ECONOMIC AND SOCIAL INDICATORS FOR THE QUEENSLAND CHARTER FISHERY, 2017/18 AND 2018/19

A report to Fisheries Queensland

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TABLE OF CONTENTS

Tables v

Figures vi

Glossary vii

Abbreviations ix

Acknowledgements ix

Document History and Status x

Executive Summary xi

1. Introduction 1

    1.1. Fishery Background 1

    1.2. Report Structure 2

2. Method of Analysis 4

    2.1. Overview of Approach 4

    2.2. Survey of Fishing Businesses 5

    2.3. Backcasting to 2017/18 7

3. Economic Indicators for the Queensland Charter Fishery 8

    3.1. Clients, Gross Value of Production and Exports 8

    3.2. Prices and Customers 8

    3.3. Cost of Management 11

    3.4. Business Financial Indicators 12

        3.4.1. Fishery average in 2017/18 and 2018/19 12

        3.4.2. Disaggregation of business financial indicators for 2018/19 15

    3.5. State and Regional Economic Contribution 20

        3.5.1. Measuring direct and flow-on effects 20

        3.5.2. Economic contribution to Queensland 21

        3.5.3. Regional economic contributions 24

4. Social and Demographic Indicators 28

4.1. Demographic Indicators 28
4.2. Fisheries Management 31
4.3. Fisher Wellbeing 32
References 35

TABLES

Table ES-1 Summary of key economic indicators, 2017/18 and 2018/19 xi

Table 2-1 Survery sample in the Charter Fishery, by main region and client days quartiles 6

Table 2-2 Cost adjustments for business level backcasting to 2017/18 7

Table 3-1 Clients, GVP and export value of the Charter Fishery, 2017/18 and 2018/19 8

Table 3-2 GVP, prices and customers for Charter Fishery, 2017/18 9

Table 3-3 GVP, prices and customers for Charter Fishery, 2018/19 10

Table 3-4 Costs of management in the Charter Fishery, 2017/18 and 2018/19 11

Table 3-5 Financial performance in the Charter Fishery, 2017/18 and 2018/19 14

Table 3-6 Financial performance in the Charter Fishery, by return on investment quartile, 2018/19 16

Table 3-7 Financial performance in the Charter Fishery, by business model, 2018/19 17

Table 3-8 Financial performance in the Charter Fishery, by main trip length, 2018/19 18

Table 3-9 Total financial performance in the Charter Fishery, by fishing region, 2018/19 19

Table 3-10 Economic contribution of the Charter Fishery to Queensland, 2017/18 23

Table 3-11 Economic contribution of the Charter Fishery to Queensland, 2018/19 23

Table 3-12 Direct economic contribution of fishing activity in the Charter Fishery to regions, 2017/18 24

Table 3-13 Direct economic contribution of fishing activity in the Charter Fishery to regions, 2018/19 24

Table 3-14 Economic contribution of the Charter Fishery to North West and Cape York Peninsula, 2018/19 25

Table 3-15 Economic contribution of the Charter Fishery to Wet Tropics, 2018/19 25

Table 3-16 Economic contribution of the Charter Fishery to Mackay, Isaac and Whitsunday, 2018/19 26

Table 3-17 Economic contribution of the Charter Fishery to Fitzroy, 2018/19 26

Table 3-18 Economic contribution of the Charter Fishery to Wide Bay Burnett, 2018/19 27

Table 3-19 Economic contribution of the Charter Fishery to South East, 2018/19 27

FIGURES

Figure 1-1 Department of Agriculture and Fisheries Subregions used for reporting 3

Figure 4-1 Age 28

Figure 4-2 Business role, place of residence and Indigenous status 29

Figure 4-3 Years as licence owner, in charter fishing and lived in local community 29

Figure 4-4 Highest education attained 29

Figure 4-5 Primary income from charter fishing 30

Figure 4-6 Other industry of employment (other than fishing) 30

Figure 4-7 Split of workload 30

Figure 4-8 Community involvement 31

Figure 4-9 Perceptions of fishery management (a) 31

Figure 4-10 Perceptions of fishery management (b) 31

Figure 4-11 Satisfaction with lifestyle 32

Figure 4-12 Wellbeing benefits of charter fishing 32

Figure 4-13 Wellbeing costs of charter fishing 33

Figure 4-14 Connection to community 33

Figure 4-15 Personal wellbeing 33

Figure 4-16 Stewardship 34

GLOSSARY

Trip days: refers to the total number of 'daytrip equivalents' by converting multi-day trips to daytrip equivalents. For example, a 3 day trip converts to '3 trip days'. Trip days data were sourced from Fisheries Queensland logbooks and collected in the survey to allow scaling up of the sample by this variable.

Client days: refers to the total number of 'single client daytrip equivalents' by converting multi-day trips to daytrip equivalents and counting each trip once for each client on it. For example, if a charter fisher undertook 10 day trips with 4 clients on each trip plus 2 multi-day trips that went for 3 days with 2 clients on each trip the fisher undertook (10 day trips x 4 clients) + (2 multi-day trips x 3 days x 2 clients) = 52 client days. Client days data were sourced from Fisheries Queensland logbooks and collected in the survey to allow scaling up of the sample by this variable. What represents a paying client is unclear in Charter Fishery logbooks as an entry is required for 'number of fishers' and 'number of guests'. The most common entries for 'number of guests' are zero or the number entered for 'number of fishers' so the number of paying clients was assumed to be the maximum of these two numbers on any one trip.

Boat Business Profit: is defined as Gross Operating Surplus (*GOS)* less *Depreciation* less *Owner-operator and Unpaid Family Labour*. Boat Business Profit represents a more complete picture of the actual financial status of an individual firm, compared with GOS, which represents the cash in-cash out situation only.

Boat Cash Income: is defined as Gross Operating Surplus less imputed wages for owner- operator and unpaid family labour.

Boat Gross Margin: is defined as *Total Boat Income* less *Total Boat Variable Costs*. This is a basic measure of profit which assumes that capital has no alternative use and that as fishing activity (trip days) varies there is no change in capital or fixed costs.

Cost of Management Services: in a professional fishery management services will generally include biological monitoring and reporting; policy, regulation and legislation development; compliance and enforcement services; licensing services; and research.

Depreciation: Depreciation refers to the annual reduction in the value of working capital due to general wear and tear or the reduction in value of an item over time. Note this is a measure of economic depreciation not accounting depreciation[1].

Gross Operating Surplus (GOS): is defined as *Total Boat Income* less *Total Boat Cash Costs* and is expressed in current dollar terms. GOS may be used interchangeably with the term Gross Boat Profit. A GOS value of zero represents a breakeven position for the business, where TBCC equals Total Boat Cash Receipts (TBCR). If GOS is a negative value the firm is operating at a cash loss and if positive the firm is making a cash profit. GOS does not include a value for owner/operator wages, unpaid family work, or depreciation.

Gross Value of Production (GVP): refers to the value of the total annual trips for the Charter Fishery or a sector of it and is measured in dollar terms. GVP, generally reported on an annual basis, is the number of client days for the year multiplied by the average trip price per client per day.

Owner-operator and Unpaid Family Labour: in many fishing businesses there is a component of labour that does not draw a direct wage or salary from the business. This will generally include owner/operator labour and often also include some unpaid family labour. The value of this labour needs to be accounted for which involves imputing a labour cost based on the amount of time and equivalent wages rate. In the above calculations this labour cost can be included simply as another cost so that Gross Operating Surplus takes

[1] Accounting depreciation allocates the cost of an asset over its useful life.

account of this cost. Alternatively, it can be deducted from GOS to give a separate indicator called Boat Cash Income. Owner-operator and unpaid family labour is separated into variable labour (fishing and repairs and maintenance) and overhead labour (management and administration).

Profit at Full Equity: is calculated as *Boat Business Profit* plus *rent, interest and lease* payments less *depreciation associated with leased capital*. Profit at Full Equity represents the profitability of an individual fishing business, assuming the business has full equity in the operation, i.e. there is no outstanding debt associated with the investment in working capital. Profit at Full Equity is a useful absolute measure of the economic performance of fishing firms.

Rate of Return to Capital: is calculated as *Profit at Full Equity* divided by *Working Capital* multiplied by *100*. This measure is expressed in percentage terms and is calculated for an individual fishing business. It refers to the economic return to the total investment in capital items, and is a useful relative measure of the performance of individual firms. Rate of return to capital is useful to compare the performance of various fishing businesses, and to compare the performance of other types of operators, and with other industries.

Total Boat Cash Costs (TBCC): defined as *Total Boat Variable Costs* plus *Total Boat Fixed Costs*

Total Boat Fixed Costs: are costs that remain fixed regardless of the level of catch or the amount of time spent fishing. As such these costs, measured in current dollar terms, are likely to remain relatively constant from one year to the next. Examples of fixed cost include:

- insurance
- administrative and industry fees
- office & business administration (communication, stationery, accountancy fees)
- interest on loan repayments and overdraft
- advertising or marketing
- leasing.

Total Boat Income (TBI): refers to the cash receipts received by an individual firm and is expressed in dollar terms. Total boat income is calculated as the number of client days for the year multiplied by the average trip price per client per day.

Total Boat Variable Costs: are costs which are dependent upon the number of client days or, more commonly, the amount of time spent on trips. As clients or fishing time increases, variable costs also increase. Variable costs are measured in current dollar terms and include the following individual cost items:

- fuel, oil and grease for the boat (net of diesel fuel rebate)
- bait
- ice
- provisions
- crew payments
- fishing equipment, purchase and repairs (lines, etc.)
- repairs & maintenance: ongoing (slipping, painting, overhaul motor).

Working Capital: includes capital items that are required by the fishing business to earn the boat income. It includes boat hull, engine, electronics and other permanent fixtures and tender boats. Other capital items such as motor vehicles, sheds, and jetty/moorings are included to the extent that they are used in the fishing business. The value of capital utilised by the business is included in total working capital whether the business owns or leases it. Working capital should not be confused with financial capital which is money provided by lenders for a price (interest).

ABBREVIATIONS

ABS	Australian Bureau of Statistics
CPI	Consumer Price Index
fte	full time equivalent
GRP	gross regional product
GSP	gross state product
GVP	gross value of production
R&M	repairs and maintenance
RBA	Reserve Bank of Australia

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EXECUTIVE SUMMARY

The principal aim of this report is to present a set of economic indicators for the Charter Fishery as well as to develop a method to create a consistent time series of economic information to aid management in future years. Data on some social indicators were also collected and are presented.

For the purpose of this report, the Charter Fishery includes all businesses that provide charter fishing services in Queensland under a Charter Fishing licence provided by Fisheries Queensland. These businesses typically charge a fee to take clients on recreational fishing trips with a broad range of objectives ranging from low cost day trips in rivers or bays to multi-day trips targeting sport fish on luxury boats. Some businesses may offer guided fishing trips in waters shallower than 2 meters and are currently not required to be licenced as a charter operator. Businesses which are not licenced charter operators are not included in this report. A summary of key economic indicators is presented in Table ES-1.

Table ES-1 Summary of key economic indicators, 2017/18 and 2018/19

Indicator	2017/18	2018/19
Client days (no.)	132,276	120,331
Trips (no.)	15,255	14,081
GVP ($m)	$35.8m	$33.1m
Export value ($m)	$5.9m	$5.4m
Active businesses	180 businesses	176 businesses
Management cost/gross value of production	3.3%	3.6%
Return on total capital	-0.6%	-2.9%
Gross state product (direct + flow-on)	$36.3m	$33.6m
Employment (direct + flow-on)	330 fte jobs	317 fte jobs

Overview of Approach

Development of economic and social indicators for the Charter Fishery occurred in parallel to similar research in Queensland's commercial fisheries. The Charter Fishery research included a separate data process and separate analysis.

The approach followed the below steps:

1. Collect administrative business level data
2. Collect fishery level data
3. Survey fishing businesses
4. Estimate the active population of charter fishers
5. Scale up the survey sample to represent the population
6. Calculate indicators
7. Backcast to 2017/18 at a fishery level and re-calculate indicators.

A total of 100 usable responses were received, including 92 that were used for economic indicators and 100 for calculating social indicators. The responses that could be used for calculating economic indicators represented over half of the estimated population of active charter fishers in 2018/19. More active

businesses are better represented in the sample with approximately three-quarters of the most active half of businesses responding to the survey and less than half of the least active half of businesses responding. The confidentiality of responses was made clear to respondents including that no individual response would be identifiable in reporting or provided to Fisheries Queensland and that any statistic published would be based on at least five responses.

Clients, Gross Value of Production and Exports

The total client days in the Charter Fishery decreased from 132,000 in 2017/18 to 120,000 in 2018/19, a decline of 9 per cent. Consequently, Charter Fishery GVP declined between 2017/18 ($35.8m) and 2018/19 ($33.1m). The value of exports[2] accounted for approximately 17 per cent of GVP in 2017/18 and 16 per cent in 2018/19.

Prices and Customers

Average price (per client day) was $271 in 2017/18 and $275 in 2018/19 and varied across business model and main trip length of operator. By business model, the highest average price per client day in 2018/19 was $359 for coral reef focused businesses and the lowest was $153 for inshore focused businesses. By main trip length, multi-day focused operators had a higher average price per client day ($405) than day trip focused operators ($203).

The most significant market for the Charter Fishery in 2018/19 was Australia. Surveyed businesses reported that 83 per cent of customers were domestic in 2017/18 and 84 per cent were in 2018/19. By business model, game fishing focused businesses derived the highest proportion of their income from international customers in 2018/19 (39 per cent) and coral reef focused operators the lowest (5 per cent). Day trip focused operators derived a greater proportion of their income from international customers (21 per cent) than did multi-day focused operators (12 per cent).

Management Costs

Estimated total Fisheries Queensland management costs for the Charter Fishery were $1.2m in both 2017/18 and 2018/19. This represented 3.3 per cent of GVP in 2017/18 and 3.6 per cent in 2018/19.

Business Financial Indicators

In 2018/19, the average business's activity in the Charter Fishery generated a positive gross operating surplus ($36,000) and negative profit at full equity (-$17,000), leading to a return on investment of -2.9 per cent. This means the average business earned enough income to cover its cash costs, but not to cover the imputed cost of unpaid labour used to operate the business and the cost of capital depreciation.

Return on investment varied widely across regions in 2018/19 from 23.0 per cent in Dry Tropics and 19.9 per cent in South East to -15.3 per cent in Mackay, Isaac and Whitsunday and -9.4 per cent in North West and Cape York Peninsula. The higher profitability regions in 2018/19 (Dry Tropics and South East) were characterised by high volume, low price and low cost operations compared to the state average.

Economic Contribution

In 2018/19, the Charter Fishery contributed an estimated $33.6m in gross state product (GSP) and 317 full-time equivalent jobs to the Queensland economy. This contribution included $19.9m in GSP (177 fte jobs) from fishing activity, $1.1m in GSP (13 fte jobs) from capital expenditure by fishing businesses and $12.7m

[2] Exports were estimated by applying each fishing business's estimate of the total proportion of their customers that are international visitors to their total revenue.

(127 fte jobs) from flow-on effects in other sectors of the Queensland economy (primarily personal and other services, professional, scientific and technical services, administrative and support services and insurance and other financial services).

Social Indicators

Social indicators and demographic information were collected for the Charter Fishery.

Respondents to the business survey were mostly over 50 years of age, business owners and living in Queensland. The median time involved in charter fishing was 16 years and median time as a licence owner 10 years. Most have a highest level of education of year 12 or above. On average, respondents earn approximately two-thirds of their income from charter fishing with the other main industries of employment being construction, agriculture, forestry and fishing and professional scientific and technical services.

Most respondents indicated that charter fishing is financially risky and just over half feel insecure in their job. Most respondents feel they understand fishery management arrangements and can cope with changes in it but more fishers feel that management is making it more difficult to run their business than easier and more think that it is has become more difficult to 'have a say' in management than those who think it has become easier.

Overall, fishers indicated that they are strongly satisfied with the lifestyle of being a charter fisher and would not quickly change jobs. They also indicated that they are quite strongly satisfied with life as a whole. Fishers indicated that they have broad ties to their community and that their community treats them fairly and respects their occupation. Fishers also identified that fishing can be physically difficult and stressful but few identified a negative mental health impact. Just over half of fishers would not encourage young people to choose a fishing career and do not feel positive about the future of fishing in their region.

Future Opportunities

The survey of charter fishing businesses completed in 2019 was part of a one-off project to develop economic and social indicators but there is value in collecting this economic information annually. It will improve the ability of management and industry to respond to changing economic situations. This is especially important during times when industries undergo significant change and the economic impacts of those changes need to be understood. Annual collection of economic information is current practice in the Queensland aquaculture industry producing the aquaculture production summary series which commenced in 2005. Regular economic reporting is also current practice in some other states and territories around Australia. For example, annual economic indicators have been reported for charter and commercial fisheries in South Australia for more than 20 years (BDO EconSearch 2019a). This provides an important time series of economic information that the fisheries can draw upon, either from the point of view of fisheries management or from industry.

1. INTRODUCTION

The principal aim of this report is to present a set of economic indicators for the Charter Fishery as well as to develop a method to create a consistent time series of economic information to aid management in future years. Data on social indicators and demographic information were also collected.

The Queensland Sustainable Fisheries Strategy 2017-2027 (SFS) sets out a comprehensive reform plan for the next 10 years. Within the SFS there are a number of actions which will improve the management of Queensland fisheries. With respect to actions relating to fisheries monitoring, the SFS requires Fisheries Queensland to deliver a practical and cost-effective system to collect data on economic indicators from Queensland's professional fishers (i.e. commercial fishers and charter operators) and directly related stakeholders (e.g. fish processors, wholesalers, community groups). These economic indicators will be used by Fisheries Queensland to better understand the economics of each fishery and of the different types of fishers (e.g. level of activity, region of activity, mode of fishing) within each fishery.

Through the SFS, harvest strategies are being developed for the major fisheries. Within these harvest strategies, these economic and social indicators will be used to inform management decisions and to monitor progress towards desired targets. It is important that the indicators meet this requirement and provide appropriate baseline data.

Considering the diverse nature of QLD fisheries, management decision making involves a complex mix of biological, economic and social considerations. There is a need to identify and explore cost-effective and efficient ways to incorporate economic and social information in harvest strategies and decision-making processes.

1.1. Fishery Background

For the purpose of this report, the Charter Fishery includes all businesses that provide charter fishing services in Queensland under a Charter Fishing licence provided by Fisheries Queensland. These businesses typically charge a fee to take clients on recreational fishing trips with a broad range of objectives ranging from low cost day trips in rivers or bays to multi-day trips targeting sport fish on luxury boats. Some businesses may offer guided fishing trips in waters shallower than 2 meters and are currently not required to be licenced as a charter operator. Businesses which are not licenced charter operators are not included in this report.

In 2018/19, Fisheries Queensland licensing data and logbooks record 329 businesses licenced in this definition of the Charter Fishery but only 143 of them provided activity information through logbooks. Some charter fishing businesses are not required to hold a licence and some licenced businesses are not required to report their fishing activity to Fisheries Queensland. This means the actual scale of Charter Fishing activity in Queensland is unknown and a source of considerable uncertainty in this economic analysis.

1.2. Report Structure

Provided in Section 2 of this report is the method of analysis and a description of the survey of fishing businesses.

Indicators are presented in Sections 3 and 4 for the 2017/18 and 2018/19 financial years and include:

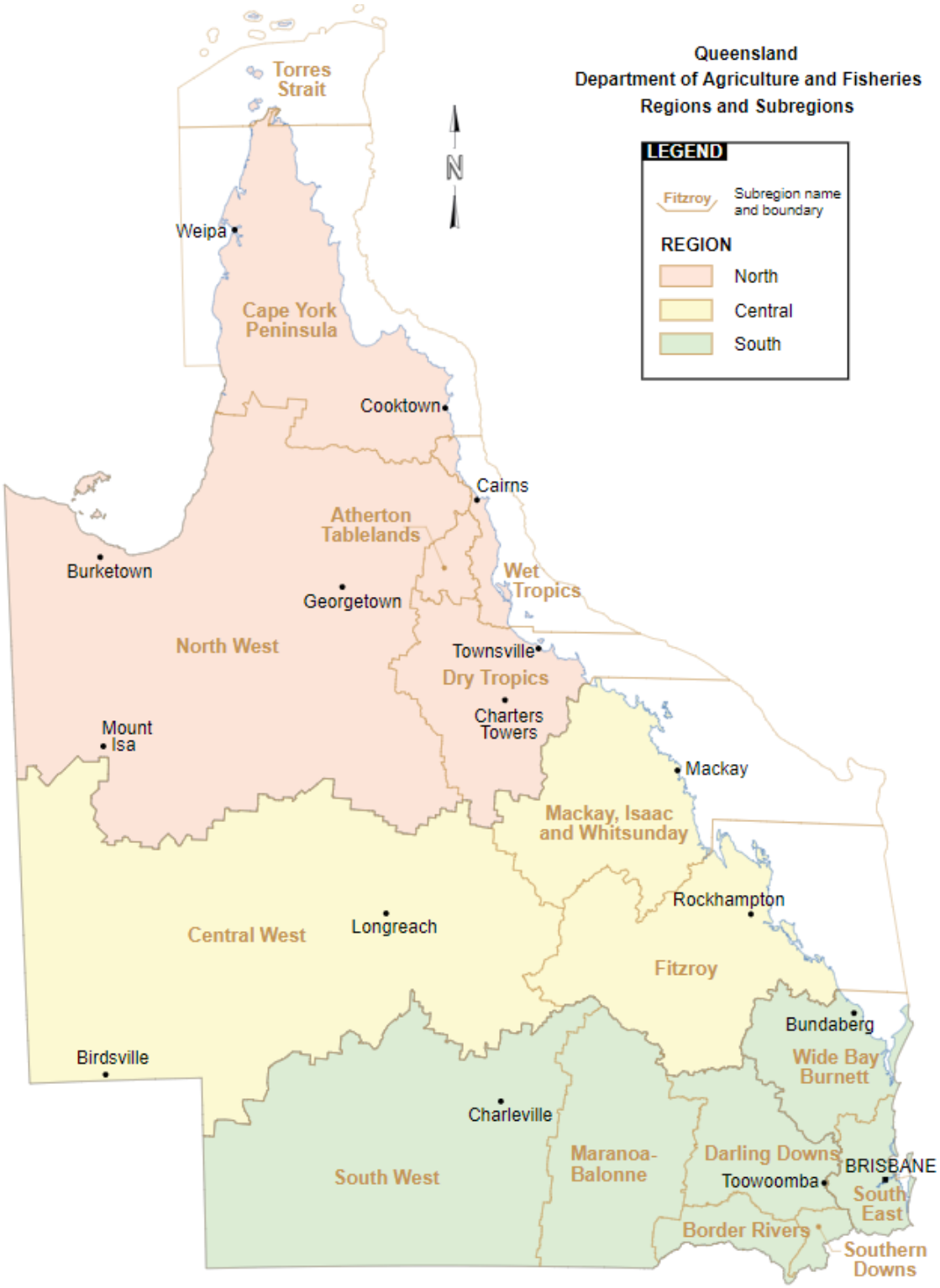
- gross value of production
- Average trip prices
- the cost of management
- business financial indicators (income, costs, profit and return on investment)
- economic contribution of the Charter Fishery
- social indicators
- demographic indicators.

Economic contribution results and business financial indicators are presented for Queensland as a whole and on a regional basis in accordance with the Department of Agriculture and Fisheries Subregion definitions (Figure 1-1). Only coastal regions are reported:

- North West
- Cape York Peninsula (includes Torres Strait)
- Wet Tropics
- Dry Tropics
- Mackay, Isaac and Whitsunday
- Fitzroy
- Wide Bay Burnett
- South East.

To maintain confidentiality of survey respondents, the North West and Cape York Peninsula regions have been combined for reporting.

Figure 1-1 Department of Agriculture and Fisheries Subregions used for reporting



Source: Business Queensland (2019a)

2. METHOD OF ANALYSIS

2.1. Overview of Approach

Development of economic and social indicators for the Charter Fishery occurred in parallel to similar research in Queensland's commercial fisheries. The Charter Fishery research included a separate data collection process and separate analysis.

The approach followed the below steps:

1. **Collect administrative business level data:** logbook client data and effort and fishery access. All were collected for 2017/18 and 2018/19.
2. **Collect fishery level data:** cost of management for 2017/18 and 2018/19.
3. **Survey fishing businesses:** trip types and prices, operating costs, employment (including unpaid), capital value and depreciation, social and demographic information. Data collection focused on the 2018/19 year to reduce survey burden on businesses. Data were collected respecting the confidentiality of fishing businesses and were used by BDO to produce the economic and social indicator reports. The data were not distributed outside of BDO and have not been provided to Fisheries Queensland.
4. **Estimate the active population of charter fishers:** The scale of charter fishing activity in Queensland is uncertain so total activity was assumed to be only that which was described in either logbook data (step 1) or the survey of fishing businesses (step 3). This involved adding activity described in the survey by licenced charter fishing businesses that had not completed logbooks to the activity of those that had completed logbooks. This increased the estimated population of active charter fishing businesses from 143 to 176, increased trip days from 10,000 to 14,000 and increased client days from 90,000 to 120,000. This is a conservative estimate of the scale of activity.
5. **Scale up the survey sample to represent the population:** a set of weights was developed to scale up the sample to represent the estimated population activity in each subregion in each financial year in terms of: active businesses, trip days and client days. The weights were applied to the relevant data items i.e. capital and fixed costs were weighted by number of active businesses, most variable costs (such as fuel and variable labour) were weighted by trip days, and revenue and some variable costs (such as provisions) were weighted by client days.
6. **Calculate indicators:**
    a. Business financial indicators are disaggregated by region, return on investment, business model, and main trip length.
    b. Fishery economic indicators are reported at the fishery level as well as disaggregated by fishing region, business model, main trip length and return on investment.
    c. Economic contribution indicators are reported for Queensland and for each of the coastal Subregions (Figure 1-1) with each business attributed to the region of their 'main port' as provided in the survey.
    d. Social indicators are reported unweighted and at the fishery level.
7. **Backcast to 2017/18 at a fishery level and re-calculate indicators:** using administrative information on individual businesses and cost indices, then repeating step 6 above.

2.2. Survey of Fishing Businesses

A survey of fishing businesses was carried out between March and May in 2020. This coincided with the time of uncertainty around the COVID-19 pandemic and associated government responses impacted fishing businesses. For this reason, the survey was piloted with a small sample of businesses before collecting the full sample. It was determined that the data collected was of sufficient quality to complete data collection over this period. The survey asked about the 2018/19 period and non-survey data used in the analysis was also from periods unaffected by COVID-19, the 2017/18 and 2018/19 financial years.

The survey involved collecting data from charter fishing businesses on trip types and prices, operating costs, employment (including unpaid), capital value and depreciation, social and demographic information and focused on the 2018/19 year. The survey was implemented using a questionnaire that was developed in collaboration with Fisheries Queensland and with industry representatives. Businesses were asked to only include the amounts that were attributable to their Queensland charter fishing business. If exact figures were not available (e.g. from a tax return), then they were asked to provide careful estimates.

Businesses were invited to participate through multiple email and phone call invitations as well as through the endorsement of various industry groups. They were invited to respond through an online form or over the phone. Most responses were provided over the phone.

The confidentiality of responses was made clear to respondents including that no individual response would be identifiable in reporting or provided to Fisheries Queensland and that any statistic published would be based on at least five responses. This 'five boat rule' is commonly used to maintain confidentiality when reporting professional fishing statistics, including by Fisheries Queensland.

A total of 100 usable responses were received, including 92 that were used[3] for economic indicators and 100 for calculating social indicators. The responses that could be used for calculating economic indicators represented over half of the estimated population of active licenced charter fishers in 2018/19. More active businesses are better represented in the sample with approximately three-quarters of the most active half of businesses responding to the survey and less than half of the least active half of businesses responding. (Table 2-1). This sample was sufficient to confidently prepare the economic indicators with the regional and activity based dissagregations that follow in this report. The population and sample size in each disaggregation appears in the same table as the results to illustrate the representativeness of each.

[3] Responses could only be used to estimate indicators if they were complete for the relevant section. For example, a response that included capital values but not operating costs could not be used to estimate economic indicators. However, if it included responses to demographic and social questions it could still be used to estimate social indicators.

Table 2-1 Survery sample in the Charter Fishery, by main region and client days quartiles

	Active businesses (no.)		Proportion of active businesses in sample
	Population	Sample	
Fishing region			
North West	7	6	86%
Cape York Peninsula	22	3	14%
Wet Tropics	40	24	60%
Dry Tropics	11	7	64%
Mackay, Isaac and Whitsunday	22	9	41%
Fitzroy	24	11	46%
Wide Bay Burnett	20	8	40%
South East	30	24	80%
Client days quartiles			
0 to 74 client days	45	6	13%
75 to 249 client days	43	19	44%
250 to 790 client days	44	33	75%
790 to 12,000 client days	44	34	77%
Queensland	**176**	**92**	**52%**

Source: BDO EconSearch analysis

Future Opportunities

The survey of charter fishing businesses completed in 2019 was part of a one-off project to develop economic and social indicators but there is value in collecting this economic information annually. It will improve the ability of management and industry to respond to changing economic situations. This is especially important during times when industries undergo significant change and the economic impacts of those changes need to be understood. Annual collection of economic information is current practice in the Queensland aquaculture industry producing the aquaculture production summary series which commenced in 2005. Regular economic reporting is also current practice in some other states and territories around Australia. For example, annual economic indicators have been reported for charter and commercial fisheries in South Australia for more than 20 years (BDO EconSearch 2019a). This provides an important time series of economic information that the fisheries can draw upon, either from the point of view of fisheries management or from industry.

2.3. Backcasting to 2017/18

The modelling procedure described in Section 2.1 was undertaken for activity in the 2018/19 financial year as this was the year focused on in the survey. Backcasting was used to estimate activity in 2017/18 before repeating steps 4 to 6 in Section 2.1 to calculate indicators for the 2017/18 financial year.

Backcasting involved adjusting operating costs and employment based on the difference in trip days and client days between the years. Further, prices of inputs were adjusted in line with changes in relevant cost indices (Table 2-2).

Table 2-2 Cost adjustments for business level backcasting to 2017/18

Adjustment	2017/18 value	2018/19 value	Adjustment amount	Cost items adjusted
National minimum wage	$18.93/hr	$19.49/hr	-2.9%	Unpaid labour
Wage Price Index for ordinary time hourly rates of pay excluding bonuses in public and private sectors	128.0	130.9	-2.2%	Paid labour
Automotive fuel component of CPI calculation for Brisbane	95.0	99.6	-4.6%	Fuel and lubricants
RBA Indicator Lending Rate: variable weighted-average rate on credit outstanding for businesses	5.69%	5.60%	1.6%	Interest and borrowing costs
Consumer Price Index for all groups in Brisbane	112.3	114.1	-1.6%	All other business operating costs

Source: BDO EconSearch analysis

3. ECONOMIC INDICATORS FOR THE QUEENSLAND CHARTER FISHERY

3.1. Clients, Gross Value of Production and Exports

The total client days, shown in Table 3-1, in the Charter Fishery decreased from 132,000 in 2017/18 to 120,000 in 2018/19, a decline of 9 per cent. Consequently, Charter Fishery GVP declined between 2017/18 ($35.8m) and 2018/19 ($33.1m). The value of exports[4] accounted for approximately 17 per cent of GVP in 2017/18 and 16 per cent in 2018/19 (Table 3-1).

Table 3-1 Clients, GVP and export value of the Charter Fishery, 2017/18 and 2018/19

	2017/18	2018/19	Change
Client days (no.)	132,276	120,331	-9%
GVP ($m)	35.8	33.1	-8%
Export value ($m)	5.9	5.4	-9%

Source: Fisheries Queensland and 2019 survey

3.2. Prices and Customers

Average price (per client day) was $271 in 2017/18 and $275 in 2018/19 and varied across business model and main trip length of operator. By business model, the highest average price per client day in 2018/19 was $359 for coral reef focused businesses and the lowest was $153 for inshore focused businesses. By main trip length, multi-day focused operators had a higher average price per client day ($405) than day trip focused operators ($203) (Table 3-2 and Table 3-3).

In the business survey, charter fishing businesses provided one average price for each trip type across the whole two-year period as the survey collected one period of data to reduce burden on participants. Prices were estimated as an average price weighted by client trips of the surveyed businesses in each year. This means the difference in price between years (Table 3-2 and Table 3-3) is due to differing activity of surveyed businesses and not due to the same businesses describing a change in price between years.

The most significant market for the Charter Fishery in 2018/19 was Australia. Surveyed businesses reported that 83 per cent of customers were domestic in 2017/18 and 84 per cent were in 2018/19. By business model, game fishing focused businesses derived the highest proportion of their income from international customers in 2018/19 (39 per cent) and coral reef focused operators the lowest (5 per cent). Day trip focused operators derived a greater proportion of their income from international customers (21 per cent) than did multi-day focused operators (12 per cent) (Table 3-2 and Table 3-3).

[4] Exports were estimated by applying each fishing business's estimate of the total proportion of their customers that are international visitors to their total revenue.

Table 3-2 GVP, prices and customers for Charter Fishery, 2017/18

	Client days	Price ($/client/day)	GVP ($m)	Customers	
				Domestic (%)	International (%)
Fishing region					
North West and Cape York Peninsula	12,748	238.49	3.0	95%	5%
Wet Tropics	21,963	352.24	7.7	65%	35%
Dry Tropics	5,923	241.91	1.4	91%	9%
Mackay, Isaac and Whitsunday	11,109	431.20	4.8	92%	8%
Fitzroy	26,519	367.24	9.7	96%	4%
Wide Bay Burnett	23,090	143.70	3.3	81%	19%
South East	30,925	186.18	5.8	73%	27%
Business model					
Game fishing	16,801	337.77	5.7	61%	39%
Sports fishing	25,897	259.66	6.7	82%	18%
Coral reef	42,221	359.48	15.2	95%	5%
Rock reef	11,061	231.95	2.6	83%	17%
Inshore[a]	36,295	156.23	5.7	78%	22%
Main trip length					
Multi-day & live aboard (>24hrs)	43,924	406.66	17.9	87%	13%
Day trips (<24hrs)	88,352	203.18	18.0	80%	20%
Queensland	**132,276**	**270.75**	**35.8**	**83%**	**17%**

[a] Includes estuary, rivers, freshwater, impoundments.

Source: Fisheries Queensland and 2019 survey

Table 3-3 GVP, prices and customers for Charter Fishery, 2018/19

	Client days	Price ($/client/day)	GVP ($m)	Customers	
				Domestic (%)	International (%)
Fishing region					
North West and Cape York Peninsula	10,241	230.36	2.4	94%	6%
Wet Tropics	20,164	352.24	7.1	65%	35%
Dry Tropics	4,626	241.91	1.1	91%	9%
Mackay, Isaac and Whitsunday	9,752	431.20	4.2	92%	8%
Fitzroy	28,063	367.24	10.3	96%	4%
Wide Bay Burnett	20,096	143.70	2.9	81%	19%
South East	27,389	186.18	5.1	73%	27%
Business model					
Game fishing	15,021	340.70	5.1	61%	39%
Sports fishing	21,880	265.19	5.8	81%	19%
Coral reef	41,907	359.46	15.1	95%	5%
Rock reef	9,497	229.78	2.2	83%	17%
Inshore[a]	32,026	153.39	4.9	77%	23%
Main trip length					
Multi-day & live aboard (>24hrs)	42,785	405.21	17.3	88%	12%
Day trips (<24hrs)	77,546	202.99	15.7	79%	21%
Queensland	**120,331**	**274.89**	**33.1**	**84%**	**16%**

[a] Includes estuary, rivers, freshwater, impoundments.

Source: Fisheries Queensland and 2019 survey

3.3. Cost of Management

The costs incurred by Fisheries Queensland in managing Queensland's fisheries is not equal to the administration fees or licence fees charged by Fisheries Queensland to the fishing businesses. This section discusses the costs incurred by Fisheries Queensland and not the administration and licence fees charged by Fisheries Queensland to professional fishing businesses.

While the total cost of managing Queensland's professional fisheries is known, the precise cost of managing each individual fishery is difficult to determine. This comes about because the nature of managing fisheries requires considerable overlap in monitoring, assessment, management and compliance across fisheries. For example, to achieve efficiency benefits, the outputs of fishery monitoring activities have inputs into the management of several different fisheries. Therefore, allocating the costs of managing fisheries requires a subjective assessment based on the benefits derived by the individual fisheries from those activities. The costs of managing the charter and commercial sectors for each fishery were provided to BDO EconSearch by Fisheries Queensland. Costs were allocated to the fisheries based on the cost being incurred to enable the management of the fishery and then proportionally attributed to the respective sectors based on the benefits of management to the fishery. This was done for the purpose of developing economic indicators and should not be relied upon for any other purpose.

Estimated total management costs, as detailed in Table 3-4, for the Charter Fishery were $1.2m in both 2017/18 and 2018/19. These costs were incurred while delivering the following services:

- policy and management services
- regulatory/legislation and licensing services
- compliance services
- directorate services
- fishery monitoring and research services.

As a proportion of GVP total management costs were 3.3 per cent in 2017/18 increasing to 3.6 per cent in 2018/19 as a result of a slight increase in management costs and a decline in GVP (Table 3-4).

Table 3-4 Costs of management in the Charter Fishery, 2017/18 and 2018/19

	2017/18	2018/19	Change
Management costs ($m)	1.2	1.2	2%
GVP ($m)	35.8	33.1	-8%
Management costs/GVP (%)	3.3%	3.6%	11%

Source: Fisheries Queensland and 2019 survey

3.4. Business Financial Indicators

The major measures of the financial performance of active businesses in the Charter Fishery for the period 2017/18 and 2018/19 are presented in Section 3.4.1. The estimates are based on the weighted sample as described in point 5 of Section 2.1. The weights applied bring the sample into the closest alignment to the population possible given existing logbook data. Average financial performance masks significant variation across types of businesses and their activities. To describe this variation, the same indicators are presented in Section 3.4.2 with businesses disaggregated by return on investment quartile, business model, main trip length and main fishing region.

3.4.1. Fishery average in 2017/18 and 2018/19

Business financial indicators are presented in Table 3-5 for average business and total activity in the Charter Fishery in 2017/18 and 2018/19. This section summarises the key points from the table.

Income

The average gross income for business activity in the Charter Fishery was estimated to be $199,000 in 2017/18 and $188,000 in 2018/19 (a 6 per cent decrease). Client days fell by more than gross income over the same period as prices were relatively higher in 2018/19 (see Section 3.2).

Costs

Total costs are separated into variable costs and fixed costs, the sum of the two is total boat cash costs. In 2018/19, variable costs represented a lesser proportion (43 per cent) of total boat cash costs than did fixed costs (57 per cent). Average total boat cash costs increased by 1 per cent between 2017/18 and 2018/19, a result of a 3 per cent increase in fixed costs.

In 2018/19, for the fishery as a whole, around 31 per cent of the total boat cash costs were attributable to labour costs (both paid and imputed), the biggest cost item. Imputed unpaid labour ($28,000) was divided into variable (fishing and repairs and maintenance) ($12,000) and fixed (management and administration) ($16,000) components based on survey data. Other significant cash costs were repairs and maintenance (17 per cent of total cash costs) and fuel (14 per cent).

Licence fees are as reported by respondents to the survey and may include other licences that respondents hold in addition to the Fisheries Queensland licence to undertake charter fishing operations. At the time of writing, Fisheries Queensland charged a $335 fee per year for a charter fishing licence (Business Queensland 2019b).

Cash Income and Profit

Boat gross margin is calculated as gross income less total variable costs and is a basic measure of profit. This assumes that capital has no alternative use and that, as fishing activity (trip days) varies, there is no change in capital or fixed costs. Boat gross margin was $122,000 in 2017/18 and $111,000 in 2018/19, a 9 per cent decrease due to a decrease in gross income and increase in variable costs.

Gross operating surplus is calculated at gross income less total boat cash costs (excluding imputed wages for operator and family members as a cost item). This measure of profit gives an indication of the capacity of the operator to remain in the fishery in the short term as unpaid labour does not affect business cash flow in the short term. Gross operating surplus was $49,000 in 2017/18 and $36,000 in 2018/19, a decrease of approximately 27 per cent. This was due to a decrease in revenue and an increase in costs.

Boat cash income is calculated as gross income less total boat cash costs (including imputed wages). Boat cash income was $21,000 in 2017/18 and $7,400 in 2018/19. Positive boat cash income indicates that the average fishing business earned enough cash income to cover its cash costs and the imputed cost of unpaid labour used to operate the business.

Boat business profit is calculated as gross income less total boat cash costs (including imputed wages) and less depreciation. This represents a more complete picture of the actual financial status of an individual firm and their capacity to remain in the fishery in the long term as a positive boat business profit is required to pay imputed wages and replace capital at the rate it depreciates. Boat business profit was -$11,000 in 2017/18 and -$25,000 in 2018/19, meaning that insufficient cash income was earned by the average business to cover the imputed cost of labour and depreciation of capital.

Profit at full equity is a measure of the profitability of an individual fishing business, assuming the business has full equity in their operation (i.e. it excludes interest and borrowing costs). It is a useful absolute measure of the economic performance of firms. Profit at full equity was -$3,200 in 2017/18 and -$17,000 in 2018/19.

Return to Capital

There are a number of interpretations of return to capital. For the purpose of this analysis it is appropriate to consider the capital employed by an average business in the fishery, that is working capital for this fishery. Capital includes boats, fishing gear, sheds, vehicles and other capital items used as part of the fishing enterprise. It does not include capital associated with non-fishing activities undertaken by the business. The average rate of return was –0.6 per cent in 2017/18 and decreased to -2.9 per cent in 2018/19.

Summary

In 2018/19, the average business's activity in the Charter Fishery generated a positive gross operating surplus ($36,000) and negative profit at full equity (-$17,000), leading to a return on investment of -2.9 per cent. This means the average business earned enough income to cover its cash costs, but not to cover the imputed cost of unpaid labour used to operate the business and the cost of capital depreciation.

Table 3-5 Financial performance in the Charter Fishery, 2017/18 and 2018/19

	2017/18			2018/19		
	Average per Business	Total for the Whole Fishery	Share of TBCC[a]	Average per Business	Total for the Whole Fishery	Share of TBCC[a]
Trip days (no.)	85	15,255		80	14,081	
Client days (no.)	735	132,276		684	120,331	
Employment (fte)	1.0	188		1.0	177	
Employment (total)	2.1	377		2.0	354	
Active Businesses (no.)	180	180		176	176	
Sample Size (n)	92	92		92	92	
(1) Gross Income	**$199,049**	**$35,813,264**		**$187,945**	**$33,078,369**	
Variable costs						
Fuel	$25,315	$4,554,821	14%	$25,369	$4,464,860	14%
Ice & Bait	$6,300	$1,133,471	4%	$6,317	$1,111,799	3%
Fishing tackle	$3,070	$552,366	2%	$2,928	$515,407	2%
Provisions	$11,985	$2,156,426	7%	$12,314	$2,167,344	7%
Labour - paid	$18,094	$3,255,555	10%	$17,867	$3,144,664	10%
(2) Labour - unpaid	$12,348	$2,221,647	7%	$12,194	$2,146,231	7%
(3) Total Variable Costs	**$77,113**	**$13,874,285**	**43%**	**$76,990**	**$13,550,304**	**43%**
Fixed costs						
Licence Fee	$1,072	$192,961	1%	$1,107	$194,878	1%
Repairs and maintenance	$30,162	$5,426,850	17%	$30,909	$5,440,044	17%
Insurance	$8,565	$1,541,056	5%	$8,770	$1,543,484	5%
(4) Interest	$4,837	$870,276	3%	$4,859	$855,116	3%
Labour - paid	$10,174	$1,830,502	6%	$10,442	$1,837,846	6%
(5) Labour - unpaid	$15,299	$2,752,648	9%	$15,900	$2,798,342	9%
(6) Leasing and rent	$5,773	$1,038,703	3%	$5,961	$1,049,136	3%
Rates	$878	$157,914	0%	$816	$143,689	0%
Power	$1,134	$204,022	1%	$1,111	$195,581	1%
Communications	$2,406	$432,944	1%	$2,521	$443,636	1%
Legal & Accounting	$2,524	$454,158	1%	$2,624	$461,830	1%
Slipping, Mooring & survey	$11,213	$2,017,472	6%	$11,580	$2,038,029	6%
Travel	$1,106	$198,951	1%	$1,100	$193,647	1%
Protective clothing & Uniforms	$1,200	$215,941	1%	$1,196	$210,462	1%
Membership, association expenses	$351	$63,074	0%	$360	$63,430	0%
Advertising	$3,580	$644,160	2%	$3,622	$637,540	2%
Other	$643	$115,643	0%	$641	$112,861	0%
(7) Total Fixed Costs	**$100,917**	**$18,157,275**	**57%**	**$103,520**	**$18,219,552**	**57%**
(8) Total Boat Cash Costs (3+7)	**$178,030**	**$32,031,560**	**100%**	**$180,511**	**$31,769,856**	**100%**
Boat Gross Margin (1-3)	**$121,936**	**$21,938,979**		**$110,955**	**$19,528,065**	
(9) Total Unpaid Labour (2+5)	**$27,647**	**$4,974,296**		**$28,094**	**$4,944,572**	
Gross Operating Surplus (1-8+9)	**$48,665**	**$8,756,000**		**$35,529**	**$6,253,085**	
(10) Boat Cash Income (1-8)	**$21,019**	**$3,781,704**		**$7,435**	**$1,308,513**	
(11) Depreciation	**$31,984**	**$5,754,686**		**$32,765**	**$5,766,609**	
(12) Boat Business Profit (10-11)	**-$10,966**	**-$1,972,982**		**-$25,330**	**-$4,458,096**	
(13) Profit at Full Equity (12+4+6[b])	**-$3,242**	**-$583,354**		**-$17,491**	**-$3,078,411**	
(14) Working Capital	**$569,406**	**$102,448,891**		**$593,297**	**$104,420,286**	
Rate of Return on working capital (13/14*100)	**-0.6%**	**-0.6%**		**-2.9%**	**-2.9%**	

[a] Total boat cash costs.

[b] Part of leasing and rent is assumed to cover depreciation of buildings and equipment so is excluded from profit at full equity.

Source: 2019 survey

3.4.2. Disaggregation of business financial indicators for 2018/19

The tables in this section present financial indicators for the fishery with the population of active businesses disaggregated across various dimensions: return on investment quartile, business model, main trip length and main fishing region. Grouping businesses in different ways and comparing the financial indicators between groups provides insight into the relationships between business characteristics and financial performance. The tables disaggregate of the same weighted sample as appears in 3.4.1.

Return on Investment Quartiles

Business financial indicators are presented in Table 3-6 for the sample of active businesses split into quarters of approximately equal size based on return on investment in 2018/19. This provides insight into the differences between the most and least profitable businesses such as cost relative to income, itemised cost amounts, capital utilised, scale of operation etc.

The top three quartiles have a positive gross operating surplus on average but only the top two quartiles have a positive return on investment. The top quartile is characterised by particularly active, low price and low cost operations in that they have the highest average trip days (137) and client days (1,119) but low working capital, variable and fixed costs.

Business Model

Business financial indicators are presented in Table 3-7 for the sample of active businesses split into business model groups (Game fishing, Sports fishing, Coral reef, Rock reef and Inshore). Businesses were divided into business models based on their identification of the most important model to their business in the survey.

Profitability varies widely between the different models in terms of return on investment. In 2018/19, the most profitable model was inshore (22.5 per cent return on investment) and the least was sports fishing (-12.8 per cent return on investment).

Main Trip Length

Business financial indicators are presented in Table 3-8 for the population of active businesses in this fishery split into groups that focus more on day trips or multi-day trips. Businesses were divided into these groups based on their identification of the most important type to their business in the survey.

In 2018/19, return on investment including endorsement value was above the fishery average for businesses that focus on day trips (-1.1 per cent) and below average for those that focus on multi-day trips (-3.4 per cent), though the variation between these groups is small.

Fishing Regions

Business financial indicators are presented in Table 3-9 by main fishing region. Each business was allocated to the region of their 'main port' as provided in the survey.

Return on investment varied widely across regions in 2018/19 from 23.0 per cent in Dry Tropics and 19.9 per cent in South East to -15.3 per cent in Mackay, Isaac and Whitsunday and -9.4 per cent in North West and Cape York Peninsula. The higher profitability regions in 2018/19 (Dry Tropics and South East) were characterised by high volume, low price and low cost operations compared to the state average.

Table 3-6 Financial performance in the Charter Fishery, by return on investment quartile, 2018/19

		Average per Business				
		1 Quartile	2 Quartile	3 Quartile	4 Quartile	All Businesses
	Trip days (no.)	43	57	87	137	80
	Client days (no.)	290	547	819	1,119	684
	Employment (fte)	0.9	1.3	1.0	0.8	1.0
	Employment (total)	1.8	2.4	2.3	1.6	2.0
	Active Businesses (no.)	48	42	43	43	176
	Sample Size (n)	23	23	23	23	92
(1)	**Gross Income**	**$72,987**	**$212,441**	**$292,479**	**$189,202**	**$187,945**
	Variable costs					
	Fuel	$16,801	$32,733	$31,093	$22,168	$25,369
	Ice & Bait	$11,467	$3,198	$6,454	$3,462	$6,317
	Fishing tackle	$2,407	$2,799	$3,828	$2,748	$2,928
	Provisions	$2,092	$10,042	$35,450	$3,090	$12,314
	Labour - paid	$10,911	$26,828	$23,446	$11,488	$17,867
(2)	Labour - unpaid	$12,473	$18,281	$10,523	$7,677	$12,194
(3)	**Total Variable Costs**	**$56,151**	**$93,879**	**$110,794**	**$50,633**	**$76,990**
	Fixed costs					
	Licence Fee	$1,123	$1,798	$1,082	$450	$1,107
	Repairs and maintenance	$30,243	$37,232	$36,062	$20,500	$30,909
	Insurance	$6,231	$13,268	$9,413	$6,630	$8,770
(4)	Interest	$3,698	$12,212	$2,210	$1,682	$4,859
	Labour - paid	$7,157	$16,247	$11,935	$7,041	$10,442
(5)	Labour - unpaid	$21,421	$17,673	$12,280	$11,625	$15,900
(6)	Leasing and rent	$5,136	$11,332	$4,652	$3,001	$5,961
	Rates	$985	$505	$1,447	$308	$816
	Power	$1,388	$1,374	$1,032	$629	$1,111
	Communications	$1,691	$4,198	$2,870	$1,485	$2,521
	Legal & Accounting	$2,705	$3,067	$3,663	$1,086	$2,624
	Slipping, Mooring & survey	$2,282	$18,608	$16,697	$10,111	$11,580
	Travel	$602	$1,643	$1,581	$659	$1,100
	Protective clothing & Uniforms	$886	$1,268	$1,412	$1,257	$1,196
	Membership, association expenses	$50	$296	$604	$527	$360
	Advertising	$1,151	$4,145	$2,374	$7,092	$3,622
	Other	$65	$1,869	$32	$699	$641
(7)	**Total Fixed Costs**	**$86,815**	**$146,736**	**$109,348**	**$74,781**	**$103,520**
(8)	**Total Boat Cash Costs (3+7)**	**$142,967**	**$240,615**	**$220,142**	**$125,415**	**$180,511**
	Boat Gross Margin (1-3)	**$16,836**	**$118,562**	**$181,684**	**$138,568**	**$110,955**
(9)	**Total Unpaid Labour (2+5)**	**$33,894**	**$35,954**	**$22,803**	**$19,301**	**$28,094**
	Gross Operating Surplus (1-8+9)	**-$36,085**	**$7,779**	**$95,139**	**$83,089**	**$35,529**
(10)	**Boat Cash Income (1-8)**	**-$69,979**	**-$28,174**	**$72,337**	**$63,787**	**$7,435**
(11)	**Depreciation**	**$14,777**	**$82,510**	**$27,665**	**$9,922**	**$32,765**
(12)	**Boat Business Profit (10-11)**	**-$84,757**	**-$110,684**	**$44,671**	**$53,865**	**-$25,330**
(13)	**Profit at Full Equity (12+4+6[a])**	**-$78,491**	**-$92,806**	**$49,207**	**$57,048**	**-$17,491**
(14)	**Working Capital**	**$224,043**	**$1,595,734**	**$507,320**	**$123,993**	**$593,297**
	Rate of Return on Working Capital (13/14*100)	**-35.0%**	**-5.8%**	**9.7%**	**46.0%**	**-2.9%**

[a] Part of leasing and rent is assumed to cover depreciation of buildings and equipment so is excluded from profit at full equity.

Source: 2019 survey

Table 3-7 Financial performance in the Charter Fishery, by business model, 2018/19

	Average per Business					
	Game fishing	Sports fishing	Coral reef	Rock reef	Inshore[a]	All Businesses
Trip days (no.)	72	72	75	65	113	80
Client days (no.)	407	466	1,007	591	929	684
Employment (fte)	0.9	1.0	1.5	0.9	0.5	1.0
Employment (total)	1.9	1.6	2.9	2.0	1.6	2.0
Active Businesses (no.)	37	47	42	16	34	176
Sample Size (n)	22	22	20	11	17	92
(1) Gross Income	**$138,565**	**$123,689**	**$361,924**	**$135,792**	**$142,536**	**$187,945**
Variable costs						
Fuel	$21,611	$21,112	$44,078	$19,649	$15,261	$25,369
Ice & Bait	$3,063	$2,074	$18,117	$5,372	$1,770	$6,317
Fishing tackle	$2,699	$4,105	$2,468	$1,896	$2,610	$2,928
Provisions	$5,836	$4,009	$38,886	$4,772	$1,989	$12,314
Labour - paid	$12,162	$14,087	$39,841	$7,690	$7,336	$17,867
(2) Labour - unpaid	$9,879	$11,339	$17,719	$15,122	$7,804	$12,194
(3) Total Variable Costs	**$55,249**	**$56,726**	**$161,110**	**$54,501**	**$36,770**	**$76,990**
Fixed costs						
Licence Fee	$603	$690	$1,956	$2,791	$405	$1,107
Repairs and maintenance	$28,389	$22,546	$48,763	$31,644	$23,091	$30,909
Insurance	$7,881	$6,438	$14,510	$7,369	$6,617	$8,770
(4) Interest	$5,773	$3,463	$9,343	$2,800	$1,323	$4,859
Labour - paid	$7,409	$8,264	$22,443	$5,109	$4,652	$10,442
(5) Labour - unpaid	$10,730	$18,623	$19,887	$16,021	$12,862	$15,900
(6) Leasing and rent	$5,630	$3,906	$11,864	$3,562	$3,102	$5,961
Rates	$880	$592	$1,059	$4	$1,140	$816
Power	$318	$1,564	$1,406	$229	$1,399	$1,111
Communications	$1,893	$2,094	$4,886	$1,831	$1,239	$2,521
Legal & Accounting	$2,195	$3,079	$4,175	$1,306	$1,206	$2,624
Slipping, Mooring & survey	$8,860	$3,588	$25,778	$4,391	$11,578	$11,580
Travel	$2,399	$993	$774	$995	$297	$1,100
Protective clothing & Uniforms	$903	$1,164	$1,230	$1,328	$1,450	$1,196
Membership, association expenses	$417	$261	$318	$198	$562	$360
Advertising	$3,579	$1,916	$3,037	$2,369	$7,283	$3,622
Other	$14	$70	$1,868	$70	$877	$641
(7) Total Fixed Costs	**$87,873**	**$79,251**	**$173,296**	**$82,019**	**$79,083**	**$103,520**
(8) Total Boat Cash Costs (3+7)	**$143,122**	**$135,977**	**$334,406**	**$136,520**	**$115,853**	**$180,511**
Boat Gross Margin (1-3)	**$83,316**	**$66,963**	**$200,814**	**$81,291**	**$105,766**	**$110,955**
(9) Total Unpaid Labour (2+5)	**$20,608**	**$29,962**	**$37,606**	**$31,142**	**$20,666**	**$28,094**
Gross Operating Surplus (1-8+9)	**$16,051**	**$17,674**	**$65,124**	**$30,415**	**$47,348**	**$35,529**
(10) Boat Cash Income (1-8)	**-$4,557**	**-$12,288**	**$27,518**	**-$727**	**$26,683**	**$7,435**
(11) Depreciation	**$38,459**	**$14,313**	**$44,337**	**$97,516**	**$7,613**	**$32,765**
(12) Boat Business Profit (10-11)	**-$43,016**	**-$26,601**	**-$16,819**	**-$98,243**	**$19,070**	**-$25,330**
(13) Profit at Full Equity (12+4+6[b])	**-$34,428**	**-$21,185**	**-$1,544**	**-$93,662**	**$21,943**	**-$17,491**
(14) Working Capital	**$624,550**	**$165,194**	**$938,602**	**$1,939,895**	**$97,647**	**$593,297**
Rate of Return on Working Capital (13/14*100)	**-5.5%**	**-12.8%**	**-0.2%**	**-4.8%**	**22.5%**	**-2.9%**

[a] Includes estuary, rivers, freshwater, impoundments.

[b] Part of leasing and rent is assumed to cover depreciation of buildings and equipment so is excluded from profit at full equity.

Source: 2019 survey

Table 3-8 Financial performance in the Charter Fishery, by main trip length, 2018/19

		Average per business		
		Multi-day trips & live aboard (>24hrs)	Day trips (<24hrs)	All Businesses
	Trip days (no.)	75	82	80
	Client days (no.)	754	650	684
	Employment (fte)	1.3	0.9	1.0
	Employment (total)	2.5	1.8	2.0
	Active Businesses (no.)	57	119	176
	Sample Size (n)	29	63	92
(1)	**Gross Income**	**$305,680**	**$131,966**	**$187,945**
	Variable costs			
	Fuel	$39,845	$18,485	$25,369
	Ice & Bait	$13,392	$2,953	$6,317
	Fishing tackle	$2,333	$3,211	$2,928
	Provisions	$31,966	$2,971	$12,314
	Labour - paid	$29,669	$12,256	$17,867
(2)	Labour - unpaid	$17,049	$9,886	$12,194
(3)	**Total Variable Costs**	**$134,255**	**$49,763**	**$76,990**
	Fixed costs			
	Licence Fee	$1,497	$922	$1,107
	Repairs and maintenance	$54,822	$19,540	$30,909
	Insurance	$13,432	$6,553	$8,770
(4)	Interest	$8,275	$3,234	$4,859
	Labour - paid	$16,852	$7,395	$10,442
(5)	Labour - unpaid	$18,863	$14,491	$15,900
(6)	Leasing and rent	$4,679	$6,571	$5,961
	Rates	$888	$782	$816
	Power	$1,312	$1,016	$1,111
	Communications	$3,951	$1,841	$2,521
	Legal & Accounting	$3,992	$1,974	$2,624
	Slipping, Mooring & survey	$19,120	$7,995	$11,580
	Travel	$2,471	$449	$1,100
	Protective clothing & Uniforms	$1,384	$1,106	$1,196
	Membership, association expenses	$439	$323	$360
	Advertising	$2,915	$3,959	$3,622
	Other	$1,262	$346	$641
(7)	**Total Fixed Costs**	**$156,154**	**$78,494**	**$103,520**
(8)	**Total Boat Cash Costs (3+7)**	**$290,408**	**$128,257**	**$180,511**
	Boat Gross Margin (1-3)	**$171,425**	**$82,203**	**$110,955**
(9)	**Total Unpaid Labour (2+5)**	**$35,912**	**$24,377**	**$28,094**
	Gross Operating Surplus (1-8+9)	**$51,184**	**$28,085**	**$35,529**
(10)	**Boat Cash Income (1-8)**	**$15,272**	**$3,709**	**$7,435**
(11)	**Depreciation**	**$75,835**	**$12,286**	**$32,765**
(12)	**Boat Business Profit (10-11)**	**-$60,563**	**-$8,578**	**-$25,330**
(13)	**Profit at Full Equity (12+4+6[a])**	**-$49,949**	**-$2,058**	**-$17,491**
(14)	**Working Capital**	**$1,448,709**	**$186,573**	**$593,297**
	Rate of Return on Working Capital (13/14*100)	**-3.4%**	**-1.1%**	**-2.9%**

[a] Part of leasing and rent is assumed to cover depreciation of buildings and equipment so is excluded from profit at full equity.

Source: 2019 survey

Table 3-9 Total financial performance in the Charter Fishery, by fishing region, 2018/19

	Region Total							
	North West and Cape York Peninsula	Wet Tropics	Dry Tropics	Mackay, Isaac and Whitsunday	Fitzroy	Wide Bay Burnett	South East	Queensland
Trip days (no.)	1,721	3,719	658	1,079	2,091	1,815	2,998	14,081
Client days (no.)	10,241	20,164	4,626	9,752	28,063	20,096	27,389	120,331
Employment (fte)	26	47	4	33	28	17	22	177
Employment (total)	57	84	17	57	56	28	54	354
Active Businesses (no.)	29	40	11	22	24	20	30	176
Sample Size (n)	9	24	7	9	11	8	24	92
Gross Income	**$2,359,076**	**$7,102,522**	**$1,119,067**	**$4,205,036**	**$10,305,740**	**$2,887,769**	**$5,099,158**	**$33,078,369**
Total Variable Costs	**$1,194,795**	**$2,533,829**	**$373,957**	**$2,568,209**	**$4,046,744**	**$1,096,767**	**$1,736,003**	**$13,550,304**
Total Fixed Costs	**$2,474,322**	**$4,327,269**	**$378,178**	**$3,750,071**	**$3,546,619**	**$1,998,652**	**$1,744,442**	**$18,219,552**
Total Boat Cash Costs	**$3,669,117**	**$6,861,098**	**$752,134**	**$6,318,281**	**$7,593,363**	**$3,095,419**	**$3,480,444**	**$31,769,856**
Boat Gross Margin	**$1,164,281**	**$4,568,693**	**$745,110**	**$1,636,827**	**$6,258,997**	**$1,791,002**	**$3,363,156**	**$19,528,065**
Total Unpaid Labour	**$733,409**	**$670,624**	**$176,908**	**$857,627**	**$1,167,837**	**$709,281**	**$628,885**	**$4,944,572**
Gross Operating Surplus	**-$576,632**	**$912,049**	**$543,841**	**-$1,255,617**	**$3,880,215**	**$501,631**	**$2,247,598**	**$6,253,085**
Boat Cash Income	**-$1,310,041**	**$241,424**	**$366,932**	**-$2,113,244**	**$2,712,378**	**-$207,650**	**$1,618,714**	**$1,308,513**
Depreciation	**$1,698,550**	**$1,307,720**	**$117,366**	**$707,622**	**$1,174,145**	**$420,625**	**$340,580**	**$5,766,609**
Boat Business Profit	**-$3,008,591**	**-$1,066,296**	**$249,566**	**-$2,820,866**	**$1,538,232**	**-$628,275**	**$1,278,133**	**-$4,458,096**
Profit at Full Equity	**-$2,902,471**	**-$756,544**	**$344,638**	**-$2,580,088**	**$1,900,946**	**-$558,275**	**$1,473,383**	**-$3,078,411**
Working Capital	**$30,853,556**	**$17,531,411**	**$1,499,656**	**$16,843,689**	**$23,235,818**	**$7,044,375**	**$7,411,781**	**$104,420,286**
Rate of Return on Working Capital	**-9.4%**	**-4.3%**	**23.0%**	**-15.3%**	**8.2%**	**-7.9%**	**19.9%**	**-2.9%**

Source: 2019 survey

3.5. State and Regional Economic Contribution

Estimates of the economic contribution of the Charter Fishery to the Queensland and regional economies in 2017/18 and 2018/19 are outlined in this section. Contribution analysis is a descriptive analysis that traces the gross economic activity of the fishery as dollars of expenditure cycle through the regional and state economies. The analysis has utilised the detailed industry specific data reported above in combination with other regional/state data that highlight the current linkages that exist within the economy to estimate indicators such as gross regional product and employment. The analysis has been undertaken within a modelling framework known as input-output analysis, with the purpose being to determine how much direct and indirect economic activity is associated with the fishery. This is because the contribution of the fishery extends beyond the initial round of output, income and employment generated by the fishery. These indirect or flow-on effects are part of the contribution of fishing related businesses to the economy and must be added to the direct effects in order to get a full appreciation of the economic contribution of the fishery. This method was recommended by the National Fisheries and Aquaculture Industry Contributions Study (FRDC project 2017-210) (BDO EconSearch 2019b). Though charter fishing was not in scope of the study, the method transfers well to charter fishing.

The terms 'contribution' and 'impact' are often used interchangeably, particularly in the context of regional economic analysis where decision makers wish to use the results from such analyses to inform policy decisions, to facilitate industry development or support a particular business strategy. However, they are distinctly different types of analysis. At the most basic level, a contribution analysis can be thought of as a 'footprint' or 'snapshot' analysis of economic activity, whereas an impact analysis can be thought of as an analysis of a change in economic activity. An economic impact analysis is an appropriate approach where an industry is generating new revenues that would otherwise not occur, keeping revenues in the region that would otherwise be lost, or being subject to changes that result in existing revenues being lost. Economic impact analysis will generally require more data than a contribution analysis and may require more sophisticated models, such as an extended input-output model or a properly specified computable general equilibrium (CGE) model, or means to estimate people's likely behaviour in response to the change (Watson et al. 2014).

3.5.1. Measuring direct and flow-on effects

The activities have been included in the quantifiable economic contribution:

- operation of charter fishing businesses
- capital expenditure by charter fishing businesses.

Each of these activities generates flow-on effects to other sectors through purchases of inputs and the employment of labour. As noted above, these flow-on effects have been estimated using input-output analysis.

Since charter fishing involves providing an experience to visitors, it is likely that the activity draws visitors to the regions where it takes place that would not otherwise have visited. These visitors spend in the region, causing further flow-on economic effects. Significant uncertainty surrounds quantification of this type of economic effect so it has been excluded from this analysis. Further research into the effect that charter fishing has on visitation to the regions is recommended to quantify this economic contribution.

In order to compile a representative cost structure for the Charter Fishery, costs per business were derived from survey data provided by operators in the fishery (for detail see Section 2). On an item-by-item basis,

the expenditures were allocated between those occurring in the fishing region, those occurring in Queensland and those goods and services imported from outside the state.

Estimates of the capital expenditure per fishing business were derived from the survey of fishing businesses and regional economic models.

Economic contributions have been specified in terms of the following economic indicators:

- value of output
- employment
- household income
- contribution to gross state or regional product.

Value of output is a measure of the gross revenue of goods and services produced by commercial organisations plus gross expenditure by government agencies. This indicator needs to be used with care as it includes elements of double counting.

Employment is a measure of the number of working proprietors, managers, directors and other employees, in terms of the number of full-time equivalent jobs.

Household income is a component of Gross State Product (GSP) and Gross Regional Product (GRP) and is a measure of wages and salaries, drawings by owner operators and other payments to labour including overtime payments and income tax, but excluding payroll tax.

Contribution to GSP or GRP is a measure of the net contribution of an activity to the state/regional economy. Contribution to GSP or GRP is measured as value of output less the cost of goods and services (including imports) used in producing the output. It can also be measured as household income plus other value added (gross operating surplus and all taxes, less subsidies). It represents payments to the primary inputs of production (labour, capital and land). Using GSP or GRP as a measure of economic contribution avoids the problem of double counting that may arise from using value of output for this purpose.

3.5.2. Economic contribution to Queensland

Estimates of the economic contribution to Queensland generated in 2017/18 and 2018/19 by the Charter Fishery are outlined in Table 3-10 and Table 3-11, respectively. This section summarises the key points from these tables.

Direct contribution measures charter fishing activity and associated capital expenditure. The flow-on contribution measures the economic effects in other sectors of the economy (retail and wholesale trade, manufacturing, etc.) generated by direct activity, that is, the multiplier effects. Flow-on effects are disaggregated by industry with the top 10 industries shown separately in each on the table. Capital expenditures are assumed to be the same as depreciation which may or may not be the case in a given year but is a reasonable assumption in the long-run. Economic contribution of capital expenditure should, therefore, be interpreted as a long-run average.

Value of Output

The value of output (GVP) generated directly in the Charter Fishery was $35.8m in 2017/18 and $33.1m in 2018/19 while output generated by associated capital expenditure was $2.1m in both 2017/18 and 2018/19.

Flow-on effects to other sectors of the state economy added another $25.7m in 2017/18 and $25.6m in 2018/19. The sectors most affected were personal and other services, professional, scientific and technical services and insurance and other financial services. The total output contribution to Queensland (direct plus flow-on) was estimated to be $63.6m in 2017/18 and $60.8m in 2018/19.

Employment

The Charter Fishery was responsible for the direct employment of an estimated 188 full-time equivalent (fte) jobs in 2017/18 and 177 fte jobs in 2018/19 while capital expenditure supported another 13 fte jobs in both 2017/18 and 2018/19. Flow-on business activity was estimated to support a further 129 fte jobs in 2017/18 and 127 fte jobs in 2018/19 state-wide. These jobs were concentrated in the personal and other services, professional, scientific and technical services and administrative and support services sectors. The total employment contribution to Queensland was estimated to be 330 fte jobs in 2017/18 and 317 fte jobs in 2018/19.

Household Income

Personal income of $10.1m was earned in 2017/18 in the Charter Fishery (wages of employees and estimated drawings by owner/operators) and $9.9m was earned in 2018/19. A further $0.8m of income was earned in 2017/18 and in 2018/19 in capital expenditure activities. An additional $8.8m in both 2017/18 and 2018/19 was earned by wage earners in other businesses in Queensland from the flow-on effects of fishing and associated downstream activities. The total household income contribution in Queensland was $19.6m in 2017/18 and $19.5m in 2018/19.

Contribution to GSP and GRP

As noted above, contribution to GSP or GRP is measured as value of output less the cost of goods and services (including imports) used in producing the output. Total Charter Fishery related contribution to GSP in Queensland was $36.3m in 2017/18 and $33.6m in 2018/19, with $22.5m in 2017/18 and $19.9m in 2018/19 generated by fishing directly, $1.0m in 2017/18 and $1.1m in 2018/19 generated by capital expenditure activities and $12.7m in both 2017/18 and 2018/19 supported in other sectors of the state economy.

Table 3-10 Economic contribution of the Charter Fishery to Queensland, 2017/18

Sector	Output ($m)	GSP ($m)	Household Income ($m)	Employment (fte)	Employment (total)
Direct effects					
Charter Fishing	35.8	22.5	10.1	188	377
CAPEX	2.1	1.0	0.8	13	14
Total Direct	37.9	23.6	10.8	201	390
Flow-on effects					
Personal & Other Serv	5.2	3.0	2.7	43	44
Prof Scientific Tech Serv	2.7	1.5	1.4	16	15
Admin Support Serv	1.5	1.0	0.9	16	16
Retail Trade	1.1	0.6	0.5	10	12
Insurance & Other Fin Serv	2.0	0.9	0.6	7	7
Wholesale Trade	0.6	0.3	0.3	3	3
Rental Hiring Real Estate	1.1	0.5	0.2	3	3
Road Transport	0.8	0.3	0.3	3	2
Food & Beverage Services	0.3	0.1	0.1	3	3
Public Admin & Regltry Serv	0.4	0.2	0.2	3	3
Other Sectors	10.0	4.1	1.6	23	21
Total Flow-on	25.7	12.7	8.8	129	129
Total	**63.6**	**36.3**	**19.6**	**330**	**519**
Total/Direct	*1.7*	*1.5*	*1.8*	*1.6*	*1.3*

Source: BDO EconSearch analysis

Table 3-11 Economic contribution of the Charter Fishery to Queensland, 2018/19

Sector	Output ($m)	GSP ($m)	Household Income ($m)	Employment (fte)	Employment (total)
Direct effects					
Charter Fishing	33.1	19.9	9.9	177	354
CAPEX	2.1	1.1	0.8	13	14
Total Direct	35.2	20.9	10.7	190	367
Flow-on effects					
Personal & Other Serv	5.3	3.0	2.7	43	44
Prof Scientific Tech Serv	2.8	1.5	1.5	16	15
Admin Support Serv	1.5	1.0	0.9	15	16
Retail Trade	1.1	0.6	0.5	10	11
Insurance & Other Fin Serv	2.0	0.9	0.6	7	7
Wholesale Trade	0.6	0.3	0.3	3	3
Rental Hiring Real Estate	1.1	0.5	0.2	3	3
Road Transport	0.8	0.3	0.3	3	2
Food & Beverage Services	0.3	0.1	0.1	2	3
Public Admin & Regltry Serv	0.4	0.2	0.2	3	3
Other Sectors	9.9	4.1	1.6	23	21
Total Flow-on	25.6	12.7	8.8	127	127
Total	**60.8**	**33.6**	**19.5**	**317**	**494**
Total/Direct	*1.7*	*1.6*	*1.8*	*1.7*	*1.3*

Source: BDO EconSearch analysis

3.5.3. Regional economic contributions

Direct economic contribution of fishing activity by fishing region is detailed in Table 3-12 (2017/18) and Table 3-13 (2018/19). This includes fishing activity only and excludes downstream and flow-on activity. The regions appear in the table in order of the magnitude of economic contribution to fte employment.

On the following pages (Table 3-14 to Table 3-19), estimates of the economic contribution of the Charter Fishery to each fishing region with 5 or greater active businesses and a significant economic contribution are presented in detail for the 2018/19 year. Estimates presented in the tables can be interpreted in the same way as those presented at the state level (see Section 3.5.2).

Table 3-12 Direct economic contribution of fishing activity in the Charter Fishery to regions, 2017/18

	Output ($m)	GSP ($m)	Household Income ($m)	Employment (fte)	Employment (total)
Queensland	35.8	22.5	10.1	188	377
Wet Tropics	7.7	4.0	2.0	50	89
Mackay, Isaac and Whitsunday	4.8	2.1	2.1	34	60
North West and Cape York Peninsula	3.0	1.7	1.5	33	72
Fitzroy	9.7	6.7	1.9	25	51
South East	5.8	4.6	1.1	22	54
Wide Bay Burnett	3.3	2.2	1.1	19	30
Dry Tropics	1.4	1.2	0.3	5	21

Source: BDO EconSearch analysis

Table 3-13 Direct economic contribution of fishing activity in the Charter Fishery to regions, 2018/19

	Output ($m)	GSP ($m)	Household Income ($m)	Employment (fte)	Employment (total)
Queensland	33.1	19.9	9.9	177	354
Wet Tropics	7.1	3.7	1.9	47	84
Mackay, Isaac and Whitsunday	4.2	1.6	2.1	33	57
Fitzroy	10.3	6.9	2.2	28	56
North West and Cape York Peninsula	2.4	1.0	1.3	26	57
South East	5.1	3.9	1.1	22	54
Wide Bay Burnett	2.9	1.9	1.1	17	28
Dry Tropics	1.1	0.9	0.3	4	17

Source: BDO EconSearch analysis

Table 3-14 Economic contribution of the Charter Fishery to North West and Cape York Peninsula, 2018/19

Sector	Output ($m)	GSP ($m)	Household Income ($m)	Employment (fte)	Employment (total)
Direct effects					
Charter Fishing	2.4	1.0	1.3	26	57
CAPEX	0.5	0.2	0.2	3	4
Total Direct	2.8	1.3	1.4	29	61
Flow-on effects					
Personal & Other Serv	0.8	0.6	0.5	7	7
Admin Support Serv	0.1	0.1	0.1	1	1
Retail Trade	0.1	0.0	0.0	1	1
Prof Scientific Tech Serv	0.1	0.0	0.0	0	0
Beef Cattle	0.1	0.0	0.0	0	0
Public Order & Safety	0.0	0.0	0.0	0	0
Rental Hiring Real Estate	0.0	0.0	0.0	0	0
Insurance & Other Fin Serv	0.1	0.0	0.0	0	0
Road Transport	0.0	0.0	0.0	0	0
Education & Training	0.0	0.0	0.0	0	0
Other Sectors	0.2	0.1	0.0	1	1
Total Flow-on	1.5	1.0	0.7	11	11
Total	**4.3**	**2.2**	**2.2**	**40**	**72**
Total/Direct	*1.5*	*1.7*	*1.5*	*1.4*	*1.2*

Source: BDO EconSearch Analysis

Table 3-15 Economic contribution of the Charter Fishery to Wet Tropics, 2018/19

Sector	Output ($m)	GSP ($m)	Household Income ($m)	Employment (fte)	Employment (total)
Direct effects					
Charter Fishing	7.1	3.7	1.9	47	84
CAPEX	0.4	0.2	0.2	3	3
Total Direct	7.5	3.9	2.1	50	86
Flow-on effects					
Personal & Other Serv	1.4	0.8	0.7	12	12
Prof Scientific Tech Serv	0.5	0.3	0.3	3	3
Admin Support Serv	0.2	0.2	0.2	3	3
Retail Trade	0.2	0.1	0.1	2	2
Rental Hiring Real Estate	0.2	0.1	0.0	1	1
Public Admin & Regltry Serv	0.1	0.0	0.0	1	1
Food & Beverage Services	0.0	0.0	0.0	0	1
Insurance & Other Fin Serv	0.1	0.1	0.0	0	0
Road Transport	0.1	0.1	0.0	0	0
Public Order & Safety	0.1	0.0	0.0	0	0
Other Sectors	1.1	0.4	0.2	3	3
Total Flow-on	4.0	2.1	1.6	25	25
Total	**11.4**	**5.9**	**3.7**	**75**	**111**
Total/Direct	*1.5*	*1.5*	*1.8*	*1.5*	*1.3*

Source: BDO EconSearch Analysis

Table 3-16 Economic contribution of the Charter Fishery to Mackay, Isaac and Whitsunday, 2018/19

Sector	Output ($m)	GSP ($m)	Household Income ($m)	Employment (fte)	Employment (total)
Direct effects					
Charter Fishing	4.2	1.6	2.1	33	57
CAPEX	0.2	0.1	0.1	1	2
Total Direct	4.4	1.7	2.2	35	59
Flow-on effects					
Personal & Other Serv	1.0	0.5	0.4	7	7
Admin Support Serv	0.3	0.2	0.2	3	3
Prof Scientific Tech Serv	0.4	0.2	0.2	2	2
Retail Trade	0.2	0.1	0.1	1	2
Fishing, Hunting & Trapping	0.2	0.1	0.0	1	1
Wholesale Trade	0.1	0.1	0.0	1	0
Public Admin & Regltry Serv	0.1	0.0	0.0	0	0
Rental Hiring Real Estate	0.1	0.1	0.0	0	0
Other Beverages	0.2	0.1	0.0	0	0
Road Transport	0.1	0.0	0.0	0	0
Other Sectors	0.8	0.3	0.2	3	2
Total Flow-on	3.5	1.7	1.2	18	18
Total	**8.0**	**3.4**	**3.4**	**53**	**77**
Total/Direct	*1.8*	*2.0*	*1.6*	*1.5*	*1.3*

Source: BDO EconSearch Analysis

Table 3-17 Economic contribution of the Charter Fishery to Fitzroy, 2018/19

Sector	Output ($m)	GSP ($m)	Household Income ($m)	Employment (fte)	Employment (total)
Direct effects					
Charter Fishing	10.3	6.9	2.2	28	56
CAPEX	0.4	0.2	0.1	2	3
Total Direct	10.7	7.1	2.3	30	59
Flow-on effects					
Personal & Other Serv	1.0	0.5	0.5	7	7
Retail Trade	0.4	0.3	0.2	4	4
Prof Scientific Tech Serv	0.5	0.3	0.3	3	2
Fishing, Hunting & Trapping	0.1	0.0	0.0	1	1
Admin Support Serv	0.1	0.1	0.1	1	1
Road Transport	0.2	0.1	0.1	1	1
Wholesale Trade	0.1	0.1	0.1	1	1
Beef Cattle	0.2	0.1	0.0	1	0
Public Admin & Regltry Serv	0.1	0.0	0.0	0	0
Rental Hiring Real Estate	0.2	0.1	0.0	0	0
Other Sectors	2.3	0.8	0.3	4	4
Total Flow-on	5.1	2.3	1.5	23	23
Total	**15.8**	**9.4**	**3.8**	**53**	**81**
Total/Direct	*1.5*	*1.3*	*1.6*	*1.8*	*1.4*

Source: BDO EconSearch Analysis

Table 3-18 Economic contribution of the Charter Fishery to Wide Bay Burnett, 2018/19

Sector	Output ($m)	GSP ($m)	Household Income ($m)	Employment (fte)	Employment (total)
Direct effects					
Charter Fishing	2.9	1.9	1.1	17	28
CAPEX	0.2	0.1	0.1	1	1
Total Direct	3.0	1.9	1.1	18	29
Flow-on effects					
Personal & Other Serv	0.5	0.3	0.3	5	5
Admin Support Serv	0.2	0.1	0.1	2	2
Prof Scientific Tech Serv	0.2	0.1	0.1	1	1
Retail Trade	0.1	0.0	0.0	1	1
Rental Hiring Real Estate	0.1	0.0	0.0	0	0
Public Admin & Regltry Serv	0.0	0.0	0.0	0	0
Road Transport	0.1	0.0	0.0	0	0
Education & Training	0.0	0.0	0.0	0	0
Insurance & Other Fin Serv	0.0	0.0	0.0	0	0
Fishing, Hunting & Trapping	0.0	0.0	0.0	0	0
Other Sectors	0.4	0.2	0.1	1	1
Total Flow-on	1.6	0.8	0.7	10	10
Total	**4.7**	**2.8**	**1.8**	**28**	**39**
Total/Direct	*1.5*	*1.4*	*1.6*	*1.6*	*1.4*

Source: BDO EconSearch Analysis

Table 3-19 Economic contribution of the Charter Fishery to South East, 2018/19

Sector	Output ($m)	GSP ($m)	Household Income ($m)	Employment (fte)	Employment (total)
Direct effects					
Charter Fishing	5.1	3.9	1.1	22	54
CAPEX	0.1	0.1	0.0	1	1
Total Direct	5.2	3.9	1.2	22	55
Flow-on effects					
Personal & Other Serv	0.4	0.2	0.2	3	3
Admin Support Serv	0.2	0.1	0.1	2	2
Prof Scientific Tech Serv	0.2	0.1	0.1	1	1
Retail Trade	0.1	0.1	0.1	1	1
Insurance & Other Fin Serv	0.2	0.1	0.0	1	1
Food & Beverage Services	0.0	0.0	0.0	0	0
Rental Hiring Real Estate	0.1	0.1	0.0	0	0
Wholesale Trade	0.1	0.0	0.0	0	0
Road Transport	0.1	0.0	0.0	0	0
Public Admin & Regltry Serv	0.0	0.0	0.0	0	0
Other Sectors	1.0	0.4	0.2	2	2
Total Flow-on	2.4	1.2	0.8	12	12
Total	**7.7**	**5.2**	**2.0**	**34**	**67**
Total/Direct	*1.5*	*1.3*	*1.7*	*1.5*	*1.2*

Source: BDO EconSearch Analysis

4. SOCIAL AND DEMOGRAPHIC INDICATORS

Fisheries Queensland compiled a list of social and demographic indicators to be included in the survey of fishing businesses and presented in this report. BDO EconSearch collected the data and the results for the social indicators are presented below.

Respondents to the business survey were mostly over 50 years of age, business owners and living in Queensland. The median time involved in charter fishing was 16 years and median time as a licence owner 10 years. Most have a highest level of education of year 12 or above. On average, respondents earn approximately two-thirds of their income from charter fishing with the other main industries of employment being construction, agriculture, forestry and fishing and professional scientific and technical services.

Most respondents indicated that charter fishing is financially risky and just over half feel insecure in their job. Most respondents feel they understand fishery management arrangements and can cope with changes in it but more fishers feel that management is making it more difficult to run their business than easier and more think that it is has become more difficult to 'have a say' in management than those who think it has become easier.

Overall, fishers indicated that they are strongly satisfied with the lifestyle of being a charter fisher and would not quickly change jobs. They also indicated that they are quite strongly satisfied with life as a whole. Fishers indicated that they have broad ties to their community and that their community treats them fairly and respects their occupation. Fishers also identified that fishing can be physically difficult and stressful but few identified a negative mental health impact. Just over half of fishers would not encourage young people to choose a fishing career and do not feel positive about the future of fishing in their region.

4.1. Demographic Indicators

Figure 4-1 Age

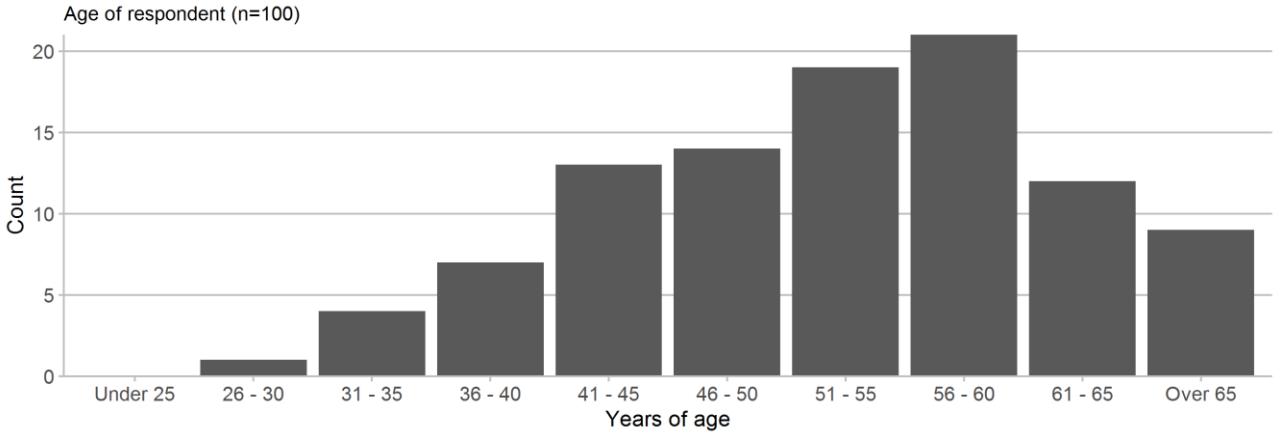


Figure 4-2 Business role, place of residence and Indigenous status

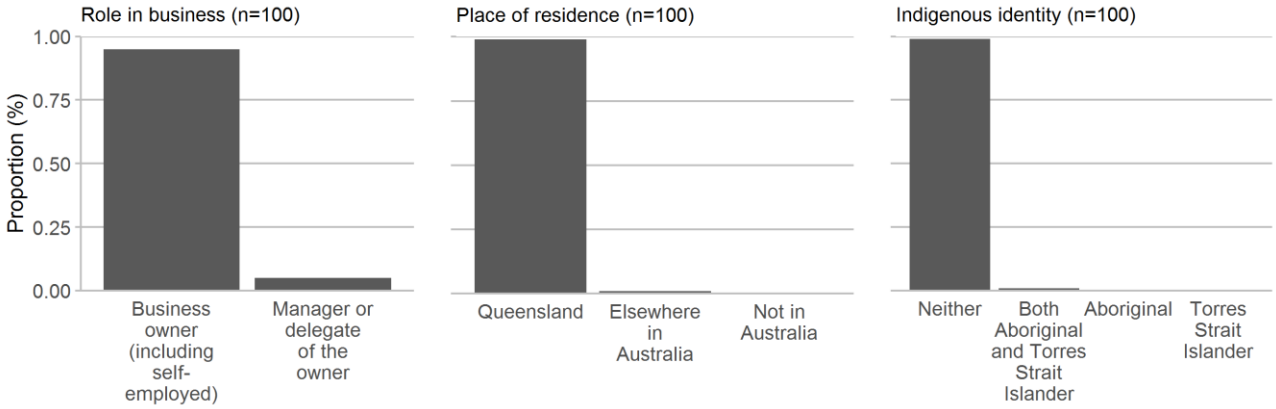


Figure 4-3 Years as licence owner, in charter fishing and lived in local community

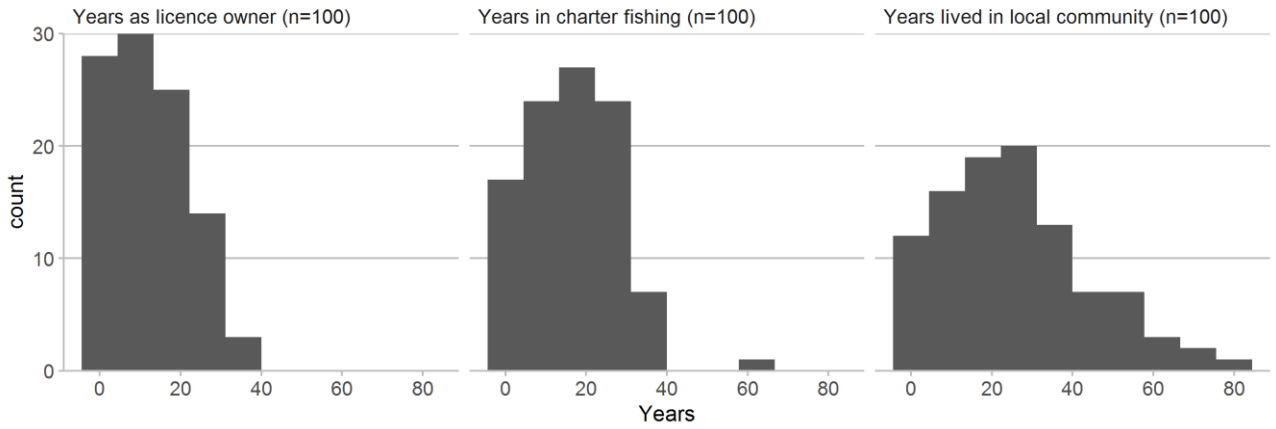


Figure 4-4 Highest education attained

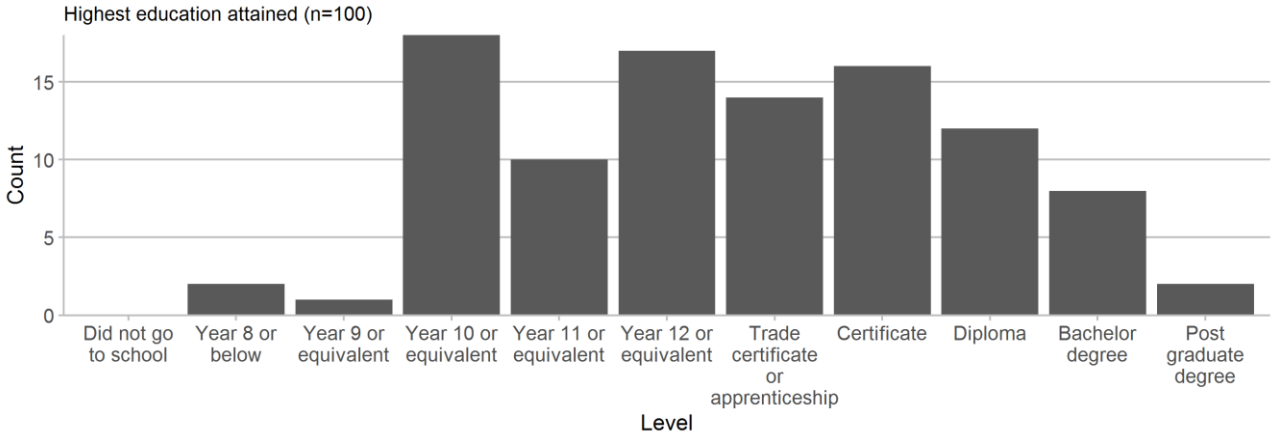


Figure 4-5 Primary income from charter fishing

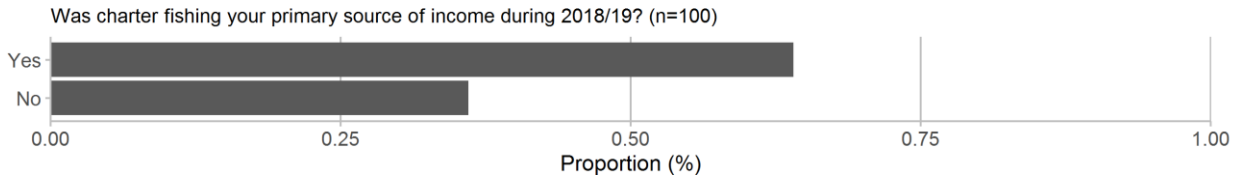


Figure 4-6 Other industry of employment (other than fishing)

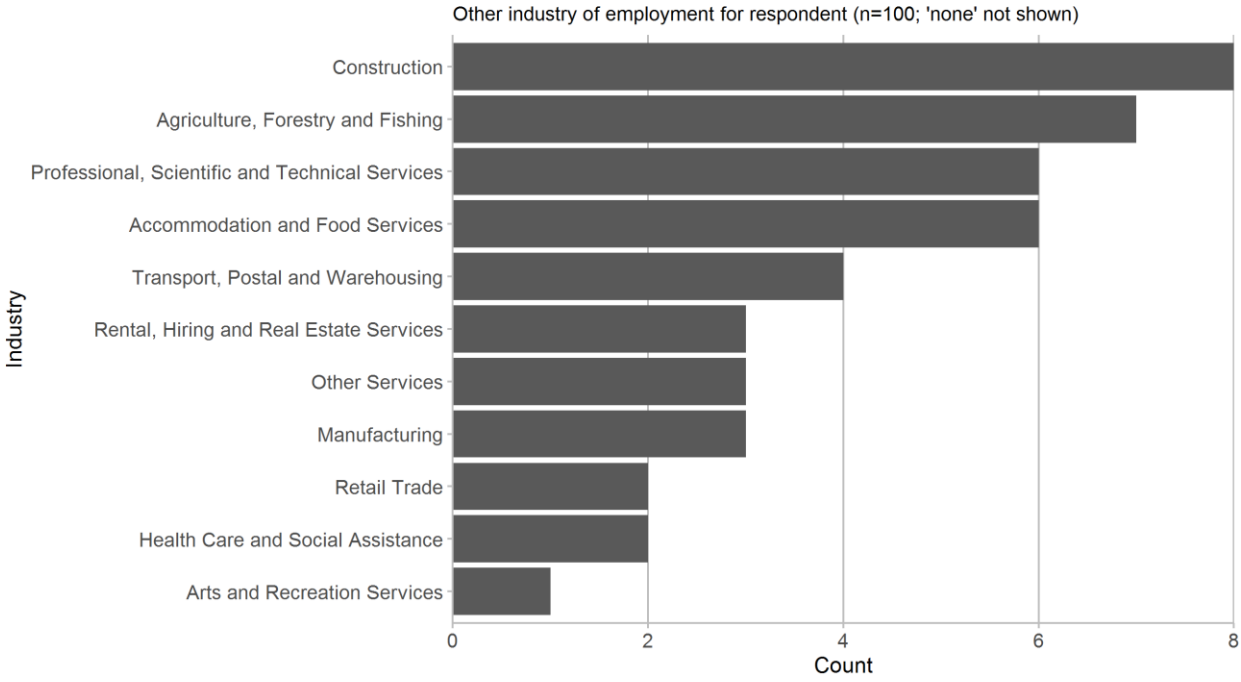


Figure 4-7 Split of workload

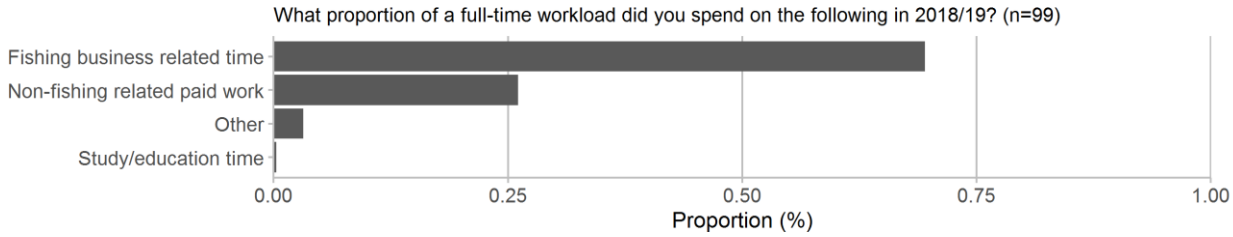
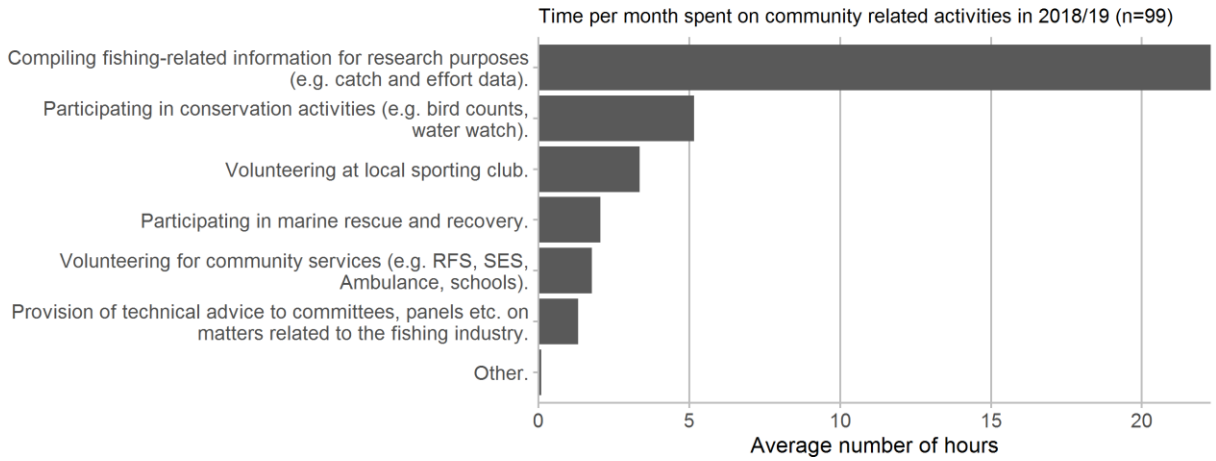


Figure 4-8 Community involvement



4.2. Fisheries Management

A set of questions about fisheries management and its effect on the fisher's business were asked in the survey. The answers are presented in the charts below with questions/statements appearing in order of the strength of the average response.

Figure 4-9 Perceptions of fishery management (a)

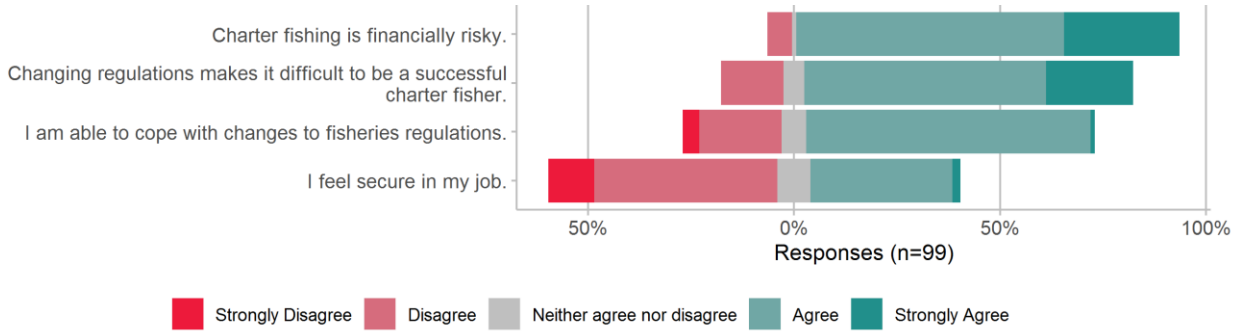
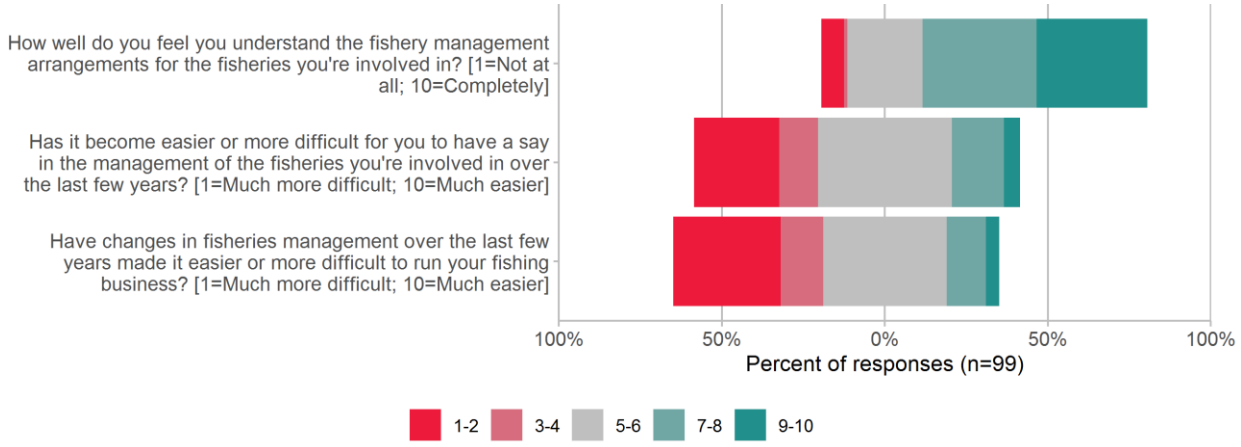


Figure 4-10 Perceptions of fishery management (b)



4.3. Fisher Wellbeing

While charter fishers aim to receive a monetary benefit from engaging in fishing activities, many also value the lifestyle and other benefits that come with the job. The survey asked fishers about their satisfaction with the lifestyle of being a charter fisher and its benefits and costs, their connection to the community as a charter fisher, their personal wellbeing and stewardship. Statements/questions are presented in the charts in this section in order of the strength of the response.

Figure 4-11 Satisfaction with lifestyle

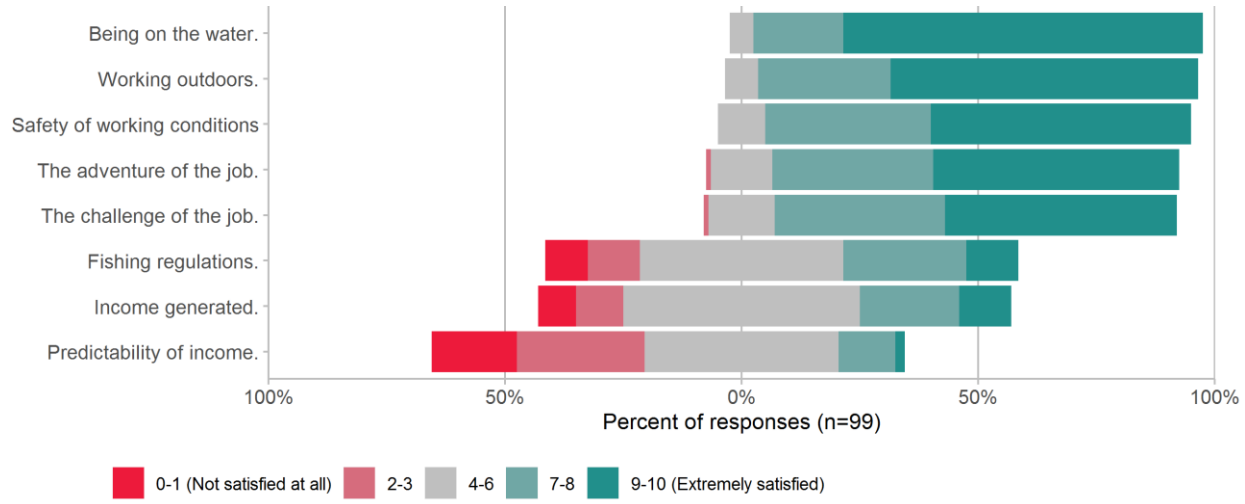


Figure 4-12 Wellbeing benefits of charter fishing

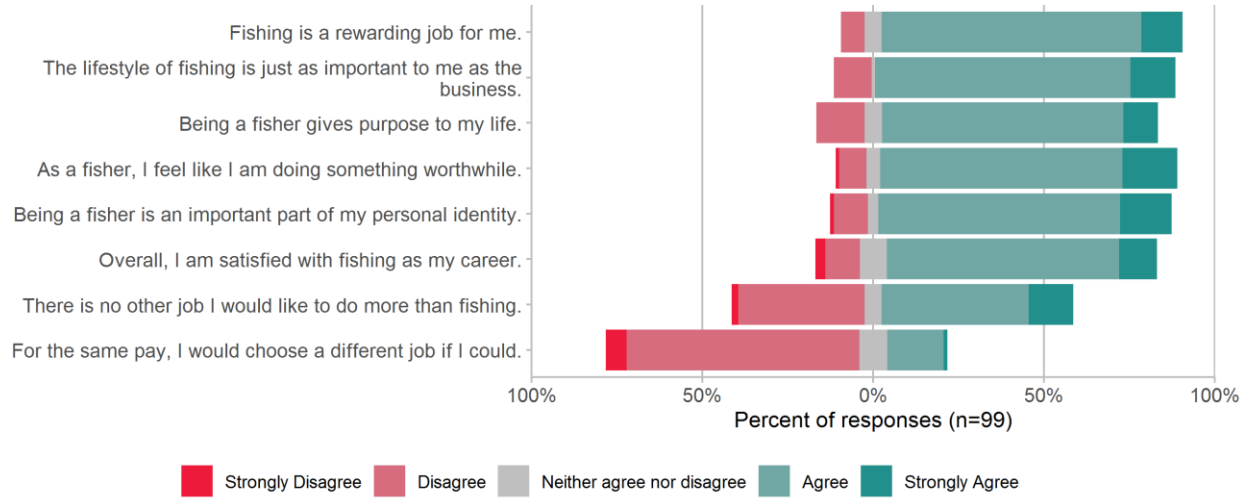


Figure 4-13 Wellbeing costs of charter fishing

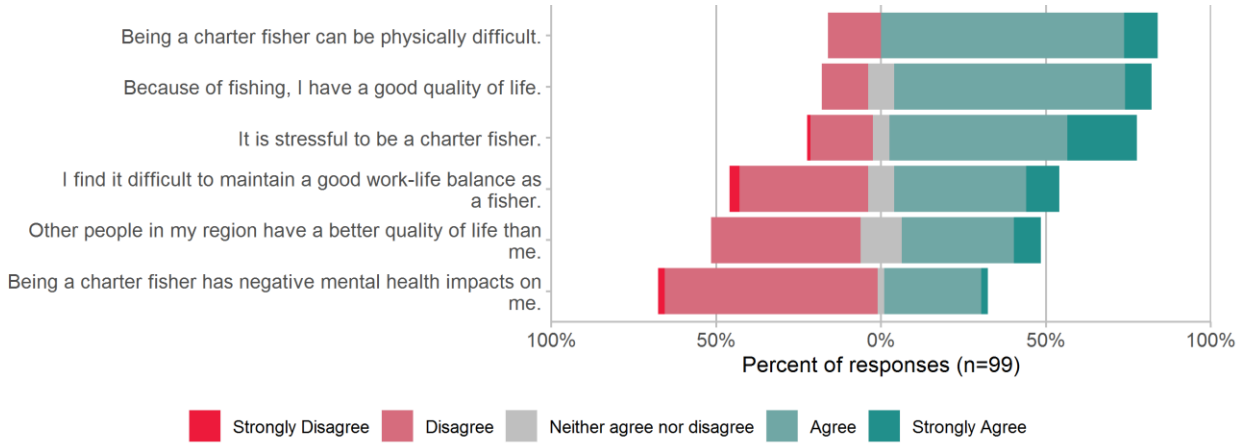


Figure 4-14 Connection to community

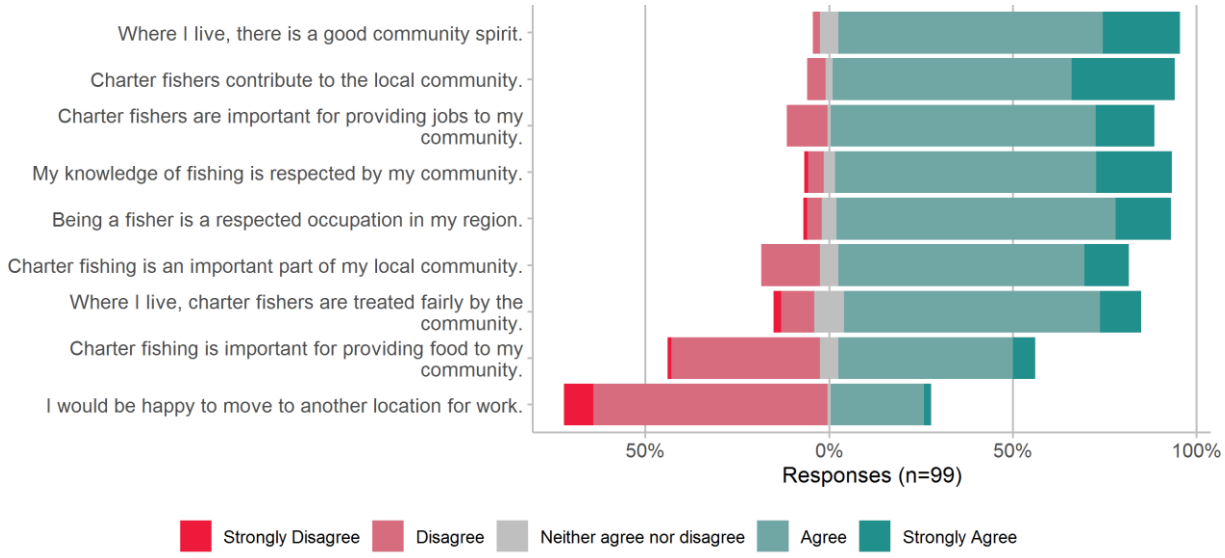


Figure 4-15 Personal wellbeing

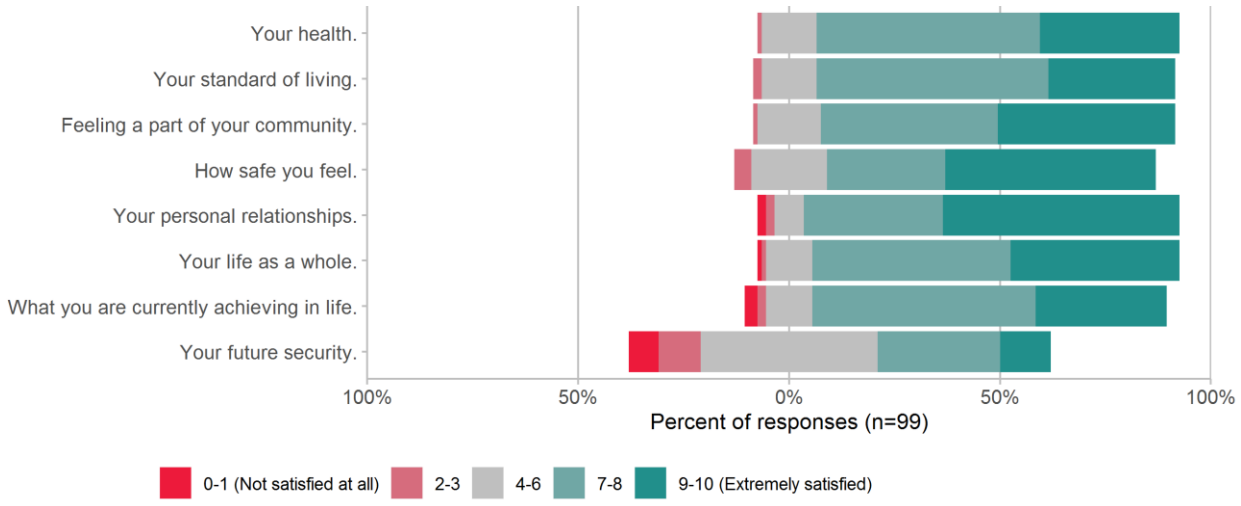
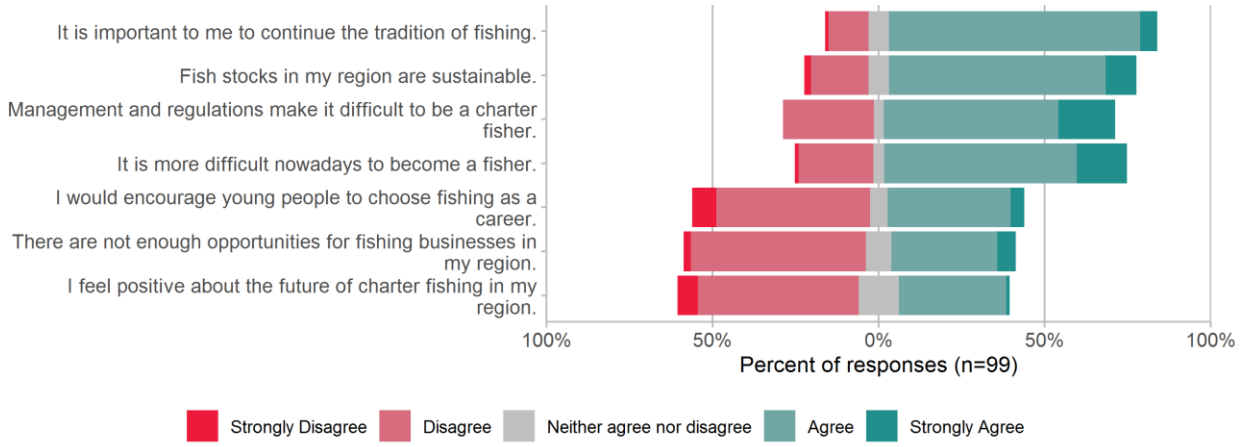


Figure 4-16 Stewardship



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Disclaimer

The assignment is a consulting engagement as outlined in the 'Framework for Assurance Engagements', issued by the Auditing and Assurances Standards Board, Section 17. Consulting engagements employ an assurance practitioner's technical skills, education, observations, experiences and knowledge of the consulting process. The consulting process is an analytical process that typically involves some combination of activities relating to: objective-setting, fact-finding, definition of problems or opportunities, evaluation of alternatives, development of recommendations including actions, communication of results, and sometimes implementation and follow-up.

The nature and scope of work has been determined by agreement between BDO and the Client. This consulting engagement does not meet the definition of an assurance engagement as defined in the 'Framework for Assurance Engagements', issued by the Auditing and Assurances Standards Board, Section 10.

Except as otherwise noted in this report, we have not performed any testing on the information provided to confirm its completeness and accuracy. Accordingly, we do not express such an audit opinion and readers of the report should draw their own conclusions from the results of the review, based on the scope, agreed-upon procedures carried out and findings.