

Recreational Fisheries Research

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MFish Research Planning Process

MFish Research Planning Groups

- Recreational, Inshore, Shellfish, Rock Lobster, Eels, Pelagic, Middle Depths, Deep Water, Aquatic Environment, Stock Assessment Methods

- Groups meet August – September to:
 - Review MediumTerm Research Plans and propose research projects for the following financial year
 - Research planned up to 18 months in advance

Recreational Fisheries Research

- **Recreational research projects are proposed and reviewed through the Marine Recreational Fisheries Research Working Group**
- **Marine Recreational Fisheries Research covers projects relating to harvest estimates, characterisation of recreational fisheries, managing the recreational harvest**
- **Participation by all stakeholders but especially recreational fishing representatives**
- **Some projects relating to recreational fisheries are developed through other Fisheries Working Groups (eg. gamefish, kahawai & blue cod research relating to the stock)**

Recreational Fisheries Research

- **Research projects relate to the Strategic Research Directions for Research; and**
- **The Recreational Research Medium Term Research Plan**
- **Research projects are consulted on through the Research Co-ordinating Committee and the SOI consultation process**
- **Research projects are approved by the Minister**
- **Research projects are tendered**

Recreational Fisheries Research

❖ Information needs:

- Time series of harvest estimates by fishstock
- Regional surveys (characterisation studies, effectiveness of bag limits etc)
- Demographics of recreational fishing population (participation rates, age, sex, ethnicity) and changes over time

Regional Recreational Fishing

❖ **Research to determine distribution of fishing effort, methods of harvest, species harvested.**

Past research has included:

- **Bay of Islands: Rawhiti Inlet closure & taiapure proposals**
- **Tauranga Harbour: allocation issues**
- **Maketu taiapure: taipure proposal**
- **Ohiwa Harbour: allocation issues**
- **Wellington South Coast: marine reserve proposal**
- **Malborough Sounds: characterisation of recreational fishing**
- **Kaikoura: fishing characterisation**

Regional Recreational Fishing

- **Akaroa harbour: characterisation of recreational fishing**
- **Oamaru: recreational fishing pressure**
- **Shag Point**
- **East Otago taiapure**
- **Otago Harbour**
- **Nuggets**
- **Bluff Harbour**
- **Stewart Island**
- **Paterson Inlet**
- **Fiordland**



National Recreational Harvest Estimates

- ❖ **First surveys undertaken on a regional basis using the telephone/diary/boat ramp interview methodology**
- ❖ **South Region 1991-92 /Central Region 1992-93 /North Region 1993-94**
- ❖ **National surveys**
 - ❖ **1996**
 - **2000**
 - **2001 roll over survey**

Telephone Diary Harvest Estimates

- **The results of the 1996 survey were accepted as being reliable at the time**
- **The 2000 survey gave results that were up to 3.2 times higher than in 1996**
- **Results of the 2001 roll over survey similar to 2000 results**

Telephone/diary Harvest Estimates

- **Marine Recreational Fisheries Technical Working Group reviewed the harvest estimates**
- **Concluded that due to a methodological error that 1996 harvest estimates are unreliable**
- **2000 and 2001 estimates may be inaccurate and for some fish stocks unbelievably high**
- **For some fishstocks not sufficient e.g. SNA1, SNA8, KAH1 & 2, KIN 1, CRA & PAU.**

Telephone/diary harvest estimates

- ❖ Extensive data on demographics of fishers & methods
- ❖ Possible to make relative comparisons between stocks within surveys
- ❖ Harvest estimates provide an order of magnitude of harvest levels that was not previously available
- ❖ For many fishstocks this level of accuracy sufficient

Harvest estimates

- ❖ **116 fishstocks with harvest weights**
- ❖ **38 fishstocks with harvest estimate 30% TACC**
- ❖ **Of these top species are snapper (all stocks), kahawai (all stocks), kingfish (all stocks), blue cod, groper, butterfish, tarakihi, trevally, rock lobster, paua, scallops**
- ❖ **QMA 1 accounts for 68% of harvest weight & nos.**
- ❖ **Snapper the most important species - 51% of total QMA 1**
- ❖ **Snapper and kahawai - 68% total QMA 1**

Harvest estimates – aerial overflight/boat ramp

- ❖ Direct observational method – fisher independent**
- ❖ Only suitable for stocks with a high percentage (80%) of fish taken from trailer boats (snapper, kahawai – QMA 1)**
- ❖ Aerial overflight/boat ramp harvest estimates for QMA1, QMA8, QMA7.**
- ❖ Estimates for snapper, kahawai and other finfish**

Harvest estimates - costs

- ❖ **1999/2000 national telephone diary survey**
\$1.1million
- ❖ **Aerial overflight method \$0.95 million**
- ❖ **Between years trial monitoring of boat ramp traffic using web cam cameras**

Future Directions

- ❖ Time series of fishstock harvest estimates top priority
- ❖ Aerial overflight method suitable for snapper, kahawai (QMA 1, SNA8?, QMA 7)
- ❖ Some other fish stocks only method diary survey

❖ BUT

- ❖ Harvest estimates for rock lobster & paua in particular constrained by available methodologies
- ❖ These fisheries widely dispersed, different methods
- ❖ Inability to locate/identify fishers – registration???

Future Directions

- ❖ **Research Projects for 2008/09 - hand out**
- ❖ **National harvest estimate delayed to 2009/10 (\$2 m)**
- ❖ **QMA 1 overflight delayed to 2009/10 to be concurrent with national survey (\$1m)**
- ❖ **Additional concurrent survey for SCA 7 (\$0.3)**
- ❖ **Creel census survey for rock lobster CRA 3 (\$?)**

Recreational fisher information

- ❖ Fisher prevalence - proportion of the population that fish**
- ❖ Important to monitor changes over time**
- ❖ Currently working with Statistics New Zealand and Sport & Recreational Council**

Fisher Prevalence

Parameter	1996 telephone recruitment	2000 telephone recruitment	2000 face to face	1991 Research Bureau	1987 Dept. Statistics	1999 Walshe et al.
Household fishing prevalence	13.9	51.4	38.9	40	21	30
Contact rate %	100	85	86	76		67
Cooperation rate %	100	44	58	64	97	70