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FISHERIES RESEARCH & DEVELOPMENT CORPORATION

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Innovation in Economic Research

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Australian Bureau of Agricultural and Resource Economics
GPO Box 1563 Canberra 2601

Telephone +61 2 6272 2000 Facsimile +61 2 6272 2001
Internet www.abareconomics.com

ABARE is a professionally independent government economic research agency.

Fisheries Research and Development Corporation
PO Box 222 Deakin West ACT 2600

Telephone +61 2 6285 0400 Facsimile +61 2 6285 4421
Internet www.frdc.com.au

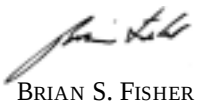
ABARE project 2635

Foreword

Australian Fisheries Statistics is designed to meet the needs of the fishing industry and fisheries managers, policy makers and researchers. ABARE has been publishing detailed production and trade data in this series since 1991. The estimates of the gross value of production provided in the report are used for a range of purposes — for example, to determine Commonwealth, state and territory fisheries research funding arrangements each year.

This report contains data on the volume and value of production from state and Commonwealth fisheries, and the volume and value of Australian fisheries trade, by destination, source and product, for the three years to 2000-01. The report also contains a profile of Commonwealth and state fisheries for 2000-01, covering selected species, fishing method and number of licences.

Australian Fisheries Statistics is part of a suite of ABARE publications that provide a comprehensive account of historical trends in, and the outlook for, Australian fisheries. *Australian Commodity Statistics* provides a historical series of production and trade statistics for fisheries and a range of other commodities. *Australian Commodities* includes forecasts for major fisheries commodities that are updated each quarter. Detailed analysis of the economic performance of selected fisheries is provided in the annual *Australian Fisheries Surveys Report*.



BRIAN S. FISHER
Executive Director

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Inquiries

Inquiries about Commonwealth and state catch information should be directed to the coordinators of fisheries statistics.

New South Wales
Marnie Tanner
NSW Fisheries Research Institute
Ph: +61 2 527 8411
Fax: +61 2 9527 0034

Queensland
Lew Williams
Queensland Fisheries Service
Ph: +61 7 3227 8789
Fax: +61 7 3227 8788

Ross Lobegeiger
Bribie Island Aquaculture Research Centre
Ph: +61 7 3400 2040
Fax: +61 7 3408 3535

Victoria
Paula Baker
Marine and Freshwater Resources Institute
Ph: +61 3 5258 0111
Fax: +61 3 5258 0270

South Australia
Angelo Tsolos
South Australian Research and Development Institute
Ph: +61 8 8200 2414
Fax: +61 8 8200 2481

Western Australia
Mark Cliff
Fisheries Western Australia
Ph: +61 8 9246 8444
Fax: +61 8 9447 3062

Tasmania
Denise Garcia
Marine Resources Division
Department of Primary Industries, Water and Environment
Ph: +61 3 6233 6462
Fax: +61 3 6223 5201

Northern Territory
Richard Sellers
Aquatic Resource Management
Department of Primary Industry and Fisheries
Ph: +61 8 8999 2190
Fax: +61 8 8999 2065

Commonwealth
Australian Fisheries Management Authority
Ph: +61 2 6272 5029
Fax: +61 2 6272 5036

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Definitions and explanations

Definitions

Aquaculture production is the liveweight quantity of product produced and marketed by aquaculturists.

Aquaculture value is the assessed value received by aquaculturists on the basis of an at 'farm gate' equivalent, for product marketed.

Crustaceans are a large family of arthropod animals, characterised by a hard, close fitting shell that is shed periodically — for example, prawns and lobsters.

Export quantity data are supplied by the Australian Bureau of Statistics on the basis of the net product weight exported.

Export value data are supplied by the Australian Bureau of Statistics on the basis of free on board value.

Finfish are aquatic vertebrates having gills, fins and typically an elongated body usually covered with scales.

Import quantity data are supplied by the Australian Bureau of Statistics on the basis of the net product weight imported.

Import value data are supplied by the Australian Bureau of Statistics on the basis of product cost plus insurance and freight.

Molluscs are invertebrates characterised by calcareous shell (sometimes lacking) of one, two or more pieces that wholly or partly encloses the soft unsegmented body — for example, abalone.

Production quantity is a measure of the quantity of fish product landed, by fishery, usually on the basis of catch records.

Production value is the assessed value at the point of landing for the quantity produced and excludes transport and marketing costs.

Products consist of fisheries products marketed for human consumption plus nonedible fisheries products.

Seafood consists of edible fisheries products marketed for human consumption; it excludes nonedible fisheries products.

Southern bluefin tuna

Southern bluefin tuna sold from the farms in South Australia are reported at their full market value. However, the input value of those tuna is also included as an output from the Commonwealth southern bluefin tuna fishery. To avoid double counting, the input value is netted out of Australian totals.

Rounding

Small discrepancies in totals are generally caused by the rounding of components. A dash (–) is used to denote a nil or negligible amount.

Production data

Production data are on a financial year basis and may overlap fishing seasons.

Abbreviations and symbols

kg	kilogram
t	tonne
kt	kilotonne
$	dollar (Australian)
$'000	thousand dollars (Australian)
$m	million dollars (Australian)
fob	free on board
ABARE	Australian Bureau of Agricultural and Resource Economics
AFZ	Australian Fishing Zone
na	Not available

Production and trade

Key features

Gross value of production

tables 1-16

Overview

Quantity and value

Australian fisheries production rose by around 1 per cent in 2000-01 to 230 000 tonnes. However, with higher prices (unit values) for some species, the gross value of Australian fisheries production rose by around 4 per cent to $2.48 billion (table 1).

In 2000-01, the gross value of production in the state wild caught fisheries fell by over 1 per cent to $1.31 billion. However, it rose in the Commonwealth wild caught fisheries by 17 per cent to $0.48 billion. Aquaculture gross value of production rose by 9 per cent to almost $0.75 billion.

Gross value, by major species group and locality

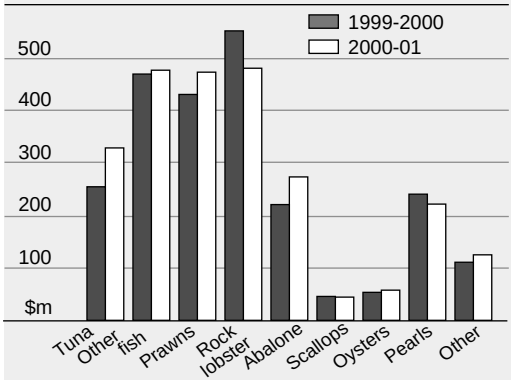
Australian fisheries production consists almost entirely of finfish, crustaceans and molluscs (figure A). The gross value of finfish production (both wild caught and aquaculture) rose by 11 per cent in 2000-01, mainly owing to higher prices for tuna. The gross value of production of crustaceans fell by 2 per cent, with lower production of rock lobster, principally in Western Australia, offsetting higher production of prawns. Boosted by higher prices for abalone, the gross value of production of molluscs rose by 8 per cent (tables 2–4).

The distribution of the catch reflects the wide diversity of Australia's fisheries. By location, around half of the gross value of Australia's fisheries production in 2000-01 originated either in or from the waters off the south eastern states (New South Wales, Victoria, Tasmania and South Australia). Western Australia accounted for around a quarter and Queensland and the Northern Territory, most of the remainder (figure B; table 5).

Aquaculture's share

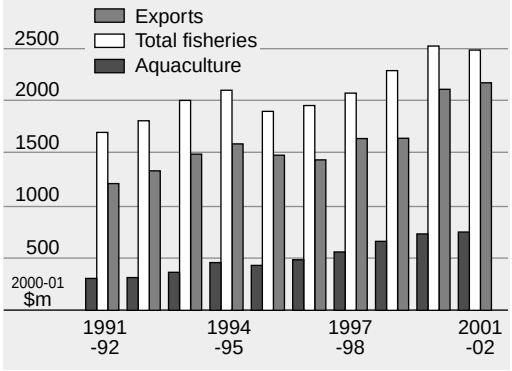
The percentage share of aquaculture in the total gross value of all fisheries production continues to rise. By 2000-01 it had risen to

A **Value of Australian fisheries**



B **Value of Australian fisheries, by state, 2000-01**

C Real value of Australian fisheries production and exports



30 per cent. In real terms (that is, in 2000-01 dollars), the gross value of aquaculture production rose by 146 per cent in the past decade, compared with a rise of 46 per cent for the total value of fisheries production (figure C).

States and territory fisheries

New South Wales

The gross value of fisheries production in New South Wales rose by 3 per cent in 2000-01. Although there was little change in the wild caught tonnage, the value of that catch rose by $5.6 million (7 per cent) owing to higher unit values of abalone, king prawns, and school prawns. In contrast, the value of aquaculture production in New South Wales fell by $1.5 million (4 per cent) mainly because of lower production of prawns. Overall, the gross value of fisheries production rose by $4.1 million to $133 million in 2000-01 (table 6).

Victoria

The gross value of Victoria's fisheries production rose significantly in 2000-01. In the wild caught sector, finfish tonnages fell slightly from the previous year, while crustacean and mollusc catches rose. The total value of wild caught production rose by $17.3 million (19 per cent), mainly owing to higher unit values for abalone. In the aquaculture sector, higher production of mussels, trout and other aquaculture boosted gross value of production by $1.8 million (10 per cent). Overall, the gross value of fisheries production rose by $19 million to $127 million in 2000-01 (table 7).

Queensland

Recovering from a fall in 1999-2000, the gross value of Queensland fisheries production rose by 7 per cent in 2000-01. Higher wild caught production of prawns, crabs, scallops, mullet, tailor, coral trout and shark boosted the value of the state's wild catch by $19.2 million. However, the volume and value of aquaculture production remained much the same as in 1999-2000. Farmed barramundi production rose, but this was offset by lower oyster production. Overall, the total value of fisheries production rose by $19.0 million to almost $302 million in 2000-01 (table 8).

Western Australia

After rising to a record $741 million in 1999-2000, the gross value of Western Australia's fisheries production fell to $610 million in 2000-01. The value of wild caught production fell by $113.5 million (21 per cent), mainly reflecting lower catches of rock lobster and prawns. However, the low rock lobster catch was expected as the catch has predictable annual variations. An increase in mussel production helped maintain the value of Western Australia's edible aquaculture sector at around its 1999-2000 level, but a large fall in receipts in the pearling sector reduced the value of production from aquaculture as a whole by $17.8 million (9 per cent) in 2000-01 (table 9).

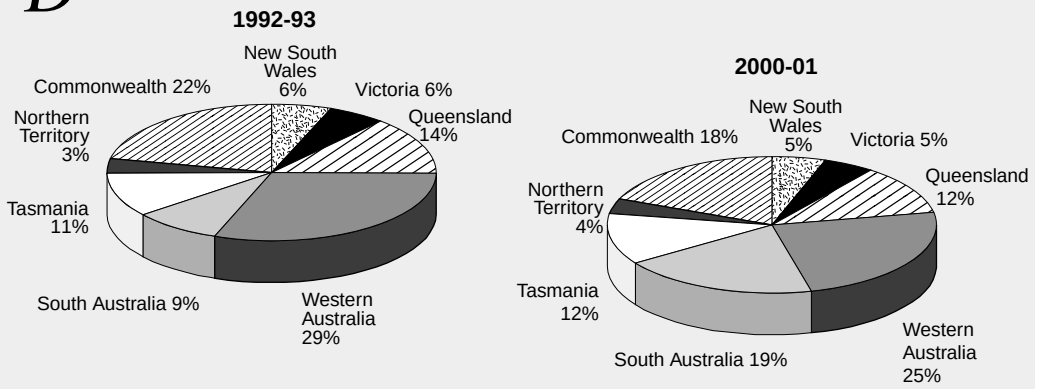
South Australia

The value of South Australia's fisheries production continued its steady increase in 2000-01, rising to $492 million from $404 million in 1999-2000. South Australia's share of the total gross value of production has now reached 19 per cent, greater than that of Commonwealth fisheries (figure D).

Boosted by higher production of prawns, crabs and pilchards, together with a significant rise in the unit value of abalone, the value of the state's wild caught fisheries rose by $22.6 million.

Most of the nearly $88 million increase in the total value of fisheries production came from increased production of farmed southern bluefin tuna, the gross value of produc-

D State shares of value of fisheries production



tion of which rose by $62 million to nearly $264 million in 2000-01. Increases in oyster and other aquaculture provided a further boost of $3.3 million from the rest of the state's aquaculture sector (table 10).

Tasmania

The gross value of production from Tasmania's fisheries rose in 2000-01 (table 11). Most of the increase came from the wild caught sector, where the gross value of production rose by $27.1 million. Increased prices for abalone and rock lobster more than offset the effect of lower production of scallops and finfish (except Australian salmon). The scallop catch fell from over 4500 tonnes in 1999-2000 to just 47 tonnes in 2000-01.

In June 2000, the beginning of the 2000 season, an exploratory survey of the scallop fishery was carried out in order to establish the potential viability of the season. The resulting catch was poor, leading to reduced effort, and consequently catch, for the remainder of the 2000 season.

The value of production from aquaculture rose by $11.8 million, reflecting continuing increases in Tasmania's production of Atlantic salmon and oysters.

Overall, the gross value of fisheries production in Tasmania rose by $38.9 million to $306.7 million in 2000-01.

Northern Territory

The gross value of fisheries production in the Northern Territory rose by over $2.2 million to $89.3 million in 2000-01 (table 12). The increase came mainly from increased production of wild caught finfish, which offset falls in the value of production of crustaceans and molluscs. The value of aquaculture production in the Northern Territory remained unchanged at an estimated $55 million. Most of this is accounted for by pearls, a major established industry in the Northern Territory (Department of Business, Industry and Resource Development 2002).

Commonwealth fisheries

Main fisheries

Major Commonwealth fisheries include the northern prawn fishery (with a gross value of production of $164.7 million in 2000-01), the south east trawl and nontrawl fisheries ($70.9 million), the eastern tuna and billfish fishery ($69.7 million), the southern bluefin tuna fishery ($62.1 million), the Torres Strait fishery ($35.7 million), and the southern and western tuna and billfish fishery ($34.5 million) (table 13).

Quantity and value of production

Based on a higher catch of banana prawns in 2000-01, the gross value of production in the northern prawn fishery rose by $57.3 million. In the other main prawn fishery, the Torres Strait fishery, gross value of production remained largely unchanged from 1999-2000. The catch in the southern and western tuna and billfish fishery continued its increase, boosting gross value of production

in this fishery by $5.4 million. Higher unit values for tuna in 2000-01 boosted the gross value of production of the southern bluefin tuna fishery by $5.6 million, although the size of the catch remained largely unchanged at just over 5200 tonnes. In the south east trawl fishery, which provides a large proportion of Australia's domestic requirements for fresh fish, lower catches of blue grenadier and tiger flathead reduced gross value of production from this fishery by around $6.8 million in 2000-01. Overall, the gross value of production in Commonwealth fisheries rose by $69 million to almost $480 million in 2000-01.

Aquaculture

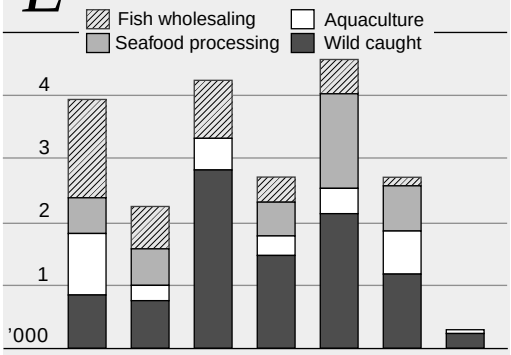
The gross value of aquaculture production in 2000-01 increased by 9 per cent to $746 million, equivalent to 30 per cent of total fisheries gross value of production (table 15). South Australian aquaculture, dominated by farmed tuna production, accounted for 38 per cent of Australian aquaculture gross value of production in 2000-01. Western Australia accounted for 24 per cent. Most of this state's aquaculture gross value of production was derived from pearling. Pearling also represented the largest contributor to aquaculture gross value of production in the Northern Territory.

In Tasmania, the dominant aquaculture activity in 2000-01 was production of Atlantic salmon (85 per cent of the gross value of aquaculture production in that state). Edible oysters accounted for a further 13 per cent. Tasmania accounted for 15 per cent of Australian aquaculture gross value of production in 2000-01. Queensland, which accounted for 7 per cent of national aquaculture gross value of production, is Australia's leading state producer of farmed prawns, while oysters and trout are the largest contributor to aquaculture gross value of production in New South Wales and Victoria respectively.

Employment

According to the most recently available Australian Bureau of Statistics (ABS) data on the labor force, Australia's commercial fishing sector directly employed some nineteen thousand people in 2000-01. Around three-quarters of these people are employed in the wild caught fishing sector and the balance in aquaculture.

E **Employment, by sector, 1998**



An ABARE study that examined employment in more detail indicated that 8561 people were employed in seafood processing and fish wholesaling in 1998 (figure E) (Gooday 2000).

Exports of fisheries products

tables 17–27

Value of exports

Export value, by sector

Australia exported nearly $2.2 billion worth of fisheries products in 2000-01 (table 17). Around 80 per cent ($1.7 billion) was edible fisheries products (seafood), principally finfish (including southern bluefin tuna), rock lobster, prawns and abalone. The remainder (nearly $0.5 billion) was nonedible fisheries products, principally pearls. The reported value of nonedible fisheries products rose significantly in 1999-2000 when the ABS revised its treatment of pearl exports. The ABS also applied this revised approach to import data, resulting in a rise of similar proportions in total imports of nonedible fisheries products.

The volume of seafood exports rose by 1 per cent to around 64 700 tonnes in 2000-01. However, reflecting large increases in export unit values of some fisheries products, the value of edible fisheries exports rose by nearly 12 per cent. The total value of all fish-

eries products exports (edible and nonedible) rose by 9 per cent.

Seafood exports

Within the $1.7 billion seafood export sector, the main individual products were rock lobster ($533 million), finfish ($478 million), prawns ($291 million) and abalone ($249 million) (figure F). Around $53 million of scallops and $33 million of crabs were also exported. Virtually all lobster tails, scallops and crabs were exported fresh, chilled or frozen. Nearly 70 per cent of whole lobster was exported live, fresh or chilled, while 9 per cent were exported frozen, and 22 per cent cooked. Just over half of all abalone exports were fresh, chilled or frozen, and the remainder canned.

Finfish exports were dominated by tuna, which made up around 70 per cent of all exports of finfish by value (tables 18 and 19).

Nonedible fisheries products exports

Within the $0.5 billion inedible fisheries products export sector, pearls make up the bulk of exports by value (93 per cent). Other inedible fisheries product exports include fish meal, ornamental fish, and marine fats and oils.

Trends in export value

The real value of fisheries product exports (seafood and nonedible fisheries products) has more than doubled over the past decade. In 1990-91, exports of fisheries products were valued at around $1 billion (in 2000-01 dollars), compared with $2.2 billion in 2000-01. Tuna has been one of the main products contributing to this expansion in exports. Based on the development of southern bluefin tuna farming, rising tuna catches off the east coast of Australia and the depreciation of the Australian dollar relative to the US dollar and Japanese yen, tuna production has risen significantly and tuna exports have risen from only $6.6 million (2000-01 dollars) in 1990-91 to $332 million in 2000-01.

Exports, by destination

Principal markets for seafood

Most of Australia's exports of edible fisheries products go to a few key markets (figure G). Some of the main products and markets include rock lobster to Hong Kong, Japan, Chinese Taipei and the United States, abalone to Hong Kong and Japan, and finfish (largely tuna) and prawns to Japan.

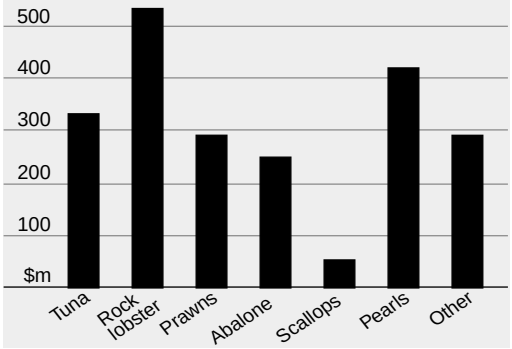
By value, Hong Kong, Japan, Chinese Taipei and the United States took 95 per cent of Australia's rock lobster, 87 per cent of its abalone, and 71 per cent of its prawn exports in 2000-01. These four countries also took 65 per cent of Australia's finfish exports by value in 2000-01 (tables 20–22).

Singapore and China were also important markets for Australian seafood products, taking mainly crustaceans and molluscs.

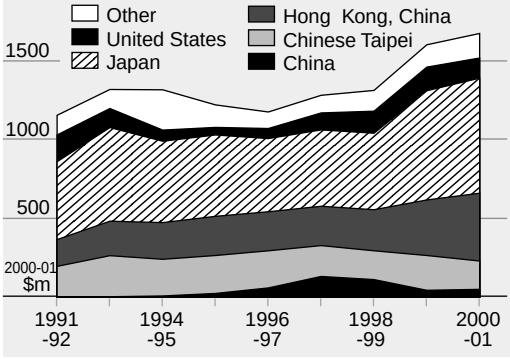
Change in value of seafood exports

Reflecting rises in the unit values of tuna and abalone, among other products, the value of Australia's exports of edible fish-

F Value of Australian fisheries exports, 2000-01



G Real value of Australian seafood exports



eries products to China, Hong Kong and Japan rose appreciably in 2000-01. The value of exports to Japan rose by 12 per cent to $731 million, while the value of exports to Hong Kong and China rose by 29 per cent and 22 per cent respectively (to $431 million and $49 million). The value of seafood exports to Chinese Taipei and the United States fell, reflecting falls in the quantities of exports shipped (tables 23 and 24).

Principal markets for nonedible fisheries products

The largest individual markets for nonedible fisheries products exports (principally, pearls) in 2000-01 were Hong Kong, the United States, New Zealand, the United Kingdom, Switzerland and Japan.

Exports, by state

Principal exporters

Western Australia, South Australia and Queensland were the largest Australian seafood exporting states in 2000-01, supplying 28 per cent, 26 per cent and 23 per cent of exports by value respectively. Tasmania, Victoria, New South Wales and the Northern Territory supplied the remaining 23 per cent. State and territory export totals include product caught in Commonwealth fisheries (tables 25–27).

Main exports

Western Australia provided the bulk of Australia's rock lobster exports in 2000-01 (70 per cent by value). Queensland was the main exporter of prawns (75 per cent) and crabs (65 per cent). Tasmania, Victoria and South Australia together provided 90 per cent of Australia's export abalone, while Queensland and Western Australia together supplied 92 per cent of all export scallops.

South Australia was the leading exporter of finfish in 2000-01, supplying 57 per cent of all Australian finfish exports by value. Queensland was the next largest finfish exporter, supplying 20 per cent.

Changes in quantity and value

Although the total tonnage of seafood exports from Australia rose only marginally in 2000-01 (by 1 per cent), the value of that tonnage rose by 12 per cent. This pattern tended to be repeated with state exports, with generally small changes in tonnages but often large changes in export value. The value of seafood exports from Queensland rose by 35 per cent in 2000-01, due mainly to increased exports of prawns and scallops. However, the value of seafood exports from Western Australia fell by 9 per cent, as reduced catches of rock lobster and prawns reduced exports of these products from that state.

Imports of fisheries products tables 28–36

Value of imports

Import value, by sector

Australia imported $1.15 billion worth of fisheries products in 2000-01. Around three quarters ($0.87 billion) consisted of seafood — mainly finfish, prawns, mussels and scallops. The remaining quarter, nonedible fisheries products (worth $0.28 billion), consisted principally of pearls, but also included fish meal, ornamental fish, marine fats and oils, and other marine products (tables 28–30).

Seafood imports

Imports provide up to 60 per cent of all commercially sourced seafood consumed in Australia. In the past, imported seafood products met the demand from those segments of the Australian market that the domestic market could not supply. However, imports have become increasingly competitive in other market segments.

In 2000-01, around 60 per cent of imports by value were finfish, and around 40 per cent were crustaceans and molluscs. For finfish, the largest import market segments were canned fish (37 per cent of finfish imports), and frozen fillets (36 per cent). Prawns made up the bulk of imports of crustaceans and molluscs, followed by mussels and scallops.

In tonnage terms, more than twice as much seafood is imported than is exported. In value terms, however, the ratio is reversed — the value of the seafood exports is about double that of imports.

Nonedible fisheries products imports

Within the $0.28 billion inedible fisheries products sector, pearls make up the bulk of imports by value (65 per cent). Fish meal, ornamental fish, marine fats and oils, and other marine products are also imported.

Trends in quantity imported

Continuing its steady uptrend, the quantity of seafood imported in 2000-01 rose by 3 per cent. This compares with an increase of 5.5 per cent in the previous year. In value terms, however, the rise in imports in 2000-01 was more significant (11 per cent). Higher import unit values for prawns, and canned crustaceans and molluscs accounted for most of the increase in the value of seafood imports in 2000-01.

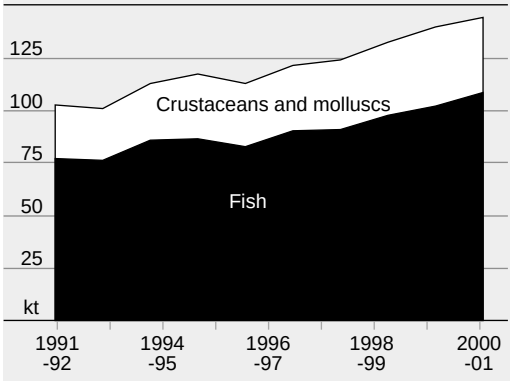
Over the past decade, the quantity of seafood imported rose by 40 per cent from 103 000 tonnes in 1991-92 to 144 000 tonnes in 2000-01 (figure H). Despite the rise in the quantity of exports, there has been little significant change in the composition of imports. The bulk of finfish imports, for example, continue to consist of canned or frozen finfish fillets.

Imports, by source

Seafood

By value, nearly half of Australia's seafood imports are sourced from two countries: Thailand (28 per cent) and New Zealand (18 per cent). Seafood imports from Thailand and New Zealand were valued at $244 million and $153 million respectively in 2000-01. Australia also imported seafood from a wide variety of sources including Viet Nam ($44 million), the United States ($43 million), South Africa ($37 million), India ($35 million), Malaysia ($34 million), Indonesia ($29 million) and Canada ($26 million) (tables 31–36).

H **Volume of Australian seafood imports**



Over three-quarters of Australia's imports of canned finfish was sourced from Thailand, Canada and the United States. New Zealand and South Africa together provided 70 per cent of frozen finfish fillets. Thailand, India, Viet Nam and Indonesia provided over 80 per cent of the prawns imported by Australia in 2000-01.

Nonedible fisheries products

Nonedible fisheries products were imported from a wide number of countries including the United States, Thailand and Peru.

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Aquaculture

Its growing role in world fisheries production

*Graham Love and Dana Langenkamp**

It is widely acknowledged that fish supplies from traditional marine and inland capture fisheries are unlikely to increase substantially in the future, and that aquaculture production will need to rise to help satisfy growing world demand for fisheries products (FAO 1997a).

World aquaculture production grew significantly in the 1990s. Much of the increase occurred in the low income food deficit countries (China in particular) as these countries sought to increase domestic food production. However, there was also an expansion in production in both developed and developing countries to supply export markets.

The growing world markets for fisheries and aquaculture products may increase export opportunities for Australia's own aquaculture sector. However, as Australia also imports fisheries products, the possibility of increased competition on the domestic market from imported aquaculture products also needs to be considered.

The growing role of aquaculture in world fisheries production is explored in this article. In particular, developments in countries that have accounted for the bulk of the increases in world aquaculture production since the early 1990s are assessed.

Aquaculture defined

The farming of fish in ponds is an ancient practice. The integration of pond fish culture and rice farming is documented as early as the Han Dynasty (AD 25–220) in China. Today, however, 'aquaculture' is used to refer to much more than the rearing of fish in ponds or rice fields (FAO 2000a).

The FAO (2001a) defines aquaculture as: 'the farming of aquatic organisms including fish, molluscs, crustaceans and aquatic plants. Farming implies some sort of intervention in the rearing process to enhance production, such as regular stocking, feeding, protection from predators, and so on. Farming also implies individual or corporate ownership of the stock being cultivated. For statistical purposes, aquatic organisms which are harvested by an individual or corporate body which has owned them throughout their rearing period contribute to aquaculture while aquatic organisms which are exploitable by the public as a common property resource, with or without appropriate licences, are the harvest of fisheries.'

The two key characteristics that therefore distinguish aquaculture from capture fisheries production are intervention in the rearing process, and ownership of the stock being cultivated.

Trends in world aquaculture production

In 1999 (the latest year for which detailed FAO statistics are available), combined global wild caught fisheries and aquaculture production (excluding seaweed and other aquatic plants) was 126.2 million tonnes. Wild caught fisheries accounted for 92.9 million tonnes, and aquaculture for 33.3 million tonnes. Aquaculture therefore provides just over a quarter of global fisheries production. With around 30 million tonnes of wild caught fisheries production reduced to fishmeal or fish oil for use in animal feeding or for industrial purposes, aquaculture's contribution to 'food fish' production is even higher — around 35 per cent in 1999 (ignoring fishmeal used in aquaculture which otherwise may have been consumed directly) (FAO 1997, 2001b).

* Patrick Hone of the Fisheries Research and Development Corporation provided useful comments on this paper and contributed to its final section.

1 World production of finfish, crustaceans and molluscs, selected years

	1990	1993	1996	1999
	kt	kt	kt	kt
Wild caught	85 553	86 588	93 531	92 867
Aquaculture	13 074	17 835	26 747	33 310
Total	98 627	104 423	120 278	126 177
	%	%	%	%
Aquaculture's share	13.4	17.1	22.2	26.4

Source: Calculated from FAO (2001b, tables A-1 (c) and A-4).

Aquaculture also provided around three-quarters of the total increase in global fisheries output between 1990 and 1999. In this period, wild caught fisheries production rose by 7.3 million tonnes (9 per cent), and aquaculture production by 20.2 million tonnes (155 per cent) (table 1).

Aquaculture production, by region

The bulk (98 per cent) of world aquaculture production of finfish, crustaceans and molluscs in 1999 was produced in thirty countries, China alone accounting for nearly 70 per cent of world production in that year (table 2).

Thirteen of these producers, including the world's seven largest (China, India, Japan, Indonesia, Bangladesh, Thailand and Viet Nam) were in south, south east or east Asia. Eleven were in Europe or the Mediterranean Middle East, and six in the Americas or the southern Pacific.

While thirty countries accounted for the bulk of world production in 1999, the bulk of the increase in world production between 1993 and 1999 came from only a dozen countries (table 3).

The dozen countries are a diverse group. They include developed and developing, warm water and cold water, and northern and southern hemisphere producers. Some key characteristics of the aquaculture sectors in these countries are discussed in appendix A.

The FAO has expressed considerable doubts about the accuracy of the production figures reported by China. In *Fishery Statistics – Aquaculture Production* (FAO 2001c, p. 176) the FAO states, 'Aquaculture production data, considered to be grossly overstated since the early 1990s, is under review and subject to downward revisions'.

According to industry news reports, there have been large increases in China's aquaculture production in recent years. The question is whether these increases have been as large as reported in China's fisheries statistics. Even if China's production is

2 Main producers of farmed finfish, crustaceans and molluscs, 1999

Region	Countries a	Production	Share of world
		kt	%
China	China	22 790	69
Other Pacific / Indian Ocean Asia	India, Japan, Indonesia, Bangladesh, Thailand, Viet Nam, Philippines, Korea (Rep. of), Chinese Taipei, Malaysia, Myanmar, Korea (DP Rep.)	6 457	19
Europe / Mediterranean Middle East	Norway, Spain, France, Italy, Egypt, United Kingdom, Netherlands, Greece, Germany, Russian Federation, Turkey	2 073	6
Americas / southern Pacific	United States, Chile, Ecuador, Brazil, Canada, New Zealand	1 206	4
Other producers		784	2
World		33 310	100

a Countries whose reported aquaculture production was more than 60 000 tonnes in 1999.
Source: Calculated from FAO (2001b, table A4).

3 Change in aquaculture production, 1993 to 1999

	Wild caught			Aquaculture		
	1993	1999	Change	1993	1999	Change
	kt	kt	kt	kt	kt	kt
China	9 351	17 240	7 889	10 357	22 790	12 433
India	3 119	3 317	198	1 427	2 035	608
Bangladesh	764	924	160	238	620	382
Thailand	2 928	3 005	77	457	603	146
Viet Nam	879	1 200	321	183	595	412
Norway	2 415	2 620	205	164	466	302
Spain	1 066	1 167	101	126	318	192
Italy	396	294	–102	171	246	75
Egypt	237	381	144	54	226	172
United Kingdom	860	838	–22	69	155	86
Chile	5 950	5 051	–899	86	274	188
Brazil	717	655	–62	30	120	90
Total (incl. China)	28 682	36 692	8 010	13 362	28 448	15 086
Total (excl. China)	19 331	19 452	121	3 005	5 658	2 653
World (incl. China)	86 588	92 867	6 279	17 835	33 310	15 475
World (excl. China)	77 237	75 627	–1 610	7 478	10 520	3 042

Source: Calculated from FAO (2001b, tables A-1(c) and A-4).

excluded from the world total (see the last row in table 3), global aquaculture production still rose by 3 million tonnes, while capture fisheries production fell by 1.6 million tonnes between 1993 and 1999.

Aquaculture production, by species

Aquaculture's contribution to production varies by major species group. Globally nearly three-quarters of the world's freshwater fish are produced using aquaculture, together with over half of all diadromous fish (salmon and trout) and molluscs. In contrast, wild caught fisheries still supply about 80 per cent of the world's crustaceans, and a large proportion of the world's marine fish (table 4).

Nearly all of the increase in global freshwater fish and diadromous fish production between 1993 and 1999 came from aqua-

4 World fisheries production, by species group and production system, 1999

	Production			Aquaculture species shares by:	
	Wild caught	Aquaculture	Aquaculture share	Volume	Value
	kt	kt	%	%	%
Freshwater fish	6 520	18 588	74	56	41
Diadromous fish **a**	1 849	2 030	52	6	13
Marine fish	70 262	845	1	3	8
Molluscs	7 349	10 133	58	30	19
Crustaceans	6 287	1 584	20	5	18
Aquatic invertebrates	605	132	22	**b**	1
World	92 867	33 310	26	100	100

a Fish whose life cycle involves both a fresh and marine stage. **b** Less than 0.5 per cent.
Source: Calculated from FAO (2001b, tables A-1(d) and B-1).

5 Change in world fisheries production, by major species group, 1993 to 1999

	Wild caught			Aquaculture		
	1993	1999	Change	1993	1999	Change
	kt	kt	kt	kt	kt	kt
Freshwater fish	5 281	6 520	1 239	9 548	18 588	9 040
Diadromous fish	1 708	1 849	141	1 286	2 030	744
Marine fish	68 526	70 262	1 736	403	845	442
Molluscs	6 311	7 349	1 038	5 629	10 133	4 504
Crustaceans	4 433	6 287	1 854	948	1 584	636
Aquatic invertebrates	401	605	204	34	132	98

Source: Calculated from FAO (2001b, tables A-1(d) and B-1).

culture, and around three-quarters of the increase in mollusc production. However, wild caught fisheries production provided the bulk of the increase in world production of marine finfish, crustaceans and aquatic invertebrates (table 5).

A large proportion of the additional wild caught marine finfish production was not for human consumption but was used as an input for aquaculture growth. Limits to wild caught marine finfish production could constrain aquaculture growth in the future if alternative protein and oil sources are not identified.

As mentioned in the previous section, the bulk of the increase in world aquaculture production between 1993 and 1999 occurred in only around a dozen countries. The species composition of production in these dozen countries is shown in table 6.

In low income, food deficit countries such as China, India, Bangladesh, Viet Nam, Thailand, Egypt and Brazil, freshwater fish, produced mainly for domestic food consumption, make up a large proportion of farmed production (by weight). However, China, Thailand, Viet Nam, India and Bangladesh also produce large quantities of farmed crustaceans; Norway, Chile, China and the United Kingdom, large quantities of farmed diadromous fish; and Spain, Italy

6 Species composition of aquaculture production in selected producers, 1999

	Fish			Other		
	Freshwater	Diadromous	Marine	Crustaceans	Molluscs	Aquatic animals
	kt	kt	kt	kt	kt	kt
China	13 728	164	339	548	7 935	77
India	1 920	0	0	115	1	
Bangladesh	530			90		
Thailand	252	6	1	234	108	
Viet Nam	408			157	30	
Norway		465	1		1	
Spain	–	31	10	–	276	
Italy	2	48	16	–	180	
Egypt	178		48			
United Kingdom		144			11	
Chile		230	–		44	
Brazil	93	1		17	9	1
World	18 588	2 029	845	1 584	10 132	133

Source: Calculated from FAO (2001c).

7 Share of increase in world aquaculture production, by major species group, 1993–99

	Fish			Other	
	Freshwater	Diadromous	Marine	Crustaceans	Molluscs
	%	%	%	%	%
China	81.5	8.7	58.9	66.9	93.9
India	6.3			6.7	
Bangladesh	3.5			9.7	
Thailand	1.1	0.5	0.1	–0.1	0.9
Viet Nam	3.2			16.6	
Norway		40.4	0.1		
Spain		1.4	1.4		3.9
Italy		0.3	2.1		1.5
Egypt	1.5		8.8		
United Kingdom		10.8			0.1
Chile		20.5	0.1		0.8
Brazil	0.7			2.2	0.2

Source: Calculated from FAO (2001c).

and Thailand, large quantities of farmed molluscs.

Just a few of these countries account for the bulk of the *increase* in world farmed production of certain species groups between 1993 and 1999. As shown in table 7, almost all of the global increase in farmed freshwater fish production between 1993 and 1999 occurred in China, India, Bangladesh and Viet Nam. Over 80 per cent of the global increase in farmed diadromous fish production occurred in Norway, Chile, the United Kingdom and China. Virtually all of the increase in farmed production of crustaceans occurred in China, Viet Nam, India and Bangladesh (table 7). Thailand's production of farmed crustaceans also increased rapidly in the past ten years; however, the bulk of the increase occurred in the early 1990s, and is not reflected in table 7. Similarly, Brazil's production of farmed crustaceans increased significantly in 2000 and 2001, but this is not reflected in table 7.

It would appear that in some of these countries, most of the increase in aquaculture production has been absorbed by their domestic market. In the others, however (notably China, Thailand, Viet Nam, Chile and Norway), exports of farmed products have increased significantly. For example, China accounted for 17 per cent of the total increase in global exports of fish between 1993 and 1999, and 11 per cent of the increase in exports of crustaceans and molluscs. Norway accounted for 20 per cent of the increase in fish exports and Chile for 5 per cent. Thailand and Viet Nam together accounted for 8 per cent of the increase in fish exports and 16 per cent of the increase in exports of crustaceans and molluscs.

Implications for Australia

A number of countries have increased their farmed production of fish, crustaceans and molluscs over the past decade. While in the low income, food deficit countries a large proportion of this increase appears to have been absorbed by the domestic market, significant quantities have also been produced for export in these countries and also by developed countries such as Norway and the United Kingdom. China, the world's largest aquaculture producer, has significantly increased both production and exports.

Essentially, the two key drivers of world seafood demand and aquaculture development have been the increasing gap between wild caught production and demand for high volume, low value seafood (principally finfish), and demand for high value seafood that is characterised by limited production.

To date, Australia's aquaculture industry has successfully exploited the latter in both

domestic and export markets. Species such as Atlantic salmon, edible oysters, southern bluefin tuna, pearl oysters and prawns have to date been the most profitable for Australia's developing aquaculture industry.

With traditional aquaculture countries like China, India and others turning some production areas previously used for low value species toward the production of higher value species, and with newer aquaculture countries such as Norway and Chile increasing high value production, countries that have significant wild caught supplies of fish used for fish meal and oil will have a competitive advantage unless alternative protein and oil substitutes are developed.

Australia has considerable opportunity to exploit its endemic species that have high world demand, especially abalone and spiny rock lobster. The development of high value species is technically complex and requires a highly skilled work force that has the capacity to adopt new knowledge, processes and technologies. Australia has advantages in this regard. However, development strategies will need to acknowledge the limited size of some markets and the possibility of price declines as production increases.

Import replacement — given Australia's relatively high dependence on seafood imports — also offers the possibility of new and increasing markets for Australia's developing aquaculture industries.

Although aquaculture's contribution to date in increasing world production of marine fish, crustaceans and other aquatic animals has been modest, the prospect of static or declining production from capture fisheries is likely to stimulate further efforts to increase aquaculture production of these species groups.

In taking advantage of this opportunity it is critical that Australian developers understand the drivers of demand, the characteristics of the market, and can exploit technology that is profitable and competitive with world producers.

Appendix A: Characteristics of selected aquaculture producers

China

China's farmers have been involved in aquaculture for over 3000 years, producing fish on a diet of pig and chicken manure and grass (Fossbakk 2000). They also began the practice of polyculture (multiple species) and today have the largest aquaculture production in the world, farming 150 different species and producing nearly 70 per cent of the world's farmed fish, crustaceans and molluscs (FAO 2001d).

With low production costs and ready access to export markets, China enjoys what is considered ideal conditions for aquaculture, making it an attractive target for foreign investment in aquaculture industries.

In 1999 aquaculture production reached almost 23 million tonnes, around 40 per cent produced from mariculture (marine aquaculture) and 60 per cent from inland water farms. Aquaculture provided 60 per cent of total seafood production in China in 1999, compared with 30 per cent in 1978. The main farmed species are abalone, scallops, pearl, prawns, crab, black sea bream and red sea bream. Around 70 per cent of production is produced in the three provinces of Shangdong, Fujian and Guangdong (Myles 2001). According to Chinese government statistics, growth in Chinese aquaculture has been substantial, with rates of 13 per cent in 1998-99, 7.7 per cent for 1997-98 and 9 per cent for 1996-97. However, as noted earlier, the FAO has expressed doubts about the accuracy of these production figures.

The incentive to increase aquaculture production has come with the introduction of measures to ensure the sustainability of wild caught fisheries, and recent international agreements between China, Japan and the Democratic People's Republic of Korea that have resulted in a significant loss of exclusive economic zones, and therefore fishing grounds (FIS Europe 2001).

Aquaculture, and in particular sea based aquaculture, is seen as the answer to recouping lost production, and China's regional and national governments have urged their aquaculture industry to embrace new technologies and become more efficient.

China is becoming increasingly reliant on aquaculture to supply high quality protein to an increasingly wealthy population and growing middle class. The strong growth in production levels has also led to growth in the trade of aquaculture products, with a 34 per cent increase in export volume and a 15 per cent increase in import volume in the two years 1998 to 1999. A large proportion of the increase in imports is accounted for by the rapid growth in demand for fishmeal and oil products for aquaculture production, most of this being imported from Peru.

China's main export markets for aquaculture products are Japan, Europe and north America (Kaminura 2001).

India

Indian aquaculture is predominantly fresh water based. In 1999, fresh water farmed fish production exceeded 1.9 million tonnes, over 80 per cent of this being carp. Brackish water aquaculture is concentrated on prawn farming, using mainly the high commercial value giant tiger prawn (FAO 2000b).

Intensive farming expanded rapidly in the mid-1990s, but resulted in environmental damage. Modified, improved traditional, and extensive prawn farming systems are now preferred. After falling in 1997, Indian farmed prawn production reached 83 000 tonnes in 1998 and 115 000 tonnes in 1999.

Prawns are the major contributor to India's export earnings from aquaculture products. India's largest export markets for prawns are Japan, the United States, the European Union and China (Nordby 2001). Government policies and the current Aquaculture bill are working to encourage the effective use of the vast extent of barren coastal lands and saline tracts as well as the diversification of aquaculture.

With its many ponds, lakes and diverse climatic zones, India plans to increase aquaculture production significantly in the medium term.

Bangladesh

Until recently, open water inland fisheries provided the bulk of Bangladesh's fish supplies. However, overfishing, pollution and siltation resulted in production from open water inland fisheries falling dramatically. While the decline has been offset by an increase in production from marine fisheries, even these fisheries are now under stress.

Further development of aquaculture is seen as a means of providing export earnings and of increasing domestic fish supplies. Though having developed rapidly in recent years, prawn farming in the extensive coastal and brackish water areas is now threatened by conflicts of interests with other resource users and the outbreak of prawn diseases (FAO 1999a).

World Bank funding and the Global Environmental Facility have raised US$33 million for the 'Fourth Fisheries Project' to develop environmentally friendly and sustainable fish and prawn production in the five years 1999–2004 (FIS 1999a). The Bangladeshi government and banks have also put together packages to encourage the development of lobster farming in Bangladesh.

Thailand

Thailand's aquaculture production expanded rapidly in the early 1990s and stood at just over 600 000 tonnes in 1999, or just under 20 per cent of national fisheries production. Coastal aquaculture accounted for around 350 000 tonnes of this, consisting of 234 000 tonnes of tiger prawns, 108 000 tonnes of shellfish and 7000 tonnes of diadromous and marine fish. Fresh water aquaculture produced 252 000 tonnes from pond, paddy ditch, and cage fish culture. The main fresh water cultivated species were tilapia, catfish, local carp, gourami and some fresh water prawns (FAO 2000c).

The production of black tiger prawns is a major aquaculture venture and foreign currency earner for Thailand. Production increased to 300 000 tonnes in 2000. Just over 80 per cent of this was exported, mainly to the United States, Japan, China, Singapore and the European Union. Production is forecast to reach 310 000 tonnes in 2001 (Engø 2001).

Although Thailand has the been the world's largest exporter of black tiger prawns since 1989, its share of world exports has fallen from 17.2 per cent in 1995 to 13.2 per cent in 2000 as other countries have increased production.

Viet Nam

For centuries, the Mekong River delta in the south and the Red River delta in the north have been used for capture fishery, and for extensive fish farming (FAO 1999b). In 1999, production from aquaculture was estimated to be 595 000 tonnes. The main fresh water fish produced was carp, followed by catfish. Production of giant fresh water prawns has increased rapidly since the mid-1990s.

Aquaculture is carried out in inland waters, with 1.1 million hectares currently in use, and in coastal waters, with 228 000 hectares currently in use. The area of coastal waters used for aquaculture is expected to expand to 330 000 hectares by 2005 (Hjellestad 2001a).

Chile

In 2000 Chile exported US$1.94 billion worth of seafood, 56 per cent sourced from the aquaculture sector. The rapid development in aquaculture in recent years has increased the availability and reduced the prices of many species in Chile. Per person consumption of seafood in Chile increased to 22.1 kilograms in 2000, nearly double the level of thirty years ago (Arthur 2001a). Chile forecasts that its fishery sector will grow at a rate higher than any other sector of its economy, and become increasingly more important than the capture fisheries.

The main aquaculture ventures in Chile are salmon and trout farming. The main export markets for these products are Japan and the United States, taking 53 per cent and 30 per cent of Chile's aquaculture exports respectively.

In 2000, Chile produced 206 000 tonnes of salmon, a 33 per cent increase over 1999. In the next few years, Chilean salmon production is forecast to reach between 400 000 and 500 000 tonnes (Arthur 2001b). By 2010, annual farmed salmon production is forecast to reach around 1 million tonnes, which if achieved would make Chile the world's largest salmon farmer.

Annual rates of growth in salmon production have been 20–35 per cent in recent years. However, annual growth rates are expected to moderate to around 12–15 per cent a year over the next few years, partly as a result of reduced world salmon prices, and partly a result of the slowdown in the Japanese economy, which has reduced demand in a key export market.

The development of the Chilean salmon industry has also been associated with investment in other sectors such as electricity (Arthur 2001c). It is recognised within Chile that to continue the high rates of growth and expansion in the salmon industry, significant new investment in related sectors such as transport and feed will be required.

Brazil

Despite possessing 6000 kilometres of coastal shores and ideal conditions for aquaculture in its north eastern regions, Brazil is currently the largest fish importer in south and central America, with demand for fish far outstripping domestic production (Adeler 2000a). However, the Brazilian government is encouraging further development in both the wild catch and aquaculture sectors.

The most significant recent increases in production have occurred in the prawn farming sector. The importance of this sector to the Brazilian economy is growing quickly, and is second only to sugar in its contribution to the economy of the Pernambuco region (FIS Latino 2001). Prawn farming is being encouraged as the number of jobs generated by the prawn sector is higher than that generated by other agricultural or livestock activities. Growing cooperation has also developed between the private sector, governments and communities to increase prawn production. The private enterprises financing prawn hatcheries have provided larvae and technical support, and governments have acted as liaisons between the private companies and the involved communities. In 2001, farmed prawn exports are expected to have increased by 116 per cent in volume and 56 per cent in value.

Governments are also working to increase the exports of fishery products.

Although this is largely centred on developing capture fisheries, aquaculture is also seen as an integral part of the plan. Aquaculture production is expected to increase by around 300 per cent, from 87 000 to 250 000 tonnes, over the next few years (Adeler 2000b).

The most popular farmed fish species are tilapia and tambaqui, which are popular as fresh water food fish in the inland cities. Brazil's production of farmed fish (including mussels and oysters) is growing by around 7 per cent a year. Although not as high a rate of growth as prawn output (currently 100 per cent a year), the rate of growth in production of farmed fish well exceeds the rate of growth in agriculture sector output, of less than 3 per cent a year. Brazilian scientists and farmers are in the process of developing and improving techniques for producing prawns, prawn larvae and other species of fish, while the government is changing current legislation to encourage both the farming of existing species and the introduction of others (FIS 1999b).

Norway

Production of farmed fish expanded rapidly after the industry was established at the beginning of the 1970s (FAO 2000d). Currently, Norway is the largest producer of farmed Atlantic salmon, accounting for more than half of world production. Production reached 342 000 tonnes in 1998, and 412 000 tonnes in 1999.

In 2001, forty new salmon farming licences were sold, the first since 1985 (Hjellestad 2001b). Each licence sold for US$4.5 million, indicating the confidence of farmers in the market (Fossbakk 2001). Other farmed species include cod, halibut, prawns and the latest introduction, spotted wolffish.

United Kingdom

Most British fish farms are located in Scottish sea lochs and consist of floating net cages (FAO 1997b). In 1999 salmonid (salmon and trout) production reached 144 000 tonnes and accounted for 98 per cent of the value of aquaculture output. The remainder consisted of various shellfish (oysters, mussels and scallops).

Italy

The geography of Italy offers varied site conditions for aquaculture development (FAO 1996). However, 75 per cent of farms are located in northern Italy. The main cultured finfish species are trout, eel, mullets, sea bass and gilthead sea bream. Cultured mollusc production reached 180 000 tonnes in 1999, with the main species farmed being Mediterranean mussels and Japanese carpet shell clam.

Egypt

Aquaculture production, including production from rice fields as well as from regular fish ponds, reached 226 000 tonnes in 1995. The main species were tilapia, carp and mullet. Catfish, sea bream, sea bass and prawns were produced in lesser quantities. Because of fresh water shortages, only hatcheries are allowed to use fresh water, while fish farms depend completely on agricultural drainage water (FAO 1998).

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Profile of Australian fisheries in 2001

Commonwealth fisheries

Fishery	Area	Species	Main fishing method	Number
Northern prawn	Gulf of Carpentaria from Cape York to Cape Londonderry	Banana, tiger, endeavour and king prawn	Otter trawling	125 concessions
Torres Strait	Torres Strait waters	Prawn, rock lobster, Spanish mackerel, trochus, pearl shell and reef fish	Otter trawl, troll and dive	81 prawn, 330 island dinghies and 200 other vessels
South east trawl	Commonwealth waters from Barrenjoey Point, NSW, around Tas. to Cape Jervis, SA	Mixed fish species, particularly orange roughy, ling, blue grenadier, flathead and warehou	Otter trawl and Danish seine	118 concessions
South east nontrawl	Commonwealth waters off south Qld, NSW, Vic., Tas. and SA	Mixed fish species particularly pink ling, blue-eye trevalla, and blue warehou	Demersal gillnet, demersal longline, dropline, trotline, trap and purse seine	145 concessions
Great Australian Bight	Commonwealth waters between Cape Leeuwin, WA, and Kangaroo Island, SA	Deepwater flathead, orange roughy and redfish	Demersal otter, and limited midwater trawl	10 concessions
Southern bluefin tuna	Commonwealth waters especially the southern and south eastern parts of the AFZ	Southern bluefin tuna	Purse seining, pole and line, longline and trolling	79 holders
Eastern tuna and billfish	Commonwealth waters off Qld, NSW, Vic. and Tas. from Cape York to the SA / Vic. border	Yellowfin, bigeye, skipjack and albacore tuna, and billfish species	Pole and line, purse seine, pelagic longline, troll, rod and reel, and handline	309 concessions
Southern and western tuna and billfish	Commonwealth waters from Cape York around Australia to SA / Vic. border	Yellowfin, bigeye, skipjack and albacore tuna, and some billfish species	Pole and line, purse seine, pelagic longline, troll, rod and handline	124 concessions
Southern shark	Commonwealth waters off SA, Vic. and Tas.	Gummy and school shark, and other shark	Demersal gillnet and demersal line	195 concessions
Bass Strait scallop	Commonwealth waters off SA, Vic. and Tas.	Scallop	Dredge	154 concessions (fishery closed 2000-01)

Fishery	Area	Species	Main fishing method	Number
Jack mackerel	Commonwealth waters from north of the NSW / Qld border along southern Australia to near Perth, WA	Greenback, yellowtail and Peruvian jack mackerel	Purse seine and midwater trawl	50 concessions
Southern squid	Commonwealth waters off SA, Vic., NSW, Tas. and southern Qld	Arrow or Gould's squid	Jig	84 concessions
Sub Antarctic	Heard, McDonald Islands and Macquarie Island waters	Patagonian toothfish, and icefish	Otter trawl and midwater trawl	3 concessions
Western deepwater trawl	Commonwealth waters off WA	Mixed fish species	Otter trawl	11 concessions
North West slope	Commonwealth waters off the northern parts of WA	Scampi	Otter trawl	7 concessions

State fisheries

Fishery	Species	Main fishing method	Number
New South Wales			
Abalone	Blacklip abalone	Diving	37 fishing businesses
Rock lobster	Eastern rock lobster	Traps	168 fishing businesses
Ocean prawn trawl	Eastern king, school whiting and octopus	Trawling	295 fishing businesses
Ocean trap and line	Spanner crabs, snapper and bonito	Fish traps, handlines droplines, spanner crab nets	576 fishing businesses
Ocean haul	Sea mullet, blue mackerel and yellowtail	Trawling	412 fishing businesses
Ocean fish trawl	Tiger and sand flathead, silver trevally, fiddler ray	Trawling	96 fishing businesses
Estuary prawn trawl	School prawns and squid	Trawling	281 fishing businesses
Estuary general	Sea mullet, luderick, school prawns, pippies	Mesh and haul nets, and hand gathering	930 fishing businesses
Victoria			
Abalone	Greenlip, blacklip	Diving	71 licence holders
Scallops	Scallops	Dredging	94 licence holders
Bay and inlet	Mixed fish species	Various	230 licence holders
Rock lobster	Southern rock lobster	Pots	159 boats and 8003 pots
Inshore trawl	Mixed fish species	Trawling	61 licence holders

Fishery	Species	Main fishing method	Number
Queensland			
East coast trawl	Tiger, banana, red spot king, endeavour, eastern king, eastern school and greasy back prawns, scallops, slipper lobster and whiting	Trawling	527 fishing symbols
East coast and Gulf of Carpentaria	Barramundi	Gillnet	323 fishing symbols
Beam trawl	Prawns	Trawling symbols	159 fishing
Net	Threadfin, mackerel, shark and mullet	Gillnet, seine	780 fishing symbols
Reef	Mixed fish species	Handline, trolling	1517 fishing symbols
Crab	Crabs	Pots, dillies	880 fishing symbols
Western Australia			
West coast rock lobster	Western rock lobster	Pots	602 boats and 56 820 pots
Abalone	Greenlip, brownlip and Roe's abalone	Diving	26 licence holders
Shark Bay prawn	King tiger and endeavour prawns, scallops	Trawling	27 boats
Exmouth prawn	King, tiger and endeavour prawns	Trawling	16 boats
Nicol Bay prawn	King, banana prawns	Trawling	14 boats
Shark Bay scallops	Scallops	Trawling	14 boats
South Australia			
Southern zone rock lobster	Southern rock lobster	Pots	185 licence holders
Northern zone rock lobster	Southern rock lobster	Pots	75 licence holders
Abalone	Greenlip and blacklip abalone	Diving	35 licence holders
West coast prawn	Western king prawn	Trawling	3 licence holders
Spencer Gulf prawn	Western king prawn	Trawling	39 licence holders
Gulf St Vincent prawn	Western king prawn	Trawling	10 licence holders
Marine scalefish	Mixed fish species	Netting, line fishing, handlines and traps	536 licence holders
Pilchard	Pilchard	Purse seine	14 licence holders
Tasmania			
Abalone	Blacklip abalone	Diving	125 licences
Rock lobster	Southern rock lobster	Pots	314 licence holders and 10 507 pots

Fishery	Species	Main fishing method	Number
Aquaculture	Atlantic salmon, Pacific oysters, mussels, rainbow trout	Cage culture farming	41 farms 115 farms 37 farms 20 farms
Scallops	Commercial scallop (*Pectin fumatus*), doughboy scallop (*Mimachlamys asperrimus*) and queen scallop (*Equichlamys bifrons*)	Dredging	109 licences and 10 730 units
Giant crab	Giant crab	Pots	94 licences and 1035 units
Scalefish:			
Fishing licence A	All scalefish	Net, hook and trap	68 licences
Fishing licence B	All scalefish	Net, hook and trap	165 licences
Fishing licence C	All scalefish	Net, hook and trap but not all at one time	204 licences
Dive fishing	Sea urchins	Dive	125 FLAD

Northern Territory

Coastal	Finfish and bait	Line, net and trap	88 licence holders
Offshore	Mackerel, shark and reef fish	Trolling, hand and longline	138 licence holders net, trap and trawling
Barramundi	Barramundi and threadfin	Gillnet	28 licence holders
Mud Crab	Mud crab	Crab pots	49 licence holders
Other	Molluscs, oyster, trepang, squid and aquarium	Hand harvest and jigging	49 licence holders and a variety of other methods

Sources: Australian Fisheries Management Authority; New South Wales Fisheries; Northern Territory Department of Primary Industry and Fisheries; Queensland Department of Primary Industries; Victoria Marine and Freshwater Resources Institute; South Australian Research and Development Institute; Western Australian Fisheries; ABARE.

1 Gross value of Australian fisheries production

	1998-99	1999-2000 p	2000-01 s
	$'000	$'000	$'000
State wild caught fisheries			
New South Wales	81 893	86 133	91 779
Victoria	74 386	90 009	107 283
Queensland	265 475	228 335	247 502
Western Australia	403 576	545 459	432 007
South Australia	165 106	183 962	206 527
Tasmania	129 784	167 489	194 607
Northern Territory	22 307	32 028	34 270
Total	1 142 526	1 333 416	1 313 975
Aquaculture a			
New South Wales	38 968	43 142	41 594
Victoria	16 227	18 053	19 831
Queensland	43 608	54 481	54 273
Western Australia	186 951	195 887	178 043
South Australia	180 171	220 229	285 350
Tasmania	85 128	100 358	112 111
Northern Territory	55 000	55 000	55 000
Total	606 053	687 150	746 202
Commonwealth fisheries			
Northern prawn	111 248	107 362	164 668
Torres Strait	35 803	35 334	35 744
South east trawl **b**	59 332	72 059	65 079
South east nontrawl	4 019	5 593	5 787
South Tasman Rise	8 654	835	2 325
Great Australian Bight	6 362	6 847	5 755
Southern shark	15 534	9 522	12 781
East coast tuna longline	49 933	57 569	66 849
East coast purse seine and pole	5 283	6 964	2 821
Southern bluefin tuna	56 874	56 517	62 134
Bass Strait scallop	1 726	0	0
Southern and western tuna	10 918	29 061	34 462
Other fisheries **c**	40 360	22 565	21 154
Total	406 046	410 227	479 558
Total value d	2 105 703	2 376 921	2 480 375

a Excludes the value of hatchery fishery production. **b** Includes Victorian Inshore Trawl for 2000-01. **c** Includes north west slope, western deepwater, southern squid, Jack mackerel, Macquarie Island, Coral Sea, Cocos and Christmas Islands, Heard and McDonald Islands, East coast deepwater, and Norfolk Island fisheries. **d** Total value has been adjusted to allow for southern bluefin tuna caught in the Commonwealth southern bluefin tuna fishery, as an input to farms in South Australia. **p** Preliminary. **s** Estimates.
Sources: ABARE; Australian Fisheries Management Authority; Marine and Freshwater Resources Institute; Melbourne Wholesale Fish Market; New South Wales Fisheries; New South Wales Fish Marketing Authority; Northern Territory Department of Primary Industry and Fisheries; Queensland Fisheries Service; Queensland Department of Primary Industries; South Australian Research and Development Institute; Tasmanian Department of Primary Industries, Water and Environment; Department of Fisheries, Western Australia.

2 Australian fisheries production in 1998-99, by state [a]

	NSW	Vic.	Qld	WA	SA	Tas.	NT	C'wlth	Aust.
Value	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Fish									
Tuna	211	0	0	103	166 700	13	15	101 687 **b**	219 807 **c**
Other	35 850	18 988	82 520	38 421	19 968	80 396	13 547	149 619 **d**	439 309
Total	36 061	18 988	82 520	38 524	186 668	80 409	13 562	251 307	659 116
Crustaceans									
Prawns	30 335	834	172 486	62 329	39 615	0	0	137 799 **e**	443 397
Rock lobster	3 890	16 744	9 354	261 457	73 908	39 873	0	7 197	412 422
Crab	4 026	1 578	19 456	3 608	3 863	82	7 736	15	40 364
Other	1 532	487	911	2 811	401	14	74	2 212	8 443
Total	39 783	19 643	202 206	330 205	117 787	39 969	7 810	147 223	904 626
Molluscs									
Abalone	12 597	45 053	0	12 944	28 017	74 200	0	0	172 811
Scallops	5	37	22 108	10 434	0	5 848	7	1 857	40 297
Oysters	27 435	0	610	0	5 489	11 637	0	0	45 171
Squid	949	280	728	406	2 022	488	0	5 227	10 099
Other	4 032	2 717	911	196 784	2 035	2 361	927	433 **f**	210 199
Total	45 017	48 087	24 357	220 568	37 563	94 534	934	7 517	478 577
Total value	120 860	90 613 **g**	309 083	590 527 **g**	345 277 **g**	214 912	77 307 **g**	406 046 **h**	2 105 703 **c**
Quantity	t	t	t	t	t	t	t	t	t
Fish									
Tuna	76	0	0	21	6 365	7	4	15 258 **b**	16 738 **c**
Other	12 125	4 270	13 788	16 727	9 616	20 262	3 177	47 457 **d**	127 423
Total	12 201	4 270	13 788	16 748	15 981	20 269	3 181	62 715	144 162
Crustaceans									
Prawns	2 467	88	11 100	4 649	2 761	0	0	10 170 **e**	31 235
Rock lobster	117	573	668	13 065	2 729	1 353	0	530	19 035
Crab	628	51	3 092	666	669	3	640	4	5 752
Other	140	85	77	226	35	5	7	229	805
Total	3 351	797	14 937	18 606	6 195	1 360	647	10 934	56 827
Molluscs									
Abalone	323	1 464	0	341	954	2 559	0	0	5 641
Scallops	1	19	4 145	2 398	0	4 217	2	793	11 575
Oysters	5 319	0	138	0	1 081	4 194	0	0	10 731
Squid	230	57	146	77	435	174	0	2 559	3 678
Other	1 379	992	20	869	1 445	358	274	215 **f**	5 552
Total	7 252	2 532	4 449	3 685	3 915	11 501	276	3 567	37 178
Total quantity	22 805	7 616 **g**	33 175	39 373 **g**	26 502 **g**	33 131	4 105	77 216 **h**	238 930 **c**

a State totals include estimates of aquaculture production but exclude hatchery. **b** Includes the southern bluefin tuna, eastern tuna and billfish, and southern and western tuna fisheries. **c** Total has been adjusted to allow for southern bluefin tuna caught in the Commonwealth southern bluefin tuna fishery, as an input to farms in South Australia. **d** Includes the fish component of Commonwealth fisheries, plus catch from Commonwealth fisheries that cannot be disaggregated due to confidentiality reasons. **e** Includes the northern prawn, Torres Strait, south east and other Commonwealth fisheries. **f** Includes octopus and cuttlefish from the south east and Great Australian Bight fisheries, pearl oyster from the Torres Strait fishery, and other Commonwealth fisheries. **g** Includes production not elsewhere specified due to confidentiality. **h** Totals include all fisheries under federal jurisdiction.

Sources: ABARE; Australian Fisheries Management Authority; Marine and Freshwater Resources Institute; Melbourne Wholesale Fish Market; New South Wales Fisheries; New South Wales Fish Marketing Authority; Northern Territory Department of Primary Industry and Fisheries; Queensland Fisheries Service; Queensland Department of Primary Industries; South Australian Research and Development Institute; Tasmanian Department Primary Industries, Water and Environment; Department of Fisheries, Western Australia.

3 Australian fisheries production in 1999-2000, by state ap

	NSW	Vic.	Qld	WA	SA	Tas.	NT	C'wlth	Aust.
Value	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Fish									
Tuna	95	0	0	203	202 000	0	38	106 097 **b**	254 563 **c**
Other	36 921	21 213	85 088	35 094	21 742	94 307	16 629	158 418 **d**	469 413
Total	37 017	21 213	85 088	35 297	223 742	94 307	16 667	264 515	723 975
Crustaceans									
Prawns	33 702	1 564	142 645	73 209	43 771	0	0	135 668 **e**	430 560
Rock lobster	4 601	18 313	7 887	385 614	80 965	48 950	0	5 390	551 720
Crab	4 319	766	22 559	4 405	3 588	2 069	12 046	92	49 844
Other	1 367	559	828	3 931	460	2	16	2 366	9 529
Total	43 990	21 202	173 919	467 159	128 784	51 022	12 062	143 516	1 041 653
Molluscs									
Abalone	12 680	57 715	0	16 329	34 394	99 513	0	0	220 631
Scallops	0	584	21 160	17 339	0	6 353	5	90	45 531
Oysters	30 089	0	674	0	9 389	13 176	0	0	53 328
Squid	857	473	1 128	322	1 978	608	19	1 608	6 994
Other	4 642	2 697	848	204 570	3 075	2 867	3 275	497 **f**	222 471
Total	48 269	61 469	23 809	238 560	48 836	122 517	3 299	2 196	548 955
Total value	129 276	108 062 **g**	282 816	741 346 **g**	404 191 **g**	267 847	87 028 **g**	410 227 **h**	2 376 921 **c**
Quantity	t	t	t	t	t	t	t	t	t
Fish									
Tuna	34	0	0	34	7 780	0	9	13 473 **b**	16 201 **c**
Other	11 464	4 396	13 542	16 326	8 497	15 744	3 696	44 833 **d**	118 499
Total	11 498	4 396	13 542	16 360	16 277	15 744	3 705	58 306	134 699
Crustaceans									
Prawns	2 647	124	9 041	4 663	2 416	0	0	7 830 **e**	26 721
Rock lobster	117	573	572	14 606	2 719	1 482	0	359	20 428
Crab	611	20	3 712	790	647	76	996	12	6 864
Other	109	123	70	273	28	2	2	251	858
Total	3 484	840	13 395	20 332	5 810	1 560	999	8 453	54 872
Molluscs									
Abalone	325	1 417	0	333	929	2 565	0	0	5 569
Scallops	0	292	3 912	3 454	0	4 554	2	22	12 236
Oysters	5 252	0	159	0	1 887	4 748	0	0	12 046
Squid	207	84	226	63	400	416	5	1 294	2 694
Other	1 213	1 106	16	875	1 586	363	342	158 **f**	5 659
Total	6 996	2 899	4 313	4 725	4 802	12 646	349	1 474	38 204
Total quantity	21 978	8 169 **g**	31 250	41 480 **g**	27 226 **g**	29 951	5 053	68 232 **h**	228 209 **c**

a State totals include estimates of aquaculture production but exclude hatchery. **b** Includes the southern bluefin tuna, eastern tuna and billfish, and southern and western tuna fisheries. **c** Total has been adjusted to allow for southern bluefin tuna caught in the Commonwealth southern bluefin tuna fishery, as an input to farms in South Australia. **d** Includes the fish component of Commonwealth fisheries, plus catch from Commonwealth fisheries that cannot be disaggregated due to confidentiality reasons. **e** Includes the northern prawn, Torres Strait, south east and other fisheries. **f** Includes octopus and cuttlefish from the south east and Great Australian Bight fisheries, pearl oyster from the Torres Strait fishery, and other Commonwealth fisheries. **g** Includes production not elsewhere specified due to confidentiality. **h** Totals include all fisheries under federal jurisdiction. **p** Preliminary.
Sources: ABARE; Australian Fisheries Management Authority; Marine and Freshwater Resources Institute; Melbourne Wholesale Fish Market; New South Wales Fisheries; New South Wales Fish Marketing Authority; Northern Territory Department of Primary Industry and Fisheries; Queensland Fisheries Service; Queensland Department of Primary Industries; South Australian Research and Development Institute; Tasmanian Department of Primary Industries, Water and Environment; Department of Fisheries, Western Australia.

4 Australian fisheries production in 2000-01, by state [a]

	NSW	Vic.	Qld	WA	SA	Tas.	NT	C'wlth	Aust.
Value	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Fish									
Tuna	108	0	0	97	263 793	0	46	123 931 **b**	328 616 **c**
Other	35 808	21 467	92 144	34 480	24 723	98 971	21 108	148 071 **d**	476 772
Total	35 916	21 467	92 144	34 577	288 516	98 971	21 154	272 002	805 388
Crustaceans									
Prawns	34 869	2 259	146 304	46 512	52 682	0	0	190 390 **e**	473 016
Rock lobster	4 489	21 451	7 056	299 629	82 726	58 011	0	7 168	480 531
Crab	3 994	601	26 298	6 546	4 238	2 637	10 341	20	54 674
Other	1 150	660	1 107	3 967	368	3	811	3 035	11 101
Total	44 502	24 971	180 765	356 654	140 014	60 650	11 152	200 614	1 019 322
Molluscs									
Abalone	15 200	70 387	0	15 612	42 688	129 463	0	0	273 350
Scallops	3	1 619	26 600	15 896	0	79	3	32	44 232
Oysters	31 603	0	442	0	11 011	14 430	0	0	57 486
Squid	859	607	1 163	242	2 421	387	4	6 267	11 950
Other	5 291	2 899	660	186 690	2 905	2 737	1 958	643 **f**	203 782
Total	52 955	75 512	28 865	218 440	59 025	147 096	1 965	6 942	590 800
Total value	133 373	127 114 **g**	301 775	610 050 **g**	491 877 **g**	306 718	89 270 **g**	479 558 **h**	2 480 375 **c**
Quantity	t	t	t	t	t	t	t	t	t
Fish									
Tuna	28	0	0	17	9 051	0	12	12 159 **b**	16 105 **c**
Other	11 106	4 494	14 661	14 905	12 130	13 445	4 678	44 661 **d**	120 080
Total	11 134	4 494	14 661	14 922	21 181	13 445	4 691	56 820	136 186
Crustaceans									
Prawns	2 600	172	9 441	2 976	2 988	0	0	11 375 **e**	29 552
Rock lobster	105	587	512	11 348	2 563	1 519	0	276	16 910
Crab	505	20	4 171	984	740	101	1 123	10	7 654
Other	91	134	86	280	25	1	85	293	995
Total	3 300	913	14 211	15 588	6 316	1 621	1 208	11 954	55 112
Molluscs									
Abalone	305	1 409	0	316	920	2 709	0	0	5 659
Scallops	0	810	4 905	3 166	0	47	1	31	8 960
Oysters	5 141	0	91	0	2 202	5 200	0	0	12 634
Squid	177	99	233	46	488	114	1	3 094	4 252
Other	1 347	1 265	34	1 223	1 775	322	201	211 **f**	6 378
Total	6 970	3 583	5 263	4 751	5 385	8 393	202	3 336	37 883
Total quantity	21 405	9 078 **g**	34 135	35 353 **g**	33 362 **g**	23 459	6 101	72 110 **h**	229 841 **c**

a State totals include estimates of aquaculture production but exclude hatchery. **b** Includes the southern bluefin tuna, eastern tuna and billfish, and southern and western tuna fisheries. **c** Total has been adjusted to allow for southern bluefin tuna caught in the Commonwealth southern bluefin tuna fishery, as an input to farms in South Australia. **d** Includes the fish component of Commonwealth fisheries, plus catch from Commonwealth fisheries that cannot be disaggregated due to confidentiality reasons. **e** Includes the northern prawn, Torres Strait, south east and other fisheries. **f** Includes octopus and cuttlefish from the south east and Great Australian Bight fisheries, pearl oyster from the Torres Strait fishery, and other Commonwealth fisheries. **g** Includes production not elsewhere specified due to confidentiality. **h** Totals include all fisheries under federal jurisdiction. **s** Estimates.

Sources: ABARE; Australian Fisheries Management Authority; Marine and Freshwater Resources Institute; Melbourne Wholesale Fish Market; New South Wales Fisheries; New South Wales Fish Marketing Authority; Northern Territory Department of Primary Industry and Fisheries; Queensland Fisheries Service; Queensland Department of Primary Industries; South Australian Research and Development Institute; Tasmanian Department of Primary Industries, Water and Environment; Department of Fisheries, Western Australia.

5 Australian fisheries production in 2000-01, by location of catch [as]

	NSW	Vic.	Qld	WA	SA	Tas.	NT	Other [b]	Aust.
Value	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Fish									
Tuna	24 381	959	22 112	14 638	325 786	38	46	15	328 616 **c**
Other	60 815	51 643	106 846	55 657	34 517	129 404	21 152	16 738	476 772
Total	85 197	52 601	128 959	70 295	360 304	129 443	21 198	16 752	805 388
Crustaceans									
Prawns	36 053	2 289	244 315	51 067	52 682	0	86 441	168	473 016
Rock lobster	4 489	21 451	14 224	299 629	82 726	58 011	0	1	480 531
Crab	3 999	611	26 298	6 546	4 238	2 641	10 341	0	54 674
Other	1 240	877	1 904	3 970	632	3	1 194	1 282	11 101
Total	45 782	25 228	286 741	361 212	140 279	60 654	97 975	1 451	1 019 322
Molluscs									
Abalone	15 200	70 387	0	15 612	42 688	129 463	0	0	273 350
Scallops	3	1 619	26 602	15 896	0	79	32	1	44 232
Oysters	31 603	0	442	0	11 011	14 430	0	0	57 486
Squid	1 266	1 424	2 655	295	2 877	536	33	2 864	11 950
Other	5 512	3 165	671	186 690	2 910	2 787	1 963	85	203 782
Total	53 583	76 595	30 369	218 494	59 486	147 295	2 028	2 950	590 800
Total value	184 562	159 589 **d**	446 069	650 380 **d**	564 390 **d**	337 392	176 201 **d**	21 153	2 480 375 **ce**
Quantity	t	t	t	t	t	t	t	t	t
Fish									
Tuna	2 685	481	1 840	981	15 262	3	12	2	16 105 **c**
Other	18 411	15 907	16 738	18 508	15 309	27 010	4 685	3 513	120 080
Total	21 096	16 388	18 578	19 490	30 571	27 013	4 697	3 514	136 186
Crustaceans									
Prawns	2 896	173	15 791	3 297	2 988	0	4 391	16	29 552
Rock lobster	105	587	788	11 348	2 563	1 519	0	0	16 910
Crab	508	25	4 171	984	740	103	1 123	0	7 654
Other	104	166	145	280	64	1	123	113	995
Total	3 612	951	20 895	15 909	6 355	1 623	5 637	129	55 112
Molluscs									
Abalone	305	1 409	0	316	920	2 709	0	0	5 659
Scallops	0	810	4 905	3 166	0	47	30	1	8 960
Oysters	5 141	0	91	0	2 202	5 200	0	0	12 634
Squid	370	486	606	71	704	185	8	1 822	4 252
Other	1 428	1 345	39	1 223	1 778	337	204	24	6 378
Total	7 244	4 050	5 641	4 776	5 604	8 479	242	1 848	37 883
Total quantity	31 953	21 477 **d**	45 115	40 267 **d**	43 009 **d**	37 114	10 576	5 491	229 841 **ce**

a Commonwealth, state and territory production is allocated according to the state or territory waters in which the catch was taken. The totals include aquaculture production but exclude hatchery production. **b** Includes Commonwealth fisheries that have been aggregated for reasons of confidentiality – they are, north west slope, western deep water, southern squid, Jack mackerel, Macquarie Island, Heard and McDonald Islands, Coral Sea, Cocos and Christmas Islands fisheries. **c** Total has been adjusted to allow for southern bluefin tuna caught in the Commonwealth southern bluefin tuna fishery, as an input to farms in South Australia. **d** Includes production not elsewhere specified due to confidentiality. **e** Totals include confidential Commonwealth landings and only sum across. **s** Estimates.
Sources: ABARE; Australian Fisheries Management Authority; Marine and Freshwater Resources Institute; Melbourne Wholesale Fish Market; New South Wales Fisheries; New South Wales Fish Marketing Authority; Northern Territory Department of Primary Industry and Fisheries; Queensland Department of Primary Industries; Queensland Fisheries Service; South Australian Research and Development Institute; Tasmanian Department of Primary Industries, Water and Environment; Department of Fisheries, Western Australia.

6 New South Wales fisheries production

	1998-99		1999-2000 p		2000-01 s	
	t	$'000	t	$'000	t	$'000
Crustaceans						
Rock lobster	117	3 890	117	4 601	105	4 489
King prawns	871	15 792	940	18 929	998	21 136
School prawns	770	5 557	1 000	6 594	1 031	7 248
Other prawns	362	2 139	258	1 528	276	1 550
Crabs	628	4 026	611	4 319	505	3 994
Other	99	1 032	57	739	55	683
Total **a**	2 847	32 437	2 982	36 711	2 971	39 100
Molluscs						
Abalone	323	12 597	325	12 680	305	15 200
Scallops	1	5	0	0	0	3
Cuttlefish	317	544	202	537	165	427
Pipi	513	1 198	628	2 030	622	2 123
Octopus	439	1 817	258	1 638	454	2 396
Squid	230	949	207	857	177	859
Other	66	244	74	208	75	238
Total **a**	1 889	17 354	1 694	17 951	1 798	21 245
Fish						
Sea mullet	3 112	4 425	2 774	4 467	3 055	4 846
Silver trevally	388	887	309	844	258	763
Yellowtail kingfish	98	807	135	1 011	132	1 044
Jack mackerel	16	19	26	29	57	63
Black and yellowfin bream	378	3 157	318	2 750	287	2 583
Australian salmon	172	189	449	404	720	801
Snapper	298	2 508	289	2 573	271	2 351
Rubberlip morwong	121	404	101	384	80	315
Mulloway	94	661	78	653	64	479
Sand whiting	182	1 622	145	1 348	147	1 423
Luderick	503	589	537	663	487	662
Other	6 302	16 833	5 632	16 346	5 052	16 103
Total **a**	11 664	32 102	10 793	31 472	10 611	31 434
Total wildcaught	16 400	81 893	15 469	86 133	15 379	91 779
Aquaculture b						
Prawns	463	6 846	450	6 651	294	4 934
Yabbies	40	472	50	590	35	458
Oysters	5 319	27 435	5 252	30 089	5 141	31 603
Silver perch	164	1 557	295	2 802	230	2 115
Trout	338	1 997	340	1 989	205	1 526
Other	81	661	122	1 021	121	958
Total	6 405	38 968	6 509	43 142	6 025	41 594
Total production	22 805	120 860	21 978	129 276	21 405	133 373

a Excludes catches in the Commonwealth south east and eastern tuna and billfish fisheries. **b** Excludes hatchery production. **p** Preliminary. **s** Estimates.
Sources: ABARE; New South Wales Fisheries; New South Wales Fish Marketing Authority.

7 Victorian fisheries production

	1998-99		1999-2000		2000-01 s	
	t	$'000	t	$'000	t	$'000
Crustaceans						
Rock lobster	573	16 744	573	18 313	587	21 451
Prawns	88	834	124	1 564	172	2 259
Giant crabs	51	1 578	20	766	20	601
Other	72	362	108	385	111	406
Total	784	19 518	825	21 028	890	24 717
Molluscs						
Abalone	1 464	45 053	1 417	57 715	1 409	70 387
Scallops	19	37	292	584	810	1 619
Squid **a**	57	280	84	473	99	607
Octopus	25	81	51	181	50	184
Other	83	124	83	154	65	116
Total	1 648	45 575	1 927	59 107	2 433	72 913
Fish						
Pilchards	277	681	200	334	287	654
Bream	209	1 596	210	1 401	186	1 281
Sea garfish	101	363	124	496	131	531
Shark **b**	141	532	90	385	47	220
Snapper	92	628	59	413	80	539
Eels	129	1 147	133	1 401	157	1 656
Australian salmon	690	805	808	795	447	497
King george whiting	238	1 714	227	2 207	168	1 550
Other	992	1 827	889	2 442	1 191	2 725
Total	2 869	9 293	2 740	9 874	2 694	9 653
Total wildcaught	5 301	74 386	5 492	90 009	6 017	107 283
Aquaculture c						
Mussels	884	2 512	972	2 362	1 150	2 599
Yabbies	13	125	15	174	23	254
Trout **d**	1 294	8 821	1 612	10 903	1 732	11 136
Eels **e**	107	874	44	436	68	678
Other **f**	17	3 895	34	4 178	88	5 164
Total	2 315	16 227	2 677	18 053	3 061	19 831
Total production	7 616	90 613	8 169	108 062	9 078	127 114

a Arrow squid taken by machine jig are now being reported to the Commonwealth. **b** Shark data only includes Victorian bays and inlets and small quantities taken in ocean waters by non shark fishers operating in state proclaimed waters. **c** Excludes hatchery production. **d** Includes salmon production. **e** Eel production data are obtained from Victorian catch and effort monthly record, and may not be complete. **f** Includes abalone, warmwater finfish, ornamental fish, other shellfish. shrimps and aquatic worms, value of ornamental fish is included but weight is excluded. **s** Estimates.
Sources: ABARE; Victorian Marine and Freshwater Resources Institute; Natural Resources and Environment; Melbourne Wholesale Fish Market.

8 Queensland fisheries production

	1998-99		1999-2000 p		2000-01 s	
	t	$'000	t	$'000	t	$'000
Crustaceans						
Prawns	9 244	137 176	6 536	97 445	6 916	101 704
Crabs	3 092	19 456	3 712	22 559	4 171	26 298
Lobster (mainly bugs)	668	9 354	572	7 887	512	7 056
Total	13 004	165 985	10 820	127 891	11 600	135 058
Molluscs						
Scallops	4 145	22 108	3 912	21 160	4 905	26 600
Squid	146	728	226	1 128	233	1 163
Other	20	101	16	80	34	171
Total	4 311	22 937	4 154	22 367	5 172	27 934
Fish						
Snapper	140	1 395	105	1 044	110	1 097
Barramundi	924	6 471	1 008	7 055	1 047	7 329
Bream (including tarwhine)	156	936	185	1 111	198	1 185
Mullet	2 579	7 744	1 828	5 496	2 456	7 376
Tailor	204	714	155	542	259	906
Whiting	1 231	3 586	832	2 583	525	1 748
Coral trout	1 598	19 172	1 668	20 011	1 894	22 727
Red throat emperor	725	5 799	740	5 917	790	6 319
Blue threadfin	161	644	303	1 213	335	1 341
King threadfin	432	1 727	674	2 695	690	2 760
Shark	760	4 558	948	5 691	1 108	6 651
Spotted mackerel	112	782	314	2 197	405	2 836
Spanish mackerel	749	5 987	788	6 305	620	4 959
Grey mackerel	353	2 118	369	2 215	388	2 329
Other species	3 120	14 919	3 043	14 001	3 198	14 947
Total	13 242	76 553	12 960	78 077	14 023	84 509
Total wildcaught	30 557	265 475	27 933	228 335	30 795	247 502
Aquaculture a						
Prawns	1 856	35 310	2 505	45 200	2 525	44 600
Barramundi	515	4 515	526	4 861	569	5 116
Oysters	138	610	159	674	91	442
Silver perch	31	274	30	272	55	439
Jade perch	na	na	26	254	14	118
Redclaw	77	911	70	828	86	1 107
Other b	na	1 988	na	2 392	na	2 451
Total	2 617	43 608	3 317	54 481	3 340	54 273
Total production	33 175	309 083	31 250	282 816	34 135	301 775

a Excludes hatchery production. **b** Includes pearls, freshwater and aquarium fish. **p** Preliminary. **s** Estimates. **na** Not available.
Sources: ABARE; Queensland Fisheries Service; Queensland Department of Primary Industries.

9 Western Australian fisheries production

	1998-99 s		1999-2000 p		2000-01 s	
	t	$'000	t	$'000	t	$'000
Crustaceans						
Rock lobster	13 065	261 457	14 606	385 614	11 348	299 629
Prawns	4 649	62 329	4 663	73 209	2 976	46 512
Crabs	666	3 608	790	4 405	984	6 546
Other	18	193	20	200	27	274
Total	18 398	327 587	20 079	463 428	15 335	352 961
Molluscs						
Abalone	341	12 944	333	16 329	316	15 612
Scallops	2 398	10 434	3 454	17 339	3 166	15 896
Squid	77	406	63	322	46	242
Other **a**	190	13 146	192	13 184	259	13 375
Total	3 006	36 930	4 042	47 174	3 787	45 125
Fish						
Tuna	21	103	34	203	17	97
Shark	1 708	4 575	1 456	3 608	1 615	4 755
Australian salmon	1 752	841	2 598	1 299	2 564	924
Cobbler	270	960	306	1 126	227	854
WA jewfish (dhufish)	210	1 987	211	1 645	223	1 740
Spanish mackerel	368	2 182	338	2 115	349	2 192
Sea mullet	372	779	388	502	264	343
Yelloweye mullet	138	208	82	82	66	66
Pilchards	3 633	2 470	1 463	1 390	870	826
Australian herring	744	306	841	336	776	310
Whiting	240	1 018	260	1 018	228	869
Breams	116	449	108	428	103	413
Emperors	968	2 765	926	2 753	879	2 579
Pink snapper	788	3 611	739	2 364	832	2 660
Rockcods	294	1 282	332	1 546	287	1 350
Seaperches	1 512	7 098	1 272	6 632	1 380	6 925
Other	3 580	7 422	4 949	7 622	4 147	6 743
Total	16 714	38 056	16 303	34 669	14 827	33 646
Total wildcaught b	38 452	403 576	40 487	545 459	34 041	432 007
Aquaculture c						
Pearls	na	181 837	na	189 700	na	171 048
Yabbies	166	1 591	211	2 781	201	2 510
Marron **d**	42	1 027	42	950	52	1 183
Mussels	679	1 801	683	1 686	964	2 267
Fish	34	300	57	460	95	679
Gold fish / Koi carp	na	105	na	124	na	122
Ornamental	na	63	na	44	na	130
Other **e**	na	227	na	142	na	104
Total	921	186 951	993	195 887	1 312	178 043
Total production	39 373	590 527	41 480	741 346	35 353	610 050

a Value includes pearl oyster taken, including those taken for 'mother of pearl', and mussels. **b** Includes other invertebrates not elsewhere included. Includes beche de mer, sea urchins etc. **c** Aquaculture excludes algae production for betacarotene and hatchery production. Some quantity data not available due to confidentiality restrictions. **d** Marron production for 1998 99 estimated from survey data for 1997-98. **e** Includes other molluscs and crustaceans. **p** Preliminary. **s** Estimates. **na** Not available.
Sources: ABARE; Department of Fisheries, Western Australia.

10 South Australian fisheries production

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Crustaceans						
Prawns	2 761	39 615	2 416	43 771	2 988	52 682
Rock lobster	2 729	73 908	2 719	80 965	2 563	82 726
Crab	669	3 863	647	3 588	740	4 238
Other	1	10	0	0	0	0
Total	6 160	117 396	5 782	128 324	6 291	139 646
Molluscs						
Abalone	933	27 161	889	32 394	867	40 011
Pipi (Goolwa cockle)	976	952	1 085	1 684	1 249	1 406
Squid	435	2 022	400	1 978	488	2 421
Other	385	900	420	1 218	415	1 239
Total	2 729	31 035	2 794	37 274	3 019	45 077
Fish a						
Australian salmon	527	672	461	569	304	403
Mullet	207	378	224	433	199	514
Australian herring	322	314	302	359	229	302
Snapper	447	2 238	576	3 244	563	3 263
King george whiting	594	4 629	516	4 843	456	4 835
Garfish	421	1 572	476	1 902	532	1 995
Leather jackets	330	512	316	579	260	501
Pilchard	4 465	2 500	3 836	2 685	7 368	5 157
Yellowfin whiting	84	391	112	555	152	719
Snook	117	240	93	223	107	233
Callop (Golden perch)	155	1 243	97	950	173	1 427
Other species	1 684	1 987	1 201	2 021	1 510	2 455
Total	9 353	16 676	8 210	18 364	11 853	21 804
Total wildcaught	18 242	165 106	16 786	183 962	21 163	206 527
Aquaculture b						
Yabbies	27	231	16	156	17	172
Marron	7	160	12	304	8	196
Oysters	1 081	5 489	1 887	9 389	2 202	11 011
Southern bluefin tuna	6 365	166 700	7 780	202 000	9 051	263 793
Barramundi	249	3 192	279	3 330	264	2 743
Trout	14	101	8	49	13	176
Abalone	21	856	40	2 000	53	2 677
Other c	496	3 442	418	3 001	591	4 582
Total	8 260	180 171	10 440	220 229	12 199	285 350
Total production	26 502	345 277	27 226	404 191	33 362	491 877

a Excludes shark from the southern shark fishery. **b** Excludes hatchery production. **c** Includes mussels, Atlantic salmon, Snapper, Microalgae, Murray cod, callop and aquarium fish. **p** Preliminary.
Sources: ABARE; South Australian Research and Development Institute.

11 Tasmanian fisheries production

	1998-99		1999-2000 p		2000-01 s	
	t	$'000	t	$'000	t	$'000
Crustaceans						
Rock lobster	1 353	39 873	1 482	48 950	1 519	58 011
Giant crab	3	82	76	2 069	101	2 637
Other	5	14	2	2	1	3
Total	1 360	39 969	1 560	51 022	1 621	60 650
Molluscs						
Abalone	2 559	74 200	2 565	99 513	2 709	129 463
Octopus	96	300	96	397	62	288
Scallop	4 217	5 848	4 554	6 353	47	79
Other	200	576	444	741	134	493
Total	7 072	80 924	7 659	107 004	2 952	130 323
Fish a						
Australian salmon	385	554	219	377	484	503
Cod	12	29	12	11	4	7
Garfish	109	407	136	519	74	292
Banded morwong	48	458	53	541	40	443
Jackass morwong	19	24	23	40	12	21
Elephant shark	14	23	22	23	17	16
Bastard trumpter	51	160	51	148	25	78
Striped trumpter	101	501	113	666	41	220
School whiting	30	39	70	103	43	64
Wrasse	98	870	137	903	86	719
Shark	184	938	214	764	173	673
Other	10 023	4 888	3 788	5 368	224	598
Total	11 074	8 891	4 838	9 463	1 222	3 634
Total wildcaught	19 506	129 784	14 057	167 489	5 795	194 607
Aquaculture b						
Salmonids **c**	9 195	71 518	10 907	84 845	12 223	95 338
Oysters	4 194	11 637	4 748	13 176	5 200	14 430
Other **d**	236	1 973	239	2 337	241	2 343
Total	13 625	85 128	15 894	100 358	17 664	112 111
Total production	33 131	214 912	29 951	267 847	23 459	306 718

a Excludes shark from the Commonwealth southern shark fishery; includes jack mackerel. **b** Excludes hatchery production. **c** Includes Atlantic salmon and ocean trout, weight in HOGG (head on, gilled and gutted). **d** Includes mussels, scallops, native oysters and abalone. **p** Preliminary. **s** Estimates.
Sources: ABARE; Tasmanian Department of Primary Industries, Water and Environment.

12 Northern Territory fisheries production

	1998-99		1999-2000 p		2000-01 s	
	t	$'000	t	$'000	t	$'000
Crustaceans						
Crab	640	7 736	996	12 046	1 123	10 341
Other	7	74	2	16	85	811
Total	647	7 810	999	12 062	1 208	11 152
Molluscs						
Scallops	2	7	2	5	1	3
Squid	0	0	5	19	1	4
Other	274	927	342	3 275	201	1 958
Total	276	934	349	3 299	202	1 965
Fish						
Tuna	4	15	9	38	12	46
Shark	381	1 416	453	2 213	510	2 401
Snapper	255	1 595	206	1 225	284	1 738
Barramundi	766	3 855	878	4 506	1 041	5 510
Threadfin salmon	321	557	298	553	430	868
Jewfish (mulloway)	49	142	93	228	142	332
Emperor	44	220	71	344	136	806
Cod	21	111	22	110	33	171
Mackerel	431	1 499	546	2 164	622	2 562
Gold band snapper	314	1 460	268	1 245	388	1 991
Sea perch	454	2 318	717	3 655	872	4 047
Other	142	374	145	387	222	682
Total	3 181	13 562	3 705	16 667	4 691	21 154
Total wildcaught	4 105	22 307	5 053	32 028	6 101	34 270
Aquaculture a	na	55 000	na	55 000	na	55 000
Total production	4 105	77 307	5 053	87 028	6 101	89 270

a Includes pearls and aquarium production. These values are based on derived estimates from a limited number of operators. Excludes hatchery production. Quantities not available due to confidentiality restrictions. **p** Preliminary. **s** Estimates. **na** Not available.
Sources: ABARE; Northern Territory Department of Primary Industry and Fisheries.

13 Commonwealth fisheries production

	1998-99		1999-2000 p		2000-01 s	
	t	$'000	t	$'000	t	$'000
Northern prawn						
Prawn						
Tiger	2 795	52 618	2 195	61 504	2 116	65 603
Banana	3 608	42 615	2 222	31 010	6 286	84 854
Endeavour	1 129	13 670	972	13 412	868	11 933
King	11	139	12	169	7	94
Other	0	6	2	33	2	25
Total	7 544	109 049	5 403	106 127	9 278	162 511
Other species	440	2 200	202	1 235	473	2 158
Total	7 984	111 248	5 605	107 362	9 752	164 668
Torres Strait						
Prawn						
Tiger	682	11 409	531	11 691	581	13 620
Endeavour	1 446	14 961	1 191	14 287	1 131	11 880
King	70	846	79	1 145	64	981
Other	4	39	1	7	3	7
Total	2 203	27 255	1 802	27 131	1 779	26 488
Tropical rock lobster	501	7 151	359	5 389	276	7 167
Spanish mackerel	100	652	392	2 410	301	1 317
Other	181	736	98	404	83	771
Pearls	0	9	0	0	0	0
Total	2 984	35 803	2 651	35 334	2 439	35 744
South east – trawl a						
Orange roughy	4 728	15 225	4 015	14 012	4 179	14 082
Blue grenadier	6 209	9 398	9 493	21 264	7 561	9 754
Tiger flathead	3 313	5 919	3 485	7 319	2 645	6 269
Redfish	1 555	1 723	1 009	1 220	775	1 349
Blue warehou	705	1 204	375	747	363	838
Silver warehou	2 463	2 697	2 849	3 020	3 792	5 119
School whiting	421	792	385	732	680	849
Jackass morwong	990	1 463	822	1 554	919	1 681
Ling	1 674	5 460	1 743	6 381	1 465	6 547
Gemfish	454	971	447	1 431	455	1 781
Silver trevally	91	146	72	157	121	390
Mirror dory	378	738	276	591	239	704
Royal red prawn	396	1 309	450	1 251	283	1 064
Ocean perch	356	852	363	1 049	373	567
John dory	136	702	159	841	143	1 145
Blue eye	122	599	105	718	148	865
Other	3 782	10 136	4 442	9 774	5 201	12 073
Total	27 772	59 332	30 491	72 059	29 341	65 079
South east – nontrawl						
Blue eye	462	2 515	512	3 490	584	4 130
Blue warehou	159	271	225	447	35	82
Ling	207	675	296	1 084	231	1 033
Other	188	558	203	572	157	543
Total	1 015	4 019	1 235	5 593	1 008	5 787
Total south east	28 787	63 351	31 727	77 651	30 349	70 866
South Tasman Rise	3 270	8 654	346	835	762	2 325

Continued

13 Commonwealth fisheries production *(continued)*

	1998-99		1999-2000 p		2000-01 s	
	t	$'000	t	$'000	t	$'000
Southern shark						
School and gummy	2 462	13 882	2 198	8 330	2 579	11 141
Other shark	550	1 514	497	1 106	679	1 547
Other	33	138	31	87	32	93
Total	3 045	15 534	2 726	9 522	3 290	12 781
Great Australian Bight						
Orange roughy	616	1 984	822	2 870	296	998
King flathead	685	1 458	555	1 266	783	2 082
Bight redfish	442	1 059	328	864	398	620
Leather jacket	122	405	108	295	150	470
Angel shark	102	152	98	234	71	128
Boarfish	68	122	56	149	39	101
Jackass morwong	97	144	94	178	59	108
Squid	35	70	22	29	58	123
Knifejaw	44	24	31	35	32	36
Gemfish	92	197	132	423	82	320
Blue grenadier	48	73	12	28	15	19
Queen snapper	29	45	23	30	24	125
Spotted trevalla	54	60	29	31	12	16
Other	209	570	177	415	236	609
Total	2 643	6 362	2 489	6 847	2 254	5 755
Eastern tuna and billfish – longline and minor line						
Yellowfin	2 183	20 790	1 307	15 498	1 922	23 764
Skipjack	28	32	5	8	3	5
Albacore	430	626	363	782	398	1 396
Bigeye	904	10 873	678	11 593	998	16 868
Billfish	2 185	16 131	2 604	28 076	2 573	22 640
Other	609	1 481	578	1 612	745	2 176
Total	6 339	49 933	5 536	57 569	6 638	66 849
Eastern tuna and billfish – purse seine and pole						
Yellowfin	0	2	0	0	5	71
Skipjack	4 591	5 280	4 492	6 963	1 544	2 749
Other	1	2	0	0	0	0
Total	4 592	5 283	4 493	6 964	1 549	2 821
Total east coast	10 931	55 216	10 028	64 533	8 187	69 670
Southern bluefin tuna	5 655	56 874	5 263	56 517	5 282	62 134
Western and southern tuna	2 071	10 918	2 859	29 061	4 305	34 462
Bass Strait scallop	763	1 726	0	0	0	0
Other fisheries b	9 084	40 360	4 538	22 565	5 491	21 154
Total production	77 216	406 046	68 232	410 227	72 110	479 558

a Includes Victorian Inshore Trawl fishery since 2000-01. **b** Includes north west slope, western deepwater, southern squid, jack mackerel, Macquarie Island, Coral Sea, Cocos and Christmas Islands, Heard and MacDonald Islands, East coast deepwater, and Norfolk Island fisheries. **p** Preliminary. **s** Estimates.
Sources: Australian Fisheries Management Authority; ABARE**.**

14 Australian aquaculture production in 1998-99, by state [a]

	NSW	Vic.	Qld	WA	SA	Tas.	NT	Aust.
Value	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Fish								
Salmon	0	0	0	0	na	71 518	na	71 518
Trout	1 997	8 821 **b**	0	0	101	0	na	10 919
Tuna	0	0	0	0	166 700	0	na	166 700
Silver perch	1 557	0	274	0	0	0	na	1 831
Barramundi	112	0	4 515	0	3 192	0	na	7 819
Other **c**	293	874	1 178	468	0	0	na	2 813
Total	3 959	9 695	5 967	468	169 993	71 518	na	261 600
Crustaceans								
Prawn	6 846	0	35 310	0	0	0	na	42 156
Yabbies	472	125	0	1 591	231	0	na	2 419
Marron	3	0	0	1 027	160	0	na	1 190
Redclaw	25	0	911	0	0	0	na	936
Total	7 346	125	36 221	2 618	391	0	na	46 701
Molluscs								
Edible oysters	27 435	0	610	0	5 489	11 637	na	45 171
Pearl oysters	0	0	810	181 837	0	0	na	182 647
Mussels	228	2 512	0	1 801	183	827	na	5 551
Other **d**	0	0	0	0	856	1 146	na	2 002
Total	27 663	2 512	1 420	183 638	6 528	13 610	na	235 371
Total value	38 968	16 227 **e**	43 608	186 951 **e**	180 171 **e**	85 128	55 000 **e**	606 053 **e**
Quantity	t	t	t	t	t	t	t	t
Fish								
Salmon	0	0	0	0	na	9 195	na	9 195
Trout	338	1 294	0	0	14	0	na	1 646
Tuna	0	0	0	0	6 365	0	na	6 365
Silver perch	164	0	31	0	0	0	na	195
Barramundi	11	0	515	0	249	0	na	775
Other **c**	24	107	0	34	0	0	na	165
Total	537	1 401	546	34	6 628	9 195	na	18 341
Crustaceans								
Prawn	463	0	1 856	0	0	0	na	2 319
Yabbies	40	13	0	166	27	0	na	246
Marron	0	0	0	42	7	0	na	49
Redclaw	1	0	77	0	0	0	na	78
Total	504	13	1 933	208	34	0	na	2 692
Molluscs								
Edible oysters	5 319	0	138	0	1 081	4 194	na	10 731
Pearl oysters	0	0	0	na	0	0	na	0
Mussels	45	884	0	679	84	236	na	1 928
Other **d**	0	0	0	0	21	0	na	21
Total	5 364	884	138	679	1 186	4 430	na	12 680
Total quantity	6 405	2 315 **e**	2 617	921	8 260 **e**	13 625	na	34 143 **e**

a Excludes hatchery production, crocodiles, microalgae and aquarium worms. **b** Includes salmon production. **c** Includes eels, aquarium fish and other native fish. **d** Includes scallops, giant clams and abalone. **e** Includes aquaculture production not elsewhere specified due to confidentiality restrictions. In Victoria, this includes abalone, warmwater finfish, ornamental fish, other shellfish, shrimps and aquatic worms. In Western Australia, this includes some other crustaceans and molluscs not specified above. In South Australia, this includes snapper, Atlantic salmon, microalgae, aqarium species, murray cod and callop. Total only sums across. **na** Not available.

Sources: ABARE; Queensland Bribie Island Aquaculture Research Centre; Victorian Marine and Freshwater Resources Institute; New South Wales Fisheries; Northern Territory Department of Primary Industries and Fisheries; South Australian Research and Development Institute; Tasmanian Department of Primary Industries, Water and Environment; Department of Fisheries, Western Australia; Tuna Boat Owners Association of Australia.

15 Australian aquaculture production in 1999-2000, by state ap

	NSW	Vic.	Qld	WA	SA	Tas.	NT	Aust.
Value	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Fish								
Salmon	0	0	0	0	na	84 845	na	84 845
Trout	1 989	10 903 **b**	0	0	49	0	na	12 941
Tuna	0	0	0	0	202 000	0	na	202 000
Silver perch	2 802	0	272	0	0	0	na	3 074
Barramundi	304	0	4 861	0	3 330	0	na	8 495
Other **c**	450	436	1 878	628	0	0	na	3 392
Total	5 545	11 339	7 011	628	205 379	84 845	na	314 747
Crustaceans								
Prawn	6 651	0	45 200	0	0	0	na	51 851
Yabbies	590	174	0	2 781	156	0	na	3 701
Marron	3	0	0	950	304	0	na	1 257
Redclaw	35	0	828	0	0	0	na	863
Total	7 279	174	46 028	3 731	460	0	na	57 672
Molluscs								
Edible oysters	30 089	0	674	0	9 389	13 176	na	53 328
Pearl oysters	0	0	768	189 700	0	0	na	190 468
Mussels	229	2 362	0	1 686	173	837	na	5 287
Other **d**	0	0	0	0	2 000	1 500	na	3 500
Total	30 318	2 362	1 442	191 386	11 562	15 513	na	252 583
Total value	43 142	18 053 **e**	54 481	195 887 **e**	220 229 **e**	100 358	55 000 **e**	687 150 **e**
Quantity	t	t	t	t	t	t	t	t
Fish								
Salmon	0	0	0	0	na	10 907	na	10 907
Trout	340	1 612 **b**	0	0	8	0	na	1 960
Tuna	0	0	0	0	7 780	na	na	7 780
Silver perch	295	0	30	0	0	0	na	325
Barramundi	30	0	526	0	279	0	na	835
Other **c**	40	44	26	57	0	0	na	167
Total	705	1 656	582	57	8 067	10 907	na	21 974
Crustaceans								
Prawn	450	0	2 505	0	0	0	na	2 955
Yabbies	50	15	0	211	16	0	na	292
Marron	0	0	0	42	12	0	na	54
Redclaw	2	0	70	0	0	0	na	72
Total	502	15	2 575	253	28	0	na	3 373
Molluscs								
Edible oysters	5 252	0	159	0	1 887	4 748	na	12 046
Pearl oysters	0	0	0	na	0	0	na	0
Mussels	50	972	0	683	81	239	na	2 025
Other **d**	0	0	0	0	40	0	na	40
Total	5 302	972	159	683	2 008	4 987	na	14 111
Total quantity	6 509	2 677 **e**	3 317	993	10 440 **e**	15 894	na	39 830 **e**

a Excludes hatchery production, crocodiles, microalgae and aquarium worms. **b** Includes salmon production. **c** Includes eels, aquarium fish and other native fish. **d** Includes scallops, giant clams and abalone. **e** Includes aquaculture production not elsewhere specified due to confidentiality restrictions. In Victoria, this includes abalone, warmwater finfish, ornamental fish, other shellfish, shrimps and aquatic worms. In Western Australia, this includes some other crustaceans and molluscs not specified above. In South Australia, this includes snapper, Atlantic salmon, microalgae, aqarium species, murray cod and callop. Total only sums across. **p** Preliminary. **na** Not available.

Sources: ABARE; Queensland Bribie Island Aquaculture Research Centre; Victorian Marine and Freshwater Resources Institute; New South Wales Fisheries; Northern Territory Department of Primary Industries and Fisheries; South Australian Research and Development Institute; Tasmanian Department of Primary Industries, Water and Environment; Department of Fisheries, Western Australia.

16 Australian aquaculture production in 2000-01, by state [a]

	NSW	Vic.	Qld	WA	SA	Tas.	NT	Aust.
Value	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Fish								
Salmon	0	0	0	0	na	95 338	na	95 338
Trout	1 526	11 136 **b**	0	0	176	0	na	12 838
Tuna	0	0	0	0	263 793	0	na	263 793
Silver perch	2 115	0	439	0	0	0	na	2 554
Barramundi	586	0	5 116	0	2 743	0	na	8 445
Other **c**	255	678	2 080	931	0	0	na	3 944
Total	4 482	11 814	7 635	931	266 712	95 338	na	386 912
Crustaceans								
Prawn	4 934	0	44 600	0	0	0	na	49 534
Yabbies	458	254	0	2 510	172	0	na	3 394
Marron	0	0	0	1 183	196	0	na	1 379
Redclaw	9	0	1 107	0	0	0	na	1 116
Total	5 402	254	45 707	3 693	368	0	na	55 424
Molluscs								
Edible oysters	31 603	0	442	0	11 011	14 430	na	57 486
Pearl oysters	0	0	489	171 048	0	0	na	171 537
Mussels	108	2 599	0	2 267	260	843	na	6 077
Other **d**	0	0	0	0	2 677	1 500	na	4 177
Total	31 710	2 599	931	173 315	13 948	16 773	na	239 276
Total value	41 594	19 831 **e**	54 273	178 043 **e**	285 350 **e**	112 111	55 000 **e**	746 202 **e**
Quantity	t	t	t	t	t	t	t	t
Fish								
Salmon	0	0	0	0	na	12 223	na	12 223
Trout	205	1 732 **b**	0	0	13	0	na	1 950
Tuna	0	0	0	0	9 051	na	na	9 051
Silver perch	230	0	55	0	0	0	na	285
Barramundi	65	0	569	0	264	0	na	898
Other **c**	24	68	14	95	0	0	na	201
Total	523	1 800	638	95	9 328	12 223	na	24 607
Crustaceans								
Prawn	294	0	2 525	0	0	0	na	2 819
Yabbies	35	23	0	201	17	0	na	276
Marron	0	0	0	52	8	0	na	60
Redclaw	1	0	86	0	0	0	na	87
Total	330	23	2 611	253	25	0	na	3 242
Molluscs								
Edible oysters	5 141	0	91	0	2 202	5 200	na	12 634
Pearl oysters	0	0	0	na	0	0	na	0
Mussels	32	1 150	0	964	111	241	na	2 498
Other **d**	0	0	0	0	53	0	na	53
Total	5 172	1 150	91	964	2 366	5 441	na	15 184
Total quantity	6 025	3 061 **e**	3 340	1 312	12 199 **e**	17 664	na	43 602 **e**

a Excludes hatchery production, crocodiles, microalgae and aquarium worms. **b** Includes salmon production. **c** Includes eels, other native fish and aquarium fish. **d** Includes scallops, giant clams and abalone. **e** Includes aquaculture production not elsewhere specified due to confidentiality restrictions. In Victoria, this includes abalone, warmwater finfish, ornamental fish, other shellfish, shrimps and aquatic worms. In Western Australia, this includes some other crustaceans and molluscs not specified above. In South Australia, this includes snapper, Atlantic salmon, microalgae, aqarium species, murray cod and callop. Total only sums across. **s** Estimates. **na** Not available.
Sources: ABARE; Queensland Bribie Island Aquaculture Research Centre; Victorian Marine and Freshwater Resources Institute; New South Wales Fisheries; Northern Territory Department of Primary Industries and Fisheries; South Australian Research and Development Institute; Tasmanian Department of Primary Industries, Water and Environment; Department of Fisheries, Western Australia.

17 Australian exports of fisheries products

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Edible						
Fish						
Live	na	13 313	na	23 593	na	41 585
Fresh, chilled or frozen						
Whole						
Tuna **a**	7 015	102 699	10 221	205 693	12 171	264 486
Other	10 198	71 411	8 079	40 622	7 463	44 320
Fillets	5 343	49 099	4 925	41 635	3 308	25 334
Canned	384	2 731	847	4 666	762	4 482
Dried, salted and smoked	197	6 869	394	14 019	291	15 703
Other fish products	3 034	28 567	3 117	62 854	4 106	82 443
Total fish **b**	26 170	274 689	27 582	393 083	28 102	478 353
Crustaceans and molluscs						
Rock lobster	14 392	451 440	15 490	577 657	13 345	532 648
Prawns	11 995	224 254	11 630	243 789	12 124	291 048
Abalone	3 396	184 621	3 808	223 415	3 543	249 277
Scallops	1 569	33 236	1 655	42 012	2 145	53 405
Oysters	73	613	152	2 884	246	6 283
Crabs	1 892	19 839	2 292	23 451	2 677	33 015
Other	2 050	35 087	1 300	29 870	2 525	72 748
Total	35 366	949 089	36 327	1 143 079	36 605	1 238 424
Total edible b	61 537	1 223 778	63 910	1 536 161	64 707	1 716 777
Nonedible						
Marine fats and oils	na	2 894	na	1 260	na	3 766
Fish meal	na	6 779	na	9 302	na	23 603
Pearls **c**	na	272 016	na	436 361	na	419 396
Ornamental fish	na	1 268	na	1 817	na	2 169
Other nonedible	na	4 673	na	3 036	na	2 950
Total nonedible	na	287 629	na	451 776	na	451 884
Total fisheries products	na	1 511 408	na	1 987 937	na	2 168 661

a Exports of tuna landed in Australia. **b** Excludes live tonnage but includes live value. **c** From 1999-2000 value of pearl exports includes items temporarily exported. **p** Preliminary. **na** Not available.
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

18 Australian exports of fish

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Tuna a						
Whole						
Fresh or chilled	5 286	71 821	6 022	100 510	8 094	147 683
Frozen	1 729	30 878	4 199	105 183	4 077	116 803
Canned	351	2 425	414	2 393	391	2 299
Other	1 163	15 240	1 947	51 248	2 199	65 146
Total	8 529	120 363	12 582	259 333	14 760	331 931
Salmon						
Fresh or chilled	767	7 847	660	5 659	986	12 407
Frozen	194	2 403	147	2 579	494	4 070
Smoked	53	1 037	47	940	103	1 661
Total	1 014	11 288	854	9 179	1 583	18 138
Other fish						
Live	na	13 313	na	23 593	na	41 585
Whole						
Fresh or chilled	835	7 236	1 027	10 279	1 249	13 427
Frozen						
Whiting	1 698	3 415	1 142	3 007	1 209	2 943
Other	6 704	50 510	5 103	19 097	3 524	11 473
Fillets						
Fresh or chilled	584	4 841	669	4 756	654	7 300
Frozen	4 759	44 258	4 255	36 879	2 654	18 034
Other (fresh, chilled or frozen)	1 237	9 380	1 159	11 115	1 871	16 140
Canned	12	307	404	2 274	305	2 183
Dried, salted and smoked	143	5 831	347	13 079	189	14 042
Other	634	3 947	11	491	36	1 157
Total **b**	16 606	143 038	14 117	124 571	11 692	128 285
Total fish b	26 170	274 689	27 582	393 083	28 102	478 353

a Exports of tuna landed in Australia. **b** Excludes live tonnage but includes live value. **p** Preliminary. **na** Not available.
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

19 Australian exports of crustaceans and molluscs

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Rock lobster						
Whole						
Live, fresh or chilled	8 374	268 581	8 080	295 755	7 670	317 708
Frozen	714	17 005	988	34 647	1 175	42 134
Cooked	3 663	86 956	4 280	141 734	3 037	100 942
Tails (fresh, chilled or frozen)	1 464	76 064	1 693	95 289	1 037	60 309
Other	176	2 835	448	10 231	426	11 554
Total	14 392	451 440	15 490	577 657	13 345	532 648
Prawns						
Headless	1 150	24 854	926	20 540	1 005	25 162
Whole	10 630	195 710	10 096	209 386	10 789	258 481
Other	215	3 691	608	13 863	330	7 405
Total	11 995	224 254	11 630	243 789	12 124	291 048
Crabs						
Fresh, frozen or cooked	1 891	19 836	2 292	23 451	2 666	32 594
Other	0	3	0	0	11	421
Total	1 892	19 839	2 292	23 451	2 677	33 015
Abalone						
Fresh, chilled or frozen	1 688	86 782	1 691	102 462	1 883	133 772
Canned	1 707	97 839	2 118	120 953	1 660	115 505
Total	3 396	184 621	3 808	223 415	3 543	249 277
Scallops						
Fresh, chilled or frozen	1 530	32 233	1 629	40 641	2 058	49 501
Other	40	1 002	26	1 371	87	3 904
Total	1 569	33 236	1 655	42 012	2 145	53 405
Other	2 122	35 700	1 452	32 754	2 771	79 031
Total crustaceans and molluscs	35 366	949 089	36 327	1 143 079	36 605	1 238 424

p Preliminary.
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

20 Australian exports of edible fish, by destination

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Tuna **a**						
Fresh or chilled (whole)						
Chinese Taipei	3	28	18	156	19	134
Japan	4 673	66 521	4 967	91 621	6 734	131 330
Singapore	7	131	9	77	9	77
Thailand	0	0	14	71	40	133
United States	593	4 968	988	8 247	1 251	15 659
Other	10	173	26	338	41	349
Total	5 286	71 821	6 022	100 510	8 094	147 683
Frozen (whole)						
Japan	1 642	30 721	3 867	101 920	3 856	115 105
Samoa	84	134	40	143	25	74
Thailand	0	0	32	65	85	262
United States	2	15	233	2 752	50	647
Other	1	8	26	302	61	716
Total	1 729	30 878	4 199	105 183	4 077	116 803
Salmon						
Fresh or chilled (whole)						
Chinese Taipei	0	0	0	0	2	56
Hong Kong, China	0	0	0	0	1	24
Indonesia	4	34	0	5	32	269
Japan	760	7 774	657	5 609	904	11 235
Korea, Rep. of	0	0	0	0	1	25
Singapore	1	7	1	9	11	139
United States	0	0	0	0	32	589
Other	2	33	2	37	4	70
Total	767	7 847	660	5 659	986	12 407
Frozen (whole)						
Chinese Taipei	0	0	20	609	0	0
Hong Kong, China	3	71	3	50	1	30
Japan	87	1 187	92	1 242	433	3 153
Korea, Rep. of	0	0	2	42	6	116
Thailand	4	73	4	89	8	184
United States	0	0	1	13	31	352
Other	100	1 072	25	535	15	234
Total	194	2 403	147	2 579	494	4 070
Whiting						
Frozen (whole)						
Chinese Taipei	0	0	7	34	0	6
Egypt	0	0	28	30	59	84
Hong Kong, China	19	46	16	35	2	23
Japan	180	445	85	407	24	122
Thailand	1 332	2 585	799	2 168	1 047	2 554
United States	0	0	0	0	15	54
Viet Nam	117	239	69	120	33	73
Other	50	99	138	213	29	26
Total	1 698	3 415	1 142	3 007	1 209	2 943

Continued

20 Australian exports of edible fish, by destination *continued*

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Other fish						
Fresh or chilled (whole)						
Chinese Taipei	21	189	73	670	73	674
Hong Kong, China	32	509	159	1 523	54	449
Japan	238	2 689	354	4 289	552	6 883
Singapore	22	132	29	260	15	176
United States	237	2 373	209	2 139	203	2 056
Other	65	498	77	492	42	305
Total	615	6 390	902	9 373	939	10 542
Fresh or chilled (fillets)						
Japan	335	2 038	322	1 730	295	4 674
United States	158	1 818	151	2 253	239	1 559
Other	91	985	196	772	120	1 067
Total	584	4 841	669	4 756	654	7 300
Frozen (whole)						
China	532	3 424	2 108	2 303	1 235	378
Germany	140	1 377	142	1 320	164	1 233
Hong Kong, China	366	2 682	169	2 065	129	1 832
Indonesia	83	202	390	1 015	403	1 090
Japan	3 211	27 979	741	4 295	185	487
New Zealand	73	216	116	107	58	443
Singapore	137	1 019	45	545	8	54
United States	830	8 410	110	788	45	568
Other	1 333	5 203	1 281	6 660	1 298	5 387
Total	6 704	50 510	5 103	19 097	3 524	11 473
Frozen (fillets)						
China	355	1 210	94	378	147	188
Chinese Taipei	58	861	0	0	51	234
France	77	256	190	704	193	800
Hong Kong, China	113	1 071	80	539	25	204
Japan	787	7 664	1 128	9 404	1 073	4 400
United States	2 083	28 606	1 845	22 594	647	9 813
Other	1 288	4 589	919	3 259	518	2 395
Total	4 759	44 258	4 255	36 879	2 654	18 034
Canned						
Tuna						
New Zealand	284	2 030	395	2 291	326	1 899
Singapore	22	148	13	66	24	132
Other	45	246	6	36	41	268
Total	351	2 425	414	2 393	391	2 299
Salmon						
New Zealand	18	103	8	134	21	244
Singapore	3	36	5	58	4	39
Other	1	7	17	153	42	285
Total	21	146	30	345	66	568
Other fish						
New Zealand	1	146	201	1 269	99	959
Singapore	3	97	8	141	42	346
Other	8	63	194	864	164	878
Total	12	307	404	2 274	305	2 183

a Exports of tuna landed in Australia. **p** Preliminary.
Source: ABS, *International Trade,* electronic data service, cat. no. 5464.0, Canberra.

21 Australian exports of crustaceans, by destination

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Rock lobster						
Whole						
Live, fresh or chilled						
China	1 520	54 188	99	3 709	49	2 305
Chinese Taipei	1 680	47 735	1 442	51 144	1 294	49 615
France	66	1 937	127	4 642	69	2 783
Hong Kong, China	3 185	106 203	4 589	164 962	4 515	191 327
Japan	1 770	52 778	1 655	64 528	1 609	65 683
Singapore	43	1 569	52	2 009	55	2 149
United States	44	2 131	59	2 397	20	1 317
Other	65	2 041	58	2 364	60	2 528
Total	8 374	268 581	8 080	295 755	7 670	317 708
Frozen						
China	5	111	19	628	0	0
Chinese Taipei	161	4 254	264	8 575	252	7 426
Hong Kong, China	5	103	0	0	0	13
Japan	415	8 950	638	22 518	729	24 891
Singapore	19	466	10	315	10	275
United States	91	2 713	51	2 442	153	8 888
Other	18	407	6	170	31	641
Total	714	17 005	988	34 647	1 175	42 134
Cooked						
China	89	2 041	64	2 133	75	3 053
Chinese Taipei	2 169	49 681	2 194	71 381	1 636	50 855
Hong Kong, China	28	789	101	3 015	143	4 470
Japan	1 142	28 144	1 565	54 485	969	33 824
Singapore	150	3 725	272	8 232	153	4 872
Other	85	2 575	84	2 488	61	3 868
Total	3 663	86 956	4 280	141 734	3 037	100 942
Tails						
Fresh, chilled or frozen						
Chinese Taipei	72	1 770	82	2 611	18	654
Hong Kong, China	68	2 542	10	469	10	600
Japan	182	6 831	234	8 861	51	4 138
Singapore	12	499	3	133	6	259
United States	1 113	63 773	1 331	81 393	915	53 243
Other	17	648	33	1 822	37	1 416
Total	1 464	76 064	1 693	95 289	1 037	60 309
Other						
Chinese Taipei	19	382	19	786	35	1 194
Hong Kong, China	0	0	34	1 418	59	2 124
Japan	81	1 244	315	5 377	254	6 176
United States	14	859	11	370	26	1 006
Other	63	349	69	2 279	52	1 054
Total	176	2 835	448	10 231	426	11 554
Total rock lobster	14 392	451 440	15 490	577 657	13 345	532 648

Continued

21 Australian exports of crustaceans, by destination *(continued)*

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Prawns						
Headless						
China	23	275	17	236	44	742
Chinese Taipei	22	462	37	604	53	1 440
Hong Kong, China	88	1 256	47	704	80	1 338
Japan	821	19 941	657	16 443	654	18 200
Spain	119	1 579	27	367	0	0
United States	5	106	33	920	80	2 048
Other	72	1 234	108	1 266	93	1 395
Total	1 150	24 854	926	20 540	1 005	25 162
Whole						
China	2 081	34 274	1 662	25 777	1 231	20 946
Chinese Taipei	155	3 077	239	5 985	170	4 694
Hong Kong, China	1 132	18 032	1 140	18 655	1 899	36 377
Italy	91	1 730	72	1 134	42	896
Japan	4 667	101 199	4 614	123 510	4 085	133 574
Malaysia	101	1 397	176	2 423	131	2 172
New Zealand	197	2 426	139	1 745	190	2 604
Spain	1 389	19 946	1 157	15 928	1 584	27 703
Thailand	280	3 695	203	2 484	673	11 982
United States	3	85	50	580	138	4 290
Other	533	9 849	644	11 165	646	13 243
Total	10 630	195 710	10 096	209 386	10 789	258 481
Other						
China	22	432	24	440	101	1 195
Chinese Taipei	8	270	54	1 428	1	32
Japan	40	852	330	9 262	65	3 505
Singapore	13	295	42	730	22	481
United States	0	0	3	86	28	681
Other	132	1 841	155	1 917	112	1 510
Total	215	3 691	608	13 863	330	7 405
Total prawns	11 995	224 254	11 630	243 789	12 124	291 048
Crabs						
Fresh, frozen or cooked						
China	124	2 108	60	1 159	127	2 510
Chinese Taipei	1 155	9 634	1 466	12 284	1 313	11 864
Hong Kong, China	110	1 736	124	1 793	190	3 495
Japan	416	4 689	462	4 832	610	6 242
Singapore	26	362	91	1 172	181	2 408
United States	34	1 058	64	1 770	192	5 064
Other	27	248	25	441	53	1 011
Total	1 891	19 836	2 292	23 451	2 666	32 594

p Preliminary.
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

22 Australian exports of molluscs, by destination

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Abalone						
Fresh, chilled or frozen						
China	26	1 513	23	1 461	66	6 351
Chinese Taipei	178	6 884	201	9 912	268	15 504
Hong Kong, China	847	44 750	875	54 157	787	58 199
Japan	572	28 782	537	32 525	667	45 718
Singapore	36	2 447	30	2 410	43	3 952
United States	11	797	10	571	12	1 217
Other	18	1 609	15	1 425	39	2 832
Total	1 688	86 782	1 691	102 462	1 883	133 772
Canned						
Chinese Taipei	571	33 299	648	33 669	562	26 487
Hong Kong, China	456	25 949	663	36 007	496	39 936
Japan	328	19 143	391	27 054	304	26 540
Singapore	247	13 765	347	19 851	216	16 621
United States	56	3 264	44	3 051	34	3 576
Other	50	2 418	24	1 321	48	2 346
Total	1 707	97 839	2 118	120 953	1 660	115 505
Scallops						
Fresh, chilled or frozen						
China	44	1 008	157	1 032	472	3 871
France	103	2 039	46	795	0	0
Hong Kong, China	933	20 133	1 017	28 688	1 181	33 506
Malaysia	85	1 604	90	2 261	101	2 994
Singapore	268	5 424	266	6 608	277	8 317
Other	96	2 025	53	1 257	26	814
Total	1 530	32 233	1 629	40 641	2 058	49 501

p Preliminary.
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

23 Australian exports of fisheries products, by destination

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Edible (excluding live)						
China	5 046	102 140	4 558	40 461	4 209	49 399
Chinese Taipei	6 858	169 110	7 265	208 916	6 107	179 526
France	452	7 841	851	16 598	391	6 869
Germany	360	2 466	328	2 218	194	1 732
Greece	296	5 417	117	1 712	313	4 423
Hong Kong, China	8 249	240 369	9 759	333 018	11 276	430 938
Indonesia	242	1 338	478	1 772	561	2 691
Italy	182	2 848	140	2 235	195	4 092
Japan	24 408	448 283	26 026	655 339	26 767	731 275
Korea, Rep. of	430	2 947	75	1 581	180	2 596
Malaysia	293	5 030	476	8 064	397	9 143
New Zealand	1 018	7 293	1 302	7 046	1 079	8 287
Singapore	1 689	39 546	1 846	52 695	2 207	53 136
South Africa	266	3 863	184	2 187	136	2 981
Spain	1 574	21 825	1 207	17 050	1 637	28 238
Thailand	2 407	9 285	1 777	7 891	2 399	17 503
United States	5 701	129 012	5 549	141 225	4 836	128 157
Viet Nam	121	528	89	642	105	723
Other	1 944	11 325	1 881	11 918	1 719	13 486
Total	61 537	1 210 465	63 910	1 512 568	64 707	1 675 192
Nonedible						
China	na	1 842	na	1 673	na	1 491
Chinese Taipei	na	613	na	1 645	na	488
France	na	6 202	na	3 926	na	6 342
Germany	na	1 734	na	5 368	na	5 242
Hong Kong, China	na	7 532	na	34 562	na	64 823
Italy	na	891	na	1 173	na	928
Japan	na	13 987	na	24 836	na	13 825
Korea, Rep. of	na	974	na	1 829	na	456
New Zealand	na	6 641	na	8 689	na	23 689
Philippines	na	621	na	79	na	595
Singapore	na	3 586	na	7 391	na	7 841
Switzerland	na	31 165	na	25 734	na	14 092
Spain	na	1 507	na	1 942	na	2 323
Thailand	na	1 469	na	422	na	384
United Kingdom	na	7 162	na	12 880	na	15 584
United States	na	15 098	na	46 088	na	64 123
Other	na	186 606	na	273 540	na	229 658
Total	na	287 629	na	451 776	na	451 884
Total exports	na	1 498 094	na	1 964 344	na	2 127 076

p Preliminary. **na** Not available.
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

24 Australian exports of seafood to selected countries, by product [a]

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Hong Kong, China						
Dried, salted or smoked fish	101	4 552	109	7 284	108	11 579
Other fish	549	4 802	468	5 032	408	5 506
Rock lobster	3 286	109 638	4 735	169 864	4 727	198 533
Prawns	1 238	19 572	1 198	19 552	1 989	37 841
Crabs	110	1 736	124	1 793	191	3 547
Abalone	1 303	70 699	1 537	90 164	1 284	98 135
Scallops	972	21 065	1 032	29 697	1 211	36 200
Other	690	8 304	555	9 632	1 359	39 598
Total	8 249	240 369	9 759	333 018	11 276	430 938
Japan						
Tuna (whole)	6 316	97 242	8 834	193 541	10 591	246 435
Fillets	1 121	9 702	1 450	11 134	1 368	9 074
Dried, salted or smoked fish	35	677	166	3 872	92	1 784
Other fish	5 909	58 621	3 887	68 574	4 386	90 108
Rock lobster	3 590	97 947	4 406	155 769	3 612	134 713
Prawns	5 528	121 992	5 600	149 215	4 804	155 279
Crabs	416	4 689	462	4 832	610	6 242
Abalone	900	47 925	928	59 580	972	72 258
Scallops	1	5	3	62	0	1
Other	592	9 482	290	8 761	332	15 382
Total	24 408	448 283	26 026	655 339	26 767	731 275
Singapore						
Tuna (whole)	7	135	19	176	26	130
Fillets	149	1 215	51	631	23	293
Dried, salted or smoked fish	12	580	19	642	10	487
Canned fish	28	245	25	207	70	478
Other fish	471	3 033	353	2 506	766	3 186
Rock lobster	225	6 259	338	10 690	224	7 556
Prawns	16	377	128	1 965	157	2 631
Crabs	26	362	91	1 172	181	2 408
Abalone	283	16 212	377	22 261	259	20 573
Scallops	268	5 424	276	6 968	331	9 395
Other	203	5 702	169	5 477	159	5 999
Total	1 689	39 546	1 846	52 695	2 207	53 136

Continued

24 Australian exports of seafood to selected countries, by product [a] *(continued)*

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Chinese Taipei						
Fish	467	5 850	545	8 001	427	5 909
Rock lobster	4 101	103 822	4 000	134 498	3 235	109 744
Prawns	185	3 809	331	8 016	225	6 166
Crabs	1 155	9 634	1 466	12 284	1 321	11 939
Abalone	749	40 184	849	43 582	830	41 991
Scallops	55	1 282	18	432	7	322
Other	146	4 529	57	2 103	63	3 456
Total	6 858	169 110	7 265	208 916	6 107	179 526
United States						
Fillets	2 241	30 424	1 997	24 848	886	11 373
Canned fish	0	0	30	40	1	28
Other fish	1 918	17 757	1 788	18 793	2 121	26 401
Rock lobster	1 278	70 275	1 455	86 808	1 156	67 645
Prawns	8	192	85	1 587	247	7 020
Crabs	34	1 058	64	1 770	192	5 064
Abalone	67	4 061	54	3 622	46	4 793
Scallops	15	290	0	0	0	0
Other	140	4 956	76	3 757	187	5 833
Total	5 701	129 012	5 549	141 225	4 836	128 157
China						
Fish	992	5 445	2 389	3 116	1 662	1 662
Rock lobster	1 614	56 340	183	6 470	125	5 386
Prawns	2 126	34 982	1 703	26 453	1 377	22 883
Crabs	124	2 108	60	1 159	130	2 804
Other	189	3 265	223	3 263	916	16 664
Total	5 046	102 140	4 558	40 461	4 209	49 399
APEC						
Tuna	8 418	120 057	12 511	258 855	14 720	331 738
Salmon	986	10 876	839	8 806	1 544	17 478
Other fish	15 127	135 484	13 052	116 906	11 720	120 999
Rock lobster	14 116	445 093	15 167	566 521	13 136	525 426
Prawns	9 804	190 068	9 697	214 963	9 957	250 887
Abalone	3 384	183 930	3 799	223 018	3 534	248 480
Scallops	1 450	30 858	1 596	40 954	2 142	53 326
Oysters	72	609	151	2 879	244	6 263
Crabs	1 878	19 737	2 282	23 255	2 653	32 595
Other crustaceans and molluscs	1 898	33 896	1 212	28 411	2 347	70 914
Total	57 132	1 170 608	60 305	1 484 569	61 995	1 658 105

a Excludes live. **p** Preliminary.
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

25 Australian seafood exports in 1998-99, by state [a]

	NSW	Vic.	Qld	WA	SA	Tas.	NT	Aust. [b]
Value	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Fish								
Live	1 509	491	11 234	0	34	25	0	13 313
Fresh, chilled or frozen								
Whole	14 906	4 039	35 983	36 180	70 987	11 436	393	174 110
Fillets	4 442	2 827	5 928	8 770	2 498	24 267	0	49 099
Other	5 684	2 546	8 420	2 521	16 965	1 339	144	38 166
Total fish	26 541	9 903	61 566	47 471	90 485	37 067	538	274 689
Crustaceans and molluscs								
Rock lobster	6 184	21 879	12 151	304 322	78 527	28 318	0	451 440
Prawns	1 474	790	151 279	26 852	42 783	0	0	224 254
Abalone	11 402	54 727	230	9 925	39 578	68 752	0	184 621
Scallops	264	2 687	22 204	7 913	19	102	0	33 236
Oysters	13	15	32	44	109	394	0	613
Crabs	35	1 050	16 599	1 109	428	320	288	19 839
Other	297	14 535	9 093	8 558	616	1 335	404	35 087
Total	19 669	95 683	211 589	358 722	162 060	99 222	692	949 089
Total value	46 210	105 586	273 155	406 192	252 545	136 289	1 229	1 223 778
Quantity	t	t	t	t	t	t	t	t
Fish								
Live	na	na	na	na	na	na	na	na
Fresh, chilled or frozen								
Whole	2 426	612	5 235	4 670	3 123	1 048	56	17 213
Fillets	621	305	899	1 205	191	2 056	0	5 343
Other	798	509	517	288	1 365	34	2	3 615
Total fish	3 845	1 426	6 652	6 163	4 679	3 138	58	26 170
Crustaceans and molluscs								
Rock lobster	116	631	263	10 381	2 239	758	0	14 392
Prawns	101	57	8 169	1 487	2 080	0	0	11 995
Abalone	322	1 073	4	124	600	1 273	0	3 396
Scallops	14	118	1 042	371	10	4	0	1 569
Oysters	1	3	2	6	12	49	0	73
Crabs	4	30	1 722	65	31	8	23	1 892
Other	61	787	282	840	16	34	17	2 050
Total	619	2 700	11 485	13 273	4 987	2 125	40	35 366
Total quantity	4 464	4 126	18 137	19 436	9 666	5 264	98	61 537

a State totals include Commonwealth fisheries exports. Exports are identified according to source state or territory, not state or territory in which the product was caught or farmed. **b** Includes Australian Capital Territory. **na** Not available.
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

26 Australian seafood exports in 1999-2000, by state [a]

	NSW	Vic.	Qld	WA	SA	Tas.	NT	Aust. [b]
Value	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Fish								
Live	843	696	22 001	41	11	0	0	23 593
Fresh, chilled or frozen								
Whole	13 890	7 896	32 564	28 029	153 019	8 221	1 247	245 234
Fillets	4 326	2 204	3 104	6 578	4 768	20 221	6	41 635
Other	7 807	3 194	11 026	2 563	53 091	3 673	131	82 620
Total fish	26 866	13 991	68 695	37 211	210 889	32 115	1 384	393 083
Crustaceans and molluscs								
Rock lobster	4 519	24 361	13 265	421 325	84 961	28 563	661	577 657
Prawns	1 536	592	160 390	35 874	43 482	0	4	243 789
Abalone	11 883	62 136	0	11 665	54 302	83 379	47	223 415
Scallops	480	2 114	24 292	14 953	15	148	0	42 012
Oysters	5	29	2 237	30	208	372	0	2 884
Crabs	151	1 219	19 700	995	277	157	952	23 451
Other	715	13 132	8 684	3 561	241	730	218	29 870
Total	19 289	103 584	228 567	488 402	183 486	113 349	1 882	1 143 079
Total value	46 155	117 575	297 262	525 613	394 375	145 464	3 266	1 536 161
Quantity	t	t	t	t	t	t	t	t
Fish								
Live	na	na	na	na	na	na	na	na
Fresh, chilled or frozen								
Whole	1 362	773	4 143	3 353	4 888	794	405	15 802
Fillets	608	247	431	572	321	2 658	1	4 925
Other	85	96	319	28	1 813	3	0	6 855
Total fish	2 055	1 116	4 893	3 953	7 022	3 454	406	27 582
Crustaceans and molluscs								
Rock lobster	89	697	315	11 300	2 337	740	12	15 490
Prawns	95	73	7 771	1 749	1 782	0	0	11 630
Abalone	269	1 178	0	117	882	1 361	0	3 808
Scallops	22	65	994	551	2	19	0	1 655
Oysters	0	4	69	1	29	48	0	152
Crabs	7	35	2 105	54	11	4	76	2 292
Other	112	663	209	147	17	21	3	1 300
Total	595	2 715	11 462	13 919	5 060	2 195	92	36 327
Total quantity	2 650	3 831	16 355	17 872	12 081	5 649	498	63 910

a State totals include Commonwealth fisheries exports. Exports are identified according to source state or territory, not state or territory in which the product was caught or farmed. **b** Includes Australian Capital Territory. **na** Not available.
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

27 Australian seafood exports in 2000-01, by state [ap]

	NSW	Vic.	Qld	WA	SA	Tas.	NT	Aust. [b]
Value	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Fish								
Live	2 793	1 326	37 262	0	19	184	0	41 585
Fresh, chilled or frozen								
Whole	16 431	3 945	37 839	27 224	202 047	15 470	2 444	305 514
Fillets	1 752	4 566	2 514	3 080	3 726	9 066	23	25 334
Other	4 592	2 640	18 142	3 219	66 653	8 559	170	105 920
Total fish	25 569	12 477	95 758	33 524	272 445	33 279	2 637	478 353
Crustaceans and molluscs								
Rock lobster	5 087	16 016	15 644	373 010	86 446	36 247	0	532 648
Prawns	3 270	153	218 672	35 412	22 791	0	62	291 048
Abalone	10 540	69 800	1	12 611	58 023	98 255	0	249 277
Scallops	46	3 890	33 795	15 528	76	2	2	53 405
Oysters	46	8	5 377	23	287	507	0	6 283
Crabs	693	2 355	21 358	3 788	245	2 330	2 238	33 015
Other	672	31 750	11 443	3 803	11 525	6 094	4	72 748
Total	20 355	123 972	306 290	444 176	179 392	143 434	2 306	1 238 424
Total value	45 924	136 449	402 048	477 699	451 838	176 712	4 944	1 716 777
Quantity	t	t	t	t	t	t	t	t
Fish								
Live	na	na	na	na	na	na	na	na
Fresh, chilled or frozen								
Whole	1 632	709	4 462	2 525	6 044	1 396	795	17 591
Fillets	280	733	260	640	100	1 163	3	3 308
Other	91	49	119	21	2 118	5	0	7 203
Total fish	2 002	1 491	4 842	3 186	8 262	2 564	798	28 102
Crustaceans and molluscs								
Rock lobster	83	359	344	9 694	2 050	797	0	13 345
Prawns	204	14	8 939	1 535	949	0	4	12 124
Abalone	213	1 170	0	108	542	1 502	0	3 543
Scallops	2	115	1 531	480	7	0	0	2 145
Oysters	5	1	152	0	38	47	0	246
Crabs	44	63	2 110	211	6	66	177	2 677
Other	183	854	326	189	334	171	1	2 525
Total	734	2 575	13 402	12 216	3 926	2 584	183	36 605
Total quantity	2 737	4 066	18 244	15 402	12 188	5 148	981	64 707

a State totals include Commonwealth fisheries exports. Exports are identified according to source state or territory, not state or territory in which the product was caught or farmed. **b** Includes Australian Capital Territory. **p** Preliminary. **na** Not available.
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

28 Australian imports of fisheries products

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Edible						
Fish						
Live fish	na	0	na	54	na	22
Fresh, chilled or frozen						
Fresh or chilled whole	4 086	21 767	4 219	23 583	4 504	25 550
Frozen whole	11 888	22 152	5 808	16 987	6 764	17 313
Fresh or chilled fillets	221	1 224	718	3 265	261	1 497
Frozen fillets	35 931	156 906	37 901	174 865	37 007	185 530
Other	5 307	13 665	6 247	17 180	5 713	16 960
Canned fish	29 328	164 910	33 027	158 374	40 597	188 628
Smoked, dried or salted fish	4 081	31 003	4 706	28 496	2 941	23 164
Other fish preparations	6 909	30 695	9 521	40 471	10 852	50 542
Total **a**	97 751	442 322	102 147	463 275	108 639	509 207
Crustaceans and molluscs						
Fresh, chilled or frozen **b**						
Prawns	10 107	151 439	10 600	147 543	10 356	175 607
Lobster	386	7 261	654	11 134	421	9 416
Scallops	1 157	16 215	1 665	25 928	1 856	28 388
Oysters	622	4 938	660	5 213	596	4 414
Mussels	2 476	7 997	2 284	7 563	1 772	7 038
Other	10 280	39 198	12 699	48 686	11 517	48 849
Canned	1 921	13 244	1 987	14 911	1 892	17 552
Extracts and pastes	192	1 041	70	336	123	587
Other	7 692	61 176	7 097	56 020	7 238	69 215
Total	34 833	302 510	37 718	317 332	35 770	361 067
Total edible **a**	132 584	744 832	139 865	780 607	144 409	870 273
Nonedible						
Pearls **c**	na	67 341	na	224 539	na	182 905
Fish meal	na	16 859	na	21 116	na	33 374
Ornamental fish	na	2 107	na	2 268	na	2 838
Marine fats and oils	na	7 077	na	7 443	na	9 540
Other marine products	na	41 775	na	55 168	na	52 897
Total nonedible	na	135 160	na	310 534	na	281 554
Total fisheries products	na	879 992	na	1 091 141	na	1 151 828

a Excludes live tonnage, but includes live value. **b** Includes dried and salted. **c** From 1999–2000 the value of pearl imports has been revised to take account of items temporarily exported. **p** Preliminary. **na** Not available.
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

29 Australian imports of fish

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Salmon						
Smoked	272	4 292	412	6 530	347	5 890
Frozen	5	119	133	255	28	150
Fresh or chilled	0	0	77	734	220	1 824
Total **a**	278	4 411	622	7 519	596	7 863
Hake						
Frozen						
Fillets	12 587	48 931	11 293	47 277	10 237	46 552
Whole	3	12	20	83	19	58
Mince	1 101	1 601	1 031	2 026	924	1 592
Total	13 691	50 544	12 344	49 386	11 180	48 202
Tuna						
Whole						
Fresh or chilled	215	915	92	460	82	488
Frozen	6 458	9 202	401	835	988	919
Total **a**	6 673	10 116	493	1 294	1 070	1 405
Other fish						
Live	na	0	na	54	na	22
Fresh or chilled whole	3 870	20 853	4 050	22 389	4 202	23 241
Frozen whole	5 422	12 819	5 254	15 815	5 729	16 187
Fresh or chilled fillets	221	1 224	718	3 265	261	1 497
Frozen fillets	23 344	107 975	26 608	127 588	26 770	138 978
Other fresh, chilled or frozen products	4 205	12 065	5 216	15 154	4 789	15 368
Canned fish						
Salmon	7 856	59 579	8 046	53 637	11 590	71 080
Tuna	14 454	68 505	16 898	66 217	21 507	76 348
Herrings	887	4 352	1 115	4 093	784	3 385
Sardines	3 695	18 263	4 758	22 559	4 769	25 365
Anchovy	637	6 979	754	7 353	671	7 514
Other	1 799	7 231	1 457	4 514	1 277	4 936
Total	29 328	164 910	33 027	158 374	40 597	188 628
Smoked						
Herrings	48	277	38	199	47	284
Liver and roes	1	13	2	52	3	50
Other	2 198	14 408	1 682	7 390	1 184	5 360
Total	2 248	14 697	1 722	7 641	1 234	5 695
Dried	451	6 417	541	7 519	595	8 765
Salted	1 109	5 597	2 031	6 806	765	2 814
Other fish preparations						
Fish meal	24	174	6	121	3	119
Fishballs, fishcake, sausages	1 709	6 708	2 223	8 579	2 324	9 893
Caviar and pastes	71	1 173	83	1 364	79	1 359
Other	5 105	22 642	7 209	30 407	8 447	39 171
Total	6 909	30 695	9 521	40 471	10 852	50 542
Total other fish **b**	77 109	377 251	88 688	405 075	95 793	451 737
Total fish b	97 751	442 322	102 147	463 275	108 639	509 207

a Excludes canned. **b** Excludes live tonnage but includes live value. **p** Preliminary. **na** Not available.
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

30 Australian imports of crustaceans and molluscs

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Canned and preserved						
Crabs	255	2 017	475	3 918	323	3 027
Prawns	5 654	51 147	5 133	45 373	5 217	57 917
Smoked molluscs	826	6 607	834	7 745	853	10 820
Other molluscs	652	3 429	535	2 630	547	2 770
Extracts and pastes	192	1 041	70	336	123	587
Other preserved	2 226	11 220	2 108	11 264	2 190	12 234
Total	9 805	75 462	9 155	71 267	9 252	87 354
Other						
Prawns						
Fresh, chilled or frozen	9 632	143 517	10 423	145 517	10 290	174 593
Other	476	7 922	177	2 026	65	1 014
Lobster	386	7 261	654	11 134	421	9 416
Scallops	1 157	16 215	1 665	25 928	1 856	28 388
Oysters	622	4 938	660	5 213	596	4 414
Mussels	2 476	7 997	2 284	7 563	1 772	7 038
Crabs	95	584	194	1 264	140	1 093
Calamari, squid and octopus	9 054	29 800	11 037	35 831	10 159	35 835
Other	1 131	8 815	1 467	11 591	1 218	11 921
Total	25 028	227 048	28 563	246 066	26 518	273 713
Total crustaceans and molluscs	34 833	302 510	37 718	317 332	35 770	361 067

p Preliminary.
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

31 Australian imports of edible fish, by source

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Fish (excluding canned)						
Tuna						
Indonesia	15	61	44	391	11	114
Japan	4 652	6 460	0	10	0	0
New Zealand	5	90	17	98	965	854
Papua New Guinea	194	764	73	345	67	401
Singapore	537	980	202	282	0	0
Thailand	130	202	156	159	27	34
Other	1 140	1 561	1	9	1	2
Total	6 673	10 116	493	1 294	1 070	1 405
Salmon						
Canada	21	294	0	3	0	2
Denmark	136	2 154	325	5 238	290	4 862
New Zealand	40	757	247	1 678	270	2 454
Other	81	1 206	51	601	36	544
Total	278	4 411	622	7 519	596	7 863
Hake						
Argentina	56	173	80	187	0	0
Chile	4 824	13 642	3 413	10 462	3 139	9 961
Chinese Taipei	86	357	16	63	14	55
Namibia	1 612	6 379	1 423	6 169	1 518	6 933
New Zealand	1 410	5 912	1 908	8 504	670	3 233
South Africa	5 367	22 185	4 951	22 043	5 149	24 893
Thailand	91	606	1	4	87	698
Uganda	33	158	319	1 160	310	1 345
Other	213	1 133	234	793	294	1 084
Total	13 691	50 544	12 344	49 386	11 180	48 202
Canned fish						
Canada	3 859	26 392	3 398	22 434	3 451	25 207
Chile	942	5 614	941	4 997	684	4 099
China	118	425	63	228	78	312
Denmark	80	528	280	3 359	443	6 497
Germany	534	3 049	710	2 665	500	2 251
Greece	191	1 732	137	1 252	168	1 304
Indonesia	354	1 794	415	1 440	70	250
Italy	484	5 102	614	5 176	588	5 336
Japan	94	456	21	124	40	223
Korea, Rep. of	163	577	156	592	382	1 812
Malaysia	377	1 916	119	361	118	457
Norway	344	3 989	419	5 086	364	4 632
Philippines	90	268	160	461	144	430
Portugal	166	679	242	1 006	172	663
Spain	78	1 617	93	1 003	239	2 648
Thailand	15 328	70 210	18 072	67 207	23 717	82 012
United Kingdom	409	3 843	628	4 863	730	5 277
United States	5 144	33 445	5 552	31 485	7 367	38 248
Other	573	3 273	1 006	4 635	1 343	6 968
Total	29 328	164 910	33 027	158 374	40 597	188 628

p Preliminary.
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

32 Australian imports of fresh, chilled or frozen fish, by source

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Fresh or chilled fish						
Whole						
Indonesia	58	218	33	201	188	228
New Zealand	3 560	19 715	3 891	22 116	4 080	24 021
Papua New Guinea	197	779	76	368	67	401
Solomon Islands	20	57	14	35	0	0
Viet Nam	200	668	137	459	63	291
Other	50	331	68	405	105	609
Total	4 086	21 767	4 219	23 583	4 504	25 550
Fillets						
Indonesia	7	32	27	134	4	13
New Zealand	174	983	217	1 534	175	1 023
South Africa	0	0	22	66	72	398
Other	40	208	452	1 530	10	62
Total	221	1 224	718	3 265	261	1 497
Frozen fish						
Whole						
Tuna						
Indonesia	1	2	32	332	8	109
Japan	4 652	6 460	0	10	0	0
New Zealand	0	0	8	47	953	776
Singapore	536	977	202	282	0	0
Thailand	130	202	156	159	27	34
Other	1 139	1 560	3	5	0	0
Total	6 458	9 202	401	835	988	919
Salmon						
Denmark	5	119	0	0	0	0
New Zealand	0	0	133	255	25	110
Norway	0	0	0	0	4	39
Other	0	0	0	0	0	0
Total	5	119	133	255	28	150
Other						
China	152	796	193	1 016	269	934
Indonesia	243	1 392	120	753	254	509
Japan	13	154	259	277	13	128
Netherlands	518	310	19	31	81	159
New Zealand	2 890	6 481	2 275	5 999	2 659	6 695
Singapore	37	142	35	273	27	164
South Africa	88	188	338	628	431	1 251
Thailand	138	327	192	529	302	830
United Kingdom	47	128	65	145	97	120
United States	483	472	451	488	555	680
Other	817	2 441	1 327	5 760	1 059	4 775
Total	5 425	12 831	5 274	15 898	5 747	16 245

Continued

32 Australian imports of fresh, chilled or frozen fish, by source *continued*

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Frozen fish *(continued)*						
Fillets						
Hake						
Argentina	56	173	80	187	0	0
Chile	3 960	12 338	2 897	9 647	2 428	8 738
Kenya	53	252	108	369	144	604
Namibia	1 612	6 379	1 415	6 142	1 518	6 933
New Zealand	1 387	5 872	1 428	7 351	509	2 969
South Africa	5 158	21 930	4 904	21 930	5 124	24 796
Thailand	91	606	1	4	87	698
Uganda	33	158	319	1 160	310	1 345
Other	238	1 223	142	487	118	469
Total	12 587	48 931	11 293	47 277	10 237	46 552
Other						
Argentina	140	543	915	2 640	492	1 581
Chile	268	765	1 608	5 190	931	3 642
China	417	1 427	416	1 188	625	1 798
Chinese Taipei	552	2 145	549	2 088	823	4 067
India	98	327	68	195	150	454
Indonesia	478	2 980	561	4 164	842	6 565
Kenya	2 929	13 600	2 506	8 791	2 054	8 990
Myanmar	345	2 123	531	4 077	416	3 437
Namibia	296	1 261	355	1 514	221	1 032
Netherlands	138	848	64	426	39	244
New Zealand	12 611	55 631	10 365	56 445	12 321	66 315
Singapore	167	974	359	2 675	268	2 362
South Africa	690	3 147	943	4 160	598	3 198
Tanzania	617	2 830	855	2 966	816	3 971
Thailand	1 068	5 777	938	5 796	956	6 978
Uganda	1 195	4 998	3 525	13 256	3 220	11 266
United Kingdom	280	1 892	356	2 002	194	1 253
Viet Nam	763	5 046	1 098	6 961	1 402	9 813
Other	293	1 660	594	3 054	402	2 009
Total	23 344	107 975	26 608	127 588	26 770	138 978

p Preliminary.
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

33 Australian imports of dried, salted or smoked fish, by source

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Dried or salted						
China	53	680	54	684	65	887
Greece	41	256	34	252	53	272
Italy	21	222	46	329	46	344
Iceland	66	549	65	536	66	564
New Zealand	1	49	5	204	1	58
Norway	149	1 736	166	1 796	183	2 211
Spain	19	105	30	158	18	115
Thailand	858	3 647	1 738	5 449	535	1 518
Viet Nam	92	950	89	870	77	761
Other	259	3 819	347	4 100	319	4 900
Total	1 561	12 014	2 574	14 377	1 363	11 630
Smoked						
Argentina	33	118	146	502	0	0
Canada	23	321	0	9	0	2
Denmark	476	8 343	357	5 827	292	4 882
Germany	27	480	29	437	25	400
Greece	16	79	16	71	15	67
Latvia	0	0	12	62	70	194
Netherlands	23	555	0	0	0	0
New Zealand	102	1 047	86	952	50	641
Philippines	16	92	13	67	23	143
South Africa	1 673	6 563	1 372	5 502	1 043	4 676
United Kingdom	42	285	60	349	38	267
Other	89	1 105	41	340	24	262
Total	2 520	18 989	2 132	14 118	1 578	11 534
Total dried, salted or smoked fish	4 081	31 003	4 706	28 496	2 941	23 164

p Preliminary.
Source: ABS, *International Trade,* electronic data service, cat. no. 5464.0, Canberra.

34 Australian imports of crustaceans and molluscs, by source

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Crustaceans (fresh, chilled or frozen)						
Lobster						
Cuba	49	832	41	701	38	840
New Zealand	15	301	3	65	0	6
Papua New Guinea	48	1 885	55	2 198	71	3 043
Thailand	83	1 118	185	2 323	178	2 927
United States	53	1 154	165	3 616	36	834
Viet Nam	75	921	102	1 293	50	883
Other	63	1 052	104	937	48	882
Total	386	7 261	654	11 134	421	9 416
Prawns						
Fresh, chilled or frozen						
China	27	181	81	985	160	3 468
Chinese Taipei	24	482	34	730	118	2 602
India	956	13 165	873	12 222	1 652	32 573
Indonesia	402	6 215	557	6 926	1 198	15 776
Malaysia	629	6 117	768	7 336	726	7 838
Myanmar	400	4 890	422	4 615	596	7 405
New Caledonia	432	6 260	306	4 721	186	3 164
Papua New Guinea	103	1 103	142	975	151	1 320
Singapore	175	2 133	163	1 938	232	2 591
Thailand	5 162	81 700	5 769	86 645	3 859	70 866
Viet Nam	1 059	17 921	1 081	15 085	1 256	24 825
Other	261	3 349	228	3 340	155	2 166
Total	9 632	143 517	10 423	145 517	10 290	174 593
Other						
Chinese Taipei	22	505	5	77	2	4
Indonesia	4	45	18	103	1	13
Malaysia	31	333	19	115	4	33
Singapore	74	746	1	6	0	0
Thailand	265	5 364	77	1 200	29	567
Viet Nam	39	302	45	352	24	309
Other	41	626	13	173	5	88
Total	476	7 922	177	2 026	65	1 014
Crabs						
India	0	0	15	72	6	31
Malaysia	0	1	4	18	4	22
Thailand	1	4	7	33	4	23
Viet Nam	76	454	149	1 040	114	910
Other	17	124	19	101	12	107
Total	95	584	194	1 264	140	1 093

Continued

34 Australian imports of crustaceans and molluscs, by source *(continued)*

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Molluscs (fresh, chilled or frozen)						
Scallops						
China	248	3 037	141	2 034	260	4 179
Indonesia	0	0	23	153	98	798
Japan	481	7 043	835	14 698	826	13 609
New Zealand	23	343	43	684	33	614
Peru	0	0	74	970	68	785
Thailand	329	4 271	366	5 592	396	6 274
Viet Nam	25	167	50	308	96	603
Other	51	1 353	135	1 489	78	1 526
Total	1 157	16 215	1 665	25 928	1 856	28 388
Mussels						
China	1	10	1	6	52	232
Denmark	0	0	16	86	56	292
New Zealand	2 473	7 975	2 252	7 391	1 655	6 465
Other	2	11	16	79	10	49
Total	2 476	7 997	2 284	7 563	1 772	7 038
Squid						
China	266	1 359	482	1 710	723	2 755
Chinese Taipei	3 931	11 980	4 249	13 252	4 198	14 733
Hong Kong, China	19	180	65	314	5	123
India	100	240	270	588	127	350
Indonesia	90	296	172	742	78	299
Japan	22	107	8	122	4	55
Korea, Rep. of	13	80	277	516	508	892
Malaysia	174	611	626	2 275	471	1 667
New Zealand	2 173	7 687	1 730	6 939	1 240	5 911
Peru	0	0	17	19	49	144
Singapore	18	141	19	86	53	204
Thailand	1 478	4 780	2 189	6 602	1 791	6 468
United States	172	347	346	614	393	492
Viet Nam	547	1 769	372	1 249	384	1 250
Other	52	222	215	804	137	492
Total	9 054	29 800	11 037	35 831	10 159	35 835
Crustaceans and molluscs (canned)						
China	303	2 360	373	2 705	400	3 643
Denmark	46	26	15	69	23	101
Korea, Rep. of	597	4 709	503	5 356	454	7 010
Malaysia	40	102	33	149	104	505
New Zealand	242	1 107	331	1 523	288	1 435
Singapore	117	839	22	135	9	55
Thailand	479	3 368	529	3 937	449	3 721
Other	97	732	181	1 036	165	1 083
Total	1 921	13 244	1 987	14 911	1 892	17 552

p Preliminary.
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

35 Australian imports of fisheries products, by source

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Edible (excluding live)						
Argentina	230	839	1 169	3 416	526	1 659
Canada	3 924	27 342	3 789	23 636	3 531	26 001
Chile	6 042	20 102	6 529	22 682	5 712	20 153
China	2 077	12 779	2 415	13 812	3 185	22 426
Chinese Taipei	5 228	17 695	5 165	17 664	5 568	23 329
Denmark	644	9 200	1 206	10 526	987	12 566
Germany	626	4 390	798	3 669	560	3 002
Hong Kong, China	155	2 641	269	3 943	141	3 436
India	1 667	15 080	1 654	14 506	2 409	35 420
Indonesia	2 020	15 551	2 209	16 802	3 240	28 886
Italy	508	5 348	666	5 586	638	5 747
Japan	5 849	19 409	1 614	20 832	1 370	19 300
Korea, Rep. of	1 528	7 676	1 239	8 002	1 734	12 067
Malaysia	3 412	23 626	4 336	28 488	4 553	34 138
Norway	622	7 071	633	7 217	599	7 285
New Zealand	31 466	133 619	30 331	146 293	31 817	153 232
Philippines	250	1 320	359	1 308	348	1 609
Singapore	1 623	9 433	1 476	8 859	1 108	9 003
South Africa	8 035	33 197	7 906	34 023	7 740	36 844
Spain	185	2 006	183	1 772	294	2 878
Thailand	33 929	235 126	39 454	238 069	40 819	243 645
United Kingdom	783	6 239	1 113	7 410	1 061	6 958
United States	6 392	37 955	6 973	38 044	8 826	42 579
Viet Nam	3 674	31 569	4 185	32 056	4 234	43 526
Other	11 715	65 620	14 194	71 939	13 410	74 563
Total	132 584	744 832	139 865	780 553	144 409	870 251
Nonedible						
Chile	na	642	na	391	na	637
Chinese Taipei	na	4 115	na	3 793	na	2 851
French Polynesia	na	7 507	na	6 022	na	3 432
Hong Kong, China	na	8 613	na	8 613	na	5 500
Indonesia	na	3 258	na	8 260	na	11 532
Japan	na	6 296	na	12 794	na	3 931
Malaysia	na	1 546	na	3 381	na	1 538
Netherlands	na	3 825	na	4 658	na	4 469
New Zealand	na	8 929	na	10 065	na	11 051
Peru	na	10 090	na	15 770	na	26 487
Philippines	na	483	na	9 126	na	3 984
Samoa	na	3 987	na	2 519	na	3 664
Singapore	na	1 613	na	3 595	na	2 230
Thailand	na	2 263	na	2 894	na	843
United States	na	22 952	na	37 058	na	32 784
Other	na	49 041	na	181 594	na	166 623
Total	na	135 160	na	310 534	na	281 554
Total imports	na	879 992	na	1 091 087	na	1 151 805

p Preliminary. **na** Not available.
Source: ABS, *International Trade,* electronic data service, cat. no. 5464.0, Canberra.

36 Australian seafood imports from selected countries, by product [a]

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Canada						
Canned fish	3 859	26 392	3 398	22 434	3 451	25 207
Smoked, dried or salted fish	57	791	24	69	21	82
Scallops	0	0	42	189	27	640
Other crustaceans and molluscs	1	8	0	8	0	2
Other	7	151	324	935	32	71
Total	3 924	27 342	3 789	23 636	3 531	26 001
Japan						
Frozen whole fish	4 664	6 614	259	288	13	128
Canned fish	94	456	21	124	40	223
Smoked, dried or salted fish	23	515	24	518	19	556
Other fish	342	2 675	271	2 810	237	2 399
Prawns	10	29	0	7	16	277
Scallops	481	7 043	835	14 698	826	13 609
Oysters	17	210	32	403	15	219
Mussels	0	0	1	4	0	3
Canned crustaceans and molluscs	8	33	0	2	1	13
Other crustaceans and molluscs	75	607	58	690	55	477
Other	135	1 226	114	1 288	147	1 396
Total	5 849	19 409	1 614	20 832	1 370	19 300
New Zealand						
Fresh and chilled whole fish	3 560	19 715	3 891	22 116	4 080	24 021
Frozen whole fish	2 890	6 481	2 415	6 301	3 636	7 581
Fresh and chilled fillets	174	983	217	1 534	175	1 023
Frozen fillets	13 998	61 503	11 793	63 796	12 829	69 285
Canned fish	1	12	65	362	108	655
Smoked, dried or salted fish	103	1 096	91	1 156	50	699
Other fish	2 363	8 142	3 400	13 077	4 055	15 702
Lobster	15	301	3	65	0	6
Scallops	23	343	43	684	33	614
Squid	2 173	7 687	1 730	6 939	1 240	5 911
Oysters	597	4 540	612	4 549	565	3 872
Mussels	2 473	7 975	2 252	7 391	1 655	6 465
Canned crustaceans and molluscs	242	1 107	331	1 523	288	1 435
Other crustaceans and molluscs	109	3 583	90	4 696	56	5 336
Extracts and pastes	86	401	57	263	65	268
Other	2 658	9 750	3 342	11 840	2 981	10 359
Total	31 466	133 619	30 331	146 293	31 817	153 232

Continued

36 Australian seafood imports from selected countries, by product [a] *(continued)*

	1998-99		1999-2000		2000-01 p	
	t	$'000	t	$'000	t	$'000
Thailand						
Frozen whole fish	268	528	348	689	329	864
Fillets	91	606	910	4 230	87	698
Canned fish	15 328	70 210	18 072	67 207	23 717	82 012
Smoked, dried or salted fish	873	3 712	1 744	5 489	535	1 524
Other fish	2 741	11 127	3 112	12 353	3 375	15 129
Prawns	5 427	87 063	5 846	87 845	3 888	71 433
Lobster	83	1 118	185	2 323	178	2 927
Scallops	329	4 271	366	5 592	396	6 274
Mussels	1	2	4	14	3	14
Canned crustaceans and molluscs	479	3 368	529	3 937	449	3 721
Other crustaceans and molluscs	2 170	7 645	3 025	10 086	2 550	9 980
Extracts and pastes	49	322	3	21	51	284
Other	6 090	45 155	5 310	38 281	5 261	48 785
Total	33 929	235 126	39 454	238 069	40 819	243 645
United States						
Frozen whole fish	483	472	451	488	555	680
Frozen fillets	75	450	34	170	73	423
Canned fish	5 144	33 445	5 552	31 485	7 367	38 248
Smoked, dried or salted fish	2	28	1	44	0	1
Other fish	98	689	50	363	38	390
Scallops	0	0	0	0	11	287
Canned crustaceans and molluscs	0	0	31	80	17	53
Other crustaceans and molluscs	173	359	462	938	393	495
Other	417	2 513	392	4 477	372	2 001
Total	6 392	37 955	6 973	38 044	8 826	42 579
APEC region						
Fresh and chilled whole fish	3 831	20 795	4 015	22 765	4 366	24 752
Frozen whole fish	10 064	18 818	4 704	13 256	5 433	12 521
Fresh and chilled fillets	185	1 049	691	3 150	180	1 038
Frozen fillets	17 073	77 042	14 956	81 949	16 741	93 573
Canned fish	25 564	135 719	28 053	124 805	35 500	149 692
Smoked, dried or salted fish	1 270	9 058	2 177	10 922	881	7 230
Other fish	6 311	27 371	8 271	36 208	9 503	45 265
Prawns	3	12	0	0	2	9
Lobster	245	5 261	497	8 927	322	7 450
Scallops	1 116	15 813	1 473	23 663	1 663	26 639
Oysters	622	4 938	660	5 213	596	4 414
Mussels	2 475	7 992	2 257	7 418	1 711	6 720
Canned crustaceans and molluscs	1 836	13 069	1 881	14 415	1 764	16 766
Other crustaceans and molluscs	9 390	35 739	11 429	43 242	10 561	44 201
Extracts and pastes	188	1 008	67	312	117	558
Other	18 222	177 704	19 319	177 466	17 380	185 059
Total	98 393	551 386	100 450	573 711	106 721	625 886

a Excludes live imports. **p** Preliminary.
Source: ABS, *International Trade,* electronic data service, cat. no. 5464.0, Canberra.