


<b>FISHERY COUNTRY PROFILE</b>	<b>Food and Agriculture Organization of the United Nations</b>	<b>FID/CP/NZE</b>
<b>PROFIL DE LA PÊCHE PAR PAYS</b>	<b>Organisation des Nations Unies pour l'alimentation et l'agriculture</b>	 <b>May 2005</b>
<b>RESUMEN INFORMATIVO SOBRE LA PESCA POR PAISES</b>	<b>Organización de las Naciones Unidas para la Agricultura y la Alimentación</b>	

## NEW ZEALAND

### GENERAL GEOGRAPHIC AND ECONOMIC DATA

Area (land):	270 534 km <sup>2</sup>
Water area:	TS 169 000 + km <sup>2</sup> EEZ 4 053 000 km <sup>2</sup>
Shelf area: (Legal continental shelf extensions area):	800 000 – 2 400 000 km <sup>2</sup>
Length of continental coastline:	5 650 km
Population (2003):	4 009 200
GDP at purchaser's value (2003):	US\$ 92 989 m

GDP per head (2003):	US\$ 23 194
Agricultural* GDP (2003):	US\$ 5 800 m
Fisheries GDP (2003):	US\$ 1 240 m

\* Excludes pastoral, horticultural and forestry sectors.

### FISHERIES DATA

Date	Production	Imports	Exports	Total supply	Per capita supply
<b>2003</b>	<b>tonnes live weight</b>				<b>kg/year</b>
Fish for direct human consumption	562 875	9 146	300 594	271 427	67.70

Fish for animal feed and other purposes

\*Source: NZ Statistics and New Zealand Seafood Industry Council.

<b>Estimated employment*:</b>	
(i) Primary sector (including aquaculture):	10 520 Full Time Equivalent (FTEs)
(ii) Secondary sector:	16 100 indirect FTEs
<b>Gross value of fisheries output (2000):</b>	US\$ 1 310 004
<b>Trade (2003):</b>	
Value of fisheries imports:	US\$ 57 020 000
Value of fisheries exports:	US\$ 702 947 000

\*May 2000, McDermott Fairgray Group Ltd. An economic study commissioned by the New Zealand Seafood Fishing Industry Council. Available at .

## FISHERY SECTOR STRUCTURE

**Overall fishery sector** <http://www.seafood.co.nz>

New Zealand's EEZ and Territorial Seas are around the fourth largest in the world and together represent more than 15 times the land mass. Although substantial in area, there is relatively little continental shelf. Seventy-two percent of the zone has waters of over 1 000 m deep, 22% is between 200 and 1000 m and only 6% is less than 200 m.

Marine fisheries play an important part in the social, cultural, ecological and economic quality of life for many New Zealanders. Maori have strong cultural links with the marine and freshwater environment and fisheries. This is recognized in the Treaty of Waitangi and supported through common law and legislation and their special relationship with the Government.

Around 130 species are harvested commercially from New Zealand waters, however, only about 40 of these are of commercial significance. Marine fisheries and aquaculture contribute more than 26 000 full-time jobs in the commercial sector.

The most valuable wild harvest species are hoki, orange roughy, spiny red rock lobster, paua (abalone), ling, snapper, squid, hake and red cod. The main aquaculture species are the greenlipped or Greenshell<sup>TM</sup> mussels, Pacific oysters and salmon although a number of other species are also farmed on land and sea.

Except for a small commercial fishery for native eel species, inland freshwater fisheries are purely recreational supporting both local and tourist sport fishing in lakes and rivers. Freshwater species caught include eels, trout and salmon. Also, some freshwater species such as eels and koura (a native freshwater crayfish) are important to Maori for their spiritual and customary needs.

Around 20% of New Zealanders are involved in recreational fishing and tourists are attracted for the quality of fishing. Expenditure by recreational fisheries to catch five key recreational species is estimated to contribute nearly US\$728 million per annum to the economy.

The comprehensive settlement of Maori fisheries claims is recognized in the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992. Since that time Maori have become one of the biggest participants in commercial fishing and control more than half of all commercial fishing through various company and quota ownerships. Legislation also supports a framework for Maori to manage and fish their customary fishing rights.

### Marine sub-sector

#### Catch profile (03/04 fishing year)

Fishery	Total Allowable Commercial Catch	Catch
<i>Deepwater</i>		
Orange roughy	15 221	13 418
<i>Mid-water</i>		
Hoki	180 000	137 800
<b>Hake</b>	<b>14 067</b>	<b>13 684</b>
Squid	140 754	83 981
Ling	19 979	18 666
<i>Inshore</i>		
Snapper	6 557	6 678
<b>Red cod</b>	<b>16 074</b>	<b>10 302</b>
Paua	1 059	1 018
Spiny red rock lobster	2 685	2 413

### Landing sites

There is a high degree of vertical integration in New Zealand commercial fishing operations i.e typically fishing companies are involved in both catching and processing of fish. In some regions the quantities of fish harvested is a small contribution to the total New Zealand output but these smaller, typically mid-water and inshore fishing operations are of local economic

importance. In these areas the fish may be transported to processing centres for example fish landed in Northland or the Bay of Plenty may be trucked for processing and distribution in Auckland.

The greatest level of commercial fishing and aquaculture activity (fishing, landings and processing) is concentrated in the wider Nelson/Marlborough region. This region represents around 37% of the regional contribution to the seafood industry. The Canterbury regional contribution is around 19% and is largely based on deep water species (mainly hoki and squid). The Auckland region follows at around 10% which is largely based on inshore fisheries such as snapper from Auckland and adjacent regions, as well as tuna and deep water species for example orange roughy. Regional contributions then fall to around 5% for Tasman and Southland with all other areas below 5%.

Recreational fishing occurs around most parts of the accessible coastline but is particularly focused in and around major cities – all of which are coastal. Around three quarters of the resident population of New Zealand is found in the North Island with the majority, around 1.2 million, in the Auckland region. The Wellington and Canterbury regions each have around 0.5 million.

## FISHING PRODUCTION

Table: Number of registered fishing vessels in 2003

Total No. Registered Vessels	No. Vessels <12 m	No. Vessels 12-15 m	No. Vessels 15-18 m	No. Vessels 18-27 m	No. Vessels 28-30	No. Vessels 30+
1 509	899	255	134	125	19	77

Table: Number of fishing vessels reporting catch by specified fishing methods

Fishing Method	Number of Vessels Registered for the Fishing Method
Danish Seining	18
Dredging	95
Lining	330
Lobster potting	357
Purse seining	20
Set netting	407
Pair trawling	13
Single trawling	320
Troll/poling	275
Other methods	513

Fishing vessels, particularly the smaller sized inshore vessels, may operate within several fisheries in any one fishing year. As a consequence any one vessel may be registered for a

number of different fishing methods, for example (tuna) longlining and (shellfish) dredging or set netting for mixed inshore species (such as cod and terakihi) and potting (for lobster or cod).

## **MAIN RESOURCES**

In addition to commercial fisheries in New Zealand waters (identified in subsection I of this section) the industry also operates globally in high seas fisheries for species such as orange roughy, Patagonian toothfish and migratory tuna species.

## **MANAGEMENT APPLIED TO MAIN FISHERIES**

### **Objectives and focus**

The government's management objectives are based around a strategic intent to ensure sustainable fisheries in a healthy aquatic environment managed in a way that allows New Zealand to realize their value. Additional objectives relate to the need to recognize and meet obligations to Maori as tangata whenua (people of the land). These objectives are achieved through building good relationships between all government and non-government stakeholders involved in or interested in fisheries and the environment.

### **Management Mechanisms**

The Quota Management System (QMS) is the primary management mechanism. By late 2005 nearly 60 of the most significant species will be introduced to the QMS. These species represent around 95% of the total commercial harvest. The QMS also establishes tacit output limits for recreational and customary Maori catch based on the amount of quota available between the Total Allowable Catch (TAC) and the TACC noted above – there are no formal allocations made for non-commercial purposes.

However, the QMS is particularly focused on the management of commercial fisheries and establishes output limits. Transferable quota is allocated to individuals based on the proportion of the Total Allowable Commercial Catch (TACC) they own. Annually this transferable quota translates to the actual fishing right – a tradeable Annual Catch Entitlement (ACE) – i.e. the tonnage that can be fished.

For both commercial and non-commercial fishing, output controls are supported by a range of input controls. Typically these reflect

- the biological needs of a species or group of species such as protection of spawning fish through closed areas or seasons, mesh size to limit take of juvenile fish;
- an attempt to balance competing and overlapping interests through area closures or method restrictions;
- or management of the effects of fishing through area, method and gear restrictions and seasons.

In the case of recreational fishing there are also individual "bag limits" for species of high importance to recreational fishers.

The QMS is supported by administrative measures for catch monitoring and to ensure incentives and penalties apply to support balancing of catch against the available ACE.

### **Inland sub-sector**

There is a small commercial fishery for two species of freshwater eels which are managed as a

single fishery. The majority of the around 1 000 tonnes of eels caught each year is taken using fyke nets.

Eels are found in catchments throughout the North and South Islands although the majority of catch is taken in the North Island. Fishing occurs throughout the country although is prohibited in National Parks and some reserves. Eels are managed within the Quota Management System supported by input controls - closed areas to protect areas of importance to Maori for spiritual and customary take, size limits and escapement tubes in fyke nets to protect non-migratory eel populations.

## **Recreational sub-sector**

### **Recreational fishing**

Recreational fishing is carried out along much of the New Zealand coastline and in inland lakes and rivers. Inland, freshwater sportfish fishing for trout and salmon requires licences to be issued for lake and river fishing throughout New Zealand.

Coastal marine fishing requires no licences and there are strong although not well-defined access rights. Future work by government and sector groups will consider means to improve the definition of rights for recreational fishers.

Fish is often taken in competition with the commercial fishery sector except where specific some input controls apply to manage this conflict. Access to the resource is managed using input controls particularly catch limits, closed areas, gear restrictions such as mesh size, gear type and amount, size limits and closed seasons. Whilst species taken vary regionally, the most important recreational fishery is snapper. Other sought after species are kahawai, blue cod, paua, scallops, billfish and rock lobster.

### **Maori Fisheries**

Customary fishing rights are provided for by Maori to recognize local Maori harvesting needs (Iwi needs). The local people develop management plans that guide their harvesting decisions to ensure sustainable stocks and culturally acceptable harvesting practices while providing for adequate kaimoana (seafood) for their needs. There is a specific "permitting" process for customary take that is managed by local Iwi.

### **Aquaculture sub-sector**

New aquaculture legislation has been enacted in 2005 to clarify local and central government roles in managing aquaculture in association with other competing uses of the coastal marine area and promoting sustainable aquaculture development. The legislation provides the aquaculture industry with more secure long-term future fish farming rights for both land based aquaculture and marine aquaculture.

Areas of the coast will be set aside for marine farming and there is a more efficient and streamlined aquaculture consent process. Controls on marine farmers will include recording keeping to adequately manage the interface between wild harvest and farmed fish given the integrated nature of company operations in New Zealand.

The marine farming industry is based on green-lipped mussels, Pacific oysters and salmon. Other less important species include paua, seaweeds species. Aquaculture exports contribute about 15% of the total export revenues.

<b>Fishery</b>	<b>Annual Production (tonnes) 2003</b>
Greenshell Mussels	28 000
Pacific Oysters	67 000
Pacific King Salmon	7 000

## **POST HARVEST USE**

### **Fish utilization**

The majority of products exported are for human consumption with 57% of the 300 594 tonnes exported as fresh and frozen fillets or frozen partially processed finfish products (such as head and gutted fish). Fresh, frozen or processed shellfish such as mussels, paua, scallops oysters and squid make up a further 23%. The remainder is processed finfish or various forms of rock lobster products.

The top four finfish and shellfish products exported by volume in 2003 were hoki, squid, mussels and jack mackerel. The top four finfish and shellfish products exported by value were hoki, mussels, rock lobster and squid.

Given the relative distances of most key markets from New Zealand the majority of products are frozen. There is a limited range of higher value products distributed as fresh or live, for example rock lobster. Fresh or live products make up around 5% of exports.

### **Fish markets**

The markets (national or international) are described in terms of the final destination of the fishery products, by geographical location and type of consumers.

The main markets are the European Union, the USA, Japan and Australia and in 2003 these accounted for more than US\$582 million in export revenue. Other market destinations include Hong Kong, China and the Republic of Korea and other Asian markets.

## **FISHERY SECTOR PERFORMANCE**

The fisheries sector is assessed in terms of its overall economic, social and ecological performance.

### **Economic role of fisheries in the national economy**

While domestic consumption of fish has increased in recent years, around 90% of fish is destined for the export market. Seafood ranks within the top five sectors contributing to the New Zealand economy.

Since around 2003/2004 there has been reductions in the total export earnings due to the impact of higher exchange rates, rising fuel costs and changes to reduce the TACCs for some deepwater and inshore species, some of which are of critical importance to the industry such as hoki and scallops. The factors have led to rationalization in the industry.

### **Demand**

### **Supply**

On a world scale New Zealand's exported fish and fish products make up less than one percent of world production and two percent of the world seafood trade by value. However New

Zealand's reputation for quality seafood from clean waters and sustainably managed fish stocks ensures a ready demand. In addition hoki has achieved Marine Stewardship Council certification.

## **Trade**

### **Food security**

Although the majority of seafood is exported, the high proportion of the population involved in recreational fishing, and given the close proximity of most places in New Zealand to the sea or lakes and rivers mean fish is an important part of the diet of many New Zealanders. In rural areas recreational fishing provides a more significant proportion of the diet of many New Zealanders, although meat products remain a more important part of the diet of New Zealanders than fish products.

### **Employment**

The catching and processing sectors provide for more than 10 500 Full Time Equivalents (FTEs) with around half of this in fish and shellfish processing. Secondary employment through linked industries equates to more than 16 000 FTEs and is typically highest in areas where fish and processing plants are located.

### **Rural development**

The regional impact, particularly in smaller coastal communities and cities away from main population centres, fishing has an important role in the local economy. Deepwater and particularly smaller inshore fishing operations are carried out from such areas with product trucked for processing. For example there is a significant deepwater fleet operating out of Timaru in the South Island with around 20 000 tonnes of unprocessed and finished product from deepwater fisheries such as hoki and squid landed each year. Also the West Coast region of the South Island with a population of around 30 000 receives a significant contribution from employment in the area. There are around 300 jobs created in the area from the inshore fleet and hoki and tuna. There is also a Deep Sea Fishing School that focuses on training in the operating of modern deep sea trawlers.

## **FISHERY DEVELOPMENT SECTOR**

### **Constraints**

A major constraint faced by the New Zealand sector is the limited potential from wild harvest fisheries. Despite the size of New Zealand's fisheries waters they are not as productive as in other parts of the world. This limits the extent to which companies can invest in wild harvest fisheries.

In addition, the industry is reliant on exports for its major revenues. In recent years the sector has been affected by falling profitability from catch reductions, increasing fuel prices and the strengthening of the dollar value. This has led to a review of operations that have resulted in strategies to consolidate companies, consider increasing globalization and a reduction in the number of vessels operating in New Zealand waters.

### **Development prospects/strategies**

The future prospects for development in New Zealand's commercial fisheries lie in aquaculture or in initiatives that improve products and their marketing.

A new joint venture company, Seafood Innovations Ltd, was launched in early 2005. The company focus is to support export growth of fish products and gain efficiencies and competitive advantage through optimizing products to meet the demands of the world's marketplaces. This strategy is designed to maximize the growth potential for aquaculture products and to grow export returns through more innovative approaches to largely fully



exploited wild fish stocks. Additional strategies adopted by New Zealand companies are extensions into international waters and strategic joint venture investments in other countries to maximize their potential operations in wild harvest fisheries.

The vision to manage growth in aquaculture is articulated in the Aquaculture Vision 2020 document which can be found at <http://www.seafood.co.nz/publications>. The Vision identifies a goal of increasing sustainable aquaculture production to support exports to achieve revenues of US\$782 million by the year 2020. The passage of new aquaculture legislation will support this through the improved definition of aquaculture rights. The New Zealand Aquaculture Council is working with the Ministry of Fisheries (MFish) to develop a National Sector Strategy and Action Plan.

## **Research**

The Minister of Fisheries purchase specific research, the aim of which is to provide information required to ensure a sustainable utilization of New Zealand's fisheries resources. There are six key research areas under which research programmes are tendered and each has as specific goals. These are:

- Fisheries resources – to provide information on sustainable yields and stock status required for sustainable utilization of New Zealand's fisheries resources.
- Harvest levels – to determine the nature and extent of commercial and recreational catch, Maori customary take, and illegal catch and fishery induced mortality.
- Aquaculture and enhancement research – to provide information and to ensure that aquaculture and enhancement activities are sustainable, and to determine the effects on wild fisheries and the aquatic environment.
- Aquatic environment research – to determine the nature and extent of the impacts of fishing and diseases on the aquatic environment.
- Cultural, economic and social research – to provide information on cultural, economic and social factors that may need to be considered in the decision-making process to enable people to provide for their social, economic and cultural well-being.
- Traditional fisheries research – to provide information on traditional and customary factors that may need to be considered in the management process to enable Maori to provide for their traditional and customary well-being.

All fisheries research (except traditional) contracted by the Ministry of Fisheries is awarded following a competitive tendering for projects. Participating organizations register with the Ministry as potential providers of research services where they are assessed as qualified providers. Information on research projects and the tender process is available from <http://www.fish.govt.nz/research-opportunities>.

The seafood industry has its own research programmes and invests over 2% of gross returns into research and development - much of this being in environmental areas. An industry initiative launched in 2005 to establish the Seafood Innovations company will also enhance industry initiatives. The role of this company is to promote industry-initiated research and development projects primarily aimed at increasing the value of existing harvests, reducing harvesting and processing costs, and enhancing consumer-driven product attributes. Information on this initiative is available from <http://www.seafoodinnovations.co.nz>.

## **Education**

The Seafood Industry Training Organization operates as an integral part of the seafood

industry to provide a nationally recognized training programme designed to enhance the industry operating environment, support improvements in product quality, and build capacity for an innovative workforce consistent with a self-regulating industry. Information on the work of SITO is available from <http://www.sito.co.nz/>.

## **FISHERY SECTOR INSTITUTIONS**

The Ministry of Fisheries (MFish) is a government department responsible, through its Chief Executive, to the Minister of Fisheries. This agency is the main one responsible for managing New Zealand's fisheries. The services to be performed, and the performance of MFish is managed through the Chief Executive's performance agreement with the Minister, and an accompanying purchase agreement.

The services delivered by the Ministry relate to statutory and international obligations and are delivered through six business groups that were established from mid-2005:

- Fisheries Policy – responsible for the delivery of management frameworks and monitoring the performance of the policies against desired management outcomes.
- International – responsible for managing the New Zealand's MFish involvement in international fisheries and related trade forums, and development and monitoring of fisheries related agreements.
- Fisheries Operations – responsible for the delivery of specific fisheries standards.
- Science – provision of all information and direction of science outcomes required to support delivery of fisheries policy and management.
- Fisheries Compliance – undertaken through surveillance, investigation, audit, monitoring and prosecution services.
- Corporate Services – incorporate administrative services in support of MFish staff as well as operating information collection and contracting services including the observer programme and contracting and monitoring of research and registry service contracts.

Further information on MFish and its role can be found at <http://www.fish.govt.nz>. MFish has a high degree of involvement with other agencies with overlapping roles including the Department of Conservation and the Ministry for the Environment. Local regional government agencies also have a role particularly in terms of coastal marine environmental management and use. In addition, a number of programmes require a "whole of government" to be effective for example Oceans Policy and Biodiversity programmes. Information on these two examples can be found at <http://www.oceans.govt.nz/> and <http://www.biodiversity.govt.nz>.

MFish has a high degree of involvement with stakeholder groups with an interest and direct involvement in both fisheries and the marine environment. These include:

- Recreational fishing organizations such as the Recreational Fishing Council and Option 4;
- Maori groups including individual Iwi groups as well as national organizations such as Te Ohu Kaimoana;
- Commercial fishing groups such as the New Zealand Seafood Industry Council and the New Zealand Fishing Industry Guild, New Zealand Aquaculture Council Inc and groups organized nationally or regionally around specific fisheries or areas;
- Conservation/environmental groups, both international and national groups, including World Wide Fund for Nature (WWF), Greenpeace and the Royal Forest and Bird Society.

## **GENERAL LEGAL FRAMEWORKS**

The Minister of Fisheries and Chief Executive of MFish has statutory responsibilities in administering the following statutes:

- Fisheries Act 1996 – sets out sustainability and administrative requirements for the management and enforcement of wild harvest fisheries, management of the effects of fishing and the management of the effects of aquaculture on fishing activity within New Zealand waters. It also provides for fishing activity on the high seas.
- The Maori Fisheries Act 1989 and Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 which give effect to the settlement of commercial and customary fisheries obligations arising from the Treaty of Waitangi.
- The Ministry of Agriculture and Fisheries (Restructuring) Act 1995 which established the MFish as a standalone agency from the Ministry of Agriculture.

There is a range of subordinate legislation also managed by MFish. In many cases the authority for action in relation to this legislation is delegated to the Chief Executive or Business Managers within MFish. The majority of this subordinate legislation is in the form of regulations that establish rules for day-to-day commercial within and outside of New Zealand waters, and recreational and customary Maori Treaty obligations.