

SOUTH PACIFIC COMMISSION

NINETEENTH REGIONAL TECHNICAL MEETING ON FISHERIES

(Noumea, New Caledonia, 3-7 August 1987)

COUNTRY STATEMENT - NEW ZEALAND

Introduction

Since the declaration of an exclusive economic zone by New Zealand in 1978 fisheries in the New Zealand area have changed enormously.

Major changes have taken place in the number of species landed, the total catch, New Zealand involvement in offshore fisheries, the system of managing fisheries, and export receipts from fish products.

The years since 1978 have seen, in particular,

- (a) The consolidation of the inshore finfish and shellfish fisheries;
- (b) The introduction of an individual transferable quota management system for finfisheries;
- (c) The development of new deepwater fisheries, particularly for orange roughy, hoki and oreo dories;
- (d) A reduction in joint venture purse seine tuna fishing and an increase in domestic troll fishing - particularly for albacore;
- (e) Major increases in some areas of aquaculture, particularly mussels;
- (f) Further improvements in research and surveillance capacity.

This paper briefly summarise the main points of these changes, and a summary of landings of main species in 1978 and 1985 is given in Table 1.

Inshore Finfisheries - Finfish

Concern of the over-exploitation of inshore finfish resources led to a moratorium on the issue of new licences in 1982. This was followed by the development of a system based on catch quotas which was introduced for 22 inshore finfish species on 1 October 1986.

This system - an individual transferable quota system - required the establishment of an annual total allowable catch (TAC) for each "stock" of each species. This was followed by allocation of quotas to individuals based on their past fishing history.

Where past catches exceeded the total allowable catch a tendering system was set up which enabled fishermen to sell back quota to the government. Where inadequate quota was received by the government to reach the TAC fishermen's quotas were compulsorily reduced.

Once obtained, the quotas, which are rights to take certain quantities of fish, may be sold, leased or otherwise treated as private property.

The introduction of the ITQ system has resulted in many fishermen leaving the industry and the consolidation of quota in a limited number of hands. Controls have been built into legislation to prevent ownership of more than 20% of quota for any species in any one management area or 35% for any species for New Zealand as a whole.

The major problems which have arisen as a result of the ITQ system have been:

- (a) Inadequate information on which to base calculation of TACs;
- (b) Dumping of low value fish in favour of high value fish;
- (c) Management of species which are caught as bycatch for which quotas may also apply.

Along with the introduction of ITQs the government also introduced a royalty system which required owners of fish quota to pay an annual royalty on all quota held. The value of royalties is linked to the port price of each species.

Inshore Fisheries - Rock Lobsters

The fishery for New Zealand's two main species of rock lobsters has remained one of the most consistent and valuable inshore fisheries. Landings between 1978 and 1985 fluctuated around 4,000-5,000 tonnes per year.

The introduction of limited entry in this fishery in 1978-79 saw a gradual reduction in the number of vessels involved although this has been compensated for by a gradual increase in the average number of pots fished by each vessel.

Proposals to introduce an individual transferable quota scheme to this fishery have been debated recently and a scheme is likely to be implemented in 1988/89.

Inshore Fisheries - Shellfish

The main shellfish species of interest to commercial fishermen have been mussels, scallops, oysters and paua (abalone).

Fisheries for mussels have steadily declined and are now insignificant. Mussel beds, which have been fished using dredges seem unable to withstand exploitation and farmed mussels have had a big impact on the market.

Scallop fisheries produce about 3,000 tonnes per year. The fishery in the Nelson area, which produced up to 10,000 tonnes in 1975, declined dramatically and was closed for two years in 1981 and 1982. The fishery was reopened in 1983 with very strict controls on catch and effort and has been relatively stable since.

Major developments in the scallop fishery in future will centre around enhancement projects (see below).

The major oyster fisheries in New Zealand centre on Foveaux Strait in Southland, and in the Nelson area. Oysters are taken by dredging. Production has been steady at around 9,000 tonnes per year although an outbreak of the disease Bonamia has resulted in severely reduced quotas in the Foveaux Strait fishery.

Fishing for paua (abalone) in New Zealand is carried out by free diving. The fishery was controlled by limiting licence numbers from 1982 as a result of concern that the landings (over 1,300 tonnes per year) were above the sustainable yield of the resource.

Under the limited entry scheme, however, effort continued to increase and in 1985 individual quotas and a total allowable catch were introduced.

Other shellfish which have attracted recent interest include surf clams (various species) and queen scallops (Chlamys sp).

Deepwater Fisheries

The most significant developments in recent years in New Zealand fisheries have been in the deepwater fisheries.

Since 1978 orange roughy have been discovered in high densities in several areas around the edge of the continental shelf in depths from 700-1200 metres. Total allowable catches are now around 58,000 tonnes.

The other major deepwater fisheries which have been developed are those for oreo dories, for which TACs are now around 24,000, and hoki, for which the TAC has recently been increased to 250,000 tonnes.

These fisheries are still developing rapidly and although they are very difficult to study, a major part of our research effort is currently being put into stock assessments for these species.

Squid

Squid in New Zealand are taken by both jigging and trawling by foreign licensed and domestic vessels. The total allowable catch is 105,000 tonnes.

The fishery is on two closely related species of arrow squid, but because of their similarity no differentiation is made in fishing or marketing operations.

In 1985 the squid fishing was the second most valuable New Zealand fishery, with export earnings for the year of \$102 million.

The trawl fishery is centred around the Auckland Islands and accounted for about 45% of the total catch. The jig fishery covers a much larger area and currently 100-180 vessels take part between December and June.

Tunas

The joint venture purse seine fishery for skipjack around northern New Zealand has declined in recent years and the purse seine fishery is now carried out entirely by domestic vessels.

Main interest has centred around the albacore troll fishery and details of this fishery are given in another paper along with information on foreign longline fisheries in the New Zealand EEZ.

Aquaculture

The most important species for the aquaculture industry is the green-lipped mussel, Perna canaliculus which yielded more than 10,000 tonnes in 1985, mainly from the Marlborough Sounds area.

Production of rock oysters in northern New Zealand has declined slightly since 1978 and the species of greatest interest has changed from the native rock oyster to the Pacific oyster, Crassostrea gigas.

The other major species of aquacultural interest at the present time are scallops and paua. Scallops form the basis of an enhancement project in the Nelson area. Large numbers of naturally occurring spat are being captured and ongrown for release onto suitable habitat and later harvesting by normal

dredge methods. A very successful pilot project has been completed in conjunction with the Japanese OFCF organisation.

A number of different schemes are currently being investigated for enhancing paua stocks and for using hatchery reared juveniles for growing paua in captivity for luxury markets. Initial results are very promising.

Research

Total New Zealand export earnings from fisheries are now around \$700 million per year. Current annual expenditure on research is around \$9 million.

Research staff number around 160 in marine fisheries and they are supported by two research vessels.

Major research projects are directed at stock assessment of snapper, orange roughy, hoki, rock lobster and squid. Limited programmes are aimed at tarakihi, albacore, oreo dories, barracouta, scallops and oysters.

The modest aquaculture research programme is currently aimed at pauas and mussels.

In the absence of a suitable research vessel, deepwater research has been conducted using chartered commercial vessels. Major improvements in our ability to investigate deepwater stocks will come with the purchase of the new (70 m) purpose-built research vessel recently announced by the government.

A further advance in data collection has also been made with the introduction, in 1986, of a scientific observer programme which places pairs of observers on 40-60% of all large trawlers fishing in the New Zealand EEZ.

Further details on all aspects of New Zealand's fisheries are available on request from The Manager
Fisheries Research Centre

P O Box 297
Wellington, New Zealand.

Table 1: Landings in 1978 and 1985 (in tonnes) and number of vessels currently involved in major New Zealand fisheries.

	1978	1985	
1. Aquaculture Production			
Mussels	800	10 759	455 farms
Oysters	1 079	795	
2. Shellfish			
Total	16 413	20 608	
Mussels	705	112}	
Oysters	9 879	8 755}	151 boats
Scallops	3 090	3 204}	
Paua	581	887	
3. Rock Lobsters			
Total	3 751	5 489	816 boats
4. Squid			
Domestic	9 698	43 830	
Foreign	30 686	42 909	
5. Inshore Finfish			
Total	69 578	87 063	
Snapper	17 660	Red cod 9 728	
Trevally	6 526	Snapper 8 749	
Barracouta	5 197	School shark 4 176	
Red cod	4 720	Barracouta 3 228	
Tarakihi	4 189	Rig 3 195	
6. Deepwater Finfish - Domestic			
Total	1 286	160 503	54 boats
Silver warehou	631	Orange rghy 40 006	
Hoki	163	Hoki 34 673	
Red cod	124	Oreos 22 356	
Tarakihi	67	Barracouta 14 112	
S.B. whiting	63	Jack mack. 10 285	
7. Foreign Licensed Trawl			
Total	73 949	50 988	27 boats
S.B. whiting	19 476	Hoki 11 969	
Oreos	10 997	S.B. whiting 7 248	
Hoki	8 543	Barracouta 5 143	
Barracouta	7 254	Jack mack. 3 246	
Jack mack.	4 786	Ling 3 126	