



Australian Government
Department of Agriculture,
Water and the Environment
ABARES



FRDC
FISHERIES RESEARCH &
DEVELOPMENT CORPORATION

Final report on Australian fisheries and aquaculture statistics 2018

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

Technical Report 20.8
August 2020



© Commonwealth of Australia 2020

Ownership of intellectual property rights

Unless otherwise noted, copyright (and any other intellectual property rights, if any) in this publication is owned by the Commonwealth of Australia (referred to as the Commonwealth).

Creative Commons licence

All material in this publication is licensed under a [Creative Commons Attribution 4.0 International Licence](#) except content supplied by third parties, logos and the Commonwealth Coat of Arms.

Inquiries about the licence and any use of this document should be emailed to copyright@awe.gov.au.



Cataloguing data

This publication (and any material sourced from it) should be attributed as Steven, AH, Curtotti, R & Mobsby, D 2020, *Final report on Australian fisheries and aquaculture statistics 2018*, Fisheries Research and Development Corporation project 2019-093, ABARES, Canberra, August.

ISSN 189-3128

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

GPO Box 858 Canberra ACT 2601

Telephone 1800 900 090

Web awe.gov.au

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.

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.

Acknowledgements

The authors thank ABARES staff who have contributed to this latest edition, and the ABARES commodities data management team for help preparing data. We also gratefully acknowledge the assistance of officers of state and NT fisheries departments, the Australian Fisheries Management Authority, and industry stakeholders. We thank the Australian Bureau of Statistics for supplying trade data.

The Fisheries Research and Development Corporation and the Australian Government Department of Agriculture Water and the Environment provided funding for this research.

New South Wales

David Makin (wild sector)

Department of Primary Industries

Phone 02 6656 8929 Fax 02 6391 5709

Email david.makin@dpi.nsw.gov.au Web dpi.nsw.gov.au

Raelene Trenaman (aquaculture)

Department of Primary Industries

Phone 02 4916 3843 Fax 02 5982 1107

Email raelene.trenaman@dpi.nsw.gov.au Web dpi.nsw.gov.au

Victoria

Monique Nelis

Victorian Fisheries Authority

Phone 03 5258 0284 Fax 03 5258 4553

Email monique.nelis@vfa.vic.gov.au Web vfa.vic.gov.au

Queensland

Dr Genevieve Phillips

Department of Agriculture and Fisheries

Phone 07 3087 8362

Email genevieve.phillips@daf.qld.gov.au Web daf.qld.gov.au

South Australia

Angelo Tsolos (wild sector)

Department of Primary Industries and Regions

Phone 08 8207 5414 Fax 08 8207 5415

Email angelo.tsolos@sa.gov.au Web pir.sa.gov.au

Jade Davison (aquaculture)

Department of Primary Industries and Regions

Phone 08 8429 0520 Fax 08 8226 0330

Email jade.davison@sa.gov.au Web pir.sa.gov.au

Western Australia

Eva Lai

Department of Primary Industries and Regional Development

Phone 08 9203 0135 Fax 08 9203 0199

Email eva.lai@dpird.wa.gov.au Web dpird.wa.gov.au

Tasmania

Denise Garcia

Department of Primary Industries, Parks, Water and Environment

Phone 03 6165 3017

Email denise.garcia@dpipwe.tas.gov.au Web dpipwe.tas.gov.au

Northern Territory

Ann Schubert

Department of Primary Industry and Resources

Phone 08 8999 2370 Fax 08 8999 2065

Email ann.schubert@nt.gov.au Web dpir.nt.gov.au

Commonwealth

John Garvey (licensing and quota management)

Australian Fisheries Management Authority

Phone 1300 723 621 Fax 02 6225 5550

Email john.garvey@afma.gov.au Web afma.gov.au

Contents

Acknowledgements.....	iii
Summary	vi
Introduction.....	1
Background	1
Need	1
Objectives.....	2
Method.....	3
Gross value of production	3
Intermediate product.....	3
Trade data.....	4
Project outputs	4
Discussion.....	6
Benefits	6
Issues and further development.....	6
Project outcomes	8
Conclusion	9
Implications	9
Recommendations.....	9
Extension and adoption	9
Project coverage.....	10
Project materials.....	10

Summary

This is a report on FRDC project 2019–093, a research and publication project that produces the *Australian fisheries and aquaculture statistics* publication.

The 2018 edition of this publication is in 2 formats:

- [Fisheries and aquaculture statistics 2018](#) subsite within the ABARES website
- downloadable PDF, available from the subsite.

The publication provides:

- a reliable time series of economic data about Australia's fishing and aquaculture industries that supports well-informed investment, management and policy decisions by governments, the fishing industry and the public
- accurate information to stakeholders on the value of the commercial fisheries and aquaculture sectors
- baseline information that is fundamental to establishing the importance of individual fisheries and trends within fisheries
- accurate information to stakeholders on exports and imports of fisheries products.

Since 1991 ABARES has published detailed production and trade data annually in *Australian fisheries statistics*, now renamed *Australian fisheries and aquaculture statistics*. The publication is designed to meet the needs of the fishing and aquaculture industries, fisheries managers, policymakers and researchers. The research undertaken for this edition produced data on the volume and value of production from Commonwealth, state and NT fisheries, and the volume and value of Australian fisheries trade by destination, source and product from 1998–99 to 2017–18.

ABARES undertakes continuous improvement on each edition of the publication. We aim to include all commercial fishing activities, incorporate industry employment data (where available), maintain the relevance of the data, and refine fishery divisions and important species categories. This is achieved by publishing the most up-to-date data on production statistics and a set of trade data for the same production year.

The online version of [Fisheries and aquaculture statistics 2018](#) is designed to help users find information more easily. On the landing page, users can view a snapshot of fisheries production, trade and consumption and employment data. They can access chapters organised by topic under the headings:

- Trends in Australian fisheries and aquaculture
- Other sectors and employment
- Feature stories, fishery profiles and data
- More about Australian fisheries and aquaculture statistics.

Users can also download a PDF version of the latest edition and view previous editions.

We have made structural changes to the subsite to improve the user experience of the product. This includes improved communication tools such as infographics and new, easy-to-navigate child pages, such as:

- [Economic concepts in Australian fisheries and aquaculture statistics](#), which is designed to help users interpret the data.
- [Fisheries data](#), which now covers 1998–99 to 2017–18 (for production) and 1989–90 to 2017–18 (for trade).

In previous editions, text in the main body of the downloadable PDF version duplicated information already captured in the statistical tables. We have streamlined the 2018 edition by increasing the number of infographics and, where necessary, included a brief statistical overview.

Introduction

Background

In 1991 the absence of national fisheries information led to the then Australian Bureau of Agricultural and Resource Economics (ABARE) publishing the first *Australian fisheries statistics*, with support from the newly formed Fisheries Research and Development Corporation (FRDC). In 2014 the title changed to *Australian fisheries and aquaculture statistics*, reflecting the growing importance of aquaculture to the gross of Australian fisheries production.

Work on the 2018 edition (FRDC project 2019–093) was undertaken primarily to maintain the collection of data on commercial fishing industry production for the 2017–18 financial year. This includes value of production and trade data.

Australian fisheries and aquaculture statistics continues to be the only source of information for nationally aggregated commercial industry catches, values and farmgate production of aquaculture enterprises. It is used for:

- determining Australian Government financial contributions to fisheries research funding
- determining industry levies
- addressing a range of information needs of government and industry.

Need

Australian fisheries and aquaculture statistics

Australian fisheries and aquaculture data on production volume and value have many applications. The Australian Government, through ABARES, contributes to several international databases. These include databases managed by the Food and Agriculture Organization (FAO) of the United Nations and the Organisation for Economic Co-operation and Development (OECD). Information at the international level is used for negotiations on transboundary stocks and in analysing trade opportunities and threats. Our data is also essential for participating in forums such as the regional fisheries management organisations, the Asia-Pacific Economic Cooperation forum and the World Trade Organization.

The gross value of production (GVP) for specific fisheries is used to determine the Australian Government and industry financial contribution to the FRDC. GVP estimates should be carried out independently of those involved in management and marketing processes to ensure the neutrality and integrity of both the process and the estimates.

The data are used extensively by the fishing industry and providers of services to the fishing industry to make investment decisions and plan marketing strategies. ABARES frequently receives requests from consumers and industry stakeholders for access to data associated with the publication project. Some requests are specific – for example, production of a particular species in a particular state or territory. Others are generic – for example, focused on the relative size of the wild-catch sector or on aquaculture and how this has changed over time.

Labour force profiling information

Employers use datasets of the labour force in the Australian fisheries and aquaculture industry to help with workforce planning. Reporting on these datasets and issues in a single publication provides industry stakeholders with a valuable, easy to access tool.

Consumption

The online and downloadable PDF versions of the 2018 edition include a new chapter dedicated to [Australia's seafood consumption](#). This section covers apparent seafood consumption, relative to other animal products such as beef and poultry, and the role of imports in Australian seafood consumption. This topic-specific reporting helps meet the needs of the seafood industry and research stakeholders.

Monitoring methodologies to determine jurisdictional GVP

For the 2018 edition, ABARES monitored approaches used by jurisdictions to estimate their GVP. A consistent approach to determining GVP across jurisdictions would:

- ensure valid comparisons of GVP across jurisdictions
- ensure a fair allocation of FRDC research funding across species groups and jurisdictions
- provide accurate data to international organisations such as the FAO and the OECD.

This work remains an ongoing priority for ABARES.

Recreational fishing survey monitoring

Periodically, jurisdictions conduct recreational fishing surveys to collect expenditure and participation trends at the national level. ABARES continues to monitor these surveys and summarises key results in *Australian fisheries and aquaculture statistics*. This edition provides a summary for stakeholders monitoring developments in this sector. The commencement of the next national survey of recreational fishers will provide more information for the next edition.

The summary in the 2018 edition is high level, and directs readers to the survey publications. ABARES only updates data on recreational fishing following the release of national recreational fishing surveys.

Objectives

The 2 primary objectives of the annual *Australian fisheries and aquaculture statistics* publication project are:

- 1) To maintain and improve the dataset of production volume, GVP and trade statistics for Australian fisheries and aquaculture.
- 2) To present *Australian fisheries and aquaculture statistics* data in an accessible form.

Method

A key element of *Australian fisheries and aquaculture statistics* is the development of GVP estimates for Commonwealth, state and NT fisheries. National GVP is the total landed and farmgate value of Australian wild-catch and aquaculture production. Calculations are based on the beach or farmgate prices received by fishers and producers. The beach price is the price received for fish at its first landing point, excluding payments for freight, marketing and processing. The farmgate price is the price received for product at the point of exit from the aquaculture farm.

The Australian Fisheries Management Authority (AFMA) provides ABARES with Commonwealth production data, which we use to estimate the value of Commonwealth fisheries production. This is done by surveying industry stakeholders for representative price points of the species they catch. The resulting weighted average price of each species is multiplied by AFMA catch to determine GVP for Commonwealth fisheries. State and territory fisheries agencies provide ABARES with production and GVP estimates.

Responsibility for the accuracy and consistency of data lies with the respective fisheries agencies and the Fisheries Statistics and Information Working Group (FSIWG), a subcommittee of the Australian Fisheries Management Forum. The FSIWG aims to address problems with methods of data collection (generally logbooks), consistency of data processing protocols, standardisation of species names, and issues such as the impact of the overlapping fisheries management jurisdictions on catch data. Estimates that are significantly different from expected values are queried.

All production volumes are recorded in landed whole weight. No account is taken of discarded species. In general, commercial aquaculture production estimates are provided by state and NT fisheries agencies. They derive their estimates by multiplying farmgate production by the price received at the farmgate for each species and each jurisdiction.

For more information on methodologies for GVP, measuring fisheries product trade and calculating apparent seafood consumption, see the [Economic concepts in Australian fisheries and aquaculture statistics](#) section.

Gross value of production

Prices used in GVP calculations are based on the estimated beach or farmgate price received by fishers and aquaculture producers. Ideally, values are derived from a range of sources, including fishers and producers, processors, wholesale marketers and seafood buyers. Most fish is not sold at the point of landing or the aquaculture farmgate, so any marketing and transport costs that are reflected in the market price need to be deducted to derive a first point of sale price. In some jurisdictions, the values are collected by the fisheries agency. Other jurisdictions depend on information provided by a sample of buyers. Sources and contacts for this process are updated and expanded, where relevant.

Intermediate product

Live product from one fishery or aquaculture operation is sometimes transferred for use in another fishery or aquaculture operation. For example, wild-catch Southern Bluefin Tuna are

taken in the Commonwealth fishery and transferred to aquaculture cages off Port Lincoln, South Australia. Where this occurs, care must be taken to determine whether the intermediate product should be included in the GVP estimate.

The criterion used in *Australian fisheries and aquaculture statistics* is whether live product is transferred to another management jurisdiction. If a product is transferred to another jurisdiction, it is included in the GVP estimates for the jurisdiction in which it was originally produced. In the case of the Southern Bluefin Tuna example, this was the Commonwealth Southern Bluefin Tuna fishery. Such product is then treated as any other input by the secondary producers and no correction is made to the value of production from the second jurisdiction (for example, the tuna farming operation). However, when calculating the total value across both jurisdictions, the value of the intermediate product must be deducted to avoid double counting.

The value of live products transferred between operators in the same fishery is generally not recorded. The exceptions are fish fry, oyster spat and post-larval prawns grown in hatcheries for ongrowing. If these products are grown on or transferred to another aquaculture operation in the same state or territory, the value of the hatchery production is not included in GVP estimates. It is only when the product is sold interstate or used for restocking that the value of hatchery product is included.

Trade data

Details on fisheries trade data sourced from the Australian Bureau of Statistics (ABS) are based on the harmonised system of tariff codes. Fisheries trade data is classified according to sections 3 and 14 of the Australian Harmonized Export Commodity Classification system.

ABARES collates the data for imports and exports based on the:

- product
- destination – country or origin for imports and country of shipment for exports
- state or territory – state or territory of origin for imports and state or territory received for exports.

The categories in the trade tables are reviewed each year to ensure they remain relevant.

Trade data is not reported on the same beach price basis as production data. Exports are based on a free on board basis (fob) and can include processing and transportation costs. For more information, see [measurement of fisheries products trade](#).

Project outputs

The 2018 edition of this publication is in 2 formats:

- free [Fisheries and aquaculture statistics 2018](#) subsite within the ABARES website
- free downloadable PDF, available from the subsite.

Both versions contain new chapters and features.

Online version of the publication

Enhancements to the PDF and web versions of the 2018 edition include:

- 1) Data products have been expanded to include production data for 1998–99 and trade data for 1989–90 onward.
- 2) Fish names in the main body of the publication and the tables now reflect the Australian Fish Names Standard (AS 5300–2019). A concordance list of species and grouping names previously used with the standard was incorporated in the publication.
- 3) Feature stories designed to provide readers with statistical insights on trending topics, such as a feature story on [Australian seaweed production](#).
- 4) A new chapter called [Australia's consumption of seafood](#) that covers apparent seafood consumption, relative to other animal products such as beef and poultry, and the role of imports in Australian seafood consumption.
- 5) Improvements to the design and greater use of informative infographics (15) and maps (3).
- 6) A new chapter called [About this report](#) that explains changes to the 2018 edition, notes on rounding and on species, and the application of the Australian Fish Names Standard.
- 7) A new section called [Economic concepts in Australian fisheries and aquaculture statistics](#) to help users interpret technical information. It includes notes on GVP, measurement of fisheries products trade, the difference between real and nominal values, calculating apparent seafood consumption, and economic geography in *Australian fisheries and aquaculture statistics*.
- 8) A new web section called [Other useful information](#) that provides users with a glossary, and units, fish name concordance and references.

Downloadable PDF version of the publication

The PDF version provides production data for 1998–99 onward and trade data from 1989–90 onward. These data products are also available on the [Fisheries data](#) web page.

Other outputs

ABARES provided a production flat file to the FRDC to help them prepare a dashboard page for *Australian fisheries and aquaculture statistics* data on the FRDC website.

Discussion

Benefits

The *Australian fisheries and aquaculture statistics* project provides a range of benefits that have a substantial public good component. In general, the benefits are non-market in nature. For example, the fishing industry uses the project data to make decisions about fisheries management and investment, research allocation, long-term planning, marketing strategies and related activities.

The provision of trade data can also help stakeholders identify emerging export markets for Australian seafood. The overall size of seafood export trends to key markets can also be assessed.

Since 2002 each version of *Australian fisheries and aquaculture statistics* has been available for free download from the ABARES website. Since 2007 the production and trade tables have been available on the ABARES website in Excel format, which enables users to create their own datasets. As part of the 2018 edition, we have released data from 1989–90 (for trade) and 1998–99 (for production).

Issues and further development

The objective of the *Australian fisheries and aquaculture statistics* project is to maintain a dataset that enables production of a low-cost publication on fisheries production and trade. ABARES collates and publishes the data, but the project is a collaboration between Commonwealth, state and territory organisations, and individual companies.

ABARES makes improvements to the production and trade tables in each edition of *Australian fisheries and aquaculture statistics*. This includes updating data in the production tables on Commonwealth, state and NT fisheries, species produced (wild-catch and aquaculture), adoption of the Australian Fish Names Standard and species groupings. We update information on relevant species and countries in the trade tables. We also report on employment in the fishing industry. Information on the economic value of recreational fishing is limited, as reflected in the data we provide on that topic.

Issues that may need to be addressed in upcoming editions are:

- calculating value of production
- size and quality of fisheries products at capture – impact on price
- reporting period
- system for collecting and reporting trade data
- challenges to reporting on industry structure
- accurate reporting on species groups
- changing nature of user interaction with data
- new reporting technology.

Calculating value of production

The general principle is that the value of production should be based on the ex-vessel or ex-farmgate price, but it can be difficult to obtain such information. When prices are not available from fishers or farmers, the large number of marketing channels used in the fisheries sector can make it difficult to obtain a representative value. The distribution of products can also change significantly over time, so regular monitoring of key markets is necessary. For this reason, ABARES must continue to foster harmonisation of beach price collection processes across jurisdictions to ensure that comparable GVP estimates can be derived. To date, the harmonisation process is fostered through the Fisheries Statistics and Information Working Group, which is represented by all jurisdictions.

Size and quality of fisheries products at capture – impact on price

The size and quality of fisheries products at capture can affect the price that fishers receive. However, these attributes are not usually collected or reported by fisheries agencies. For example, prawns sold at markets will often be priced according to size and quality, but catch data typically only reveals tonnages. The problem is more pronounced for aquarium species, where price can be affected by appearance, condition and breeding status.

Some industry respondents have more difficulty establishing a representative average price for a species than for various grades. The provision of production data by grade or size may improve the accuracy of GVP estimates for some products. Collecting whole-weight beach prices that reflect an accurate weighting of size, grade and regional attributes is part of the harmonisation effort that jurisdictions are trying to achieve. However, some areas of price collection are likely to remain difficult. For example, collection of accurate pricing data on the full range of marine aquarium fish caught annually in Australia is likely to remain prohibitively expensive for jurisdictions regardless of the level of harmonisation.

A requirement for statistics reporting is that there has to be a minimum number of operators within a category before an estimate can be published. This can be a problem for reporting aggregate production estimates for fisheries or aquaculture sectors with only a small number of operators.

Reporting period

The reporting period chosen by ABARES and jurisdictions can affect the harmonisation of estimates. *Australian fisheries and aquaculture statistics* uses a financial year reporting period, but critics have pointed out that this does not concur with fishing seasons. In some cases, users may need reports based on the fishing season or calendar year. Databases would have to be modified to report on a monthly rather than an annual basis. This requires significant investment by jurisdictions in data collection processes and consideration of the costs and benefits of such investment.

System for collecting and reporting trade data

The international harmonised system for collecting and reporting trade data, and the statistical identification framework currently implemented in Australia, prevent identification of the trade of most individual species. For example, achieving an accurate estimate of certain fish species trade is difficult using ABS data because of the way that the data is reported. The ABS periodically reviews the statistical codes with a view to amalgamating codes or adding new ones.

Challenges to reporting on industry structure

Information on industry structure is difficult to present because management approaches vary widely across jurisdictions. In some jurisdictions, structure is based on the number of individual fishers, and in others on the number of boats. Many operators are also licensed for multiple fisheries, making it difficult to establish the overlaps in boat and employment numbers. Addressing some of these data gaps would require targeted research across some of these areas. For example, data is needed on fleet structure and characteristics, and numbers of fishers endorsed to fish across multiple jurisdictions.

Accurate reporting on species groups

The aggregated nature of some species groups listed in *Australian fisheries and aquaculture statistics*, and the reporting at largely the group level rather than at a single species level, make applying the Australian Fish Names Standard challenging in some instances. Over time, ABARES would like to collect a more disaggregated dataset to help classify species under the correct group name required by the standard. This would also enable us to integrate the data from *Australian fisheries and aquaculture statistics* into the [Status of Australian fish stocks reports](#).

Changing nature of user interaction with data

The way people use and interact with data is changing. User preferences are for readily available datasets that they can custom query and analyse. To meet this need, we may have to publish the data via a digital portal alongside the PDF version of the publication. Achieving this goal may require some reorganisation of the way information is presented.

New reporting technology

Increasingly, data visualisation tools are being developed that help users interrogate and understand data. The FRDC maintains dashboards on its website that provide access to the *Australian fisheries and aquaculture statistics* dataset, which is updated with each new edition. Users can also access data on fisheries and aquaculture trade supplied by ABARES.

Project outcomes

Outcomes of the *Australian fisheries and aquaculture statistics* project are:

- 1) The Australian fishing industry, researchers and consumers use the data for input into investment, research, management and policy decisions.
- 2) Stakeholders obtain accurate information on the values associated with the fisheries sector.
- 3) Research funding arrangements obtain accurate and cost-effective estimates of the GVP of Australian fisheries.
- 4) The data identifies the importance of individual fisheries and trends within fisheries.

Conclusion

The research project achieved its objectives and outputs with the release of the online and downloadable PDF versions of *Australian fisheries and aquaculture statistics 2018*.

Implications

The outputs of this research project contribute to the long-term statistical data on the Australian fishing and aquaculture industry. The project produces the only national publication that combines statistical data for the industry from all fishing and aquaculture jurisdictions. It provides a valuable indication of the size and depth of the industry and helps industry plan for future development.

ABARES receives requests throughout the year for statistical information about the seafood industry. These requests are from a range of stakeholders, including management, industry, researchers and consumers. The publication provides ABARES with a cost-effective way of addressing requests for data.

Recommendations

The *Australian fisheries and aquaculture statistics* publication meets the needs of users and requires only minor modifications.

ABARES recommends the following modifications:

- 1) Consider more contemporary approaches to presenting and disseminating data, including the use of visualisation tools and timelines within a dedicated AFAS ABARES online landing page. This will enable us to
 - a) produce a shorter report that can be edited and published in a timelier manner
 - b) move away from static tables, allowing stakeholders to interact with fisheries and aquaculture statistics in a more bespoke manner
 - c) make data and insights more accessible to users
 - d) provide space for less frequently updated information – for example, a dedicated space for recreational and Indigenous customary fishing on the landing page.
- 2) Collect data from state providers much earlier each year and shorten the length between data collection and report publication.
- 3) Continue to work through the Fishery Statistics and Information Working group to align methods of pricing species, to improve the accuracy of GVP estimates and to expand the coverage of species.

Extension and adoption

Each edition of *Australian fisheries and aquaculture statistics* is published online by ABARES and the FRDC. ABARES also responds to inquiries about the publication and provides users with information from its databases that is not available in the publication.

ABARES discusses fisheries statistics collection processes with jurisdictional fisheries agencies, to help improve collection processes.

Project coverage

Statistics from the publication are frequently used in media reports on the Australian seafood industry.

Project materials

The 2018 edition of this publication is in 2 formats:

- free [Fisheries and aquaculture statistics 2018](#) subsite within the ABARES website
- free downloadable PDF, available from the subsite, to be cited as Steven, AH, Mobsby, D & Curtotti, R 2020, *Australian fisheries and aquaculture statistics 2018*, Fisheries Research and Development Corporation project 2019-093, ABARES, Canberra, April. CC BY 4.0.