

# SEAFOOD OUTLOOK TO 2009-10

## quality not quantity the key for Australian producers

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- **Worldwide catches of fish are expected to remain fairly static over the medium term, whereas aquaculture production is projected to continue to rise.**
- **Australia produced \$2.2 billion of edible seafood products in 2003-04, of which around a third came from aquaculture. In the same year, Australian edible seafood exports were valued at \$1.3 billion and imports at \$905 million.**
- **An assumed easing of economic growth in major export markets is likely to place downward pressure on seafood prices.**

### Trends in world seafood markets

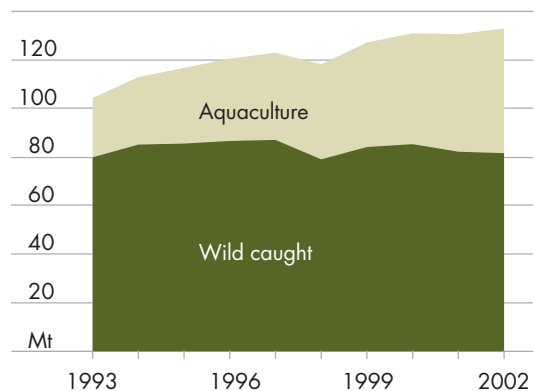
Global fisheries production in 2002 was at a record high, with around 133 million tonnes produced (FAO 2004a). World production of wild caught fisheries products has remained relatively static since the early 1990s (figure A). Forecasts of an upper limit of around 100 million tonnes made in the 1970s are being increasingly substantiated by the catches in recent years (FAO 2004b).

The number of fisheries around the world for which the current level of harvest is less than the maximum biological sustainable yield (termed biologically underexploited) continues to fall as global fishing pressure increases. It is estimated that in 2002 only 25 per cent of major marine fish stocks, or species groups for which informa-

tion is available, are biologically either underexploited or only moderately exploited. Around 47 per cent of major marine fish stocks are assessed as being fully exploited, and 18 per cent as overexploited. The remaining 10 per cent of stocks are significantly depleted or recovering. This means that production from around three quarters of global fish stocks cannot be expected to expand or increase in any substantial manner in the future (FAO 2004b).

Over the past thirty years, aquaculture production has increased at an average annual rate of 9.1 per cent a year (compared with 2.1 per cent a year for capture fisheries). Aquaculture production in 2002 was around 40 million tonnes or 30 per cent of total fisheries production (figure A). While world aquaculture production is expected to continue expanding in the future, the rate of expansion is projected to slow to between 0.4

### A World fisheries production



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per cent a year and 5.3 per cent a year (Brugere and Ridler 2004). The pace of growth in aquaculture production will depend to a large extent on movements in world seafood prices and harvest rates of wild fish stocks.

Global consumption of fish has doubled since 1973, with most of the growth occurring in developing countries, many of which have experienced rapid population growth, rapid income growth, and rapid urbanisation. China's share of global fish consumption increased from 11 per cent in 1973 to 26 per cent in 1997, while the share of India and south east Asia doubled to 11 per cent. In the same period, total fish consump-

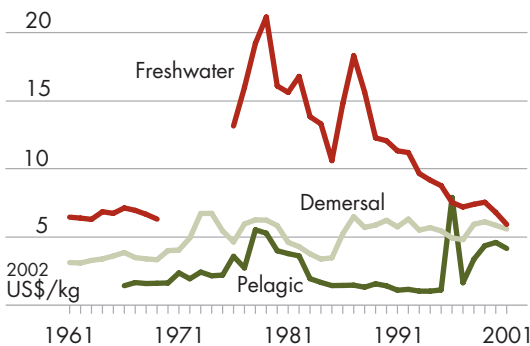
tion by the developed countries declined (Delgado et al. 2003).

As a consequence of rising demand for fisheries products and slow growth in wild catch supplies, the prices for fresh and frozen fish entering world trade has been maintained in real terms in recent decades (figure B). This is especially the case for demersal and pelagic fish species for which little aquaculture production is available. These constant real prices are in contrast to the prices for most animal origin foods, which have fallen significantly in real terms over the same period.

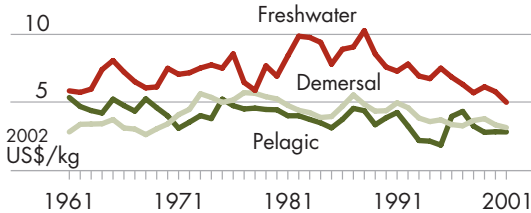
However, world prices have been declining for many freshwater fish species, such as salmon, for which aquaculture operations have reached industrial scale. Prices for farmed salmon have fallen in real terms as production from countries such as Chile and Norway have increased rapidly. Prices of canned finfish have also fallen with the decline in popularity of the product in developing countries.

## B World import prices for fisheries products In real terms

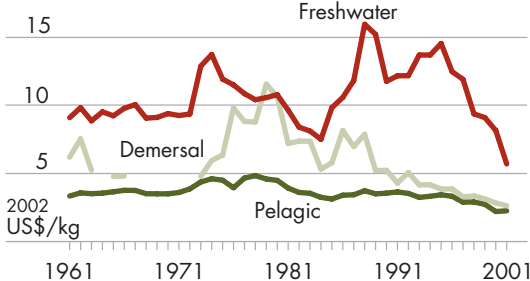
### Fresh/chilled fillets



### Frozen fillets



### Canned finfish



## Australian production and trade

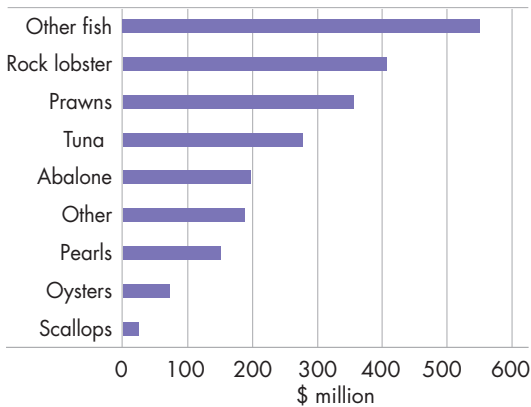
### Production increasing but value falling

Australia produced \$2.2 billion worth of fisheries products in 2003-04. Around 93 per cent of this production was edible products (seafood), while the remaining nonedible proportion was largely pearl production worth approximately \$150 million.

A wide range of species are produced in Australia. In 2003-04, finfish accounted for 38 per cent of the gross value of production, crustaceans 38 per cent and molluscs 22 per cent. The most valuable species produced in terms of their contribution to total fisheries gross value of production, were rock lobster, prawns, abalone and tuna (figure C). These are also the major exported products.

While the volume of total Australian fisheries production since 1994-95 increased by 15 per cent, the real value (in 2003-04 dollars) of that production fell by 4 per cent (figure D). Falling average real Australian prices for seafood products over the past decade, and particularly since 1999-2000 (figure E), have meant that although

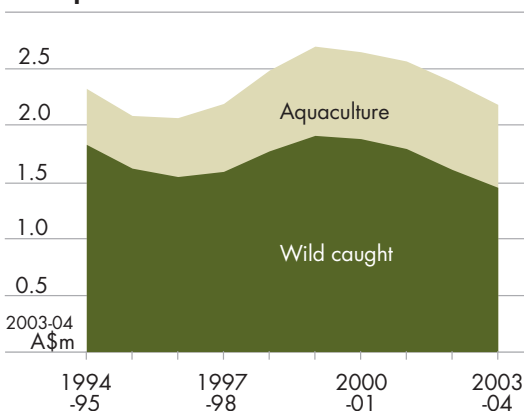
## C Australian production of key species, 2003-04



production levels have increased, the real value of Australia's fisheries production has not always kept pace. This was especially the case in 2002-03 and 2003-04 with the appreciation of the Australia dollar against the currencies of major trading partners.

Of the \$2.2 billion worth of seafood products produced in 2003-04, wild catch fisheries produced \$1.5 billion. Following global trends in wild caught harvest, this sector of Australia's fisheries production has been relatively stable over the past decade, with production fluctuating around 200 000 tonnes. However, wild caught production has increased in the past two years, mainly from finfish species other than tuna.

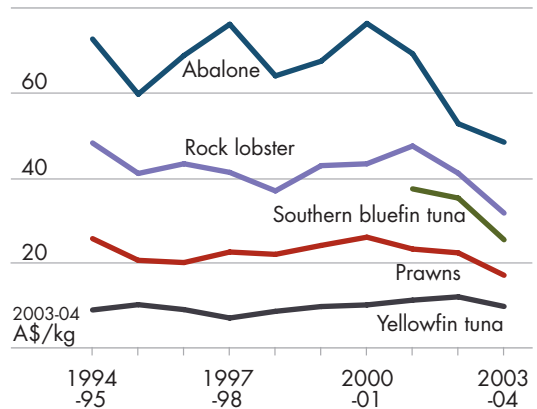
## D Gross value of Australian fisheries production



In 2003-04 production of wild caught fish species increased in New South Wales, South Australia and Western Australia. Most notably, catches of Australian salmon (New South Wales and Western Australia), pilchards (South Australia) and emperors (Western Australia) increased.

In the Commonwealth fisheries, the gillnet, hook and trap and Great Australian Bight fisheries increased production of finfish species. For the gillnet, hook and trap fishery, production of most species increased slightly in 2003-04. The Great Australian Bight fishery also had increased catches of most species, especially king flathead and bight redfish.

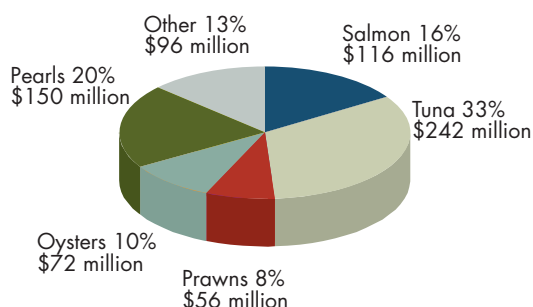
## E Australian export prices for key species



While the volume of wild caught production has increased by only 7 per cent over the past decade, aquaculture production increased by 80 per cent. Aquaculture production fell slightly, however, in 2003-04 to 43 000 tonnes. In 2003-04, aquaculture accounted for 16 per cent of total production by volume and 34 per cent by value, compared with 10 per cent and 21 per cent a decade earlier.

Major aquaculture species in Australia include southern bluefin tuna, Atlantic salmon, oysters and prawns (figure F). These four species accounted for 66 per cent of the value of total aquaculture production in 2003-04. Over 98 per cent of wild caught southern bluefin tuna is used

## F Gross value of production of key aquaculture species, 2003-04



for aquaculture growout operations. Aquaculture farms contribute 35 per cent of Australian prawn production, 5 per cent of abalone and all Atlantic salmon and oyster production.

### Australian exports fell in 2003-04

In volume terms, Australia is a small producer, ranked 53rd in the world. However, by value, Australia is a more significant seafood exporter, ranked 21st in the world (FAO 2004a). In 2003-04, Australia exported \$1.7 billion of fisheries products. Around 80 per cent of this was edible seafood products.

Japan continues to be Australia's main export market for edible fisheries products, with Hong

Kong and the United States the next largest destinations. Other major markets include Chinese Taipei, China and Singapore (figure G). In 2003-04 these six markets accounted for 92 per cent of Australia's exports by value and 81 per cent by volume.

The total value of Australian fisheries exports fell by 10 per cent in 2003-04 to \$1.65 billion. This fall was driven primarily by the 11 per cent fall in the value of edible exports by to \$1.3 billion. The value of exports to a number of Asian markets such as China, Chinese Taipei and Japan have not recovered to pre-SARS levels. The volume of exports to these markets has fallen slightly and their value has fallen because of falling world prices and appreciation of the Australian dollar.

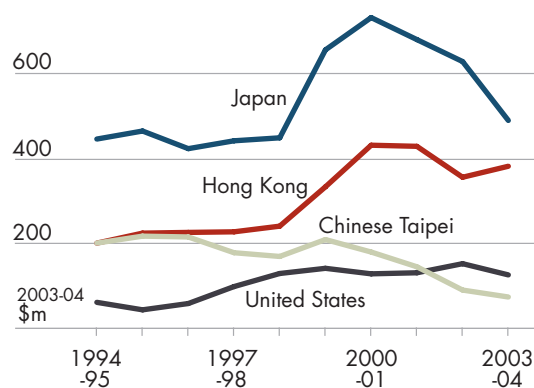
The Australian dollar continued to appreciate in 2003-04 relative to the US dollar (by 22 per cent) and the Japanese yen (by 13 per cent). As Australia is a small producer of fish and the export prices received by Australian producers are set in world markets, an appreciating Australian dollar results in lower export prices in Australian dollar terms. This explains a large part of the fall in the unit value of many of Australia's fisheries products in 2003-04. However, some products, such as abalone and scallops, have recovered over the past year, with their export value increasing by 10 per cent and 22 per cent respectively.

### Imports also fell in 2003-04

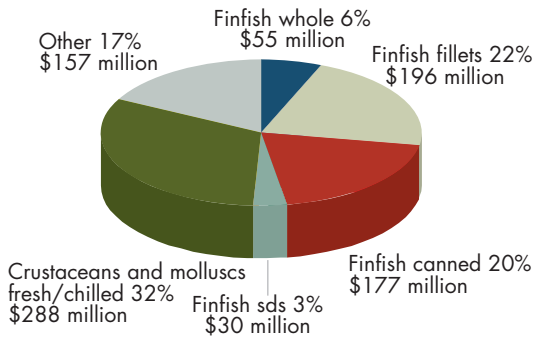
Australia imported \$1.1 billion of fisheries products in 2003-04, a fall of \$95 million from 2002-03. Over 80 per cent of the gross value of imports was edible fisheries products. The main products imported into Australia are frozen fish fillets (36 per cent of the gross value of seafood imports), prawns (34 per cent) and canned fish (33 per cent) (figure H).

Australia imports relatively large volumes of low value fish and crustaceans, and exports relatively small volumes of high value fish and crustaceans. In product weight terms, fish imports in 2003-04 were over three times that of exports, but the average unit value of exported fish was almost five times the value of imported fish products.

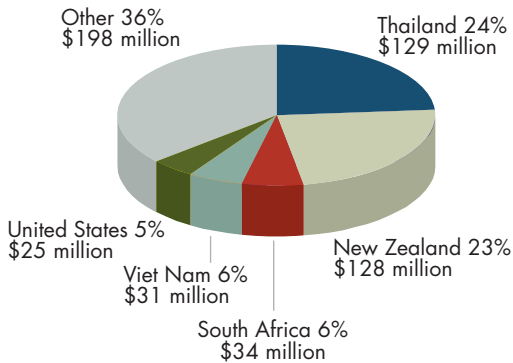
## G Major exporters of edible fisheries products



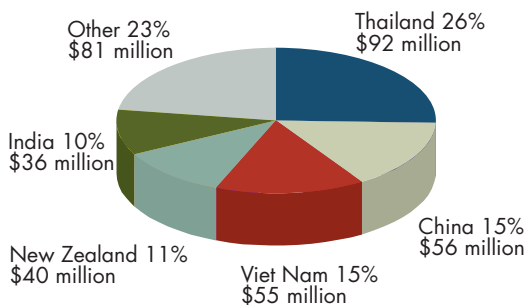
## H Australian imports of edible fisheries products, 2003-04



## I Australian imports of finfish, by source, 2003-04



## J Australian imports of crustaceans and molluscs, by source, 2003-04



Thailand and New Zealand dominate as the major sources of edible fisheries products imported in Australia (figures I, J), and together accounted for around 43 per cent of total edible imports by value in 2003-04. The remainder of edible imports originated from a number of countries including Viet Nam, China, India and South Africa.

Australia sourced over 57 per cent of its imported canned fish and 16 per cent of canned crustaceans and molluscs from Thailand in 2003-04. Thailand was also the second largest supplier of fresh, chilled and frozen prawns behind Viet Nam. New Zealand was the source of almost 40 per cent of Australian imports of fresh, chilled or frozen fish products, 27 per cent of fresh, chilled or frozen molluscs and 33 per cent of canned crustacean and mollusc imports.

The quantity of seafood imports increased by 60 per cent between 1994-95 and 2003-04. However, the real value of seafood imports increased by only 18 per cent. The increase in imports of finfish, and in particular canned finfish products, was responsible for the bulk of the increase in the quantity of seafood imports.

## Outlook for Australian production and trade

Overall, it is expected that the volume of Australian wild caught production will remain at around current levels over the medium term. Growth in Australian fisheries production will therefore depend on the expansion of aquaculture operations. However, aquaculture production over the past four years has not expanded as rapidly as earlier anticipated. Factors contributing to this lack of growth have been the appreciating Australian dollar, falling world prices for farmed species, and increased costs of production in Australia.

Low value imports of many species, most notably prawns, has led to increased competition for Australian fisheries products (wild caught and aquaculture) both in the domestic and export markets. Product marketing and seafood labeling initiatives will continue to be significant for Australian fishers and farmers in

the differentiation of their product. In particular, promoting the 'clean, green' nature of seafood production in Australia will be increasingly important in today's environment of higher environmental and health standards.

With the profile of Australian consumption not matching wild caught production (Love and Langenkamp 2002), many wild caught producers (and some aquaculturists) find it more profitable to export than to sell on the domestic market. The outlook for Australian exports is dependent on the competitiveness of Australian seafood products and the level of demand in our major export markets. A number of factors influence the level of seafood demand, including economic growth, population growth, the prices of seafood and substitute products (such as meat) and consumer tastes and preferences.

The assumed appreciation of the Australian dollar against the US dollar from US\$0.71 in 2003-04 to US\$0.74 in 2004-05 will tend to reduce the relative competitiveness of Australian seafood in export markets. The Australian dollar is assumed to depreciate slightly against the US dollar to US\$0.72 in 2005-06, and to continue to depreciate to US\$0.65 by 2009-10. This will improve the competitiveness of Australian exports in the medium term.

Stagnant wild caught production may lead to increased dependence on imports in some markets. However, the extent to which domestic aquaculture in these markets will substitute for wild caught products will also affect import demand.

### Major markets for Australian exports

Compared with 2004, Australia's major export markets in Asia are expected to experience a slight easing in economic growth in 2005 (Penm 2004). For example, economic growth in Japan is assumed to fall from 4 per cent in 2004 to 1.3 per cent in 2005 and 2006, and to remain around 1 per cent from 2007 to 2010. Economic growth in Hong Kong is expected to fall and growth in the United States is assumed to fall from 4.4 per cent in 2004 to 3.3 per cent in 2006 and remain at that level over the outlook period.

The slowdown in economic growth in these major markets could lead to a fall in demand

for Australian seafood. As mentioned above, ensuring that customers recognise the specific quality attributes of Australian seafood is likely to be an important factor determining the competitiveness of the product.

There is a strong chance that imports into Australia's other major export market, the United States, will increase significantly in the near future. Production from US wild catch fisheries have been declining since a peak in 1994. Rising population and increased consumption, combined with the assumption of static wild caught production and aquaculture production growing at the same rates as achieved in the 1990s, are expected to lead to an increased dependence on seafood imports in the United States (Love 2003).

Australia has recently negotiated trade agreements with New Zealand, Singapore, the United States and Thailand. These agreements have led to a reduction in many key tariffs for seafood. For example, many Thai seafood tariffs (ranging between 5 and 30 per cent) are to be phased out over a five year period. On 1 January 2005, Australia also announced its intention to enter into free trade agreements with ten ASEAN nations, expected to be concluded in 2007. It is expected that successful negotiations and resulting reduction in tariff barriers will lead to an increased volume of exports to these key markets over the longer term.

### Australian imports expected to remain low value products

Like exports, the demand for seafood imports into Australia is dependent on the same drivers, such as economic growth and the availability of substitutes. A key factor to note is the observation that Australian seafood imports have traditionally supplied the market for edible fisheries products not caught in Australian waters, such as low value fish fillets (Love and Langenkamp 2002). Thus it is unlikely that even with an increase in wild caught or aquaculture production, imports would fall dramatically. The extent that aquaculture production in particular will be able to replace imports is dependent on the import price and costs of production of the high value species such as prawns.



# 1 Medium term projections for Australia's fisheries products

	2002 -03	2003 -04	2004 -05 <sup>f</sup>	2005 -06 <sup>z</sup>	2006 -07 <sup>z</sup>	2007 -08 <sup>z</sup>	2008 -09 <sup>z</sup>	2009 -10 <sup>z</sup>
<b>Gross value of fisheries production</b>	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Tuna <sup>a</sup>	317	276	206	223	227	234	242	243
– real <sup>b</sup>	332	283	206	218	216	217	220	215
Other fish	560	550	668	550	556	566	572	706
– real <sup>b</sup>	587	564	668	537	531	526	519	625
Prawns <sup>c</sup>	360	355	335	346	348	351	353	353
– real <sup>b</sup>	377	363	335	338	332	327	320	313
Rock lobster	460	406	383	366	359	399	407	408
– real <sup>b</sup>	483	415	383	358	342	371	369	362
Abalone	216	196	199	197	208	220	223	223
– real <sup>b</sup>	226	201	199	192	198	204	202	197
Scallops	33	24	20	24	24	25	27	28
– real <sup>b</sup>	34	24	20	24	23	23	25	25
Other	360	373	336	355	355	357	237	236
– real <sup>b</sup>	377	382	336	347	339	332	215	209
Total	2 305	2 180	2 148	2 061	2 078	2 151	2 061	2 197
– real <sup>b</sup>	2 417	2 232	2 148	2 014	1 981	2 001	1 871	1 946
<b>Export value</b>								
Tuna <sup>a</sup>	321	273	169	193	202	209	231	244
– real <sup>b</sup>	337	280	169	189	192	194	210	216
Other fish	164	137	147	157	169	174	179	184
– real <sup>b</sup>	172	140	147	154	161	162	163	163
Prawns								
Headless	12	5	6	8	12	14	15	16
– real <sup>b</sup>	13	5	6	8	11	13	14	14
Whole	193	151	154	161	176	184	194	205
– real <sup>b</sup>	202	155	154	158	168	171	176	181
Rock lobster								
Tails	113	103	101	97	100	102	105	107
– real <sup>b</sup>	118	105	101	95	96	95	96	94
Whole	344	318	322	306	297	321	334	342
– real <sup>b</sup>	360	326	322	299	283	299	303	303
Abalone								
Fresh, chilled or frozen	109	117	123	120	135	141	143	142
– real <sup>b</sup>	115	120	123	118	129	131	129	126
Prepared or preserved	107	120	127	113	114	123	125	125
– real <sup>b</sup>	112	123	127	111	109	114	114	111
Scallops	29	35	24	28	28	28	31	32
– real <sup>b</sup>	30	36	24	28	27	26	28	28
Other fisheries products	121	81	76	121	113	111	119	116
– real <sup>b</sup>	127	83	76	118	108	104	108	103
<b>Total (excluding pearls)</b>	1 512	1 342	1 249	1 306	1 346	1 408	1 476	1 513
– real <sup>b</sup>	1 586	1 374	1 249	1 276	1 284	1 310	1 340	1 340
Pearls	332	310	279	300	300	320	320	320
– real <sup>b</sup>	348	318	279	293	286	298	290	283
<b>Total (including pearls)</b>	1 844	1 652	1 528	1 606	1 646	1 728	1 796	1 833
– real <sup>b</sup>	1 934	1 692	1 528	1 570	1 570	1 608	1 630	1 623

<sup>a</sup> Exports of tuna landed in Australia. Excludes tuna transhipped at sea or captured under joint venture or bilateral agreements. <sup>b</sup> In 2004-05 Australian dollars. <sup>c</sup> Includes headless and whole prawns only. <sup>f</sup> ABARE forecast. <sup>z</sup> ABARE projection.

Sources: Australian Bureau of Statistics; ABARE.

Following the destruction from the December 2004 tsunami to parts of the aquaculture and fishing fleets of many Asian nations, in particular Thailand, it may be expected that imports of canned fish and prawns from the affected regions in the near future may fall.

## Medium term projections

ABARE's medium term projections for the gross value of production and the gross value of exports (in both real and nominal terms) for Australian fisheries products (both edible and nonedible) are shown in table 1. Prospects for tuna, prawns, rock lobster and abalone in 2004-05 are discussed below.

### Tuna

The main high value tuna species caught in Australian waters are southern bluefin tuna, bigeye tuna, yellowfin tuna and albacore. Juvenile southern bluefin tuna caught off South Australia are transferred to farms and fattened. Farming significantly increases the volume of production of this species, which regularly accounts for 60–65 per cent of Australia's tuna production by weight. Wild caught production of other high value species, particularly yellowfin tuna but also bigeye and albacore, is also significant.

More than three quarters of Australian tuna production by weight is exported. Japan is the principal destination, receiving over 90 per cent of Australia's total tuna exports by weight and almost 99 per cent of southern bluefin tuna exports.

The gross value of tuna production is forecast to fall to around \$206 million in 2004-05 from \$276 million in 2003-04. The appreciation of the Australian dollar resulted in lower export prices for all tuna species. An increase in the supply of farmed northern bluefin tuna from the Mediterranean Sea is also placing downward pressure on the export prices of Australian farmed southern bluefin tuna. However, supply of Mediterranean northern bluefin tuna is not expected to increase significantly in the medium term.

Production of wild caught tuna species in the medium term is expected to remain static. As farmed production of southern bluefin tuna

is closely linked to a relatively static quota on wild catch, production of southern bluefin tuna is also expected to remain relatively static. The total value of tuna exports in the medium term therefore will be closely linked to movements in both the exchange rate and yen price of tuna.

### Prawns

The majority of Australia's prawns are harvested as wild catch from the northern waters off Queensland and the Northern Territory. A small but growing share of prawn production is farmed — the majority in Queensland. In 2003-04, 13 per cent of total prawn production in Australia was farmed.

Prawn production increased in 2003-04 from 26 000 tonnes in 2002-03 to 27 000 tonnes. The increase was largely the result of increases in wild caught harvest from the northern prawn fishery and increases in both wild caught and aquaculture production in Queensland. The value of production, however, was stable at \$355 million, with average beach prices falling by 4 per cent from 2002-03 to 2003-04.

The fall in prices is a reflection of the appreciating Australian dollar and increased competition on the domestic and international markets from low priced imports. In 2003-04 the volume of prawn imports from China (predominantly *P. vannamei*) increased by over 600 per cent to 3900 tonnes, China's share of fresh, chilled or frozen prawn imports increasing from 4 per cent in 2002-03 to 21 per cent in 2003-04. Average import prices of these prawns were around \$5 a kilogram less than average Australian beach prices (ABS 2004).

While the full impact on world aquaculture and wild caught production following the December 2004 tsunami in the Indian Ocean has not yet been determined, some impact on the world market can be expected. In 2002 Thailand and Indonesia were the second and third largest producers of farmed prawns behind China (FAO 2004a). It is possible therefore that a decrease in the level of production from these nations will lead to an increase in world prawn prices. However, the short production cycle of prawns means that unaffected aquaculture operations can rapidly increase production and that



once infrastructure is rebuilt in south east Asia, production can also be rapidly increased.

In the medium term it is expected that Australian wild caught production of prawns will remain relatively static. The rate of growth of the Australian farmed prawn industry will be influenced by competition from imported prawn product. Product labeling and differentiation of Australian versus imported product will also be important. The total value of prawn exports in the medium term will largely be dependent on the movements in the Australian dollar.

### Rock lobster

The bulk of Australian rock lobster is wild caught off Western Australia, and to a lesser extent in south east waters around New South Wales, Victoria and Tasmania. Australian production is forecast to fall by around 9 per cent from the second largest harvest on record in 2003-04 to 17 900 tonnes in 2004-05. It is expected that production will continue this decline in the subsequent two years with the lower recruitment of juvenile rock lobster in Western Australia.

Australian dollar beach prices of rock lobster fell by around 23 per cent in 2003-04, due to the appreciation of the Australian dollar and increased competition on the world market from Mexico, Cuba and South Africa. In the short to medium term, this competition and reduced demand is likely to place downward pressure on prices. This coupled with falling production is expected to lead to a fall in the gross value of production to \$383 million in 2004-05 from \$404 million in 2003-04.

### Abalone

Australian production of abalone is forecast to remain relatively stable from 2003-04 to 2004-05 at around 5800 tonnes, worth \$200 million. Abalone is currently harvested mainly from managed quota fisheries. Aquaculture production of abalone is expected to increase significantly over the next few years as production from farms in Victoria, South Australia, Tasmania and Western Australia come on stream. However, it is expected that wild fisheries will continue to provide the bulk of production in the medium term.

Like tuna, prawns and rock lobster, the abalone industry is highly export oriented, and like those other industries, the appreciating Australian dollar and lower demand from many Asian economies have had a negative impact on prices and export volumes. Over the medium term, the Australian dollar is expected to depreciate slightly against the US dollar. Combined with the expected increase in production from aquaculture operations, the value of abalone exports is expected to increase slightly to 2009-10.

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