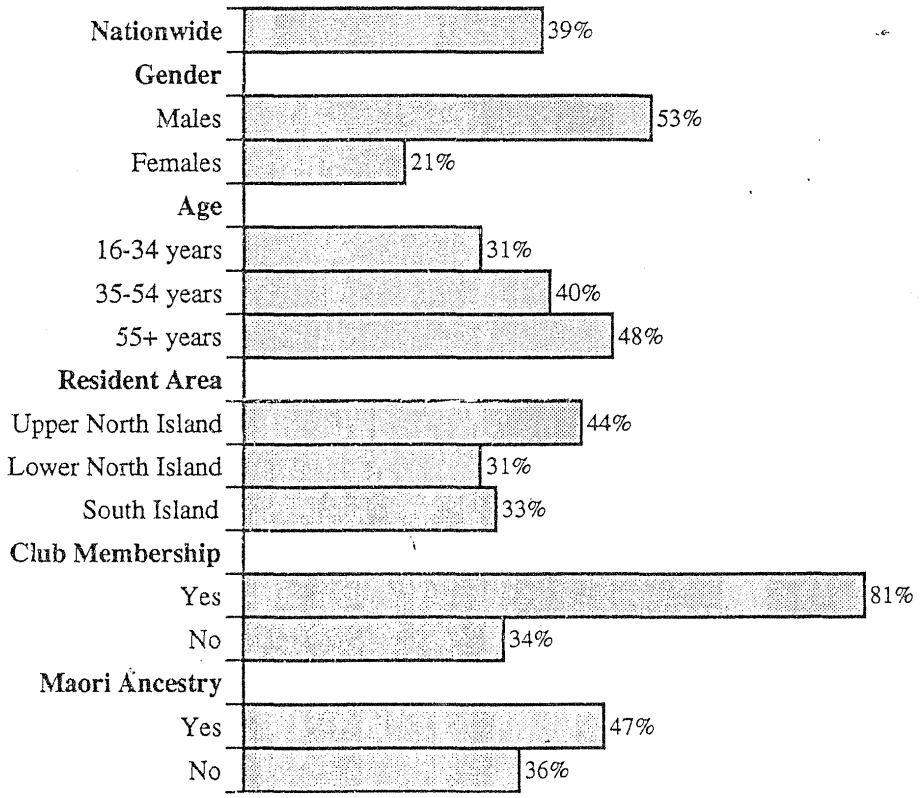
- males,
- those living in upper North Island.

1.3 Adoption of Recreational Seawater Fishing as a Pastime

Not all of the people who had ever marine fished can be regarded as true fishers. Some merely accompanied fishers and took part as a result of tagging along. The bar chart below shows the percentage of these 2119 who ever fished, who consciously chose marine fishing.

All 2119 respondents who have ever fished in New Zealand seawaters were asked if they considered seawater fishing as a recreation they consciously chose to be in. The following chart illustrates the findings:

Those Who Consciously Chose Seawater Fishing As A Recreation



Base: The 2119 who had ever fished in NZ marine waters.
Note: Percentages on subset of people who have ever fished in New Zealand.

Reader Guide: 53% of males and 21% of females, who have ever fished in New Zealand, consciously chose seawater fishing as a recreation, as compared with 39% of respondents overall. They are distinguished from "tag along" fishers who are the balance making up 100% for each bar in the chart. For example, 53% of men who had ever fished chose fishing, therefore 47% did not.

Respondents more likely to have consciously chosen seawater fishing as recreation are:

- males,
- those aged 55+ years,
- those living in upper North Island,
- those who have ever been a member of a fishing/diving club,
- those who have Maori ancestry.

It is also interesting to note that the older the person, the more likely that they had chosen seawater fishing as a recreation. Conversely, the younger they are, the more likely that they have been tag-alongs (happened to have been along on one or more fishing trips because people took them along, or opportunities came up).

An understanding of the proportion and type of people who consciously chose seawater fishing as a recreation is important because:

- it helps identify the target audience,
- it helps plan fisheries management endeavours,
- it helps better understand the motivation and perception issues that unfold in later chapters.

1.4 Currency Of Involvement

The 816 respondents, who considered seawater fishing as a recreation they consciously chose to be in, were asked whether they now regarded themselves as active, temporarily inactive, or as having given up recreational seawater fishing. The following table illustrates the findings.

"For Seawater Recreational Fishing, Do They Now Regard Themselves As...?"

Currency Of Involvement	Total %	Gender		Age			Resident Area		
		Male %	Female %	16-34 years %	35-54 years %	55+ years %	Upper North Island %	Lower North Island %	South Island %
Currently active	**46**	(50)	35	54	50	36	(51)	37	40
Temporarily inactive, but definitely involved	**33**	33	32	36	38	[24]	29	(41)	35
Retired from, or given up seawater fishing	**21**	17	(33)	10	12	40	20	22	25
TOTAL	**100**	100	100	100	100	100	100	100	100
BASE	**816**	597	219	178	364	274	472	156	188

Note: Percentages on subset of people who chose seawater fishing as a recreation. Percentages read down.

Reader Guide: 50% of males and 35% of females who had consciously chosen this form of recreation consider themselves currently active in seawater recreational fishing, as compared with 46% overall.

The likelihood of people (who consciously chose seawater fishing as a recreation), considering themselves as having retired from seawater fishing:

- increases with age,
- increases as we move from north to south.

The younger they are, the more likely that they are currently active.

Respondents more likely to consider themselves currently active are:

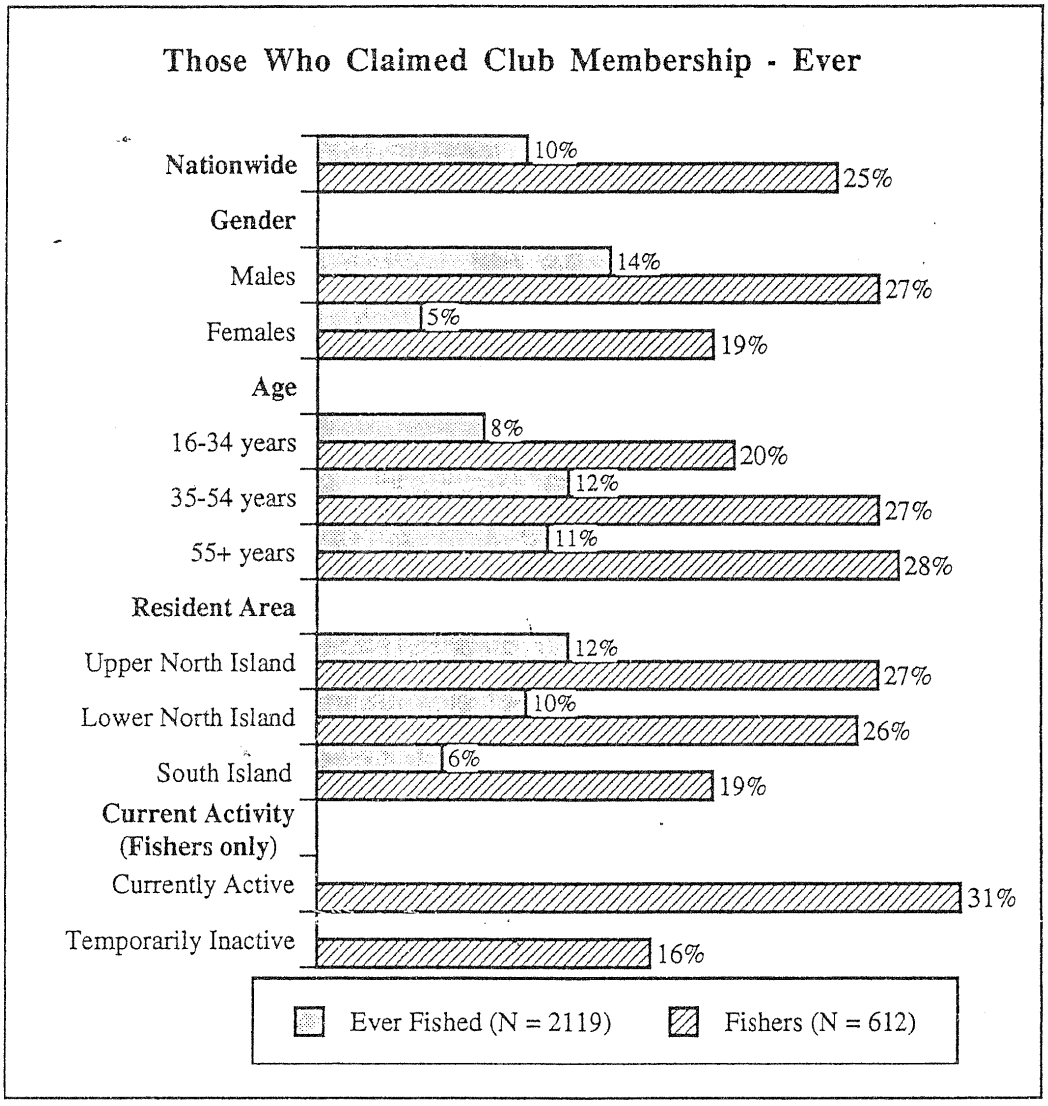
- males,
- those living in upper North Island,

Those aged over 55 years are more likely to be either clearly active currently, or have given it up. Those living in the lower North Island are, however, more likely to consider themselves involved but temporarily inactive. Females are more likely to have given up seawater fishing as a recreation.

1.5 Claimed Fishing/Diving Club Membership - Ever

For this chart we refocus attention back on the 2119 people who said they had ever fished in New Zealand seawater in order to see what involvement this larger group has had with fishing/diving clubs. For comparison we also show the 'ever' club involvement of the 612 fishers who are active or temporarily inactive, viz. "fishers".

All 2119 respondents who have ever fished in New Zealand seawaters were asked if they are, or have been a member of a seawater fishing or diving club. The following chart contrasts the "fisher" profile against the population who have "ever fished".



Reader Guide: 10% of all people who've ever fished in New Zealand waters, (compared with 25% of fishers) claim they are/have been a member of a seawater fishing or diving club. The balance of each column consists of those who have not been club members, eg. 10% of those who have ever fished have been members, while 90% have not; 25% of fishers have been members of a club while 75% have not.

Among the "ever fished", claimed club membership increases as we move north. Claimants are more likely to be males and/or those living in the North Island. The more actively involved they are in recreational seawater fishing, the more likely that they are/have been a member of a fishing/diving club. (See shaded bars in figure 1.5 , pg 28).

Amongst "fishers", claimed club membership increases with age as well as with the move towards north in the country. Claimant fishers are also more likely to be males. Interestingly, the more they fished in the most recent year they went fishing, the more likely that they are/have been a member of a fishing/diving club. (See hatched bars in figure 1.5, pg 28).

It is also interesting to note that while only a tenth of the "ever fished" claimed club membership, a quarter of the fishers said they are/have been a member of a fishing/diving club. So fishers are more than twice as likely as the normal populace (who have ever fished in New Zealand) to have ever been a fishing/diving club member.

If we narrow our focus from "fishers" to active fishers, which we can do by removing those who are temporarily inactive, we find that almost a third (31%) of currently active fishers are/have been members of a fishing/diving club.

1.6 Type Of Boat Used

All 2119 respondents who have ever fished in New Zealand seawaters were asked what boat type they had used over the most recent year they went recreational seawater fishing. The following table illustrates the findings.

"Over The Most Recent Year They Fished Recreationally, They Have Used..."									
		Gender		Age			Resident Area		
Types Of Boats Used	Total	Male %	Female %	16-34 years %	35-54 years %	55+ years %	Upper North Island %	Lower North Island %	South Island %
Only privately owned boats	59	60	59	59	59	59	64	51	56
Some private, some chartered	9	13	3	9	10	8	10	8	7
Only charter boats	6	6	6	6	6	6	5	7	7
Land only - didn't use boats	25	20	31	26	24	25	20	33	29
Other answers	1	1	1	-	1	2	1	1	1
TOTAL	100	100	100	100	100	100	100	100	100
BASE	2119	1120	999	594	914	608	1062	508	549

Note: Percentages on subset. Percentages read down.

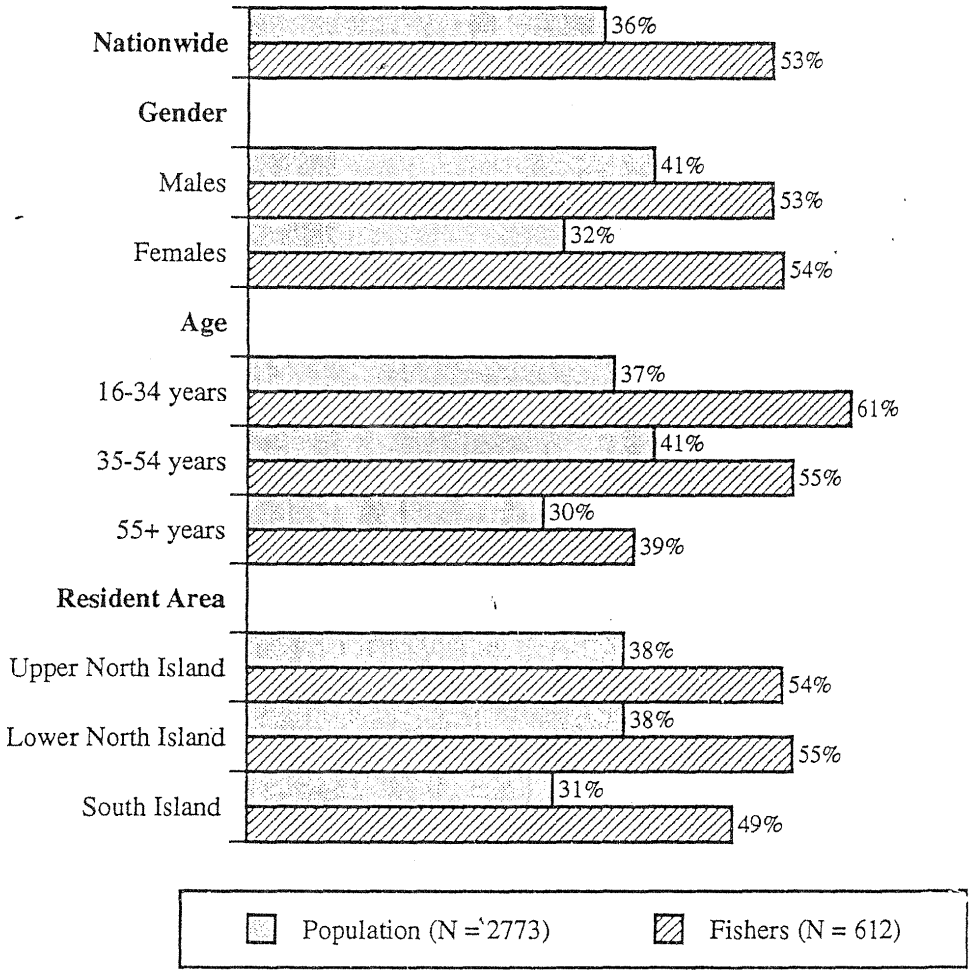
Reader Guide: 60% of males and 59% of females (vs 59% overall) have used only privately owned boats over the most recent year they went recreational seawater fishing in New Zealand.

The likelihood of some private and some chartered boats being used to access the fishery increases as we move north. Those living in the upper North Island are more likely to have used only privately owned boats and less likely to have fished from land only (no boats used) in the most recent year they seawater fished recreationally. Females are more likely to have fished from land (didn't use boats) in the most recent year they fished, and are less likely to have used various boat types.

1.7 Alternative Relationship To Seawater Life

All 2773 respondents were asked if they had ever made a trip to a New Zealand marine reserve (or location), where the specific purpose was to view marine life underwater, with mask, glass bottom boat or photo equipment, but NOT to catch or remove any of it. The following chart contrasts the 612 fishers' responses against those of the 2773 people surveyed in total.

Those Who've Made A Trip To Marine Reserve(s) Only To View



Reader Guide: 36% of all people aged 16+ have visited marine reserves to view marine life, by comparison 53% of fishers have done so.

1.8 Fisher Profile

The demographics of the 612 fishers are contrasted against those for the population sample of 2773 in the chart below:

Reader Guide: 79% of the fishers are male, as compared with 48% of the population who are male.

As compared with the populace, fishers are more likely to:

- be males,
- be living in the upper North Island,
- be aged 35-54 years,
- have visited view only Marine reserve(s),
- have hunted bird or game in New Zealand,
- fished in New Zealand fresh water lakes or streams.

READERS GUIDE TO FISHER SUBSETS

The following sections now deal only with people who classified themselves as fishers. To recap our earlier chart, a fisher was defined as a person who...

- **has ever fished in New Zealand seawaters by any one of the (nominated) approaches, and**
- **considered seawater fishing as a recreation they consciously chose to be in, and**
- **for seawater recreation fishing, they now regarded themselves as ...**
  - **either currently active,**
  - **or temporarily inactive, but definitely still involved.**

Note that we draw subsets from among "fishers' where this is appropriate to presenting the answers to questions which could only be sensibly asked of that subset.

Subset	*Unweighted Base*
Fishers	612
Fishers who target **finfish** some of the time	565
Fishers who target Snapper as their first mentioned finfish	341
Fishers who target Blue Cod as their first mentioned finfish	59
Finfish fishers who mentioned that a legal daily limit existed for their first mentioned species	408
Fishers who target cray, lobster, paua or shellfish some of the time	299
Fishers who target crayfish as their first mentioned species	108
Fishers who target paua as their most preferred species	60
Fishers who target cray/lobster, paua, who mentioned that a legal daily limit existed for their first mentioned species	186

2. Motive For Fishing

2.1 Claimed Motivation

All fishers were asked what they felt their main motivation to go fishing was. On average, each fisher gave two answers. The top seven responses are analysed in the table below.

"What Do You Feel Your Main Motivation To Go Fishing Is?" – Top Seven Replies

Top Seven Claimed Motivators	Fisher Total %	Age 16-34 yrs %	Age 35-54 yrs %	Age 55+ yrs %	Fishing Frequency Last Year They Fished 1-4 times %	Fishing Frequency Last Year They Fished 5-10 times %	Fishing Frequency Last Year They Fished Over 10 times %	Resident Area Upper North Island %	Resident Area Lower North Island %	Resident Area South Island %
Enjoyment/pleasure/fun	46	52	46	38	41	51	47	49	37	45
Relaxation/leisure	33	29	35	33	28	29	39	33	33	31
Recreation/Recreation activity	22	13	23	31	20	22	23	18	27	27
Food supply/fish to eat	18	11	23	20	19	17	18	20	14	15
Environment/outdoors/fresh air	17	19	16	13	16	14	18	16	18	17
To get away/escape/time out	11	9	11	13	11	13	9	10	13	12
Sport/a good sport/exercise	10	10	10	10	7	12	11	10	6	13
TOTAL (SEE FOOTNOTE) BASE	612	154	309	149	218	162	232	369	114	129

Note: Open-ended question. Percentages will not add up to 100, multiple response.

Reader Guide: 46% of fishers mentioned enjoyment/pleasure/fun as their main Motivation to go fishing. 33% mentioned relaxation/leisure.

The older the fishers, the more likely that they had mentioned:

- recreation/recreational activity,
- to get away/escape/time out.

The younger the fishers, the more likely that they had mentioned:

- enjoyment/pleasure/fun,
- environment/outdoors/fresh air/healthy

The greater the number of times they went fishing in the most recent year they fished, the more likely that they had mentioned:

- relaxation/leisure,
- recreation/recreational activity.

Other motivators mentioned were: excitement/challenge of catching fish (8%), socialising/companionship/friendship (7%), to catch a fish/variety/satisfaction (7%), fresh fish (6%), something to do/a day out/different (6%), family time (5%), hobby/an interest (4%), and peace and quiet/tranquility/solitude (4%) etc.

2.2 *Individual Drivers Of Motivation*

Taste Perception

Each fisher was asked if they saw the fish they catch as different, same or not as good in taste, taken **overall** to what they can buy. The following table indicates the results.

"Taken Overall, Do You See The Fish You Catch As..."										
		Age			Fishing Frequency Last Year They Fished			Resident Area		
Taste Perceptions	Fisher Total %	16-34 yrs %	35-54 yrs %	55+ yrs %	1-4 times %	5-10 times %	Over 10 times %	Upper North Island %	Lower North Island %	South Island %
Special and different in taste	84	78	85	89	79	82	90	87	82	74
Much the same in taste	10	13	11	6	13	13	6	9	13	14
Not as good in taste	1	2	2	-	1	2	1	1	1	3
Other answers	5	9	3	5	9	4	4	3	7	11
TOTAL (See Footnote) BASE	612	154	309	149	218	162	232	369	114	129

Note: Percentages will not add up to 100, as some fishers offered multiple responses, or qualified their response. Other answers include: don't know/no opinion (2.6%), only fish for sport (1.5%), is fresher (1.1%), and others (0.6%).

The likelihood of perceiving the fish caught as being special and different in taste, compared with what they can buy increases:

- with an increase in age,
- with an increase in fishing frequency in the most recent year they fished,
- from south to north.

Those who are more active in recreational seawater fishing are more likely to perceive the fish they catch as special and different in taste.

The younger the fishers, or the further south they lived, the more likely they thought that it was much the same in taste.

Cost Perceptions

Each fisher was also asked if they believed they were averaging cheaper or dearer fish to take home than they could buy retail, taking the cost of all the equipment, travel, bait and other expenses into account. The following table indicates the results.

"Comparing Overall Cost Of Catching Fish With Retail Cost Of Fish, Are They...?"

Cost Perceptions	Fisher Total %	Age			Fishing Frequency Last Year They Fished			Resident Area		
		16-34 yrs %	35-54 yrs %	55+ yrs %	1-4 times %	5-10 times %	Over 10 times %	Upper North Island %	Lower North Island %	South Island %
Averaging cheaper fish	39	46	36	35	39	30	46	40	40	37
Averaging dearer fish	53	47	59	52	53	62	46	53	53	53
Other answers	8	7	5	13	8	8	8	7	7	10
TOTAL	100	100	100	100	100	100	100	100	100	100
BASE	612	154	309	149	218	162	232	369	114	129

Note: Other answers include: 'recreation activity (1.9%), cost doesn't come into it/doesn't matter (1%), depends on the number of fish you catch (1.3%), about the same (1.3%), depends on other factors (0.5%), don't buy fish (0.6%), don't know (1.2%) etc.

The younger they are, the more likely they perceive that they're averaging cheaper fish to take home compared with what they can buy retail. This perception is also more likely shared by those who have fished over 10 times in the most recent year they fished.

Those who believe they're averaging dearer fish are more likely:

- males (56% vs. 39% of females),
- 35-54 years of age,
- those who fished 5-10 times over the most recent year they went fishing.

Individual Drivers Of Motivation

Each fisher was then asked whether they would still go out on a seawater fishing trip, everything else being equal, except for a particular aspect. The aspects covered and the related findings are detailed in the table below.

"Would They Still Go Out On A Seawater Fishing Trip, Everything Else Being Equal If ...?"

Individual Drivers Of Motivation*	Fisher Total %	Age			Fishing Frequency Last Year They Fished			Resident Area		
		16-34 yrs %	35-54 yrs %	55+ yrs %	1-4 times %	5-10 times %	Over 10 times %	Upper North Island %	Lower North Island %	South Island %
They had plenty of money to buy good fish	94	89	95	98	93	93	95	94	93	94
They didn't enjoy eating the species in the area	52	47	49	63	49	48	57	50	51	59
Sea and weather was safe, but unpleasant	54	57	50	55	46	54	61	51	56	61
It was a catch and release area	61	64	62	56	59	63	62	60	63	64
Indifferent companionship, neither goodNor bad	36	35	40	33	35	28	43	40	33	27
It was a captive fishing area	44	46	46	38	43	47	41	45	40	44
Species was available at a good special	86	82	87	89	83	89	86	86	84	86
TOTAL (See Footnote) BASE	612	154	309	149	218	162	232	369	114	129

* **See questionnaire for full text.**

Note: Percentage of 'definitely still go' answers only. Percentages will not add up to 100 as drivers are not mutually exclusive).

When not fishing alone, indifferent companionship is more likely to deter fishing than any of the other drivers. If other people on the trip are not known to them and there wouldn't be any good socialising, only a little over a third of the fishers will still go fishing. Other fundamental drivers of motivation in their rank order are:

- Fishers like challenge in their fishing. A captive fishing area is a deterrent to more than half of the fishers.

- Fishers enjoy eating/gifting the fish they catch. Only a little over half the fishers would still go fishing if they didn't enjoy eating/gifting the species they expected to catch.

- Almost half the fishers desire a pleasant sea and weather to go fishing. The die-hard half would still go if the sea and weather was unpleasant, so long as it was safe.

- Sixty percent of the fishers would, however, still go if it was a catch and release area.

Analysis of the drivers clearly speaks against an economic motive to go fishing:

- 94% of the fishers would still go even if they had plenty of money to buy good fish/food etc.

- 86% of the fishers would still go even if the species they liked to eat had become available at a really good special, at the shops.

It was interesting to note that socialisation as a motivator decreases as we move north. Also interestingly, the likelihood of going fishing even if they didn't enjoy eating/gifting the species in the area increases with an increase in age and as we move south.

The likelihood of them going fishing, even if the sea and weather were unpleasant (albeit safe) rises with an increase in their fishing frequency (in the most recent year they fished) and as we move south.

The younger they are, and the further south they live, the more likely they'll still go fishing in a catch and release area. Conversely, the older they are, the more likely they'll still go fishing even if:

- they had plenty of money to buy good fish/food etc,
- the species they like to eat was available at good specials at the shops,
- they didn't enjoy eating/gifting the species in the area.

2.3 Connection With Other Hunting Sports

Fishers were asked whether they'd ever visited view only marine reserve(s), hunted bird or game in New Zealand, and fished in freshwater lakes or streams in New Zealand. These questions were aimed to provide more insights into the fisher psyche. These connections are depicted in the table below.

Other Activities Fishers Have Done	Fisher Total %	Gender		Age			Resident Area		
		Male %	Female %	16-34 years %	35-54 years %	55+ years %	Upper North Island %	Lower North Island %	South Island %
Yes, visited view only New Zealand marine reserve(s)	53	53	54	61	55	39	54	55	49
Yes, hunted bird or game in New Zealand	56	64	27	51	55	66	54	60	61
Yes, fished in freshwater lakes or streams in New Zealand	67	71	55	63	71	69	60	81	77
TOTAL (See Footnote) BASE	612	475	137	154	309	149	369	114	129

Note: Percentage 'yes' answers only. Percentages on fisher subset. Percentages will not add up to 100 as activities are not mutually exclusive. Only the 'yes' answers are displayed.

Reader Guide: 53% of male fishers have visited view only New Zealand marine reserve(s), 64% of male fishers have hunted bird or game in New Zealand, and 71% of male fishers have fished in New Zealand freshwater lakes or streams.

The older the fishers, the more likely that they have hunted bird or game in New Zealand. Conversely, the younger the fishers, the more likely that they have visited view only marine reserve(s). Likelihood of fishers having hunted bird or game in New Zealand increases from north to south.

Fishers who are currently actively involved in fishing (as compared with those temporarily inactive) are more likely to have:

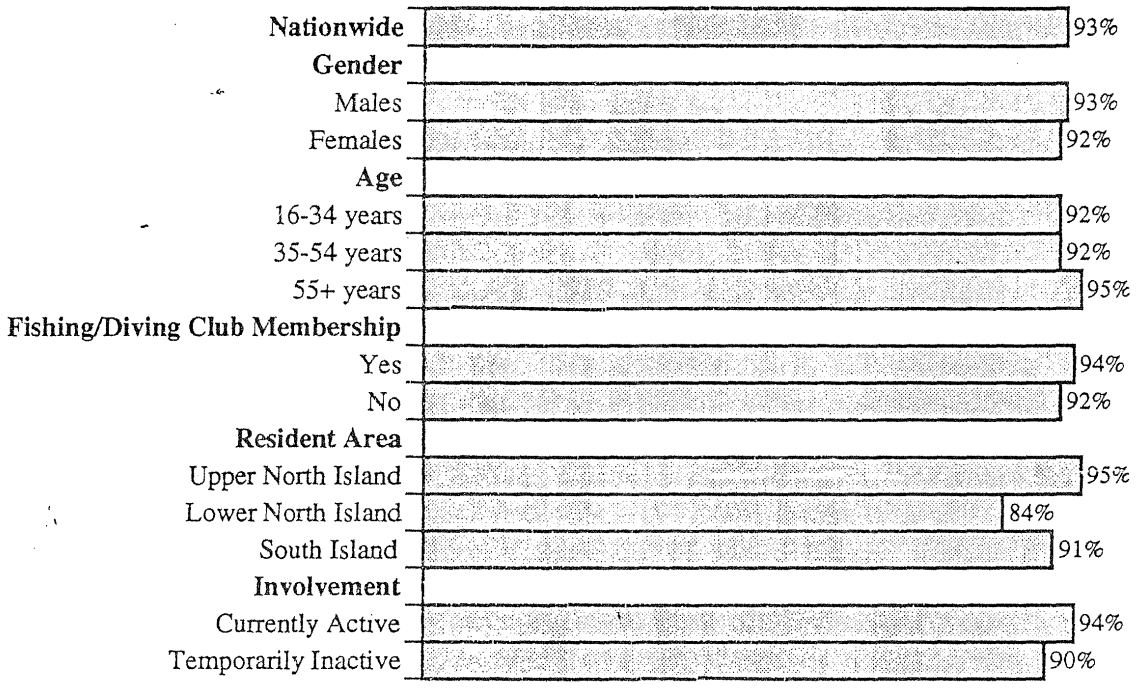
- visited view only New Zealand Marine reserve(s) (56% vs. 48% inactive),
- hunted bird or game in New Zealand (61% vs. 48% inactive),
- fished in New Zealand freshwater lakes/streams (70% vs. 64% inactive).

3. Finned Fish Management

3.1 Preferred Targets

Each fisher was asked whether they tried exclusively for cray*_, scallops, paua or other shellfish or whether they tried to take finned fish some or most of the time. The following chart illustrates the results.

Fishers Who Try For Finned Fish Some Or Most Of The Time



Note: Percentage of all fishers. Base = 612

Reader Guide: 93% of male fishers and 92% of female fishers try for finned fish some or most of the time.

93% of the fishers nationwide fished for finned fish some or most of the time. Residents living in the lower North Island were less likely to try for finned fish, compared nationally.

Inspection of targets across fishing frequency (in the most recent year they went fishing) revealed no noticeable differences.

* The questionnaire followed the colloquial use of the word "cray" among fishers where the correct term is rock lobster.

Finfish Species Most Preferred

These 565 fishers who targeted finned fish were asked which species they were most commonly hoping to take when they went seawater fishing for finned fish. The following table details the top six species most commonly aimed for.

"Species Most Commonly Aimed For, When They Go Seawater Fishing For Finfish" – Top Six Replies

Top Six Most Preferred Finfish Species	Fisher Total %	Age 16-34 yrs %	Age 35-54 yrs %	Age 55+ yrs %	Fishing Frequency Last Year They Fished 1-4 times %	Fishing Frequency Last Year They Fished 5-10 times %	Fishing Frequency Last Year They Fished Over 10 times %	Resident Area Upper North Island %	Resident Area Lower North Island %	Resident Area South Island %
Snapper	(63)	(70)	59	59	60	66	63	80	52	18
Blue Cod	9	6	11	10	12	7	7	-	5	38
Kahawai	4	3	5	3	5	3	4	2	8	5
Tarakihi	4	3	5	3	3	2	5	4	7	1
Kingfish	3	3	2	5	2	2	5	4	4	-
Salmon	3	4	2	3	1	4	3	-	1	(13)
TOTAL (SeeFootnote) BASE	565	140	283	142	203	150	212	349	98	118

Note: Percentages on subset. Percentages will not add up to 100 as only the top six species detailed in their rank order.

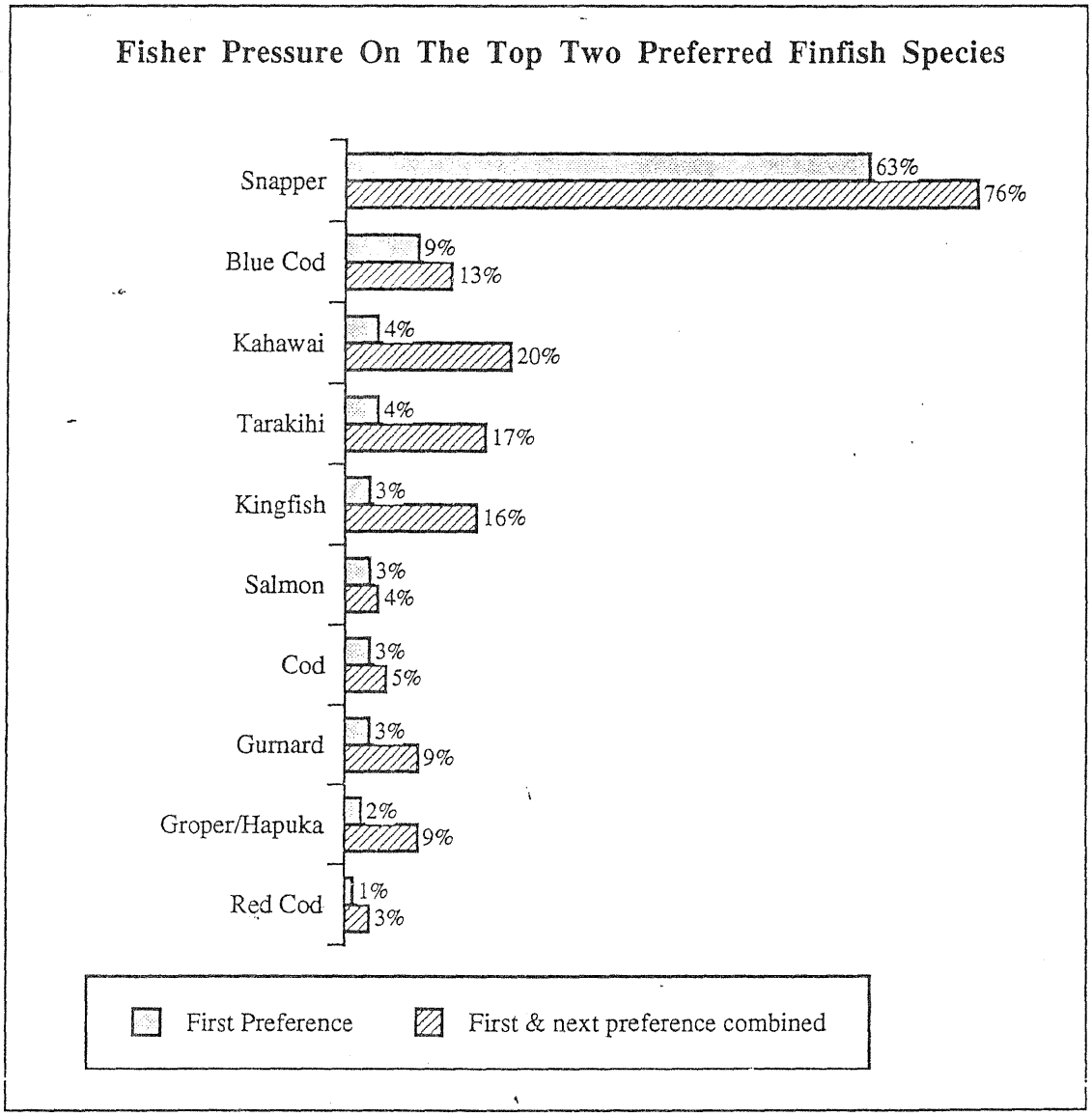
63% of the fishers aim to catch snapper as their first choice. Snapper therefore stands out, as the most preferred finfish species. The further north they live, the more likely that they are targeting Snapper. Fishers angling for snapper are more likely to be 16-34 years of age.

Blue Cod is the second most preferred finfish species. The further south they live, the more likely that they are angling for blue cod. As expected, fishers more likely angling for salmon are from the South Island.

Other finfish species preferred included: cod (2.5%), gurnard (2.5%), groper/hapuka (1.6%), red cod (1.4%), flounder (1%), john dory (0.8%), and trevally (0.7%).

Top Two Finfish Species Targeted

All 565 fishers who targeted finned fish were also asked which species they were next most commonly targeting. The following chart illustrates the fisher pressure on the top two preferred finfish species.



Notice the resulting change in the ranking of blue cod which slips from 2 (first preference) to 5 (first and next preference combined). Salmon declined from 6 to 10 and cod from 7 to 9. John dory (7%) was the 8th most preferred species (first and next preference combined rank).

Reader Guide: Snapper is the highest first preferred species at 63%. When first and second preferences are both allowed, ie. a "top two" most preferred Snapper increases its dominance to 76% of mentions.

The following table details fisher pressure on six top two preferred (combined) finfish species:

"Top Two Finfish Species (Combined) Most Commonly Hoped For?"

Fisher Pressure On Top Two Finfish Species Preferred	Fisher Total %	Age			Fishing Frequency Last Year They Fished			Resident Area		
		16-34 yrs %	35-54 yrs %	55+ yrs %	1-4 times %	5-10 times %	Over 10 times %	Upper North Island %	Lower North Island %	South Island %
Snapper	**76**	83	73	73	75	75	78	93	67	32
Kahawai	**20**	23	17	20	17	26	19	23	17	14
Tarakihi	**17**	14	21	17	20	18	15	18	25	10
Kingfish	**16**	20	14	14	12	14	23	22	11	2
Blue Cod	**13**	9	15	16	16	10	12	1	17	50
Gurnard	**9**	7	10	10	12	7	8	12	10	1
TOTAL (See Footnote) BASE	**565**	140	283	142	203	150	212	349	98	118

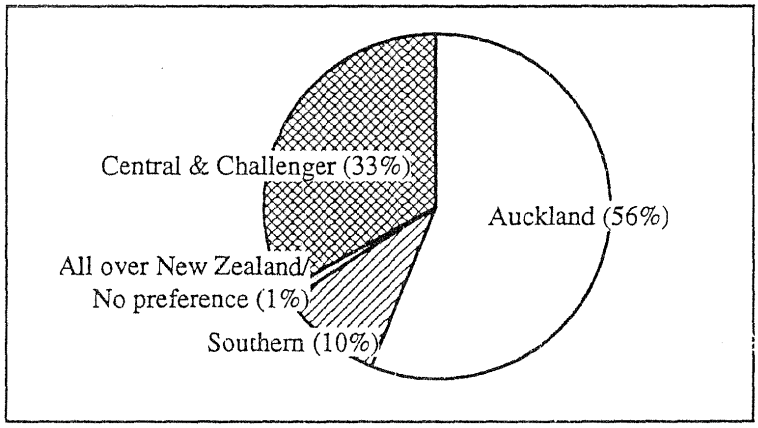
Note: Percentages on subset. Percentages will not add up to 100. Only six top two species preferred detailed in their rank order.

Snapper still remains outstanding in attracting fisher pressure by a long margin. As expected, regional disparities exist in terms of fisher pressure on species. The further north they live, the more likely that they're angling for snapper, kahawai, kingfish and gurnard. Conversely, the further south they live the more likely that they're aiming for blue cod. Fishers who live in the lower North Island are more likely to fish for tarakihi, as compared with the rest of the nation.

Fishers more likely targeting snapper are 16-34 years of age.

3.2 Preferred Fishing Area

All fishers who targeted finned fish were asked to name the area in which they targeted for their most preferred finned fish species. The town, district or city closest to where they fished was accepted as a response. Whether fishing occurred on the East/West Coast was also probed and recorded. Information was then recoded back into the fishery management areas. The findings are illustrated in the following chart.



Note: Figures exclude mentions of 'all over New Zealand/no preference' (0.5%). Base 565.

Almost two thirds of the finfish anglers fish in the Auckland fishery management area. Inspection of fishing areas across age groups and fishing frequency in the most recent year they fished, revealed no noticeable differences. As expected, inspection of fishing areas against resident areas revealed that fishers tend to fish for their most preferred species close to where they physically live.

We also inspected most preferred finfish species across fishing areas. The following table illustrates the findings for the top six most preferred finfish species.

Top Six Most Preferred Finfish Species	National %	Fishing Area			
		Auckland East %	Auckland West %	Central Challenger %	Southern %
Snapper	63	82	76	43	3
Blue Cod	9	-	-	15	39
Kahawai	4	1	6	8	6
Tarakihi	4	4	-	6	-
Kingfish	3	4	4	3	-
Salmon	3	-	-	1	21
TOTAL (See Footnote) BASE	565	298	48	133	78

Note: Percentages read down. Percentages will not add up to 100 as only the top six species detailed in their rank order. Percentages on subset. Percentages exclude 'other' area mentions.

Reader Guide: 82% of finfish anglers who fish in the North East fishing area preferred Snapper.

The further north they fish, the more likely the fisher was to target snapper. Conversely, the further south they fish, the more likely they fish for blue cod.

3.3 *Awareness of Legal Limits*

All 565 fishers who targeted finned fish were asked if they were aware of any legal limit on the number of their most preferred species in the preferred fishing area. 28% of the finfish anglers were not aware of any daily limits. Another 19% were aware that a limit exists, but didn't know the number. We inspected the responses for the top six most preferred species, across fishing areas. The following tables illustrate the findings. Note that the base is for those targeting each fish.

"Perceived Legal Daily Limit For Snapper Among Those Who Target Snapper"

Perceived Legal Daily Limits For "Snapper"	Fishing Area			
	Auckland East %	Auckland West %	Central/ Challenger %	Southern %
Three	1	-	3	-
Four to eight	11	19	19	-
Nine	39	5	3	-
Ten	7	11	13	-
11-14	2	2	2	-
Fifteen	3	8	-	-
16+	4	6	4	-
Aware there is a limit, don't know number	17	22	23	-
No/not aware of any legal daily limit	16	27	33	100
TOTAL	100	100	100	100
BASE	241	36	56	2

Note: Percentages read down. Percentages on subset. Percentages excluded for 'other' area mentions.

The above table must be viewed in the perspective of the following legal daily limits for Snapper by area:

- Auckland - 15 (but 9 in SNA 1),
- Central/Challenger - 10 (but 3 in Marlborough Sounds),
- Southern fishery area - 10.

Correct awareness of the limit was higher in Auckland East but even here only 39% gave the right figure.

"Perceived Legal Daily Limits For Blue Cod Among Those Who Target It"				
Perceived Legal Daily Limits For "Blue Cod"	**Fishing Area**			
	Auckland East %	Auckland West %	Central/ Challenger %	Southern %
Two	-	-	-	6
Six	-	-	27	-
Eight	-	-	17	4
10-20	-	-	-	17
25-30	-	-	3	21
Others	-	-	-	5
Aware there is a limit, don't knownumber	-	-	34	22
No/not aware of any legal daily limit	-	-	19	25
TOTAL	-	-	100	100
BASE	-	-	22	36

Caution: small bases

Note: Percentages read down. Percentages on subset Percentages excluded for 'other' area mentions.

The above table must be viewed in the perspective of the following legal daily limits for blue cod by area. (CL = combined daily bag limit of certain fin fish species).

- Auckland - up to CL of 20,
- Central/Challenger - up to CL of 20 (but 6 in Marlborough Sounds),
- Southern fishery area - up to CL of 30.

In both Central/Challenger and Southern areas where this fish is targeted, about half or more were unable to offer any actual number as the limit indicating low specific appreciation of limits.

"Perceived Legal Daily Limits For Those Who Target Kahawai"				
Perceived Legal Daily Limits For "Kahawai"	**Fishing Area**			
	Auckland East %	Auckland West %	Central/ Challenger %	Southern %
Four to ten	12	-	19	29
Twenty	46	-	-	-
Thirty two	-	-	-	20
Aware there is a limit, don't know number	12	-	7	-
No/not aware of any legal daily limit	30	100	74	51
TOTAL	100	100	100	100
BASE	6	2	8	5

Caution: Very small bases

Note: Percentages read down. Percentages on subset. Percentages excluded for 'other' area mentions.

The above table must be viewed in the perspective of the following legal daily limits for kahawai by area. (CL = combined daily bag limit of certain fin fish species).

- Auckland - up to CL of 20,
- Central/Challenger - up to CL of 20,
- Southern fishery area - 15.

The bases for this table are too small to enable comment but suggest awareness of limits may be quite low.

"Peceived Legal Daily Limits For Tarakihi Among Those Who Target It"				
Perceived Legal Daily Limits For "Tarakihi"	**Fishing Area**			
	Auckland East %	Auckland West %	Central/ Challenger %	Southern %
7 to 13	29	-	40	-
Fifteen	17	-	6	-
Twenty	9	-	-	-
Others	14	-	11	-
Aware there is a limit, don't know Number	21	-	22	-
No/not aware of any legal daily limit	10	-	21	-
TOTAL	100	-	100	-
BASE	14	-	9	-

Caution: Very small bases

Note: Percentages read down. Percentages on subset. Percentages excluded for 'other' area mentions.

The above table must be viewed in the perspective of the following legal daily limits for tarakihi by area.

- Auckland - up to CL of 20,
- Central/Challenger - up to CL of 20,
- Southern fishery area - 15.

The majority of fishers who target tarakihi in Auckland East and in Central/ Challenger areas believed the legal daily limit was less than the actual daily limit.

3.4 Achievement of Legal Limits

All finfish anglers who mentioned a limit (correct or incorrect) for their most preferred species for the areas they target them in, were asked how often they achieved it when they were trying for this species. The following table illustrates the findings:

"How Often Do They Get Up To This (Perceived) Limit When Targeting This Species?"										
		Age			Fishing Frequency Last Year They Fished			Resident Area		
Perceived Limit Achievement Frequency	Fisher Total %	16-34 yrs %	35-54 yrs %	55+ yrs %	1-4 times %	5-10 times %	Over 10 times %	Upper North Island %	Lower North Island %	South Island %
Most days	14	11	16	16	14	15	14	14	19	11
One out of two or three days	13	18	9	12	6	12	19	14	4	17
One out of four or five days	13	16	12	10	9	14	16	10	13	27
Less often	15	12	13	23	17	18	13	16	13	15
Rarely/never	43	41	47	38	52	38	38	45	45	30
Don't know	2	2	3	1	2	3	-	1	6	-
TOTAL	100	100	100	100	100	100	100	100	100	100
BASE	408	96	203	109	130	109	169	268	66	74

Note: Percentages read down. Percentages on subset.

Reader Guide: 11% of finfish anglers who are 16-34 years of age, achieve their perceived limit for their most preferred species (in the area they most commonly fish for it) on most days, as compared with 14% nationally.

A majority didn't think they're getting anywhere near their limit. The same inference echoed from our inspection of perceived limit achievement frequency amongst snapper anglers. Tarakihi and blue cod fishers seemed to be getting their limits more frequently when compared with fishers of other species nationwide.

3.5 *Perception Of Fairness Of Limits*

All finfish anglers who mentioned a limit (correct or incorrect) for their most preferred species for the areas they target them in, were asked whether they saw this limit as fair, unfair or had no opinion either way. A majority (86%) saw the current limits as fair. The following table illustrates the findings:

"Did They See This (Perceived) Limit As...?"										
		Age			Fishing Frequency Last Year They Fished			Resident Area		
Fairness Perceptions	Fisher Total %	16-34 yrs %	35-54 yrs %	55+ yrs %	1-4 times %	5-10 times %	Over 10 times %	Upper North Island %	Lower North Island %	South Island %
Fair	86	83	87	88	77	88	90	88	78	85
Unfair	4	5	4	3	5	5	3	4	4	4
No opinion either way	10	12	9	9	18	7	7	8	18	11
TOTAL	100	100	100	100	100	100	100	100	100	100
BASE	408	96	203	109	130	109	169	268	66	74

Note: Percentages read down. Percentages on subset.

The older the fisher, and the more times they have fished (in the most recent year they went fishing), the more likely that they saw their (perceived) limit as fair. Those who perceived the limits as fair were more likely to be currently active in fishing. Inspection of fairness perceptions species-wise, revealed no noticeable differences from the overall fairness perceptions.

All fishers who perceived the limit as fair were asked to comment on why they felt it was fair. The following table depicts the top five reasons given:

"Why Do They Feel The (Perceived) Limit Is Fair?"										
		Age			Fishing Frequency Last Year They Fished			Resident Area		
Top Five Reasons Given	Fisher Total %	16-34 yrs %	35-54 yrs %	55+ yrs %	1-4 times %	5-10 times %	Over 10 times %	Upper North Island %	Lower North Island %	South Island %
To conserve marine life	47	44	52	43	49	50	43	43	53	56
It's plenty/enough to feed a family	44	47	41	46	42	41	48	51	28	34
Gives everyone a chance	7	4	10	6	6	6	8	7	1	11
Limit is high	7	8	6	6	4	5	10	8	8	3
Discourages people from taking too much	5	5	7	4	7	3	5	6	5	2
TOTAL (See Footnote) BASE	355	80	178	97	105	95	155	239	54	62

Note: Percentages on subset. Percentages will not add up to 100 as open-ended question. Multiple response.

Conservation and need satisfaction are the main reasonings perceived by finfish anglers in seeing the limit as fair. The further south they live, the more likely that they offered conservation as the reason for their perception.

Inspection of reasons given, across the top few most preferred individual species, revealed no noticeable differences from the national reasoning.

Other reasons given for perceiving the limit as fair included: never reach the limit (3.8%), protects undersize fish/increase size (3.7%), , commercial boats affecting fishing (2.8%), and people are irresponsible/ignore limits (2.3%).

Only a few finfish anglers perceived the limit as unfair. They were asked to comment on why they felt so. Following is a list of all the reasons given:

- *They are too low, have always fished to the limit and frozen the extra, so just get enough to eat.*
- *It should be more than 9 per person.*
- *Very limited in regard to what the commercial fishing allowed to catch, especially if you only go out to fish occasionally.*
- *The area has never been over-fished, it's not fair.*
- *If fishing now and then, it's not fair, because others go every weekend and get to those limits.*
- *Any restrictions are unfair when commercial fishers throw away more than we can catch.*
- *Unfair for commercial fishers, it disadvantages them when recreational fishers can take lots of fish from the sea.*
- *If fishing for the day and you catch the number allowed fast, then you have to finish. Plenty of fish about. Increased size limit would be fairer.*
- *I fish for recreation and I do not feel there should be any limit for my catch.*
- *Cost factor makes it ridiculous - you go all that way and fish until you have your biggest six fish, the rest you just throw over the side, so it's not a conservation help at all.*
- *Probably a bit unfair on the fish. You need 10 big ones for a decent feed.*
- *Would like to take more - I can't get out very often and sometimes feel cheated.*
- *A little high or excessive.*
- *Limit a bit too high for one person.*
- *It's probably too lenient - should be less than 30 a day, perhaps 5 a day.*
- *Too many - should be cut down to 4 or 5 to force people to keep larger fish only.*

3.6 Alternative Restraints Desired/Favoured

All finfish anglers were asked if there was any way, other than bag limits, that they felt should be used, to prevent their most preferred species being overfished. Multiple responses were accepted. Over half the anglers said they couldn't think of anything. The following table illustrates the main findings.

"Is There Any Other Way That Should Be Used, To Prevent This Species Being Overfished?"

Top Five Responses	Fisher Total %	Age			Fishing Frequency Last Year They Fished			Resident Area		
		16-34 yrs %	35-54 yrs %	55+ yrs %	1-4 times %	5-10 times %	Over 10 times %	Upper North Island %	Lower North Island %	South Island %
No/can't think of any/don't know	51	51	48	55	58	53	43	51	46	56
Restrictions on commercial fishing	16	17	16	15	10	17	21	15	20	17
Size/weight restrictions/increase size	11	14	12	5	7	16	11	11	9	13
Better controls/more policing/ inspections	8	7	10	8	7	3	14	10	11	3
Close off areas to replenish stocks	7	5	9	6	5	8	8	6	10	7
TOTAL (See Footnote)										
BASE	565	140	283	142	203	150	212	349	98	118

Note: Percentages on subset. Percentages will not add up to 100 as only top five responses detailed above.

Other mentions included: nets shouldn't be allowed (3.2%), more marine reserves (3.2%), more public awareness/responsibility (2.4%), catch and release/tag and release (1.7%), and foreigners/Asians fishing our waters (1.5%) etc.

The fewer times they've fished in the most recent year they went fishing, the more likely they couldn't think of anything. Conversely, the more times they've fished in the last year they went fishing, the more likely they wanted restrictions on commercial fishing. 16% of the finfish anglers nationwide feel restrictions should be imposed on commercial fishing, to prevent their most preferred species being overfished.

The younger fishers are, the more likely they_ felt that size/weight restrictions/increased size should be used to prevent overfishing. This means was also suggested more likely by those who are currently active in recreational seawater fishing.

Inspection of suggestions made across species reiterated the overall result for which "size/weight restrictions" (17%) superceded "restrictions in commercial fishing" (8%) as the top prevention suggested. Blue cod fishers were also more likely to have said 'don't know' as compared with snapper fishers.

3.7 Additional Restrictions

All finfish anglers were asked if they were aware of any restrictions on the length, weight or condition of their most preferred species. Length was predominantly mentioned, where anglers were aware that restriction(s) existed.

"Is There Any Restriction On The Length, Weight Or Condition Of This Finfish Species...?"

Perceived Additional Restrictions	Fisher Total %	Age 16-34 yrs %	Age 35-54 yrs %	Age 55+ yrs %	Fishing Frequency Last Year They Fished 1-4 times %	Fishing Frequency Last Year They Fished 5-10 times %	Fishing Frequency Last Year They Fished Over 10 times %	Resident Area Upper North Island %	Resident Area Lower North Island %	Resident Area South Island %
Length mentioned	38	39	33	41	30	36	45	47	18	24
Length/size restriction, not specified	13	16	14	9	9	14	17	12	19	12
Yes, but not sure what it is	34	28	37	37	41	36	25	29	46	37
No/none that I'm aware of	15	17	16	13	20	14	13	12	17	27
TOTAL	100	100	100	100	100	100	100	100	100	100
BASE	565	140	283	142	203	150	212	349	98	118

More than half the finfish anglers were either not aware of any additional restrictions, or where they were aware that restriction(s) exist - did not know what it was. The more times they've fished, the less likely :

- that they were unaware/unsure of the restriction(s),
- that they mentioned a length restriction of 13 - 26 cms.

Conversely, the more times they've fished in the most recent year they went fishing, the more likely that:

- they mentioned a length restriction of 27 cms (which is the minimum size allowed for snapper in Northern and Central regions. Minimum allowed size for snapper in the Challenger and Southern region is 25 cm).
- they were aware of a length/size restriction, but haven't specified it.

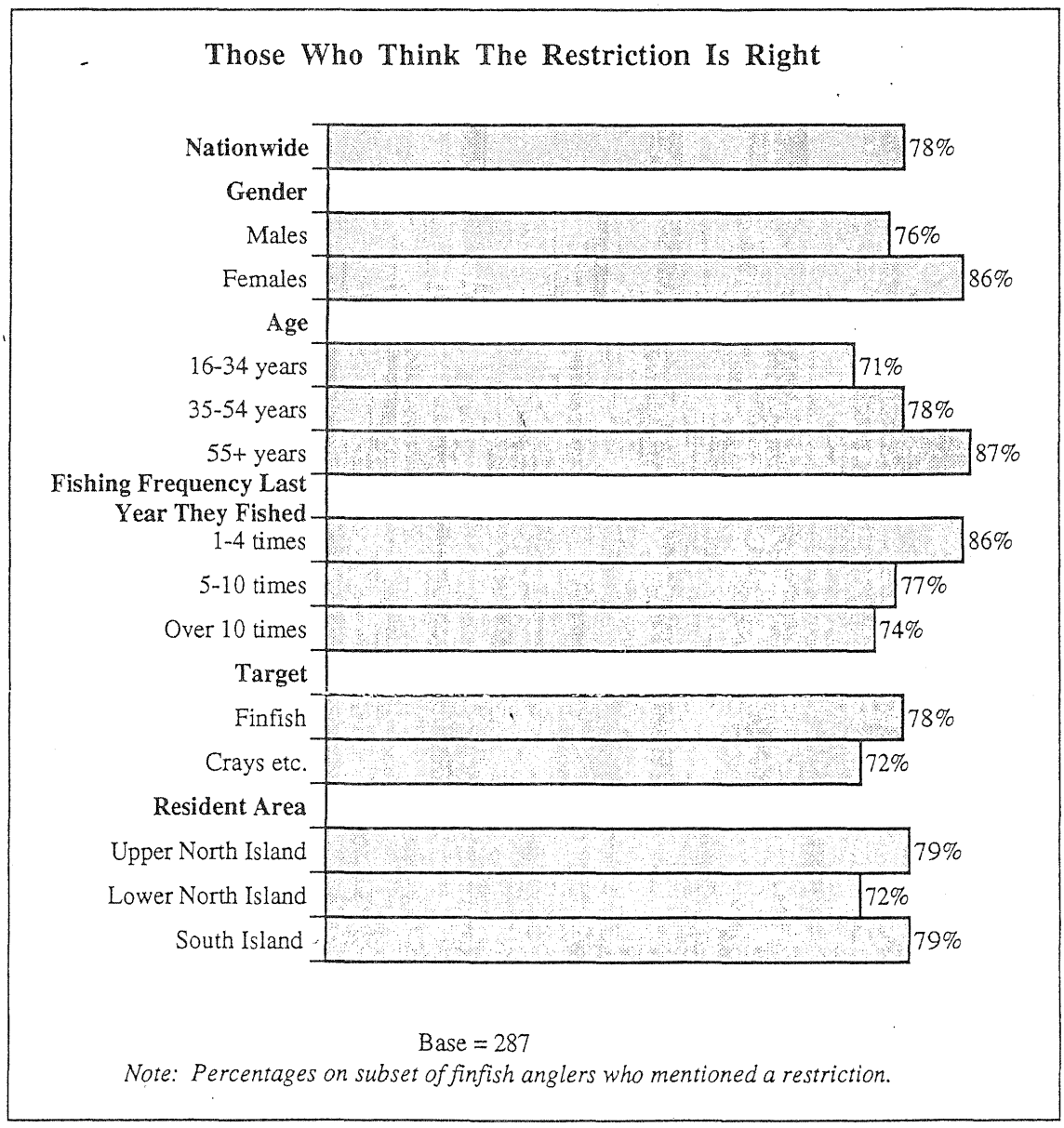
The older they were, or the further north they lived, the more likely that they had mentioned a length restriction of 13 - 26 cms. Conversely, the younger they were or the further south they lived, the more likely they were unaware of any restriction(s).

Inspection of mentions (and non-mentions) of length restriction(s) across the top most preferred individual species reflected the overall perceptions. Other interesting statistics that emerged were: **(caution: very small fisher bases)**:

- 16% of snapper anglers knew the allowed minimum size.
- Most blue cod anglers who mentioned a restriction gave 30cm as a response.
- Less than half the kahawai anglers correctly mentioned that there wasn't a limit on kahawai.
- 16% of tarakihi anglers knew the allowed minimum size.
- Many (45%) kingfish anglers stated the correct legal limit.

Are These Restrictions Right?

All finfish anglers who mentioned a restriction were asked if they thought those restrictions were right or could usefully be changed. Whatever the perceived restriction, over three-quarters (of those who mentioned one) thought it was right. 20% thought the restrictions could usefully be changed. The rest offered no opinion, - ie. 2%.



Base = 287

Note: Percentages on subset of finfish anglers who mentioned a restriction.

The older the fishers and the less times they've fished (in the most recent year they went fishing), the more likely they thought that the restrictions are right.

All finfish anglers who thought the restriction(s) could usefully be changed were asked what they thought it could usefully be changed to. Over three quarters of these fishers thought that the size should be increased/would allow the fish to breed. The following table illustrates the findings.

"What Could The Restrictions Be Usefully Changed To...?"

Changes Proposed To Existing Restrictions	Fisher Total %	Age			Fishing Frequency Last Year They Fished			Resident Area		
		16-34 yrs %	35-54 yrs %	55+ yrs %	1-4 times %	5-10 times %	Over 10 times %	Upper North Island %	Lower North Island %	South Island %
Size increased/would allow fish to breed	(77)	75	88	56	65	68	86	85	67	50
Reduce amount taken	13	15	2	30	19	-	18	16	-	9
Other answers	25	35	15	14	43	19	23	25	10	41
Don't know	4	8	-	-	-	13	-	-	(23)	-
TOTAL (See Footnote) BASE	56	17	30	9	12	12	32	42	8	6

Note: Percentages on subset. Very small bases. Percentages will not add up to 100 as open-ended question. Multiple responses were accepted.

An overwhelming majority of the fishers who though restriction could be changed was therefore in favour of restriction(s) to be tightened in favour of conservation.

3.8 *Method, Equipment, Or Technique Limitations Favoured*

All finfish anglers were asked if there was any method, equipment or technique they felt should not be allowed to be used in the interest of preventing damage to the number or average weight of their most preferred species. Many fishers didn't know any/couldn't readily think of any. The following table illustrates the findings:

"Method, Equipment or Technique That Should Not Be Allowed To Be Used..."										
		Age			Fishing Frequency Last Year They Fished			Resident Area		
Prohibition Perceptions	Fisher Total %	16-34 yrs %	35-54 yrs %	55+ yrs %	1-4 times %	5-10 times %	Over 10 times %	Upper North Island %	Lower North Island %	South Island %
Nothing/none known/don't know any	47	51	46	46	50	48	44	44	49	55
Nets/netting should be banned	15	15	14	17	15	14	16	16	15	14
Netting by commercial fishermen/ trawlers	13	11	12	15	12	10	16	14	15	6
Other net mentions summed*	14	14	13	17	12	15	17	17	15	5
Commercial fishermen	4	4	7	2	4	4	6	6	2	2
Long lines/set lines	4	4	4	5	3	3	6	5	5	2
Use of hooks/small hooks/foul hooking	4	4	4	6	4	5	4	4	3	6
All others summed*	12	11	13	11	13	12	12	11	10	16
TOTAL (See Footnote) BASE	565	140	283	142	203	150	212	349	98	118

Note: Percentages on subset. Percentages do not add up to 100 as open-ended question. Multiple responses were accepted.

* **Summarised percentages. These are not literal percentages as the proportions have been combined to give only an insight into the response type.**

Inspection of responses across individual most preferred finfish species within fishing areas generally echoed the overall reading.

3.9 Perceived Availability Of Finfish

All finfish anglers were asked their perceptions about the catch availability of their most preferred species, disregarding season-to-season ups and downs. The following table illustrates the findings:

"Disregarding Season-To-Season Ups And Downs, The Numbers Of Their Most Preferred Species Are..."

Catch Availability Perceptions	Fisher Total %	Age 16-34 yrs %	Age 35-54 yrs %	Age 55+ yrs %	Fishing Frequency Last Year They Fished 1-4 times %	Fishing Frequency Last Year They Fished 5-10 times %	Fishing Frequency Last Year They Fished Over 10 times %	Resident Area Upper North Island %	Resident Area Lower North Island %	Resident Area South Island %
Trending upwards	18	14	14	(29)	16	18	20	20	18	13
Trending downwards	(38)	37	39	38	32	40	42	36	36	(46)
More or less stable	24	24	26	19	25	20	26	23	25	24
No pattern evident	17	23	16	9	21	20	10	18	17	13
Don't know	3	2	5	5	6	2	2	3	4	4
TOTAL	100	100	100	100	100	100	100	100	100	100
BASE	565	140	283	142	203	150	212	349	98	118

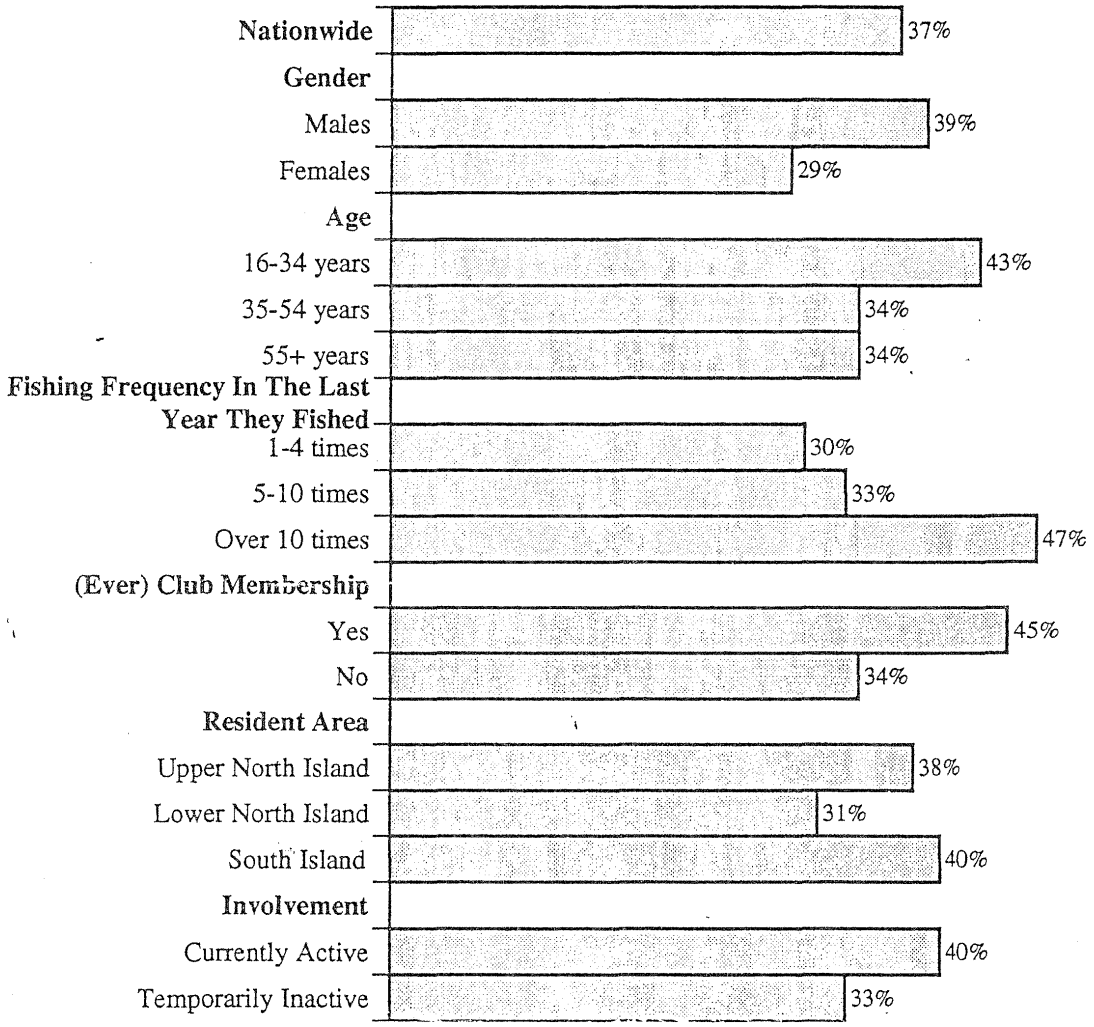
Note: Percentage of finfish anglers. Percentages read down.

38% of the finfish anglers believed that the catch availability of their most preferred species was trending downwards. The more frequently they've fished (in the most recent year they went fishing), the more likely they saw a trend - either upwards or downwards. Conversely, the less frequently they've fished more recently, the more likely they saw no pattern.

3.10 Finfish Areas Seemed To Be Lost

All finfish anglers were asked whether they thought any seawater fishing ground was becoming lost to them, or was no longer worth visiting, for any reason at all. Over a third of the finfishers said yes there was. The following chart illustrates the findings.

Those Who Can Think Of A Seawater Fishing Ground That Is Becoming Lost To Them



Note: Bar percentages show finfish anglers who said 'Yes'. Base = 565.

Species specific areas more likely perceived as lost were:

- snapper/kingfish - north east, north west, central,
- blue cod - central, south,
- kahawai - north west, south,
- tarakihi - north east, central.

The more frequently they've fished in the most recent year they went fishing, the more likely that they mentioned a fishing ground becoming lost to them.

Fishing Area Becoming Lost

All finfish anglers who believed that a fishing ground was becoming lost to them for their target species, were asked to name the area. The following table illustrates the results:

"Which Fishing Ground Is Becoming Lost, Or No Longer Worth Visiting For Their Target Species."

Fishing Ground Becoming Lost	Fisher Total %	Age 16-34 yrs %	Age 35-54 yrs %	Age 55+ yrs %	Fishing Frequency Last Year They Fished 1-4 times %	5-10 times %	Over 10 times %	Club Member Fish/Diving Yes %	Club Member Fish/Diving No %	Involvement Current Active %	Involvement Temp. Inactive %
Auckland East	(57)	61	[45]	68	49	60	61	62	55	60	52
Auckland West	9	10	12	4	(17)	3	8	5	11	9	11
Central/Challenger	22	20	26	19	27	17	21	20	23	18	(28)
Southern	12	9	17	9	7	20	10	13	11	13	9
TOTAL	100	100	100	100	100	100	100	100	100	100	100
BASE	202	58	95	49	63	42	97	62	140	127	75

Note: 'Other area mentions' (0.3%) excluded from the table. Percentages read down. Percentages on subset of finfish anglers who think a fishing ground is becoming lost to them.

Reader's Guide: Of the 565 finfish anglers, 202 thought there was a fishing ground becoming lost to them for some reason, - 57% of these fishers identified a fishing ground in the Auckland East as such a ground.

Why Do They Feel That

All finfish anglers who mentioned a fishing ground, were asked why they felt it was becoming lost to them. The following table illustrates the top five reasons given.

"Why Do They Think That A Seawater Fishing Ground Is Becoming Lost To Them?"

Top Five Reasons	National %	Fishing Area: Auckland %	Central/ Challenger %	Southern %	All Over New Zealand %	No area given %
Overfished/fished out	30	28	36	30	21	27
Less fish/reduced catches	30	29	33	40	23	9
Commercial fishing/trawlers	23	24	26	12	27	25
Pollution of water	14	11	4	53	21	-
More boats/increased population	13	14	15	-	18	7
TOTAL (See Footnote)	100	100	100	100	100	100
BASE	204 *	115	49	24	6	10

Note: Percentages will not add up to 100, as open-ended question. Multiple responses accepted. Percentages read down. Percentages of all finfish anglers who think a fishing ground is becoming lost to them for the species they target. **(Caution: small bases for some areas mentioned.)**

* **Multiple areas accepted.**

Overfishing/fished out and less fish/reduced catches were the main reasons stated for fishing grounds being lost to recreational fishers. The further south they fished, the more likely they believed that overfishing/less fish was the main reason why a seawater fishing ground was becoming lost to them. However, pollution was the main reason perceived by those who fish in the southern area(s).

3.11 Issues Related To Combined Daily Limits

All finfish anglers were asked if they were aware of any legal limit on the number of fish, all species combined, that they could take home on a given day's fishing, where they most commonly fished. There was no appreciation of "total bag limit" among finfish anglers and where it did exist, it suggested guess work. The following table illustrates the findings:

"Perceived Daily Legal Limit On Numbers Of Fish, All Species Combined, Where They Most Commonly Fish"

Perceptions Of Combined Daily Bag Limit - All Species	Fisher Total %	Age 16-34 yrs %	Age 35-54 yrs %	Age 55+ yrs %	Fishing Frequency Last Year They Fished 1-4 times %	Fishing Frequency Last Year They Fished 5-10 times %	Fishing Frequency Last Year They Fished Over 10 times %	Resident Area Auckland/ Central/ Challenger %	Resident Area Southern %
Less than 20	7	4	9	8	5	7	9	7	7
Twenty	6	7	4	8	2	7	10	8	1
22-50	4	2	4	5	3	2	6	2	8
Aware there is a limit, don't know number	41	32	46	47	46	41	37	42	38
Not aware of any limit	42	55	37	32	44	43	38	41	46
TOTAL	100	100	100	100	100	100	100	100	100
BASE	565	140	283	142	203	150	212	447	118

Note: Percentage of all finfish anglers. Percentages read down.

The above table must be viewed in the perspective of the following combined daily bag limits for certain species by area:

- Auckland/ Central/Challenger - 20 finfish,
- Southern - 30 finfish.

The younger they were, the more likely they were not aware of any combined limit (all species). Conversely, the older they were, the more likely they perceived a limit existed, but either didn't know the number or were unable to recall the correct number at the time of the interview.

Perception Of Fairness Of Perceived Combined Limit

All finfish anglers who mentioned a combined limit were asked whether they saw this limit as fair, unfair, or had no opinion either way. Most fishers (84%) saw the perceived limit as fair. The top three reasons given for perceived fairness were:

- enough/plenty for personal use (41%),
- it's a lot of fish/don't need that many (22%),
- preserving resources/replenish stock (20%).

Only 9% felt the limit was unfair - and these too were generally perceived unfair on the grounds of conservation and being overgenerous.

Analysis across most preferred finfish species revealed no noticeable differences from the national readings.