Australian Government
Department of Agriculture, Water and the Environment
ABARES

Australian fisheries and aquaculture statistics 2018

Research by the Australian Bureau of Agricultural and Resource Economics and Sciences

APRIL 2020

Cataloguing data
This publication (and any material sourced from it) should be attributed as: Steven, AH, Mobsby, D and Curtotti, R 2020, *Australian fisheries and aquaculture statistics 2018*, Fisheries Research and Development Corporation project 2019-093, ABARES, Canberra, April. CC BY 4.0. https://doi.org/10.25814/5de0959d55bab.

ISBN 978-1-74323-479-2
ISSN 2205-0094

This publication is available at awe.gov.au/abares.

Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES)
Postal address GPO Box 858 Canberra ACT 2601
Switchboard 1800 900 090
Email info.abares@agriculture.gov.au
Web awe.gov.au/abares

Professional independence
The views and analysis presented in ABARES publications, including this one, reflect ABARES professionally independent findings, based on scientific and economic concepts, principles, information and data. These views, analysis and findings may not reflect or be consistent with the views or positions of the Australian Government, or of organisations or groups who have commissioned ABARES reports or analysis. More information on professional independence is provided on the ABARES website at agriculture.gov.au/abares/about/research-and-analysis#professional-independence.

Disclaimer
The Australian Government acting through the Department of Agriculture, Water and the Environment, represented by the Australian Bureau of Agricultural and Resource Economics and Sciences, has exercised due care and skill in preparing and compiling the information and data in this publication. Notwithstanding, the Department of Agriculture, Water and the Environment, ABARES, its employees and advisers disclaim all liability, including liability for negligence and for any loss, damage, injury, expense or cost incurred by any person as a result of accessing, using or relying on any of the information or data in this publication to the maximum extent permitted by law.

Acknowledgements

FRDC
FISHERIES RESEARCH & DEVELOPMENT CORPORATION

ABARES thanks state and territory fisheries departments and the Australian Fisheries Management Authority, researchers and industry representatives for contributing fisheries and aquaculture production data presented in this report. Thanks also to the commodities data management team from ABARES for help preparing data and the Australian Bureau of Statistics for trade data. *Australian fisheries and aquaculture statistics 2018* is supported by funding from the Fisheries Research and Development Corporation and ABARES.

Note
Commercial fish and invertebrates are referred to in this report by the names specified in Australian Fish Names Standard AS SSA 5300–2019.

Contents

Tables

Maps

Boxes

Chapter 1
Snapshot

↑4%
to **$3.18 billion**
in 2017–18

Production
Production value increased largely as a result of growth in Salmonids and a number of wild-caught species.

↑10%
to **$1.58 billion**
in 2017–18

Exports
Export value increased as a result of higher export earning from Rock Lobsters and Salmonids.

↑0.3%
to **$2.18 billion**
in 2017–18

Imports
Import value increased marginally as a result of a decline in non-edible imports partially offsetting increased seafood imports.

341kt
of seafood
was consumed
in 2017–18

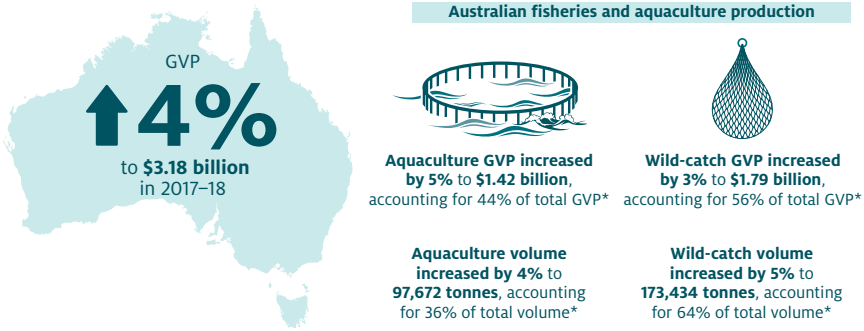
Consumption
Apparent consumption of seafood remained largely unchanged in 2017–18. Imports accounted for 65% of consumption.

17,000
people employed
in 2017–18

Employment
11,000 people were employed in wild-catch fisheries and 6,000 people were employed in aquaculture.

Chapter 2

Australian fisheries and aquaculture production



Note: *Per cent of total amount not adjusted for Southern Bluefin Tuna caught in the Commonwealth Southern Bluefin Tuna Fishery, as an input to farms in South Australia.
Source: ABARES

GVP increases by 4% in 2017–18 to $3.18 billion

The gross value of production (GVP) of Australian fisheries and aquaculture increased by 4% to $3.18 billion in 2017–18. Total production volume increased by 4% to 265,975 tonnes in 2017–18 (Figure 1).

Higher volumes of Salmonids, predominantly Atlantic Salmon produced in Tasmania's Salmonids aquaculture industry, combined with increased landings of several wild-caught species and higher export unit values for Western Rock Lobster and Southern Rock Lobster and Abalone accounted for most of the growth in GVP in 2017–18.

Wild-catch GVP increased by 3% to $1.79 billion, accounting for 56% of total GVP in 2017–18. In the same year, wild-catch volume increased by 4% to 173,430 tonnes, accounting for 64% of total fisheries and aquaculture production volume. Higher catch of Australian Sardines (2,531 tonnes higher, 6% increase from 2016–17), Scallops (1,633 tonnes higher, a 27% increase from 2016–17) and Tunas (651 tonnes higher, an 8% increase from 2016–17) contributed most to higher wild-catch landings in 2017–18.

GVP of aquaculture increased by 5% to $1.42 billion in 2017–18—the fourth consecutive rise since 2013–14, lifting the sector's contribution to 44% of total GVP. Production volume of aquaculture increased by 4% to 97,406 tonnes in the same year, accounting for 36% of total fisheries and aquaculture production—up from 26% a decade earlier.

The three highest producing states in terms of total GVP (wild-catch and aquaculture) in 2017–18 were:

- Tasmania ($1,068 million, a 13% increase from 2016–17)
- Western Australia ($634 million, a 2% increase from 2016–17)
- South Australia ($470 million, a 3% decrease from 2016–17).

These three jurisdictions together accounted for 68% of total GVP in 2017–18.

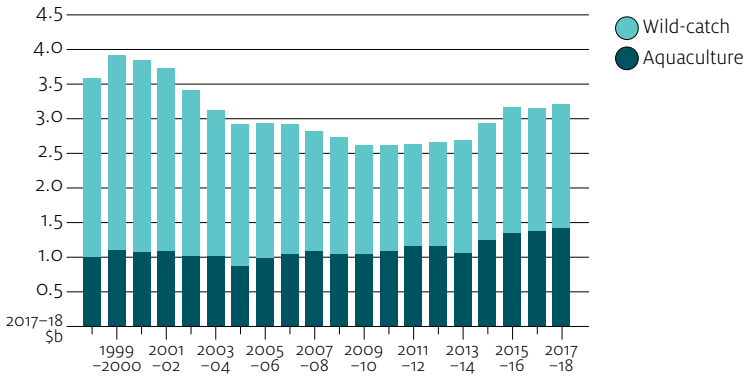
The three most valuable species groups (wild-catch and aquaculture) in 2017–18 were:

- Salmonids ($855 million, a 13% increase from 2016–17)
- Rock Lobsters ($713 million, a 8% increase from 2016–17)
- Prawns ($361 million, a 9% decrease from 2016–17).

These three species groups together accounted for 61% of total GVP in 2017–18.

As fisheries products move through the supply chain to final consumption additional value is created through value adding, beyond the economic impacts derived from GVP alone. The overall value added by the seafood sector to the Australian economy has been recently estimated to amount to $5.3 billion (BDO Econsearch & IMAS 2019).

FIGURE 1 Wild-catch and aquaculture GVP, 1998–99 to 2017–18



Source: ABARES

Wild-catch fisheries recovering after steep declines in early 2000s

In 2017–18 the GVP of wild-catch fisheries (including state and Commonwealth) was $1.79 billion—a 3% increase from the previous financial year, continuing a period of growth that commenced in 2012–13 (Figure 2). The increase in GVP since 2012–13 is largely due to the increasing value of Rock Lobsters.

The three most valuable wild-catch jurisdictions in 2017–18, in terms of GVP, were:

- Western Australia ($554 million, a 5% increase from 2016–17)
- Commonwealth ($390 million, 3% decrease from 2016–17)
- South Australia ($264 million, 4% increase from 2016–17).

The three most valuable wild–caught species in 2017–18 were:

- Rock Lobsters ($713 million, a 8% increase from 2016–17)
- Prawns ($280 million, a 10% decrease from 2016–17)
- Abalone ($151 million, a 6% increase from 2016–17).

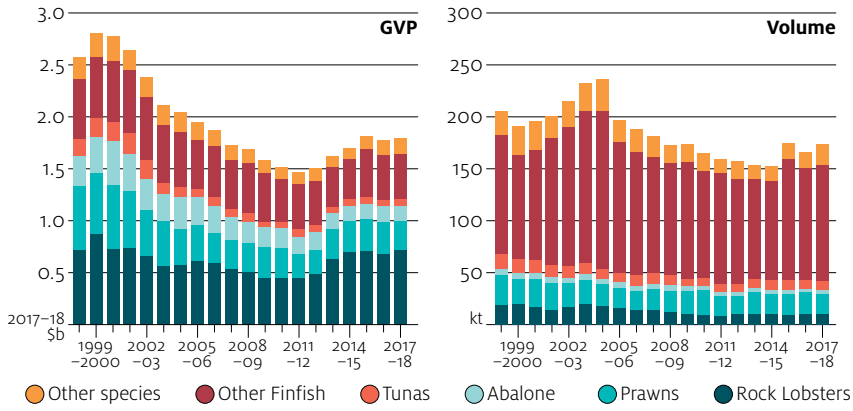
Growing demand for Rock Lobsters (largely for Western Rock Lobster and Southern Rock Lobster) in China and an industry focus on direct exports of live products to that market have resulted in higher unit prices in recent years. Moreover, increased total allowable catch (TAC) of Western Rock Lobster since 2012–13, and the scaling down of tariffs for direct exports of Rock Lobsters to China following the introduction of the China Australia Free Trade Agreement (ChAFTA), has resulted in higher volume of exports of Rock Lobsters, which has flowed through to higher GVP from this species. The ChAFTA eliminated tariffs on Australian seafood in 2019. Since 2015 tariffs for Rock Lobsters and Abalone, amongst a number of other species, steadily declined and are now zero for products exported to China. For more information on the ChAFTA see Exports by destination.

The decline in wild-caught GVP from 2000–01 to 2011–12 was driven by Australia's exchange rate appreciation over the period, structural change in the sector to achieve more sustainable wild-caught fisheries and adverse environmental and disease factors that affected the availability of some species, as well as adjustment to changing commodity demand patterns in the global market. In volume terms the sector most affected by these changes has been the Finfish sector, where volumes produced declined by 35% over the period 2004–05 to 2014–15, with declines across a broad range of species landed, particularly from Commonwealth fisheries. Structural adjustment in Commonwealth fisheries through the 2005–06 Commonwealth Securing Our Fishing Future structural adjustment package resulted in a number of vessels exiting the industry.

Growth in the global aquaculture industry has also contributed to the declining relative value of the wild-catch sector, as a result of increasing import competition from this sector in the domestic market. The global growth of aquaculture-produced species in Asia during this period may have negatively affected prices for some Finfish and Prawn species through increased competition from these products in the domestic market. In the domestic market, the rise of the Salmonids industry (largely Atlantic Salmon) has also provided competition for wild-caught Finfish products.

Between 2011–12 and 2017–18 the value of wild-caught production increased by around $327 million in real terms (2017–18 dollars). Much of this growth was the result of Rock Lobsters production value which increased by $270 million in real terms (2017–18 dollars) over the same period to $713 million. In 2017–18 around 40% of the Australian wild-caught sector GVP was attributable to Rock Lobsters. Rock Lobsters are a family of species that have a high unit value with high export demand from China (Pereira & Josupeit 2017). Rock Lobsters are caught across several fishery jurisdictions, however GVP is largely attributable to three: Western Australia (predominantly Western Rock Lobster, production value of $438 million in 2017–18), South Australia (production value of $123 million in 2017–18) and Tasmania (predominantly Southern Rock Lobster, production value of $97 million in 2017–18).

FIGURE 2 Wild-catch GVP and volume by major species group, 1998–99 to 2017–18



Source: ABARES

Aquaculture's growing contribution

In 2017–18 the GVP of Australia's aquaculture sector was $1.42 billion—a 5% increase from 2016–17. This result reinforces the increasing trend over the last two decades that has resulted in incrementally higher value and volume of production from the aquaculture sector (Figure 3). Falls in production volume during this extended period of growth have been largely attributed to occasional disease outbreaks or adverse seasonal growing conditions. In recent years, disease outbreaks have impacted on production volumes of Salmonids, Oysters and Prawns, resulting in some volatility of total production value. Despite these setbacks, the aquaculture sector has increased its overall contribution to Australian fisheries and aquaculture GVP from 29% in 1999–2000 to 44% in 2017–18.

The three most valuable aquaculture-producing states in 2017–18 were:

- Tasmania ($874 million of GVP, a 13% increase from 2016–17)
- South Australia ($206 million, a 11% decrease from 2016–17)
- Queensland ($114 million, a 2% decrease from 2016–17).

The three most valuable aquaculture species in 2017–18 were:

- Salmonids ($855 million, a 13% increase from 2016–17)
- Tunas ($126 million, a 10% increase from 2016–17)
- Oysters ($102 million, a 9% decrease from 2016–17).

In 2017–18 the Tasmanian aquaculture sector accounted for 62% of Australia's aquaculture production value. Salmonids comprised around 96% of Tasmania's aquaculture production value (98% of the GVP of Australia's Salmonids originated from Tasmania and 100% of this species group is aquaculture produced). For more information on Salmonids see Tasmania.

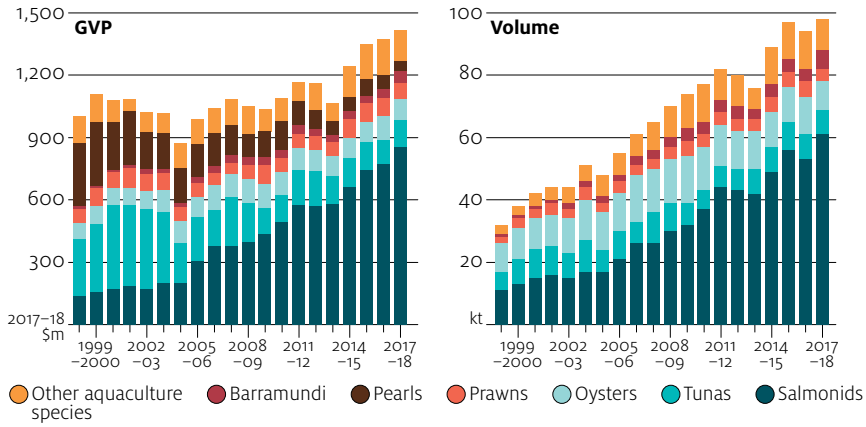
The Southern Bluefin Tuna aquaculture sector accounted for 9% of Australia's aquaculture production value in 2017–18. Wild-caught Southern Bluefin Tuna is largely ranched and grown out in purpose-built sea pens in the Port Lincoln region—a significant seafood centre in South Australia. When fattened, the ranched Southern Bluefin Tuna gains significant value (Mobsby & Curtotti 2019). A generally declining share of Southern Bluefin Tuna has been ranched in recent years while there has been an increase in catch from eastern Australia (predominantly caught by the Commonwealth Eastern Tuna and Billfish Fishery fleet). It is uncertain whether this represents a long-term shift in the pattern of catch in the fishery (Patterson et al 2019).

Oysters accounted for 7% of Australia's aquaculture production value. In 2017–18, 51% of Oysters GVP was produced in New South Wales ($51.8 million) and the remainder from Tasmania ($28.7 million), South Australia ($20.2 million) and Queensland ($900,000).

Aquaculture Prawns GVP was $80.5 million in 2017–18, accounting for 6% of aquaculture GVP in that year. In 2017–18 the GVP of aquaculture Prawns decreased by 6% and production decreased by 9% as the industry recovered from White Spot Disease, which led to the destocking of prawn farms in the Logan River region of southern Queensland in 2016–17. Most aquaculture-produced Prawns are from Queensland. There are significant plans for expansion of the aquaculture Prawns industry in coming years. For example, Tassal is planning to expand their Gregory River prawn farm to reach an annual production of 20,000 tonnes of Prawns (ABC 2019). There is also a large scale project to build a large scale prawn farm in northern Australia for the export market (SBS 2019).

Other fast-growing sectors for the aquaculture sector are Barramundi and Abalone, which achieved a farmgate value of $54 million and $44 million in 2017–18 respectively. These two species together accounted for 7% of the farmgate value of aquaculture in 2017–18.

FIGURE 3 Aquaculture GVP and volume by major species group, 1998–99 to 2017–18

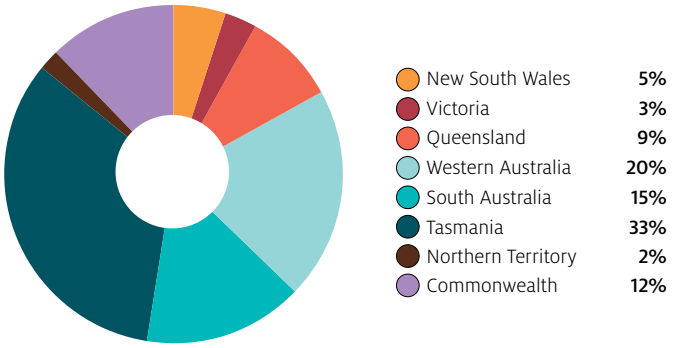


Note: Pearl production volume is unavailable.
Source: ABARES

GVP by jurisdiction and location of catch

Of all Australian jurisdictions Tasmania had the largest GVP in 2017–18, accounting for 33% of total fishery production value, followed by Western Australia (20%) and South Australia (15%). Percentages are calculated based on the sum of gross jurisdictional production values, which have not been adjusted for Tunas caught in the Southern Bluefin Tuna Fishery and ranched in SA farms.

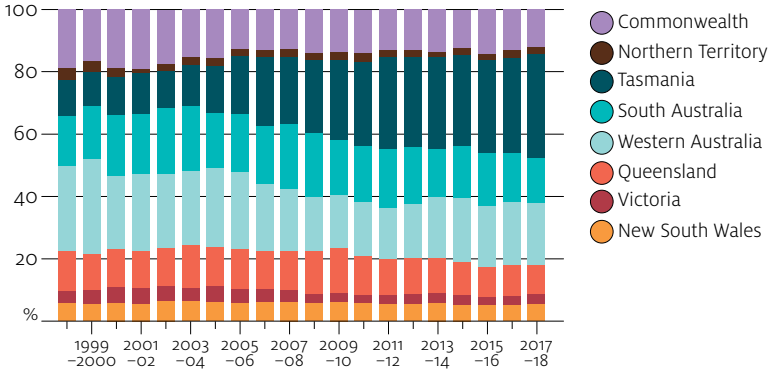
FIGURE 4 Shares in GVP of fishery and aquaculture production by jurisdiction, 2017–18



Source: ABARES

Between 1998–99 and 2017–18 Tasmanian production volume increases have been the main driver of growth in GVP. Tasmania's fisheries and aquaculture GVP more than doubled between 1998–99 and 2017–18 with the expansion of the aquaculture industry.

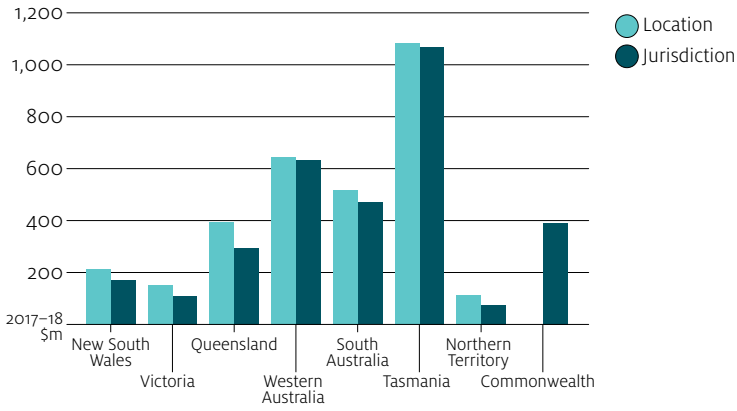
FIGURE 5 Shares in gross value of fisheries and aquaculture production by jurisdiction, 1998–99 to 2017–18



Source: ABARES

By location of catch—where Commonwealth catch is distributed to the states according to where it was caught—Tasmania accounted for the largest share value (34%), followed by Western Australia (20%), South Australia (15%), Queensland (12%), New South Wales (7%), Victoria (5%) and Northern Territory (4%).

FIGURE 6 Value of Australian fisheries and aquaculture production by jurisdiction and location of catch, 2017–18



Note: Location of catch and aquaculture production have been adjusted to exclude Southern Bluefin Tuna caught in the Southern Bluefin Tuna Fishery and introduced into farms in South Australia.
Source: ABARES

New South Wales—GVP rises by 11% in 2017–18

NSW key species		
 Prawns (wild-catch)	 Eastern Rock Lobster (wild-catch)	 Oysters (aquaculture)
2017–18		
Wild-catch	$104.4 million	11,578 tonnes
Aquaculture	$65.8 million	4,333 tonnes
Total	**$170.2 million**	**15,911 tonnes**

For detailed statistics, see Table S7 in the ABARES fisheries data products.
Source: ABARES, DPI

The GVP of New South Wales fisheries and aquaculture production increased by 11% in 2017–18 to $170.2 million as a result of growth in both the wild-caught and aquaculture sectors (Figure 7).

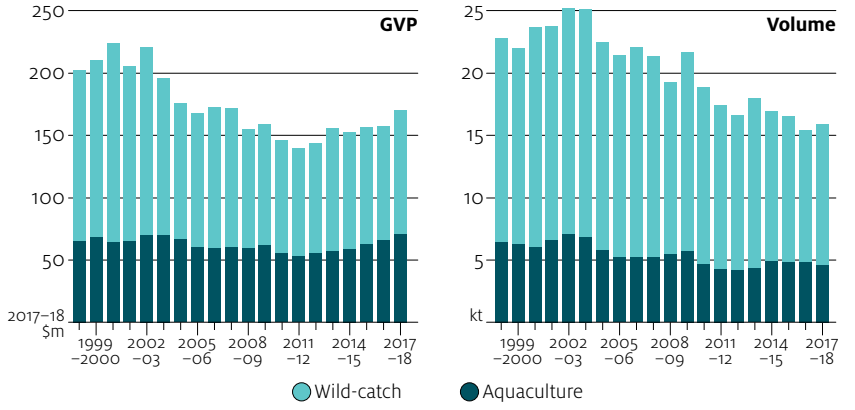
Wild-catch

In 2017–18 the GVP of New South Wales wild-catch fishery production increased by 11% to $99.5 million. Finfish contributed 46% of total New South Wales wild-caught GVP in 2017–18, with the most valuable species being Sea Mullet and Eastern School Whiting, both of which experienced an increase in GVP. Sea Mullet GVP increased by 26% to $10.2 million and Eastern School Whiting GVP increased by 80% to $5.0 million; the increase in GVP for both species was influenced by increased price and catch volume. Abalone GVP increased by 50% to $5.5 million, despite an 11% decline in catch volume. A significant unit price increase for Abalone during the year was driven by growing demand for wild-caught Abalone in China. For more information on Abalone trade in China see Exports by destination.

Aquaculture

The GVP of New South Wales aquaculture increased by 9% in 2017–18 to $70.7 million. Aquaculture Oysters (largely Sydney Rock Oyster) production made the most significant contribution to the rise in value, increasing by 14% to $51.8 million—the highest value since 2003–04. The price of Oysters increased from $12.0 per kilogram in 2016–17 to $14.5 per kilogram in 2017–18. The increase in the price of Oysters is likely due to a shortage in South Australia production. For more information on South Australia Oysters production see South Australia.

FIGURE 7 New South Wales fisheries and aquaculture GVP and volume production by sector, 1998–99 to 2017–18



Source: ABARES, DPI

Victoria—GVP rises by 19% in 2017–18

VIC key species

Abalone
(wild-catch and aquaculture)

Southern Rock Lobster
(wild-catch)

2017–18		
Wild-catch	$62.8 million	3,961 tonnes
Aquaculture	$48.3 million	3,362 tonnes
Total	**$111.0 million**	**7,323 tonnes**

For detailed statistics, see Table S8 in ABARES fisheries data products.
Source: ABARES, VFA

The GVP of Victorian fisheries and aquaculture increased by 19% in 2017–18 to $111.0 million from $93.7 million in 2016–17 (Figure 8). This was mainly due to increases in the value of both wild-catch and aquaculture Abalone.

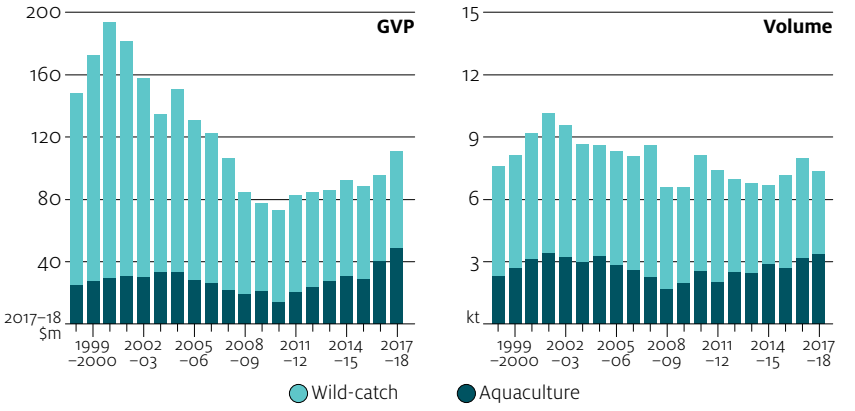
Wild-catch

In 2017–18 wild-catch GVP increased by 15% to $62.8 million, with almost all of this growth attributed to higher GVP of Abalone. GVP of wild-caught Abalone increased 31% to $26.9 million driven in large part by higher unit prices, which increased by 24% to $35.6 per kilogram in 2017–18 as a result of strong demand in the Chinese market. In 2017–18 Victorian wild-caught fisheries production was dominated by Abalone and Rock Lobsters (predominantly Southern Rock Lobster), which together comprised 80% of GVP. For more information on Abalone trade in China see Exports by destination.

Aquaculture

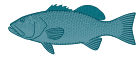
The GVP of Victorian aquaculture increased by 23% in 2017–18 to $48.3 million, with almost all of this growth being attributed to higher GVP of Abalone. In 2017–18 Abalone GVP increased by 42% to $25.2 million, reaching its highest level in real terms. However, in 2017–18 the value of Salmonids slightly decreased by 6% to a value of $13.7 million, due to a decrease in production volume. Since 2008–09 aquaculture GVP has generally increased due to growth in the value of Salmonids and Abalone. In 2017–18 Victorian aquaculture production was dominated by Abalone and Salmonids (predominantly Rainbow Trout), which together comprised 81% of GVP.

FIGURE 8 Victoria fisheries and aquaculture GVP and production volume by sector, 1998–99 to 2017–18



Source: ABARES, VFA

Queensland—GVP declines by 5% in 2017–18

QLD key species		
 Prawns (wild-catch and aquaculture)	 Coral Trouts (wild-catch)	 Barramundi (wild-catch and aquaculture)
2017–18		
Wild-catch	$180.2 million	19,853 tonnes
Aquaculture	$114.2 million	7,528 tonnes
Total	**$294.4 million**	**27,381 tonnes**

For detailed statistics, see Table S9 in ABARES fisheries data products.
Source: ABARES, DAF

The GVP of Queensland fishery and aquaculture decreased by 5% in 2017–18. GVP declined in both the aquaculture and wild-catch sectors (Figure 9).

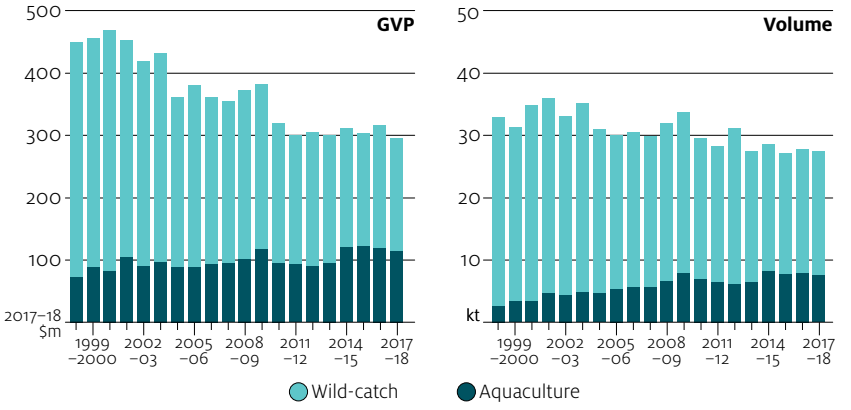
Wild-catch

The GVP of wild-catch fisheries in Queensland decreased by 7% in 2017–18 to $180.2 million. This was mostly driven by a decrease in the landed volumes of Prawns and Coral Trouts. The aggregated wild-caught GVP of Prawns, comprising mainly King Prawns, Tiger Prawns, Banana Prawns and Endeavour Prawns, decreased by 12%. The value of Coral Trouts decreased by 2% to $27.1 million in 2017–18 as a result of decreased catch. In 2017–18 Queensland wild-caught production was dominated by Prawns and Coral Trouts, which together comprised 54% of GVP.

Aquaculture

Queensland aquaculture GVP decreased by 2% in 2017–18 to $114.2 million. This was largely due to a 4% decline in the GVP of Prawns (including Black Tiger Prawns, Banana Prawns and Eastern King Prawns) to $74.7 million—down from $77.8 million in 2016–17; and lower production value of Barramundi, which declined by $1.5 million to $26.9 million. Prawns are Queensland's biggest contributor to the aquaculture sector. The volume of aquaculture Prawns harvested for commercial purposes declined by 8% from 4,264 tonnes in 2016–17 to 3,921 tonnes in 2017–18. In 2016–17 prawn farms in the Logan River region of southern Queensland were destocked following an outbreak of White Spot Disease (McCarthy 2016; Mobsby & Curtotti 2019), with industry still rebuilding in 2017–18. In 2017–18 Queensland aquaculture production was dominated by Prawns and Barramundi, which together comprised 89% of GVP.

FIGURE 9 Queensland fisheries and aquaculture GVP and production volume by sector, 1998–99 to 2017–18



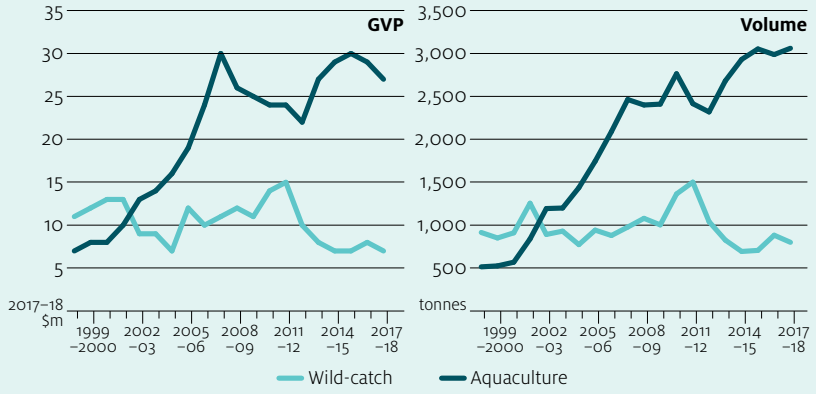
Source: ABARES, DAF

Box 1 Queensland Barramundi aquaculture growing

Barramundi was Queensland's second largest contributor to GVP from aquaculture, with a farmgate value of $26.9 million in 2017–18. Since 2001–02 the volume and value of the Barramundi aquaculture sector in Queensland has significantly increased (Figure 10). Catch of Barramundi from the wild-caught sector has been between 700 tonnes and 1,500 tonnes (Figure 10).

According to Business Queensland (2016), Barramundi is largely marketed towards domestic wholesalers and supermarket chains. The increase in Barramundi production in Queensland may be attributed to expansions of pond-based operations and the improvements in productivity and efficiency within the industry. Barramundi itself is a tropical species and, for that reason, most Barramundi aquaculture farms are in northern Australia (Business Queensland 2016).

FIGURE 10 Barramundi aquaculture and wild-catch GVP and production volume, 1998–99 to 2017–18



Source: ABARES, DAF

South Australia—GVP declines by 3% in 2017–18

SA key species		
 Southern Rock Lobster (wild-catch)	 Southern Bluefin Tuna (aquaculture)	 Prawns (wild-catch)

2017–18		
Wild-catch	$264.0 million	52,833 tonnes
Aquaculture	$205.7 million	15,985 tonnes
Total	**$469.7 million**	**68,818 tonnes**

For detailed statistics, see Table S10 in ABARES fisheries data products.
Source: ABARES, PIRSA

In 2017–18 the GVP of South Australian fisheries and aquaculture decreased by 3% to $469.7 million (Figure 11). This decline resulted mainly from an 11% fall in the value of aquaculture production.

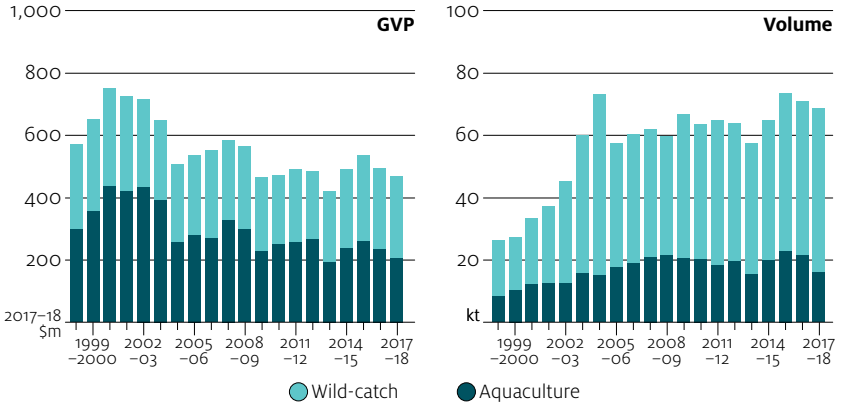
Wild-catch

South Australian wild-catch GVP increased by 4% in 2017–18 to $264.0 million. This was driven by increases in catch and price for a number species. Catch of Prawns increased by 6% to 2,577 tonnes and value increased by 11% to $51.2 million. Of the wild-caught finfish species, Australian Sardines made the largest contribution to GVP, increasing by 11% in value in 2017–18 to $26.4 million. Australian Sardines are predominantly used as feed for Tunas produced by SA Southern Bluefin Tuna ranching sector (Econsearch 2018). Australian Sardines have a low unit value but are caught in large volumes. In 2017–18 Australian Sardines accounted for 82% of the 52,833 tonnes of wild-caught production. In 2017–18 South Australian wild-caught production value was dominated by Southern Rock Lobster and Prawns, which together comprised 66% of GVP.

Aquaculture

In 2017–18 the South Australian aquaculture GVP was $205.7 million—an 11% decline from 2016–17. A leading factor in the decline of Aquaculture GVP in South Australia was the volume of Oysters (predominantly Pacific Oyster) produced in 2017–18. The volume of Oysters produced declined by 58% in 2017–18 to 2,177 tonnes. As a result, in 2017–18 the GVP of Oysters halved from 2016–17 levels to $20.2 million. The decline in production is due to the outbreak of Pacific Oyster Mortality Syndrome (POMS) diseases in Tasmania in 2016. While South Australia is classified as POMS free, the South Australian Oyster industry is heavily reliant on spat grown in Tasmania, meaning that production has been limited since the POMS outbreak (Nogrady 2019). Southern Bluefin Tuna accounts for 61% of aquaculture GVP, with a production value of $126.0 million. Southern Bluefin Tuna is ranched off the coast of Port Lincoln and is mostly exported to the Japanese market as a high-value product (DA 2015).

FIGURE 11 South Australian fisheries and aquaculture GVP and production volume by sector, 1998–99 to 2017–18



Source: ABARES, PIRSA

Western Australia—GVP rises by 2% in 2017–18

WA key species

Western Rock Lobster (wild-catch)

Pearl Oysters (aquaculture)

Prawns (wild-catch)

2017–18		
Wild-catch	$554.5 million	22,846 tonnes
Aquaculture	$79.2 million	127 tonnes
Total	**$633.7 million**	**22,973 tonnes**

For detailed statistics, see Table S11 in ABARES fisheries data products.
Source: ABARES, DPIRD

In 2017–18 the GVP of Western Australia fisheries and aquaculture increased by 2% to $633.7 million (Figure 12). The GVP of WA fisheries production is dominated by wild-catch fisheries, which averaged 77% of total GVP from 1998–99 to 2017–18.

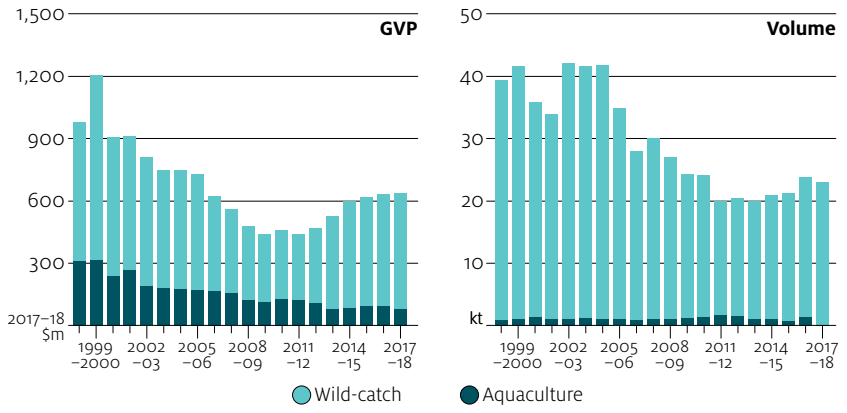
Wild-catch

The GVP of Western Australia wild-catch fisheries increased by 5% in 2017–18 to $554.5 million. Western Rock Lobster is the single most significant contributor to Western Australia wild-catch fisheries GVP, contributing 79% of total wild-caught production value in 2017–18. In 2017–18 the value of Western Rock Lobster increased by 9% to $438.1 million, reflecting an increase in production volume and offsetting a slight decline in average unit prices. The Western Rock Lobster industry is highly export oriented with China being the main export destination. The increase in production in financial year terms was due to an increase in TAC as well as the distribution of the catch across the full calendar year. Generally catch is highest in the first couple of months of the calendar year, coinciding with Lunar New Year.

Aquaculture

The GVP of Western Australia aquaculture decreased by 12% in 2017–18 to $79.2 million. Pearls are the most valuable aquaculture product produced in Western Australia; however, the contribution to aquaculture GVP has declined in absolute and relative terms. In the 10 years to 2017–18, the real value (in 2017–18 dollars) of pearl GVP fell from $141.2 million to $52.6 million and its contribution to aquaculture production value fell from 92% to 66%. Aquaculture in Western Australia has further potential for growth as a result of recent announcements regarding the creation of two new aquaculture zones in the Kimberly and the state's Mid West and a hatchery in Albany. Such measures facilitate the setting up and expansion of aquaculture operations.

FIGURE 12 Western Australia fisheries and aquaculture GVP and production volume by sector, 1998–99 to 2017–18



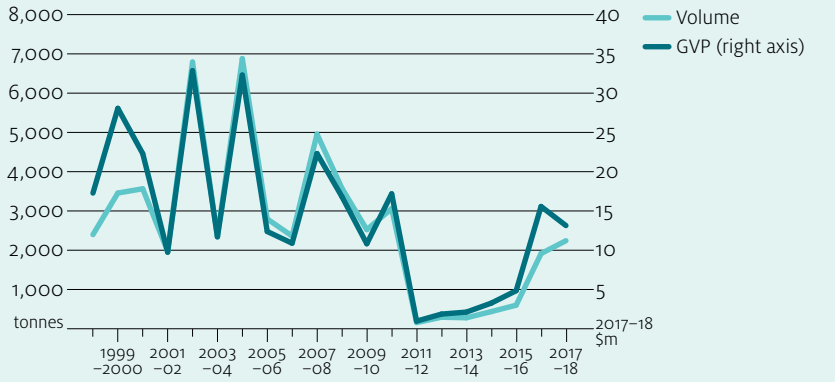
Source: ABARES, DPIRD

Box 2 Ballot's Saucer Scallops in Western Australia recovering after heatwave

GVP and produced volume of Ballot's Saucer Scallops in Western Australia are recovering back toward pre-2011–12 levels following an extreme marine heatwave event in 2011. The heatwave affected the waters of Western Australia and resulted in the closure of Abrolhos Island and Shark Bay Scallop Fisheries (Caputi, Jackson & Pearce 2014). This heatwave caused GVP to decrease from $17.2 million in 2010–11 to $0.98 million in 2011–12. Similarly, in 2010–11, 3,060 tonnes of Ballot's Saucer Scallops were harvested; this declined to 158 tonnes in 2011–12.

As Ballot's Saucer Scallops stocks have recovered and fisheries have reopened, production volume increased from the low of 158 tonnes in 2011–12 to 1,915 tonnes in 2016–17 and 2,243 tonnes in 2017–18. GVP increased to $15.6 million in 2016–17 before declining to $13.1 million in 2017–18. The average unit price of Ballot's Saucer Scallops declined in 2017–18, reflecting ongoing stock recovery and markets adjusting to higher production volumes.

FIGURE 13 GVP and production volume of WA Ballot's Saucer Scallops, 1998–99 to 2017–18



Source: ABARES, DPIRD

Tasmania—GVP rises by 13% in 2017–18

TAS key species		
 Salmonids (aquaculture)	 Southern Rock Lobster (wild-catch)	 Abalone (wild-catch)

2017–18		
Wild-catch	$194.3 million	5,314 tonnes
Aquaculture	$873.5 million	63,729 tonnes
Total	**$1.07 billion**	**69,043 tonnes**

For detailed statistics, see Table S12 in ABARES fisheries data products.
Source: ABARES, DPIPWE

The GVP for Tasmanian fisheries and aquaculture increased by 13% in 2017–18 to $1.07 billion (Figure 14). Contributing to the increase in 2017–18 was further growth of the aquaculture sector, where GVP increased by 13% to reach $873.5 million; and the wild-caught sector, where GVP increased by 10% to reach $194.3 million.

Wild-catch

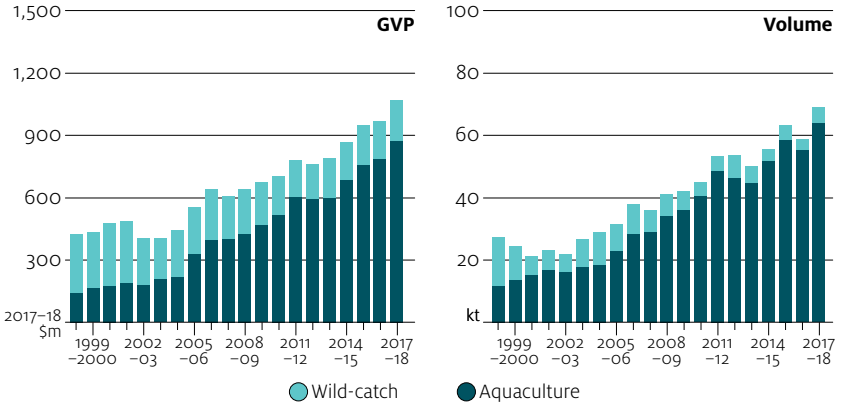
Tasmanian wild-catch GVP increased by 10% to $194.3 million in 2017–18. Abalone and Southern Rock Lobster remained the two most valuable species in the wild-caught sector. Southern Rock Lobster production value increased by 17% to $97.1 million as result of higher catch and increased average prices. In contrast, Abalone catch decreased in 2017–18 due to reductions in TAC. However, GVP increased by 3% to $86.4 million, reflecting an increase in average prices and demand for Abalone.

Tasmania has recently introduced a new seaweed fishery. While only a minor contributor to GVP at present, the sector may grow in importance over time (see Feature story: Australian seaweed production).

Aquaculture

The GVP of aquaculture in Tasmania increased by 13% to $873.5 million in 2017–18. Salmonids are the major aquaculture product of Tasmania, accounting for 96% of total aquaculture production in that state. In 2017–18 Salmonids production value increased by 13% to $838.3 million, which was driven by a 17% increase in production volume. The increase in production volume was likely partially due to destocking of Tasmania's Macquarie Harbour in late 2017 because of an outbreak of Pilchard Orthomyxovirus (POMV) (Street & Dunlevie 2018). In 2017–18 aquaculture Abalone had the highest relative production value increase (up 36% on 2016–17) and the Abalone aquaculture industry expanded, supported by higher prices (reflecting continued demand for Abalone from the Chinese market).

FIGURE 14 Tasmanian fisheries and aquaculture GVP and production volume by sector, 1998–99 to 2017–2018



Source: ABARES, DPIPWE

Feature story: Australian seaweed production

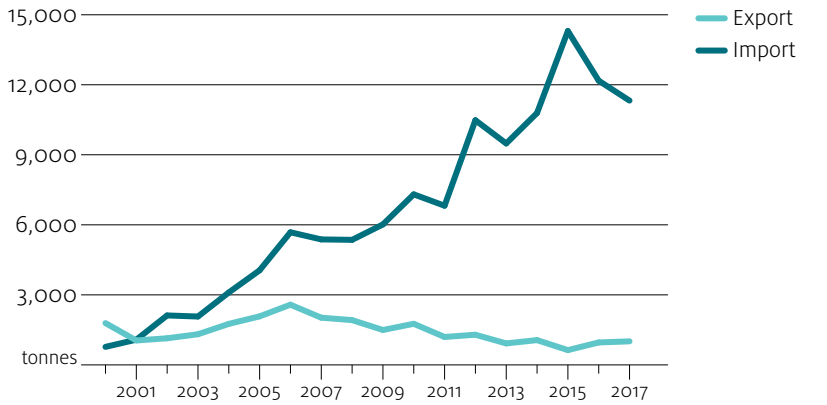
Globally seaweed is a highly valued marine resource. It is estimated that the global seaweed industry is worth around US$6 billion a year (Ferdouse et al. 2018). Most seaweed is consumed as food, with the remainder being used for industrial (cosmetics, fertiliser and agars) or feed purposes (such as animal and fish feed). Commercial harvesting occurs in approximately 35 countries throughout a variety of climates and regions, mainly in Europe and Asia (Chen 2004). In 2017 China imported the most amount of seaweed and the Republic of Korea was the largest exporter (UN 2019).

An increase in the volume of Australian seaweed imports in recent years suggests that there has been growing demand for seaweed products in Australia. The volume of seaweed imports increased by 10,550 tonnes between 2000 and 2017 while the volume of exports has been relatively steady (Figure 15). However, data on the size of Australia's seaweed harvest are limited, so it is unclear how or if changes in domestic production have contributed to the rise in volume of seaweed imports. Australia's seaweed industry is in its early developmental stages compared with international competitors. In 2017, the export price of seaweed was approximately $2.18 per kilogram and the import price was $2.81 per kilogram.

continued...

Feature story: Australian seaweed production continued

FIGURE 15 Australian seaweed exports and imports, 2000–2017



Source: ABARES, UN

There is limited data to determine the gross value of production (GVP) of Australia's seaweed harvest. For this reason seaweed GVP statistics in this publication are not included in jurisdictional reporting—with the exception of Tasmania. Tasmania first introduced a formal management plan for its seaweed fishery in 2017. Prior to 2017 the harvesting of marine plants was subjected to regulations spread across several pieces of legislation and there had been no requirement for the reporting of commercial seaweed harvesting.

Northern Territory—GVP decreases by 6% in 2017–18

NT key species

Mackerels (wild-catch)	Goldband Snapper (wild-catch)	Mud Crabs (wild-catch)	Barramundi (wild-catch and aquaculture)

2017–18

Wild-catch	$47.8 million	6,224 tonnes
Aquaculture	$25.6 million	2,342 tonnes
Total	**$73.4 million**	**8,566 tonnes**

For detailed statistics, see Table S13 in ABARES fisheries data products.
Source: ABARES, DPIF

The GVP of Northern Territory fisheries and aquaculture decreased by 6% in 2017–18 to $73.4 million (Figure 16). This was largely the result of a 26% fall in aquaculture production value. In contrast, GVP from NT wild-caught fisheries increased by 9% to $47.8 million.

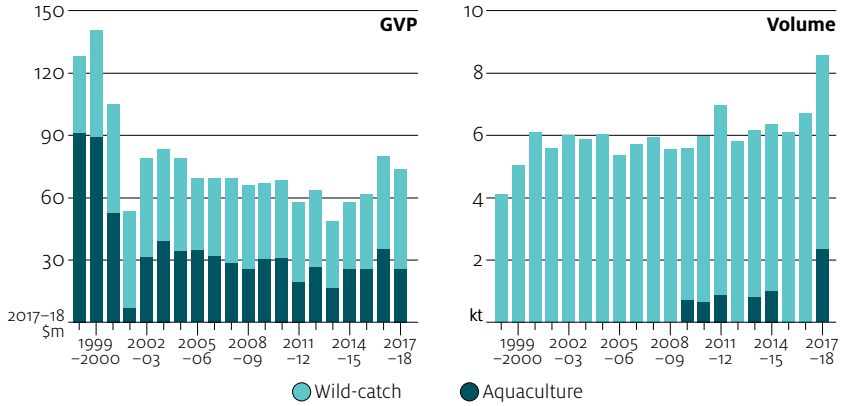
Wild-catch

The GVP of the Northern Territory wild-catch sector increased by 9% in 2017–18 to $47.8 million. This was largely the result of a 66% increase in GVP of Crabs from the Mud Crab Fishery. This increase was the result of a 69% increase in production volume (from 192 tonnes in 2016–17 to 324 tonnes in 2017–18) more than offsetting a slight decline in average price.

Aquaculture

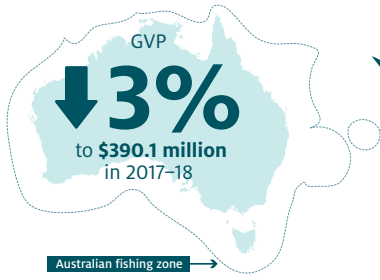
The value of aquaculture production in the Northern Territory decreased by 26% in 2017–18 to $25.6 million. In 2017–18 the value of aquaculture Barramundi was $22.8 million. Since the late 1990s Barramundi aquaculture has expanded due to advances in technology and economies of scale. In 2017–18, 2,342 tonnes of Barramundi were produced in the aquaculture sector—up from 699 tonnes in 2009–10—indicating continued demand for Barramundi. Production values of other aquaculture species and products (for example Pearls from Pearl Oyster aquaculture) generally cannot be provided because of confidentiality requirements. Pearls from Pearl Oyster aquaculture contribute significantly to the value of aquaculture production in the Northern Territory.

FIGURE 16 Northern Territory fisheries and aquaculture GVP and production volume by sector, 1998–99 to 2017–18



Note: Northern Territory aquaculture production volume not available for 1998–99 to 2008–09, 2012–13 and 2015–16 to 2016–17 due to confidentiality requirements.
Source: ABARES, DPIF

Commonwealth fisheries—GVP declines by 3% in 2017–18



Commonwealth key species

Sharks and Rays (wild-catch)	Finfish (wild-catch)	Tunas (wild-catch)	Prawns (wild-catch)

2017–18		
Prawns (wild-catch)	$102.2 million	6,945 tonnes
Tunas (wild-catch)	$66.8 million	9,182 tonnes
Other species	$221.1 million	34,964 tonnes
Total	**$390.1 million**	**51,090 tonnes**

For detailed statistics, see table S14 in ABARES fisheries data products.
Source: ABARES, AFMA

Commonwealth fisheries are exclusively wild-catch. The GVP of Commonwealth fisheries production declined by 3% in 2017–18 to $390 million, owing in large part to lower landings of wild-caught Prawns (Figure 17). For more information on Australian fishery jurisdiction management see Economic geography in Australian fisheries and aquaculture statistics.

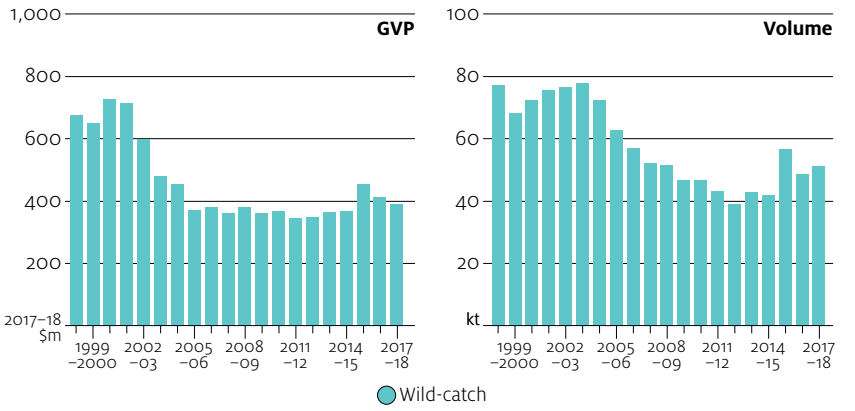
Wild-catch

Finfish other than Tunas made the largest contribution to Commonwealth fishery production value in 2017–18. More than 100 commercially targeted species are accounted for in this category, with a combined catch value of $189.0 million.

Despite a 14% decrease in production value in 2017–18, Prawns remained the second most valuable species group produced in Commonwealth fisheries (after other Finfish), with an aggregated GVP of $102.2 million. The Northern Prawn Fishery and Torres Strait Prawn Fishery are the two primary fisheries that harvest Prawns in Commonwealth-managed fisheries. The Northern Prawn Fishery's GVP decreased by 17% to $98.2 million, which was largely the result of a decrease in volume catch of Tiger Prawns. Tiger Prawns catch reached 3,258 tonnes in 2015–16 (the highest since 1994–95) but subsequently declined to 2,000 tonnes in 2016–17 and then to 1,091 tonnes in 2017–18.

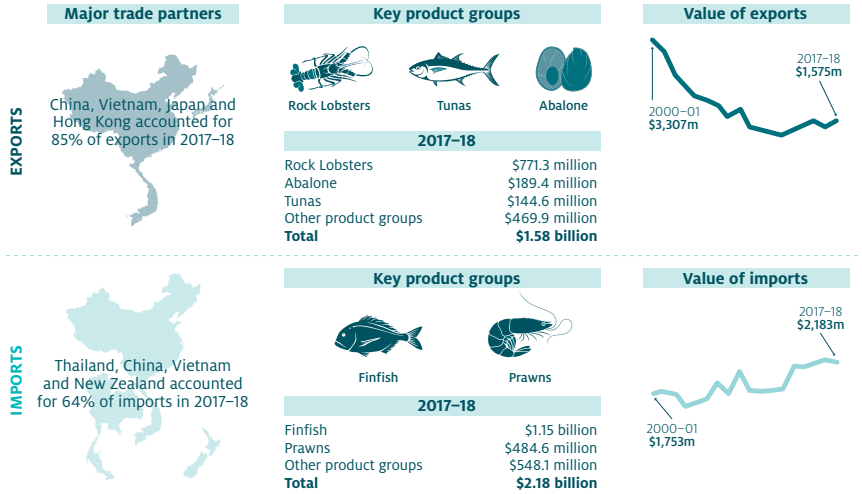
The GVP of Tunas increased by 4% in 2017–18 to $66.8 million, reflecting an increase in GVP of Southern Bluefin Tuna (from the Southern Bluefin Tuna Fishery) and Yellowfin Tuna (from the Eastern Tuna and Billfish Fishery).

FIGURE 17 Commonwealth fisheries GVP and production volume, 1998–99 to 2017–18



Source: ABARES, AFMA

Chapter 3
Australia's trade in fisheries and aquaculture products

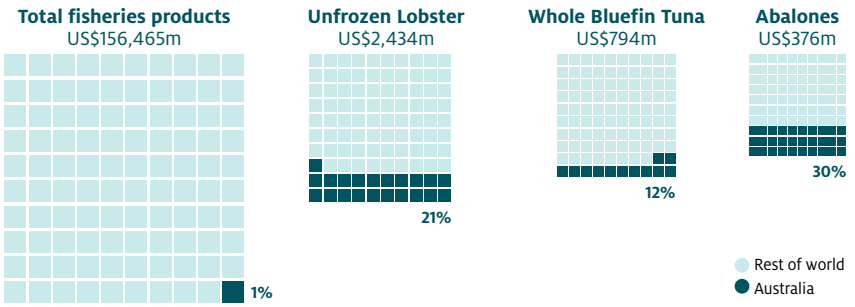


Source: ABARES, ABS

Australia's place in global fisheries trade

Seafood is an increasingly traded and globalised commodity, with international trade of seafood products estimated at a value of US$156 billion in 2017 (FAO 2018). Australia's role in global trade is relatively minor, with the value of Australia's exports and imports accounting for about 1% of global trade value. However, Australia is a significant exporter of a number of species, including live Rock Lobsters, Bluefin Tuna and Abalone (Figure 18).

FIGURE 18 Australia's place in global seafood exports in 2017



Notes: Whole Bluefin Tuna includes Southern Bluefin Tuna, Northern Bluefin Tuna and Pacific Tuna. Unfrozen Lobster includes Rock Lobsters and other sea clawfish species. Species squares are not drawn to scale.
Source: ABARES, FAO

Australia's trade in fisheries products is driven by several factors, including the proximity of Australia to a fast-growing seafood market in Asia and Australia's reputation as a reliable and high-quality supplier of high unit value fisheries products. Changes to population, income levels, urbanisation rates and consumer preferences in the main export markets are important factors in determining the value and destination of Australis fisheries product exports. Other factors, such as trade agreements between Australia and its trading partners and macro-economic factors in competing exporting countries, also contribute to Australia's overall competitiveness in the global market.

Box 3 Australian seafood trade transport modes

In 2017–18 the majority of Australian seafood export value was airfreighted (a mode of transport suited to higher unit value and live products) out of Australia, while the majority of seafood imports were shipped (generally the mode of choice for lower unit value products) into Australia (Figure 19). The transport mode of Australian seafood trade (that is, whether products are internationally shipped or airfreighted) is likely reflective of Australia generally being an exporter of high-value species (such as live Rock Lobsters) and an importer of lower value processed products (such as canned Tunas and frozen Finfish fillets).

FIGURE 19 Australia's place in global seafood trade in 2017

Source: ABARES, ABS

Airfreighting seafood reduces time in transit, which is important for preserving the quality of fresh and live seafood and hence maximising returns on the product. Australia's live Rock Lobsters export industry is a leading example of the importance of airfreight in Australia's seafood export industry. For example, of Western Rock Lobster from Western Australia to China. The establishment of live trade required the industry to develop solutions to managing lobsters from the point of capture to the point of final delivery to the customer. This has involved building holding infrastructure close to airports and developing efficient air transport packaging and delivery logistics (ABARES 2017).

TABLE 1 Seafood exports, 2017–18

Product group	Export value ($ million)	Share (%)	Import value ($ million)	Share (%)
Airfreight	1,165.3	78	116.4	6
Shipping	332.3	22	1,861.7	94
Total	1,497.6	100	1,978.1	100

Notes: Trade data defined as products listed under Standard International Trade Classification (SITC) division 03 'Fish, crustacean and molluscs, and preparations thereof'. For this reason total seafood trade value presented here may differ from trade values in the data products, which are based on ABARES definition of 'seafood trade'.

Fisheries and aquaculture product exports

Total value of Australian fisheries and aquaculture product exports increased by 10% in 2017–18 to $1.58 billion. This was driven by an increase in seafood (edible) exports more than offsetting a decline in the value of non-edible exports. The decline in the value of non-edible exports in 2017–18 continues a long-run trend in the decline of value in this product group, which is largely linked to the decline in the export value of aquaculture pearls.

The volume of Australian seafood exports declined by 1% to 50,741 tonnes largely because of a decline in exports of Finfish species, which are typically of low unit value.

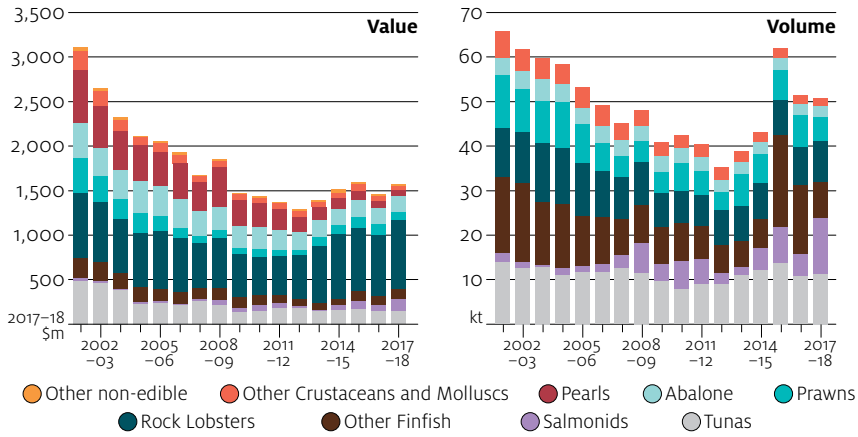
Exports by commodity

Crustacean and Mollusc product exports are the largest contributor to Australia's fishery and aquaculture product export earnings. This is mostly the result of the export of species from the Rock Lobsters family—in particular, the Western Rock Lobster and Southern Rock Lobster species—and Abalone family, particularly Greenlip and Blacklip Abalone species. The combined exports from these family and species groupings accounted for 61% of export value but only 23% of export volume in 2017–18, reflecting the relatively high unit value of these products (Figure 20).

The large increase in export volume in 2015–16 reflected a large rise in exports of pelagic species such as Jack Mackerel (see Australian fisheries and aquaculture statistics 2016 for further information).

Species from the Rock Lobsters family (principally Western Rock Lobster and Southern Rock Lobster) were the highest-value exported fisheries and aquaculture product in 2017–18 ($771.3 million). Export volume of these species increased by 10%, reflecting increased domestic production (much of Australian Rock Lobsters production is exported). Average export price increased, reflecting continued strong demand from China and support from reduced tariffs faced by Australian exporters to China. The export value of species from the Abalone family increased by 1% to $189.4 million. Strong demand, particularly from China, has supported average export prices rising steadily in recent years, reaching its highest level in real terms since 2006–07 in 2017–18.

FIGURE 20 Australia's fisheries product exports, 2001–02 to 2017–18



Note: Export volumes shown only for seafood (edible) imports.
Source: ABARES, ABS

Tunas were Australia's single most valuable export of Finfish in 2017–18 (by species group). The value of exports of species from the Tunas grouping of species, predominantly Southern Bluefin Tuna, Yellowfin Tuna, Bigeye Tuna and Albacore, remained largely unchanged in 2017–18 at $144.6 million. A decline in the value of Southern Bluefin Tuna, Big Eye Tuna and Albacore was offset by increased export value of Yellowfin Tuna products.

TABLE 2 Fishery and aquaculture product exports, 2017–18

Product group	Value ($ million)	Volume (tonnes)	Value change (%)	Volume change (%)
Crustaceans and Molluscs	1,101.5	18,912	7	–6
Edible Finfish	393.0	31,829	28	2
Non-edible	80.6	na	–21	na
Total	1,575.1	na	10	na

For detailed statistics, see Table S18 in ABARES fisheries data products. **na** Not available.
Source: ABARES, ABS

Australia's export industry for Tunas is closely associated with the Japanese sashimi market. Between 2002–03 and 2014–15, Japan accounted for 95% of the total value of all Australian exports of Tunas and 99% of Australian Southern Bluefin Tuna exports. However, in recent years the industry diversified export values away from Japan to other markets (primarily towards China and the Republic of Korea), with Japan accounting for 84% of the total value of all Australian exports of Tunas in the period 2015–16 to 2017–18. This pattern has also been reflected internationally. In 2017 Japan accounted for 59% of world whole Bluefin Tuna imports compared with 81% in 2007.

The value of Salmonids exports (principally Atlantic Salmon from Tasmania's aquaculture sector) increased significantly in 2017–18, to a similar level as Tunas export value. The Salmonids industry is largely domestically oriented, with the rise in export value in 2017–18 linked to the above average level of production in that year (for more information on the increase in Salmonids production see Tasmanian production section). Most of the increase in exports of Salmonids was sent to China. In 2017 Australia accounted for 8% of the value of China's Salmonids imports compared with only 1% in 2016.

Exports by destination

The main fisheries product export destinations for Australia in 2017–18 were China, Vietnam, Japan, Hong Kong and the United States (Map 1). Together, these countries accounted for 88% of edible fishery products exported from Australia in 2017–18.

Exports to China reached $658 million in 2017–18, making China the most valuable export destination that year for Australian fisheries products. The increase in export value was driven by an increase in the value of Rock Lobsters, Salmonids and Abalone species.

MAP 1 Value of fisheries product exports by destination, 2017–18

For detailed statistics, see Table S37 in ABARES fisheries data products. Made with Natural Earth.
Source: ABARES, ABS

Rising incomes in China have resulted in higher demand for premium seafood products, such as Greenlip and Blacklip Abalone and Western and Southern Rock Lobster. Also supporting this trade has been the ChAFTA, which has resulted in tariffs on a number of seafood products being reduced in 2017 and 2018, including for Abalone, Rock Lobsters and Salmonids.

However, it should be noted that the rise in Australian exports to China in 2017–18 was influenced by a change towards more direct trade routes for Australian products into China. For example, the rise in exports to Vietnam of Southern and Western Rock Lobster in recent years may have been the result of Vietnam being used as an indirect avenue to export to China (ERA 2015; Fabinyi 2018). The ChAFTA has assisted in increasing the level of direct exports to China in 2018–19.

Fisheries and aquaculture product imports

Australia's level and composition of seafood production means that imports are required to fill the gap between Australia's seafood consumption and local seafood supply. Whereas Australian fishery and aquaculture exports are dominated by high unit value products such as Western and Southern Rock Lobster and Blacklip and Greenlip Abalone, imports of fishery and aquaculture products largely consist of lower unit value products such as canned or frozen Finfish but also include higher unit value products such as Prawns and Salmonids. The value of fisheries and aquaculture product imports increased by 23% in real terms between 2001–02 and 2017–18. Prepared and preserved Finfish (such as canned Tunas) and Prawns accounted for the majority of the increase in seafood imports.

The total value of fishery and aquaculture product imports remained largely unchanged in 2017–18 at $2.18 billion (Table 3). Seafood imports increased by 4% to $1.97 billion, offsetting a 24% decline in the value of non-edible imports. Just under half the value of seafood imports in 2017–18 consisted of smoked, prepared and preserved (for example, canned Finfish) products. Much of the remainder consists of frozen Finfish, Prawns, Squids and Octopus.

TABLE 3 Fishery and aquaculture imports, 2017–18

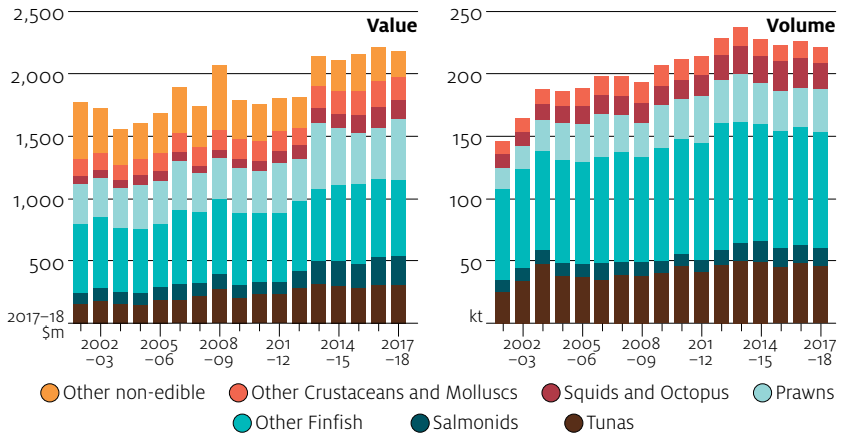
Product group	Value ($ million)	Volume (tonnes)	Value change (%)	Volume change (%)
Crustaceans and Molluscs	823.1	68,315	7	–2
Edible Finfish	1,150.7	144,171	2	–8
Non-edible	209.1	na	–24	na
Total	2,183.3	na	0	na

For detailed statistics, see Table S29 in ABARES fisheries data products. **na** Not available.
Source: ABS

Imports by commodity

Edible Finfish is the most valuable product group imported into Australia. Imports of this commodity group increased by 2% to $1.15 billion to account for 58% of seafood import value in 2017–18 (Figure 21). Tunas (largely canned) remained the single most valuable imported Finfish with a total import value of $307.4 million in 2017–18.

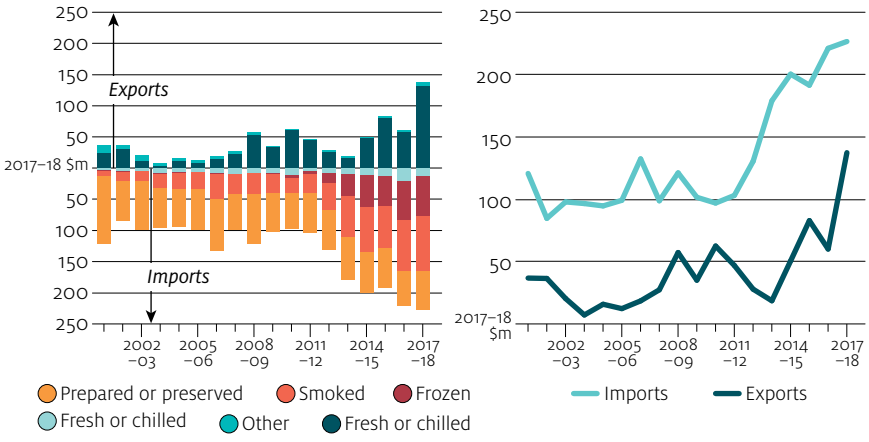
FIGURE 21 Australia's fisheries product imports, 2001–02 to 2017–18



Note: Import volumes shown only for seafood (edible) imports. For detailed statistics, see Table S29 in ABARES fisheries data products.
Source: ABARES, ABS

Australian imports of Salmonids increased by 4% in 2017–18, reaching a record $226.6 million (Figure 22). The value of imports of Salmonids products more than doubled between 2007–08 and 2017–18. This increase occurred despite domestic Salmonids production volume more than doubling over that period to around 61,413 tonnes (worth $854.8 million at the farm gate). While 2017–18 marked a record year for imports of Salmonids, it was also a record year for exports of Australian Salmonids. Australia largely exports fresh and chilled Salmonids and imports mainly smoked and canned Salmonids, although since 2009–10 imports of frozen fillets of Salmonids have accounted for an increasing share of import value.

FIGURE 22 Australia's Salmonids trade, 2001–02 to 2017–18



Source: ABARES, ABS

The total value of Crustacean and Mollusc imports increased by 7% in 2017–18 to $823.1 million. This was mainly driven by a 20% rise in the value of imports of Prawns (with frozen Prawns imports accounting for most of the increase). The value of Squids and Octopus imports declined by 8% to $153.4 million, while volume declined by 13% to 20,731 tonnes. In 2017–18 the average import unit value of Squids was more than twice the average price paid in 2007–08. According to the Food and Agriculture Organization of the United Nations (FAO), Squids prices have risen in recent years as a result of a tightening in world supplies from wild-caught fisheries (FAO 2019b).

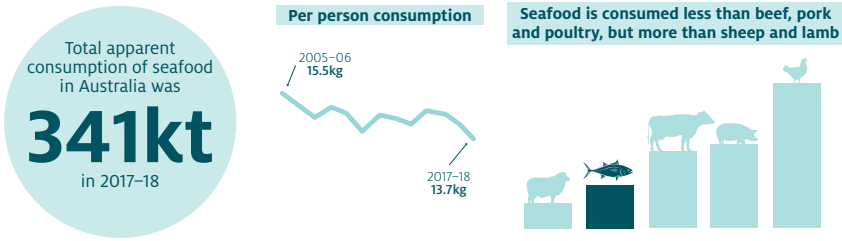
Imports by origin

The major sources of Australian edible fishery and aquaculture product imports in 2017–18 (excluding live products) were Thailand, China, Vietnam and New Zealand. Together, these countries accounted for 64% of imports in 2017–18 (Map 2). These countries also accounted for the majority of imports roughly 10 years earlier in 2007–08. Norway and Denmark have become increasingly important seafood trade partners for Australia, reflecting growth in imports of Salmonids. In 2017–18 Norway and Denmark accounted for 8% of Australia's seafood imports compared with 4% in 2007–08. During this period the real value (2017–18 dollars) of imports of Salmonids from Norway and Denmark increased from $31 million to $142 million.

MAP 2 Value of fisheries product imports by origin, 2017–18

For detailed statistics, see Table S37 in ABARES fisheries data products. Made with Natural Earth.
Source: ABARES, ABS

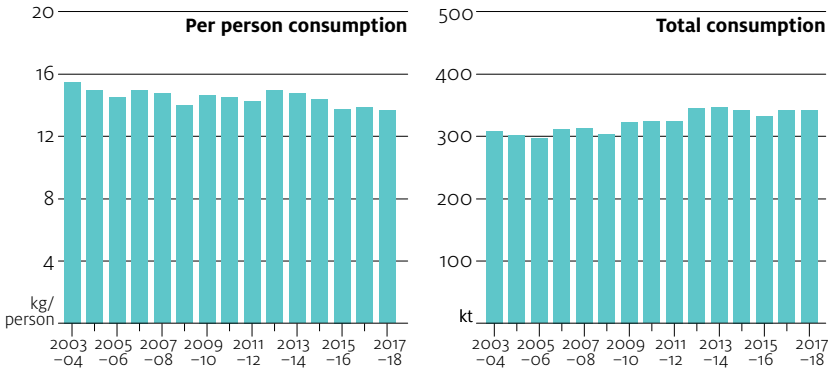
Chapter 4
Australia's consumption of seafood



Source: ABARES

Australia's apparent consumption of seafood increased, on average, at an annual rate of 1.9% between 1998–99 and 2017–18, from an estimated 238,968 tonnes in 1998–99 to 341,272 tonnes in 2017–18 (Figure 23). Per person apparent consumption of seafood decreased slightly between 2007–08 and 2017–18 (trending down from 14.7 kilograms per person in 2007–08 to 13.7 kilograms per person in 2017–18).

FIGURE 23 Apparent consumption of seafood in Australia, 2003–04 to 2017–18

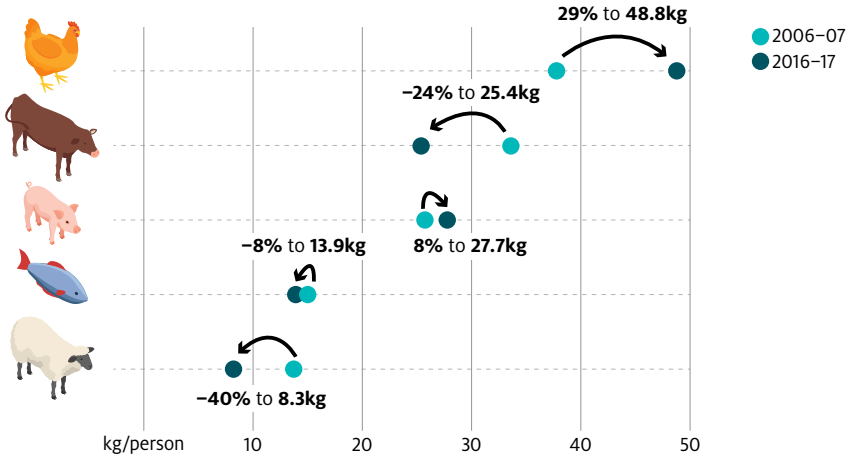


Source: ABARES

Australian seafood consumption ranks behind beef, chicken and pork but ahead of lamb and sheep meat

Apparent consumption of seafood typically ranks behind poultry, beef and veal and pig meat but ahead of sheep and lamb (Figure 24). In terms of expenditure, Australian households spent $5.46 per week on fish and seafood in 2015–16 compared with $27.0 per week for meat, not including fish and seafood (ABS 2017). See Box 4 for further information on Australian household expenditure on fish and seafood.

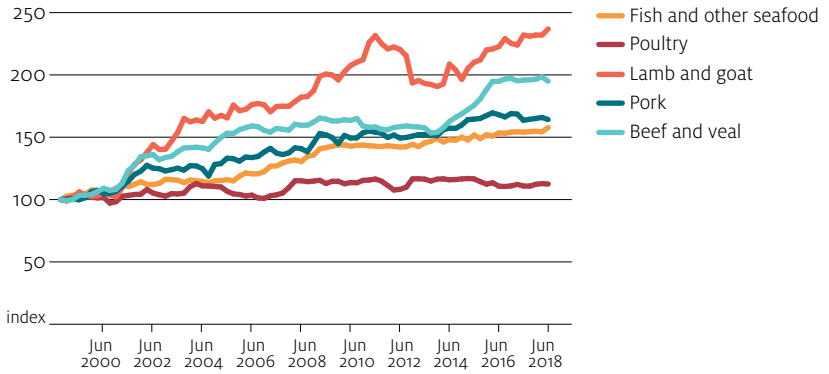
FIGURE 24 Change in consumption of meat and seafood in Australia, 2006–07 and 2016–17



Source: ABARES

It is unclear why per capita seafood consumption is trending downwards in Australia. However, changes in the consumption of other meat products may provide insights into what has been driving this trend. Total meat consumption in Australia (including seafood) has remained relatively stable for the 10 years to 2016–17. However, there have been divergent trends in the type of meat consumed. For example, beef consumption has declined significantly, while poultry consumption has continued to grow. The reasons for this are varied but are thought to include changes in consumer preferences (such as consumers seeking healthier food options) and relative price (Taylor & Butt 2017). Taylor and Butt (2017) suggest that the lower relative price of poultry (and, to lesser extent, pork) compared with beef is a major reason why poultry consumption has increased so markedly. Figure 25 shows that seafood has become relatively expensive compared with poultry but less expensive relative to beef and veal.

FIGURE 25 Retail meat and seafood prices in Australia, September 1998 to June 2018



Notes: September 1998 = 100. Prices are taken as the weighted average of eight capital cities. Fish and other seafood defined as fresh, chilled or frozen fish and seafood (Crustaceans and other shellfish); dried, smoked or salted fish and seafood. Adapted from Taylor & Butt 2017.
Source: ABARES, ABS

One problem with interpreting the seafood price index is that the index covers a multitude of fisheries products. For example, Prawns, Scallops and Salmonids would all be components of the index and average movements in the price may obscure price trends in major species groups. For example, apparent consumption of Salmonids in Australia has increased, while consumption of other Finfish products has declined. It may be the case that higher priced seafood products may compete with higher unit value meat products (such as beef) whereas cheaper (often imported) products may compete with cheaper protein alternatives such as poultry (DIIS 2017).

Role of imports in Australian seafood consumption

Seafood imports play an important role in Australian seafood consumption and are required to fill the gap between seafood consumption and local seafood supply. Between 1998–99 and 2013–14 seafood imports increased from 132,396 tonnes to peak at 237,511 tonnes. During this period the proportion of seafood accounted for by imports (by volume) increased from 55% to 69%, while domestic seafood supply remained broadly steady at around 112,000 tonnes.

Between 2013–14 and 2017–18 the volume of imported seafood generally declined, largely reflecting a decline in volume of frozen Prawns and prepared or preserved fish (see Fisheries and aquaculture product imports for more information on Australia's seafood imports). An increase in domestic supply during this period resulted in the share of imports in Australia's apparent seafood consumption decreasing from 69% in 2013–14 to 65% in 2017–18 (the lowest share since 2007–08).

Box 4 Australian household expenditure on seafood

According to the ABS Household Expenditure Survey, Australian households spent $5.46 per week on fish and seafood in 2015–16 (ABS 2017). Fresh fish and seafood accounted for 45% of total fish and seafood expenditure, followed by frozen fish and seafood expenditure (24%) and canned and bottled fish and seafood expenditure (23%). The remainder is accounted for by items which are classified as 'not further defined'.

Between 2009–10 and 2015–16 Australian household expenditure on fish and seafood declined by 2% in real terms (ABS 2017). This was largely the result of a decline in expenditure on canned and bottled fish and seafood. In contrast, expenditure on fresh fish and seafood remained largely unchanged and expenditure on frozen seafood increased by 4%.

The Food and Agriculture Organisation of the United Nations (FAO) (FAO 2019a) estimated annual Australian consumption of seafood at around 26 kilograms per person in 2016 compared with the ABARES estimate of 13.5 kilograms per person for 2015–16. The difference in estimates is mainly the result of different methods of estimating consumption (for more information, see Calculating apparent seafood consumption). For example, the FAO applies a consistent method of estimation for all countries and provides its estimates on a live weight basis.

TABLE 4 Apparent consumption of seafood, Australia, 1998–99 to 2017–18

Year	Apparent consumption (total)	Apparent consumption (per person)	Percentage of consumption from imports
	(tonnes)	(kg per person)	(%)
1998–99	238,968	12.7	55.4
1999–2000	240,150	12.6	57.9
2000–01	247,194	12.8	58.1
2001–02	247,797	12.7	58.9
2002–03	273,533	13.9	60.1
2003–04	308,691	15.5	60.8
2004–05	302,105	15.0	61.6
2005–06	296,784	14.5	63.5
2006–07	311,595	15.0	63.7
2007–08	312,991	14.7	63.3
2008–09	303,470	14.0	63.7
2009–10	v322,735	14.6	64.3
2010–11	324,077	14.5	65.3
2011–12	324,506	14.3	66.0
2012–13	345,383	14.9	66.1
2013–14	346,311	14.8	68.6
2014–15	342,096	14.4	66.5
2015–16	332,277	13.7	67.0
2016–17	340,864	13.9	66.4
2017–18	341,272	13.7	64.9

Source: ABARES

Surveys of Australian seafood consumers

Recent consumer research *Unpacking the consumer seafood experience* sheds light on recent trends among Australian seafood consumers (Intuitive Solutions 2019). The survey sampled 2,002 adult grocery buyers in 2019 and is an update on similar research from 2016. According to the results of the survey, 78% of Australians had consumed seafood in the previous 12 months, largely unchanged from 77% in 2016. The results of the survey showed these seafood consumers fall into one of three categories: frequent eaters, regular eaters and infrequent eaters. The survey results showed that frequent eaters (those that consume seafood once a week or more) accounting for only 33% of consumers but accounted for 77% of consumption. Price is important to consumers but was found not to be the key driver of seafood consumption. Consumers reported that freshness and food safety are more important than price but that price was more important than quality (whether the fish is fresh or has been frozen) and presentation. The 2019 findings reiterated that uncertainty about choosing, preparing and cooking seafood is a barrier to seafood consumption.

Chapter 5
Employment

In 2017–18...

...the number of people employed in the fishing, hunting and trapping sector was **17,000**

...the aquaculture sector employed more people than the commercial sector

...Tasmania employed the largest number of people in the seafood sector in 2016

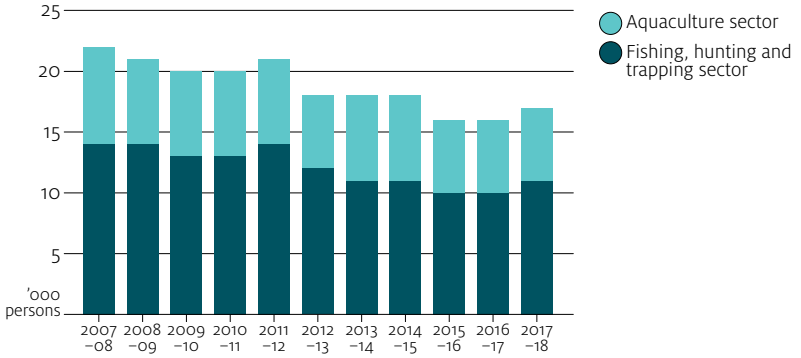
Source: ABARES

Tasmania is the largest employer in the fisheries and aquaculture sector

In the release of *Australian Industry, 2017–18* the ABS estimated that in 2017–18 the fishing hunting and trapping and aquaculture industries employed 17,000 people combined (Figure 26) (ABS 2019b). This compares with 16,000 people in 2016–17. The additional 1,000 people employed in 2017–18 were accounted for by an increased in the fishing, hunting and trapping workforce. Of the 17,000 people employed in 2017–18, 11,000 people were employed in fishing, hunting and trapping and 6,000 people were employed in aquaculture. Although employment increased in 2017–18, the total workforce that year was 5,000 people lower than the workforce in 2007–08. Fishing, hunting and trapping data is not available at a more disaggregated level in *Australian Industry, 2017–18*.

The data provided in *Australian Industry* uses data obtain by the ABS through its annual Economic Activity Survey and Business Activity Statement data provided by businesses to the Australian Taxation Office. This differs from previously provided employment statistics used in Australian fisheries and aquaculture statistics which used data from the ABS series *Labour Force, Australia, Detailed, Quarterly* which contains data collected from the ABS Labour Force Survey component of the Monthly Population Survey.

FIGURE 26 Employment in Fisheries and aquaculture sectors, 2007–08 to 2017–18



Source: ABS 2019b

The 2016 ABS Census is the most recent survey detailing employment in the fishing industry by sector and by state. Commercial fishing, hunting and trapping and aquaculture activities employed 9,745 people—59% (5,777 people) were engaged in commercial fishing, hunting and trapping activities and 41% (3,968 people) in aquaculture activities. Fish wholesaling and seafood processing employed 4,013 people—62% (2,477 people) were employed in fish wholesaling and 38% (1,536 people) in seafood processing.

The offshore longline and rack aquaculture sector employed the largest number of people (1,406), followed by rock lobster and crab potting (1,106). By state, excluding fishing, hunting and trapping, Queensland employed the largest number of people in the wild-catch sector (1,274), followed by Western Australia (1,091) and South Australia (968). Tasmania employed the largest number of people in the aquaculture sector (1,585 people), followed by New South Wales (675) and South Australia (568).

The 2016 ABS Census is the most recent survey detailing employment in the fishing industry by sector and by Statistical Areas Level 2 (SA2) (for more information, see ABS Australian Statistical Geography Standard). The ABS Census data provide subsector and jurisdictional employment data for the 2016 calendar year.

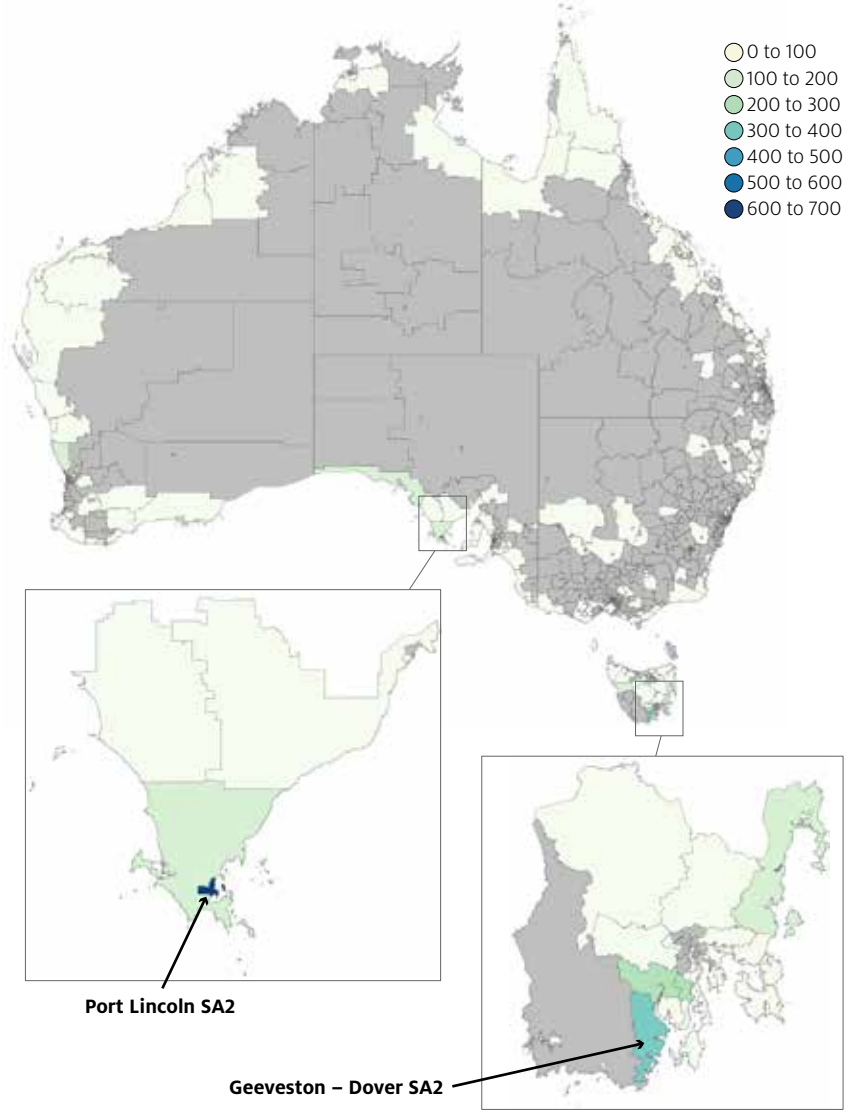
TABLE 5 Estimated employment in the Australian commercial fishing and aquaculture industry, 2016

Category	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Australia
	no.	no.	no.	no.	no.	no.	no.	no.	no.
Aquaculture	84	142	118	156	92	139	8	0	737
Onshore aquaculture	106	104	334	152	74	120	17	0	913
Offshore longline and rack aquaculture	453	19	103	220	77	532	3	0	1,406
Offshore caged aquaculture	32	29	11	40	11	794	0	0	912
Rock lobster and crab potting	42	66	81	189	544	164	12	0	1,106
Prawn fishing	64	0	167	76	61	0	14	0	392
Line fishing	6	7	12	18	4	3	0	0	58
Fish trawling, seining and netting	11	11	28	22	3	0	0	0	80
Fishing, hunting and trapping	260	196	276	89	99	45	18	7	997
Other fishing	673	299	710	574	380	316	173	0	3,144
Fishing and aquaculture total	1,731	873	1,840	1,536	1,345	2,113	245	7	9,745
Seafood processing	202	173	221	321	266	349	5	0	1,536
Fish and seafood wholesaling	668	625	604	191	258	109	16	7	2,477
Processing and wholesaling total	870	798	825	512	524	458	21	7	4,013
Grand total	**2,606**	**1,667**	**2,668**	**2047**	**1,875**	**2,586**	**282**	**18**	**13,755**

Note: Based on the 2016 ABS Census data. Categories are consistent with ANZSIC 2006.
Source: ABS 2016a

Port Lincoln in South Australia is the largest SA2 employer of the seafood industry, with 5% (631) of Australia's seafood industry employed by Place of Work (POW) in this region. In Port Lincoln, seafood processing was the largest sector employer (188 employees) followed by fishing (NFD) (132 employees). Geeveston–Dover SA2 (largely comprising the town of Geeveston and just outside of Port Huon) in Tasmania was the second largest employer of people in the seafood industry (369 employees) (Map 3). The sector with the highest number of employees was offshore caged aquaculture in Tasmania, which is consistent with the expansion of the Salmonids industry.

MAP 3 Employment in the Australian commercial fishing and aquaculture industry, 2016



Source: ABARES, ABS

Chapter 6

Recreational and charter fishing

Recreational fishing is a popular activity with a large economic contribution

Recreational fishing is a popular activity that contributes economic and social benefits to the Australian economy, particularly in regional areas. The most recent national recreational fishing survey estimates that about 3.4 million Australians engage in recreational fishing each year, directly contributing an estimated $1.8 billion to the economy (Campbell & Murphy 2005; Henry & Lyle 2003).

Some industries depend on the recreational fishing sector either wholly (the fishing tackle and bait industry and the fishing tour and charter industry) or for a large proportion of their income (the recreational boating industry and the tourism industry in coastal regions). In 2003, the Australian Bureau of Statistics (ABS) estimated that the sector supports about 90,000 Australian jobs (ABS 2003). Campbell and Murphy (2005) estimated that recreational fishers spent $223 million on fishing gear, tackle and bait in the 12 months to May 2000 (including second-hand purchases). Dominion Consulting (2005) estimated that the value of retail sales in the tackle and bait industry in 2003–04 was $665 million. For the recreational boating industry, annual turnover was estimated at around $500 million, of which 60% related to fishing (ABS 2003).

It is difficult to value the recreational sector because unlike commercial fishers who sell their catch on markets, recreational fishers do not have to pay for fish caught recreationally. They therefore do not reveal the associated value they gain from catching fish. Although non-market valuation techniques are available to estimate the value of recreational fisheries, these techniques are often costly to apply. Such recreational values cannot be easily compared with gross value of production measures used for valuing the commercial sector. For these reasons, estimates of the economic value of recreational fishing are often not available.

Managing recreational fishing

Individual state and territory authorities are responsible for managing recreational and charter fishing in Australia. State and territory governments use controls on fish size, bag limits, gear restrictions and seasonal and area closures to regulate recreational catches. Licensing requirements and regulations vary considerably between jurisdictions and often depend on location within a jurisdiction, the fishing method used and the species targeted. Recreational fishers are not required to report their activities to fishery management agencies. However, in some states charter operators report the total catch and fishing effort of tour groups as a condition of their licence. Some states require that recreational fishers be licensed and that anglers carry their licences while fishing.

Estimating catch and expenditure of recreational fishers

Estimating the catch of fish and expenditure by recreational fishers depends on surveys of the general population and targeted surveys of fishers who can be contacted through licence details or at known locations where fishers commonly have access to fish stocks.

National survey of recreational fishers

Comprehensive national recreational fisheries statistics are not available for recent years. A National Social and Economic Survey of Recreational Fishing is currently underway and results are expected to be released post 2020. This survey is targeted at presenting the different social and economic benefits of recreational fishing as well as the direct and indirect contribution of recreational fishing to the national economy. For further information about this survey see The National Recreational Fishing Survey website.

The last Australia-wide survey of the sector was the 2000–01 National Recreational and Indigenous Fishing Survey (NRIFS), conducted by Commonwealth and state/territory fishery management agencies (Henry & Lyle 2003). The study used a telephone screening survey of the general population (March to April 2000) to estimate the number of recreational fishers in each state and territory and a diary survey of recreational fishers (May 2000 to April 2001) to gather information on the extent of their activities.

The survey results indicated that 3.4 million fishers participated in recreational fishing in the 12 months to May 2000, with New South Wales having the largest number of participants at nearly 1 million. Estimated expenditure on services and items related to recreational fishing was $2.8 billion (in 2016–17 dollars) over the diary survey period. In real terms (2016–17 dollars) New South Wales had the largest expenditure ($829 million), followed by Victoria ($593 million) and Queensland ($478 million). The annual average expenditure per fisher in real terms (2016–17 dollars) was highest in Victoria at $1,079 per fisher, followed by Western Australia ($1,057 per fisher) and the Northern Territory ($910 per fisher). The national average was $826 per fisher per year.

Since 2001, the NRIFS survey methodology has been repeated in some states and the Northern Territory, although not in concurrent time frames. A comparison of key participation and fishing effort data from the NRIFS and subsequent statewide surveys shows that the states where the surveys have recently been repeated have recorded a moderate reduction in numbers of resident fishers and a more pronounced reduction in participation rate and total days spent fishing. With the exception of the 2009–10 NT survey, the recent statewide surveys do not include data on expenditure by fishers.

Jurisdiction-based surveys

New South Wales

The NSW Department of Primary Industries conducted a 2013–14 recreational fishing survey using the same methodology as the 2000–01 NRIFS. The survey estimated that 849,249 New South Wales and Australian Capital Territory residents participated in fishing in the 12 months to June 2013 (a participation rate of 12%). More males than females fished, with the male participation rate 17% compared with 7% for females. The highest number of fishers were between 30 and 44 years of age. The highest participation rate of any age group was 20% for 5–14-year-olds (West et al. 2016). In 2017 the NSW Department of Primary Industries commenced a statewide survey of recreational fishing, to be run during October 2017 to September 2018. The results for the 2018–19 survey are planned to be available by early 2020. A fourth survey commenced in September 2019 for the 2019–20 year.

Victoria

From March to July 2011, Fisheries Victoria conducted a survey of fishers targeting Southern Bluefin Tuna in western Victoria. During interviews at boat ramps, fishers were asked about fishing effort and size composition of retained Southern Bluefin Tuna. In 2012 Fisheries Victoria surveyed 4,500 Recreational Fishing Licence holders on the importance of inland fishing locations (such as rivers, lakes and estuaries) and preferred species to catch to recreational fishers.

Fisheries Victoria has run the statewide Angler Diary Program since the mid-1990s to collect statistics on Victorian recreational fishing. Between 2011 and 2014, 150 angler diarists recorded fishing activity for 10 key target species in 11 waterbodies in Victoria. Angler diary programmes are run in selected inland and estuarine water bodies where monitoring is required under fishery management plans (Conron et al. 2014).

In 2014 a survey of recreational fishers was conducted that provided estimates of the economic contribution of recreational fishers to the Victorian economy (EY 2015). According to the survey results an estimated 838,119 adult Victorian residents participated in recreational fishing in 2013–14. This compares with an earlier report which estimated that 721,000 Victorians participated in recreational fishing in 2008–09 (EY 2009).

Queensland

The 2013–14 statewide Recreational Fishing Survey performed by Queensland Department of Agriculture and Fisheries collected estimates of recreational participation rates, statewide and regional annual catch, common species caught by recreational fishers and regions where recreational fishing activities took place. The survey results estimate that 15% of Queenslanders (642,000 people) aged five years and over had engaged in recreational fishing. The survey combined diary and telephone surveys to collect data over 12 months (Queensland DAF 2015). The Queensland Department of Agriculture and Fisheries estimates that the commercial equivalent for recreational catch in Queensland in 2016–17 was $94 million (Queensland DAF 2018).

A more recent recreational fishing survey commenced in April 2019 and is planned for completion by mid-2020(Queensland DAF 2019). Initial results from the first stage of this survey have shown a large increase in participation in Queensland recreational fisheries from residents five years and over, with participation increasing from 13% in 2013 to 19% in 2019. The results from this phase indicate that 943,000 people recreationally fished in Queensland in 2019.

South Australia

In 2013–14, a recreational fishing survey was conducted that provided estimates of recreational fisher participation levels, demographics and fishing effort (Giri & Hall 2015). The survey estimated that 277,027 SA residents engaged in recreational fishing in the 12 months prior to November 2013 (a participation rate of 18%). For more information about recreational fishing in South Australia, see the South Australian Recreational Fishing Survey 2013–14 (Giri & Hall 2015).

Western Australia

Results from the WA Department of Primary Industries and Regional Development Statewide Survey of Boat-Based Recreational Fishing in 2015–16 were published in late 2017 (Ryan et al. 2017). The survey provides estimates of participation, effort and the quantity of fish retained and released for each WA fishing region. The survey found that, from a population of 137,388 Recreational Fishing from Boat licence holders, an estimated 117,023 fished at least once in 2015–16. In terms of catch, 55% of the recreational catch consisted of Finfish species, with School Whitings being the most caught Finfish.

Tasmania

The Institute for Marine and Antarctic Studies, University of Tasmania, carried out the 2012–13 Survey of Recreational Fishing in Tasmania (Lyle et al. 2014). Survey estimates of recreational fishing participation, landed catch and effort applied the same methodology as the previous statewide survey by the Tasmanian Department of Primary Industries, Parks, Water and Environment and the Tasmanian Aquaculture and Fisheries Institute (Lyle et al. 2009). Both surveys were funded by the Fishwise Fund.

Other surveys funded through the Tasmanian Fishwise Community Grants programme included assessments of the recreational Rock Lobsters and Abalone fisheries (Lyle & Tracey 2012), studies of net fishing and a survey of game fishing in Tasmania (Forbes, Tracey & Lyle 2009).

Northern Territory

The NT Government conducted a recreational fishing survey from February 2009 to March 2010. The survey repeated the NRIFS methodology of a telephone screening/participation survey and fisher diary but also included surveys at boat ramps and accommodation establishments in key catchments (West et al. 2012). The survey found that non-Indigenous NT residents spent an estimated $47 million annually on goods and services directly related to recreational fishing. Most of this ($33 million) was spent on boats and trailers. In October 2018 the NT Department of Primary Industry and Fisheries began a recreational fishing survey for 2018–19. The results of the survey are expected to be released in 2020 (NTDPIR 2018).

Australian Capital Territory

Australian Capital Territory fishers were included in the 2013–14 NSW statewide recreational fishing survey.

Commonwealth waters

While recreational fishing data was not explicitly collected for Commonwealth-managed fisheries, Henry and Lyle (2003) did record recreational fishing by water body type. One of the categories of water type, 'offshore', in many instances coincided with water managed by the Commonwealth government. Of the 23.2 million fishing events records over the survey period, only 4% (937,000 events) occurred in offshore waters. Measured by number of fish, the highest catch in offshore waters were Emperors, Whitings and King George Whiting.

In October 2010, Recfish Australia released *Recreational fishing in Commonwealth waters: a preliminary assessment*, focusing on the level of recreational fishing in Commonwealth waters. The report found that, in some regions in 2005–06, particularly Narooma–Bermagui, 47% of fishing trips occurred in Commonwealth waters and generated about $27 million for the local community (Recfish Australia 2010).

Between December 2010 and May 2011, ABARES surveyed game fishers, local businesses and community members at three eastern Australian sites where game fishing tournaments were held several times a year (Ward et al. 2012). The sites were Mooloolaba, Port Stephens and Bermagui. Tournament game fishers surveyed at Mooloolaba averaged 13 game fishing trips to that site, amounting to 15 days per year. Those at Port Stephens averaged six trips (nine days) and those at Bermagui averaged four trips (11 days) per year. On average, fishers spent $4,625 for a tournament trip to Port Stephens, $2,698 per trip to Bermagui and $2,378 per trip to Mooloolaba.

The net economic value of game fishing was also estimated. This is the 'use value' (non-financial) that individuals place on a game fishing trip, in addition to their actual expenditure. The net economic value from a trip to Bermagui ($124 per individual per trip) was substantially higher than that for Port Stephens ($67), but survey respondents travelled greater distances to experience game fishing in Bermagui.

The University of Tasmania, on behalf of the Commonwealth Department of Agriculture, will undertake a recreational fishing survey of Southern Bluefin Tuna and other large Tunas and Billfish. Data collection began in December 2018 and concluded in November 2019, with results expected to be released mid-2020 (DAWR 2018).

Chapter 7

Indigenous customary fishing and aquaculture enterprises

Indigenous customary fishing

Definition of Indigenous customary fishing?

Various definitions exist for customary, traditional or cultural fishing in Australia. The National Indigenous Fishing Technical Working Group defined customary fishing as 'fishing in accordance with relevant Indigenous laws and customs for the purpose of satisfying personal, domestic or non-commercial communal needs' (NNTT 2004). The Torres Strait Treaty is more specific, describing traditional fishing as 'the taking, by traditional inhabitants for their own or their dependants' consumption or for use in the course of other traditional activities, of the living natural resources of the sea, seabed, estuaries and coastal tidal areas, including Dugong and Turtle' (Department of Trade and Resources 1978).

For State jurisdictions the approach taken in defining Indigenous customary fishing varies. For South Australia, the definition of 'Aboriginal traditional fishing' in the *Fisheries Management Act 2007* (SA) is 'fishing engaged in by an Aboriginal person for the purposes of satisfying personal, domestic or non-commercial, communal needs, including ceremonial, spiritual and educational needs, and using fish and other natural marine and freshwater products according to relevant Aboriginal custom'. For Victoria, a strategy is being developed to formally recognise Indigenous customary fishing rights in the *Fisheries Act 1995* (VIC) and *Fisheries Regulations 2009* (VIC), which currently lack a formal recognition of the sector. Victorian traditional owners may have rights under the Commonwealth's *Native Title Act 1993* to hunt, fish, gather and conduct other cultural activities for their personal, domestic or non-commercial communal needs without the need to obtain a licence. Traditional Owners that have agreements under the Traditional Owner Settlement Act 2010 (Vic) may also be authorised to fish without the requirement to hold a recreational fishing licence. In NSW, the *Fisheries management Act 1994* defines Indigenous cultural fishing as "fishing activities and practices carried out by Aboriginal persons for the purpose of satisfying their personal, domestic or communal needs, or for educational or ceremonial purposes or other traditional purposes, and which do not have a commercial purpose".

Indigenous customary fishing nationally recognised in 2003

At the national level, the importance of Indigenous customary fishing was formally recognised with the National Indigenous Fishing Technical Working Group being established in October 2003. The working group aims to enhance Indigenous people's participation in protecting, sharing and using Australian fisheries (NNTT 2003). One of its key outputs is *The principles communiqué on Indigenous fishing*, which was endorsed by the Australian Government in August 2005. The principles represent a commitment from stakeholders to:

- recognise customary fishing as a sector in its own right
- integrate and protect customary fishing within fisheries management frameworks
- implement strategies to engage Indigenous people in fisheries-related business
- expedite processes to increase Indigenous involvement in fisheries management and vocational training (NNTT 2005).

The principles have supported efforts at the state and territory level to separately recognise, support and protect Indigenous customary fishing activities. A common challenge across all jurisdictions has been implementing initiatives that support Indigenous customary fishing while also achieving sustainable fishing practices.

Indigenous customary fishing has high cultural and livelihood values

The *Livelihood values of Ingenious customary fishing* was released in November 2018 (see Smyth et al. 2018). The research was conducted from October 2015 to July 2017 across three case study regions in South Australia, the Northern Territory and New South Wales. Through qualitative research, the study identified cultural, social and economic values that customary fishing provided to the Indigenous communities interviewed. While results differed amongst the regions, a number of key findings were consistent within all the communities. The study found that customary fishing encompasses a deep, multifaceted value to Indigenous people, allowing for the maintenance of connection to country, culture, identity spirituality and knowledge.

Customary fishing was also found to have an impact on physical activity and accessibility to healthy foods which may be otherwise unavailable or affordable. Economically, customary fishing was also found to be a way in which Indigenous people could provide for their families, enabling them with a sense of pride (Smyth, Egan & Kennett 2018).

The study also found that there is significant interest in greater Indigenous involvement in the commercial fishing and aquaculture sectors. This is because jobs in these fields were seen to not only provide income but also allow the use and passing on of cultural knowledge and skills (Smyth, Egan & Kennett 2018).

Participation in Indigenous customary fishing is high

A comprehensive evaluation of Indigenous fishing activities in Northern Australia was completed in 2003 as part of the National Recreational and Indigenous Fishing Survey (NRIFS) (Henry & Lyle 2003). This survey aimed to better understand the level of Indigenous fishing by surveying Indigenous people aged five years and over living in coastal communities across northern Australia, from Broome in Western Australia to Cairns in Queensland (excluding those living in Torres Strait). The survey showed that an estimated 37,000 Indigenous people living in northern Australia fished at least once during 2000–01. This was equivalent to 92% of the Indigenous population in the region. These individuals spent an estimated total of 420,000 days fishing in that year (Henry & Lyle 2003).

This fishing was estimated to be associated with a harvest of approximately 900,000 Finfish, 1.1 million Molluscs, 660,000 Prawns and Yabbies, 180,000 Crabs and Rock Lobsters and smaller numbers of other species during 2000–01 (Henry & Lyle 2003). The major Finfish species groups harvested were Mullets, Catfishes, Tropical Snappers, Breams and Barramundi. Major non-Finfish species groups included Mussels, Freshwater Prawns, Mud Crabs, Prawns and Oysters. A large proportion (70%) of this Indigenous harvest was taken from inshore and coastal waters that are relatively more accessible to traditional fishing methods. Methods typically used include lines, traps, nets and more traditional spear and hand collection methods (Campbell & Murphy 2005).

Based on the NRIFS, Henry and Lyle (2003) estimated that 186,200 Indigenous people (excluding those living in Torres Strait) participated in non-commercial fishing in the survey year and that a total expenditure of $22.5 million was incurred by these fishers. Expenditure on fishing was estimated to be $2.4 million for Indigenous people residing in northern Australia and $20.6 million for those residing in southern Australia.

More recent research on Indigenous cultural fishing was conducted in New South Wales to determine a methodology for estimating cultural catch (Schnierer 2011). The report found that cultural fishing in the Tweed River region occurred on a regular basis, was predominantly shore-based and was focused around the estuary and adjacent coastal waters. The main gear types used were rods and handlines, with nets, traps and spears used to catch some species. The top 10 culturally most important species, based on a ranking given by participants, comprised a mix of Finfish and invertebrates. Pipis and Mud Crabs were the top two, followed by Sea Mullet, Tailor, Sand Whiting, Dusky Flathead, Beach Worms, Sydney Rock Oysters and the bait Yabbies.

A separate project in New South Wales identified the participation of Indigenous people in the commercial fishing sector (Schnierer & Egan 2012). This study found that 28 Indigenous people operated in share management fisheries in New South Wales, most in the Estuary General Fishery and Ocean Hauling Fishery. Aboriginal people hold approximately 3% of the total shares available in all of the share management fisheries in New South Wales. More than 90% of Aboriginal commercial fishers indicated that they gave some of their commercial catch to their local Indigenous communities. These contributions ranged from 5% to 20% of annual catch, with the average contribution approximately 10%.

Indigenous people and aquaculture

Ancient Indigenous eel trap site added to UNESCO World Heritage List

Aboriginal and Torres Strait Islander peoples have for thousands of years managed Australia's marine and aquatic resources, including through the practice of aquaculture (FAO 2010).

Recognised as one the oldest aquaculture sites in the world, the Budj Bim Cultural Landscape in south-west Victoria was added to the UNESCO World Heritage list in 2019. The ancient aquaculture system was created about 6,600 years ago by the Gunditjmara people to catch and ranch the Southern Shortfin Eel or Kooyanng, allowing for year-round harvesting. The Gunditjmara people used stones from the local volcanic rock to create weirs, channels and dams to manage water flows in order to trap and store the eels for harvest (UNESCO 2019; Neal 2019).

Other examples of ancient Indigenous aquaculture systems include the Brewarrina Aboriginal Fish Traps in north-west New South Wales. The custodians of the fish traps are the Ngemba people and it is unknown how old the site is (New South Wales Office of Environment and Heritage n.d.).

Indigenous-owned aquaculture enterprises

According to a report published in 2015, *Australian Indigenous women's seafood harvesting practices and prospects for integrating aquaculture,* a number of unsuccessful attempts have been made to establish commercial aquaculture business in Australia's northern Indigenous communities (Fleming, Petheram & Stacey 2015).

However, more recently a number of new enterprises are showing promising signs. An enterprise funded by the Northern Territory Department of Primary Industries and Fisheries (DPIF) and through research by the Darwin Aquaculture Centre (DAC) is supporting the establishment of a small-scale farm for Oysters with a view to penetrating the Australian seafood market (National Landcare Program n.d.). The Aboriginal-owned Oysters farm in the Goulburn Islands in the Northern Territory is currently growing 90,000 Blacklip Pearl Oysters for edible consumption in cages on tidal longlines. The farm is owned by the Warruwi community members and is expecting its first harvest in approximately 2020 (Roberts 2018). Further, in late 2019 the Cooperative Research Centre for Developing Northern Australia (CRCNA) announced a collaborative research program aimed at expanding the Tropical Rock Oyster aquaculture industry across Indigenous communities in northern Australia. The three year $4.1 million dollar project is expected to conclude in late 2022 and will cover aspects such as securing commercial spat, and optimising grow out and gear technology (CRCNA 2019).

The Emama Nguda Aboriginal Corporation (ENAC) in Western Australia has recently completed a three-year pilot project to commercialise the breeding of giant Freshwater Prawns or Cherabin—the first of its kind. The project is now planning to upscale by establishing a commercial aquaculture facility and to provide empowerment opportunities for local Aboriginal people. Cherabin is a traditional part of Indigenous diet and culture (Fowler 2019).

Chapter 8
Profile of Australian fisheries and aquaculture in 2016–17 and 2017–18

TABLE 6 Commonwealth fisheries profiles, 2016–17 to 2017–18

Fishery	Species	Method	Number (2016–17)	Number (2017–18)
Northern Prawn	Banana Prawns, Tiger Prawns, Endeavour Prawns and King Prawns	Otter trawl	53 vessels	55 vessels
Torres Strait **a**	Prawns	Otter trawl, troll, handline, free dive and hookah	84 endorsements	84 endorsements
	Tropical Rock Lobster		519 endorsements	586 endorsements
	Spanish Mackerel		256 endorsements	294 endorsements
	Pearl shell		119 endorsements	123 endorsements
	Trochus		80 endorsements	98 endorsements
	Finfish		248 endorsements	257 endorsements
	Sea Cucumber		150 endorsements	177 endorsements
	Crabs and Crystal Crabs		123 endorsements	133 endorsements
SESSF Commonwealth Trawl Sector	Mixed Finfish species, particularly Pink Ling, Blue Grenadier, Flathead and Silver Warehou	Otter trawl and Danish seine	48 vessels	49 vessels
SESSF Gillnet , Hook and Trap Sector	Mixed fish species, particularly Pink Ling, Blue-eye Trevalla and Gummy Sharks	Demersal gillnet, demersal longline, dropline and trotline	71 vessels	84 vessels
SESSF Great Australian Bight Trawl Sector	Deepwater Flathead and Bight Redfish	Demersal otter and limited midwater trawl	5 vessels	4 vessels
Southern Bluefin Tuna	Southern Bluefin Tuna	Purse seine, pole and line and longline and trolling	5 farm boats and 25 domestic	7 farm boats and 29 domestic

continued...

TABLE 6 Commonwealth fisheries profiles, 2016–17 to 2017–18 continued

Fishery	Species	Method	Number (2016–17)	Number (2017–18)
Eastern Tuna and Billfish	Yellowfin Tuna, Bigeye Tuna, Skipjack Tuna, Albacore and Billfish	Pelagic longline, purse seine, pole, trolling, rod and reel, handline	44 vessels	42 vessels
Western Tuna and Billfish	Yellowfin Tuna, Bigeye Tuna, Skipjack Tuna, Albacore and Billfish	Pole and line, purse seine, pelagic longline, troll, rod and reel and handline	3 vessels	3 vessels
Bass Strait Scallop	Scallops	Dredge	12 vessels	12 vessels
Small Pelagic **b**	Blue Mackerel, Jack Mackerels, Redbaits and Australian Sardine	Purse seine and midwater trawl	3 vessels	3 vessels
Southern Squid Jig	Gould's Squid	Jig	6 vessels	8 vessels
Sub Antarctic	Patagonian Toothfish and Mackerel Icefish	Trawl (demersal and midwater), longline and trial pot fishing	5 vessels	5 vessels
Western Deepwater Trawl	Mixed Finfish species	Otter trawl	11 Permits, 1 vessel	11 permits, 3 vessels
North West Slope Trawl	Scampi	Otter trawl	7 permit, 2 vessels	7 permits, 4 vessels
Coral Sea	Reef species including Sharks and Rays, Trochus, Tropical Rock Lobster, Sea Cucumber, aquarium species and Live Rock	Demersal line, trawl and fish trap, hand collection with and without breathing apparatus, hand-held scoop and seine nets	16 permits, 6 vessels	16 permits, 6 vessels
South Tasman Rise	Orange Roughy, Smooth Oreodory and Spikey Oreodory	Deepwater demersal trawl	Closed	Closed

a Numbers of active transferable vessel holder and traditional inhabitant licences in the Torres Strait with commercial fishing endorsements.
b Includes four permits held in the Informally Managed Fishery. **SESSF** Southern and Eastern Scalefish and Shark Fishery.
Source: Australian Fisheries Management Authority

TABLE 7 New South Wales fisheries profiles, 2016–17 to 2017–18

Fishery	Species	Method	Number (2016–17)	Number (2017–18)
Abalone	Blacklip Abalone	Diving	50 shareholdings	48 shareholdings
Rock Lobster	Eastern Rock Lobster	Trapping	100 shareholdings	100 shareholdings
Ocean Trawl	Prawns, Flathead and Eastern School Whiting	Otter board trawling	181 shareholdings	147 shareholdings
Ocean Trap and Line	Snapper, Leatherjackets, Bonitos and Spanner Crab	Fish and spanner crab traps, handline and dropline	327 shareholdings	284 shareholdings
Ocean Hauling	Mullets, Australian Sardine and Eastern Australian Salmon	Hauling (seine) nets and purse seine net	232 shareholdings	207 shareholdings
Southern Fish Trawl	Flathead, Eastern School Whiting and Squids	Otter board trawling	19 shareholdings	23 entitlements
Estuary Prawn Trawl	School Prawns, Squids and King Prawns	Otter board trawling	134 shareholdings	112 shareholdings
Estuary General	Mullets, Breams, Prawns, Crabs and Crystal Crabs	Mesh and hauling (seine) nets, crab and fish traps and hand gathering	533 shareholdings	458 shareholdings
Inland	Yabbies and European Carp	Yabby traps and gillnets	28 entitlements	27 entitlements
Sea Urchin and Turban Shell	Sea Urchin and Periwinkles	Diving	37 entitlements	37 entitlements
Aquaculture **a**	Prawns	Pond culture	10 licence holders	10 licence holders
	Yabbies	Ponds and farm dams	63 licence holders	59 licence holders
	Oysters	Rack tray and stick	284 licence holders	281 licence holders
	Silver Perch	Pond	71 licence holders	69 licence holders
	Trouts	Ponds and raceway	21 licence holders	21 licence holders
	Snapper	na	9 licence holders	9 licence holders
	Barramundi	Pond culture	8 licence holders	9 licence holders

a Aquaculture licence holders may culture more than one species per licence. **na** Not applicable.
Note: All NSW shares/entitlements are held in fishing businesses that may have shares and/or entitlements in one or more fisheries. The Abalone, Rock Lobster, Ocean Trawl (Prawn and Northern Fish Trawl), Ocean Trap and Line, Ocean Hauling, Estuary General and Estuary Prawn Trawl Fisheries are share management fisheries. The Sea Urchin and Turban Shell, Southern Fish Trawl and Inland Fisheries are restricted fisheries.
Source: New South Wales Department of Primary Industries

TABLE 8 Victorian fisheries profiles, 2016–17 to 2017–18

Fishery	Species	Method	Number (2016–17)	Number (2017–18)
Abalone	Greenlip Abalone and Blacklip Abalone	Diving	71 licences	71 licences
Scallops	Scallops	Dredge	90 licences	88 licences
Bay and Inlet	Mixed species	Various	57 licences	55 licences
Rock Lobster	Southern Rock Lobster	Pots	107 licences and 7235 pots	107 licences and 7,235 pots
Giant Crab	Giant Crab	Pots	14 licences	14 licences
Inshore Trawl	Mixed species	Various	54 licences	54 licences
Wrasse (Ocean)	Wrasse	Hand lines	22 licences	22 licences
Bait (General)	Mixed species	Various	12 licences	11 licences
Ocean (General)	Mixed species	Various	171 licences	162 licences
Aquaculture	Abalone	Flow-through systems	10 licences	10 licences
	Freshwater Eels (Short fin and Long fin Eels)	Recirculation units and cultured waters	13 licences	13 licences
	Mussels	Longlines	16 licences	17 licences
	Ornamental Species	Recirculation units and ponds	9 licences	8 licences
	Yabbies	Recirculation units, ponds and farm dams	17 licences	20 licences
	Salmonids (Atlantic Salmon, Rainbow Trout)	Recirculation units and raceways	18 licences	18 licences
	Warmwater Finfish (Barramundi, Murray Cod, Golden Perch, Silver Perch)	Recirculation units, flow-through system and ponds	18 licences	18 licences
	Other	na	21 licences	23 licences

Source: Victorian Fisheries Authority

TABLE 9 Queensland fisheries profiles, 2016–17 to 2017–18

Fishery	Species	Method	Number (2016–17)	Number (2017–18)
East Coast Trawl	Tiger Prawns, Banana Prawns, King Prawns, Endeavour Prawns, Bay Prawns, Saucer Scallops and Bugs	Otter trawl	370 licence holders	369 licence holders
River and Estuary Trawl	Banana Prawns, Bay Prawns and Tiger Prawns	Beam trawl	83 licence holders	81 licence holders
Gulf of Carpentaria Inshore	Barramundi, King Threadfin, Blue Threadfin, Sharks and Rays and Grey Mackerel	Net	88 licence holders	85 licence holders
East Coast Net (mainly Tropical)	Barramundi, King Threadfin, Blue Threadfin, Sharks and Rays and Grey Mackerel	Net	94 licence holders	94 licence holders
East Coast Net (mainly Subtropical)	Mullet, Tailor, Whitings, Breams, Grey Mackerel, Sharks and Rays	Net	86 licence holders	86 licence holders
East Coast Shark	Various Shark and Ray species	Net	115 licence holders	114 licence holders
East Coast Handline (mainly Tropical)	Coral Trouts, Redthroat Emperors and various other reef species	Handline	190 licence holders	190 licence holders
East Coast Handline (mainly Subtropical)	Snapper, Pearl Perch and other rocky reef species	Handline	226 licence holders	224 licence holders
Line RQ (Handline) **a**	Coral Trouts, Redthroat Emperors and various other reef species	Handline	347 licence holders	346 licence holders
Line SM (Trolling) **b**	Spanish Mackerel	Trolling	240 licence holders	240 licence holders
Estuary Crab	Mud Crabs and Blue Swimmer Crab	Pot	412 licence holders	412 licence holders
Oceanic Crab	Spanner Crab	Pot	239 licence holders	243 licence holders
Aquaculture	Prawns	Pond culture	61 development approvals (16 producing)	58 development approvals (16 producing)
	Barramundi	Pond and cage culture (incl. tank culture)	221 development approvals (21 producing)	207 development approvals (26 producing)
	Oysters	Rack and stick culture	105 development approvals (30 producing)	108 development approvals (33 producing)
	Redclaw	Pond culture	155 development approvals (23 producing)	142 development approvals (29 producing)
	Freshwater Finfish	Pond and tank culture	215 development approvals (14 producing)	201 development approvals (12 producing)
	Eel	Pond and tank culture	53 development approvals	49 development approvals

a Coral Reef Fin Fish Fishery; the RQ symbol can be used only in the area defined for the East Coast Line Fishery symbol(s) appearing on the same licence. **b** Spanish Mackerel Fishery; the SM symbol can be used only in the area defined for the East Coast Line Fishery symbol(s) appearing on the same licence.

Source: Department of Agriculture and Fisheries

TABLE 10 South Australian fisheries profiles, 2016–17 to 2017–18

Fishery	Species	Method	Number (2016–17)	Number (2017–18)
Blue Crab	Blue Swimmer Crab	Pots	9 licence holders	9 licence holders
Central Zone Abalone	Greenlip Abalone and Blacklip Abalone	Diving	6 licence holders	6 licence holders
Gulf St Vincent Prawn	King Prawns	Trawl	10 licence holders	10 licence holders
Lakes and Coorong	Freshwater Finfish and Marine Finfish, Molluscs	Netting, line fishing and handlines	36 licence holders	36 licence holders
Marine Scalefish	Various Finfish, Crustaceans and Molluscs	Netting, line fishing, handlines and traps	306 licence holders	305 licence holders
Miscellaneous	Various Finfish, Crustaceans, Molluscs and Worms	Traps, diving, etc.	14 licence holders	13 licence holders
Northern Zone Rock Lobster	Southern Rock Lobster	Pots	63 licence holders	63 licence holders
Restricted Marine Scalefish	Various Finfish, Crustaceans and Molluscs	Netting, line fishing, handlines and traps	3 licence holders	3 licence holders
River Fishery	Freshwater Finfish and Crustaceans	Netting, pots	6 licence holders	6 licence holders
Southern Zone Rock Lobster	Southern Rock Lobster	Pots	180 licence holders	180 licence holders
Southern Zone Abalone	Greenlip Abalone and Blacklip Abalone	Diving	6 licence holders	6 licence holders
Spencer Gulf Prawn	King Prawns	Trawl	39 licence holders	39 licence holders
West Coast Prawn	King Prawns	Trawl	3 licence holders	3 licence holders
Western Zone Abalone	Greenlip Abalone and Blacklip Abalone	Diving	22 licence holders	22 licence holders
Aquaculture	Land-based Category A: native species to local area, e.g. Yabbies	Ponds, dams	30 licences	32 licences
	Land-based Category B: exotic species to locality, e.g. Marron, Barramundi	Ponds, dams and recirculation systems	36 licences	31 licences
	Land-based Category C: high risk, e.g. Abalone	Ponds, recirculation systems	13 licences	12 licences
	Land-based Category D: highest risk, e.g. marine species with discharge to the environment	Flow-through raceways and intensive recirculation systems	8 licences	7 licences
	Marine: Abalone	Sea cages, contained longlines and uncontained benthic structures	10 licences	5 licences
	Marine: intertidal Molluscs, e.g. Oysters	Contained racks and contained longlines	334 licences	333 licences
	Marine: subtidal Molluscs, e.g. Blue Mussels	Longlines	38 licence holders	40 licence holders
	Marine: Tunas	Sea cages	14 licence holders	14 licence holders

Sources: Department of Primary Industries and Regions South Australia

TABLE 11 Western Australian fisheries profiles, 2016–17 to 2017–18

Fishery	Species	Method	Number (2016–17)	Number (2017–18)
West Coast Rock Lobster	Western Rock Lobster	Pots	240 boats	244 boats
Abalone **a**	Greenlip Abalone, Brownlip Abalone and Roe's Abalone	Diving	37 active licences	38 active licences
Shark Bay Prawn	King Prawns, Tiger Prawns, Endeavour Prawns and Scallops	Trawl	18 licences	18 licences
Exmouth Gulf Prawn	King Prawns, Tiger Prawns and Endeavour Prawns	Trawl	15 licences	15 licences
Nickol Bay Prawn	King Prawns and Banana Prawns	Trawl	14 licences	14 licences
Aquaculture	Pearl Oyster	Longlines	na	na
	Yabbies	Ponds and farmdams	na	na
	Marron	Ponds and farm dams	na	na
	Mussels	Longlines	na	na

a Number of active licences were given instead of active boats as in previous years due to the change in data collection process. **na** Not applicable.
Source: Department of Primary Industries and Regional Development

TABLE 12 Tasmanian fisheries profiles, 2016–17 to 2017–18

Fishery	Species	Method	Number (2016–17)	Number (2017–18)
Abalone	Blacklip Abalone and Greenlip Abalone	Diving	121 licence holders	121 licence holders
Rock Lobster	Southern Rock Lobster	Pots	311 licence holders	311 licence holders
Giant Crab	Giant Crab	Pots	82 licence holders	80 licence holders
Scallop	Commercial Scallop, Doughboy Scallop and Queen Scallop	Scallop harvester	67 licence holders	67 licence holders
Scalefish	Various	Netting/hooks	275 licence holders	270 licence holders
Aquaculture	Atlantic Salmon	Sea cages	45 licence holders	45 licence holders
	Pacific Oyster	Racking/line system	103 licence holders	103 licence holders
	Blue Mussel	Longlines	6 licence holders	7 licence holders
	Rainbow Trout	Sea cages	na	9 licence holders
	Other	na	12 licence holders	15 licence holders
	Abalone	Land-based tanks	6 licence holders	6 licence holders

na Not applicable.
Source: Department of Primary Industries, Parks, Water and Environment

TABLE 13 Northern Territory fisheries profiles, 2016–17 to 2017–18

Fishery	Species	Method	Number (2016–17)	Number (2017–18)
Coastal	Finfish and Bait	Line, net and trap	73 licence holders	78 licence holders
Offshore **a**	Mackerels, Sharks and Rays and Reef Fish	Trolling, hand and longline net, trap and trawling	58 licence holders	56 licence holders
Barramundi	Barramundi and Threadfin	Gillnet	14 licence holders	14 licence holders
Mud crab	Mud Crabs	Crab pots	49 licence holders	49 licence holders
Other	Molluscs, Oysters, Sea Cucumber, Squids and aquarium species	Hand harvest, jigging and a variety of other methods	24 licence holders	24 licence holders
Aquaculture **b**	Prawns	na	0 endorsements	0 endorsements
	Barramundi	na	1 endorsements	1 endorsements
	Others	na	5 endorsements	3 endorsements
	Pearl Oysters	na	4 licence holders	4 licence holders

a As a result of administrative changes in the Timor Reef Fishery and Demersal Fishery, both are now managed by individual transferable quota and no restrictions apply to the number of licences that can be issued or held. **b** Aquaculture licence holders may culture more than one species on their licences. The number of license is included once for each type; if a licence is approved for Barramundi, Prawns and other species, it will be listed once in each category. **na** Not applicable.
Source: Northern Territory Department of Primary Industry and Fisheries

References

ABARES 2017, Agricultural commodities: March quarter 2017 (pdf 15.5 Mb). Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra. CC BY 3.0.

ABC 2019, Tasmanian seafood giant Tassal expands into tropical north Queensland, Australian Broadcasting Corporation, November, accessed 15 November 2019.

ABS 2003, Year book Australia 2003, cat. no. 1301.0, Australian Bureau of Statistics, Canberra.

—— 2011, Household Expenditure Survey, Australia: summary of results, 2009–10, cat. no. 6530.0, Australian Bureau of Statistics, Canberra, September.

—— 2016a, Australian Census, Australian Bureau of Statistics, Canberra, August.

—— 2016b, Australian Statistical Geography Standard (ASGS): volume 1—main structure and greater capital city statistical areas, cat. no. 1270.0.55.001, Australian Bureau of Statistics, Canberra, July.

—— 2017, Household Expenditure Survey, Australia: summary of results, 2015–16, cat. no. 6530.0, Australian Bureau of Statistics, Canberra, September.

—— 2019a, Consumer price index, Australia, Sep 2019, cat. no. 6401.0, Australian Bureau of Statistics, Canberra, October.

—— 2019b, Australian Industry, 2017-18, cat. no. 8155.0, Australian Bureau of Statistics, Canberra, May.

Business Queensland 2016, Barramundi aquaculture, Queensland Government, 23 December 2019, accessed 15 October 2019.

Butterly, L 2013, 'Unfinished business in the Straits: Akiba v. Commonwealth of Australia [2013] HCA 33' (pdf 314 Kb), Indigenous Law Bulletin, vol.8, Issue 8.

Campbell, D & Murphy, JJ 2005, The 2000–01 National Recreational Fishing Survey economic report: a Fisheries Action Program project (pdf 919.5 Kb), FRDC project no. 99/158, Natural Heritage Trust, Department of Agriculture, Fisheries and Forestry, Canberra.

Caputi, N, Jackson, G & Pearce AF 2014, The marine heat wave off Western Australia during the summer of 2010/11—2 years on, Fisheries Research Report no. 250. WA Department of Fisheries, Perth, accessed 8 October 2018.

Chen J, 2004, Cultured Aquatic Species Information Programme—Laminaria japonica, United Nations Food and Agriculture Organisation, Fisheries and Aquaculture Department, Rome, accessed 31 October 2019.

Conron, SD, Grixti, D, Bruce, TK, Bridge, NF, Giri, K, Hindell, JS & Walker, TI 2014, New and innovative approaches to monitoring small-scale recreational fisheries (pdf 6.4 Mb), final report to Fisheries Research and Development Corporation, project no. 2008/005, April.

CRCNA 2019, Northern Australian Tropical Rock Oyster research and development, Cooperative Research Centre for Developing Northern Australia Ltd, Townsville, accessed 2 January 2020.

Danenberg, N & Mueller, S 2011, *Omnibus consumer research findings wave 2*, project no. 2008/779, Australian Seafood Cooperative Research Centre and the UniSA Ehrenberg-Bass Institute for Marketing Science, Canberra.

DA 2015, Australia's seafood trade, Department of Agriculture and Water Resources, Canberra, accessed 8 October 2018.

DAWR 2018, National recreational fishing survey of Southern Bluefin Tuna, Department of Agriculture and Water Resources, Canberra, accessed 5 October 2018.

Deakin Research 2017, Harvest from the sea, Deakin University, accessed 29 October 2019.

Department of Trade and Resources 1978, Treaty between Australia and the Independent State of Papua New Guinea concerning Sovereignty and Maritime Boundaries in the area between the two Countries, including the area known as Torres Strait, and Related Matters (pdf 175.3 Kb), Australian treaty series 1985, no. 5, Department of Trade and Resources, Canberra.

DIIS 2017, Addendum to Seafood Origin Information Working Group paper (pdf 148 Kb), Department of Industry, Innovation and Science, Canberra.

Dominion Consulting 2005, An economic profile of the Australian fishing tackle industry, final report to the Australian Fishing Tackle Association, Dominion Consulting Pty Ltd, Sydney, October.

DPIPWE 2015, Undaria (Wakame) Action Plan, Tasmanian Department of Primary Industries, Parks, Water and Environment, Hobart, accessed 12 November 2019.

—— 2018, Seaweed Fishery, Tasmanian Department of Primary Industries, Parks, Water and Environment, Hobart, accessed 1 November 2019.

ERA 2015, An Analysis of the Demand for Western Rock Lobster, report prepared for the Western Australian Department of Fisheries, Economic Research Associates, Perth.

Econsearch 2018, The economic contribution of aquaculture in the South Australian state and regional economies, 2016/1 (pdf 1.4 Mb), report to Primary Industries and Regions South Australia Fisheries and Aquaculture, accessed 15 October 2019.

EY 2009, Economic study of recreational fishing in Victoria (pdf 1.1 Mb), report prepared for the Victorian Recreational Fishing Peak Body, Ernst & Young, Melbourne, November.

—— 2015, Economic study of recreational fishing in Victoria (pdf 762 Kb), report prepared for the Victorian Recreational Fishing Peak Body, Ernst & Young, Melbourne, November.

Fabinyi M 2018, The Chinese seafood market: Opportunities and challenges for Australian exporters (pdf 690 kb), University of Technology Sydney, June.

FAO 2010, National aquaculture legislation overview: Australia Food and Agriculture Organisation of the United Nations, Rome, accessed 20October2019.

—— 2018, The state of world fisheries and aquaculture 2018—opportunities and challenges (pdf 7.9 Mb), Food and Agriculture Organization of the United Nations, Rome.

—— 2019a, FAOSTAT statistics database, Food and Agriculture Organization of the United Nations, Rome, accessed 10 October 2019.

—— 2019b, Tight supplies and rising prices, Food and Agriculture Organization of the United Nations, Rome, accessed 10 October 2019.

Ferdouse, F, Løvstad Holdt, S, Smith, R, Murúa, P & Yang, Z 2018, The global status of seaweed production, trade and utilization (pdf 1.94 Mb), Globefish research programme, vol. 124, Food and Agriculture Organisation of the United Nations, Rome.

Fleming, A, Petheram, L & Stacey, N, 2015, Australian Indigenous women's seafood harvesting practices and prospects for integrating aquaculture, Journal of Enterprising Communities: People and Places in the Global, accessed 27 October 2019.

Forbes, E, Tracey, S & Lyle, J 2009, Assessment of the 2008 recreational gamefish fishery of southeast Tasmania, with particular reference to Southern Bluefin Tuna, Tasmanian Aquaculture and Fisheries Institute, University of Tasmania, Hobart, accessed 27 October 2019.

Fowler, C 2019, Cherabin commercial farming by traditional owners in WA's far north to be an Australian first, Australian Broadcasting Corporation, 22 October 2019, accessed 27 October 2019.

BDO Econsearch & IMAS 2019, Australia's fisheries and aquaculture industry 2017–18: economic and social contributions summary (pdf 1.06 Mb), Presented by the Fisheries Research and Development Corporation project 2017-210 ,BDO Econsearch and the Institute of Marine and Antarctic Studies.

Gaughan, DJ, Molony, B & Santoro, K (eds) 2019, Status reports of the fisheries and aquatic resources of Western Australia 2017/18: the state of the fisheries (pdf 11.2 Mb), WA Department of Primary Industries and Regional Development, Perth.

Geoscience Australia 2018, Maritime boundary definitions, Geoscience Australia, Canberra, accessed 1 November 2019.

Giri, K & Hall, K 2015, South Australian Recreational Fishing Survey 2013–14 (pdf 2.05 Mb), Fisheries Victoria internal report series no. 62, Victorian Department of Economic Development, Jobs, Transport and Resources, Melbourne,

Henry, GW & Lyle, JM (eds) 2003, The National Recreational and Indigenous Fishing Survey (pdf 3.9 Mb), FRDC project no. 99/158, Department of Agriculture, Fisheries and Forestry, Canberra.

Intuitive Solutions 2019, 2019 Unpacking the Consumer Seafood Experience, Report prepared for the Fisheries Research and Development Corporation, Canberra.

Koreis, D 2019, Feeding seaweed to cows: our livestock methane research lights up, CSIRO, accessed 29 October 2019.

Lyle, JM & Tracey, SR 2012, Tasmanian Recreational Rock Lobster and Abalone Fisheries: 2010–11 Fishing Season, Institute of Marine and Antarctic studies, University of Tasmania, Hobart.

Lyle, JM, Stark, KE & Tracey, SR 2014, 2012–13 Survey of Recreational Fishing in Tasmania, Institute for Marine and Antarctic Studies, University of Tasmania, Hobart.

Lyle, JM, Tracey, SR, Stark, KE & Wotherspoon, S 2009, 2007–08 Survey of Recreational Fishing in , Tasmanian Aquaculture and Fisheries Institute, University of Tasmania, Hobart.

McCarthy, M 2016, White spot outbreak a 'wake-up call' for Australia's biosecurity system, as prawn farmers claim imports are to blame, Australian Broadcasting Corporation, 23 December 2019, accessed 15 October 2019.

Mobsby, D & Curtotti, R 2019, ABARES annual fisheries outlook 2019, Australian Bureau of Agricultural and Resource Economics and Sciences, Department of Agriculture, Canberra, accessed 5 October 2019.

Murphy, S 2019, Scientist researching skin-healing powers of seaweed suffers catastrophic scalping, Australian Broadcasting Corporation, 4 August 2019, accessed 15 October 2019.

National Landcare Program n.d., Developing Indigenous rock oyster farming, Australian Government, Canberra, accessed 24 October 2019.

Neal, M 2019, Ancient Indigenous aquaculture site Budj Bim added to UNESCO World Heritage list, Australian Broadcasting Corporation, 6 July 2019, accessed 23 October 2019.

New South Wales Office of Environment and Heritage n.d., Brewarrina Aboriginal Fish Traps / Baiame's Ngunnhu, NSW Department of Planning, Industry and Environment, Sydney, accessed 23 October 2010.

NNTT 2003, 'Australia's first Indigenous fishing rights conference draws local and international experts', media release, National Native Title Tribunal, Australia, 27 October.

—— 2004, ''Fishing principles to guide Indigenous involvement in marine management', media release, National Native Title Tribunal, Australia, 22 December.

—— 2005, *Indigenous fishing bulletin*, National Native Title Tribunal, Australia, November.

Noble, L, Mantilla, E & Gallagher, J 2017, WINSC—providing pathways for the involvement of women in the seafood industry development—shaping a new community for seafood (pdf 5.8 Mb), Fisheries Research and Development Corporation, Canberra, Brisbane, accessed 28 October 2019.

Nogrady, B 2019, POMS: where is the Pacific Oyster industry now?, Fisheries Research & Development Corporation News, vol. 27, no. 3, September 2019.

NTDPIR 2018, Recreational fishing surveys, NT Department of Primary Industry and Resources, Darwin accessed 15 November 2019

Patterson, H, Williams, A, Hennecke, B & Mobsby D 2019, ''Southern Bluefin Tuna', in Fishery status reports 2019, Ch 23, Australian Bureau of Agricultural and Resource Economics and Sciences, Department of Agriculture, Canberra, accessed 18 December 2019.

Pereira, G & Josupeit, H 2017, The world lobster market (pdf 521 Kb), FAO Globefish Research Programme, Food and Agriculture Organisation of the United Nations, vol. 123, Rome, accessed 3 October 2019.

Pereira, R & Yarish, C 2008, Mass production of marine macroalgae, in Encyclopaedia of Ecology, p. 3120, accessed 5 October 2019.

Queensland DAF 2015, 2013–14 Statewide Recreational Fishing Survey (pdf 9.06 Mb), Queensland Department of Agriculture and Fisheries, Brisbane.

—— 2018, Queensland AgTrends 2017–18 (pdf 2.83 Mb), Queensland Department of Agriculture and Fisheries, Brisbane.

—— 2019, Statewide recreational fishing surveys, Queensland Department of Agriculture and Fisheries, Brisbane, accessed 28 October 2019.

Recfish Australia 2010, Recreational fishing in Commonwealth waters: a preliminary assessment (pdf 3.4 Mb), Recfish Australia, Brisbane.

Roberts, G 2018, Aboriginal oyster farm pearl in the making, Special Broadcasting Service Australia and Australian Associated Press, 24 November 2018, accessed 24 October 2019.

Ryan, KL, Hall, NG, Lai, EK, Smallwood, CB, Taylor, SM & Wise, BS 2017, Statewide survey of boat-based recreational fishing in Western Australia 2015/16 (pdf 6.8 Mb), fishing research report no. 287, WA Department of Primary Industries and Regional Development, Perth.

SBS 2019, Seafarms confident in NT prawn funds, Special Broadcasting Service, May, accessed 18 December2019.

Schipp, G, Bosmans, J & Humphrey, J 2007, Northern Territory barramundi farming handbook (pdf 1.7 Mb), NT Department of Primary Industries, Fisheries and Mines, Darwin, accessed 1 October 2019.

Schnierer, S 2011, Aboriginal fisheries in New South Wales: determining catch, cultural significance of species and traditional fishing knowledge needs (pdf 2.9 Mb), report to the Fisheries Research and Development Corporation, project no. 2009/038, Canberra.

Schnierer, S & Egan, H 2012, Impact of management changes on the viability of Indigenous commercial fishers and the flow on effects to their communities: case study in New South Wales (pdf 17.3 Mb), report to the Fisheries Research and Development Corporation, project no. 2010/304, Canberra.

Smyth, L, Egan, H & Kennett, R, 2018, Livelihood values of Indigenous customary fishing: final report to the Fisheries Research and Development Corporation (pdf 3 Mb), Australian Institute of Aboriginal and Torres Strait Islander Studies, Canberra.

Street, E & Dunlevie, J 2018, Macquarie Harbour salmon: 1.35 million fish deaths prompt call to 'empty' waterway of farms, Australian Broadcasting Corporation, 29 May 2018, accessed 27 October 2019.

Taylor, E & Butt, A 2017, Three charts on: Australia's declining taste for beef and growing appetite for chicken, The Conversation, Melbourne, accessed 11 November 2019.

UN 2019, United Nations commodity trade statistics database, accessed 31 October 2019.

UNESCO 2019, Budj Bim Cultural Landscape, United Nations Educational, Scientific and Cultural Organisation, Paris, accessed 23 October 2019.

Ward, P, Mazur, K, Stenekes, N, Kancans, R, Curtotti, R, Summerson, R, Gibbs, C, Marton, N, Moore, A & Roach, J 2012, A socioeconomic evaluation of three eastern Australian game-fishing regions (pdf 18 Mb), ABARES report to client prepared for the Fisheries Research and Development Corporation, Canberra, August.

West, LD, Lyle, JM, Matthews, SR, Stark, KE & Steffe, AS 2012, Survey of Recreational Fishing in the Northern Territory, 2009–10 (pdf 2.7 Mb), fishery report no. 109, NT Department of Primary Industry and Fisheries, Darwin.

West, LD, Stark, KE, Murphy, JJ, JM Lyle & Ochwada-Doyle, FA 2016, Survey of Recreational Fishing in New South Wales and the ACT, 2013/14 (pdf 4.2 Mb), fisheries final report series no. 149, NSW Department of Primary Industries, Wollongong.

About this report

Australian fisheries and aquaculture statistics contains comprehensive information on commercial fishing and aquaculture in Australia covering fisheries production, trade data, consumption and employment statistics. The report is aimed at providing statistical information for the fishing and aquaculture industry, fisheries managers, policy makers and researchers.

Australian fisheries and aquaculture statistics has been published by ABARES since 1991 and is part of a suite of publications that provides annual economic updates for Australia's fishery and aquaculture industry. Estimates of GVP provided in the report are used for a range of purposes, including to determine Commonwealth, state and territory fisheries research funding arrangements each year.

An overview of Economic concepts in Australian fisheries and aquaculture statistics is included to better communicate and clarify definitions and methodologies used for this report.

Broad areas covered

The Production section can help answer questions such as:

- What are the major commercial species produced in Australia?
- Which fishery management jurisdiction produces the most seafood?
- How much of Australia's seafood is produced from aquaculture and wild-catch -fisheries?

The Trade section can help answer questions such as:

- How much fisheries product does Australia import and export?
- How much is that trade worth?
- Where does imported seafood come from, and where does exported seafood go?

The Recreational fishing section provides a high-level summary of the participation level and the economic value of recreational fishing. It also provides a summary of recent jurisdictional surveys of the recreational fishing sector.

The Customary fishing and Indigenous aquaculture enterprises section provides a high-level summary of customary fishing in Australia, including how 'customary fishing' is defined. Survey results and some recent research are highlighted.

The Employment section provides statistics on employment in Australia's fisheries and aquaculture sector. Data is presented from the most recent Australian national census on employment levels in commercial fishing and aquaculture, and in seafood processing and wholesale. Regional distribution of employment is also presented from the census in the form of a heat map for employment in commercial fishing and aquaculture.

The Profiles of Australian fisheries and aquaculture section displays the number of licence holders by selected species and fishing methods for all Commonwealth, state and territory fisheries.

Time series data on the volume and value of production, trade and consumption of Australian fisheries products are available for download here.

Changes to the 2018 edition

The format and style of the 2018 edition of *Australian fisheries and aquaculture statistics* has been updated from previous editions.

Statistical tables contained in the report are also available from ABARES fisheries data products. A longer time series for fisheries and aquaculture data is now available. Trade data presented are available from the early 1990s and all other data extend back to the late 1990s.

Commercial species names referred to in this publication are in compliance with the *Australian Fish Names Standard AS SSA 5300-2019*. In this report standard fish names for groups of species or species families are not capitalised and employ the use of initial capital letters. A concordance list showing previously used fish names against the fish names now used in this report is available in Fish name concordance.

Rounding

Small discrepancies in totals for the data products associated with this report are generally caused by the rounding of components. A dash (–) is used to denote a nil or negligible amount.

na is used to denote a number that is not available.

Species notes

Treatment of double counting for Southern Bluefin Tuna

Southern Bluefin Tuna sold from the farms in South Australia is reported at its full market value. However, the input value of those Tunas 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.

Confidential data

For this publication some data is confidential. State and Commonwealth jurisdictions generally do not publish GVP information for species that are caught by less than five operators in a given fishing season. Catch data may also be confidential for the same reason. Confidentiality may also apply to some aquaculture operations. Confidential data is masked in this publication by grouping in "other" categories and is appropriately noted where confidentiality applies.

Applying the Australian Fish Names Standard to certain species groupings

Rock Lobsters

The terms Rock Lobsters in this publication refers to species of the *Palinuridae* family including the Western Rock Lobster (caught predominantly along the west coast of Western Australia), Southern Rock Lobster (caught predominantly along the southern coastline of South Australia and Victoria and along the coastline of Tasmania), Eastern Rock Lobster (caught predominantly off the coast of New South Wales), Ornate Rock Lobster (caught predominantly in the Torres Strait Tropical Rock Lobster Fishery and northern Queensland) and species from the Champagne Group (caught predominantly in northern Queensland).

Prawn and Prawns

The term Prawn and Prawns in this publication refers to all species included in the SFN Prawns Group (species of the scientific Penaeoidea & Caridea family), the Red Prawn, Giant Scarlet Prawn and Pink Striped Prawn (all three of these species belong to the scientific Aristeidae family), Royal Red Prawn (Solenoceridae family), species from the SFN Freshwater Prawns Group (Palaemonidae family), and Red Carid Prawn and White Carid Prawn (both species belonging to the Pandalidae family).

Oysters

In this publication the term Oysters refers solely to edible oysters which refers to species of the Ostreidae family, including Pacific Oyster (produced predominantly in South Australia and Tasmania) and Sydney Rock Oyster (produced in New South Wales). Oysters used for producing pearl products are referred to as Pearl Oysters, species from the Pteriidae family. Pearl Oysters meat is not separately identified in the pearl sector.

Sharks & Rays

The term Sharks & Rays in this publication refers to the group of cartilaginous fish species from the Elasmobranchii (Sharks, Skates and Rays) and Holocephali (chimaera) sub classes of the taxonomic Chondrichthyes class.

Salmonids

The term Salmonids in this publication refers to species from the Salmonidae family, including Atlantic Salmon, Rainbow Trout and Brown Trout. In Australia predominantly Atlantic Salmon is produced.

Acronyms and units

Acronyms

ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
AFMA	Australian Fisheries Management Authority
AFZ	Australian Fishing Zone
ANZSIC	Australian and New Zealand Standard Industrial Classification
ChAFTA	China Australia Free Trade Agreement
CPI	consumer price index
DA	Department of Agriculture
DAC	Darwin Aquaculture Centre
DAF	Department of Agriculture and Fisheries (Queensland)
DAWR	Department of Agriculture and Water Resources (now Department of Agriculture)
DPI	Department of Primary Industries (New South Wales)
DPIF	Department of Primary Industries and Fisheries (Northern Territory)
DPIPWE	Department of Primary Industries, Parks, Water and Environment (Tasmania)
DPIRD	Department of Primary Industries and Regional Development (Western Australia)
EEZ	Exclusive Economic Zone
ENAC	The Emama Nguda Aboriginal Corporation
FAO	Food and Agriculture Organization of the United Nations
fob	free on board
FRDC	Fisheries Research and Development Corporation
FTE	full time equivalent
GDP	gross domestic product
GVA	gross value added
GVP	gross value of production
NRIFS	National Recreational and Indigenous Fishing Survey
NSW	New South Wales
NT	Northern Territory
na	not available
n.d.	no date
NER	net economic returns
nfd	not further defined
nm	nautical miles
no.	number
PIRSA	Primary Industries and Regions South Australia
POMV	Pilchard Orthomyxovirus

SA	South Australia
SA2	Statistical Areas Level 2
SARDI	South Australian Research and Development Institute
SITC	Standard International Trade Classification
TAC	total allowable catch
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
VFA	Victorian Fisheries Authority
WA	Western Australia

Units

kg	kilogram
t	tonne (1,000 kilograms)
kt	kilotonne (1,000 tonnes)
$b	billion dollars
$m	million dollars
'000	thousands

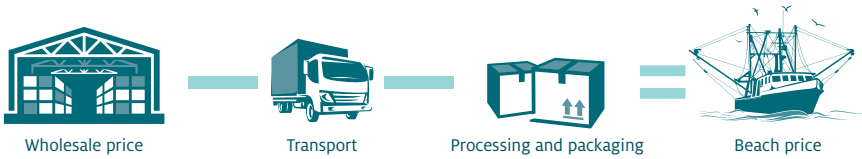
Economic concepts in Australian fisheries and aquaculture Statistics

Fishery gross value of production (GVP)

Fishery gross value of production (GVP) provides an estimate of the activity level, in monetary terms, of commercial fisheries and aquaculture production. GVP is calculated by multiplying the whole weight of production by the landed unit value. The landed unit value is defined as the beach price for fish species caught in wild-catch fisheries and the farmgate price for aquaculture products. Beach price is used so that GVP measures what is directly produced from the resource and not the value added component as product moves through the supply chain.

Price data can be derived from various sources, including fishers and aquaculture farm operators, seafood markets and seafood buyers and processors. Most fish is sold on a market away from the point of landing or aquaculture farm gate. As a result, transport and marketing margins are subtracted to estimate the beach or farmgate price that commercial fishers and aquaculture farmers receive (Figure 27).

FIGURE 27 Description of beach price estimation



Note: Not all prices used in *Australian fisheries and aquaculture statistics* will be estimated in this way. A number of beach prices are obtained directly from fishers from surveying operators and fish receivers.
Source: ABARES

To value production at the point of landing, whole weight equivalents are used for production volume. Similar to beach prices, valuing production in whole weight equivalents enables comparisons across regions and species. Whole weight equivalents for semi-processed fish are obtained by applying conversion factors for each species where production is not landed whole but in a semi-processed state, such as gutted, headed and gutted, or in an otherwise reduced condition.

Measurement of fisheries products trade

In this report the volume and value of fisheries trade is reported on a different basis from the volume and value of Australian fisheries and aquaculture production.

Exports are valued on a free on board (fob) basis—that is, the market price of fisheries products is valued as fob at the border. This may differ from the beach price because it will include any processing and transportation costs required for the product to be readied for export from Australia (Figure 28). The volume of exports is reported on a processed basis. Because of these differences volume and value of exports are not directly comparable to the volume and value of fisheries and aquaculture production. See Calculating apparent seafood consumption to understand how ABARES adjusts for these differences for the purposes of measuring seafood consumption in Australia.

FIGURE 28 Description of export price

Source: ABARES

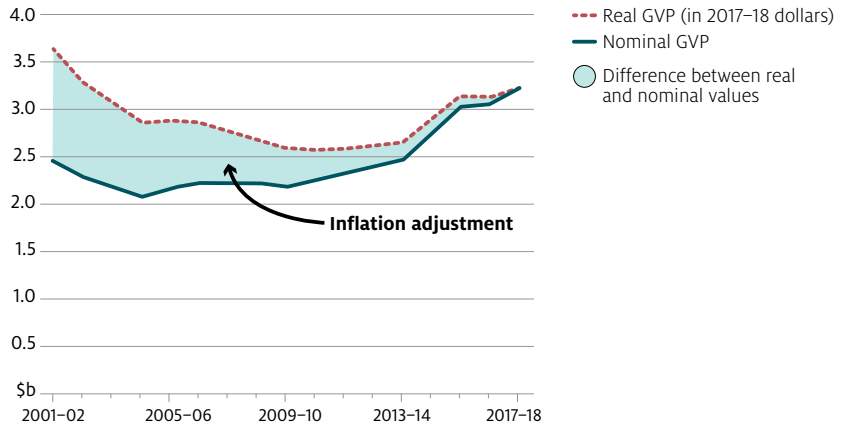
Difference between real and nominal values

Broad-level increases in price levels across the economy are referred to as inflation. In the Australian context inflation is measured by the Australian Bureau of Statistics quarterly and reported as movement in the consumer price index (CPI) from one quarter to the next. Inflation makes comparing the value of fisheries production over the longer term problematic if the influence on the value of fisheries production from CPI movements is not separated out when reporting in current period (nominal) terms.

Changes in prices and the value of production between years can be more directly compared if they are inflation adjusted because the value of a dollar is held constant over time. The inflation-adjusted values used in this publication are referred to as 'real' values and are measured in 2017–18 dollars.

Inflation in Australia generally averages around 2% a year, so changes to prices in the short run are not as affected by this as prices in the long run. For this reason recent year price changes are generally discussed in current period dollars. Figure 29 shows how real and current period values compare between 2001–02 and 2017–18.

FIGURE 29 Australian fisheries and aquaculture gross value of production, real and nominal



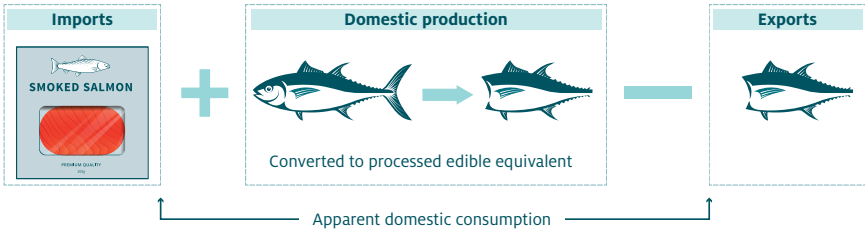
Source: ABARES

Calculating apparent seafood consumption

ABARES estimates annual apparent consumption as total edible quantity of seafood supplied domestically—that is, total production plus imported seafood, less exports of seafood (Figure 30). Apparent consumption provides an estimate of the total amount of seafood consumed in Australia assuming zero change in stocks. Apparent consumption is a measure often used to track the consumption of agricultural commodities over time.

The production quantity of Australian fishery and aquaculture products is reported in this publication on a whole weight basis, whereas trade data are reported on a processed basis. To align the units of measurement between production and trade data, production volume needs to be converted to a processed edible equivalent. Production volumes are adjusted to an edible quantity basis using species-specific conversion rates and excluding species that are known to be predominantly supplied for non-human consumption purposes, such as for aquaculture feed or bait. Imports and exports of seafood are sourced from the Australian Bureau of Statistics (ABS) trade data and are reported as edible weight. The apparent consumption per person is calculated as the total apparent consumption divided by the total Australian population in each year. The method applied here is consistent with that used by ABARES to estimate apparent consumption of other agricultural commodities produced in Australia.

FIGURE 30 Apparent domestic consumption



Source: ABARES

The Food and Agriculture Organization of the United Nations (FAO) also compiles statistics on apparent consumption of seafood, applying a consistent method across all countries. FAO estimates indicate that for any given year annual consumption of seafood in Australia is higher on a per-person basis than estimates derived by ABARES using the above methodology. The discrepancy between FAO and ABARES estimates reflects differences in methodological approaches to estimating consumption. ABARES estimates seafood consumption on a processed edible basis, whereas the FAO provides its estimates on a whole weight basis.

Economic geography in Australian fisheries and aquaculture statistics

In this report a distinction is made between jurisdiction and location of catch. Jurisdiction of catch refers to whether the catch falls into state or Commonwealth jurisdictional waters. Location of catch refers to the state that the catch is landed in and includes Commonwealth catch distributed to the states. State catch data are reported on a jurisdictional basis.

Within jurisdictions management of fisheries are by fish stocks. This can involve restrictions on the type of fishing gear allowed as well as spatial boundaries of the fishery itself. Sometimes the spatial extent of two or more fisheries within the same jurisdiction will overlap. One example of this is the Commonwealth Eastern Tuna and Billfish Fishery and the Commonwealth Small Pelagic Fishery off eastern Australia.

State and territory fisheries agencies typically manage fisheries out to 3 nautical miles, while the Australian Government generally manages fisheries in waters from 3 nautical miles out to 200 nautical miles out from the Australian coast (Figure 31). This area is referred to as the Australian Fishing Zone. The majority of economic activity (wild-catch and aquaculture) occurs within the combined area of state-managed fisheries. This is because of the higher biological productivity of waters closer to shore, the location of high-value species and the geographic location of aquaculture production.

FIGURE 31 Australian Maritime Zones

Note: **a** The limit of the Exclusive Economic Zone (EEZ) may be less that 200nm if the limit of another country's EEZ is reached. Boundaries between overlapping EEZs are determined by international treaty. nm nautical mile (1 nautical mile = 1.852km).
Source: Adapted from Geoscience Australia 2018

Glossary

A

Aquaculture: commercial growing of marine or freshwater animals and aquatic plants. Often called 'fish farming'.

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

Australian Fishing Zone (AFZ): the area extending seaward of coastal waters (3 nautical miles from the territorial sea baseline) to the outer limits of the Exclusive Economic Zone (EEZ). In the case of external territories, such as Christmas Island, the AFZ extends from the territorial sea baseline to the outer limit of the EEZ. The AFZ is defined in the *Fisheries Management Act 1991*, which also specifies a number of 'excepted waters', notably in Antarctica and Torres Strait, that are excluded from the AFZ. For more information on the AFZ see Economic geography in Australian fisheries and aquaculture statistics.

B

Beach price: a price that would be received by fishers or aquaculture farmers per unit of whole-weight fish at the point of landing or farm gate. It excludes any margins for freight, marketing and processing. For more information on *Beach price* see Measurement of fisheries products trade.

C

Catch: in relation to fishing, means capture, take or harvest.

Coastal waters: the waters extending 3 nautical miles from the territorial sea baseline. The states and the Northern Territory have jurisdiction over the coastal waters adjacent to them. For more information on *Coastal waters* see Economic geography in Australian fisheries and aquaculture statistics.

Continental shelf: either the area of relatively shallow water that fringes a continent from the shoreline to the top of the continental slope (the top of the continental slope is often defined by the 200-metre isobath), or a defined maritime zone that comprises the continental shelf where it extends beyond the limit of the Exclusive Economic Zone to the limit of the continental margin. The defined maritime zone is also sometimes referred to as the 'extended continental shelf', and its limit is determined by the United Nations Commission on the Limits of the Continental Shelf.

D

Danish-seining: a trawling method used by relatively small vessels in shallow waters (up to about 200 metres). Lengths of weighted ropes of up to 2,800 metres are laid out on the sea floor in a diamond pattern, with the vessel at one end of the diamond and the net at the other. As the vessel moves forward, bringing in the net, the diamond becomes elongated, allowing the fish to be herded into the path of the net (c.f. *Purse seining*).

Demersal: found on or near the benthic habitat (c.f. *Pelagic*).

Demersal trawling: trawling with gear designed to work on or near the seabed. Such gear is used to take demersal species of Finfish and Prawns.

Domestic fishery: fishery within the Australian Fishing Zone operated by Australian-flagged vessels.

E

Exclusive Economic Zone (EEZ): the area that extends from the limit of the territorial sea, which is 12 nautical miles offshore from the territorial sea baseline, to a maximum of 200 nautical miles, measured from the territorial sea baseline. The EEZ is less than 200 nautical miles in extent where it coincides with the EEZ of another country. In this case, the boundaries between the two countries are defined by treaty. Within its EEZ, Australia has sovereign rights and responsibilities over the water column and the seabed, including the exploration and exploitation of natural resources. For more information on *EEZ* see Economic geography in Australian fisheries and aquaculture statistics.

Export quantity: data supplied by the Australian Bureau of Statistics (ABS) are on the basis of the net product weight (excluding packaging) exported. Exports are identified by the ABS according to source state or territory, not state or territory in which the product was grown or processed.

Export value: data supplied by the ABS and valued on a *Free on board (fob)* basis at the Australian port of export. The costs of freight, insurance and other distributive services beyond the Australian customs border are not included.

F

Farmgate value: see *Beach price*.

Fisheries: refers to Commonwealth, state and territory waters in which marine and freshwater animals are commercially caught or farmed, unless otherwise specified.

Fisheries production: refers to commercial production of wild-caught and aquaculture marine or freshwater animals from Commonwealth, state and territory waters and aquaculture farms, unless otherwise specified.

The *Farmgate value* of a cultivated product in aquaculture is the net value of the product when it leaves the farm, after marketing costs have been subtracted.

Fishing season: the period during which a fishery can be accessed by fishers. Sometimes referred to as a fishing year.

Free on board (fob): a seller pays for transportation of the goods to the port of shipment, plus loading costs. The buyer pays the cost of marine freight transport, insurance, unloading, and transportation from the arrival port to the final destination.

G

Gross value of production (GVP): historically, 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. For more on GVP see Economic concepts in Australian fisheries and aquaculture statistics.

Grow-out cage: pontoons supporting cages in which wild-caught fish are fattened until they reach marketable size.

I

Import quantity: data supplied by the ABS on the basis of the net product weight (excluding packaging) imported import value data supplied by the ABS on the basis of product cost.

Import value: data provided by the ABS are valued on a customs value for duty basis that is identical to a *Free on board (fob)* basis. The customs value for duty is the price actually paid at the port of origin, including inland freight and insurance costs incurred in delivering the product(s) to the port of origin; the freight and insurance costs of delivering the product(s) to the Australian port of destination are excluded.

Individual transferable quota (ITQ): management tool by which portions of the total allowable catch quota are allocated to fishers (individuals or companies). The fishers have long-term rights over the quota but can trade quota with others. See also *Quota*.

J

Jig: vertical line with lures, which is moved up and down, or jigged, by hand or machine.

L

Line fishing: fishing methods that use fishing lines, including handlines, hand reels, powered reels, pole and line, droplines, longlines, trotlines and troll lines.

Longline: fishing gear in which short lines (branch lines, snoods or droppers) carrying hooks are attached to a longer mainline at regular intervals. Pelagic longlines are suspended horizontally at a predetermined depth with the help of surface floats. The mainlines can be 100 kilometres long and have several thousand hooks. Droppers on demersal longlines (set at the seabed with weights) are usually more closely spaced.

M

Minor line: term adopted by the Australian Fisheries Management Authority to refer to several line-fishing methods, including trolling, and fishing using a rod and reel, handline, or pole and line.

N

Nautical mile (nm): a unit of distance derived from the angular measurement of 1 minute of arc of latitude but standardised by international agreement as 1,852 metres.

Net economic returns (NER): a fishery's NER over a particular period are equal to fishing revenue less fishing costs. Fishing costs include the usual accounting costs of fuel, labour, and repairs and maintenance, as well as various economic costs such as the opportunity cost of owner labour and capital (c.f. Opportunity cost). The concept of NER is very closely related to economic efficiency—a necessary condition for NER to be maximised.

O

Otter trawl: Demersal trawl operated by a single vessel in which the net is held open horizontally by angle-towed otter boards (large rectangular 'boards' of timber or steel) and vertically by a combination of floats on the headrope and weights on the ground line. Attached between the head and ground ropes and the towing warps, the otter boards are spread apart by the hydrodynamic forces acting on them when the net is towed.

P

Pair trawling: trawling by two vessels steaming in parallel with the net towed between them. Very large nets can be held open and towed in this way. The net may be hauled aboard the two vessels alternately for processing of the catch.

Pelagic: inhabiting surface waters rather than the sea floor. Usually applied to free-swimming species such as Tunas and Sharks (c.f. *Demersal*).

Purse seining: harvesting of surface-schooling pelagic fish by surrounding the school with a net. A line that passes through rings on the bottom of the net can be tightened to close the net so that the fish cannot escape (c.f. *Danish-seining*).

Q

Quota: amount of catch allocated to a fishery (total allowable catch), or to an individual fisher or company (individual transferable quota).

Quota species: species for which catch quotas have been allocated.

R

Re-exports: (included in merchandise exports statistics) are goods originally imported, which are exported in either the same condition in which they were imported or after undergoing repair or minor alterations which leave them essentially unchanged. This is not considered to be Australian production or manufacture. Minor operations include blending, packaging, bottling, cleaning and sorting.

Re-imports: (included in merchandise imports statistics) are goods originally exported, which are subsequently imported in either the same condition in which they were exported or after undergoing repair or minor operations which leave them essentially unchanged. Minor operations include blending, packaging, bottling, cleaning and sorting.

Real: 'real 2017–18 dollars' or 'real terms' refers to conversion of nominal dollar values to take account of inflation; comparison from year to year is expressed in nominal terms unless stated otherwise.

Rounding small discrepancies in totals are generally caused by the rounding components.

Real prices; real terms: Real prices are historical prices that have been adjusted to reflect changes in the purchasing power of money (most commonly measured by the consumer price index). Such prices may also be expressed as being in real terms. Commonly, a year is indicated alongside a real price to show the year's prices to which historical prices have been adjusted. Prices quoted in real terms allow meaningful comparison over time because any fluctuations exclude the effect of inflation.

S

Seines: seine nets are usually long, flat nets like a fence that are used to encircle a school of fish, with the vessel driving around the fish in a circle. Purse-seine and Danish-seine nets are used in a range of fisheries.

Species group: group of similar species that are often difficult to differentiate without detailed examination.

T

Territorial sea baseline: the baseline from which all the zones (for example, Exclusive Economic Zone) of Australia's maritime jurisdiction are measured. The baseline is defined as the level of lowest astronomical tide along the coast. Straight baselines may be drawn along deeply indented coastlines or to encompass islands fringing the coast. The baseline may also be drawn straight across the entrances to bays and estuaries, rather than following the coast inshore.

Trap fishing: fishing by means of traps, often designed to catch a particular species (for example, Rock Lobster pots).

Trawl fishing: fishing method in which a large, bag-like net is drawn along behind a vessel to target either demersal or pelagic fish species. There are many variations.

Trolling: fishing method in which lines with baits or lures are dragged by a vessel at 2–10 knots. Used widely to catch fish such as Spanish Mackerel, Yellowtail Kingfish and several Tunas species.

Fish name concordance

Previously used name	Name used in this edition
Aquarium fish	Aquarium Species
Australian salmon	Australian Salmon
Balmain bug	Balmain Bugs
Banana prawn	Banana Prawns
Greasyback prawn	Greasyback Prawns
Mussels	Blue Mussel
Bonito	Bonitos
Bream	Breams
Cockle	Cockles
Coral trout	Coral Trouts
Crab	Crabs
Cuttlefish	Cuttlefishes
Eel	Eels
Emperor	Emperors
Endeavour prawn	Endeavour Prawns
Fish	Finfish
Eel	Eels
Jack mackerel	Jack Mackerels
King prawn	King Prawns
Mackerel	Mackerels
Mud crab	Mud Crabs
Murray cod	Murray Cods
Ornamental fish	Ornamental Species
Oyster	Oysters

Previously used name	Name used in this edition
Pearl oyster	Pearl Oysters
Pipi	Pipis
Prawn	Prawns
Reef fish	Reef Species
Rockcod	Rockcods
Saucer scallops	Saucer Scallops
Scallop	Scallops
School prawn	School Prawns
School whiting	School Whitings
Sea cucumber	Sea Cucumber
Shark	Sharks and Rays
Silver trevally	Silver Trevally
Southern rock cod	Southern Rock Cods
Rock lobster	Rock Lobsters
Squid	Squids
Tiger prawn	Tiger Prawns
Toothfish	Icefishes
Tropical snapper	Tropical Snappers
Tuna	Tunas
Yabby	Yabbies

Fisheries inquiries

New South Wales

David Makin (Wild-catch Sector)
Department of Primary Industries
Tel 02 6691 9605

Raelene Trenaman (Aquaculture)
Department of Primary Industries
Tel 02 4916 3843 Website dpi.nsw.gov.au

Victoria

Monique Nelis
Victorian Fisheries Authority
Tel 03 5258 0284 Website vfa.vic.gov.au

Queensland

Dr Genevieve Phillips
Department of Agriculture and Fisheries
Tel 07 3087 8362 Website daf.qld.gov.au

Western Australia

Eva Lai
Department of Primary Industries and Regional Development
Tel 08 9203 0135 Website dpird.wa.gov.au

Tasmania

Denise Garcia
Department of Primary Industries, Parks, Water and Environment
Tel 03 6165 3017 Website dpiw.tas.gov.au

Northern Territory

Ann Schubert (Fisheries)
Department of Primary Industry and Fisheries
Tel 08 8999 2370 Website dpir.nt.gov.au/fisheries

Commonwealth

John Garvey (Licensing and Quota Management)
Australian Fisheries Management Authority
Tel 1300 723 621 Website afma.gov.au

South Australia

Angelo Tsolos (Wild-catch Sector)
SARDI Aquatic Sciences
Tel 08 8207 5414 Website pir.sa.gov.au/research

Jade Davison (Aquaculture)
Department of Primary Industries and Regions
Tel 08 8429 0520 Website pir.sa.gov.au

Statistical tables

TABLE S1 Gross value of fisheries and aquaculture production, Australia

	2015-16 $'000	2016-17 $'000	2017-18 p $'000
State wild-catch fisheries			
New South Wales	91,082	89,305	99,501
Victoria	57,810	54,362	62,770
Queensland	175,897	192,832	180,199
South Australia	264,653	253,107	264,049
Western Australia	503,939	529,336	554,472
Tasmania	182,349	175,935	194,317
Northern Territory	34,894	43,860	47,825
Total	1,310,625	1,338,736	1,403,132
Aquaculture a			
New South Wales	60,232	64,610	70,728
Victoria	27,584	39,320	48,269
Queensland	117,300	116,500	114,200
South Australia	251,520	230,540	205,660
Western Australia	89,636	90,453	79,240
Tasmania	730,723	770,949	873,545
Northern Territory	24,522	34,447	25,551
Total	1,301,518	1,346,818	1,417,192
Commonwealth fisheries			
Northern Prawn	124,014	118,812	98,150
Torres Strait	24,355	18,045	20,632
SESSF Commonwealth Trawl Sector	42,913	47,096	43,962
SESSF Gillnet, Hook and Trap Sector	22,378	25,286	23,301
SESSF Great Australian Bight Trawl Sector	7,694	10,040	9,159
Eastern Tuna and Billfish – Longline and minor line	48,755	35,674	38,401
Southern Bluefin Tuna	35,875	38,544	39,735
Western Tuna and Billfish	np	np	np
Bass Strait Scallop	4,610	5,998	6,715
Southern Squid Jig	1,035	572	2,699
Other fisheries **b**	127,201	103,283	107,324
Total	438,829	403,350	390,078
Total value c	3,020,402	3,057,505	3,177,773

a Excludes the value of hatchery fishery production. **b** Includes entries marked np and Small Pelagics, Macquarie Island, Coral Sea, Heard and McDonald Islands, SESSF Victorian coastal waters sector, Norfolk Island, South Tasman Rise, Eastern and Western Skipjack Tuna, East Coast Deepwater Trawl, North West Slope Trawl, and Western Deepwater Trawl fisheries because of confidentiality requirements. **c** To avoid double counting, total value has been reduced to allow for Southern Bluefin Tuna caught in the Commonwealth Southern Bluefin Tuna Fishery, as an input to farms in South Australia. **p** Preliminary. **SESSF** Southern and Eastern Scalefish and Shark Fishery.

Sources: ABARES; AFMA; Western Australian Department of Fisheries; Tasmanian Department of Primary Industries and Regional Development; New South Wales Department of Primary Industries; Queensland Department of Agriculture and Fisheries; Victorian Fisheries Authority; Northern Territory Department of Primary Industry and Resources; Primary Industries and Regions South Australia; South Australian Research and Development Institute.

TABLE S2 Wild-caught fisheries production a

	2015-16		2016-17		2017-18 p	
	t	$'000	t	$'000	t	$'000
Finfish						
Australian Salmons	2,109	3,306	1,633	3,348	1,883	3,381
Australian Sardine	44,898	29,734	44,302	27,588	46,833	29,680
Barramundi	1,029	9,080	1,210	11,241	1,132	10,929
Breams	1,030	6,420	982	5,374	868	5,119
Coral Trouts	856	27,158	876	28,106	855	27,444
Dories	466	2,038	532	2,788	364	2,227
Flathead	3,788	24,471	3,787	26,000	3,134	22,018
Gemfishes	118	287	114	272	101	257
Pink Ling	821	4,701	961	5,234	1,018	5,077
Mullets	4,743	14,670	4,563	14,333	4,384	14,970
Orange Roughy	415	2,319	417	2,217	514	2,665
Sharks & Rays **b**	5,570	26,839	5,614	27,886	5,127	26,771
Spanish Mackerel	1,280	9,688	1,412	11,211	1,264	10,024
Tunas	10,225	74,427	8,543	64,227	9,194	66,889
Whitings	3,557	20,753	3,411	17,051	4,010	19,763
Other	45,589	260,377	37,129	242,231	39,724	252,915
Total	126,494	516,271	115,485	489,107	120,405	500,130
Crustaceans						
Crabs	4,685	52,764	4,614	57,151	4,580	59,936
Prawns	19,930	301,507	20,982	310,273	19,012	280,086
Rock Lobsters	9,444	681,231	10,021	661,830	10,519	713,101
Other	1,054	20,445	1,010	20,134	1,071	22,641
Total	35,114	1,055,947	36,627	1,049,388	35,182	1,075,764
Molluscs						
Abalone	3,392	131,489	3,401	142,672	3,176	151,469
Octopus	728	5,662	901	7,643	682	6,678
Pipis	722	6,298	775	7,025	843	7,739
Scallops	5,012	13,995	6,098	23,891	7,732	25,158
Squids	2,271	12,773	2,128	14,733	2,889	16,445
Other	267	6,098	295	6,358	450	6,850
Total	12,394	176,315	13,598	202,321	15,772	214,339
Other nei	245	922	306	1,271	2,074	2,978
Total wild-caught	174,246	1,749,454	166,016	1,742,087	173,434	1,793,211

a State and Commonwealth wild-catch production. **b** Sharks converted to whole weight. **nei** Not elsewhere included. **p** Preliminary.
Sources: ABARES; Australian Fisheries Management Authority; Western Australian Department of Fisheries; Tasmanian Department of Primary Industries and Regional Development; New South Wales Department of Primary Industries; Queensland Department of Agriculture and Fisheries; Victorian Fisheries Authority; Northern Territory Department of Primary Industry and Resources; Primary Industries and Regions South Australia; South Australian Research and Development Institute

TABLE S3 Fisheries and aquaculture production in 2015–16, by state, Australia [a]

	NSW	Vic.	Qld	SA	WA	Tas.	NT	C'wlth		Aust.	
Value	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000		$'000	
Finfish											
Tunas	0.0	0.0	0.0	126,870	6.0	0.0	59.3	74,362		170,727	**b**
Salmonids **c**	2,290	10,981	0.0	0.0	73.9	704,370	0.0	0.0		717,714	
Other Finfish	46,501	11,885	99,124	79,386	44,879	3,209	31,560	206,988	**d**	523,533	
Total	48,791	22,866	99,124	206,256	44,959	707,579	31,620	281,350		1,411,975	
Crustaceans											
Prawns	23,279	2,165	143,150	45,039	43,388	0.0	0.0	130,972		387,993	
Rock Lobsters	11,785	24,516	5,895	137,680	394,129	92,946	0.0	14,279		681,231	
Crabs	9,514	113	24,170	5,606	8,326	2,030	2,984	20.9		52,764	
Other Crustaceans	1,858	719	14,886	1,569	2,429	0.0	0.0	3,235		24,697	
Total	46,436	27,513	188,101	189,894	448,272	94,976	2,984	148,508		1,146,684	
Molluscs											
Abalone	3,582	30,824	0.0	36,936	6,223	82,583	0.0	0.0		160,148	
Scallops	0.0	0.0	3,040	0.0	4,673	1,667	0.0	4,615		13,995	
Oysters	42,774	0.0	564	30,950	0.0	21,206	0.0	0.0		95,494	
Squids	1,115	508	673	5,245	488	1,347	26.4	3,370		12,773	
Other Molluscs	3,133	3,683	0.0	9,372	86,148	3,568	264	978		107,146	
Total	50,604	35,016	4,277	82,503	97,532	110,371	291	8,964		389,557	
Other nei	5,484	0.0	1,695	37,520	2,812	145	24,522	7.9		72,186	
Total value	151,314	85,394	293,197	516,173	593,575	913,072	59,416	438,829	**e**	3,020,402	**b**
Quantity	t	t	t	t	t	t	t	t		t	
Finfish											
Tunas	0.0	0.0	0.0	8,895	1.0	0.0	11.1	10,213		14,221	**b**
Salmonids **c**	196	1,343	0.0	0.0	8.5	54,772	0.0	0.0		56,319	
Other Finfish	9,324	3,300	12,350	46,538	10,165	370	5,894	35,066	**d**	123,008	
Total	9,520	4,643	12,350	55,433	10,175	55,142	5,905	45,279		193,548	
Crustaceans											
Prawns	1,574	175	9,547	2,574	3,226	0.0	0.0	7,462		24,559	
Rock Lobsters	158	288	180	1,592	5,712	1,138	0.0	376		9,444	
Crabs	532	9.0	2,570	726	672	25.1	149	1.9		4,685	
Other Crustaceans	122	80.0	709	21.0	89.0	0.0	0.0	174		1,195	
Total	2,386	552	13,007	4,913	9,699	1,163	149	8,014		39,883	
Molluscs											
Abalone	128	1,054	0.0	976	166	1,826	0.0	0.0		4,150	
Scallops	0.0	0.0	1,406	0.0	601	744	0.0	2,261		5,012	
Oysters	3,727	0.0	0.0	4,589	0.0	3,029	0.0	0.0		11,345	
Squids	109	47.0	135	427	34.0	434	5.1	1,081		2,271	
Other Molluscs	326	850	0.0	2,731	530	718	50.8	137		5,343	
Total	4,290	1,951	1,541	8,723	1,331	6,751	56.0	3,478		28,121	
Other nei	330	0.0	155	4,412	37.0	80.9	0.0	2.0		5,017	
Total quantity	16,526	7,146	27,052	73,481	21,242	63,138	6,110	56,773	**e**	266,569	**b**

a State totals include aquaculture but exclude hatchery production. **b** To avoid double counting, total has been reduced to allow for southern bluefin tuna caught in the Commonwealth Southern Bluefin Tuna Fishery, as an input to farms in South Australia. **c** Includes salmon and trout production. **d** Includes fish (excluding tuna) component of Commonwealth fisheries, plus catch from Commonwealth fisheries that cannot be disaggregated for confidentiality reasons. **e** Totals include all fisheries under Commonwealth jurisdiction.

Sources: ABARES; AFMA; Western Australian Department of Fisheries; Tasmanian Department of Primary Industries and Regional Development; New South Wales Department of Primary Industries; Queensland Department of Agriculture and Fisheries; Victorian Fisheries Authority; Northern Territory Department of Primary Industry and Resources; Primary Industries and Regions South Australia; South Australian Research and Development Institute.

TABLE S4 Fisheries and aquaculture production in 2016–17, by state, Australia [a]

	NSW	Vic.	Qld	SA	WA	Tas.	NT	C'wlth		Aust.	
Value	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000		$'000	
Finfish											
Tunas	0.0	0.0	0.0	115,000	17.0	0.0	23.9	64,186		147,827	**b**
Salmonids **c**	2,623	14,674	0.0	0.0	76.6	738,694	0.0	0.0		756,068	
Other Finfish	40,687	10,803	98,375	72,205	54,214	3,496	37,255	190,998	**d**	508,033	
Total	43,311	25,477	98,375	187,205	54,308	742,190	37,279	255,184		1,411,928	
Crustaceans											
Prawns	28,795	931	157,036	46,271	44,703	0.0	0.0	118,206		395,942	
Rock Lobsters	11,275	22,856	10,268	120,082	401,165	83,274	0.0	12,911		661,830	
Crabs	9,095	127	23,271	5,841	10,888	2,000	5,904	24.9		57,151	
Other Crustaceans	1,995	982	12,976	1,427	2,250	0.1	42.4	4,898		24,571	
Total	51,160	24,897	203,550	173,621	459,006	85,274	5,946	136,040		1,139,494	
Molluscs											
Abalone	3,663	38,215	0.0	41,167	7,227	86,775	0.0	0.0		177,047	
Scallops	0.0	0.0	2,492	0.0	15,279	38.9	0.0	6,080		23,891	
Oysters	45,413	0.0	500	40,070	0.0	26,287	0.0	0.0		112,270	
Squids	990	363	715	5,692	570	1,659	32.3	4,712		14,733	
Other Molluscs	3,540	4,730	0.0	10,062	78,469	4,517	602	1,280		103,200	
Total	53,606	43,308	3,707	96,991	101,545	119,277	634	12,072		431,141	
Other nei	5,839	0.0	3,700	25,830	4,930	142	34,447	54.0		74,942	
Total value	153,915	93,682	309,332	483,647	619,789	946,883	78,307	403,350	**e**	3,057,505	**b**
Quantity											
Finfish											
Tunas	0.0	0.0	0.0	8,100	2.0	0.0	12.9	8,528		11,957	**b**
Salmonids **c**	211	1,282	0.0	0.0	8.3	51,298	0.0	0.0		52,800	
Other Finfish	8,009	3,816	12,110	45,500	10,523	373	6,435	27,712	**d**	114,477	
Total	8,220	5,098	12,110	53,600	10,533	51,671	6,448	36,241		179,233	
Crustaceans											
Prawns	1,687	74.0	10,783	2,429	3,062	0.0	0.0	7,572		25,606	
Rock Lobsters	156	262	277	1,559	6,402	1,083	0.0	283		10,021	
Crabs	462	10.0	2,362	724	835	25.6	192	2.0		4,614	
Other Crustaceans	146	108	613	21.0	81.1	0.0	2.5	189		1,159	
Total	2,450	454	14,035	4,733	10,380	1,109	195	8,045		41,401	
Molluscs											
Abalone	128	1,178	0.0	1,067	173	1,728	0.0	0.0		4,274	
Scallops	0.0	0.0	1,153	0.0	1,915	16.3	0.0	3,014		6,098	
Oysters	3,770	0.0	0.0	5,158	0.0	3,004	0.0	0.0		11,932	
Squids	111	33.0	143	444	38.0	241	5.0	1,113		2,128	
Other Molluscs	391	1,227	0.0	2,524	505	888	74.6	174		5,783	
Total	4,400	2,438	1,296	9,193	2,631	5,877	79.6	4,301		30,215	
Other nei	356	2.0	284	3,441	129	81.9	0.0	4.8		4,299	
Total quantity	15,425	7,992	27,725	70,967	23,673	58,739	6,722	48,592	**e**	255,148	**b**

a State totals include aquaculture but exclude hatchery production. **b** To avoid double counting, total has been reduced to allow for southern bluefin tuna caught in the Commonwealth Southern Bluefin Tuna Fishery, as an input to farms in South Australia. **c** Includes salmon and trout production. **d** Includes fish (excluding tuna) component of Commonwealth fisheries, plus catch from Commonwealth fisheries that cannot be disaggregated for confidentiality reasons. **e** Totals include all fisheries under Commonwealth jurisdiction.

Sources: ABARES; AFMA; Western Australian Department of Fisheries; Tasmanian Department of Primary Industries and Regional Development; New South Wales Department of Primary Industries; Queensland Department of Agriculture and Fisheries; Victorian Fisheries Authority; Northern Territory Department of Primary Industry and Resources; Primary Industries and Regions South Australia; South Australian Research and Development Institute.

TABLE S5 Fisheries and aquaculture production in 2017–18, by state, Australia ap

	NSW	Vic.	Qld	SA	WA	Tas.	NT	C'wlth		Aust.	
Value	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000		$'000	
Finfish											
Tunas	0.0	0.0	0.0	126,000	10.0	0.0	43.5	66,836		160,260	b
Salmonids c	2,682	13,740	0.0	0.0	70.0	838,276	0.0	0.0		854,768	
Other Finfish	53,971	12,267	97,674	77,695	44,353	4,229	60,234	188,966	d	539,390	
Total	56,653	26,008	97,674	203,695	44,433	842,505	60,278	255,802		1,554,418	
Crustaceans											
Prawns	25,402	1,758	144,780	51,181	35,316	0.0	0.0	102,171		360,607	
Rock Lobsters	11,565	23,277	5,410	122,578	438,140	97,121	0.0	15,009		713,101	
Crabs	8,362	0.0	23,607	5,667	10,531	1,931	9,806	31.7		59,936	
Other Crustaceans	4,417	867	13,720	2,572	3,270	0.0	23.9	3,478		28,347	
Total	49,745	25,902	187,516	181,998	487,257	99,053	9,830	120,690		1,161,991	
Molluscs											
Abalone	5,484	52,132	0.0	41,455	5,418	90,574	0.0	0.0		195,063	
Scallops	0.0	0.0	5,290	0.0	13,140	0.0	0.0	6,728		25,158	
Oysters	51,832	0.0	900	20,160	0.0	28,723	0.0	0.0		101,615	
Squids	1,140	460	719	6,683	450	1,198	38.5	5,757		16,445	
Other Molluscs	3,076	6,538	0.0	10,478	59,825	3,962	475	1,087		85,441	
Total	61,532	59,130	6,908	78,776	78,833	124,457	514	13,572		423,722	
Other nei	2,298	0.0	2,300	5,240	23,190	1,847	2,754	14.8		37,643	
Total value	170,229	111,039	294,399	469,709	633,712	1,067,862	73,375	390,078	e	3,177,773	b
Quantity											
Finfish											
Tunas	0.0	0.0	0.0	8,000	1.0	0.0	11.8	9,182		12,064	b
Salmonids c	182	1,179	0.0	0.0	4.1	60,048	0.0	0.0		61,413	
Other Finfish	9,564	2,711	11,578	48,956	9,672	377	8,164	29,571	d	120,594	
Total	9,745	3,890	11,578	56,956	9,678	60,425	8,176	38,753		194,070	
Crustaceans											
Prawns	1,228	137	9,785	2,577	2,546	0.0	0.0	6,945		23,218	
Rock Lobsters	157	287	146	1,554	6,949	1,148	0.0	278		10,519	
Crabs	405	0.0	2,360	669	794	20.1	324	7.3		4,580	
Other Crustaceans	207	94.0	657	20.0	104	0.0	1.3	154		1,238	
Total	1,997	518	12,947	4,820	10,393	1,168	326	7,384		39,554	
Molluscs											
Abalone	113	1,281	0.0	1,099	134	1,576	0.0	0.0		4,203	
Scallops	0.0	0.0	2,447	0.0	2,243	0.0	0.0	3,042		7,732	
Oysters	3,582	0.0	88.5	2,177	0.0	2,976	0.0	0.0		8,824	
Squids	123	41.0	144	470	29.0	293	6.5	1,783		2,889	
Other Molluscs	254	1,593	0.0	2,599	360	766	58.6	126		5,756	
Total	4,072	2,915	2,679	6,345	2,766	5,611	65.1	4,951		29,404	
Other nei	96.5	0.0	176	697	136	1,839	0.0	2.2		2,947	
Total quantity	15,911	7,323	27,381	68,818	22,973	69,043	8,566	51,090	e	265,975	b

a State totals include aquaculture but exclude hatchery production. **b** To avoid double counting, total has been reduced to allow for southern bluefin tuna caught in the Commonwealth Southern Bluefin Tuna Fishery, as an input to farms in South Australia. **c** Includes salmon and trout production. **d** Includes fish (excluding tuna) component of Commonwealth fisheries, plus catch from Commonwealth fisheries that cannot be disaggregated for confidentiality reasons. **e** Totals include all fisheries under Commonwealth jurisdiction. **p** Preliminary.

Sources: ABARES; AFMA; Western Australian Department of Fisheries; Tasmanian Department of Primary Industries and Regional Development; New South Wales Department of Primary Industries; Queensland Department of Agriculture and Fisheries; Victorian Fisheries Authority; Northern Territory Department of Primary Industry and Resources; Primary Industries and Regions South Australia; South Australian Research and Development Institute.

TABLE S6 Fisheries and aquaculture production in 2017–18, by location of catch and production, Australia ap

	NSW	Vic.	Qld	SA	WA	Tas.	NT	Other b	Aust.
Value	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Finfish									
Tunas	15,252	0.0	17,374	126,000	1,308	282	43.5	0.0	160,260
Salmonids	2,682	13,740	0.0	0.0	70.0	838,276	0.0	0.0	854,768
Other Finfish	79,372	46,118	109,252	92,634	45,808	13,797	60,242	92,167	539,390
Total	97,306	59,858	126,627	218,634	47,186	852,355	60,285	92,167	1,554,418
Crustaceans									
Prawns	26,278	1,758	200,651	51,181	42,560	0.0	38,180	0.0	360,607
Rock Lobsters	11,565	23,277	20,419	122,578	438,140	97,121	1.1	0.0	713,101
Crabs	8,367	23.8	23,607	5,667	10,531	1,934	9,806	0.0	59,936
Other Crustaceans	4,446	991	14,220	2,572	5,224	0.0	893	0.0	28,347
Total	50,656	26,050	258,896	181,998	496,456	99,055	48,880	0.0	1,161,991
Molluscs									
Abalone	5,484	52,132	0.0	41,455	5,418	90,574	0.0	0.0	195,063
Scallops	0.0	2,934	5,290	0.0	13,140	3,781	12.2	0.0	25,158
Oysters	51,832	0.0	900	20,160	0.0	28,723	0.0	0.0	101,615
Squids	2,205	3,317	752	6,956	516	2,559	140	0.0	16,445
Other Molluscs	3,453	7,146	0.6	10,488	59,825	4,053	475	0.0	85,441
Total	62,975	65,529	6,943	79,059	78,899	129,690	627	0.0	423,722
Other nei	2,298	0.4	2,314	5,240	23,190	1,847	2,754	0.0	37,643
Total value	213,235	151,438	394,779	484,931	645,731	1,082,948	112,547	92,167	3,177,773 c
Quantity	t	t	t	t	t	t	t	t	t
Finfish									
Tunas	1,678	0.0	2,203	8,000	127	44.4	11.8	0.0	12,064
Salmonids	182	1,179	0.0	0.0	4.1	60,048	0.0	0.0	61,413
Other Finfish	20,950	10,282	13,261	51,545	9,920	2,034	8,165	4,438	120,594
Total	22,809	11,461	15,464	59,545	10,051	62,126	8,176	4,438	194,070
Crustaceans									
Prawns	1,434	137	13,779	2,577	3,099	0.0	2,192	0.0	23,218
Rock Lobsters	157	287	424	1,554	6,949	1,148	0.1	0.0	10,519
Crabs	406	6.0	2,360	669	794	20.3	324	0.0	4,580
Other Crustaceans	208	98.7	678	20.0	185	0.0	48.4	0.0	1,238
Total	2,205	529	17,240	4,820	11,026	1,168	2,565	0.0	39,554
Molluscs									
Abalone	113	1,281	0.0	1,099	134	1,576	0.0	0.0	4,203
Scallops	0.0	1,328	2,447	0.0	2,243	1,711	3.1	0.0	7,732
Oysters	3,582	0.0	88.5	2,177	0.0	2,976	0.0	0.0	8,824
Squids	476	954	149	540	38.1	712	21.3	0.0	2,889
Other Molluscs	297	1,666	0.1	2,600	360	775	58.6	0.0	5,756
Total	4,468	5,228	2,684	6,416	2,775	7,749	83.0	0.0	29,404
Other nei	97.0	0.3	178	697	136	1,839	0.0	0.0	2,947
Total quantity	29,579	17,219	35,566	71,478	23,989	72,883	10,825	4,438	265,975 c

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, Small Pelagics, Macquarie Island, Heard and McDonald Islands, Coral Sea, North West Slope, Southern Squid and Western Deepwater Trawl fisheries. **c** Totals include confidential Commonwealth landings and only sum across. **p** Preliminary.

Sources: ABARES; AFMA; Western Australian Department of Fisheries; Tasmanian Department of Primary Industries and Regional Development; New South Wales Department of Primary Industries; Queensland Department of Agriculture and Fisheries; Victorian Fisheries Authority; Northern Territory Department of Primary Industry and Resources; Primary Industries and Regions South Australia; South Australian Research and Development Institute.

TABLE S7 Fisheries and aquaculture production, New South Wales

	2015-16		2016-17		2017-18 p	
	t	$'000	t	$'000	t	$'000
Crustaceans						
Eastern Rock Lobster	158	11,785	156	11,275	157	11,565
King Prawns	525	10,173	767	15,682	560	14,668
School Prawns	692	6,740	483	4,727	363	4,558
Other Prawns **a**	31.0	381	76.4	517	21.3	355
Crabs	532	9,514	462	9,095	405	8,362
Other Crustaceans **b**	114	1,522	139	1,615	192	4,004
Total **c**	2,052	40,115	2,083	42,911	1,698	43,511
Molluscs						
Blacklip Abalones	128	3,582	128	3,663	113	5,484
Cuttlefishes	64.0	343	73.8	393	87.0	530
Pipis	168	1,943	175	1,962	138	1,777
Octopus	145	1,100	195	1,444	100	1,196
Squids	45.0	772	37.4	597	36.2	611
Other Molluscs **d**	13.0	90.0	21.2	134	15.0	103
Total **c**	563	7,830	630	8,193	490	9,700
Finfish						
Sea Mullet	2,843	9,552	2,281	8,116	2,679	10,236
Silver Trevallies	89.0	473	59.8	384	67.6	461
Yellowtail Kingfish	100	947	65.7	669	77.5	804
Jack Mackerels	0.0	1.0	0.0	0.0	1.2	2.0
Black Bream and Yellowfin Bream	282	3,565	212	2,674	247	3,208
Eastern Australian Salmon	836	1,302	754	1,980	894	1,667
Snapper	175	2,003	167	1,860	172	1,895
Grey Morwong	21.0	106	23.6	108	24.3	118
Mulloway	76.0	818	71.8	766	71.0	774
Sand Whiting	99.0	1,514	83.5	1,246	67.6	1,076
Luderick	291	707	197	489	209	536
Eastern School Whiting	869	2,828	953	2,754	1,369	4,956
Dusky Flathead	143	1,353	136	1,240	124	1,258
Other Finfish **e**	3,178	17,383	2,767	15,350	3,023	18,613
Total **c**	9,002	42,552	7,771	37,636	9,028	45,605
Other nei f	125	585	89.9	565	96.5	685
Total wild-caught	11,742	91,082	10,574	89,305	11,312	99,501
Aquaculture g						
Prawns	326	5,985	360	7,869	284	5,821
Yabbies	7.5	336	6.3	380	15.2	413
Oysters	3,727	42,774	3,770	45,413	3,582	51,832
Silver Perch	254	2,968	194	2,398	221	2,753
Trouts	196	2,290	211	2,623	182	2,682
Barramundi	67.8	982	43.7	654	46.5	684
Ornamental species	na	474	na	263	na	303
Other aquaculture **h**	205	4,424	266	5,011	269	6,239
Total	4,784	60,232	4,851	64,610	4,599	70,728
Total production c	16,526	151,314	15,425	153,915	15,911	170,229

a Mainly includes Tiger Prawns, Royal Red Prawn and Bay Prawns. **b** Mainly includes Balmain Bugs, Yabbies and Nippers. **c** Excludes catches in the Commonwealth and other jurisdiction fisheries landed into New South Wales. **d** Mainly includes Cockles, Periwinkles, Whelk and Blue Mussel. **e** Mainly includes Australian Sardine, Blue Mackerel, Leatherjackets, Flathead, Bonitos, Yellowtail Scad, Sandy Sprat, Tailor, Silver Biddy and Eels. f Mainly includes Beachworms and Sea Urchin. **g** Excludes hatchery production. **h** Mainly includes Longfin Eel, Golden Perch, Murray Cod, Mulloway and Pearls. **p** Preliminary.

Source: New South Wales Department of Primary Industries

TABLE S8 Fisheries and aquaculture production, Victoria a

	2015-16		2016-17		2017-18 p	
	t	$'000	t	$'000	t	$'000
Crustaceans						
Southern Rock Lobster	288	24,516	262	22,856	287	23,277
Prawns	175	2,165	74.0	931	137	1,758
Crabs	9.0	113	10.0	127	na	na
Other Crustaceans	79.0	714	105	964	90.0	843
Total	551	27,507	451	24,879	514	25,878
Molluscs						
Abalone	728	19,740	716	20,499	756	26,916
Scallops	na	na	na	na	na	na
Squids	47.0	508	33.0	363	41.0	460
Octopus	18.5	60.3	45.0	149	41.0	139
Other Molluscs	68.0	385	46.0	265	206	1,210
Total	861	20,694	840	21,276	1,044	28,725
Finfish						
Australian Sardine	1,524	1,682	2,344	1,711	1,217	841
Black Bream	45.0	439	48.0	538	20.4	199
Southern Garfish	27.9	168	61.0	460	53.8	772
Sharks & Rays **a**	38.0	177	19.0	105	34.0	388
Snapper	108	1,000	54.0	517	63.7	490
Freshwater Eels	54.8	758	93.0	1,308	58.6	643
Australian Salmons	450	251	265	162	242	160
King George Whiting	213	3,618	115	1,990	54.1	954
Other Finfish	604	1,515	555	1,416	660	3,720
Total	3,064	9,609	3,554	8,207	2,403	8,168
Total wild caught	4,476	57,810	4,845	54,362	3,961	62,770
Aquaculture b						
Abalone	326	11,084	462	17,716	525	25,216
Blue Mussel	764	3,238	1,136	4,316	1,346	5,189
Yabbies	1.0	5.9	3.0	17.9	4.0	24.3
Salmonids **c**	1,343	10,981	1,282	14,674	1,179	13,740
Warmwater Finfish **d**	236	2,277	256	2,512	294	3,976
Freshwater Eels	na	na	6.0	84.4	14.0	124
Ornamental species	no	na	no	na	no	na
Other aquaculture	na	na	2.0	na	na	0.0
Total	2,670	27,584	3,147	39,320	3,362	48,269
Total production	7,146	85,394	7,992	93,682	7,323	111,039

a Sharks and Rays data only include Victorian bays and inlets and small quantities taken in ocean waters by non-shark fishers operating in state-proclaimed waters.**b** Excludes hatchery production. **c** Includes Salmonids and Trouts production. **d** Includes Australian Bass, Barramundi, Basa, Golden Perch, Murray Cod and Silver Perch. **p** Preliminary. **na** Not available. **no** Only number of fish is reported.
Sources: ABARES; Victorian Fisheries Authority

TABLE S9 Fisheries and aquaculture production, Queensland

	2015-16		2016-17		2017-18 p	
	t	$'000	t	$'000	t	$'000
Crustaceans						
Prawns						
Banana Prawns	478	3,911	661	5,407	782	6,404
Endeavour Prawns	483	3,476	469	3,375	470	3,381
King Prawns	2,581	33,044	3,356	42,954	2,819	36,081
Tiger Prawns	1,299	19,870	1,654	25,302	1,456	22,282
Other Prawns	404	2,349	379	2,197	336	1,932
Total	5,245	62,650	6,519	79,236	5,864	70,080
Crabs	2,570	24,170	2,362	23,271	2,360	23,607
Rock Lobster	180	5,895	277	10,268	146	5,410
Other Crustaceans	658	13,545	548	11,276	608	12,520
Total	8,653	106,260	9,706	124,050	8,977	111,616
Molluscs						
Scallop	1,406	3,040	1,153	2,492	2,447	5,290
Squid **a**	135	673	143	715	144	719
Total	1,541	3,713	1,296	3,207	2,591	6,008
Finfish						
Snapper	66.8	543	72.7	591	50.8	412
Tropical Snapper	476	2,912	246	1,407	249	1,470
Barramundi	706	6,480	884	8,103	801	7,344
Breams (including Tarwhine)	194	1,549	124	989	86.6	693
Mullets	1,520	3,801	1,864	4,659	1,292	3,231
Tailors	55.4	236	68.5	292	58.1	248
Whitings	1,092	3,690	913	3,157	1,255	3,868
Coral Trouts	817	26,716	850	27,800	829	27,130
Red Throat Emperor	164	1,106	137	923	167	1,128
Blue Threadfin	142	568	137	550	128	512
King Threadfin	311	1,353	346	1,506	338	1,471
Sharks and Rays	665	1,996	580	1,773	439	1,318
Spotted Mackerel	81.2	568	28.1	197	39.3	275
Spanish Mackerel	459	3,213	495	3,468	539	3,773
Grey Mackerel	864	4,796	846	4,696	709	3,934
Other Finfish	1,459	6,397	1,263	5,464	1,303	5,768
Total	9,074	65,924	8,854	65,575	8,285	62,574
Other NEI	0.0	0.0	0.0	0.0	0.0	0.0
Total wild-caught	19,269	175,897	19,855	192,832	19,853	180,199
Aquaculture b						
Prawns	4,302	80,500	4,264	77,800	3,921	74,700
Barramundi	3,053	29,300	2,987	28,400	3,061	26,900
Oysters	na	564	na	500	88.5	900
Silver Perch	103	1,105	125	1,105	96.0	1,032
Barcoo Grunter	93.5	1,124	101	1,220	117	1,462
Redclaw	51.3	1,341	64.8	1,700	48.8	1,200
Aquarium species **d**	na	1,300	na	1,000	na	5,300
Other aquaculture	181	2,066	327	4,775	195	2,705
Total	7,784	117,300	7,869	116,500	7,528	114,200
Total production	27,052	293,197	27,725	309,332	27,381	294,399

a Includes Cuttlefish. **b** Excludes hatchery production. **c** Exotic and native species (including Australian Lungfish, Northern Saratoga and Southern Saratoga). **d** Includes Eels, Murray Cods, Golden Perch, Sleepy Cod, Australian Bass, Marine Finfish, Crabs and Oysters. **p** Preliminary.
Sources: Fisheries Queensland, Department of Agriculture and Fisheries

TABLE S10 Fisheries and aquaculture production, South Australia

	2015-16		2016-17		2017-18 p	
	t	$'000	t	$'000	t	$'000
Crustaceans						
Prawns	2,574	45,039	2,429	46,271	2,577	51,181
Southern Rock Lobster	1,592	137,680	1,559	120,082	1,554	122,578
Crabs	726	5,606	724	5,841	669	5,667
Other Crustaceans	16.0	1,369	17.0	1,297	18.0	1,672
Total	4,908	189,694	4,729	173,491	4,818	181,098
Molluscs						
Abalone	626	22,206	743	27,557	700	27,215
Pipis	492	3,480	600	5,063	646	5,047
Squids	427	5,245	444	5,692	470	6,683
Other Molluscs	151	1,492	147	1,119	120	1,451
Total	1,696	32,423	1,934	39,431	1,936	40,396
Finfish a						
Western Australian Salmon	457	807	272	499	322	585
Mullets	149	805	200	1,028	177	935
Australian Herring	90.0	354	83.0	337	85.0	307
Snapper	427	4,065	343	3,459	304	2,997
King George Whiting	272	4,595	268	4,387	243	4,289
Garfish	163	1,627	186	1,772	174	1,705
Leatherjacket	153	283	328	626	121	405
Australian Sardine	41,103	25,895	39,745	23,847	43,293	26,409
Yellowfin Whiting	115	1,047	133	1,106	140	1,070
Snook	47.0	211	48.0	240	42.0	231
Golden Perch	79.0	1,139	81.0	1,160	106	1,477
Other Finfish	1,024	1,708	1,137	1,724	1,072	2,145
Total	44,079	42,536	42,824	40,185	46,079	42,555
Total wild-caught	50,683	264,653	49,487	253,107	52,833	264,049
Aquaculture b						
Marron and Yabbies **c**	5.0	200	4.0	130	2.0	900
Oysters **d**	4,589	30,950	5,158	40,070	2,177	20,160
Southern Bluefin Tuna **e**	8,895	126,870	8,100	115,000	8,000	126,000
Abalone **f**	350	14,730	324	13,610	399	14,240
Blue Mussel	2,088	4,400	1,777	3,880	1,833	3,980
Other aquaculture **g**	6,871	74,370	6,117	57,850	3,574	40,380
Total	22,798	251,520	21,480	230,540	15,985	205,660
Total production	73,481	516,173	70,967	483,647	68,818	469,709

a Excludes catch from Commonwealth waters. **b** Excludes hatchery production. **c** Marron and Yabbies are grouped together to protect commercial confidentiality. **d** Excludes spat. **e** Processed weight. Input of wild-caught Southern Bluefin Tuna from Commonwealth Southern Bluefin Tuna Fishery was 4,899 tonnes in 2015–16, 4,687 tonnes in 2016–17 and 5,130 tonnes in 2017–18. **f** Includes the value of local spat sales. **g** Includes Barramundi, Yellowtail Kingfish, Mulloway, Rainbow Trout, Algae and Brine Shrimp production. **p** Preliminary.
Sources: Primary Industries and Regions South Australia; South Australian Research and Development Institute

TABLE S11 Fisheries and aquaculture production, Western Australia

	2015-16		2016-17		2017-18 p	
	t	$'000	t	$'000	t	$'000
Crustaceans						
Rock Lobsters	5,712	394,129	6,402	401,165	6,949	438,140
Prawns	3,226	43,388	3,062	44,703	2,546	35,316
Crabs	672	8,326	835	10,888	794	10,531
Other Crustaceans	13.0	59.0	10.0	41.0	8.0	101
Total	9,623	445,902	10,309	456,797	10,297	484,088
Molluscs						
Abalone	166	6,223	173	7,227	134	5,418
Scallops	601	4,673	1,915	15,279	2,243	13,140
Squids	34.0	488	38.0	570	29.0	450
Other Molluscs **a**	332	6,998	336	7,408	360	7,228
Total	1,133	18,382	2,462	30,484	2,766	26,236
Finfish						
Tunas	1.0	6.0	2.0	17.0	1.0	10.0
Sharks & Rays	974	3,600	922	3,507	797	3,188
Sharkfin	na	na	na	na	na	na
Western Australian Salmon	104	95.0	152	115	191	176
Estuary Cobbler	70.0	278	66.0	223	48.0	173
West Australian Dhufish	47.0	691	42.0	622	45.0	680
Spanish Mackerel	311	2,517	287	2,738	252	2,472
Sea Mullet	218	466	195	467	213	513
Yelloweye Mullet	9.0	14.0	21.0	34.0	18.0	25.0
Australian Sardine	2,161	2,020	2,062	1,856	2,201	2,267
Australian Herring	82.0	199	87.0	196	71.0	178
Whitings	181	1,189	167	781	175	1,166
Breams	110	652	164	876	150	812
Emperors	531	2,573	684	3,377	630	3,056
Snapper	279	2,228	244	1,946	207	1,682
Rockcods	460	3,543	519	4,245	502	4,152
Tropical Snappers	1,617	12,337	1,792	13,963	2,023	15,468
Other Finfish	2,565	7,063	2,015	6,582	2,123	7,698
Total	9,720	39,471	9,421	41,545	9,647	43,716
Other nei b	37.0	184	129	510	136	432
Total wild caught	20,513	503,939	22,321	529,336	22,846	554,472
Aquaculture c						
Pearls	na	78,353	na	70,364	na	52,597
Yabbies	24.7	750	20.0	594	32.3	995
Marron	51.3	1,620	51.1	1,615	63.8	2,174
Blue Mussel	198	796	169	697	na	na
Other species	455	5,299	1,112	12,578	30.6	485
Goldfish and European Carp	na	189	na	185	na	231
Ornamental species	na	230	na	999	na	299
Other aquaculture **d**	na	2,398	na	3,421	na	22,459
Total	729	89,636	1,352	90,453	127	79,240
Total production	21,242	593,575	23,673	619,789	22,973	633,712

a Value includes Pearl Oysters shells taken, including those taken for Mother of Pearl and Octopus. **b** Includes Sea Cucumber, Sea Urchin and others previously reported under Molluscs other. **c** Aquaculture excludes Algae production for betacarotene and hatchery production. Some quantity data not available because of confidentiality restrictions. **d** Includes Barramundi, Silver Perch and Rainbow Trout. **p** Preliminary. **na** Not available. **nei** Not elsewhere included.

Source: Western Australian Department of Primary Industries and Regional Development

TABLE S12 Fisheries and aquaculture production, Tasmania

	2015-16		2016-17		2017-18 p	
	t	$'000	t	$'000	t	$'000
Crustaceans						
Southern Rock Lobster	1,138	92,946	1,083	83,274	1,148	97,121
Giant Crab	25.1	2,030	25.6	2,000	20.1	1,931
Other Crustaceans	0.0	0.0	0.0	0.1	0.0	0.0
Total	1,163	94,976	1,109	85,274	1,168	99,053
Molluscs						
Abalone	1,744	79,738	1,641	83,726	1,473	86,436
Octopus	105	987	119	1,295	112	1,111
Scallops	744	1,667	16.3	38.9	0.0	0.0
Other Molluscs	472	1,628	280	1,963	345	1,640
Total	3,065	84,019	2,056	87,023	1,930	89,188
Finfish a						
Australian Salmons	89.3	298	19.3	58.4	77.8	308
Southern Rock Cods	1.6	3.0	1.5	4.9	0.9	7.9
Garfish	22.0	214	16.5	174	9.6	103
Banded Morwong	33.0	762	33.0	811	33.0	871
Jackass Morwong	3.2	10.7	1.6	3.6	3.3	10.2
Elephantfish	0.2	0.7	1.8	5.8	1.1	3.9
Bastard Trumpeter	7.3	37.6	6.4	32.2	4.2	31.5
Striped Trumpeter	6.2	69.4	9.1	128	7.3	106
Eastern School Whiting	23.4	119	30.7	128	22.6	112
Wrasse	71.2	978	79.7	1,138	83.6	1,163
Sharks & Rays	11.5	107	14.2	140	10.8	108
Other Finfish	101	609	159	872	123	1,405
Total	370	3,209	373	3,496	377	4,229
Other nei b	80.9	145	81.9	142	1,839	1,847
Total wild-caught	4,680	182,349	3,620	175,935	5,314	194,317
Aquaculture c						
Salmonids **d**	54,772	704,370	51,298	738,694	60,048	838,276
Oysters	3,029	21,206	3,004	26,287	2,976	28,723
Blue Mussel	575	2,301	729	2,918	602	2,408
Abalone	81.3	2,845	87.1	3,050	103	4,138
Total	58,458	730,723	55,119	770,949	63,729	873,545
Total production	63,138	913,072	58,739	946,883	69,043	1,067,862

a Excludes Sharks and Rays from the Commonwealth Southern Shark Fishery. **b** Includes Sea Urchins. **c** Excludes hatchery production. **d** Includes Salmonids and Trouts production, weight in HOGG (head on, gilled and gutted). **p** Preliminary. **ne**i Not elsewhere included.
Source: Tasmanian Department of Primary Industries, Parks, Water and Environment

TABLE S13 Fisheries and aquaculture production, Northern Territory

	2015-16		2016-17		2017-18 p	
	t	$'000	t	$'000	t	$'000
Crustaceans						
Crabs	149	2,984	192	5,904	324	9,806
Other Crustaceans	0.0	0.0	2.5	42.4	1.3	23.9
Total	149	2,984	195	5,946	326	9,830
Molluscs						
Squids	5.1	26.4	5.0	32.3	6.5	38.5
Other Molluscs	50.8	264	74.6	602	58.6	475
Total	56.0	291	79.6	634	65.1	514
Finfish						
Tuna	11.1	59.3	12.9	23.9	11.8	43.5
Shark	76.8	217	165	376	88.8	310
Tropical snapper	324	1,766	186	932	136	813
Barramundi	323	2,600	327	3,138	331	3,585
Threadfin salmon	239	891	270	1,081	265	1,049
Black jewfish	133	1,442	173	1,780	181	2,836
Emperor	100	395	222	1,528	195	1,469
Rockcod	48.5	158	69.8	392	60.6	364
Mackerel	829	5,279	1,002	7,206	829	6,174
Goldband snapper	519	3,173	598	4,994	296	5,320
Other Finfish	3,302	15,639	3,422	15,828	3,438	15,517
Total	5,905	31,620	6,448	37,279	5,833	37,481
Total wild-caught	6,110	34,894	6,722	43,860	6,224	47,825
Aquaculture a						
Barramundi	na	na	na	na	2,342	22,797
Pearl Oysters	na	na	na	na	na	na
Other aquaculture **b**	na	24,522	na	34,447	na	2,754
Total	na	24,522	na	34,447	2,342	25,551
Total production	6,110	59,416	6,722	78,307	8,566	73,375

a These values are based on derived estimates from a limited number of operators. Excludes hatchery production. Quantities not available because of confidentiality restrictions. **b** Includes aquarium production. **p** Preliminary.
Source: Northern Territory Department of Primary Industry and Resources

TABLE S14 Fisheries production, Commonwealth

	2015-16		2016-17		2017-18 p	
	t	$'000	t	$'000	t	$'000
Northern Prawn						
Prawns						
Tiger Prawns	3,258	73,690	2,000	46,139	1,091	26,035
Banana Prawns	2,863	40,339	4,757	62,818	4,955	65,255
Endeavour Prawns	547	6,972	369	4,333	390	5,271
King Prawns	35.7	561	28.4	432	6.5	111
Other Prawns	12.0	111	5.1	39.0	10.5	251
Total Prawns	6,716	121,673	7,159	113,760	6,453	96,923
Other species	148	2,341	363	5,052	82.8	1,227
Total	6,864	124,014	7,523	118,812	6,536	98,150
Torres Strait						
Prawns						
Tiger Prawns	442	7,312	185	3,112	222	3,871
Endeavour Prawns	103	981	41.7	334	44.4	408
King Prawns	16.9	236	3.0	38.5	0.9	17.8
Other Prawns	5.2	23.9	2.5	13.5	0.7	2.0
Other species **a**	22.8	310	8.9	441	9.8	304
Total	589	8,862	241	3,939	278	4,602
Tropical rock lobster	376	14,279	283	12,908	278	15,008
Spanish mackerel						
Spanish Mackerel	86.9	732	93.2	861	73.2	682
Other species	0.5	0.8	0.1	0.2	0.2	0.6
Total	87.4	733	93.3	862	73.4	682
Reef Line **b**	41.7	480	27.8	336	28.6	339
Total	1,094	24,355	645	18,045	658	20,632
SESSF Commonwealth Trawl Sector c						
Orange Roughy	415	2,319	416	2,215	495	2,569
Blue Grenadier	1,715	2,230	1,408	2,534	1,517	2,792
Tiger Flathead	2,939	18,165	2,803	18,363	2,361	15,774
Redfish	52.1	179	25.7	77.1	29.4	109
Blue Warehou	3.3	10.2	15.6	40.8	30.4	109
Silver Warehou	290	333	309	451	432	566
Eastern School Whiting	690	2,104	747	1,494	683	2,268
Jackass Morwong	145	487	215	472	179	448
Pink Ling	523	2,998	650	3,542	724	3,668
Gemfish	107	261	102	244	92.3	234
Silver Trevally	65.3	293	48.3	243	46.4	235
Mirror Dory	252	793	313	992	148	581
Royal Red Prawn	172	689	169	893	206	876
Ocean Perch	1.2	6.3	1.0	2.5	0.8	3.9
John Dory	78.0	675	84.1	715	82.1	817
Blue-eye Trevallas	19.9	166	51.1	460	46.8	452
Gummy Sharks	134	846	148	1,042	130	920
School Shark	22.7	136	34.3	194	33.5	208
Sawshark	115	219	114	251	140	214
Elephantfish	29.9	14.3	29.3	48.4	29.4	70.3
Other species	2,856	9,992	3,100	12,821	3,115	11,046
Total	10,625	42,913	10,783	47,096	10,521	43,962

Continued

TABLE S14 Fisheries production, Commonwealth continued

	2015-16		2016-17		2017-18 p	
	t	$'000	t	$'000	t	$'000
SESSF Gillnet, Hook and Trap Sector c						
Blue-eye Trevallas	264	2,407	399	3,586	258	2,486
Blue Warehou	0.2	0.6	0.2	0.4	0.6	2.3
Pink Ling	294	1,684	308	1,676	289	1,380
Gummy Sharks	2,458	15,459	2,463	16,886	2,283	16,210
School Shark	241	1,443	243	1,507	267	1,661
Sawsharks	135	258	175	267	142	200
Elephantfish	55.4	44.3	61.1	37.8	40.6	24.4
Other Sharks and Rays	123	446	115	165	157	402
Other species	146	636	174	1,161	212	935
Total	3,716	22,378	3,938	25,286	3,649	23,301
SESSF Great Australian Bight Trawl Sector c						
Orange Roughy	0.0	0.0	0.0	0.0	18.5	96.0
Deepwater Flathead	616	4,381	732	5,856	538	4,575
Bight Redfish	177	940	317	1,427	288	1,298
Leatherjackets	213	366	241	626	201	290
Angel Sharks	122	291	133	179	120	268
Yellowspotted Boarfish	82.3	330	80.4	332	86.6	564
Jackass Morwong	13.5	45.3	23.9	71.0	29.0	84.1
Squids	58.9	223	59.0	313	69.5	273
Knifejaw	18.8	48.4	21.0	17.5	23.7	116
Gemfish	2.5	6.1	2.1	4.2	2.9	7.3
Blue Grenadier	2.9	3.7	11.0	10.2	15.0	13.6
Blue Morwong	11.9	25.1	14.5	114	12.7	27.8
Silver Warehou	2.7	3.2	4.3	4.9	0.8	1.2
School Shark	2.4	14.4	3.2	7.8	4.2	25.9
Gummy Shark	57.4	361	67.2	243	89.7	637
Sawsharks	18.6	28.8	21.2	22.5	19.2	26.7
Elephantfish	0.0	0.0	0.1	0.1	0.0	0.0
Other species	167	628	206	812	240	854
Total	1,566	7,694	1,936	10,040	1,759	9,159

Continued

TABLE S14 Fisheries production, Commonwealth continued

	2015-16		2016-17		2017-18 p	
	t	$'000	t	$'000	t	$'000
Eastern Tuna and Billfish – longline and minor line						
Albacore	1,159	3,871	1,020	4,061	956	2,723
Skipjack Tuna	0.0	0.0	0.0	0.0	0.0	0.0
Yellowfin Tuna	2,498	24,704	1,159	12,605	1,858	18,785
Bigeye Tuna	858	7,955	668	7,292	372	4,294
Swordfish	1,231	9,076	1,116	9,319	1,164	9,246
Striped Marlin	320	1,374	236	1,020	294	1,602
Other Billfish	21.7	27.6	16.3	27.0	19.4	24.4
Other species	485	1,748	321	1,350	441	1,727
Total	6,572	48,755	4,537	35,674	5,106	38,401
Southern Bluefin Tuna	5,508	35,875	5,512	38,544	5,869	39,735
Western Tuna and Billfish						
Albacore	26.0	np	25.9	np	10.5	np
Skipjack Tuna	0.0	np	0.0	np	0.0	np
Yellowfin Tuna	86.8	np	52.4	np	60.4	np
Bigeye Tuna	77.2	np	89.6	np	52.1	np
Other Tunas	0.0	np	0.0	np	3.2	np
Billfish	177	np	168	np	163	np
Other species	10.8	np	8.2	np	3.8	np
Total	378	np	344	np	293	np
Bass Strait Scallop	2,260	4,610	2,998	5,998	3,039	6,715
Southern Squid Jig	385	1,035	206	572	818	2,699
Other fisheries d	17,805	127,201	10,169	103,283	12,842	107,324
Total production	56,773	438,829	48,592	403,350	51,090	390,078

a Mainly Moreton Bay Bugs, Scallops and Squids. **b** Includes Finfish other than Spanish Mackerel caught by line fishing. **c** Sharks and Rays converted to whole weight. **d** Includes entries marked np and Small Pelagics, Macquarie Island, Coral Sea, Cocos and Christmas islands, Heard and McDonald Islands, SESSF Victorian coastal waters sector, Norfolk Island, South Tasman Rise, Western Skipjack, East Coast Deepwater Trawl, North West Slope Trawl and Western Deepwater Trawl fisheries because of confidentiality requirements. **na** Not available. **np** Not for publication because of confidentiality requirements. Included in Other fisheries. **p** Preliminary. SESSF Southern and Eastern Scalefish and Shark Fishery.

Zero denotes zero or less than 0.5 tonnes

Sources: ABARES; AFMA

TABLE S15 Aquaculture production in 2015–16, by state, Australia a

	NSW	Vic.	Qld	SA	WA	Tas.	NT	Aust.
Value	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Finfish								
Salmonids **b**	2,290	10,981	0.0	0.0	73.9	704,370	0.0	717,714
Tunas	0.0	0.0	0.0	126,870	0.0	0.0	0.0	126,870
Silver Perch	2,968	0.0	1,105	0.0	528	0.0	0.0	4,601
Barramundi	982	0.0	29,300	0.0	4,697	0.0	na	34,979
Other **c**	0.0	2,277	2,795	36,850	189	0.0	0.0	42,110
Total	6,239	13,257	33,200	163,720	5,488	704,370	na	926,275
Crustaceans								
Prawns	5,985	0.0	80,500	0.0	0.0	0.0	0.0	86,485
Yabbies	336	5.9	0.0	0.0	750	0.0	0.0	1,092
Marron	0.0	0.0	0.0	200	1,620	0.0	0.0	1,820
Redclaw	0.0	0.0	1,341	0.0	0.0	0.0	0.0	1,341
Total	6,321	5.9	81,841	200	2,370	0.0	0.0	90,738
Molluscs								
Oysters	42,774	0.0	564	30,950	0.0	21,206	0.0	95,494
Pearls	0.0	0.0	0.0	0.0	78,353	0.0	na	78,353
Abalone	0.0	11,084	0.0	14,730	0.0	2,845	0.0	28,659
Blue Mussel	0.0	3,238	0.0	4,400	796	2,301	0.0	10,735
Total	42,774	14,322	564	50,080	79,150	26,352	na	213,241
Other nei d	4,899	0.0	1,695	37,520	2,628	0.0	24,522	71,264
Total value	60,232	27,584	117,300	251,520	89,636	730,723	24,522	1,301,518
Quantity	t	t	t	t	t	t	t	t
Finfish								
Salmonids **b**	196	1,343	0.0	0.0	8.5	54,772	0.0	56,319
Tunas	0.0	0.0	0.0	8,895	0.0	0.0	0.0	8,895
Silver Perch	254	0.0	103	0.0	24.8	0.0	0.0	382
Barramundi	67.8	0.0	3,053	0.0	422	0.0	0.0	3,542
Other **c**	0.0	236	120	2,459	na	0.0	na	2,815
Total	518	1,579	3,275	11,354	455	54,772	na	71,953
Crustaceans								
Prawns	326	0.0	4,302	0.0	0.0	0.0	0.0	4,628
Yabbies	7.5	1.0	0.0	0.0	24.7	0.0	0.0	33.2
Marron	0.0	0.0	0.0	5.0	51.3	0.0	0.0	56.3
Redclaw	0.0	0.0	51.3	0.0	0.0	0.0	0.0	51.3
Total	334	1.0	4,353	5.0	76.0	0.0	na	4,769
Molluscs								
Oysters	3,727	0.0	0.0	4,589	0.0	3,029	0.0	11,345
Pearls	0.0	0.0	0.0	0.0	0.0	0.0	na	na
Abalone	0.0	326	0.0	350	0.0	81.3	0.0	757
Blue Mussel	0.0	764	0.0	2,088	198	575	0.0	3,625
Total	3,727	1,090	0.0	7,027	198	3,686	0.0	15,728
Other nei d	205	0.0	155	4,412	0.0	0.0	na	4,772
Total quantity	4,784	2,670	7,784	22,798	729	58,458	na	97,222

a Excludes hatchery production, Crocodiles, Microalgae and Aquarium Worms. **b** Includes Atlantic Salmon and Trouts production. **c** Includes Eels, other native Finfish and Aquarium species. **d** Includes aquaculture production not elsewhere specified because of confidentiality restrictions. In Victoria, this includes warmwater species, Ornamental species, other Shellfish, Shrimps and Aquatic Worms. Total only sums across. **na** Not available. **nei** Not elsewhere included.

Sources: ABARES; Australian Fisheries Management Authority; Western Australian Department of Fisheries; Tasmanian Department of Primary Industries and Regional Development; New South Wales Department of Primary Industries; Queensland Department of Agriculture and Fisheries; Victorian Fisheries Authority; Northern Territory Department of Primary Industry and Resources; Primary Industries and Regions South Australia; South Australian Research and Development Institute

TABLE S16 Aquaculture production in 2016–17, by state, Australia [a]

	NSW	Vic.	Qld	SA	WA	Tas.	NT	Aust.
Value	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Finfish								
Salmonids **b**	2,623	14,674	0.0	0.0	76.6	738,694	0.0	756,068
Tunas	0.0	0.0	0.0	115,000	0.0	0.0	0.0	115,000
Silver Perch	2,398	0.0	1,105	0.0	479	0.0	0.0	3,982
Barramundi	654	0.0	28,400	0.0	12,022	0.0	na	41,076
Other Finfish **c**	0.0	2,596	3,295	32,020	185	0.0	0.0	38,096
Total	5,675	17,270	32,800	147,020	12,763	738,694	na	954,222
Crustaceans								
Prawns	7,869	0.0	77,800	0.0	0.0	0.0	0.0	85,669
Yabbies	380	17.9	0.0	0.0	594	0.0	0.0	992
Marron	0.0	0.0	0.0	130	1,615	0.0	0.0	1,745
Redclaw	0.0	0.0	1,700	0.0	0.0	0.0	0.0	1,700
Total	8,249	17.9	79,500	130	2,209	0.0	0.0	90,106
Molluscs								
Oysters	45,413	0.0	500	40,070	0.0	26,287	0.0	112,270
Pearls	0.0	0.0	0.0	0.0	70,364	0.0	na	70,364
Abalone	0.0	17,716	0.0	13,610	0.0	3,050	0.0	34,376
Blue Mussel	0.0	4,316	0.0	3,880	697	2,918	0.0	11,810
Total	45,413	22,032	500	57,560	71,061	32,254	0.0	228,820
Other nei d	5,274	na	3,700	25,830	4,420	0.0	34,447	73,671
Total value	64,610	39,320	116,500	230,540	90,453	770,949	34,447	1,346,818
Quantity	t	t	t	t	t	t	t	t
Finfish								
Salmonids **b**	211	1,282	0.0	0.0	8.3	51,298	0.0	52,800
Tunas	0.0	0.0	0.0	8,100	0.0	0.0	0.0	8,100
Silver Perch	194	0.0	125	0.0	20.7	0.0	0.0	339
Barramundi	43.7	0.0	2,987	0.0	1,083	0.0	na	4,114
Other Finfish **c**	0.0	262	144	2,676	na	0.0	0.0	3,082
Total	448	1,544	3,256	10,776	1,112	51,298	na	68,434
Crustaceans								
Prawns	360	0.0	4,264	0.0	0.0	0.0	0.0	4,624
Yabbies	6.3	3.0	0.0	0.0	20.0	0.0	0.0	29.3
Marron	0.0	0.0	0.0	4.0	51.1	0.0	0.0	55.1
Redclaw	0.0	0.0	64.8	0.0	0.0	0.0	0.0	64.8
Total	367	3.0	4,329	4.0	71.1	0.0	0.0	4,774
Molluscs								
Oysters	3,770	0.0	0.0	5,158	0.0	3,004	0.0	11,932
Pearls	0.0	0.0	0.0	0.0	0.0	na	na	na
Abalone	0.0	462	0.0	324	0.0	87.1	0.0	873
Blue Mussel	0.0	1,136	0.0	1,777	169	729	0.0	3,811
Total	3,770	1,598	0.0	7,259	169	3,821	0.0	16,617
Other nei d	266	2.0	284	3,441	0.0	na	na	3,993
Total quantity	4,851	3,147	7,869	21,480	1,352	55,119	na	93,818

a Excludes hatchery production, Crocodiles, Microalgae and Aquarium Worms. **b** Includes Atlantic Salmon and Trouts production. **c** Includes Eels, other native Finfish and Aquarium species. **d** Includes aquaculture production not elsewhere specified because of confidentiality restrictions. In Victoria, this includes warmwater species, Ornamental species, other Shellfish, Shrimps and Aquatic Worms. Total only sums across.

Sources: ABARES; AFMA; Western Australian Department of Fisheries; Tasmanian Department of Primary Industries and Regional Development; New South Wales Department of Primary Industries; Queensland Department of Agriculture and Fisheries; Victorian Fisheries Authority; Northern Territory Department of Primary Industry and Resources; Primary Industries and Regions South Australia; South Australian Research and Development Institute

TABLE S17 Aquaculture production in 2017–18, by state, Australia ap

	NSW	Vic.	Qld	SA	WA	Tas.	NT	Aust.
Value	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Finfish								
Salmonids **b**	2,682	13,740	0.0	0.0	70.0	838,276	0.0	854,768
Tunas	0.0	0.0	0.0	126,000	0.0	0.0	0.0	126,000
Silver Perch	2,753	0.0	1,032	0.0	415	0.0	0.0	4,201
Barramundi	684	3,225	26,900	0.0	0.0	0.0	22,797	53,606
Other Finfish **c**	4,929	875	7,168	35,140	231	0.0	0.0	48,343
Total	11,048	17,840	35,100	161,140	717	838,276	22,797	1,086,917
Crustaceans								
Prawns	5,821	0.0	74,700	0.0	0.0	0.0	0.0	80,521
Yabbies	413	24.3	0.0	0.0	995	0.0	0.0	1,432
Marron	0.0	0.0	0.0	900	2,174	0.0	0.0	3,074
Redclaw	0.0	0.0	1,200	0.0	0.0	0.0	0.0	1,200
Total	6,234	24.3	75,900	900	3,169	0.0	0.0	86,227
Molluscs								
Oysters	51,832	0.0	900	20,160	0.0	28,723	0.0	101,615
Pearls	0.0	0.0	0.0	0.0	52,597	0.0	na	52,597
Abalone	0.0	25,216	0.0	14,240	0.0	4,138	0.0	43,594
Blue Mussel	0.0	5,189	0.0	3,980	0.0	2,408	0.0	11,577
Total	51,832	30,405	900	38,380	52,597	35,269	0.0	209,383
Other nei d	1,613	0.0	2,300	5,240	22,758	0.0	2,754	34,665
Total value	70,728	48,269	114,200	205,660	79,240	873,545	25,551	1,417,192
Quantity	t	t	t	t	t	t	t	t
Finfish								
Salmonids **b**	182	1,179	0.0	0.0	4.1	60,048	0.0	61,413
Tunas	0.0	0.0	0.0	8,000	0.0	0.0	0.0	8,000
Silver Perch	221	0.0	96.0	0.0	26.5	0.0	0.0	343
Barramundi	46.5	219	3,061	0.0	0.0	0.0	2,342	5,668
Other Finfish **c**	269	89.0	136	2,877	na	0.0	0.0	3,371
Total	718	1,487	3,293	10,877	30.6	60,048	2,342	78,796
Crustaceans								
Prawns	284	0.0	3,921	0.0	0.0	0.0	0.0	4,205
Yabbies	15.2	4.0	0.0	0.0	32.3	0.0	0.0	51.5
Marron	0.0	0.0	0.0	2.0	63.8	0.0	0.0	65.8
Redclaw	0.0	0.0	48.8	0.0	0.0	0.0	0.0	48.8
Total	299	4.0	3,970	2.0	96.1	0.0	0.0	4,371
Molluscs								
Oysters	3,582	0.0	88.5	2,177	0.0	2,976	0.0	8,824
Pearls	0.0	0.0	0.0	0.0	na	0.0	na	0.0
Abalone	0.0	525	0.0	399	0.0	103	0.0	1,027
Blue Mussel	0.0	1,346	0.0	1,833	0.0	602	0.0	3,781
Total	3,582	1,871	88.5	4,409	0.0	3,681	na	13,632
Other nei d	na	0.0	176	697	na	0.0	na	873
Total quantity	4,599	3,362	7,528	15,985	127	63,729	2,342	97,672

a Excludes hatchery production, Crocodiles, Microalgae and Aquarium Worms. **b** Includes Atlantic Salmon and Trouts production. **c** Includes Eels, other native Finfish and Aquarium species. **d** Includes aquaculture production not elsewhere specified because of confidentiality restrictions. In Victoria, this includes warmwater species, Ornamental species, other Shellfish, Shrimps and Aquatic Worms. Total only sums across. **p** Preliminary.

Sources: ABARES; AFMA; Western Australian Department of Fisheries; Tasmanian Department of Primary Industries and Regional Development; New South Wales Department of Primary Industries; Queensland Department of Agriculture and Fisheries; Victorian Fisheries Authority; Northern Territory Department of Primary Industry and Resources; Primary Industries and Regions South Australia; South Australian Research and Development Institute

TABLE S18 Exports of fisheries and aquaculture products, Australia

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Edible						
Finfish, Sharks and Rays						
Live **a**	800	30,179	770	31,573	781	30,659
Tunas	13,752	163,255	10,742	144,489	11,325	144,575
Salmonids **b**	8,038	79,936	5,037	58,914	12,481	137,428
Swordfish	554	6,904	496	7,530	498	6,798
Other Finfish, Sharks and Rays	19,241	74,352	14,190	63,570	6,744	73,570
Total **c**	42,385	354,626	31,235	306,074	31,829	393,029
Crustaceans and Molluscs						
Rock Lobsters	7,987	693,199	8,586	676,348	9,423	771,324
Prawns	6,689	114,384	7,015	114,448	5,305	90,266
Abalone	2,615	181,982	2,584	187,210	2,421	189,385
Scallops	364	11,698	368	11,970	343	11,237
Crabs	558	7,614	456	7,710	489	8,721
Other Crustaceans and Molluscs	1,457	54,820	1,127	28,816	931	30,549
Total	19,670	1,063,697	20,136	1,026,502	18,912	1,101,483
Total edible c	62,055	1,418,323	51,371	1,332,576	50,741	1,494,513
Non-edible						
Marine fats and oils	na	11,157	na	9,992	na	5,656
Fish meal	na	453	na	1,084	na	1,086
Pearl Oysters	na	95,946	na	75,379	na	56,779
Ornamental species	na	2,106	na	2,414	na	3,088
Other non-edible	na	13,797	na	13,781	na	14,019
Total non-edible	na	123,460	na	102,649	na	80,629
Total fisheries products	na	1,541,783	na	1,435,224	na	1,575,142

a Includes all species of live fish exports. **b** Predominantly Atlantic Salmon. Includes Trouts and Salmons-like products. **c** Excludes live tonnage but includes live value. **na** Not available.

Source: ABS, *Information Consultancy Services* , 2007, cat. no. 9920.0, Canberra

TABLE S19 Exports of Finfish, Australia

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Live a	800	30,179	770	31,573	781	30,659
Tunas						
Fresh or chilled	3,264	43,042	2,193	30,394	2,011	27,540
Frozen	8,798	115,018	7,486	109,943	8,126	110,592
Prepared and preserved	1,690	5,195	1,064	4,152	1,188	6,444
Total	13,752	163,255	10,742	144,489	11,325	144,575
Salmonids b						
Fresh or chilled	7,363	76,518	4,489	56,845	11,538	131,560
Frozen	482	2,528	510	1,439	822	3,796
Smoked	15.4	311	13.0	423	60.9	1,577
Prepared and preserved	178	579	24.9	207	60.7	495
Total	8,038	79,936	5,037	58,914	12,481	137,428
Swordfish						
Total c	554	6,904	496	7,530	498	6,798
Other Finfish						
Fresh or chilled	1,457	12,862	1,860	15,788	1,020	16,484
Fillets	25.3	609	61.0	1,671	57.7	1,598
Other	1,432	12,253	1,799	14,116	962	14,886
Frozen	12,691	50,632	8,547	35,407	4,980	49,778
Fillets	297	8,768	273	7,868	411	11,108
Other	12,393	41,864	8,274	27,539	4,570	38,670
Prepared and preserved	4,975	7,582	3,689	8,675	677	2,910
Dried, salted and smoked	118	3,276	72.0	3,648	65.7	4,398
Other	0.0	0.0	22.4	52.2	0.3	1.0
Total d	19,241	74,352	14,190	63,570	6,744	73,570
Total Finfish d	42,385	354,626	31,246	306,074	31,829	393,029

a Includes all species of live fish exports. **b** Predominantly Atlantic Salmon. Includes Trouts and Salmons-like products.
c Predominantly fresh or chilled. **d** Includes live tonnage and live value. **na** Not available.
Source: ABS, *Information Consultancy Services* , 2007, cat. no. 9920.0, Canberra

TABLE S20 Exports of Crustaceans and Molluscs, Australia

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Rock Lobsters						
Frozen						
Whole	62.5	3,527	23.5	1,108	48.2	1,989
Tails	166	12,120	157	9,929	126	8,120
Other	78.0	1,875	24.7	524	21.4	474
Unfrozen	7,681	675,677	8,381	664,787	9,228	760,742
Total	7,987	693,199	8,586	676,348	9,423	771,324
Prawns						
Frozen	6,602	113,223	6,838	111,974	4,979	86,160
Unfrozen	0.7	0.9	18.2	258	1.6	27.4
Prepared or preserved	86.4	1,160	159	2,216	324	4,078
Total	6,689	114,384	7,015	114,448	5,305	90,266
Crabs						
Frozen	415	4,452	317	3,735	360	4,235
Unfrozen	137	3,112	138	3,965	124	4,309
Prepared or preserved	6.3	50.4	0.9	10.5	5.7	177
Total	558	7,614	456	7,710	489	8,721
Abalone						
Live, fresh or chilled	1,350	84,040	1,288	89,320	1,229	90,552
Frozen or cooked	724	58,662	809	61,601	779	62,789
Prepared or preserved	541	39,280	487	36,289	413	36,044
Total	2,615	181,982	2,584	187,210	2,421	189,385
Scallops						
Live, fresh or chilled	2.5	136	23.8	260	0.3	2.7
Frozen or cooked	362	11,562	345	11,711	343	11,234
Total	364	11,698	368	11,970	343	11,237
Other Crustaceans and Molluscs						
Prepared or preserved	13.1	91.6	32.9	287	43.6	330
Dried, salted or smoked	910	48,348	427	19,361	271	17,976
Other	534	6,380	666	9,168	616	12,243
Total	1,457	54,820	1,127	28,816	931	30,549
Total Crustaceans and Molluscs	19,670	1,063,697	20,136	1,026,502	18,912	1,101,483

Source: ABS, *Information Consultancy Services, 2007,* cat. no. 9920.0, Canberra

TABLE S21 Exports of major edible Finfish, Sharks and Rays products, by destination, Australia continued

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Tunas						
Fresh or chilled						
France	0.0	0.0	0.0	0.0	0.0	0.0
Germany	0.0	0.0	0.0	0.0	0.0	0.0
Hong Kong	5.6	80.5	7.8	102	0.6	9.1
Japan	2,049	27,534	1,375	18,676	1,268	16,021
United States	1,121	14,533	774	11,068	691	10,007
Other	88.5	895	35.8	548	52.0	1,503
Total	3,264	43,042	2,193	30,394	2,011	27,540
Frozen						
Japan	8,207	110,981	7,009	108,102	6,982	97,872
Thailand	17.0	59.0	65.7	220	125	422
Vietnam	0.0	0.0	0.0	0.0	0.0	0.9
Other	574	3,977	411	1,621	1,020	12,297
Total	8,798	115,018	7,486	109,943	8,126	110,592
Salmonids a						
Fresh or chilled						
China	4,369	45,498	1,981	24,416	7,582	80,278
Indonesia	565	5,542	867	11,348	859	10,515
Japan	1,071	11,649	684	9,287	837	11,110
Taiwan	302	3,024	119	1,329	1,549	21,155
Vietnam	79.2	2,183	2.1	39.8	88.1	1,091
Other	976	8,621	836	10,425	623	7,410
Total	7,363	76,518	4,489	56,845	11,538	131,560
Frozen						
China	0.3	7.6	0.0	0.0	82.6	791
Hong Kong	26.6	155	1.5	39.6	8.0	222
Japan	0.5	14.0	0.1	5.9	0.0	0.0
Other	454	2,352	508	1,393	731	2,782
Total	482	2,528	510	1,439	822	3,796
Swordfish						
Fresh, chilled or frozen						
Japan	148	1,659	82.8	905	67.6	790
United States	399	5,001	392	6,304	428	5,968
Other	7.1	244	21.8	320	2.7	40.0
Total	554	6,904	496	7,530	498	6,798

Continued

TABLE S21 Exports of major edible Finfish, Sharks and Rays products, by destination, Australia

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Prepared and preserved Finfish						
Tunas						
Guam	0.0	0.0	0.0	0.0	0.0	0.0
New Zealand	1,607	4,772	1,022	3,846	1,130	6,001
Papua New Guinea	7.1	44.6	6.5	53.1	9.5	49.9
Other	75.9	379	35.5	253	48.1	393
Total	1,690	5,195	1,064	4,152	1,188	6,444
Salmonids **a**						
New Zealand	130	372	22.2	161	47.5	325
Papua New Guinea	14.8	18.6	0.4	13.3	0.6	27.9
Singapore	26.2	76.0	0.6	10.9	9.9	90.0
Other	6.8	112	1.7	22.1	2.7	52.1
Total	178	579	24.9	207	60.7	495
Other Finfish, Sharks and Rays						
Hong Kong	1.0	21.4	3.3	256	6.1	227
Malaysia	7.8	59.3	29.6	132	24.8	176
Micronesia	4.5	16.2	4.5	18.1	0.0	0.0
New Zealand	1,347	2,868	1,571	5,982	612	2,300
Other	3,615	4,617	2,080	2,287	33.9	206
Total	4,975	7,582	3,689	8,675	677	2,910
Dried, salted or smoked Finfish, Sharks and Rays						
Salmonids **a**						
Denmark	0.0	0.0	0.0	0.0	20.4	457
Hong Kong	1.6	48.7	10.2	312	15.6	515
New Zealand	3.1	65.9	0.0	0.0	0.0	0.0
Other	10.6	197	2.8	111	24.9	605
Total	15.4	311	13.0	423	60.9	1,577
Other Finfish, Sharks and Rays						
Hong Kong	19.7	1,681	14.6	1,515	28.6	2,874
Japan	10.3	1,149	10.2	1,218	11.9	1,271
Singapore	0.0	0.0	0.0	0.0	0.0	0.0
Other	87.9	446	47.2	916	25.1	253
Total	118	3,276	72.0	3,648	65.7	4,398

a Predominantly Atlantic Salmon. Includes Trout and Salmon-like products.

Source: ABS, *Information Consultancy Services* , 2007, cat. no. 9920.0, Canberra

TABLE S22 Exports of Crustaceans, by destination, Australia continued

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Rock Lobsters						
Frozen						
France	3.1	217	0.0	0.0	0.0	0.0
Hong Kong	12.2	690	10.5	459	11.4	471
Japan	82.4	2,648	43.6	1,520	24.1	1,049
Singapore	7.9	462	11.9	667	14.7	803
Taiwan	30.3	1,115	1.1	35.2	29.1	516
United States	138	10,119	130	8,416	99.4	6,635
Other	32.4	2,270	8.2	464	16.3	1,109
Total	306	17,522	205	11,561	195	10,583
Unfrozen						
China	93.7	8,395	1,094	91,340	5,406	468,021
Hong Kong	733	52,669	697	50,136	302	26,526
Japan	24.5	1,993	36.0	2,537	48.7	2,743
Taiwan	1.2	85.5	3.1	224	17.1	995
Thailand	5.6	469	9.8	835	0.2	19.5
Vietnam	6,782	608,480	6,494	515,834	3,403	257,861
Other	40.3	3,585	46.2	3,880	51.5	4,576
Total	7,681	675,677	8,381	664,787	9,228	760,742
Prawns						
Frozen						
China	895	15,933	265	4,394	459	6,585
Hong Kong	1,420	25,599	1,009	19,998	948	18,483
Japan	1,339	28,989	1,298	31,699	918	23,563
Malaysia	211	2,501	912	10,199	219	2,834
New Zealand	373	5,743	209	3,876	246	4,171
Vietnam	979	13,643	2,175	28,167	1,290	15,385
Other	1,384	20,815	972	13,641	900	15,138
Total	6,602	113,223	6,838	111,974	4,979	86,160
Unfrozen						
Hong Kong	0.0	0.0	0.1	1.7	0.1	5.3
New Zealand	0.0	0.0	0.0	0.0	0.0	0.0
Vietnam	0.0	0.0	17.3	236	0.0	0.0
Other	0.7	0.9	0.8	20.4	1.4	22.0
Total	0.7	0.9	18.2	258	1.6	27.4
Prepared or preserved						
China	0.0	0.0	10.6	75.5	58.5	683
Thailand	12.5	43.4	3.0	30.7	11.7	167
Vietnam	52.0	878	140	2,027	218	2,836
Other	22.0	238	5.5	82.7	36.0	392
Total	86.4	1,160	159	2,216	324	4,078

Continued

TABLE S22 Exports of Crustaceans, by destination, Australia

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Crabs						
Frozen						
China	87.3	814	28.0	269	105	1,084
Hong Kong	23.2	435	26.4	695	14.3	385
Japan	5.8	63.3	16.3	207	15.2	165
Singapore	2.4	127	3.3	183	1.5	90.8
Taiwan	164	1,351	77.0	580	55.8	454
United States	15.4	267	2.6	68.2	3.7	96.8
Other	117	1,394	163	1,733	164	1,960
Total	415	4,452	317	3,735	360	4,235
Unfrozen						
China	39.3	1,008	61.2	1,701	69.9	2,088
Hong Kong	42.2	846	30.3	758	13.1	627
Japan	31.6	331	15.3	186	6.7	70.2
Singapore	8.7	430	15.0	680	20.4	892
Taiwan	8.5	116	9.6	172	4.0	161
Other	6.3	381	7.0	469	9.6	469
Total	137	3,112	138	3,965	124	4,309
Other crustaceans						
China	7.1	282	0.0	1.4	6.5	402
Hong Kong	4.6	334	1.6	97.8	4.9	321
Thailand	1.2	53.4	0.0	0.0	0.0	0.0
Vietnam	253	25,242	34.8	1,149	14.6	362
Other	58.5	1,477	10.1	321	25.2	864
Total	325	27,388	46.5	1,569	51.2	1,949

Source: ABS, *Information Consultancy Services, 2007,* cat. no. 9920.0, Canberra

TABLE S23 Exports of Molluscs, by destination, Australia

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Abalone						
Live, fresh or chilled						
China	340	21,966	612	44,292	966	73,641
Hong Kong	613	38,950	395	26,902	87.3	6,053
Japan	64.3	3,017	70.3	3,355	69.2	3,669
Singapore	2.9	378	6.2	432	3.1	245
Taiwan	22.6	1,020	27.8	1,298	20.8	1,036
Vietnam	304	18,576	174	12,899	80.7	5,713
Other	2.4	132	2.6	143	2.4	195
Total	1,350	84,040	1,288	89,320	1,229	90,552
Frozen or cooked						
Canada	20.6	1,992	51.3	3,702	30.3	2,248
China	15.2	1,631	18.5	1,010	25.1	2,782
Hong Kong	240	28,458	240	27,141	234	26,564
Japan	137	7,547	173	8,591	182	9,488
Singapore	137	8,193	187	11,014	184	11,842
United States	103	5,681	69.0	3,923	66.7	4,325
Other	70.4	5,160	69.8	6,220	56.9	5,543
Total	724	58,662	809	61,601	779	62,789
Prepared or preserved						
Hong Kong	214	16,845	237	17,428	190	18,687
Japan	53.4	4,552	64.2	4,946	32.3	2,921
Malaysia	5.9	400	6.3	562	5.0	405
Singapore	224	13,544	141	9,974	150	10,480
Taiwan	12.8	1,250	7.4	566	12.0	1,083
United States	13.4	1,198	8.9	1,069	9.3	1,163
Other	18.8	1,492	21.5	1,743	14.8	1,305
Total	541	39,280	487	36,289	413	36,044
Scallops						
Live, fresh or chilled						
Hong Kong	2.5	136	2.9	113	0.0	0.0
Indonesia	0.0	0.0	0.0	0.0	0.0	0.0
Malaysia	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	20.9	147	0.3	2.7
Total	2.5	136	23.8	260	0.3	2.7
Frozen or cooked						
China	26.5	418	11.4	304	2.2	39.5
Hong Kong	71.3	3,411	105	5,418	98.6	4,957
Malaysia	2.2	60.6	0.1	5.7	0.2	8.4
Singapore	63.9	3,143	79.3	4,074	117	5,506
Other	198	4,530	149	1,909	125	724
Total	362	11,562	345	11,711	343	11,234
Other Molluscs						
Canada	69.2	664	27.3	347	10.1	219
China	107	1,113	55.8	728	39.0	339
Hong Kong	665	21,055	596	20,328	502	18,878
Japan	37.0	696	36.2	459	19.5	250
Malaysia	12.8	353	55.0	819	12.2	620
Singapore	106	1,925	50.4	1,135	35.3	1,265
Other	135	1,628	247	1,839	215	1,908
Total	1,132	27,433	1,068	25,654	834	23,480

Source: ABS, *Information Consultancy Services* , 2007, cat. no. 9920.0, Canberra

TABLE S24 Exports of fisheries and aquaculture products, by destination, Australia

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Edible (including live species)						
Canada	102	3,621	297	5,608	57.8	3,552
China	6,609	104,649	4,264	170,335	15,453	656,908
France	81.7	2,234	47.6	1,227	133	2,506
Germany	113	2,228	133	2,573	121	2,462
Hong Kong	5,029	223,663	4,187	202,889	3,235	158,369
Indonesia	1,171	10,003	1,037	12,458	1,022	11,801
Italy	278	5,411	354	7,140	343	6,892
Japan	13,395	205,332	10,995	193,720	10,617	174,555
Malaysia	448	7,530	1,275	17,501	512	8,749
New Zealand	3,903	19,862	3,108	16,995	2,276	15,602
Singapore	1,224	35,275	1,274	37,732	984	37,349
Taiwan	1,032	20,854	569	13,400	1,996	34,973
Thailand	1,459	9,375	1,742	11,751	2,218	14,876
United States	2,150	44,841	1,670	38,176	1,670	38,298
Vietnam	9,895	681,689	10,912	574,325	7,055	297,626
Other	15,165	41,756	9,507	26,746	3,047	29,993
Total	62,055	1,418,323	51,371	1,332,576	50,741	1,494,513
Non-edible						
China	na	3,831	na	807	na	731
France	na	77.9	na	393	na	300
Germany	na	816	na	1,057	na	1,298
Hong Kong	na	53,154	na	29,333	na	30,340
Indonesia	na	2,401	na	4,692	na	2,812
Italy	na	621	na	880	na	894
Japan	na	24,011	na	29,775	na	15,128
New Zealand	na	4,496	na	3,485	na	1,742
Singapore	na	1,970	na	1,699	na	1,430
Switzerland	na	1,843	na	2,063	na	1,772
Thailand	na	1,904	na	7,356	na	4,119
United Arab Emirates	na	126	na	813	na	45.8
United Kingdom	na	2,107	na	1,938	na	2,262
United States	na	21,566	na	14,418	na	14,301
Vietnam	na	627	na	591	na	516
Other	na	3,911	na	3,351	na	2,938
Total	na	123,460	na	102,649	na	80,629
Total exports	na	1,541,783	na	1,435,224	na	1,575,142

na Not available.

Source: ABS, *Information Consultancy Services* , 2007, cat. no. 9920.0, Canberra

TABLE S25 Exports of seafood to selected countries, by product, Australia [a]

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Hong Kong						
Rock Lobsters (unfrozen)	733	52,669	697	50,136	302	26,526
Abalone	1,067	84,253	873	71,471	511	51,303
Prawns (frozen)	1,420	25,599	1,009	19,998	948	18,483
Tunas	8.3	116	9.7	127	9.0	127
Salmonids	169	1,187	69.0	1,022	66.1	1,283
Crabs	65.6	1,282	56.6	1,452	27.3	1,012
Other	1,567	58,558	1,473	58,683	1,372	59,634
Total	5,029	223,663	4,187	202,889	3,235	158,369
Japan						
Tunas	10,256	138,515	8,384	126,778	8,250	113,893
Prawns (frozen)	1,339	28,989	1,298	31,699	918	23,563
Rock Lobsters (unfrozen)	24.5	1,993	36.0	2,537	48.7	2,743
Rock Lobsters (frozen)	82.4	2,648	43.6	1,520	24.1	1,049
Abalone	255	15,116	307	16,892	284	16,078
Salmonids	1,072	11,681	684	9,293	837	11,110
Crabs	37.4	394	31.6	393	22.0	235
Scallops	0.0	0.0	0.0	0.0	0.0	0.0
Swordfish	148	1,659	82.8	905	67.6	790
Other	180	4,336	127	3,702	166	5,094
Total	13,395	205,332	10,995	193,720	10,617	174,555
China						
Abalone	355	23,598	631	45,360	991	76,470
Rock Lobsters (unfrozen)	93.7	8,395	1,094	91,340	5,406	468,021
Prawns (frozen)	895	15,933	265	4,394	459	6,585
Prawns (prepared and preserved)	0.0	0.0	10.6	75.5	58.5	683
Crabs	127	1,822	89.2	1,970	175	3,172
Salmonids	4,370	45,506	1,981	24,416	7,671	81,124
Scallops	0.0	0.0	20.9	147	0.0	0.0
Other	769	9,396	173	2,634	692	20,851
Total	6,609	104,649	4,264	170,335	15,453	656,908
United States						
Rock Lobsters (frozen)	138	10,119	130	8,416	99.4	6,635
Tunas	1,121	14,535	776	11,079	716	10,351
Salmonids	65.2	631	51.0	568	48.5	556
Crabs	17.0	360	2.9	84.2	4.1	111
Abalone	119	6,974	78.7	5,036	77.3	5,609
Swordfish	399	5,001	392	6,304	428	5,968
Other	292	7,223	240	6,690	297	9,068
Total	2,150	44,841	1,670	38,176	1,670	38,298

Continued

TABLE S25 Exports of seafood to selected countries, by product, Australia **a** continued

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Singapore						
Abalone	363	22,115	334	21,420	337	22,567
Rock Lobsters(frozen)	7.9	462	11.9	667	14.7	803
Rock Lobsters (unfrozen)	15.6	1,502	18.2	1,620	18.9	1,774
Scallops	63.9	3,143	79.3	4,074	117	5,506
Crabs	11.1	558	18.3	863	21.9	983
Oysters	38.7	363	25.8	233	5.4	63.2
Salmonids	351	2,880	465	5,299	314	2,711
Other	373	4,253	321	3,556	155	2,943
Total	1,224	35,275	1,274	37,732	984	37,349
Taiwan						
Rock Lobsters (frozen)	30.3	1,115	1.1	35.2	29.1	516
Rock Lobsters (unfrozen)	1.2	85.5	3.1	224	17.1	995
Abalone	46.2	2,944	46.6	2,726	41.9	2,902
Salmonids	302	3,024	119	1,329	1,549	21,155
Prawns (frozen)	382	9,519	156	3,751	91.0	2,663
Crabs and Crytsal Crabs	173	1,467	86.6	751	59.7	615
Other	97.6	2,700	157	4,583	209	6,128
Total	1,032	20,854	569	13,400	1,996	34,973
Vietnam						
Rock Lobsters (unfrozen)	6,782	608,480	6,494	515,834	3,403	257,861
Prawns (frozen)	979	13,643	2,175	28,167	1,290	15,385
Prawns (unfrozen)	0.0	0.0	17.3	236	0.0	0.0
Prawns (prepared and preserved)	52.0	878	140	2,027	218	2,836
Abalone	340	21,487	214	16,924	107	8,713
Salmonids	275	3,260	112	735	172	1,569
Tunas	0.5	6.8	0.1	2.6	0.0	0.9
Other	1,465	33,933	1,760	10,399	1,866	11,261
Total	9,895	681,689	10,912	574,325	7,055	297,626

a Excludes live.

Source: ABS, *Information Consultancy Services* , 2007, cat. no. 9920.0, Canberra

TABLE S26 Seafood exports in 2015–16, by state, Australia a

	NSW	Vic.	Qld	SA	WA	Tas.	NT	Aust. b
Value	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Finfish, Sharks and Rays								
Live	100	1,227	26,079	452	0.0	482	0.0	30,179
Tunas	10,038	506	20,081	124,960	920	1,225	0.0	163,255
Salmonids	218	2,393	209	820	0.6	74,842	0.0	79,936
Swordfish	515	0.0	5,848	0.0	516	26.2	0.0	6,904
Other Finfish, Sharks and Rays	5,650	17,131	14,308	22,031	6,587	4,704	0.0	74,352
Total	16,521	21,257	66,525	148,263	8,023	81,280	0.0	354,626
Crustaceans and Molluscs								
Rock Lobsters	3,024	109,953	31,840	36,334	453,068	27,474	0.0	693,199
Prawns	996	114	79,932	2,468	22,766	0.0	0.0	114,384
Abalone	1,332	50,368	3,158	32,213	14,283	77,622	0.0	181,982
Scallops	952	1,171	2,461	79.7	4,029	3.2	0.0	11,698
Crabs	260	384	4,446	121	1,594	0.0	109	7,614
Other Crustaceans and Molluscs	179	9,296	11,217	30,990	1,098	473	50.8	54,820
Total	6,744	171,286	133,054	102,206	496,837	105,572	160	1,063,697
Total value	23,264	192,543	199,580	250,469	504,860	186,852	160	1,418,323
Quantity	t	t	t	t	t	t	t	t
Finfish, Sharks and Rays								
Live	3.8	34.6	656	23.8	0.0	34.4	0.0	800
Tunas	672	195	2,144	9,016	113	73.2	0.0	13,752
Salmonids	89.9	270	22.1	130	0.0	7,305	0.0	8,038
Swordfish	17.6	0.0	472	0.0	62.8	1.5	0.0	554
Other Finfish, Sharks and Rays	654	13,732	2,092	1,018	422	350	0.0	19,241
Total	1,437	14,232	5,387	10,187	598	7,764	0.0	42,385
Crustaceans and Molluscs								
Rock Lobsters	36.8	1,081	508	364	5,373	286	0.0	7,987
Prawns	189	9.3	4,213	142	1,417	0.0	0.0	6,689
Abalone	25.8	746	60.8	305	237	1,203	0.0	2,615
Scallops	34.0	63.6	51.7	2.3	78.2	0.1	0.0	364
Crabs	8.6	4.8	371	1.2	103	0.0	3.0	558
Other Crustaceans and Molluscs	11.7	272	228	725	43.8	26.0	0.5	1,457
Total	306	2,177	5,431	1,540	7,253	1,515	3.4	19,670
Total quantity	1,743	16,409	10,818	11,727	7,851	9,279	3.4	62,055

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 and re-exports. **na** Not available.

Source: ABS, *Information Consultancy Services* , 2007, cat. no. 9920.0, Canberra

TABLE S27 Seafood exports in 2016–17, by state, Australia [a]

	NSW	Vic.	Qld	SA	WA	Tas.	NT	Aust. [b]
Value	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
FinFish, Sharks and Rays								
Live	50.3	3,650	26,394	745	0.0	503	0.0	31,573
Tunas	9,411	1,331	13,440	115,690	1,192	419	0.0	144,489
Salmonids	270	843	80.5	1,305	2.8	56,065	0.0	58,914
Swordfish	407	0.8	6,732	2.3	383	0.0	0.0	7,530
Other FinFish, Sharks and Rays	6,576	9,569	15,940	18,632	5,552	36.0	32.7	63,570
Total fish	16,714	15,393	62,587	136,374	7,129	57,024	32.7	306,074
Crustaceans and Molluscs								
Rock Lobsters	676	117,361	37,296	68,149	433,366	13,012	0.0	676,348
Prawns	1,190	70.7	57,365	1,355	18,815	0.0	0.0	114,448
Abalone	2,059	60,693	4,060	29,264	11,534	78,392	0.0	187,210
Scallops	927	362	1,879	82.9	7,696	251	0.0	11,970
Crabs	258	594	3,435	35.2	2,908	0.0	260	7,710
Other Crustaceans and Molluscs	597	7,984	10,819	7,455	491	189	0.0	28,816
Total	5,708	187,064	114,855	106,341	474,809	91,844	260	1,026,502
Total value	22,422	202,457	177,442	242,715	481,938	148,868	293	1,332,576
Quantity	t	t	t	t	t	t	t	t
FinFish, Sharks and Rays								
Live	3.4	41.4	648	36.8	0.0	35.1	0.0	770
Tunas	622	166	1,410	7,527	71.9	31.8	0.0	10,742
Salmonids	27.9	289	3.2	102	0.2	4,590	0.0	5,037
Swordfish	32.3	0.1	426	0.2	37.8	0.0	0.0	496
Other FinFish, Sharks and Rays	828	8,157	2,160	939	510	2.2	0.3	14,190
Total fish	1,514	8,654	4,648	8,605	619	4,659	0.3	31,235
Crustaceans and Molluscs								
Rock Lobsters	9.7	1,249	576	741	5,776	142	0.0	8,586
Prawns	232	3.4	2,665	69.0	1,115	0.0	0.0	7,015
Abalone	41.9	826	73.9	314	201	1,108	0.0	2,584
Scallops	33.9	28.1	37.2	2.3	149	60.9	0.0	368
Crabs	6.8	5.8	245	0.4	174	0.0	7.7	456
Other Crustaceans and Molluscs	13.3	238	173	484	28.1	9.8	0.0	1,127
Total	338	2,350	3,770	1,611	7,443	1,320	7.7	20,136
Total quantity	1,852	11,004	8,417	10,216	8,062	5,980	8.0	51,371

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 and re-exports. **na** Not available.

Source: ABS, *Information Consultancy Services, 2007,* cat. no. 9920.0, Canberra

TABLE S28 Seafood exports in 2017–18, by state, Australia [a]

	NSW	Vic.	Qld	SA	WA	Tas.	NT	Aust. [b]
Value	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Finfish, Sharks and Rays								
Live	343	3,790	25,336	539	0.0	609	0.0	30,659
Tunas	8,227	2,594	13,811	115,059	841	154	0.0	144,575
Salmonids	394	1,430	30.9	2,562	63.6	130,234	0.0	137,428
Swordfish	422	0.0	5,865	0.0	479	0.0	0.0	6,798
Other Finfish, Sharks and Rays	4,172	1,342	23,522	18,225	11,549	11,745	55.2	73,570
Total	13,558	9,155	68,565	136,384	12,933	142,742	55.2	393,029
Crustaceans and molluscs								
Rock Lobsters	2,029	158,707	29,450	57,073	505,738	14,143	0.0	771,324
Prawns	992	174	51,801	2,024	15,363	13.4	0.0	90,266
Abalone	2,982	58,705	4,495	34,111	4,355	84,677	0.0	189,385
Scallops	68.7	320	3,173	18.9	7,276	21.6	0.0	11,237
Crabs	604	542	3,671	158	2,992	0.0	498	8,721
Other Crustaceans and Molluscs	680	9,336	10,939	7,728	719	239	0.0	30,549
Total	7,355	227,784	103,530	101,113	536,442	99,094	498	1,101,483
Total value	20,913	236,939	172,095	237,497	549,375	241,836	554	1,494,513
Quantity	t	t	t	t	t	t	t	t
Finfish, Sharks and Rays								
Live	5.1	99.0	626	19.9	0.0	29.0	0.0	781
Tunas	579	348	1,446	8,041	56.2	1.8	0.0	11,325
Salmonids	22.8	635	1.8	177	3.4	11,500	0.0	12,481
Swordfish	31.2	0.0	430	0.0	34.4	0.0	0.0	498
Other Finfish, Sharks and Rays	825	262	3,199	968	575	336	4.3	6,744
Total	1,462	1,345	5,704	9,206	669	11,866	4.3	31,829
Crustaceans and molluscs								
Rock Lobsters	26.4	1,585	390	604	6,587	136	0.0	9,423
Prawns	205	12.7	2,638	88.0	886	1.0	0.0	5,305
Abalone	56.1	748	76.0	411	34.6	1,095	0.0	2,421
Scallops	16.7	81.4	61.7	0.5	154	1.0	0.0	343
Crabs	15.6	5.5	261	1.4	183	0.0	13.6	489
Other Crustaceans and Molluscs	15.7	234	170	368	31.6	13.6	0.0	931
Total	336	2,667	3,597	1,472	7,875	1,247	13.6	18,912
Total quantity	1,798	4,012	9,301	10,678	8,544	13,113	18.0	50,741

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 and re-exports. **na** Not available.
Source: ABS, *Information Consultancy Services, 2007,* cat. no. 9920.0, Canberra

TABLE S29 Imports of fisheries and aquaculture products, Australia

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Edible						
Live Finfish	na	15.4	na	0.0	na	0.0
Finfish, Sharks and Rays						
Fresh or chilled						
Tunas	57.8	700	195	2,712	116	1,386
Salmons	910	11,747	1,291	19,670	813	12,160
Swordfish	127	1,014	73.9	721	87.0	858
Sharks and Rays	439	3,310	391	2,783	362	2,614
Other	9,287	76,728	9,832	82,777	8,939	77,900
Frozen						
Hakes	5,122	23,568	5,719	23,067	4,232	20,486
Salmoninds	3,192	46,340	3,514	61,496	3,454	64,167
Tunas	581	4,156	854	8,421	894	9,900
Icefishes	225	8,164	140	4,653	370	13,639
Other	50,232	303,138	46,890	286,533	46,517	280,219
Prepared or preserved fish **a**	79,355	507,769	82,686	536,359	81,994	556,427
Smoked, dried or salted fish	4,800	81,319	5,178	98,117	5,316	105,349
Other fish preparations	153	4,692	149	5,655	153	5,568
Total **b**	154,482	1,072,645	156,912	1,132,964	153,247	1,150,674
Crustaceans and molluscs						
Frozen **c**						
Prawns	20,265	266,167	15,717	210,004	16,633	260,985
Lobsters	868	28,127	1,178	32,148	1,241	34,732
Crabs	1,584	24,040	1,327	19,313	1,197	18,442
Mussels	2,050	11,137	1,649	9,281	898	5,247
Scallops	2,510	53,554	2,715	62,705	2,084	46,282
Squids and Octopus	18,216	95,453	17,061	114,619	15,234	111,756
Other	1,691	23,409	1,513	19,186	1,132	11,339
Unfrozen **c**						
Prawns	72.8	1,792	34.0	702	7.1	107
Mussels	77.1	1,281	588	5,164	966	7,364
Squids and Octopus	67.1	259	788	5,733	582	4,934
Other	308	5,448	268	4,629	192	4,379
Prepared or preserved						
Prawns	11,581	132,911	16,017	191,767	18,066	223,499
Crabs	290	4,597	373	5,544	425	7,709
Lobsters	1.4	28.1	25.7	784	1.5	31.2
Other	8,115	64,477	9,583	77,655	9,006	75,912
Mixed preparations	572	7,340	617	8,635	651	10,383
Total	68,267	720,021	69,454	767,869	68,315	823,103
Other edible **c**	29.3	264	19.9	237	26.8	405
Total edible b	222,778	1,792,946	226,386	1,901,069	221,589	1,974,182
Non-edible						
Pearls **d**	na	144,399	na	131,574	na	85,946
Fish meal	na	61,689	na	60,823	na	41,240
Ornamental species	na	4,884	na	4,243	na	4,353
Marine fats and oils	na	61,139	na	56,042	na	50,743
Other marine products	na	21,339	na	22,681	na	26,860
Total non-edible	na	293,450	na	275,362	na	209,143
Total fisheries products	na	2,086,396	na	2,176,431	na	2,183,324

a Predominantly canned. **b** Excludes live Finfish . **c** Includes smoked, dried or salted. **d** As indicated in Table S18, mostly reimports. **na** Not available.

Source: ABS, *Information Consultancy Services, 2007* , cat. no. 9920.0, Canberra

TABLE S30 Imports of Finfish, Sharks and Rays, Australia continued

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Live Finfish	na	15.4	na	0.0	na	0.0
Tunas						
Fresh or chilled	57.8	700	195	2,712	116	1,386
Frozen	581	4,156	854	8,421	894	9,900
Prepared or preserved **a**	44,221	269,937	46,868	291,568	44,472	296,072
Total	44,859	274,792	47,917	302,702	45,482	307,358
Salmonids						
Fresh or chilled	910	11,747	1,291	19,670	813	12,160
Frozen	3,192	46,340	3,514	61,496	3,454	64,167
Smoked	3,174	65,638	3,343	80,989	3,589	88,827
Prepared or preserved	7,783	60,958	6,515	54,802	7,105	61,483
Total	15,059	184,683	14,663	216,957	14,962	226,637
Hakes						
Frozen	5,122	23,568	5,719	23,067	4,232	20,486
Total **b**	5,123	23,576	5,722	23,089	4,233	20,493
Swordfish						
Fresh or chilled	127	1,014	73.9	721	87.0	858
Frozen	32.1	545	34.2	492	7.6	100
Other preparations	0.0	0.0	0.0	0.0	7.0	76.2
Total	160	1,559	108	1,213	102	1,034
Icefishes						
Frozen	225	8,164	140	4,653	370	13,639
Other preparations **b**	0.0	2.3	1.3	11.6	0.3	24.1
Total	225	8,166	141	4,665	371	13,663
Herrings						
Fresh or chilled	0.0	0.0	0.0	0.0	0.0	0.0
Frozen	1,333	1,086	4.9	29.7	2.9	27.3
Smoked, salted or dried	76.3	546	62.5	451	65.4	500
Prepared or preserved	768	4,066	712	3,758	821	4,480
Total	2,177	5,697	779	4,239	890	5,007

Continued

TABLE S30 Imports of Finfish, Sharks and Rays, Australia

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Sharks and Rays						
Fresh or chilled	439	3,310	391	2,783	362	2,614
Frozen	5.7	58.8	8.0	70.6	0.0	0.0
Smoked, salted or dried **c**	2.1	527	4.4	605	4.1	528
Total	447	3,896	404	3,458	366	3,142
Other Finfish						
Fresh or chilled	9,286	76,720	9,828	82,753	8,938	77,893
Frozen	48,861	301,448	46,842	285,940	46,506	280,092
Prepared or preserved fish **a**						
Sardines	3,957	23,266	4,867	26,963	4,831	27,936
Anchovies	1,081	15,477	821	11,261	865	11,803
Mackerels	1,668	7,757	1,599	7,476	1,743	8,640
Other	19,877	126,310	21,304	140,529	22,156	146,013
Smoked, salted or dried						
Liver and roes	37.7	502	51.5	577	47.2	535
Anchovies	46.6	621	44.6	491	51.7	405
Cod	99.0	1,222	129	1,514	104	1,359
Other	1,365	12,264	1,543	13,490	1,454	13,195
Caviar and pastes	153	4,689	148	5,646	146	5,468
Total	86,431	570,275	87,178	576,641	86,842	573,339
Total fish d	154,482	1,072,661	156,912	1,132,964	153,247	1,150,674

a Predominantly canned. **b** Includes fresh or chilled. **c** Predominantly dried Shark fins. **d** Excludes live tonnage but includes live value.
Source: ABS, *Information Consultancy Services, 2007,* cat. no. 9920.0, Canberra.

TABLE S31 Imports of Crustaceans and Molluscs, Australia continued

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Prawns						
Frozen **a**	20,265	266,167	15,717	210,004	16,633	260,985
Unfrozen **a**	72.8	1,792	34.0	702	7.1	107
Prepared or preserved	11,581	132,911	16,017	191,767	18,066	223,499
Total	31,919	400,871	31,768	402,472	34,706	484,592
Lobsters						
Frozen **a**	868	28,127	1,178	32,148	1,241	34,732
Unfrozen **a**	40.3	1,748	22.2	881	19.1	830
Prepared or preserved	1.4	28.1	25.7	784	1.5	31.2
Total	909	29,903	1,226	33,813	1,262	35,593
Crabs						
Frozen **a**	1,584	24,040	1,327	19,313	1,197	18,442
Unfrozen **a**	1.2	26.0	1.5	45.9	0.0	0.0
Prepared or preserved	290	4,597	373	5,544	425	7,709
Total	1,875	28,663	1,701	24,903	1,622	26,151
Mussels						
Frozen **a**	2,050	11,137	1,649	9,281	898	5,247
Unfrozen **a**	77.1	1,281	588	5,164	966	7,364
Other perparations	1,202	7,605	1,336	7,278	1,519	8,226
Total **b**	3,329	20,022	3,574	21,722	3,384	20,837
Scallops						
Frozen **a**	2,510	53,554	2,715	62,705	2,084	46,282
Unfrozen **a**	27.2	336	164	4,220	149	3,967
Other perparations	87.1	1,108	119	1,670	85.3	1,190
Total **b**	2,624	54,998	2,998	68,595	2,318	51,439
Squid and Octopus						
Frozen **a**	18,216	95,453	17,061	114,619	15,234	111,756
Unfrozen **a**	67.1	259	788	5,733	582	4,934
Other perparations	5,097	39,125	6,085	46,204	4,916	36,687
Total **b**	23,380	134,837	23,934	166,556	20,731	153,376

Continued

TABLE S31 Imports of Crustaceans and Molluscs, Australia

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Other Crustaceans and Molluscs						
Frozen **a**						
Abalone	7.5	514	6.6	511	14.8	459
Other c	1,684	22,895	1,506	18,675	1,117	10,880
Unfrozen **a**	239	3,339	282	6,204	339	11,076
Mixed preparations **d**						
Oysters	467	6,672	498	7,607	531	9,142
Snails	4.5	36.8	4.7	48.5	11.4	96.0
Other **c**	100	631	115	979	109	1,145
Prepared or preserved						
Molluscs	1,117	10,731	1,270	10,651	1,542	12,809
Crustaceans	81.7	1,127	36.0	242	45.9	434
Other **c**	530	4,782	534	4,888	583	5,072
Total	4,231	50,728	4,252	49,807	4,293	51,115
Total crustaceans and molluscs	68,267	720,021	69,454	767,869	68,315	823,103

a Includes smoked, salted or dried. **b** Includes prepared or preserved. **c** Includes aquatic invertebrates other than Crustaceans and Molluscs, such as Jellyfish,Sea Urchin and Sea Cucumbers. **d** Includes live, fresh, chilled or frozen that may be smoked, salted or dried but excludes prepared and preserved.

Source: ABS, *Information Consultancy Services, 2007,* cat. no. 9920.0, Canberra

TABLE S32 Imports of edible Finfish, Sharks and Rays, by source, Australia continued

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Tunas						
Fresh or chilled						
Fiji	0.3	2.5	9.5	70.3	14.2	117
Indonesia	28.9	345	26.2	300	18.1	191
Maldives	15.8	193	105	1,552	56.2	789
New Zealand	6.7	52.8	17.9	167	16.5	110
Other	6.1	106	35.8	623	11.4	179
Total	57.8	700	195	2,712	116	1,386
Frozen						
Indonesia	82.1	1,663	179	3,451	325	5,963
Japan	6.2	627	6.0	610	7.3	648
Other	493	1,866	669	4,360	562	3,289
Total	581	4,156	854	8,421	894	9,900
Salmonids						
Fresh or chilled						
New Zealand	572	6,891	776	10,078	693	10,317
Norway	324	4,626	503	9,441	121	1,844
Other	14.1	229	12.4	151	0.0	0.0
Total	910	11,747	1,291	19,670	813	12,160
Frozen						
Norway	2,214	32,649	2,344	41,615	2,461	46,938
Poland	739	10,261	586	9,749	664	11,365
Denmark	62.5	983	199	3,682	190	3,642
Other	176	2,447	385	6,450	139	2,223
Total	3,192	46,340	3,514	61,496	3,454	64,167
Hakes						
Frozen						
Argentina	311	710	240	516	376	996
China	324	1,005	522	1,442	70.6	214
Namibia	1,191	6,566	1,102	6,015	1,477	8,514
New Zealand	2,093	8,157	2,699	7,919	1,482	5,512
South Africa	1,182	6,997	1,122	6,996	807	5,205
Other	20.4	132	34.3	179	20.1	44.7
Total	5,122	23,568	5,719	23,067	4,232	20,486
Icefishes						
Frozen						
New Zealand	10.8	446	2.3	118	3.6	32.2
Other **a**	214	7,718	137	4,535	367	13,607
Total	225	8,164	140	4,653	370	13,639

Continued

TABLE S32 Imports of edible Finfish, Sharks and Rays, by source, Australia

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Swordfish						
Fresh or chilled						
Indonesia	59.2	510	45.0	477	54.2	622
New Zealand	59.5	424	22.6	152	29.4	198
Other	8.8	80.0	6.4	91.4	3.4	37.8
Total	127	1,014	73.9	721	87.0	858
Frozen						
Thailand	0.0	0.0	0.0	0.0	0.0	0.0
Vietnam	0.7	9.0	2.0	24.4	1.0	11.0
Other	31.5	536	32.2	468	6.6	89.2
Total	32.1	545	34.2	492	7.6	100
Herrings						
Fresh or chilled						
Denmark	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	0.0	0.0	0.0	0.0
Frozen						
Philippines	0.0	0.0	0.0	0.0	0.0	0.0
Other	1,333	1,086	4.9	29.7	2.9	27.3
Total	1,333	1,086	4.9	29.7	2.9	27.3
Sharks and Rays						
Fresh or chilled						
New Zealand	439	3,310	388	2,761	362	2,614
Other	0.0	0.0	3.1	22.0	0.0	0.0
Total	439	3,310	391	2,783	362	2,614
Frozen						
New Zealand	5.7	58.8	8.0	70.6	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
Total	5.7	58.8	8.0	70.6	0.0	0.0

a Mostly reimports.

Source: ABS, *Information Consultancy Services, 2007,* cat. no. 9920.0, Canberra

TABLE S33 Imports of prepared or preserved Finfish, Sharks and Rays products, by source, Australia

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Prepared and preserved Finfish, Sharks and Rays						
Tunas a						
China	86.0	223	73.5	213	43.3	176
Indonesia	4,543	32,496	4,427	31,504	4,691	32,481
Philippines	234	973	136	753	128	687
Thailand	38,806	231,540	41,721	254,961	38,859	257,199
Other	552	4,704	511	4,138	751	5,529
Total	44,221	269,937	46,868	291,568	44,472	296,072
Salmonids						
Canada	732	7,158	458	3,974	225	2,090
Norway	48.4	523	41.3	649	45.6	1,090
Thailand	2,309	17,861	2,093	16,920	2,362	20,414
United States	4,345	31,438	3,435	28,100	3,930	32,137
Other	348	3,978	488	5,160	542	5,752
Total	7,783	60,958	6,515	54,802	7,105	61,483
Herrings						
Canada	83.5	396	99.0	589	216	1,365
Estonia	121	348	146	416	158	473
Germany	309	1,611	266	1,439	279	1,676
Other	254	1,711	200	1,314	169	966
Total	768	4,066	712	3,758	821	4,480
Sardines						
Canada	589	2,757	864	4,531	163	819
Poland	680	6,198	620	5,480	1,089	8,917
Thailand	1,627	7,576	1,898	8,226	1,701	7,081
United Kingdom	225	2,144	582	4,136	618	4,538
Other	837	4,591	904	4,590	1,261	6,581
Total	3,957	23,266	4,867	26,963	4,831	27,936
Anchovies						
Chile	219	2,275	156	1,548	137	1,073
Italy	466	7,401	297	4,664	286	4,823
Morocco	122	1,992	107	1,467	106	1,524
Spain	115	2,179	116	2,189	139	2,902
Other	158	1,630	146	1,393	196	1,481
Total	1,081	15,477	821	11,261	865	11,803
Mackerels						
Germany	20.6	129	15.6	102	24.0	153
Malaysia	98.4	535	86.6	442	96.7	505
Thailand	992	3,301	1,023	3,463	925	3,198
United Kingdom	46.2	421	56.6	452	209	1,683
Other	510	3,370	417	3,018	489	3,101
Total	1,668	7,757	1,599	7,476	1,743	8,640
Other						
China	3,900	26,507	3,987	27,027	4,552	30,222
Malaysia	3,784	24,763	4,597	30,468	4,039	25,877
New Zealand	1,504	16,291	1,836	22,314	2,056	24,990
Thailand	6,439	27,323	6,778	29,533	6,940	31,427
Other	4,250	31,426	4,106	31,187	4,569	33,498
Total	19,877	126,310	21,304	140,529	22,156	146,013

a Predominantly canned.

Source: ABS, *Information Consultancy Services* , 2007, cat. no. 9920.0, Canberra

TABLE S34 Imports of dried, salted or smoked Finfish, Sharks and Rays, by source, Australia

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Smoked, salted or dried						
Salmonids (smoked only)						
Denmark	2,010	43,622	2,229	54,284	2,008	50,949
New Zealand	48.3	1,333	45.3	1,328	60.0	1,549
Norway	1,035	18,681	956	22,414	1,501	35,758
Other	80.4	2,001	112	2,963	20.6	571
Total	3,174	65,638	3,343	80,989	3,589	88,827
Herrings						
Greece	7.2	76.4	5.3	56.6	12.9	150
Philippines	6.2	54.0	7.4	58.0	2.5	21.5
United Kingdom	51.2	356	43.3	306	44.2	309
Other	11.7	59.2	6.5	30.2	5.8	19.2
Total	76.3	546	62.5	451	65.4	500
Sharks and Rays a						
China	1.3	410	1.5	230	1.5	167
Hong Kong	0.5	49.8	2.7	332	2.5	333
Indonesia	0.3	64.7	0.0	9.2	0.0	0.0
Other	0.0	2.2	0.1	33.7	0.1	28.7
Total	2.1	527	4.4	605	4.1	528
Anchovies						
Greece	7.2	76.4	8.2	75.6	10.7	94.2
Malaysia	0.4	4.0	0.6	4.9	1.4	14.0
Other	38.9	541	35.8	411	39.7	297
Total	46.6	621	44.6	491	51.7	405
Cods						
Italy	0.6	16.0	3.2	51.9	1.7	30.9
Norway	80.0	985	63.4	827	49.4	692
Portugal	11.8	114	52.1	534	44.0	503
Other	6.7	107	10.5	102	9.0	132
Total	99.0	1,222	129	1,514	104	1,359
Livers and roes						
Greece	18.5	93.2	33.5	112	28.9	104
Japan	15.6	341	16.1	384	15.3	349
Other	3.6	67.6	1.8	80.4	3.0	81.8
Total	37.7	502	51.5	577	47.2	535
Other Finfish						
China	38.0	927	25.2	719	15.5	466
Denmark	7.7	37.7	5.4	57.7	15.1	111
Korea, Republic of	81.0	904	52.3	692	36.4	571
Norway	66.8	785	110	1,357	72.5	715
South Africa	509	2,912	707	4,080	827	5,008
Other	662	6,699	644	6,584	488	6,324
Total	1,365	12,264	1,543	13,490	1,454	13,195

a Predominantly dried Shark fin.

Source: ABS, *Information Consultancy Services* , 2007, cat. no. 9920.0, Canberra

TABLE S35 Imports of major Crustaceans products, by source, Australia

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Prawns						
Frozen						
China	7,472	94,543	4,544	56,888	3,962	67,300
Malaysia	2,712	34,430	2,247	29,815	2,165	34,665
Thailand	4,223	59,527	3,902	54,280	4,940	73,045
Vietnam	4,937	62,800	4,419	61,413	4,410	63,991
Other	922	14,868	605	7,607	1,155	21,984
Total	20,265	266,167	15,717	210,004	16,633	260,985
Prepared or preserved						
China	1,911	20,427	3,406	37,276	5,086	57,156
Thailand	2,890	34,619	4,408	58,328	4,081	52,084
Vietnam	6,255	70,394	6,603	79,229	7,128	94,500
Other	526	7,471	1,600	16,934	1,770	19,760
Total	11,581	132,911	16,017	191,767	18,066	223,499
Lobsters						
Frozen						
Cuba	42.9	1,781	29.5	1,019	62.8	2,084
Papua New Guinea	97.9	3,898	63.4	2,614	47.8	1,938
United States	135	4,507	94.4	3,118	50.0	1,326
Vietnam	97.2	1,743	31.2	546	22.4	372
Other	495	16,198	960	24,851	1,058	29,011
Total	868	28,127	1,178	32,148	1,241	34,732
Prepared or preserved						
Japan	0.8	22.7	0.7	21.5	0.7	20.7
Taiwan	0.4	3.2	0.0	0.0	0.0	0.0
Other	0.3	2.2	25.0	762	0.8	10.5
Total	1.4	28.1	25.7	784	1.5	31.2
Crabs						
Frozen						
Chile	45.5	1,045	99.0	2,250	112	2,993
Myanmar	500	7,621	431	5,598	283	3,666
Thailand	279	4,600	161	2,423	163	2,980
Other	759	10,773	636	9,043	638	8,804
Total	1,584	24,040	1,327	19,313	1,197	18,442
Prepared or preserved						
Indonesia	61.4	1,412	96.7	2,003	129	3,217
Thailand	80.6	1,223	108	1,321	77.3	1,054
Vietnam	121	1,623	105	1,207	99.6	1,236
Other	27.1	339	63.1	1,012	119	2,202
Total	290	4,597	373	5,544	425	7,709

Source: ABS, *Information Consultancy Services, 2007* , cat. no. 9920.0, Canberra

TABLE S36 Imports of major Molluscs products, by source, Australia

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Mussels						
Frozen						
Chile	360	1,784	43.3	228	75.4	357
New Zealand	1,686	9,315	1,605	9,048	803	4,790
Vietnam	0.0	0.0	0.0	0.0	1.0	4.6
Other	3.9	37.3	0.4	4.6	18.3	95.8
Total	2,050	11,137	1,649	9,281	898	5,247
Unfrozen						
New Zealand	77.1	1,281	588	5,157	966	7,364
Other	0.0	0.0	0.7	6.6	0.0	0.0
Total	77.1	1,281	588	5,164	966	7,364
Scallops						
Frozen						
China	1,791	31,165	1,826	37,602	1,404	27,471
Japan	278	10,794	305	10,751	324	9,444
Thailand	133	1,652	91.0	1,517	42.8	747
United States	88.3	2,454	257	6,756	134	2,918
Other	219	7,490	236	6,080	179	5,702
Total	2,510	53,554	2,715	62,705	2,084	46,282
Unfrozen						
Thailand	0.0	0.0	4.0	78.3	5.2	95.0
Other	27.2	336	160	4,142	144	3,872
Total	27.2	336	164	4,220	149	3,967
Squids and Octopus						
Frozen						
China	11,152	52,868	11,051	71,910	9,785	70,464
Malaysia	606	3,081	457	3,133	457	3,238
New Zealand	1,031	4,911	1,156	5,451	834	5,256
Taiwan	848	3,729	547	3,760	549	4,431
Thailand	1,575	12,714	1,506	13,418	1,228	11,351
Vietnam	582	3,479	644	4,517	576	4,080
Other	2,422	14,672	1,700	12,429	1,805	12,936
Total	18,216	95,453	17,061	114,619	15,234	111,756
Unfrozen						
China	20.7	60.2	309	2,265	185	1,479
New Zealand	0.0	0.0	135	580	19.7	139
South Africa	16.2	70.4	9.6	61.8	25.6	112
Other	30.3	128	334	2,826	351	3,203
Total	67.1	259	788	5,733	582	4,934
Other Molluscs a						
Prepared or preserved						
China	767	7,792	808	6,530	1,104	9,080
Malaysia	1.5	9.9	0.6	5.4	0.4	3.2
New Zealand	0.2	10.2	31.8	234	39.4	325
Thailand	149	980	127	858	111	686
Other	200	1,939	303	3,023	287	2,715
Total	1,117	10,731	1,270	10,651	1,542	12,809

a Includes aquatic invertebrates.

Source: ABS, *Information Consultancy Services* , 2007, cat. no. 9920.0, Canberra

TABLE S37 Imports of fisheries and aquaculture products, by source, Australia

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Edible (volume excludes live species)						
Argentina	927	4,972	1,043	6,025	1,352	9,553
Canada	1,943	17,725	1,791	17,539	1,136	17,173
Chile	1,055	7,134	1,091	7,600	1,196	8,167
China	34,959	292,159	35,221	304,982	35,073	325,345
Denmark	2,378	47,719	2,912	61,787	2,725	58,831
Germany	540	4,302	588	6,247	463	4,713
India	538	3,898	467	3,628	461	4,010
Indonesia	9,697	89,504	8,995	78,840	8,833	76,601
Italy	730	10,844	493	7,460	430	7,149
Japan	903	20,460	1,006	23,251	1,083	21,435
Korea, Republic of	1,639	8,245	1,093	7,810	1,145	8,322
Malaysia	10,294	88,932	11,943	100,609	10,451	98,604
Myanmar	1,577	15,188	1,512	14,602	1,341	11,596
Namibia	1,607	8,367	1,433	7,461	1,974	10,924
New Zealand	27,644	199,774	29,628	216,252	27,628	211,657
Norway	4,338	66,756	4,899	91,272	4,760	95,725
Philippines	802	4,847	894	5,299	814	4,708
Poland	1,826	20,390	1,649	19,662	2,144	24,857
Singapore	601	5,212	777	6,482	679	7,332
South Africa	4,214	27,733	4,061	26,525	4,014	26,149
Taiwan	8,025	60,284	6,868	55,350	7,185	59,668
Thailand	61,280	416,141	65,297	454,951	62,848	469,781
United Kingdom	842	7,930	808	6,804	962	7,685
United States	6,991	54,926	5,435	51,122	7,435	54,698
Vietnam	32,743	242,957	31,674	242,731	29,774	251,058
Other	4,686	66,532	4,809	76,780	5,684	98,437
Total	222,778	1,792,931	226,386	1,901,069	221,589	1,974,182
Non-edible						
Chile	na	6,052	na	2,170	na	4,986
China	na	24,668	na	22,265	na	15,287
Ecuador	na	12,149	na	10,171	na	2,324
French Polynesia	na	1,771	na	1,289	na	831
Hong Kong	na	3,586	na	2,207	na	2,693
Indonesia	na	17,029	na	20,744	na	21,365
Japan	na	2,776	na	4,616	na	5,812
New Zealand	na	9,535	na	8,802	na	9,225
Norway	na	10,832	na	9,268	na	9,260
Peru	na	30,481	na	37,332	na	26,869
Samoa (American)	na	11,831	na	11,722	na	6,564
Thailand	na	7,019	na	8,656	na	10,077
United States	na	8,073	na	7,031	na	9,719
Other **a**	na	147,649	na	129,090	na	84,130
Total	na	293,450	na	275,362	na	209,143
Total imports	na	2,086,381	na	2,176,431	na	2,183,324

a Predominantly reimports. na Not available.

Source: ABS, *Information Consultancy Services, 2007,* cat. no. 9920.0, Canberra

TABLE S38 Seafood imports from selected countries, by product, Australia [a]

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Thailand						
Prepared or preserved						
Tunas [b]	38,806	231,540	41,721	254,961	38,859	257,199
Salmonids	2,309	17,861	2,093	16,920	2,362	20,414
Other Finfish, Sharks and Rays	9,066	38,270	9,703	41,277	9,601	41,814
Prawns	2,890	34,619	4,408	58,328	4,081	52,084
Frozen [c]						
Fish meat	1,109	7,591	664	2,906	697	2,713
Squids and Octopus	1,575	12,714	1,506	13,418	1,228	11,351
Scallops	133	1,652	91.0	1,517	42.8	747
Crabs	279	4,600	161	2,423	163	2,980
Lobsters	21.9	368	22.7	416	0.2	2.5
Prawns	4,223	59,527	3,902	54,280	4,940	73,045
Other	868	7,401	1,025	8,504	875	7,434
Total	61,280	416,141	65,297	454,951	62,848	469,781
New Zealand						
Frozen [c]						
Hakes	2,093	8,165	2,699	7,942	1,482	5,512
Salmonids	47.0	8,157	2,699	7,919	1,482	291
Other Finfish, Sharks and Rays	11,699	605	34.5	484	11.4	69,671
Mussels	77.1	68,904	12,218	71,627	12,328	7,364
Squids and Octopus	1,031	1,281	588	5,157	966	5,256
Unfrozen [c]						
Salmonids	572	6,891	776	10,078	693	10,317
Sharks and Rays	439	3,310	388	2,761	362	2,614
Other Finfish, Sharks and Rays	6,787	58,732	6,580	59,220	6,424	57,772
Smoked salted or dried						
Salmonids (smoked only)	48.3	1,333	45.3	1,328	60.0	1,549
Sharks and Rayss and Rays [d]	0.0	0.0	0.0	0.0	0.0	0.0
Prepared or preserved						
Finfish, Sharks and Rays	1,504	16,291	1,839	22,337	2,057	25,001
Molluscs	0.2	10.2	31.8	234	39.4	325
Mixed preparations [e]						
Oysters	409	6,152	414	6,623	489	8,721
Other	2,937	19,943	1,315	20,542	1,236	17,263
Total	27,644	199,774	29,628	216,252	27,628	211,657
China						
Prepared or preserved						
Tunas	86.0	0.0	73.5	213	43.3	176
Other Finfish, Sharks and Rays	4,110	27,546	4,177	28,217	4,783	31,504
Prawns	1,911	20,427	3,406	37,276	5,086	57,156
Molluscs	767	7,792	808	6,530	1,104	9,080
Frozen [c]						
Hakes	324	1,005	522	1,442	70.6	214
Other Finfish, Sharks and Rays	324	1,005	522	1,442	70.6	27,569
Prawns	3,748	25,316	4,066	25,524	4,556	67,300
Squids and Octopus	7,472	94,543	4,544	56,888	3,962	70,464
Scallops	11,152	52,868	11,051	71,910	9,785	27,471
Smoked, salted or dried						
Finfish, Sharks and Rays	39.4	1,337	26.7	949	17.9	651
Other	5,026	60,321	6,024	74,592	5,594	33,760
Total	34,959	292,159	35,221	304,982	35,073	325,345

Continued

TABLE S38 Seafood imports from selected countries, by product, Australia **a** continued

	2015-16		2016-17		2017-18	
	t	$'000	t	$'000	t	$'000
Vietnam						
Frozen **c**						
Other Finfish, Sharks and Rays	16,858	76,826	15,886	72,766	14,363	69,332
Prawns	4,937	62,800	4,419	61,413	4,410	63,991
Squids and Octopus	582	3,479	644	4,517	576	4,080
Lobsters	97.2	1,743	31.2	546	22.4	372
Crabs	103	1,194	92.9	1,240	75.8	767
Prepared or preserved						
Prawns	6,255	70,394	6,603	79,229	7,128	94,500
Finfish, Sharks and Rays	1,473	8,604	1,430	8,540	1,597	8,755
Crabs	121	1,623	105	1,207	99.6	1,236
Other	2,318	16,295	2,462	13,272	1,502	8,025
Total	32,743	242,957	31,674	242,731	29,774	251,058
Malaysia						
Prepared or preserved						
Mackerels	98.4	535	86.6	442	96.7	505
Other Finfish, Sharks and Rays	3,898	25,433	4,700	31,049	4,152	26,524
Prawns	127	1,489	975	9,201	1,192	12,771
Frozen **c**						
Prawns	2,712	34,430	2,247	29,815	2,165	34,665
Squids and Octopus	606	3,081	457	3,133	457	3,238
Finfish, Sharks and Rays	695	6,843	880	6,138	349	3,566
Unfrozen **c**						
Fish	135	2,085	138	2,271	299	3,701
Smoked, salted or dried						
Finfish, Sharks and Rays	85.3	994	110	942	76.3	963
Other	1,937	14,043	2,351	17,619	1,664	12,671
Total	10,294	88,932	11,943	100,609	10,451	98,604
APEC region						
Prepared or preserved						
Tunas **b**	43,915	266,614	46,638	288,905	44,245	293,603
Salmonids	57,057	7,456	50,025	6,130	55,675	6,663
Sardines	13,476	2,887	15,767	3,465	12,302	2,889
Other Finfish, Sharks and Rays	20,153	123,034	21,835	138,346	22,316	141,704
Prawns	11,505	131,634	15,641	186,676	17,667	218,032
Molluscs	1,113	10,657	1,257	10,506	1,536	12,719
Frozen **c**						
Fish meat	948	13,924	1,164	15,281	1,364	24,063
Squids and Octopus	17,724	92,795	16,799	113,204	14,863	109,192
Prawns	20,059	262,867	15,644	208,570	16,200	253,059
Scallops	2,478	52,450	2,702	62,270	2,084	46,282
Crabs	935	14,706	624	10,967	671	12,268
Mixed preparations **e**						
Oysters	467	6,672	498	7,607	531	9,142
Other	9,817	545,649	14,285	545,376	7,798	526,709
Total	199,646	1,531,347	202,877	1,597,304	197,253	1,656,326

a Excludes live imports. **b** Predominantly canned. **c** Includes smoked, salted or dried. **d** Predominantly dried Shark Fin.
e Includes live, fresh, chilled or frozen that may be smoked, salted or dried but excludes prepared and preserved.
Source: ABS, *Information Consultancy Services* , 2007, cat. no. 9920.0, Canberra

Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES)

Postal address GPO Box 858 Canberra ACT 2601

Switchboard +61 2 6272 3933

Email info.abares@agriculture.gov.au

awe.gov.au/abares

ABA4151_1019