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**Department of Agriculture and Water Resources** ABARES



# **Annual Fisheries Outlook**

Forecast to 2022-23

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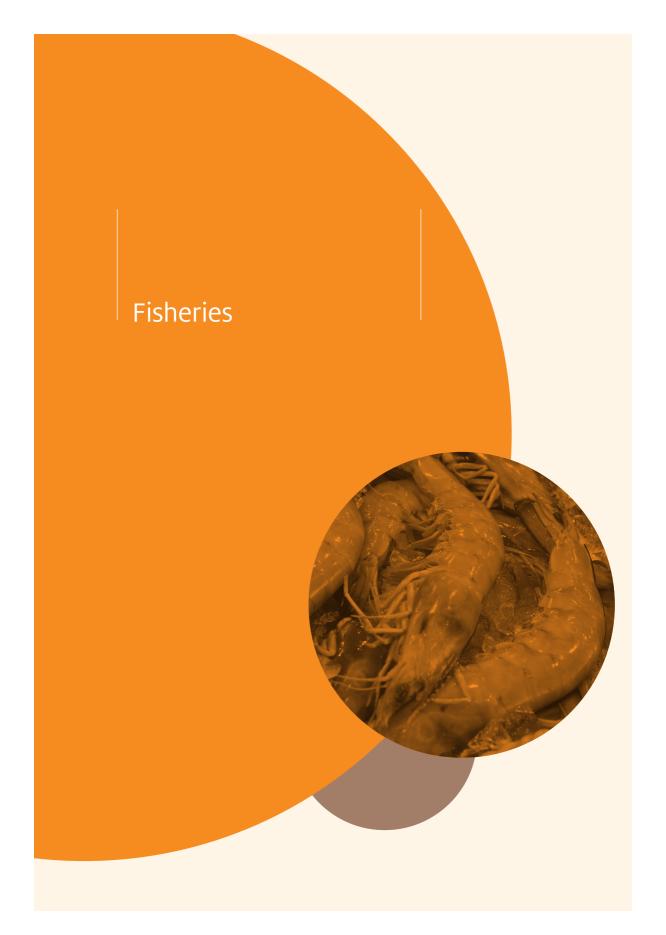
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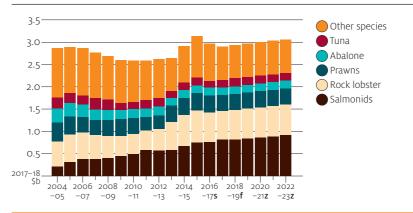
## Fisheries

## Outlook to 2022-23

David Mobsby, Andrea Bath and Robert Curtotti

- From 2018–19 to 2022–23 the value of Australia's fisheries and aquaculture production is projected to rise by 4 per cent in real terms to reach \$3.1 billion (in 2017–18 dollars).
- Salmonid aquaculture production, primarily for domestic consumption, is projected to contribute most to gross value of production, averaging \$858 million annually (in 2017–18 dollars) from 2018–19 to 2022–23.
- Between 2018–19 and 2022–23 the value of Australia's fishery product exports is projected to decline marginally in real terms to around \$1.5 billion (in 2017–18 dollars).
- Rock lobster, abalone, tuna and prawns are projected to contribute most to fisheries product export value across the medium term (2018–19 to 2022–23). Between 2018–19 and 2022–23 these commodities will account for around 80 per cent of export value.

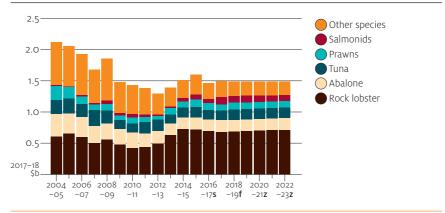
Over the outlook period to 2022–23, the value of Australia's fisheries and aquaculture production is projected to increase by 4 per cent in real terms to \$3.1 billion (in 2017–18 dollars). This increase will be supported by growth in Australia's aquaculture sector, particularly for salmonids. Rock lobster, the most valuable wild-caught species produced in Australia, is projected to increase in production value and remain the second most valuable fisheries and aquaculture species, after salmonids.



Gross value of Australian fishery and aquaculture production, 2004–05 to 2022–23

f ABARES forecast. s ABARES estimate. z ABARES projection.

Over the medium term, the value of Australia's fisheries product exports is projected to decline marginally to around \$1.5 billion in real terms (in 2017–18 dollars). Rock lobster, abalone, tuna and prawns will remain the most valuable fisheries product exports, accounting for around 80 per cent of export value over the outlook period.

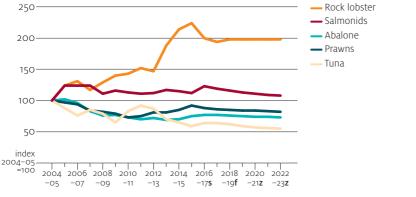


#### Australian fisheries product export value, 2004-05 to 2022-23

f ABARES forecast. s ABARES estimate. z ABARES projection.

Over the medium term, prices received for fish species caught in Australian fisheries are projected to remain more stable compared with price movements between 2004–05 and 2016–17. This reflects an assumed stability in the Australian dollar exchange rate over the medium term. Over the medium term, the assumed exchange rate is expected to support prices in export markets and limit competition in the local market from fish product imports. These factors are likely to result in low levels of price volatility for products sold on the international and domestic market.





#### f ABARES forecast. s ABARES estimate. z ABARES projection.

## Seafood consumption to 2022–23

The OECD-FAO (2017) agricultural outlook projects that global seafood consumption will rise by 13.0 million tonnes over the medium term to 189.8 million tonnes by 2023. Growth in seafood consumption is projected to be met largely by increased aquaculture production, which will grow to 96.2 million tonnes by 2023. Income and population growth will drive increased seafood consumption in key seafood-consuming regions in Asia, particularly China (with 7.6 million tonnes growth between 2017 and 2023), Indonesia (1.2 million tonnes) and India (1 million tonnes). However, the pattern of growth in seafood consumption in these regions is likely to be influenced by some key trends. Rising numbers of urbanised and high-income communities in Asia's larger cities will increase the pressure on supply chains to deliver fresh seafood using more convenient selling platforms. Increased online selling of seafood and selling through supermarkets is expected as consumers in urban areas opt for convenience. Consumers are also likely to become more discerning about the provenance of seafood. Sellers may respond by adopting technologies and processes that prove their supply chains are ethical and sustainable.

Australia's export seafood supply chains are well positioned to adapt to changes in seafood markets. Recent tariff reductions under Australia's free trade agreements with China, the Republic of Korea and Japan are expected to support export demand for Australian fisheries products over the medium term. Relatively stable exchange rates would also help Australia maintain market share in the key seafood-consuming regions in Asia. Many of Australia's larger seafood enterprises have processes in place to ensure sustainability, and Australia's robust fishery management systems help provide assurance to international buyers that Australian seafood is a quality sustainable product.

In Australia, per person consumption of seafood has been relatively stable in recent years, averaging 14.5 kilograms over the decade to 2015–16. However, seafood marketing in the domestic market is becoming increasingly sophisticated. Over the medium term, marketing is expected to continue to focus on seafood as a healthier alternative to other forms of protein. Seafood is featuring more prominently on supermarket shelves, with innovations in packaging making the product more attractive for consumers. Online selling of seafood is also increasingly being used to bring seafood to consumers, particularly in large Australian coastal metropolitan centres where retailers have access to fresh seafood and suitable transport infrastructure.

## **Key species outlook**

#### Lobster

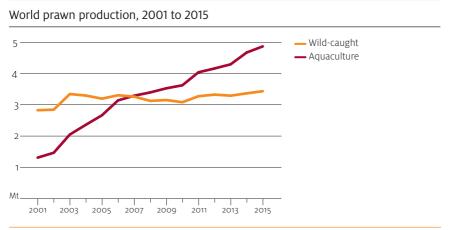
Between 2006 and 2015 global lobster production increased by 22 per cent to 310,571 tonnes. Canada and the United States accounted for most of the growth in world output during that period (FAO 2018). Over the same period the value of lobster exports from Canada and the United States increased by US\$879 million in real terms to US\$2.4 billion (in 2017 US dollars)(UN Statistics Division 2018). Between 2012 and 2016 the value of lobster exports to China from Canada and the United States more than tripled to US\$231 million, driven largely by abundant supplies of relatively cheap lobster from North America (FAO 2017b).

The value of Australian rock lobster production is forecast to rise by 5 per cent in 2018–19 to \$678 million, reflecting increased production and higher average beach prices. The value of rock lobster exports is forecast to rise by 4 per cent in 2018–19 to \$703 million, in line with production and assumed movements in the Australian dollar exchange rate. The Australian dollar exchange rate and import demand from Asia are expected to be key influences on beach prices over the medium term. In particular, increased demand for rock lobster from a growing middle class in China is anticipated to increase lobster import demand to that market. Australian rock lobster exports to China will be supported by a reduction in tariffs. Under the China–Australia Free Trade Agreement, Australian exports of unfrozen rock lobster to China will attract a tariff of 3 per cent in 2018 (a 3 percentage point reduction on 2017) and will be admitted duty-free from 2019 onwards. However, the assumption of a relatively stable Australian dollar and export competition for this market, particularly from North American exporters, is expected to limit increases on beach prices.

#### Prawns

World prawn production is estimated to have been 8.3 million tonnes in 2015 (FAO 2018). Since 2008 most global prawn production has been sourced from the growing aquaculture sector, particularly from farms in Asia. Shrimp and prawns are a major globally traded seafood product group and in 2015 were the second most valuable seafood product group, after salmonids (FAO 2017a).

Australia is a relatively minor producer of prawns but supplies and exports a range of high-quality species. Australia also imports a significant quantity of prawns to meet domestic consumption. Between 2012–13 and 2016–17 Australian exports of prawns averaged \$98 million and imports averaged \$421 million (in 2017–18 dollars). Australian prawn exports tend to be high unit value products, but imports are typically more processed and have lower unit values. Australian exports and imports target different market segments.



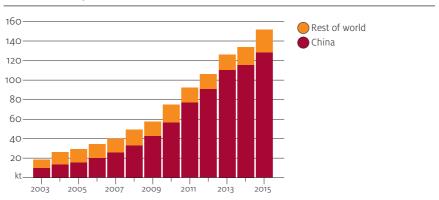
Source: FAO (2018)

In 2018–19 the value of Australian prawn production is forecast to rise by 6 per cent to \$375 million and export value to rise by 8 per cent to \$112 million. This forecast is supported by an expected increase in wild-caught production, reflecting an assumed return to an average level of tiger prawn catch in the Commonwealth Northern Prawn Fishery from the below average level of catch estimated for 2017–18. Most of Australian prawn production is wild-caught, but the share of aquaculture-produced prawns is increasing. From 2006–07 to 2015–16 the share of production volume derived from farmed prawns increased from 16 per cent to 19 per cent. Queensland aquaculture production volume. In 2016–17 prawn farms in the Logan River region of southern Queensland were destocked following an outbreak of white spot disease. This is expected to have a significant impact on output in affected regions, particularly in 2017–18. However, production in non-affected regions is expected to increase. Farms in the affected region will lay fallow until 31 May 2018 (Biosecurity Queensland 2017).

Over the medium term, aquaculture prawn production is projected to rise, supported by an expected production recovery in farms recently affected by white spot disease. In contrast, wild-caught prawn production is expected to remain largely unchanged. A planned large-scale prawn farm in the Northern Territory could significantly increase aquaculture prawn production beyond projections if the farm becomes operational over the outlook period. The value of Australian prawn production is projected to be lower in real terms in 2022–23 compared with 2018–19. This reflects the outlook for lower average unit values in real terms over the projection period more than offsetting projected increased production.

#### Abalone

World abalone production increased by around 111,000 tonnes from 41,128 tonnes in 2006 to 151,973 tonnes in 2015 (FAO 2018). This was driven by an increase in aquaculture abalone production from 25,638 tonnes in 2006 to 141,871 tonnes in 2015. Much of the global increase occurred in China, where production rose by 108,011 tonnes to 127,967 tonnes between 2006 and 2015. While global aquaculture abalone has grown substantially, the volume of wild-caught abalone has continued to fall. Between 2006 and 2015 wild-caught abalone production fell from 15,490 tonnes to 10,102 tonnes, driven partly by declining global wild-caught production, global prices of abalone have gradually fallen, reflecting increased global supply of aquaculture-produced abalone.



World abalone production, 2003 to 2015

Source FAO (2018)

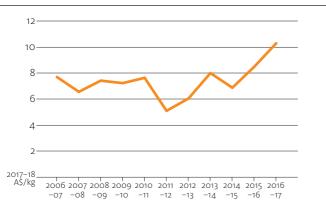
In 2018–19 the value of Australian abalone production is forecast to remain largely unchanged at \$170 million. A forecast increase in the value of aquaculture-produced abalone will be offset by a forecast decline in the value of wild-caught abalone. Australian aquaculture abalone production has risen significantly over recent years (increasing by 62 per cent to 757 tonnes between 2006–07 and 2015–16) and is expected to continue to expand over the medium term. In contrast, wild-caught production declined by 32 per cent between 2006–07 and 2015–16. Over the medium term, wild-caught volumes are expected to remain constrained by the assumption of conservatively set total allowable catch. By 2022–23 the value of Australian abalone production is forecast to increase to \$174 million (in 2017–18 dollars), reflecting growth in aquaculture production.

Australia produces species of abalone not produced in China. This should support Australian exports to major trading partners over the medium term. Under the China–Australia Free Trade Agreement, exports of abalone from Australia to China will be admitted duty-free from 2019 onwards. Despite being the world's largest producer of abalone, China has become an increasingly important export market for Australian abalone. Reduced barriers to trade should support exports to this market. In 2022–23 the value of Australian abalone exports is projected to be \$195 million (in 2017–18 dollars).

## Salmonids

Global production of salmonids (including salmon, trout and smelt) reached 4.5 million tonnes in 2015. The largest producers—both through aquaculture—are Norway (31 per cent of global production) and Chile (18 per cent) (FAO 2018). In contrast, Australia accounted for only 1 per cent of global production.

In 2016 production issues in Norway and Chile contributed to a global supply shortage. Norwegian farmed salmon were affected by an outbreak of sea lice. In Chile, algae blooms caused mass fish deaths. As a result of the supply shortage, international salmonid prices increased during 2015–16 and 2016–17.



International salmonid price, 2006–07 to 2016–17

#### Source: IMF (2018)

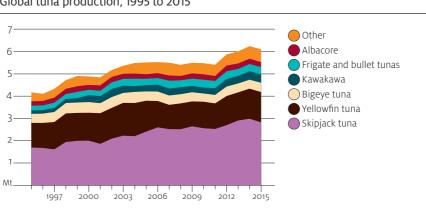
During 2016–17 high international prices for salmonids resulted in an estimated increase in Australian domestic prices, increasing total production value to \$740 million despite an 8 per cent decline in production volumes. As international supply returns in 2018–19, a forecast decline in international prices will have a flow-on effect on domestic prices. In 2018–19 total domestic production is forecast to increase by 3 per cent to 59,165 tonnes (\$812 million).

Australia exports a relatively small proportion of Australian salmonid production. In the decade to 2016–17, an average of 12 per cent of production was exported. In 2018–19 the volume of salmonid exports is forecast to decline by 5 percent to around 10,300 tonnes, as a results of falling international prices. The value of exports is forecast to fall from the high of \$119 million in 2017–18 to \$112 million in 2018–19.

By 2022–23 salmonid production is forecast to increase to 71,600 tonnes. This represents a more conservative growth level of salmonid production compared with previous years of growth as producers adjust to environmental restrictions. To support production levels, Tasmania's main salmonid producers are exploring alternative sites for farmed salmon at Bruny Island, Storm Bay and Okehampton Bay. The value of Australian salmonid production is projected to reach \$910 million (in 2017–18 dollars) by 2022–23. Export volumes in the medium term are forecast to decline by 9 per cent from the higher levels of 2018–19 (around 10,300 tonnes) as international prices decline. However, expanding domestic production will support export volumes remaining high compared with historical levels at around 9,400 tonnes in 2022–23. In 2022–23 export earnings are projected to decline to \$95 million (in 2017–18 dollars) in line with lower export volumes.

#### Tuna

Global tuna production includes large volumes of the major species skipjack. vellowfin and bigeve tuna, as well as smaller volumes of species such as albacore and southern bluefin. Each species has a distinct tuna market that determines value. Skipjack is the largest in terms of volume for global production. It is used primarily in the canned tuna market and a large portion is processed in Thailand. As a result of low production and labour costs for canning in South-East Asian countries, Australia does not compete in the canned market. However, Australia is competitive in fresh and frozen premium tuna markets for species such as southern bluefin, yellowfin and bigeye.



Global tuna production, 1995 to 2015

Most of Australia's tuna production is from the Southern Bluefin Tuna Fishery (SBTF) in South Australia. Smaller quantities are produced at the Eastern Tuna and Billfish Fishery (ETBF), which extends from Cape York in Queensland to the South Australian/Victorian border. Tuna species from the ETBF include albacore, yellowfin and bigeye. Southern bluefin tuna from the SBTF are caught as wild juveniles using purse seine methods and then fattened in farms near Port Lincoln, South Australia. Australian tuna production is estimated to increase in 2018–19 to 13,382 tonnes, driven by an increase in the total allowable commercial catch for the SBTF. The value of production is forecast to increase in 2018–19 to \$183 million, driven by the tuna export market.

Between 2006–07 and 2016–17 Australia exported on average around 10,800 tonnes of tuna a year. Exports are primarily southern bluefin tuna destined for the Japanese sashimi market. Export volumes are anticipated to rise in 2018–19 along with production volumes, increasing by 5 per cent to 11,900 tonnes. Export prices in 2018–19 are forecast to rise by 8 per cent to \$166 million due to an assumed weakening of the Australian dollar against the yen.

Source: FAO (2018)

Over the medium term, the volume of tuna production is expected to remain steady at around 13,400 tonnes. The total allowable commercial catch for the Australian SBTF is determined by an international governing body, the Commission for the Conservation of Southern Bluefin Tuna. This ensures the global southern bluefin tuna fishery is being utilised sustainably. The commission has set the total allowable commercial catch for Australia at 6,165 tonne per annum through to 2020. A similar level of total allowable commercial catch is assumed for the remaining forecast period to 2022–23. However, this represents a conservative level, with potential for the total allowable commercial catch to increase beyond 2020. The value of production is projected to decline from 2018–19 to \$176 million (in 2017–18 dollars) in 2022–23. Export volumes are estimated to remain at similar levels to 2018–19, reaching 12,100 tonnes in 2022–23. In contrast, export value is estimated to decline by 3 per cent in real terms. Lower prices are projected in the medium term due to longer-term trends of lower tuna imports and lower consumption per capita of seafood in Japan.

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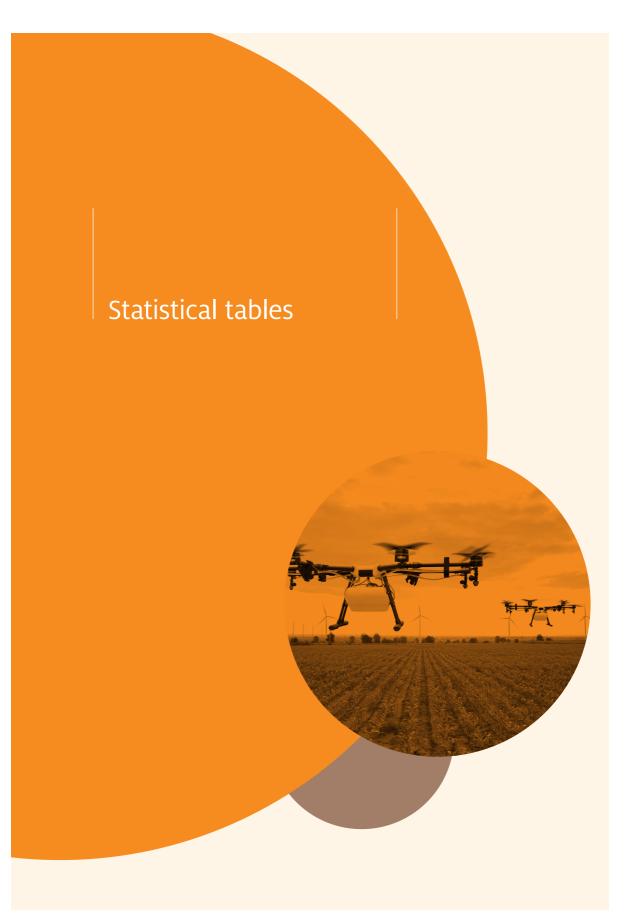
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### Outlook for fisheries

		2015–16	2016–17 s	2017–18 f	2018–19 f	2019–20 z	2020–21 z	2021–22 z	2022–23 z
Gross value of fisheries products									
Fish									
Tuna a	\$m	171	153	171	187	188	193	197	199
real <b>b</b>	\$m	177	156	171	183	180	180	179	176
Salmonids c	\$m	718	740	810	830	871	919	971	1,027
real <b>b</b>	\$m	744	754	810	812	831	855	881	910
Other fish	\$m	523	475	428	438	448	459	469	480
real <b>b</b>	\$m	542	484	428	428	428	427	426	426
Crustaceans									
Prawns	\$m	388	378	355	375	383	392	401	410
real <b>b</b>	\$m	402	385	355	367	366	365	364	364
Rock lobster <b>d</b>	\$m	695	649	648	678	706	733	756	778
real <b>b</b>	\$m	720	662	648	663	674	682	686	689
Other crustaceans	\$m	63.6	59.8	61.1	61.3	61.6	61.8	62.1	62.3
real <b>b</b>	\$m	66.0	61.0	61.1	60.0	58.8	57.6	56.4	55.2
Molluscs									
Abalone	\$m	160	174	170	170	175	181	188	197
real <b>b</b>	\$m	166	177	170	166	167	169	171	174
Other molluscs	\$m	231	229	210	208	230	238	245	252
real <b>b</b>	\$m	239	233	210	204	219	222	223	224
Other nei	\$m	77.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3
real <b>b</b>	\$m	80.1	53.4	52.3	51.2	49.9	48.7	47.5	46.4
Total value	\$m	3,026	2,910	2,904	2,999	3,116	3,229	3,342	3,458
real <b>b</b>	\$m	3,138	2,967	2,904	2,933	2,973	3,006	3,035	3,064
Fisheries export value									
Fish									
Tuna	\$m	163	144	148	169	171	175	179	181
real <b>b</b>	\$m	169	147	148	166	163	163	162	161
Salmonids	\$m	79.9	58.9	135	112	112	107	107	107
real <b>b</b>	\$m	82.9	60.1	135	109	107	99.8	97.3	94.9
Other fish	\$m	111	103	98.4	85.4	86.7	88.0	89.7	91.8
real <b>b</b>	\$m	116	105	98.4	83.5	82.7	81.9	81.5	81.3
Crustaceans and molluscs									
Abalone	\$m	182	187	187	189	196	203	211	220
real <b>b</b>	\$m	189	191	187	185	187	189	192	195
Prawns	\$m	114	114	104	112	115	117	119	122
real <b>b</b>	\$m	119	117	104	110	109	109	108	108
Rock lobster	\$m	693	676	679	703	727	753	778	801
real <b>b</b>	\$m	719	690	679	687	694	701	706	710
Pearls	\$m	95.9	75.4	69.6	73.9	73.1	72.4	71.7	71.0
real <b>b</b>	\$m	99.5	76.9	69.6	72.3	69.8	67.4	65.1	62.9
Other crustaceans and molluscs	\$m	74.1	48.5	51.7	47.4	48.3	49.3	50.5	51.8
real <b>b</b>	\$m	76.9	49.4	51.7	46.4	46.1	45.9	45.9	45.9
Other fisheries products	\$m	27.5	27.2	30.6	28.4	28.7	29.1	28.7	28.8
real <b>b</b>	\$m	28.5	27.7	30.6	27.7	27.3	27.1	26.1	25.5
Total fisheries products	\$m	1,542	1,435	1,503	1,520	1,557	1,594	1,634	1,674
real <b>b</b>	\$m	1,599	1,463	1,503	1,487	1,486	1,484	1,484	1,484

a Exports of tuna landed in Australia. Excludes tuna transhipped at sea or captured under joint venture or bilateral agreements. b In 2017–18 Australian dollars. c Predominantly salmon. Includes trout and salmon-like products. d Includes Queensland bugs. f ABARES forecast. s ABARES estimate. z ABARES projection.

Sources: ABARES; Australian Bureau of Statistics



Commodity	unit	2013–14	2014–15	2015–16	2016–17 s	2017–18 f	2018–19 f
Fisheries I							
Tuna	kt	10.7	12.4	14.2	12.5	12.8	13.4
Salmonids m	kt	41.8	48.6	56.3	51.8	57.4	59.2
Other fish	kt	102	102	123	114	104	104
Prawns	kt	25.0	25.5	24.6	24.5	22.8	24.2
Rock lobster <b>n</b>	kt	10.5	10.3	10.1	10.4	10.5	10.5
Abalone	kt	4.7	4.6	4.2	4.3	4.1	4.1
Scallops	kt	4.4	4.3	5.0	4.8	4.8	4.4
Oysters	kt	11.6	11.0	11.3	11.5	8.3	7.7
Other molluscs	kt	5.9	7.2	7.6	7.1	7.1	7.1
Other crustaceans	kt	5.5	5.6	5.2	4.8	4.8	4.8

#### TABLE 12 Agricultural, fisheries and forestry commodity production Australia

f ABARES forecast.

I Liveweight. m Includes salmon and trout production. n Includes Queensland bugs. s ABARES estimate.

Note: Series break in 2015–16. Prior to 2015–16 figures are based on establishments with an estimated value of agricultural operations (EVAO) of \$5,000. From 2015–16 (inclusive) figures are based on establishments with an EVAO of \$40,000.

Sources: ABARES; Australian Bureau of Statistics; Australian Fisheries Management Authority; Dairy Australia; Department of Fisheries, Western Australia; Department of Primary Industries, Parks, Water and Environment, Tasmania; Fisheries Queensland, Department of Agriculture, Fisheries and Forestry; Fisheries Victoria, Department of Primary Industries; Industry & Investment New South Wales; Northern Territory Department of Regional Development, Primary Industry, Fisheries and Resources; Primary Industries and Regions, Fisheries, South Australia; Pulse Australia; Raw Cotton Marketing Advisory Committee; South Australian Research and Development Institute; state and territory forest services; various Australian forestry industries

Commodity	unit	2013–14	2014–15	2015–16	2016–17 s	2017–18 f	2018–19 f
Fisheries products n							
Tuna	\$m	147	161	171	153	171	187
Salmonids <b>o</b>	\$m	543	631	718	740	810	830
Other fish <b>p</b>	\$m	405	435	523	475	428	438
Prawns	\$m	339	365	388	378	355	375
Rock lobster <b>q</b>	\$m	588	668	695	649	648	678
Other crustaceans	\$m	63.9	65.1	63.6	59.8	61.1	61.3
Abalone	\$m	164	164	160	174	170	170
Scallops	\$m	11.3	11.3	14.0	13.6	13.8	13.3
Oysters	\$m	91.3	93.0	97.0	100	79.7	75.3
Pearls	\$m	60.7	67.9	78.4	69.0	71.7	73.0
Other molluscs	\$m	33.5	40.8	41.5	45.5	45.0	46.6
Other <b>nei</b>	\$m	27.1	67.7	77.3	52.3	52.3	52.3
Total fisheries products	\$m	2,473	2,769	3,026	2,910	2,904	2,999

#### TABLE 13 Gross value of farm, fisheries and forestry production Australia

n Value to fishers of product landed in Australia. o Includes salmon and trout production. p Includes an estimated value of aquaculture. q Includes Queensland bugs. s ABARES estimate.

Notes: The gross value of production is the value placed on recorded production at the wholesale prices realised in the marketplace. The point of measurement can vary between commodities. Generally the marketplace is the metropolitan market in each state and territory. However, where commodities are consumed locally or where they become raw material for a secondary industry, these points are presumed to be the marketplace. Prices used in these calculations exclude GST. Series break in 2015–16. Prior to 2015–16 figures are based on establishments with an estimated value of agricultural operations (EVAO) of \$5,000. From 2015–16 (inclusive) figures are based on establishments with an EVAO of \$40,000.

Sources: ABARES; Australian Bureau of Statistics

Commodity	unit	2013–14	2014–15	2015–16	2016–17 s	2017–18 f	2018–19 f
Fisheries products							
Tuna	kt	11.0	12.1	13.8	10.7	11.2	11.9
Salmonids	kt	1.8	5.0	8.0	5.0	12.5	10.3
Other fish	kt	5.8	6.5	20.6	15.5	7.9	6.9
Abalone	kt	2.7	2.6	2.6	2.6	2.5	2.5
Prawns	kt	7.1	6.5	6.7	7.0	6.5	6.9
Rock lobster	kt	8.0	8.2	8.0	8.6	8.8	8.8
Other crustaceans and molluscs	kt	2.5	2.4	2.4	2.0	1.8	1.8
Total edible k	kt	38.9	43.3	62.1	51.4	51.4	49.1

#### TABLE 16 Volume of agricultural and fisheries exports Australia

a Includes the grain equivalent of malt. b Includes the grain equivalent of wheat flour. c Includes soybeans, linseed, sunflower seed, safflower seed and peanuts. Excludes meals and oils. d Excludes cotton waste and linters. e Includes buffalo. f ABARES forecast. g Includes dairy cattle and buffalo. h Includes breeding stock. i Australian Bureau of Statistics recorded trade data adjusted for changes in stock levels held overseas. j Includes ghee, dry butterfat, butter concentrate and butter oil, and dairy spreads, all expressed as butter. k total non-edible export volume not available. s ABARES estimates.

Sources: ABARES; Australian Bureau of Statistics; Department of Foreign Affairs and Trade; UN Commodity Trade Statistics Database (UN Comtrade)

Commodity	unit	2013–14	2014–15	2015-16	2016–17 s	2017–18 f	2018–19 f
Fisheries products							
Tuna	\$m	136	151	163	144	148	169
Salmonids	\$m	17.4	48.1	79.9	58.9	135	112
Other fish	\$m	72.5	72.1	111	103	98.4	85.4
Abalone	\$m	170	174	182	187	187	189
Prawns	\$m	101	94.2	114	114	104	112
Rock lobster	\$m	590	691	693	676	679	703
Other crustaceans and molluscs	\$m	51.6	62.3	74.1	48.5	51.7	47.4
Pearls	\$m	144	111	95.9	75.4	69.6	73.9
Other fisheries products	\$m	21.5	36.2	27.5	27.2	30.6	28.4
Total fisheries products	\$m	1,304	1,440	1,542	1,435	1,503	1,520

#### TABLE 17 Value of agricultural and fisheries exports (fob) Australia

Sources: ABARES; Australian Bureau of Statistics; Department of Agriculture and Water Resources, Canberra; UN Commodity Trade Statistics Database (UN Comtrade)

Commodity	unit	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Edible a							
Fish							
Live	kt	0.9	0.8	0.9	0.8	0.8	0.8
Tuna	kt	8.9	8.9	11.0	12.1	13.8	10.7
Salmonids	kt	5.8	2.6	1.8	5.0	8.0	5.0
Swordfish	kt	0.5	0.5	0.4	0.5	0.6	0.5
Whiting	kt	0.9	0.4	0.1	0.0	0.0	0.0
Other fish	kt	5.1	4.7	4.4	5.3	19.2	14.2
Total fish	kt	22.0	17.8	18.6	23.6	42.4	31.2
Crustaceans and molluscs							
Rock lobster	kt	6.9	7.8	8.0	8.2	8.0	8.6
Prawns	kt	5.4	3.9	7.1	6.5	6.7	7.0
Abalone	kt	3.1	2.8	2.7	2.6	2.6	2.6
Scallops	kt	0.4	0.4	0.5	0.3	0.4	0.4
Crabs	kt	0.8	0.4	0.4	0.6	0.6	0.5
Other crustaceans and molluscs	kt	1.7	2.1	1.6	1.6	1.5	1.1
Total crustaceans and molluscs	kt	18.4	17.5	20.3	19.7	19.7	20.1
Total edible fisheries products	kt	40.5	35.3	38.9	43.3	62.1	51.4

TABLE 23 Volume of fisheries products exports Australia

a Includes prepared and preserved.

Commodity	unit	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Edible							
Fish							
Live	\$m	32.0	30.7	34.2	29.9	30.2	31.6
Tuna	\$m	163	163	136	151	163	144
Salmonids	\$m	41.8	25.4	17.4	48.1	79.9	58.9
Swordfish	\$m	4.2	3.9	3.9	4.4	6.9	7.5
Whiting	\$m	2.5	1.4	0.2	0.1	0.0	0.1
Other fish	\$m	46.2	34.2	34.2	37.7	74.3	63.5
Total fish	\$m	289	258	225	271	355	306
Crustaceans and molluscs							
Rock lobster	\$m	387	447	590	691	693	676
Prawns	\$m	66.7	51.8	101	94.2	114	114
Abalone	\$m	197	186	170	174	182	187
Scallops	\$m	15.3	10.8	13.6	10.7	11.7	12.0
Crabs	\$m	11.0	8.2	5.5	7.9	7.6	7.7
Other crustaceans and molluscs	\$m	34.4	40.2	32.5	43.7	54.8	28.8
Total crustaceans and molluscs	\$m	711	744	913	1,021	1,064	1,026
Total edible fisheries products	\$m	1,001	1,002	1,138	1,293	1,418	1,333
Non-edible							
Marine fats and oils	\$m	7.3	10.0	9.1	20.9	11.2	10.0
Fish meal	\$m	0.4	1.0	0.7	1.0	0.5	1.1
Pearls a	\$m	207	152	144	111	96	75
Ornamental fish	\$m	2.3	3.8	2.0	1.9	2.1	2.4
Other non-edible	\$m	9.4	6.5	9.7	12.3	13.8	13.8
Total non-edible fisheries products	\$m	226	173	166	147	123	103
Total fisheries products	\$m	1,227	1,175	1,304	1,440	1,542	1,435

## TABLE 24 Value of fisheries products exports (fob) Australia

a Includes items temporarily exported and re-imported.

Commodity	unit	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Edible a							
Fish							
Tuna	kt	40.8	46.9	50.1	49.2	44.9	47.9
Salmonids	kt	10.2	11.9	14.2	16.1	15.1	14.7
Hake	kt	5.3	6.1	4.5	4.9	5.1	5.7
Swordfish	kt	0.2	0.2	0.2	0.2	0.2	0.1
Toothfish	kt	0.1	0.2	0.2	0.1	0.2	0.1
Herrings	kt	0.9	1.8	0.9	1.1	2.2	0.8
Shark	kt	0.5	0.5	0.7	0.6	0.4	0.2
Other fish	kt	86.6	92.8	90.0	87.6	86.4	87.2
Total fish <b>b</b>	kt	144	161	161	160	154	157
Crustaceans and molluscs							
Prawns	kt	37.5	34.8	38.7	32.4	31.9	31.8
Lobster	kt	0.9	0.8	1.0	1.1	0.9	1.2
Crabs	kt	1.5	1.5	2.1	2.0	1.9	1.7
Mussels	kt	2.8	3.7	3.6	3.1	3.3	3.6
Scallops	kt	3.0	3.1	3.5	2.9	2.6	3.0
Squid and octopus	kt	17.0	19.9	23.2	22.3	23.4	23.9
Other crustaceans and molluscs	kt	7.3	4.1	4.8	4.0	4.2	4.3
Total crustaceans and molluscs	kt	69.8	67.9	76.7	67.8	68.3	69.5
Total edible fisheries products abc	kt	214	228	238	228	223	226

TABLE 25 Volume of fisheries products imports Australia

a Includes prepared and preserved. b Excludes live tonnage. c Includes other fisheries products not classified into fish or crustaceans and molluscs.

Commodity	unit	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Edible a							
Fish							
Tuna	\$m	206	258	296	284	275	303
Salmonids	\$m	91.8	119	167	191	185	217
Hake	\$m	20.9	23.4	19.5	21.8	23.6	23.1
Swordfish	\$m	1.2	1.7	1.4	1.7	1.6	1.2
Toothfish	\$m	1.3	2.2	3.0	3.5	8.2	4.7
Herrings	\$m	4.2	5.1	4.5	3.9	5.7	4.2
Shark	\$m	4.0	4.6	5.5	4.9	3.9	2.2
Other fish	\$m	460	480	508	544	570	577
Total fish <b>b</b>	\$m	789	894	1,005	1,055	1,073	1,132
Crustaceans and molluscs							
Prawns	\$m	351	305	495	431	401	402
Lobster	\$m	16.0	15.3	22.4	28.3	29.9	33.8
Crabs	\$m	15.5	16.8	28.3	31.1	28.7	24.9
Mussels	\$m	11.7	17.1	19.1	17.9	20.0	21.7
Scallops	\$m	43.6	41.1	52.9	49.6	55.0	68.6
Squid and octopus	\$m	90.4	97.7	114	112	135	167
Other crustaceans and molluscs	\$m	57.0	40.7	44.0	42.9	50.7	49.8
Total crustaceans and molluscs	\$m	585	533	776	712	720	768
Total edible fisheries products abc	\$m	1,374	1,428	1,781	1,767	1,793	1,900
Non-edible							
Pearls d	\$m	138	105	102	97.2	144	132
Fish meal	\$m	34.2	43.3	43.2	64.3	61.7	60.8
Ornamental fish	\$m	3.7	4.0	4.5	4.4	4.9	4.2
Marine fats and oils	\$m	39.5	39.1	40.1	52.7	61.1	56.0
Other marine products	\$m	17.1	29.0	30.4	22.2	21.3	22.7
Total non-edible fisheries products	\$m	233	221	220	241	293	275
Total fisheries products	\$m	1,607	1,648	2,002	2,008	2,086	2,175

#### TABLE 26 Value of fisheries products imports Australia

a Includes prepared and preserved. b Includes live value. c Includes other fisheries products not classified into fish or crustaceans and molluscs. d Mainly re-imports.

Trade	unit	2011-12	2012-13	2013–14	2014–15	2015–16	2016-17
Exports							
Edible (including live)							
Hong Kong	\$m	479	317	209	192	224	203
Vietnam	\$m	60.5	293	566	716	682	574
Japan	\$m	255	236	192	192	205	194
China	\$m	58.5	45.2	36.6	48.7	105	170
Singapore	\$m	42.5	31.0	34.2	35.0	35.3	37.7
United States	\$m	23.1	17.9	22.1	28.0	44.8	38.2
Taiwan	\$m	17.5	9.8	13.7	15.1	20.9	13.4
Thailand	\$m	18.1	9.3	8.0	10.0	9.4	11.8
New Zealand	\$m	10.1	9.1	14.5	13.9	19.9	17.0
Malaysia	\$m	7.7	7.8	9.9	11.2	7.5	17.5
Indonesia	\$m	6.1	7.4	9.9	9.3	10.0	12.5
Non-edible							
Hong Kong	\$m	96.6	54.3	74.6	55.9	53.2	29.3
Japan	\$m	44.4	33.0	26.9	23.4	24.0	29.8
United States	\$m	22.2	21.0	19.2	16.6	21.6	14.4
Imports							
Edible (excluding live)							
Thailand	\$m	362	400	417	422	416	455
New Zealand	\$m	197	206	207	190	200	215
China	\$m	231	196	342	285	292	305
Vietnam	\$m	174	163	232	233	243	243
Malaysia	\$m	73.2	81.0	97.9	94.7	88.9	101
United States	\$m	45.1	52.2	56.0	53.0	54.9	51.1
Indonesia	\$m	36.3	50.9	73.5	85.6	89.5	78.8
Taiwan	\$m	38.9	48.1	44.5	58.3	60.3	55.4
South Africa	\$m	31.3	35.1	31.6	27.5	27.7	26.5
Denmark	\$m	25.3	32.2	44.8	58.2	47.7	61.8
Norway	\$m	27.1	29.9	45.4	68.1	66.8	91.3

TABLE 27 Value of Australian fisheries products trade, by selected countries Australia

## Abbreviations

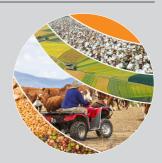
lb	pound	454 grams
kg	kilogram	2.20462 pounds
t	tonne	1,000 kilograms
kt	kilotonne	1,000 tonnes
Mt	megatonne	1,000,000 tonnes
L	litre	1.761 pints
kL	kilolitre	1,000 litres
ML	megalitre	1,000,000 litres
GL	gigalitre	1,000,000,000 litres
ha	hectare	2.471 acres
m <sup>3</sup>	cubic metre	1.307 cubic yards
C	cent (Australian)	
A\$	dollar (Australian)	
\$m	million dollars (Australian)	
DM	deutschmark	
ECU	European currency unit	
€	euro	
£	pound sterling	
USc	cent (United States)	
US\$	dollar (United States)	
¥	yen	
cif	cost, insurance and freight	
CW	carcase weight	
SW	shipped weight	
fas	free alongside ship	
fob	free on board	
fot	free on truck	
na	not available	
nec	not elsewhere classified	
nei	not elsewhere included	
nfd	not further defined	
ABARE		tural and Resource Economics
ABARES		tural and Resource Economics and Sciences
ABS	Australian Bureau of Statistic	
ANZSIC		Standard Industrial Classification
BAE	Bureau of Agricultural Econo	
BRS	Bureau of Rural Sciences (no	
CIS	Commonwealth of Independ	
EVAO	Estimated value of agricultura	
FAO	Food and Agriculture Organiz	zation of the United Nations
USDA	United States Department of	Agriculture

All values and prices are in nominal terms unless stated in table footnotes.

Small discrepancies in totals are generally caused by rounding. Zero is used to denote nil or a negligible amount.

### The 'Biosphere' Graphic Element

The biosphere is a key part of the department's visual identity. Individual biospheres are used to visually describe the diverse nature of the work we do as a department, in Australia and internationally.



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