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**ECONOMIC AND SOCIAL INDICATORS
FOR THE NSW ESTUARY GENERAL
FISHERY IN 2019/20**

A Report for the Department of
Primary Industries

20 April 2022

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TABLE OF CONTENTS

Tables	iv
Figures.....	v
Abbreviations.....	vi
Acknowledgments.....	vi
Glossary	vii
Document History and Status	x
Summary	xi
1. Introduction	1
2. Survey.....	4
3. Catch, Value, Prices and Markets	5
4. Financial Indicators	6
4.1. Financial Performance	6
4.2. Assets, Liabilities and Equity.....	12
5. Economic Contribution	13
5.1. Economic Contribution to New South Wales.....	13
5.2. Economic Contribution to Regions of New South Wales.....	15
6. Net Economic Return	16
7. Demographics.....	17
8. Social Indicators	18
8.1. Management.....	18
8.2. Lifestyle and Satisfaction.....	22
8.3. Personal Wellbeing	24
8.4. Community Contribution.....	25
References.....	26

TABLES

Table S-1	Summary of key economic indicators for 2019/20	xi
Table 1-1	Region definitions for indicators	3
Table 2-1	Survey sample from 2021 in the Estuary General fishery	4
Table 3-1	Catch, GVP and markets for Estuary General fishery in 2019/20	5
Table 4-1	Financial performance of the average business in the Estuary General fishery in 2019/20	7
Table 4-2	Financial performance in the Estuary General fishery in 2019/20, average business in each profitability quartile	8
Table 4-3	Financial performance in the Estuary General fishery in 2019/20, average business in each days fished quartile	9
Table 4-4	Financial performance in the Estuary General fishery in 2019/20, average business in each region	10
Table 4-5	Financial performance in the Estuary General fishery in 2019/20, average business in each specialisation group.....	11
Table 4-6	Assets, liabilities and equity in the Estuary General fishery in 2019/20.....	12
Table 5-1	Economic contribution to New South Wales of the Estuary General fishery in 2019/20.....	14
Table 5-2	Economic contribution to regions of New South Wales of the Estuary General fishery in 2019/20	15
Table 6-1	Net Economic Return of the Estuary General fishery in 2019/20	16
Table 6-2	Sensitivity of Net Economic Return	16

FIGURES

Figure 1-1	Revenue share and days fished of businesses in the Estuary General fishery in 2019/20	1
Figure 7-1	Demographic profile of the Estuary General fishery in 2019/20	17
Figure 8-1	Perceptions of fishery management in the Estuary General fishery (2021 survey).....	19
Figure 8-2	Perceptions of management fairness in the Estuary General fishery (2021 survey).....	20
Figure 8-3	Perceptions of infrastructure access in the Estuary General fishery (2021 survey)	21
Figure 8-4	Satisfaction with aspects of the Estuary General fishery (2021 survey)	22
Figure 8-5	Satisfaction in the Estuary General fishery (2021 survey)	23
Figure 8-6	Personal wellbeing in the Estuary General fishery (2021 survey)	24
Figure 8-7	Community contribution in the Estuary General fishery (2021 survey)	25

ABBREVIATIONS

ABARES	Australian Bureau of Agriculture and Resource Economics and Science
DPI	the Department of Primary Industries
fte	full-time equivalent
GOS	Gross Operating Surplus
GVP	Gross Value of Production
GSP	Gross State Product
GRP	Gross Regional Product
NSW	New South Wales
PWI	Personal Wellbeing Index

ACKNOWLEDGMENTS

In the preparation of economic indicators for the NSW Fisheries, BDO has relied heavily on the voluntary cooperation of fishing operators in providing data for the surveys. We are particularly grateful for the time and cooperation generously provided by fishing businesses in responding to the rather lengthy questionnaire. BDO is also indebted to the members of the Commercial Fishing NSW Advisory Council, Professional Fishers Association and the Sydney Fish Market for providing the necessary information, advice and support. NSW DPI officers provided assistance, were supportive of the data collection and offered valuable advice which was much appreciated.

GLOSSARY

Active Business: refers to a fisher operating a fishing business which fished at least one day during the relevant period.

Beach Price: refers to the unimproved price received by commercial fishers when landing their catch at the beach, wharf or port (also referred to as wharf price and comparable to farm gate price), and is generally expressed in terms of \$/kg or \$/unit. Processing margins are not included in the beach price as processing operations are assumed to occur further along the value chain. The use of beach prices also removes the effect of transfer pricing by the firm if it is vertically integrated into the value chain.

Boat Business Profit: is defined as *Gross Operating Surplus 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 Gross Operating Surplus, 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 *Gross 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 (days fished) varies there is no change in capital or fixed costs.

Cost of Management: in a commercial fishery management services will generally include biological monitoring and reporting; policy, regulation and legislation development; compliance and enforcement services; licensing services; and research. Approximated by licence fees in this report.

Days Fished: refers to the number of days fished by a fishing business throughout the relevant period.

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 depreciation¹.

Employment: is a measure of the number of working proprietors, managers, directors and other employees, in terms of the number (total jobs) or full-time equivalent (fte) jobs. One fte is considered to be 37.5 hours for 42 week per year.

Equity: Commercial fishing businesses in New South Wales utilise valuable fishery shares, vessels or vehicles and other working capital. They may hold cash and may also hold debt to finance the business and other liabilities. The total assets held by a business less its total liabilities is the business' equity, which can be expressed in dollar terms or as a percentage of total asset value.

Fishing Business: for the purpose of this report is an economic entity rather than a legal entity and is defined by Fishing Business ID or Authorised Fisher ID.

Gross Operating Surplus (GOS): is defined as *Gross 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 *Total Boat Cash Costs (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.

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

Gross Regional Product (GRP) and Gross State Product (GSP): 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).

Gross Value of Production (GVP): refers to the value of the total annual catch for individual fisheries, fishing sectors or the fishing industry as a whole, and is measured in dollar terms. GVP, generally reported on an annual basis, is the quantity of catch for the year multiplied by the average beach price.

Household Income (economic contribution): 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.

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 includes 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 account of this cost. Alternatively, it can be deducted from GOS to give a separate indicator called *Boat Cash Income* in this report. 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 *leasing of building, equipment & quota transfer* 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 so equity is 100%. Profit at Full Equity is a useful absolute measure of the economic performance of fishing firms.

Rate of Return on Capital: is calculated as *Profit at Full Equity* divided by *Working Capital* multiplied by 100. In this calculation, the value of leased equipment or transferred quota is capitalised and added to *Working Capital* to represent a 'full equity' scenario. 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
- leasing.

Gross Income: refers to the cash receipts received by an individual firm and is expressed in dollar terms. *Gross Income* is calculated as catch (kg) multiplied by 'beach price' (\$/kg). Total boat income is the contribution of an individual fishing business to the GVP of a fishing sector or fishery.

Total Variable Cost: are costs which are dependent upon the level of catch or, more commonly, the amount of time spent fishing. As catch 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
- bait
- ice
- provisions
- crew payments
- unscheduled repairs & maintenance.

Working Capital: includes capital items that are required by the fishing business to earn the gross income². It includes boat hull, engine, electronics and other permanent fixtures and tender boats. Other capital items such as motor vehicles, sheds, cold-rooms, and jetty/moorings are included to the extent that they are used in the fishing business.

² Working capital should not be confused with financial capital which is money provided by lenders for a price (interest).

DOCUMENT HISTORY AND STATUS

Doc Version	Doc Status	Issued To	Qty elec	Date	Reviewed	Approved
1	Draft	DPI Fisheries	1 Word 1 PDF	7/12/21	AM	AM
2	Draft	DPI Fisheries	1 Word 1 PDF	15/12/21	AM	AM
3	Final	DPI Fisheries	1 Word 1 PDF	20/4/22	AM	AM

Printed: 20/04/2022 2:38:00 PM

Last Saved: 20/04/2022 2:38:00 PM

File Name: I:\CLIENTS\NSWDPI\ES2033_Economic Analysis for Harvest Fisheries\Reports\Accessibility reports\Economic_and_Social_Indicators_FY20_Estuary General_220420.docx

Project Manager: Anders Magnusson

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Name of Client: Department of Primary Industries

Name of Project: Economic and Social Indicators for the NSW Estuary General Fishery in 2019/20

Document Version: 3

Job Number: 2033

SUMMARY

This report presents economic and social indicators for the Estuary General fishery for 2019/20. BDO EconSearch was contracted by the Department of Primary Industries (DPI) to develop an independent economic and social indicator monitoring program to inform stakeholders with published financial, economic and social information about commercial fisheries in New South Wales (NSW). The objective is to inform discussions and decisions about fisheries management and to develop an understanding of the values supported by the industry. This report is complemented by a more detailed report 'Economic and Social Indicators for NSW Commercial Fisheries for 2019/20' (BDO 2021) that describes the monitoring program in detail and presents results for all NSW commercial fisheries.

A summary of key indicators is provided in Table S-1. In 2019/20, the Estuary General fishery produced \$23.0m in gross value of production (at beach price) from a catch of 2,784t of species counted by weight and 2,170,000 of species counted by number. The fishery generated \$-3.1m in net economic return. Including flow-on contributions to the broader economy, the fishery supported \$40.9m of gross state product and 439 fte jobs in NSW.

Table S-1 Summary of key economic indicators for 2019/20

Indicator	
Catch (t)	2,784t
Catch ('000)	2,170
Gross Value of Production (beach price) (\$m)	\$23.0m
Active Businesses	378 businesses
Fisheries fees/Gross Value of Production	5.5%
Rate of Return on Total Boat Capital	0.6%
Active Share Value per Active Business ^a	\$372,149
Gross State Product (direct + flow-on) (\$m)	\$40.9m
Employment (direct + flow-on)	439 fte jobs
Net Economic Return (\$m)	\$-3.1m
Net Economic Return/Gross Value of Production	-13.3%

^a Active Share Value refers to the value of shares held by active fishers.

Source: BDO EconSearch analysis

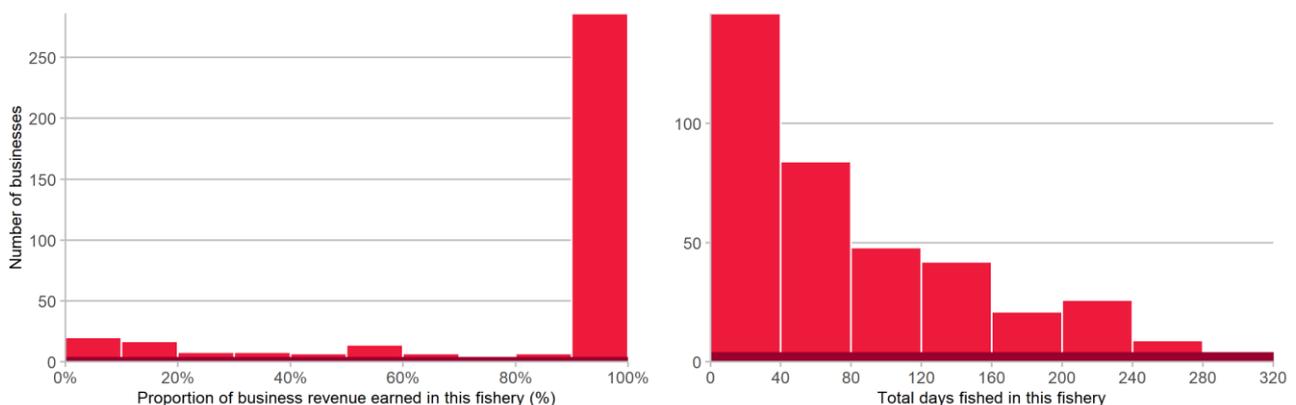
1. INTRODUCTION

This report presents economic and social indicators for the Estuary General fishery for 2019/20. BDO EconSearch was contracted by the Department of Primary Industries (DPI) to develop an independent economic and social indicator monitoring program to inform stakeholders with published financial, economic and social information about commercial fisheries in New South Wales (NSW). The objective is to inform discussions and decisions about fisheries management and to develop an understanding of the values supported by the industry. This report is complemented by a more detailed report ‘Economic and Social Indicators for NSW Commercial Fisheries for 2019/20’ (BDO 2021) that describes the monitoring program in detail and presents results for all NSW commercial fisheries.

The Estuary General Fishery is a diverse multi-species multi-method fishery operating throughout New South Wales estuarine systems. It is the most diverse fishery utilising most forms of fishing and gathering by the shareholders in this fishery. It is a share managed fishery with a multitude of endorsements available for the wide range of fishing methods used.

The variation in businesses in the Estuary General fishery in terms of proportion of revenue earned within the Estuary General fishery and total days fished is presented in Figure 1-1. Each visible bar represents at least 5 businesses for confidentiality reasons. The burgundy band along the horizontal axis covers the area between 0 and 4 businesses to ensure confidentiality. The limits of the horizontal axis are set to show non-confidential data only which means there may be businesses with greater days fished than the maximum axis values.

Figure 1-1 Revenue share and days fished of businesses in the Estuary General fishery in 2019/20



Source: 2021 business survey

Data

The indicators are based on a confidential survey of fishing businesses undertaken in 2021 and administrative data provided by Department of Primary Industries (DPI). Survey data are confidential and BDO will not provide individual data to DPI in any form that is not also appropriate to be published publicly, such as by aggregating responses into groups of at least 5 for any statistic (see BDO 2021 for details). All results in this report are calculated from a representative model of the fishery developed from survey data. At a high level, the data collected include:

- Survey data:
 - Itemised costs of fishing, business administration and associated processing
 - Species prices and market destinations
 - Share values

- Quota values
- Working capital values (e.g. vessel, vehicles, buildings and equipment)
- Perceptions of management, lifestyle and wellbeing.
- Department of Primary Industries data:
 - Fisher level fishing activity such as catch by species and effort, including spatial and temporal dimensions
 - Share ownership and trading
 - Licence fees
 - Disposal details
 - Species prices provided by Sydney Fish Market (as a contingency for gaps in survey based prices only).

Method

Indicators were produced through a number of techniques including:

- Business level statistical matching and imputation
- Regional economic contribution analysis (using an input-output model approach)
- Established financial reporting techniques
- Data visualisation.

A description of the methods used to produce these indicators is presented in ‘Economic and Social Indicators for NSW Commercial Fisheries for 2019/20’ (BDO 2021).

Indicators

This report presents indicators in the following categories:

- Economic indicators
 - Business financial indicators
 - Economic contribution indicators
 - Fishery economic indicators
- Social indicators
 - Perceptions of management
 - Lifestyle and satisfaction
 - Personal wellbeing
 - Community contribution.

Regions

Indicators for the Estuary General fishery that have a regional dimension use the regions described in the table below.

Table 1-1 Region definitions for indicators

Indicator category	Regions
- Survey sample summary	Estuary regions:
- Business financial indicators	- Region 1: Upper North Coast
- Economic contribution indicators	- Region 2: Clarence
	- Region 3: North Coast
	- Region 4: Central
	- Region 5: Metropolitan
	- Region 6: Upper South Coast
	- Region 7: Lower South Coast

2. SURVEY

The survey captured responses from 29.6% of fishing businesses that were active in 2019/20. A business is considered active if it fished at least one day during 2019/20. Regional response rates ranged from 42.9% (Region 1: Upper North Coast) to 22.9% (Region 3: North Coast) (Table 2-1).

Table 2-1 Survey sample from 2021 in the Estuary General fishery

Fishing Region	Active Businesses	Sample Size	%
Region 1: Upper North Coast	35	15	42.9%
Region 2: Clarence	66	22	33.3%
Region 3: North Coast	83	19	22.9%
Region 4: Central	151	47	31.1%
Region 5: Metropolitan	33	11	33.3%
Region 6: Upper South Coast	29	11	37.9%
Region 7: Lower South Coast	14	5	35.7%
Whole Fishery	378	112	29.6%

Source: BDO EconSearch analysis

3. CATCH, VALUE, PRICES AND MARKETS

Catch, price, value and market destinations are shown in Table 3-1 for the species where the survey provided at least 5 observations (to maintain confidentiality), these prices were used to calculate indicators. The price shown for other species is not a specific price but an average price of all the species included within the other species grouping. The Estuary General fishery produced 2,784t of species counted by weight and 2,170,000 of species counted by number of catch and \$23.0m in GVP (at beach price). Market destinations by catch include NSW (87.4%), Interstate (12.5%), Total overseas (0.8%). The proportion of catch exported overseas is likely to be lower due to the impact of COVID-19 and associated boarder restrictions and closures.

Table 3-1 Catch, GVP and markets for Estuary General fishery in 2019/20

Species	Catch	Price	Unit	GVP (\$m)	Market Destination (%)			
					NSW	Interstate	Direct overseas	Total overseas ^a
Sea Mullet	1,222,975	\$2.85	Kg	3.5	70.4%	29.6%	0.0%	4.8%
Mud Crab	115,366	\$28.17	Kg	3.3	90.4%	8.5%	0.0%	0.0%
Yellowfin Bream	241,427	\$13.20	Kg	3.2	74.5%	25.5%	0.0%	0.0%
Pipi	110,180	\$21.71	Kg	2.4	100.0%	0.0%	0.0%	0.0%
School Prawn	143,540	\$11.51	Kg	1.7	97.8%	2.2%	0.0%	0.0%
Sand Whiting	87,344	\$18.17	Kg	1.6	100.0%	0.0%	0.0%	0.0%
Dusky Flathead	111,463	\$10.33	Kg	1.2	100.0%	0.0%	0.0%	0.0%
Beachworms (Polychaete Worms)	556,281	\$1.46	Number	0.8	100.0%	0.0%	0.0%	0.0%
Blue Swimmer Crab	50,856	\$14.33	Kg	0.7	100.0%	0.0%	0.0%	0.0%
Luderick	247,895	\$2.31	Kg	0.6	79.2%	20.8%	0.0%	0.0%
Common Silverbiddy	60,857	\$6.88	Kg	0.4	84.0%	16.0%	0.0%	0.0%
Mulloway	28,846	\$11.20	Kg	0.3	99.9%	0.1%	0.0%	0.1%
Trumpeter Whiting	9,723	\$8.77	Kg	0.1	100.0%	0.0%	0.0%	0.0%
Fantail Mullet	24,502	\$2.03	Kg	0.0	100.0%	0.0%	0.0%	0.0%
Forktail Catfishes	20,943	\$2.25	Kg	0.0	100.0%	0.0%	0.0%	0.0%
River Garfish	4,539	\$8.24	Kg	0.0	100.0%	0.0%	0.0%	0.0%
Other species	303,624	\$8.80	Kg	2.7	83.1%	16.8%	0.0%	0.3%
Other species	1,613,298	\$0.33	Number	0.5	85.7%	14.1%	0.0%	0.7%
Fishery Total	2,784,080	\$7.77	Kg	23.0	87.4%	12.5%	0.0%	0.8%
Fishery Total	2,169,580	\$0.62	Number					

^a This estimate is made by fishing businesses. It is their understanding of total exports by all businesses (e.g. themselves and seafood processors).

Source: BDO EconSearch analysis

4. FINANCIAL INDICATORS

This section presents a series of tables that describe the average financial performance of businesses in the Estuary General fishery in 2019/20. The average business refers to the average activity within the Estuary General fishery of businesses that access the fishery, which means that a 'business' as represented in the financial indicators table may actually be just the proportion of the business attributable to the Estuary General fishery. For example, a business that is active in both the Estuary General fishery and another fishery will have their business activity (employment, expenditure, capital values, etc.) proportionally split between the financial indicators tables of the two fisheries.

Following the financial indicators tables, the value of assets, liabilities and equity of fishing businesses that accessed the Estuary General fishery in 2019/20 is summarised.

4.1. Financial Performance

Financial indicators are presented in Table 4-1 to Table 4-5 that follow using various groupings:

- **Whole fishery:** provides an understanding of the average performance across the whole fishery.
- **Profitability quartiles:** provides an understanding of the performance of the average business in each profitability quartile (defined by return on investment). This allows comparison of business characteristics at different levels of profitability.
- **Activity level quartiles:** provides an understanding of the performance of the average businesses in each activity level quartile (by days fished). This allows comparison of the business characteristics of businesses with different levels of activity.
- **Fishing regions:** provides an understanding of the performance of the average businesses in each fishing region. This allows comparison of the business characteristics and performance of businesses active in each region. Business activity is proportionally split between regions in the same way it is split between fisheries.
- **Specialisation:** provides an understanding of the performance of businesses that are specialised in this fishery compared to those that earn more of their revenue in other fisheries. This allows comparison of the business characteristics of businesses with different levels of specialisation.

Fishing activity

The average business that accessed the Estuary General fishery in 2019/20 employed 0.6 fte jobs and fished on 79 days of the year (Table 4-1).

Revenue and costs

Average gross income was \$60,796 and average total variable costs was \$35,388, producing an average boat gross margin of \$25,408. Average total fixed cost was \$16,332 which produces an average gross operating surplus of \$25,893 (Table 4-1).

Profitability

Average boat business profit, which accounts for depreciation and unpaid labour, was \$1,651. Average profit at full equity, which excludes any leasing and interest costs, was \$2,866. Dividing profit at full equity by the value of capital produces a return on investment of 2.5% including the capital value of fishing gear and equipment only, or 0.6% when also including the capital value of fishery shares or licences (Table 4-1).

Table 4-1 Financial performance of the average business in the Estuary General fishery in 2019/20

Indicator	Whole Fishery	
	Value per active business	%
Fishing Businesses		
Active Businesses	378	
Sample Size	112	
Fishing Activity		
Days Fished	79	
Catch (kg)	7,365	
Catch (no.)	5,740	
Prop. of Revenue Earned in this Fishery	84.0%	
Employment		
Total Jobs	1.4	
FTE Jobs	0.6	
(1) Gross Income	\$60,796	
Variable Costs		
Bait/Ice	\$2,486	5%
Fuel	\$8,527	16%
Labour - paid	\$4,002	8%
(2) Labour - unpaid	\$12,660	24%
Other	\$396	1%
Provisions	\$481	1%
Repairs & Maintenance	\$6,836	13%
(3) Total Variable Cost	\$35,388	68%
Fixed Costs		
Insurance	\$1,403	3%
(4) Interest	\$697	1%
(5) Labour - unpaid	\$4,157	8%
(6) Leasing of building, equipment & quota transfers	\$192	
Legal & Accounting	\$1,285	2%
Licence fee	\$3,305	6%
Office & Admin	\$1,872	4%
Other	\$1	0%
Other licence fees	\$831	
Slipping & Mooring	\$593	1%
Telephone etc.	\$1,804	3%
Travel	\$191	0%
(7) Total Fixed Cost	\$16,332	32%
(8) Total Boat Cash Costs (3+7)	\$51,720	100%
Profitability		
Boat Gross Margin (1-3)	\$25,408	
(9) Total Unpaid Labour (2+5)	\$16,817	
Gross Operating Surplus (1-8+9)	\$25,893	
(10) Boat Cash Income (1-8)	\$9,076	
(11) Depreciation	\$7,425	
(12) Boat Business Profit (10-11)	\$1,651	
(13) Profit at Full Equity (12+4+6)	\$2,866	
Boat Capital		
(14) Fishing Gear and Equipment	\$104,405	
Licence Value	\$372,149	
(15) Total Working Capital	\$476,555	
Rate of Return		
Rate of Return on Fishing Gear and Equipment (13/14*100)	2.5%	
Rate of Return on Total Working Capital (13/15*100)	0.6%	

Source: BDO EconSearch analysis

Table 4-2 Financial performance in the Estuary General fishery in 2019/20, average business in each profitability quartile

Indicator	Return on Investment Quartile			
	Q1	Q2	Q3	Q4
Fishing Businesses				
Active Businesses	95	94	94	95
Sample Size	13	26	36	37
Fishing Activity				
Days Fished	24	65	97	129
Catch (kg)	1,737	4,947	7,603	15,151
Catch (no.)	728	2,568	1,146	18,434
Prop. of Revenue Earned in this Fishery	93.4%	83.7%	74.7%	84.2%
Employment				
Total Jobs	1.8	1.3	1.1	1.2
FTE Jobs	0.5	0.5	0.6	0.7
(1) Gross Income	\$13,651	\$38,164	\$70,784	\$120,452
Variable Costs				
Bait/Ice	\$2,111	\$2,530	\$2,954	\$2,354
Fuel	\$9,512	\$7,511	\$8,595	\$8,478
Labour - paid	\$4,465	\$4,273	\$5,473	\$1,816
(2) Labour - unpaid	\$9,820	\$11,059	\$12,845	\$16,902
Other	\$320	\$347	\$374	\$544
Provisions	\$341	\$819	\$412	\$355
Repairs & Maintenance	\$9,897	\$5,334	\$5,569	\$6,515
(3) Total Variable Cost	\$36,465	\$31,874	\$36,221	\$36,964
Fixed Costs				
Insurance	\$1,526	\$1,605	\$1,147	\$1,335
(4) Interest	\$312	\$222	\$901	\$1,350
(5) Labour - unpaid	\$4,094	\$3,413	\$4,471	\$4,647
(6) Leasing of building, equipment & quota transfers	\$143	\$92	\$142	\$389
Legal & Accounting	\$1,258	\$1,358	\$1,364	\$1,162
Licence fee	\$2,259	\$3,231	\$3,558	\$4,173
Office & Admin	\$2,289	\$1,990	\$1,794	\$1,418
Other	\$0	\$4	\$0	\$0
Other licence fees	\$789	\$1,029	\$677	\$829
Slipping & Mooring	\$1,207	\$518	\$296	\$345
Telephone etc.	\$3,181	\$1,321	\$1,046	\$1,656
Travel	\$120	\$134	\$335	\$176
(7) Total Fixed Cost	\$17,178	\$14,917	\$15,731	\$17,479
(8) Total Boat Cash Costs (3+7)	\$53,642	\$46,792	\$51,953	\$54,444
Profitability				
Boat Gross Margin (1-3)	-\$22,814	\$6,290	\$34,562	\$83,487
(9) Total Unpaid Labour (2+5)	\$13,913	\$14,472	\$17,315	\$21,549
Gross Operating Surplus (1-8+9)	-\$26,079	\$5,845	\$36,146	\$87,557
(10) Boat Cash Income (1-8)	-\$39,992	-\$8,627	\$18,831	\$66,008
(11) Depreciation	\$11,210	\$6,315	\$5,679	\$6,465
(12) Boat Business Profit (10-11)	-\$51,202	-\$14,942	\$13,152	\$59,543
(13) Profit at Full Equity (12+4+6)	-\$50,107	-\$14,088	\$14,501	\$61,101
Boat Capital				
(14) Fishing Gear and Equipment	\$120,234	\$123,664	\$83,299	\$90,404
Licence Value	\$63,190	\$200,028	\$1,007,319	\$222,933
(15) Total Working Capital	\$183,424	\$323,692	\$1,090,619	\$313,338
Rate of Return				
Rate of Return on Fishing Gear and Equipment (13/14*100)	-36.9%	-10.3%	15.7%	64.6%
Rate of Return on Total Working Capital (13/15*100)	-25.2%	-4.2%	1.3%	19.2%

Source: BDO EconSearch analysis

Table 4-3 Financial performance in the Estuary General fishery in 2019/20, average business in each days fished quartile

Indicator	Days Fished Quartile			
	Q1	Q2	Q3	Q4
Fishing Businesses				
Active Businesses	98	93	92	95
Sample Size	13	30	38	31
Fishing Activity				
Days Fished	7	37	87	186
Catch (kg)	773	5,291	10,588	13,075
Catch (no.)	137	2,679	8,829	11,524
Prop. of Revenue Earned in this Fishery	75.1%	80.0%	85.4%	95.8%
Employment				
Total Jobs	1.2	1.5	1.6	1.2
FTE Jobs	0.3	0.4	0.5	1.1
(1) Gross Income	\$6,745	\$40,659	\$79,891	\$117,773
Variable Costs				
Bait/Ice	\$1,756	\$1,976	\$3,151	\$3,093
Fuel	\$2,971	\$9,001	\$11,683	\$10,736
Labour - paid	\$203	\$6,001	\$5,457	\$4,556
(2) Labour - unpaid	\$6,156	\$6,771	\$12,637	\$25,158
Other	\$184	\$336	\$403	\$668
Provisions	\$38	\$824	\$547	\$539
Repairs & Maintenance	\$6,676	\$5,984	\$7,972	\$6,734
(3) Total Variable Cost	\$17,985	\$30,894	\$41,850	\$51,484
Fixed Costs				
Insurance	\$1,162	\$1,646	\$1,325	\$1,491
(4) Interest	\$14	\$232	\$2,173	\$427
(5) Labour - unpaid	\$3,253	\$903	\$2,562	\$9,819
(6) Leasing of building, equipment & quota transfers	\$2	\$28	\$628	\$126
Legal & Accounting	\$707	\$1,949	\$1,224	\$1,291
Licence fee	\$1,496	\$2,962	\$4,037	\$4,797
Office & Admin	\$1,904	\$1,260	\$1,459	\$2,839
Other	\$3	\$0	\$0	\$0
Other licence fees	\$464	\$791	\$878	\$1,202
Slipping & Mooring	\$964	\$679	\$472	\$242
Telephone etc.	\$2,675	\$1,139	\$1,503	\$1,849
Travel	\$37	\$127	\$266	\$340
(7) Total Fixed Cost	\$12,683	\$11,716	\$16,527	\$24,425
(8) Total Boat Cash Costs (3+7)	\$30,668	\$42,610	\$58,376	\$75,909
Profitability				
Boat Gross Margin (1-3)	-\$11,240	\$9,765	\$38,042	\$66,290
(9) Total Unpaid Labour (2+5)	\$9,409	\$7,674	\$15,199	\$34,978
Gross Operating Surplus (1-8+9)	-\$14,514	\$5,724	\$36,714	\$76,843
(10) Boat Cash Income (1-8)	-\$23,923	-\$1,951	\$21,515	\$41,865
(11) Depreciation	\$4,734	\$7,045	\$10,286	\$7,802
(12) Boat Business Profit (10-11)	-\$28,656	-\$8,996	\$11,229	\$34,063
(13) Profit at Full Equity (12+4+6)	-\$27,908	-\$8,480	\$13,728	\$35,198
Boat Capital				
(14) Fishing Gear and Equipment	\$69,975	\$134,131	\$104,949	\$110,297
Licence Value	\$59,151	\$842,725	\$242,468	\$359,948
(15) Total Working Capital	\$129,126	\$976,856	\$347,418	\$470,245
Rate of Return				
Rate of Return on Fishing Gear and Equipment (13/14*100)	-33.0%	-6.1%	12.3%	28.3%
Rate of Return on Total Working Capital (13/15*100)	-19.4%	-0.9%	3.9%	7.3%

Source: BDO EconSearch analysis

Table 4-4 Financial performance in the Estuary General fishery in 2019/20, average business in each region

Indicator	Region						
	North Coast	Central	Upper North Coast	Upper South Coast	Clarence	Lower South Coast	Metropolitan
Fishing Businesses							
Active Businesses	83	151	35	29	66	14	33
Sample Size	19	47	15	11	22	5	11
Fishing Activity							
Days Fished	75	84	74	83	54	55	49
Catch (kg)	4,585	7,305	5,591	10,536	8,232	8,134	4,306
Catch (no.)	4,394	2,021	1,304	1,099			43,098
Prop. of Revenue Earned in this Region	90.9%	95.1%	89.0%	91.3%	90.9%	79.4%	91.7%
Employment							
Total Jobs	1.3	1.3	1.1	1.6	1.0	1.3	1.1
FTE Jobs	0.6	0.6	0.5	0.6	0.4	0.4	0.5
(1) Gross Income	\$49,475	\$64,766	\$55,447	\$75,580	\$40,683	\$67,775	\$40,252
Variable Costs							
Bait/Ice	\$1,679	\$2,713	\$2,259	\$2,567	\$1,801	\$1,671	\$2,873
Fuel	\$7,195	\$8,043	\$12,676	\$5,850	\$7,033	\$6,889	\$7,198
Labour - paid	\$1,666	\$5,315	\$4,873	\$2,352	\$3,178	\$2,713	\$2,594
(2) Labour - unpaid	\$12,433	\$13,323	\$10,253	\$12,911	\$8,381	\$9,845	\$9,621
Other	\$320	\$381	\$331	\$663	\$312	\$290	\$312
Provisions	\$339	\$413	\$535	\$1,017	\$323	\$632	\$391
Repairs & Maintenance	\$6,023	\$7,357	\$5,643	\$6,007	\$5,340	\$6,009	\$7,287
(3) Total Variable Cost	\$29,655	\$37,545	\$36,570	\$31,368	\$26,369	\$28,049	\$30,275
Fixed Costs							
Insurance	\$1,254	\$1,419	\$1,885	\$1,139	\$786	\$1,145	\$1,388
(4) Interest	\$353	\$746	\$627	\$584	\$533	\$279	\$1,320
(5) Labour - unpaid	\$4,180	\$4,684	\$3,962	\$4,793	\$1,939	\$1,236	\$2,854
(6) Leasing of building, equipment & quota transfers	\$40	\$202	\$152	\$477	\$77	\$0	\$436
Legal & Accounting	\$1,137	\$1,319	\$912	\$973	\$1,215	\$1,321	\$1,011
Licence fee	\$2,317	\$3,608	\$2,827	\$3,651	\$2,822	\$3,091	\$2,352
Office & Admin	\$1,855	\$2,231	\$1,538	\$1,568	\$1,060	\$752	\$1,126
Other	\$0	\$0	\$0	\$0	\$0	\$0	\$10
Other licence fees	\$757	\$913	\$739	\$867	\$500	\$552	\$652
Slipping & Mooring	\$466	\$577	\$749	\$470	\$321	\$400	\$1,040
Telephone etc.	\$1,773	\$1,969	\$1,515	\$1,599	\$1,077	\$1,054	\$1,608
Travel	\$121	\$158	\$58	\$164	\$325	\$154	\$239
(7) Total Fixed Cost	\$14,252	\$17,828	\$14,965	\$16,286	\$10,655	\$9,985	\$14,038
(8) Total Boat Cash Costs (3+7)	\$43,907	\$55,373	\$51,534	\$47,653	\$37,024	\$38,034	\$44,313
Profitability							
Boat Gross Margin (1-3)	\$19,821	\$27,222	\$18,877	\$44,213	\$14,314	\$39,726	\$9,977
(9) Total Unpaid Labour (2+5)	\$16,613	\$18,008	\$14,216	\$17,704	\$10,320	\$11,081	\$12,475
Gross Operating Surplus (1-8+9)	\$22,182	\$27,401	\$18,128	\$45,631	\$13,979	\$40,822	\$8,415
(10) Boat Cash Income (1-8)	\$5,569	\$9,393	\$3,913	\$27,927	\$3,659	\$29,741	-\$4,061
(11) Depreciation	\$8,068	\$6,711	\$8,222	\$8,127	\$4,921	\$6,813	\$5,452
(12) Boat Business Profit (10-11)	-\$2,500	\$2,682	-\$4,309	\$19,799	-\$1,262	\$22,928	-\$9,513
(13) Profit at Full Equity (12+4+6)	-\$1,643	\$4,100	-\$3,316	\$20,792	-\$468	\$23,348	-\$7,932
Boat Capital							
(14) Fishing Gear and Equipment	\$108,806	\$102,950	\$99,274	\$111,783	\$68,162	\$90,314	\$73,020
Licence Value	\$220,460	\$234,639	\$176,154	\$1,813,467	\$136,438	\$1,117,210	\$107,334
(15) Total Working Capital	\$329,266	\$337,588	\$275,428	\$1,925,250	\$204,600	\$1,207,523	\$180,353
Rate of Return							
Rate of Return on Fishing Gear and Equipment (13/14*100)	-1.4%	3.5%	-3.1%	17.3%	-0.6%	25.1%	-10.1%
Rate of Return on Total Working Capital (13/15*100)	-0.5%	1.2%	-1.2%	1.1%	-0.2%	1.9%	-4.3%

Source: BDO EconSearch analysis

Table 4-5 Financial performance in the Estuary General fishery in 2019/20, average business in each specialisation group

Indicator	Share of Revenue earned in Fishery	
	High Revenue Share	Low Revenue Share
Fishing Businesses		
Active Businesses	268	110
Sample Size	55	57
Fishing Activity		
Days Fished	83	68
Catch (kg)	6,776	8,801
Catch (no.)	8,069	65
Prop. of Revenue Earned in this Fishery	100.0%	45.0%
Employment		
Total Jobs	1.6	0.8
FTE Jobs	0.7	0.4
(1) Gross Income	\$59,563	\$63,800
Variable Costs		
Bait/Ice	\$2,669	\$2,040
Fuel	\$8,534	\$8,508
Labour - paid	\$2,876	\$6,746
(2) Labour - unpaid	\$14,832	\$7,368
Other	\$435	\$303
Provisions	\$531	\$359
Repairs & Maintenance	\$7,636	\$4,887
(3) Total Variable Cost	\$37,513	\$30,210
Fixed Costs		
Insurance	\$1,636	\$837
(4) Interest	\$765	\$531
(5) Labour - unpaid	\$4,452	\$3,439
(6) Leasing of building, equipment & quota transfers	\$155	\$281
Legal & Accounting	\$1,540	\$665
Licence fee	\$3,032	\$3,970
Office & Admin	\$2,248	\$958
Other	\$0	\$3
Other licence fees	\$1,011	\$393
Slipping & Mooring	\$572	\$642
Telephone etc.	\$2,166	\$924
Travel	\$174	\$232
(7) Total Fixed Cost	\$17,751	\$12,873
(8) Total Boat Cash Costs (3+7)	\$55,265	\$43,084
Profitability		
Boat Gross Margin (1-3)	\$22,049	\$33,590
(9) Total Unpaid Labour (2+5)	\$19,284	\$10,807
Gross Operating Surplus (1-8+9)	\$23,582	\$31,523
(10) Boat Cash Income (1-8)	\$4,298	\$20,716
(11) Depreciation	\$8,425	\$4,988
(12) Boat Business Profit (10-11)	-\$4,127	\$15,729
(13) Profit at Full Equity (12+4+6)	-\$2,725	\$16,487
Boat Capital		
(14) Fishing Gear and Equipment	\$121,229	\$63,416
Licence Value	\$437,893	\$211,974
(15) Total Working Capital	\$559,122	\$275,390
Rate of Return		
Rate of Return on Fishing Gear and Equipment (13/14*100)	-2.0%	24.3%
Rate of Return on Total Working Capital (13/15*100)	-0.5%	5.9%

Source: BDO EconSearch analysis

4.2. Assets, Liabilities and Equity

Commercial fishing businesses in New South Wales utilise valuable fishery shares, vessels or vehicles and other working capital. They may hold cash and may also hold debt to finance the business and other liabilities. The total assets held by a business less its total liabilities is the business' equity, which can be expressed in dollar terms or as a percentage of total asset value. Table 4-6 presents a simple average of the equity of all surveyed businesses that access the Estuary General fishery. The average is of whole businesses and includes the share values for all fisheries that they access, unlike the financial indicator tables above which present averages of proportions of businesses that access the fishery.

Table 4-6 Assets, liabilities and equity in the Estuary General fishery in 2019/20

	Value
Assets	
Share value	\$435,950
Working capital	\$166,646
Other assets	\$171,797
Total assets	\$774,394
Liabilities	
Total liabilities	\$44,658
Equity	
Total equity	\$729,736
Equity / Total assets	94.2%

Source: BDO EconSearch analysis

5. ECONOMIC CONTRIBUTION

Estimates of the economic contribution of the Estuary General fishery to the NSW and regional economies in 2019/20 are outlined in this section.

Economic 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 utilised the detailed industry specific data reported above in combination with other regional/state data that describe the linkages that exist within the regional economies.

Contribution or impact?

An *economic contribution analysis* (presented in this report) can be thought of as a *footprint* or *snapshot* analysis of economic activity. It is distinctly different to an *economic impact analysis*, which can be thought of as an analysis of a *change* in economic activity (not the subject of this report). An *economic impact analysis* is an appropriate approach for evaluating a *change* 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.

Direct and flow-on effects

The following types of activity are presented in this report as *direct* economic contribution:

- the landed beach value of production
- the sustaining capital expenditure of fishing businesses
- the margin value of local seafood processing.

Each of these activities generates flow-on effects to other sectors through purchases of inputs and the employment of labour. These effects have been estimated using input-output analysis (BDO 2021).

Economic contribution indicators

Economic contributions have been specified in terms of the following indicators.

- Value of output (direct only and equivalent to gross value of production or GDP)
- Employment (fte and total jobs)
- Household income
- Gross regional (and state) product.

5.1. Economic Contribution to New South Wales

The estimated economic contribution of the Estuary General fishery to New South Wales in 2019/20 is presented in Table 5-1.

Direct contribution measures fishing and downstream activities (i.e. processing and capital expenditure). Flow-on contribution measures the economic effects in other sectors of the economy (retail and wholesale trade, manufacturing, etc.) generated by fishing and processing activities, that is, the multiplier effects. Flow-on effects are disaggregated by industry with the top 10 industries shown separately in the table. Capital expenditures are assumed to be the same as depreciation (i.e. sustaining the capital stock) 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.

Table 5-1 Economic contribution to New South Wales of the Estuary General fishery in 2019/20

Sector	Output (\$m)	Gross State Product (\$m)	Household Income (\$m)	Employment (fte)	Employment (total)
Direct					
Fishing	23.0	13.2	7.9	221	517
CAPEX	0.8	0.4	0.3	5	5
Processing	11.4	3.0	1.2	19	18
Total Direct	35.2	16.7	9.4	245	540
Flow-on					
Personal & Other Services		1.6	1.5	27	27
Retail Trade		1.7	1.2	23	27
Professional, Scientific & Technical Services		1.9	1.9	17	15
Food & Beverage Services		0.7	0.6	13	17
Admin Support Services		1.0	1.0	13	13
Health & Community Services		1.0	1.0	12	14
Wholesale Trade		1.4	1.0	12	11
Education & Training		0.8	0.8	9	9
Aquaculture		0.8	0.4	9	8
Public Order & Safety		0.4	0.4	5	5
Other Sectors		12.9	4.6	54	54
Total Flow-ons		24.2	14.2	194	201
Total Contribution		40.9	23.6	439	741

Source: BDO EconSearch analysis

Value of Output

The value of output at beach price (also known as GVP) generated directly in the Estuary General fishery in 2019/20 was \$23.0m (Table 5-1).

Employment

The Estuary General fishery directly contributed an estimated 221 fte jobs in 2019/20 while associated seafood processing of catch and capital expenditure by fishing businesses supported additional employment of around 24 fte jobs (Table 5-1).

Flow-on business activity was estimated to support a further 194 fte jobs in 2019/20 state-wide. These jobs were concentrated in the Personal & Other Services, Retail Trade, and Professional, Scientific & Technical Services sectors. The total employment contribution to New South Wales was estimated to be 439 fte jobs in 2019/20 (Table 5-1).

Household Income

Estimated household income of \$ 7.9m was earned in 2019/20 in the Estuary General fishery (wages of employees and estimated drawings by owner/operators) while associated seafood processing of catch and capital expenditure by fishing businesses generated an estimated additional \$1.5m in household income. Flow-on business activity was estimated to support a further \$14.2m of household income in 2019/20 state-wide. The estimated total household income contribution in New South Wales was \$23.6m in 2019/20 (Table 5-1).

Contribution to GSP

Contribution to GSP is measured as value of output less the cost of goods and services (including imports but excluding wages) used in producing the output. Estimated GSP of \$13.2m was produced in 2019/20 by the Estuary General fishery while associated seafood processing of catch and capital expenditure by fishing businesses generated an estimated additional \$3.5m in GSP. Flow-on business activity was estimated to support a further \$24.2m of GSP in 2019/20 state-wide. The estimated total GSP contribution in New South Wales was \$40.9m in 2019/20 (Table 5-1).

5.2. Economic Contribution to Regions of New South Wales

Table 5-2 presents the estimated economic contribution of the Estuary General fishery to regions of New South Wales in 2019/20. Direct activity includes fishing, capital and seafood processing activity. In terms of fte employment including all flow-on effects, the largest contributions of the Estuary General fishery were to Central (149 fte jobs) and North Coast (76 fte jobs).

Table 5-2 Economic contribution to regions of New South Wales of the Estuary General fishery in 2019/20

Region	Output (\$m)	Gross Regional Product (\$m)	Household Income (\$m)	Employment (fte)	Employment (total)
Direct					
Upper North Coast	2.2	1.1	0.7	19	40
Clarence	4.3	1.8	1.1	27	72
North Coast	5.0	2.6	1.7	50	112
Central	10.7	6.1	3.7	97	203
Metropolitan	9.1	2.6	1.4	29	48
Upper South Coast	2.8	1.6	0.6	18	46
Lower South Coast	1.1	0.7	0.2	6	19
New South Wales	35.2	16.7	9.4	245	540
Flow-On					
Upper North Coast		1.2	0.7	11	12
Clarence		2.3	1.3	20	21
North Coast		2.9	1.7	26	27
Central		6.1	3.6	52	55
Metropolitan		6.0	3.2	45	46
Upper South Coast		1.2	0.7	11	11
Lower South Coast		0.4	0.3	4	4
New South Wales		24.2	14.2	194	201
Total					
Upper North Coast		2.3	1.5	30	51
Clarence		4.1	2.4	47	93
North Coast		5.5	3.4	76	140
Central		12.2	7.3	149	258
Metropolitan		8.7	4.6	74	94
Upper South Coast		2.8	1.4	28	57
Lower South Coast		1.1	0.5	10	23
New South Wales		40.9	23.6	439	741

Source: BDO EconSearch analysis

6. NET ECONOMIC RETURN

Net economic return is the long-run profit from a fishery after all costs have been met, including fuel, crew costs, repairs, the opportunity cost of family and owner labour, fishery management costs, depreciation and the opportunity cost of capital (excluding endorsement) (Bath et al. 2018). These unit costs or long-term costs all need to be covered if the fishing business is to remain viable in the fishery. The cost of fisheries management is included as a cash cost to fishing businesses through licence fees, though this likely underestimates the cost of fisheries management as this cost is not fully recovered from businesses. The opportunity cost of capital is equivalent to what the fisher's investment could have earned in the next most similar alternative use considering risk and skills required. What remains after the value of these inputs (labour, capital, materials and services) has been netted out is the net economic return.

Commercial fishing operations in Australia are not risk free. Returns can be impacted both positively and negatively by factors such as natural events, changes in market conditions, disease, and management regulations. Determining the opportunity cost of capital involves an assessment of the degree of financial risk involved in the activity. For a risk-free operation, an appropriate opportunity cost of capital might be the long-term real rate of return on government bonds. The greater the risks involved, the greater is the necessary return on capital to justify the investment in that particular activity. For this analysis an opportunity cost of capital of 10 per cent has been used with sensitivity analysis at 7 and 15 per cent. The lower-bound is consistent with ABARES Australian fisheries economic indicator reporting for commonwealth managed fisheries (Bath et al. 2018). Commonwealth managed fisheries are generally larger and characterised by larger businesses with less overall variation than state managed inshore fisheries. This is why the 7 per cent used by ABARES is used as a lower-bound in this analysis. The upper-bound of 15 per cent represents a reasonable estimate for what an investor might expect when buying into a commercial fishery in New South Wales, given the variability and risk involved in this type of fishing business.

The net economic return results are presented in Table 6-1. Assuming an opportunity cost of capital of 10 per cent, net economic return generated in the Estuary General fishery was estimated to be \$-3.06m in 2019/20.

Table 6-1 Net Economic Return of the Estuary General fishery in 2019/20

	Value (\$m)
Gross Value of Production	22.98
Less Labour Costs	7.87
Less Materials & Services	11.42
Less Depreciation	2.81
Less Opportunity Cost of Capital (10%)	3.95
Net Economic Return	-3.06

Source: BDO EconSearch analysis

The sensitivity analysis in Table 6-2 shows that, with the varying assumptions about opportunity cost of capital, net economic return was likely in the range of \$-5.03m to \$-1.87m.

Table 6-2 Sensitivity of Net Economic Return

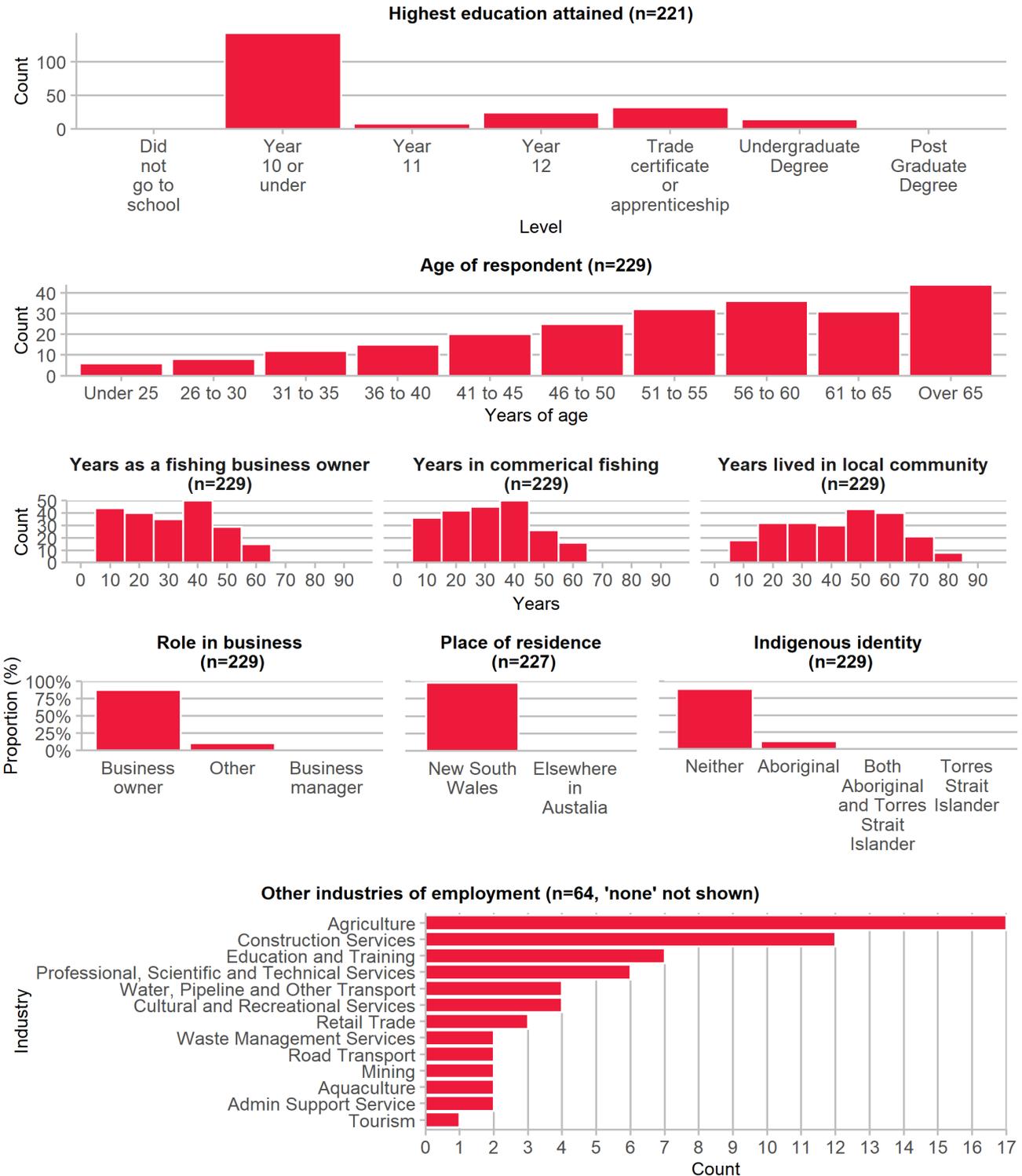
Opportunity Cost of Capital (%)	7%	10%	15%
Less Opportunity Cost of Capital (\$m)	2.76	3.95	5.92
Net Economic Return (\$m)	-1.87	-3.06	-5.03

Source: BDO EconSearch analysis

7. DEMOGRAPHICS

Figure 7-1 present a demographic profile of fishers who accessed the Estuary General fishery in New South Wales in 2019/20.

Figure 7-1 Demographic profile of the Estuary General fishery in 2019/20



Source: 2021 business survey

8. SOCIAL INDICATORS

Fishers may derive non-financial benefits or costs from the Estuary General fishery and may contribute to the community in different ways. This section presents a series of social indicators including:

- Perceptions of management
- Lifestyle and satisfaction
- Personal wellbeing
- Community contribution.

8.1. Management

Figure 8-1 to Figure 8-3 presents fishers' perceptions of different aspects of fishery management and participation in management.

Fishers who access the Estuary General fishery were almost unanimous in agreement that they had a good understanding of the fishing rules and regulations that apply to their fishing activities. A significant majority also agreed that most commercial fishers comply with fishing rules and regulations and most fishers felt that it was easy for their business to comply with them. These results indicate a high level of stewardship amongst fishers who access the Estuary General fishery which is associated with lower costs of management and compliance activities, and a greater ability to achieve ecological sustainability.

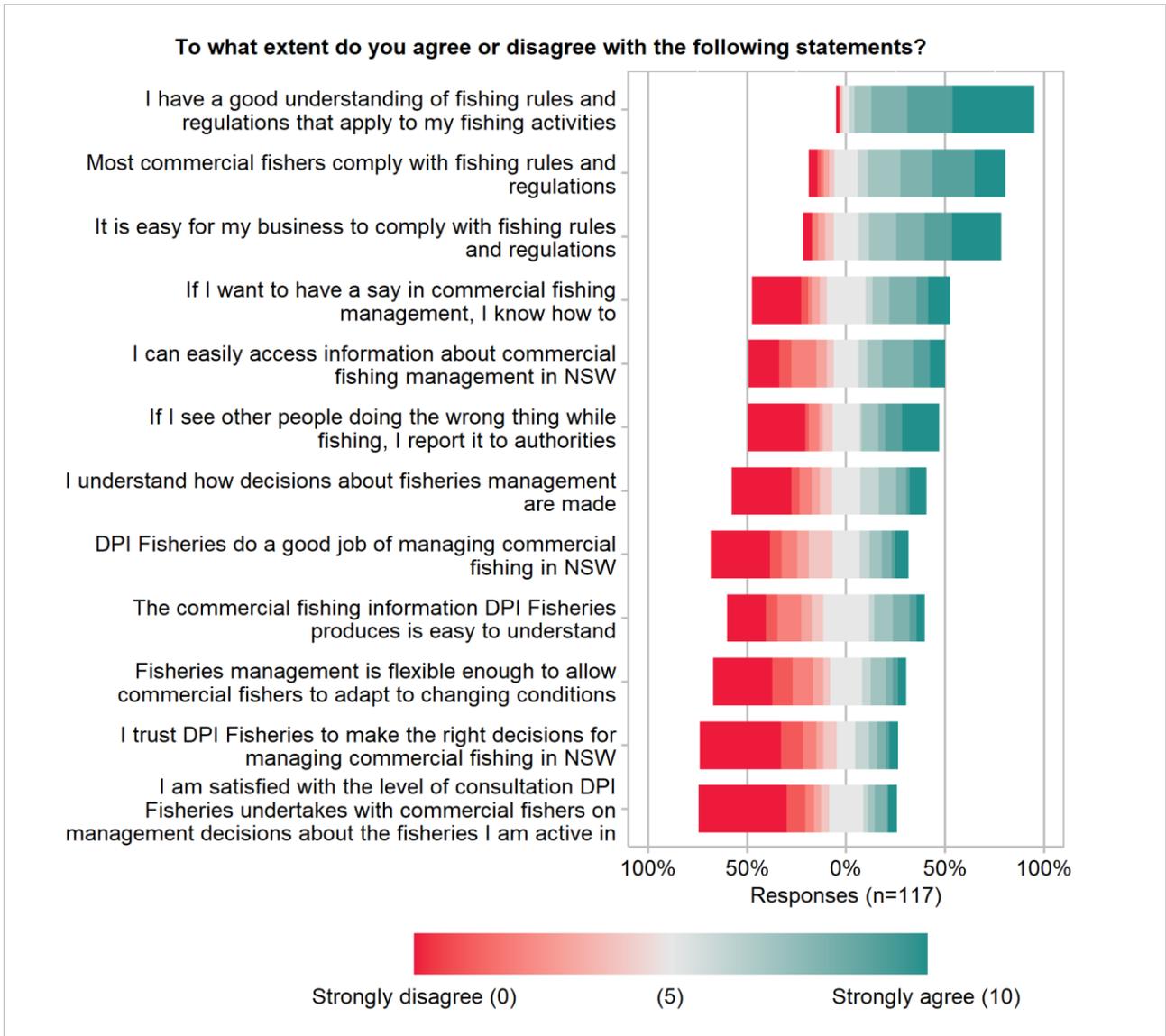
Importantly, a significant majority of fishers who access the Estuary General fishery do not trust DPI Fisheries to make the right decisions for managing commercial fishing in NSW. This indicates that there may be problems in terms of management achieving desired social outcomes. Fishers are more likely to trust fisheries management if they feel the processes used to make decisions are transparent. Over half of fishers who access the Estuary General fishery indicated that they did not think the information DPI Fisheries produces is easy to understand or how fisheries management decisions are made. Half of fishers who access the Estuary General fishery indicated that it was not easy to access information about commercial fishing management in NSW. A significant majority of fishers who access the Estuary General fishery also indicated that they did not feel that consultation processes are satisfactory or that fisheries management is flexible enough. Almost half of fishers who access the Estuary General fishery indicated that they do not know how to have a say in fishery management.

These perceptions suggest that communication and transparency between DPI Fisheries and fishers that access the Estuary General fishery may be affecting trust in fisheries management.

Most fishers who access the Estuary General fishery indicated that they felt fairly treated by fisheries managers in relation to gear restrictions, though more than half indicated that they felt unfairly treated in relation to access to fishing areas and the processes around decision making in fisheries management.

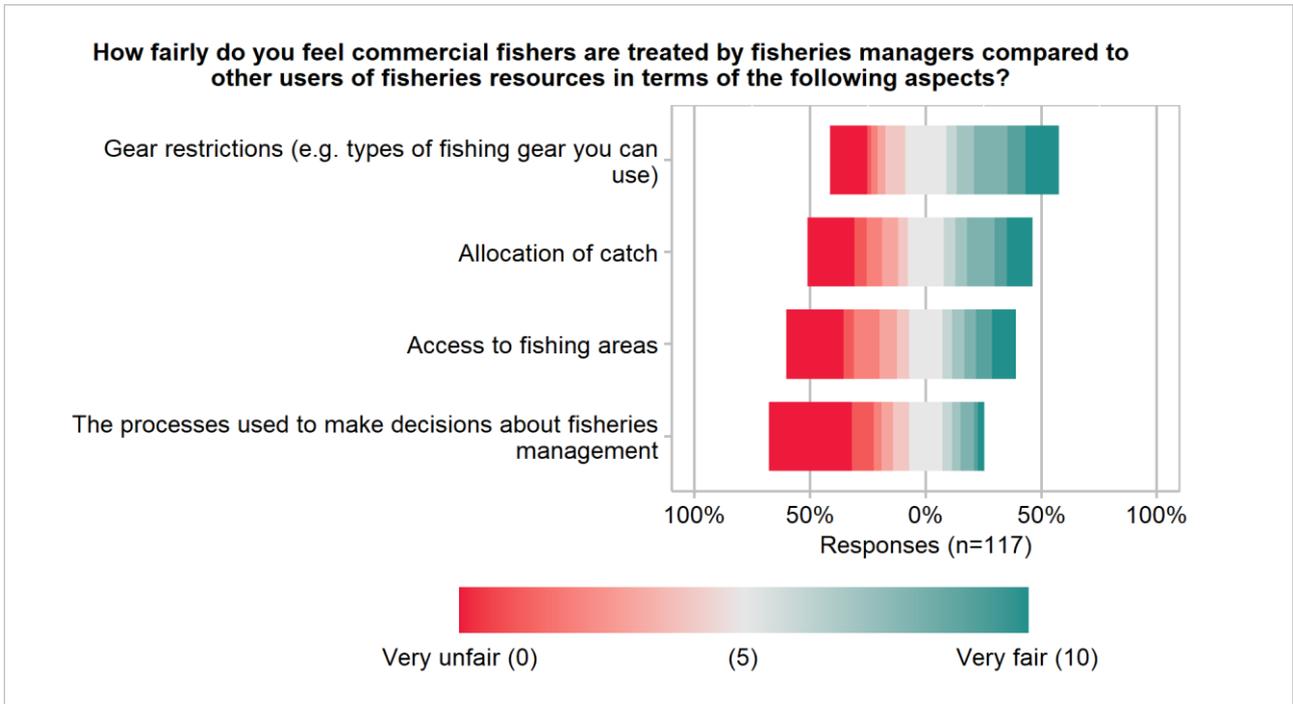
Fishers who access the Estuary General fishery indicated high levels of satisfaction relating to infrastructure access across all facilities.

Figure 8-1 Perceptions of fishery management in the Estuary General fishery (2021 survey)



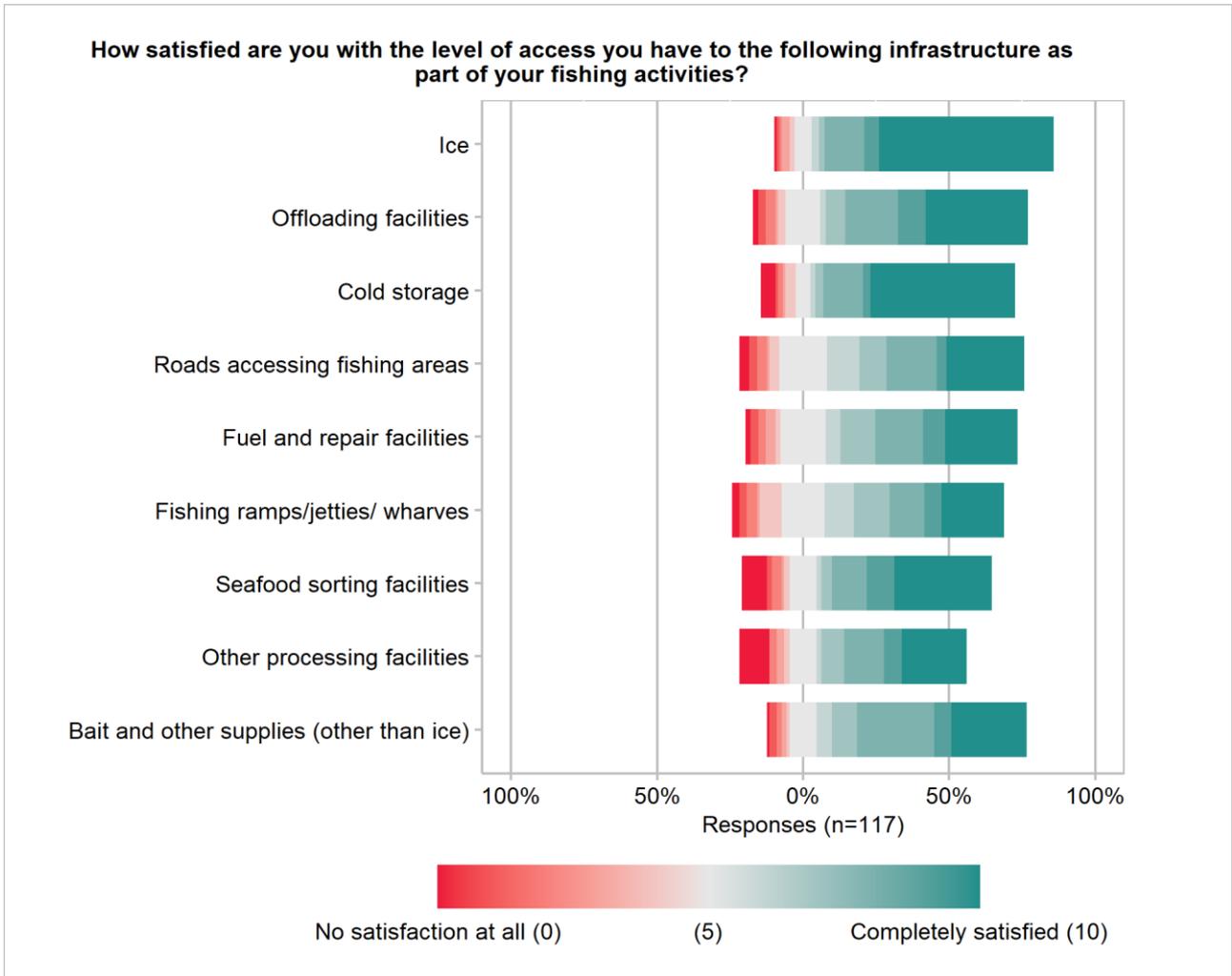
Source: 2021 business survey

Figure 8-2 Perceptions of management fairness in the Estuary General fishery (2021 survey)



Source: 2021 business survey

Figure 8-3 Perceptions of infrastructure access in the Estuary General fishery (2021 survey)



Source: 2021 business survey

8.2. Lifestyle and Satisfaction

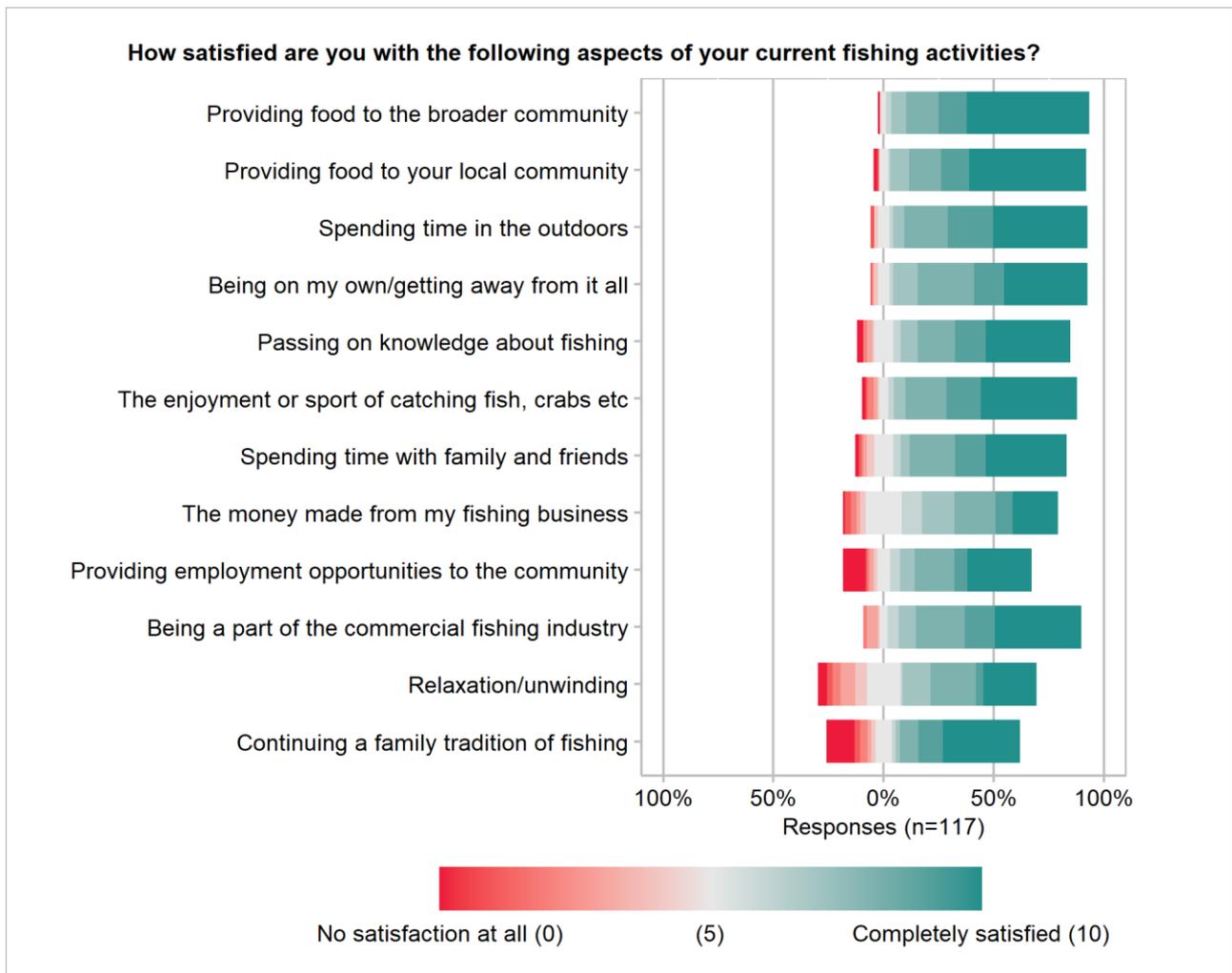
Figure 8-4 and Figure 8-5 present indicators of continuity, importance and satisfaction with different aspects of fisher’s activity in the Estuary General fishery.

Fishers who access the Estuary General fishery were near unanimous in agreement that fishing is a very important aspect of their lives. A significant majority indicated that they intend to continue fishing for as long as possible and a significant majority indicated that they were satisfied, or completely satisfied with their commercial fishing activities over the last 12 months. A significant majority of fishers who access the Estuary General fishery were satisfied with most aspects of their current fishing activities, though some indicated that they had less satisfaction with relaxation and unwinding, continuing a family tradition of fishing and being able to provide employment opportunities to the community.

Fishers who access the Estuary General fishery indicated that they had very high levels of personal wellbeing across all PWI domains. However, a number of fishers who access the Estuary General fishery indicated that they were dissatisfied their future security. This mirrors the overall pattern across NSW commercial fisheries.

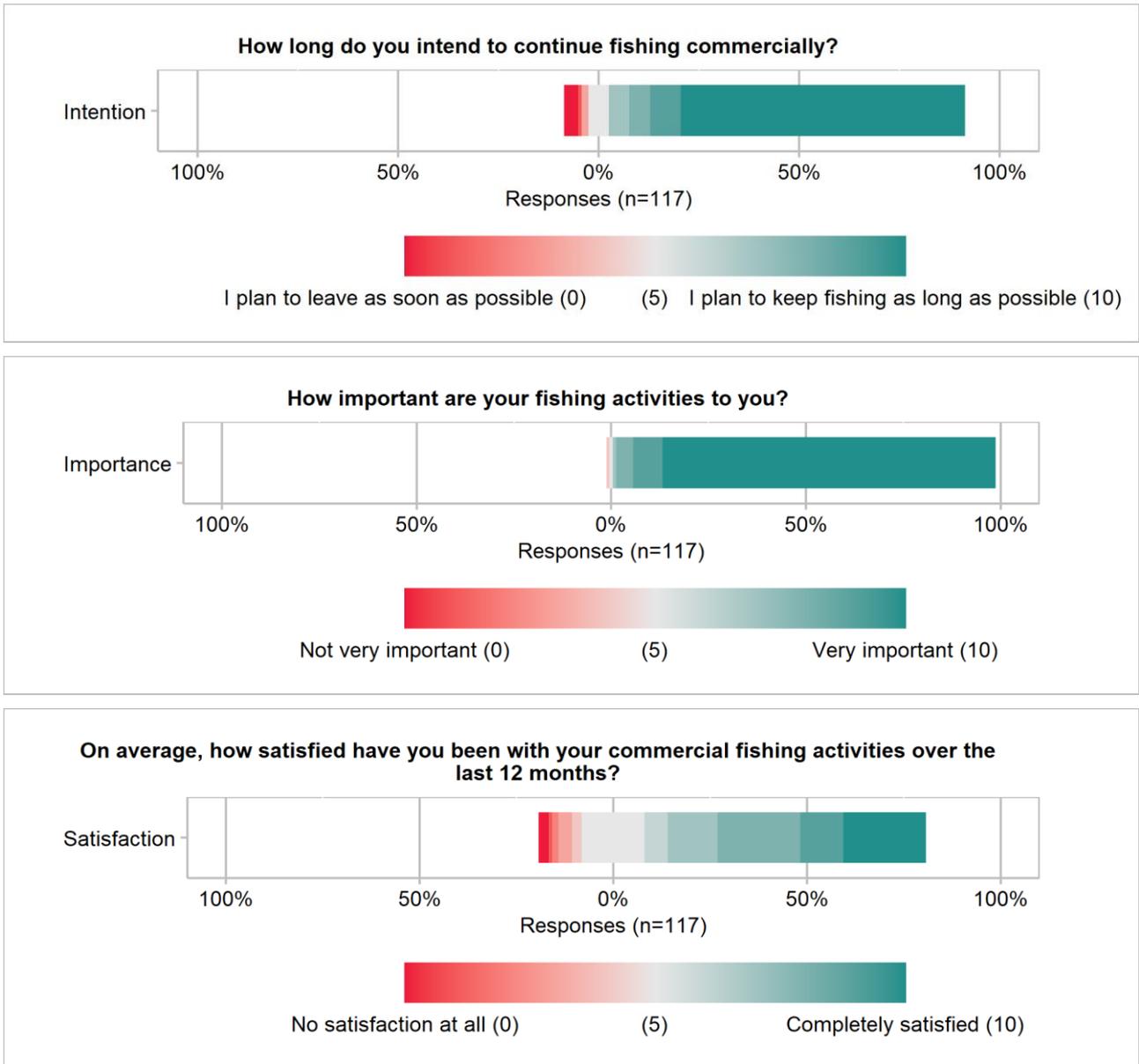
Overall, these results indicate that fishing activities are making a significant, positive contribution to the overall satisfaction and personal wellbeing of fishers who access the Estuary General fishery.

Figure 8-4 Satisfaction with aspects of the Estuary General fishery (2021 survey)



Source: 2021 business survey

Figure 8-5 Satisfaction in the Estuary General fishery (2021 survey)



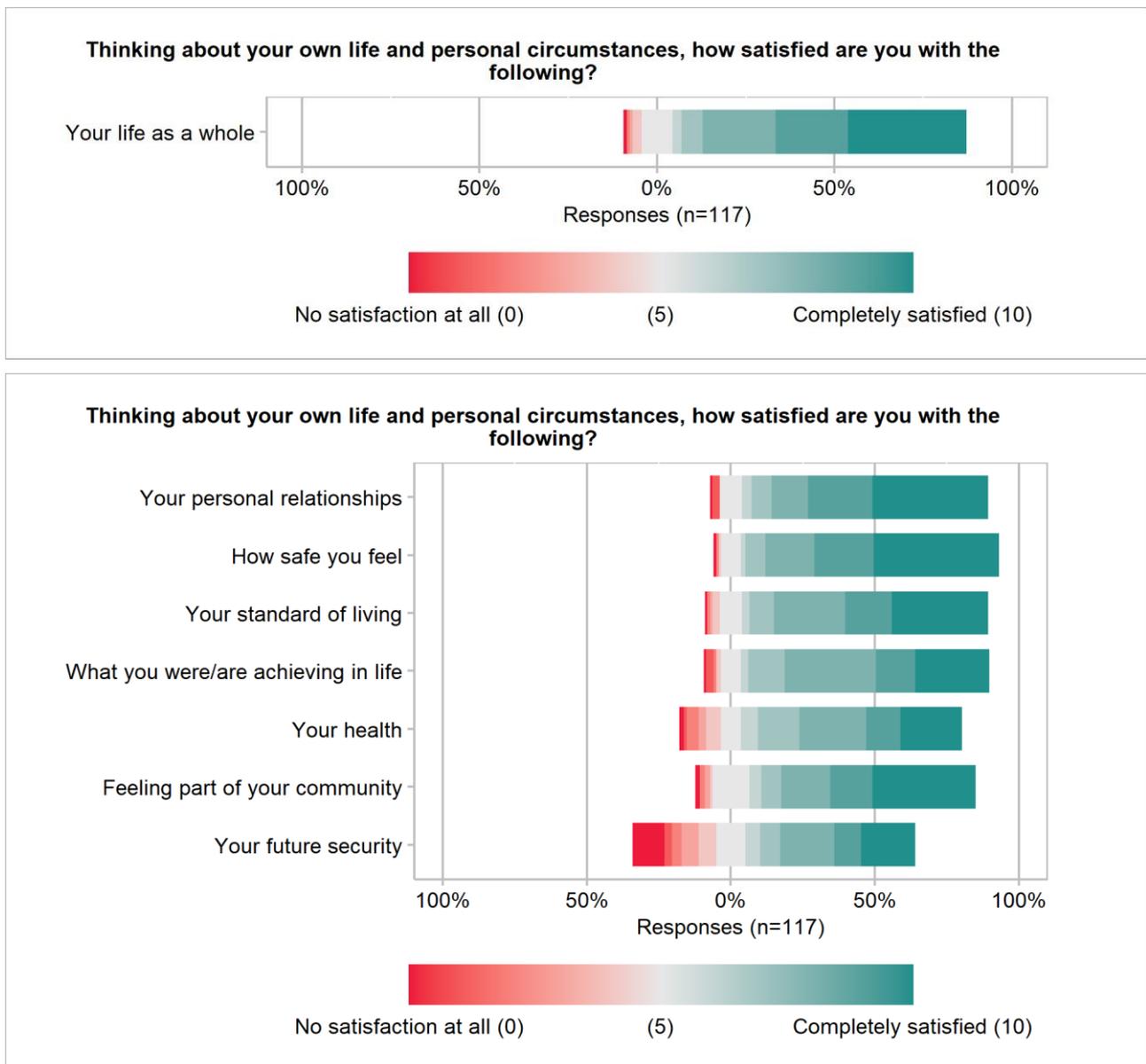
Source: 2021 business survey

8.3. Personal Wellbeing

The Personal Wellbeing Index (PWI) is a validated measure of wellbeing with established benchmarks that are useful for comparing between groups. A higher PWI means higher subjective wellbeing. It is calculated from the data presented in Figure 8-6 though the charts themselves also provide useful information about the levels of different domains of wellbeing for fishers that access the Estuary General fishery. The PWI for the Estuary General fishery is compared against the average for Australia, New South Wales and regional New South Wales, as reported in the Regional Wellbeing Survey (UC 2020), below:

- Australia: 70.4
- New South Wales: 71.4
- Regional New South Wales: 72.9
- Estuary General fishery: 77.7.

Figure 8-6 Personal wellbeing in the Estuary General fishery (2021 survey)



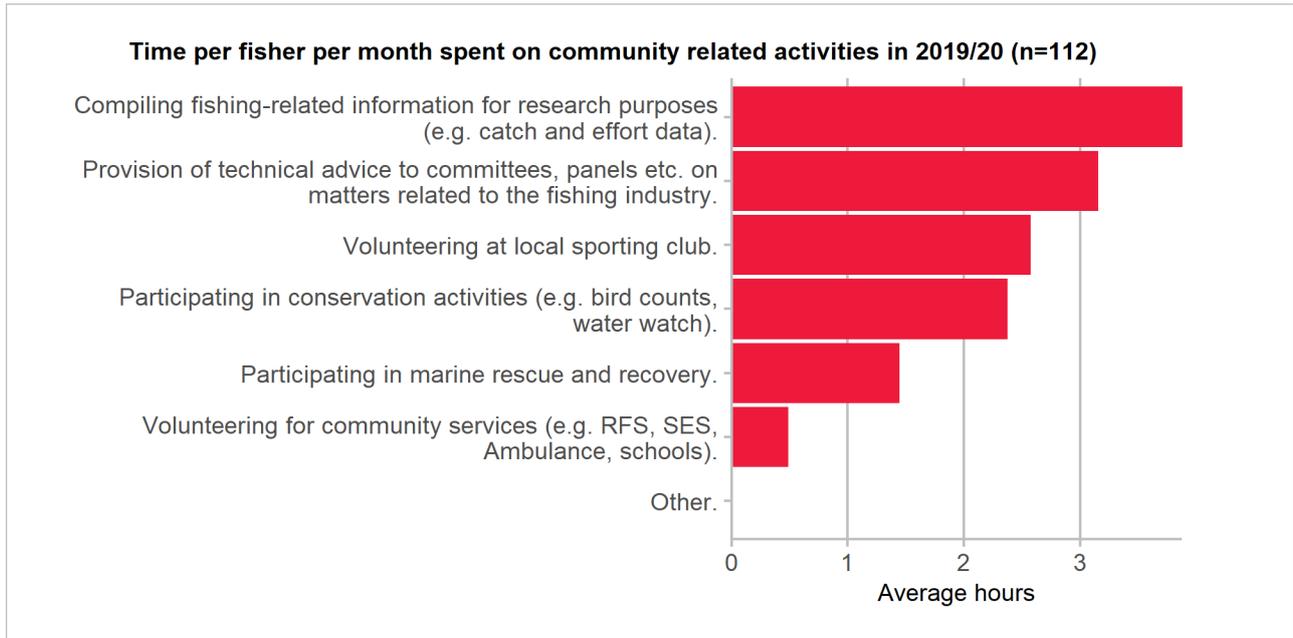
Source: 2021 business survey

8.4. Community Contribution

Fishers that access the Estuary General fishery spend some of their time contributing to the community through various activities. The average number of hours contributed per month is presented in Figure 8-7.

Fishers who access the Estuary General fishery indicated that they make a significant contribution to the community. This was particularly in the form of time spent compiling fishing related information for research and contributing to providing technical advice related to the fishing industry.

Figure 8-7 Community contribution in the Estuary General fishery (2021 survey)



Source: 2021 business survey

REFERENCES

- Bath, A. Mobsby, D. and Koduah, A. 2018, *Australian fisheries economic indicators report 2017: financial and economic performance of the Southern and Eastern Scalefish and Shark Fishery*, ABARES, Canberra, April.
- BDO 2021, *Economic and Social Indicators for NSW Commercial Fisheries in 2019/20*, report prepared for the Department for Primary Industries, Adelaide, December.
- University of Canberra (UC) 2020, *Regional Wellbeing Survey*.

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.



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