

Economic Indicators for the NSW Commercial Fisheries in 2023/24

A report for Department of Primary
Industries and Regional Development

3 December 2025

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Abbreviations

ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
ABS	Australian Bureau of Statistics

AMR	Action Market Research
CGE	computable general equilibrium
CPI	Consumer Price Index
DPIRD	Department of Primary Industries and Regional Development
FRDC	Fisheries Research and Development Corporation
fte	full time equivalent
FY	financial year
GOS	Gross Operating Surplus
GRP	Gross Regional Product
GSP	Gross State Product
GVP	Gross Value of Production
MEY	Maximum Economic Yield
NSW	New South Wales
RISE	Regional Industry Structure and Employment
R&M	repairs and maintenance
SMU	spatial management units
SUTS	Sea Urchin and Turban Shell
TAC	Total Allowable Catch
TACC	Total Allowable Commercial Catch
TAE	Total Allowable Effort

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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: 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 per week for 42 weeks per year.

Endorsement: authorises the holder to take certain species of fish in certain areas using specific methods. To be eligible for an endorsement in a share management fishery, a minimum number of shares of a corresponding type must be held.

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 income: refers to the cash receipts received by an individual firm and is expressed in Australian 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.

Gross operating surplus (GOS): is defined as gross income less total boat cash costs and is expressed in current Australian 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 regional /state economy. Contribution to GRP or GSP is measured as value of output less the cost of goods and services (including imports) used in producing the output.

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 monthly landed beach prices.

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.

Sample size: is the total sample, including both 2023/24 survey and 2019/20 supplementary responses.

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.

Total variable costs: 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.

Document history and status

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

Executive summary

This report presents a set of economic performance indicators for each of the New South Wales commercial fisheries, continuing a time series of economic and social information to aid management. This report summarises the indicators across all fisheries and presents the statewide aggregates for the 2023/24 financial year.

BDO was contracted by the Department of Primary Industries and Regional Development (DPIRD) 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 forms the fifth consecutive financial year of annual indicators. Separate fishery-specific reports are also available.

Table ES-1 Summary of key economic indicators for 2021/22 to 2023/24^{a,b}

Indicator	2021/22	2022/23	2023/24
Catch (t)	8,138t	9,576t	9,837t
Catch (no) ('000)	1,283	3,076	1,504
Days fished	45,366	51,133	50,618
Gross value of production (beach price)	\$81.0m	\$90.9m	\$88.2m
Export value	\$7.0m	\$9.1m	\$7.9m
Active businesses	754 businesses	904 businesses	858 businesses
Gross state product (direct + flow-on)	\$161.3m	\$265.6m	\$267.4m
Employment (direct + flow-on)	1,533 fte jobs	2,329 fte jobs	2,393 fte jobs
Net economic return	-\$27.4m	-\$18.4m	-\$19.6m

^a All values reported are in real 2023/24 dollars.

^b The results increase from 2022/23 is due to improved supply-chain modelling.

Source: BDO analysis

Overview of approach

Businesses that operate in a commercial fishery in New South Wales tend to operate in multiple fisheries. For this reason, a business level modelling approach was used rather than an aggregate or fishery level approach. This involved the following steps:

1. Collect fishery monitoring and administrative data
2. Survey fishing businesses
3. Conduct supply chain workshops
4. Import supplementary survey responses
5. Model structure and activity of surveyed businesses
6. Impute non-surveyed businesses at the business level
7. Backcast business level synthetic population to 2022/23
8. Attribute operating costs, employment and capital value to the relevant fisheries
9. Calculate indicators for each fishery.

The 2022/23 economic indicators were derived using a range of primary and secondary data about 2022/23, and survey-based 2023/24 indicators. Non-survey data were obtained from New South Wales Department of Primary Industries and Regional Development for the 2022/23 financial year to adjust the 2023/24 indicators to reflect fishery performance in 2022/23.

Across all fisheries in the 2023/24 survey, 124 survey responses were received, representing 15 per cent of active commercial fishing businesses in 2023/24. An additional 68 supplementary responses were then included from the previous survey undertaken in 2019, bringing the total sample size to 22 per cent of active commercial fishing businesses. The total sample size represented between 21 per cent and 28 per cent of active businesses in each region and between 17 per cent and 43 per cent of active businesses in each fishery. The confidentiality of responses was made clear to respondents including that no individual response would be identifiable in reporting or provided to New South Wales Department of Primary Industries and Regional Development and that any statistic published would be based on at least five responses. The exception to this is the Inland fishery where consent from each survey respondent was provided to publish results based on three responses.

Some reporting changes were made in this report. Compared to previous reports in this series, this report:

- Includes supplementary responses from the previous survey along with 2025 survey responses to bolster sample size and confidence
- Includes average valuation of shares table for access shares and quota shares within the fishery
- Includes breakdown of supply chain including final sales and economic activity supported by supply chain activities
- Includes revised supply chain in the economic contribution estimates from 2022/23
- Includes economic contribution of the Sydney Fish Market as an important part of the NSW fisheries supply chain.

NSW Harvest Strategies

The NSW Harvest Strategies were established under the NSW Fisheries Harvest Strategy Policy and Guidelines. The NSW Harvest Strategies provide a framework for managing fisheries in line with the *Fisheries Management Act 1994* and the *Marine Estate Management Act 2014*. These strategies set out management objectives, and strategies for achieving these objectives, including performance indicators and reference points for review or action in some fisheries.

Currently, there are three harvest strategies governing four commercial fisheries, with two additional strategies being drafted. These harvest strategies focus primarily on catch and biomass, with only two including economics as a secondary indicator with no reference or trigger points.

As such, each fishery's performance should be considered based on the performance indicators discussed and presented in detail throughout each of their individual reports.

NSW seafood and bait supply chain

In the 2023/24 study, BDO conducted workshops with the NSW seafood industry to map out the NSW wild-caught seafood and bait supply chains. These maps have been used to improve the understanding of the flows of product from production to consumption, and improve estimates about the economic activity supported by seafood and bait supply chain activities.

Figure ES-1 illustrates the direct output at key stages of the NSW wild-caught seafood post-harvest supply chain and final sales destinations (green arrows). The market destination values in Figure ES-1 differ from

those implied by Table ES-1 as Figure ES-1 captures all value-added products downstream of the landed catch, while Table ES-1 captures catch exported by fishers or processors at beach price

For more detailed insights and fishery-specific supply chains, please refer to their individual reports.

In 2023/24, NSW fisheries generated \$88.2 million in fishing output (GVP). Processing and marketing, including wholesaling, added \$49.4 million. About 83 per cent of the product was sold within NSW, \$64.1 million through food services and \$12.9 million through retail. The remaining 17 per cent was exported. Transport services contributed \$13.6 million. Total final sales reached \$228.1 million, including \$4.0 million in interstate and \$4.4 million in overseas exports, and the remainder in NSW sales.

Figure ES-1 NSW wild-caught seafood post-harvest supply chain, direct output generated by each sector and final destination value (\$m)



Source: BDO analysis

Catch, price, value and exports

The total catch in New South Wales commercial fisheries was 9,837 tonnes and 1,504,000 individuals in 2023/24. Gross value of production for this catch was \$88.2 million at beach price, a decrease from \$108.5 million in 2019/20 but an increase from \$81.0 million in 2021/22 in real terms. The value of international exports by commercial fishing businesses accounted for approximately 9 per cent of GVP in 2023/24 at beach price, a decrease from 13 per cent in 2019/20.

Business financial indicators

A broad range of business profitability was observed within and between fisheries in 2023/24. Average rate of return on total working capital varied between 1.5 per cent (Lobster) and -13.4 per cent (Sea Urchin and Turban Shell).

The average level of equity that fishers have in their businesses varied across fisheries from 86 per cent (Estuary Prawn Trawl) to 98 per cent (Inland).

Economic contribution

In 2023/24, New South Wales commercial fisheries contributed an estimated \$267.4 million to gross state product (up from \$265.6 million in 2022/23 in real terms) and 2,393 full-time equivalent jobs (an increase from 2,329 in 2022/23) to the New South Wales economy. This contribution included \$46.4 million (762 fte jobs) directly from fishing activity, \$1.3 million (12 fte jobs) from capital expenditure by fishing businesses, \$69.3 million (651 fte jobs) from post-harvest supply chain activities and \$150.4 million (968 fte jobs) from flow-on effects in other sectors of the New South Wales economy.

Net economic return

Net economic return is a fishery level indicator and is defined as the long-run profit from a fishery after all costs have been met.

Determining the opportunity cost of capital (a cost component of net economic return) involves an assessment of the degree of financial risk involved in the activity. 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. For this analysis a range of 7 to 15 per cent was used for opportunity cost of capital.

Net economic return was estimated to be in the range of -\$14.1 million to -\$28.8 million in 2023/24 for the state as a whole, a decrease from -\$3.0 million to -\$19.4 million in 2019/20, but an increase from -\$21.4 million and -\$37.4 million in 2022/23 in real terms. There was a wide range of levels of net economic return across the fisheries ranging from \$0.5 million in the Lobster fishery to -\$6.8 million in the Estuary General fishery.

Social Indicators

The results of the survey indicate a high level of stewardship amongst New South Wales fishers which is associated with lower costs of management and compliance activities, and a greater ability to achieve ecological sustainability. However, a majority of New South Wales fishers do not trust DPIRD Fisheries to make the right decisions for managing commercial fishing in New South Wales (66 per cent). This is despite seeing a slight improvement since 2019/20. This lack of trust may be due to a perception amongst fishers that fisheries management is not flexible enough to allow for adaptation (64 per cent), and that decision making is lacking in transparency and consultation (40 per cent). However, the latter has improved slightly.

Overall, and despite slight decreases across the board, these results indicate that New South Wales fishers are achieving satisfaction with the cultural, recreational and lifestyle benefits derived from their fishing activities.

Respondents indicated that they had very high levels of personal wellbeing, although 37 per cent of respondents indicated that they were dissatisfied with their future security. In addition, satisfaction in most wellbeing domains have seen decreases since 2019/20.

1. Introduction

Commercial fishing in New South Wales is a diverse and valuable industry that draws on a natural resource to generate livelihoods, food and purpose for those involved directly and indirectly. The New South Wales Department of Primary Industries and Regional Development (DPIRD) is seeking to understand these economic and social values of the industry and to establish a monitoring program to track how they change over time. This report sets out the approach used to achieve this and reports the fifth consecutive year of results.

BDO was contracted by DPIRD to develop a program to monitor economic and social indicators for New South Wales commercial fisheries. The program is producing an annual time series of economic and social indicators for nine fisheries and for the state of New South Wales. A separate report is being produced for each fishery for each financial year, with the intended audience being fishery managers, researchers, industry associations and fishing businesses.

1.1. Objectives

The aim of this study is to develop and deliver a program to monitor economic and social indicators for New South Wales commercial fisheries.

The objectives of the monitoring program are to:

- Inform discussions and decisions about fisheries management with evidence
- Demonstrate the economic contribution of commercial fisheries to New South Wales and its regions
- Provide data for developing harvest strategies
- Provide data to target Maximum Economic Yield (MEY).

1.2. Changes in this report

Compared to previous reports in this series, this report:

- Includes supplementary responses from the previous survey along with 2025 survey responses to bolster sample size and confidence
- Includes average valuation of shares table for access shares and quota shares within the fishery
- Includes breakdown of supply chain including final sales and economic activity supported by supply chain activities
- Includes revised supply chain in the economic contribution estimates from 2022/23
- Includes economic contribution of the Sydney Fish Market as an integral step in the NSW fisheries supply chain.

1.3. Scope

The scope of work is outlined in this section in terms of activity, fisheries, regions, time period, deliverables and review process.

1.3.1. Time periods

Indicators are produced annually for each financial year as part of a three-year survey cycle. The first year draws on a comprehensive business survey and administrative data, while the following two years are based solely on administrative data.

This report presents indicators for the 2023/24 financial year, the fifth consecutive year of indicators produced by this program.

In addition, this report presents previously unpublished indicators for the 2022/23 financial year, which have been based on administrative data.

1.3.2. Activity

The activity in scope for this analysis includes all activities associated with commercial fisheries managed by DPIRD. This includes fishing activity up to the point where catch is landed (e.g. hauling, trawling, trapping and hand lining) and all associated business operation and administration activity, including fisheries management. Along with this direct commercial fishing activity, the economic contribution indicators quantify the effects that New South Wales commercial fishing activity has on the broader economy through post-harvest supply chain activities (such as processing, food service, retail), capital expenditures of fishing businesses and flow-on effects in all other sectors.

1.3.3. Business units

In New South Wales commercial fisheries, a fishing business can be owned without owning shares or an endorsement in a fishery. These businesses will have some form of arrangement to fish on other individuals' endorsements. This monitoring program defines a fishing business as the economic entity (rather than legal entity) that undertakes fishing activity. For example, if a survey respondent described their operations as an authorised fisher in two fishing businesses that they do not own, then that activity was considered to be part of the survey respondent's business, rather than that of the business owners' the survey respondent was authorised to fish on. For businesses that did not respond to the survey, fishing businesses were imputed using linked fisher-business logbook records. This means that the count of fishing businesses and active fishing businesses presented in this monitoring program may differ from other published counts.

1.3.4. Fisheries and reports

The fisheries in scope for the monitoring program are listed below along with the reference to the relevant economic indicator results report.

Share Management Fisheries:

- Abalone (BDO 2025a)
- Estuary General (BDO 2025b)
- Estuary Prawn Trawl (BDO 2025c)
- Lobster (BDO 2025d)
- Ocean Hauling (BDO 2025e)
- Ocean Trap & Line (BDO 2025f)
- Ocean Trawl (BDO 2025g)

Restricted Fisheries:

- Inland (BDO 2025h)
- Sea Urchin & Turban Shell (BDO 2025i).

The Southern Fish Trawl fishery was not included in the scope of this project.

Each New South Wales fishing business includes shares or restricted fishery endorsements. Shares authorise access to a share management fishery in various ways. In some cases, shares may be used for more than one of the following purposes.

Eligibility to an endorsement

An endorsement authorises the holder to take certain species of fish in certain areas using specific methods. To be eligible for an endorsement in a share management fishery, a minimum number of shares of a corresponding type must be held.

For example, to be eligible for a meshing endorsement in region 4 of the Estuary General fishery, 125 Estuary General - meshing shares - Region 4 must be held.

Shares used in this way are sometimes referred to as 'access shares'.

Catch and effort quota

Some shares provide an ongoing right to a share of a Total Allowable Catch (TAC) or Total Allowable Effort (TAE), which is allocated to shareholders as quota at the beginning of each fishing period proportional to the number of corresponding shares held.

For example, holders of Estuary General - pipi quota shares are issued pipi quota at the beginning of each fishing period in kilograms (a share of the TAC).

Shares used in this way are generally referred to as 'quota shares'.

Endorsements and catch or effort quota

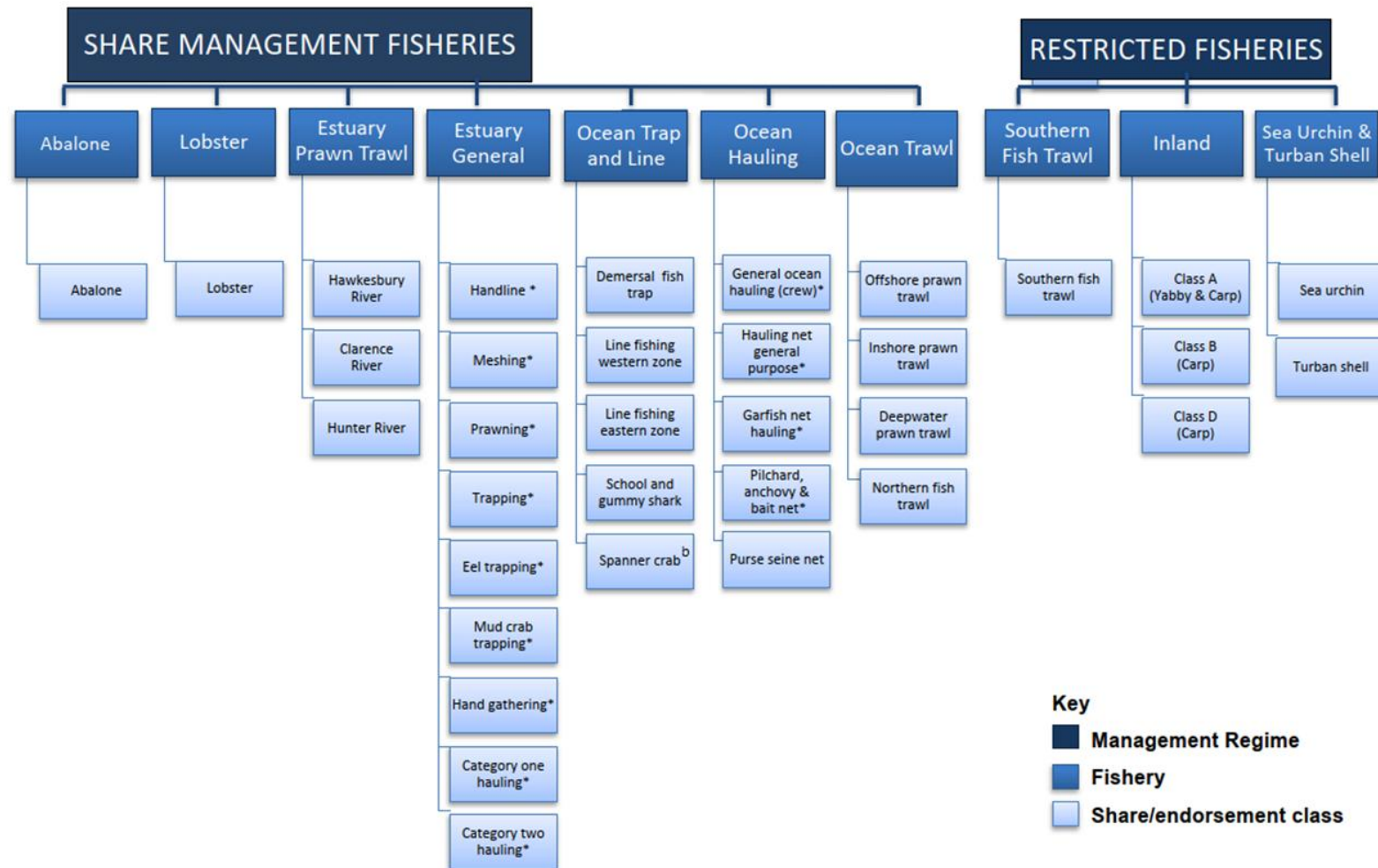
Some shares provide for eligibility for an endorsement and an ongoing right to receive a share of the TAC or TAE for each fishing period. For example, Lobster shares (TAC) and Estuary General - category one hauling shares (TAE).

Endorsements and other forms of access

Some shares provide for eligibility for an endorsement and determine other factors such as how much gear or how many crew a shareholder may use. For example, a mud crab trapper who holds 135 Estuary General - Mud Crab Trapping - Region 2 shares may use 11 mud crab traps in region 2 of the Estuary General fishery.

Most fisheries have multiple types of shares (and corresponding endorsements) within the fishery allowing shareholders to diversify within the fishery. This structure is illustrated in Figure 1 1.

Figure 1-1 Share/endorsement classes in New South Wales Commercial fisheries



* Share/endorsement classes are region specific

^b Separate Spanner Crab access shares exist for the northern and southern zone

Source: NSW DPIRD (2019)

1.3.5. Regions

While all indicators are reported at the state level, some indicators can also be appropriately reported on a sub-state regional basis, particularly business financial indicators, as these can provide cost inputs into regionalised harvest strategies. These indicators are reported on a regional basis for the fisheries that have a regional dimension to their management and sufficient regional activity to publish confidential results.

Abalone

The Abalone fishery has four spatial management units (SMU) used for TACC determination which are used when reporting on the regional business financial indicators:

- SMU 1
- SMU 2
- SMU 3
- SMU 4.

Estuary General

The Estuary General and Ocean Haul fisheries have seven regions based on their share classes as pictured in Figure 1-2:

- Region 1: Upper North Coast
- Region 2: Clarence
- Region 3: North Coast
- Region 4: Central
- Region 5: Metropolitan
- Region 6: Upper South Coast
- Region 7: Lower South Coast.

The Estuary General fishery is reported on the seven Estuary General and Ocean Hauling regions in the regional business financial indicators.

Estuary Prawn Trawl

The Estuary Prawn Trawl fishery is fished exclusively in three rivers which are used when reporting on the regional business financial indicators:

- Clarence River
- Hunter River
- Hawkesbury River.

Inland

The Inland fishery has too few active businesses to report non-confidential data on a regional basis. Indicators for the Inland fishery are, therefore, reported at the state level only. Fishery economic indicators are reported at the state level for all fisheries.

Lobster

The Lobster fishery for the purpose of this project has been separated into four regions comprised of ten of the Ocean Zones as pictured in Figure 1-2. The four regions are used when reporting on the regional business financial indicators and are as follows:

- Region 1 - Ocean Zones 1, 2 and 3
- Region 2 - Ocean Zones 4 and 5
- Region 3 - Ocean Zones 6 and 7
- Region 4 - Ocean Zones 8, 9 and 10.

Ocean Hauling

The Ocean Hauling fishery is reported on an aggregation of the seven Estuary General and Ocean Hauling regions in the regional business financial indicators to preserve confidentiality in the less active regions (Figure 1-2).

- Region 1 & 2 - Upper North Coast & Clarence
- Region 3 - North Coast
- Region 4 - Central
- Region 5 & 6 - Metropolitan & Upper South Coast
- Region 7 - Lower South Coast.

Ocean Trawl

The Ocean Trawl fishery for the purpose of this project has been separated into three regions comprised of ten of the Ocean Zones as pictured in Figure 1-2. The three regions are used when reporting on the regional business financial indicators and are as follows:

- Region 1 - Ocean Zones 1, 2 and 3
- Region 2 - Ocean Zones 4 and 5, and Ocean Zone 6 north of Barrenjoey Head
- Region 3 - Ocean Zone 6 south of Barrenjoey Head, and Ocean Zones 7, 8, 9 and 10.

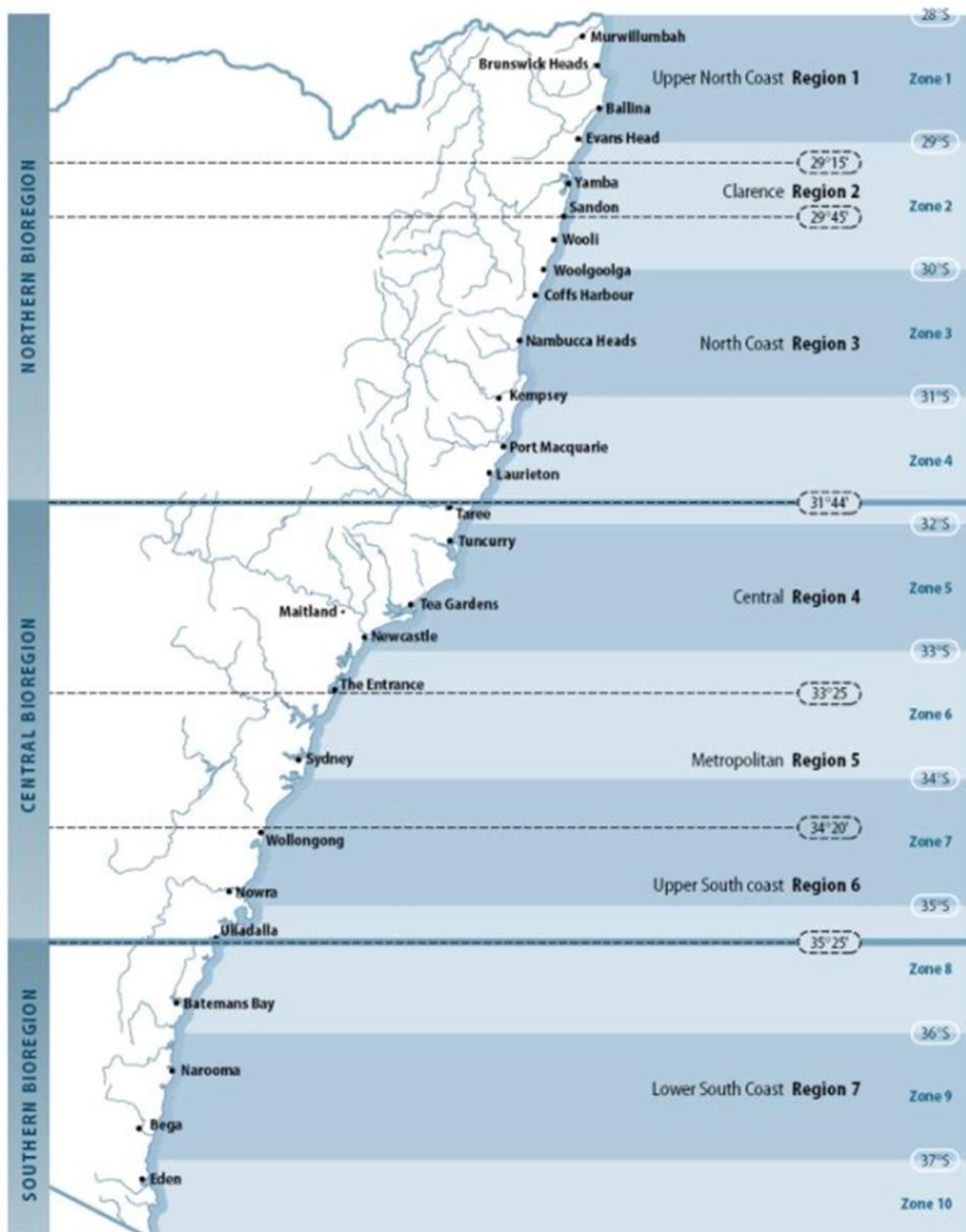
Ocean Trap and Line

The Ocean Trap and Line fishery is reported on the seven Estuary General and Ocean Hauling regions in the regional business financial indicators (Figure 1-2).

Sea Urchin and Turban Shell

While the SUTS fishery uses regional catch limits, there are too few active businesses to report non-confidential data on a regional basis. Indicators for SUTS are, therefore, reported at the state level only. Fishery economic indicators are reported at the state level for all fisheries.

Figure 1-2 Regional boundaries for the Estuary General and Ocean Haul Fisheries



Source: NSW DPIRD (2019)

1.4. NSW Harvest Strategies

The NSW Harvest Strategies were established under the NSW Fisheries Harvest Strategy Policy and Guidelines. These strategies are a key component of the NSW Marine Estate Management Strategy 2018-2028 and the Stronger Primary Industries Strategy 2022-2030. These harvest strategies are designed to support ecologically sustainable development by setting clear ecological, economic, social, and Aboriginal cultural objectives for specific species or fisheries.

Ecologically Sustainable Development (ESD) involves “Using, conserving and enhancing the community’s resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased” (Commonwealth of Australia 1992).

Decision-making and management to achieve ESD requires consideration of short and long-term economic, social and environmental implications. For fisheries, implementing ESD requires consideration of the effect of management decisions on the target species and rest of the ecosystem, on the economic health of the fishery (such as the profits of commercial fishers) and community satisfaction (Fletcher et al. 2002).

The NSW Harvest Strategies provide a framework for managing fisheries in line with the *Fisheries Management Act 1994* and the *Marine Estate Management Act 2014*. These strategies set out management objectives and strategies for achieving these objectives including performance indicators and reference points for review or action in some fisheries.

Currently, there are three harvest strategies governing four commercial fisheries, with two additional strategies being drafted. Those currently in place are:

- NSW Lobster Harvest Strategy - Lobster fishery (DPIRD 2022a)
- NSW Spanner Crab Harvest Strategy - Ocean Trawl and Ocean Trap and Line fisheries (DPIRD 2023)
- NSW Trawl Whiting Harvest Strategy - Ocean Trawl fishery (DPIRD 2022b).

These harvest strategies focus primarily on catch and biomass indicators. Two include economic surveys as a secondary indicator to measure economic performance. However, no reference or trigger points are in place so have not been used as reference points in these reports.

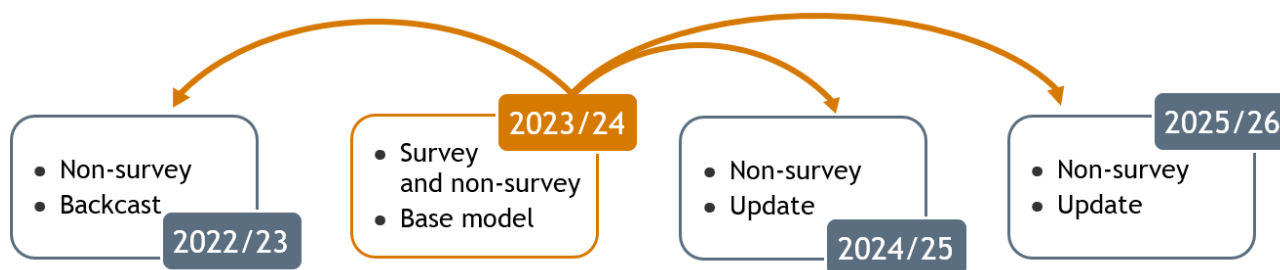
As such, each fishery’s performance should be considered based on the performance indicators discussed and presented in detail throughout each of their individual reports (BDOa-i).

2. Methods and data

Businesses that operate in a commercial fishery in New South Wales tend to operate in multiple fisheries. This makes calculating indicators for any single fishery difficult as fishery activity is comprised of a combination of business types (full and part-time, single and multiple fishery operators). Since this research produces indicators for most commercial fisheries in New South Wales, a business level modelling approach was used rather than an aggregate or fishery level approach.

The fisheries reporting year and data approach underpinning the business-level modelling are summarised in Figure 2-1. The 2023/24 indicators are based on survey responses, fishery logbook and administration data from DPIRD, as well as data from Sydney Fish Market (SFM) and Australian Bureau of Statistics (ABS), about 2023/24. The 2022/23, 2024/25 and 2025/26 indicators are calculated by adjusting the 2023/24 indicators using a range of data sources including fishery logbook and administration data from DPIRD, along with data from SFM and ABS.

Figure 2-1 Methodology, 2022/23 to 2025/26



2.1. Indicator analysis

In a business level approach, the overall activity of each business is proportionally attributed to each fishery at the business level then total activity for each fishery is estimated by aggregating the business activities attributable to each fishery. The method of analysis is described below in stages.

Stage 1: Collect fishery monitoring and administrative data (2023/24)

Data were requested from DPIRD monitoring and administrative systems to build a business level understanding of fishing activity in the commercial fisheries. This included 2023/24 financial year data on the following:

- business contact information
- business level catch and effort data from logbooks detailing species caught, form sold, quantities, dates and locations
- business level share and quota holding and trading data
- business level licence fees and management charges paid to DPIRD.

Stage 2: Survey fishing businesses (2023/24)

A survey of fishing businesses was undertaken (see Section 2.2 for detail) to collect various data items that are not held by DPIRD but are required to calculate economic and social indicators. This included:

- species prices, disposal locations and fishers' understanding of species ultimately processed or exported overseas further down the supply chain
- operating costs

- own business seafood processing activity
- employment (including unpaid)
- share and quota values
- capital value and depreciation of boats, equipment and other physical capital
- demographic information
- perceptions of management, lifestyle and other social matters.

Data were collected respecting the confidentiality of fishing businesses and were used by BDO to produce the economic and social indicator reports. Individual survey responses were not distributed outside of BDO and may not be provided to DPIRD without prior permission from the businesses in question.

Stage 3: Conduct supply chain workshops (2023/24)

Online workshops were undertaken (see Section 2.3 for detail) with stakeholders from similar supply chains gathering collective knowledge on key components of the supply chain. Several further individual interviews were held to fill any remaining gaps in the supply chains.

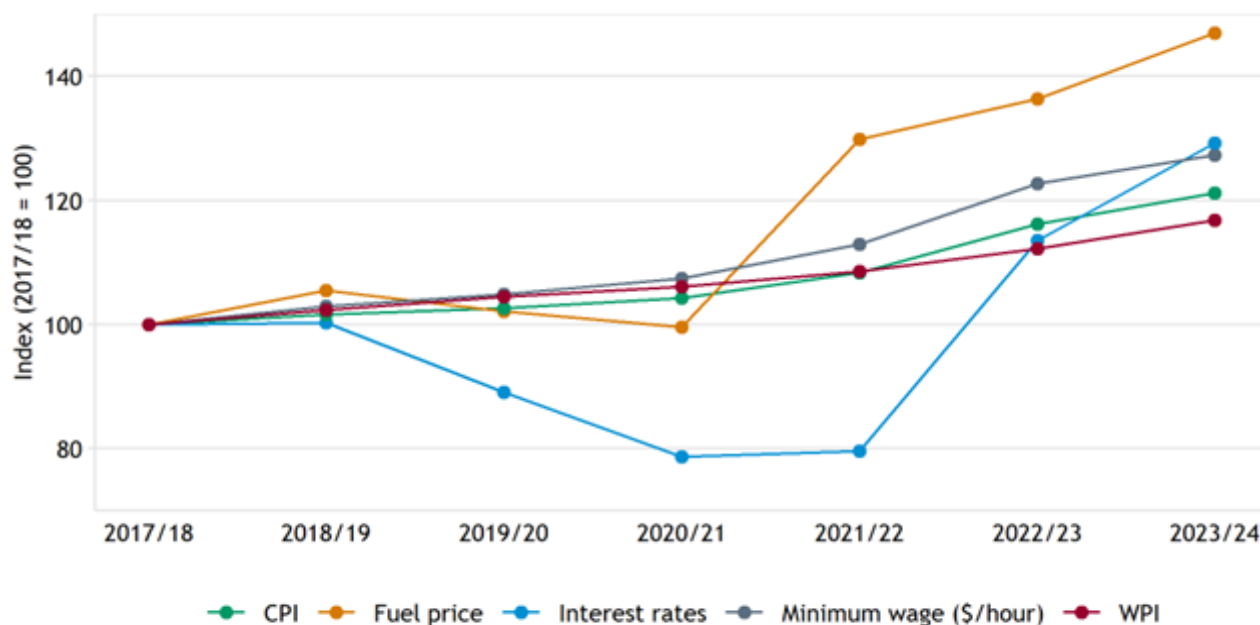
Data were collected respecting the confidentiality of the stakeholders and were used by BDO to produce the supply chain maps.

Stage 4: Import supplementary survey responses (2023/24)

To improve confidence, supplementary survey responses from the previous survey (2019/20) were used. To qualify, each business went through a number of validation processes including having the same business structure in both 2019/20 and 2023/24, and similarity using matrix of catch, species and days fished. Businesses were then selected by best-fit in each fishery to find a level of confidence similar to that in 2019/20.

These survey responses were updated to 2023/24 using a range of primary and secondary data about 2019/20 and 2023/24. The updating process involved adjusting operating costs and employment for each business based on the difference in fishing effort and catch between 2019/20 and 2023/24. Further, input prices were adjusted in line with changes in relevant cost indices. Figure 2-2 outlines the trend in each cost index for the past seven years and shows that the key feature between 2019/20 and 2023/24 was a sharp increase in fuel prices, and an initial decline and then sharp rise in interest rates.

Figure 2-2 Input price indicator^a trends, 2017/18 to 2023/24 financial years



^a CPI = Consumer Price Index, Index Numbers, all groups CPI, Sydney; Minimum Wage (\$/hour) = Fair Work Ombudsman, National Minimal Wage; Fuel Price = Consumer Price Index, Index Numbers, Automotive fuel, Sydney; WPI = Quarterly Index ; Ordinary time hourly rates of pay excluding bonuses; New South Wales; Private and Public; All industries; Interest Rates = Lending rates; Small business; Variable; Overdraft.

Source: BDO analysis

Stage 5: Model structure and activity of surveyed businesses (2023/24)

Fishery monitoring and administrative data and business survey data were combined to model the structure and activity of each individual fishing business that participated in the business survey. The model describes each business in terms of all data items identified above in stages 1 and 2, such that they can be combined to understand how costs, capital and employment relate to fishing activity. For example, combining logbook catch data with species price data allows for an estimate of the value of catch taken by species by region.

The set of business level models was validated through a series of plausibility checks to ensure that each survey response was matched to the correct records in the monitoring and administrative data and that the survey response itself was internally coherent. For example, calculated revenue based on species prices and logbook catch were compared to total revenues stated in survey responses, and distributions of various financial indicators were examined to identify outliers to be investigated.

Stage 6: Impute non-surveyed businesses at the business level in the base year (2023/24)

The structure and activity of each non-surveyed business was imputed using the business level models (as described in Stage 5) of the most similar five surveyed businesses. This involved matching, imputation and adjustment.

1. **Matching:** involved calculating a similarity matrix describing the similarity of each non-surveyed business to each surveyed business. The matrix used dimensions of 'revenue by fishery' and 'days fished by fishery', which were normalised to give them equal weighting in the calculation of similarity. Similarity was calculated as the lowest sum of squared errors across both dimensions. In a practical sense, this assumes that businesses are similar if they catch a similar value of product in a similar mix of fisheries and all with similar efficiency (i.e. catch per unit effort).

2. **Imputation:** involved imputing the capital, employment and operating costs of the non-surveyed businesses as the average of the five most similar businesses, where the average was weighted by the relative similarity to each surveyed business. This assumes that similar businesses (as described above) use similar capital and have similar operating costs and employment.
3. **Adjustment:** involved making marginal adjustments to the variable operating costs and employment of imputed businesses based on the differences between the imputed business and the weighted average of its five most similar businesses in terms of revenue and days fished. For example, fuel and provisions were adjusted based on the relative difference in effort, and crew and skipper income was adjusted based on the relative difference in revenue.

Stage 7: Backcast business level synthetic population to 2022/23

The 2022/23 economic indicators for the NSW commercial fisheries were calculated by back-casting the 2023/24 indicators using a range of primary and secondary data about 2022/23 and 2023/24.

Fisheries monitoring and management data were obtained from NSW Department of Primary Industries and Regional Development for the 2022/23 financial year to adjust the 2023/24 indicators to reflect fishers' fishing and share trading activities in 2022/23. The imputation process involved calculating revenue using back-cast species prices for 2022/23, then adjusting operating costs and employment for each business based on the difference in fishing effort and revenue between 2023/24 and 2022/23. Businesses that were active in 2022/23 but not 2023/24 were not represented in the base year data so were imputed in the same way as a non-surveyed business was for the 2023/24 indicators. As in Stage 4, input prices were adjusted in line with changes in relevant cost indices. Figure 2-2 outlines the trend in each cost index for the past seven years and shows that the key feature of 2022/23 was a sharp increase in interest rates. Finally, data on the 2022/23 financial year provided by NSW Department of Primary Industries and Regional Development were used to quantify fishing licence fees and management costs.

Fish prices were back-cast to 2022/23 prices from 2023/24 prices using relative changes in species prices observed in time series of price data provided by Sydney Fish Market and the Australian Bureau of Statistics trade data for exported species.

Stage 8: Attribute operating costs, employment and capital value to the relevant fisheries

Share and endorsement values were attributed directly to their relevant fisheries. Shares and endorsements were valued by taking the median of survey valuations of each share and endorsement. These values were applied to annualised shareholdings of each business.

Operating costs and employment were attributed across all fisheries accessed by each business based on the relative proportion of income earned in each. This assumes a similar rate of return in each fishery that a business accesses under the assumption that businesses maximise return across multiple fisheries by adjusting their effort between them over time. It also implies that capital (such as a boat) can generally be used to access multiple fisheries. Rates of return do vary between fisheries, but this assumption is considered reasonable for an individual business and is necessary to avoid collecting separate sets of financial and employment details for each individual fishery that each business accesses.

Stage 9: Calculate indicators for each fishery

Business activity was grouped based on the fishery attribution described in Stage 8 before calculating indicators for each fishery. The definitions of indicators are presented in the Glossary. For some indicators, business activity was further attributed to regions or other groupings prior to calculation:

- Business level financial indicators such as revenues, costs and profitability were reported by region, level of return on investment, level of activity (days fished), proportion of total business revenue earned in the fishery in question (i.e. level of fishery specialisation) and proportion of businesses' fishery revenue earned from a particular species (i.e. species specialisation)
- Net economic return was reported at the fishery level
- Economic contribution indicators were reported for New South Wales and for each of the seven Estuary General and Ocean Haul regions (Table 3-10) with all business activity attributed across regions in proportion to the value of catch landed in each.

2.2. Survey of fishing businesses, 2023/24

Stage 2 of the approach described above involved surveying fishing businesses. The survey was carried out between March and May in 2025. Survey data collection was undertaken both by BDO and by sub-contracted interviewers Action Market Research (AMR).

Fieldwork took place with a staged approach, inviting and engaging with individual shareholders. The shareholder survey included multiple methods of contact and participation, including paper, online and over the phone.

Following commencement of the survey, telephone interviewing was the prioritised method, with calls made Monday to Friday between 9am and 8pm, and Saturdays between 9am and 5pm (local time). Respondents were given an opportunity to participate at a time that was convenient to them during the fieldwork period, and appointments were made and followed through by the interviewing team. Some respondents preferred to complete the survey online and were emailed a survey link to complete the survey. Reminders were made via email and phone to boost participation.

A quota sheet was maintained showing the number of completed interviews by each of the respondent types. The data were reviewed regularly during fieldwork for accuracy and completeness. Businesses were asked to include only the amounts that were attributable to their New South Wales fishing business. If exact figures were not available (e.g. from a tax return), then they were asked to provide careful estimates.

The confidentiality of responses was made clear to respondents including that no individual response would be identifiable in reporting or provided to New South Wales DPIRD 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 commercial fishing statistics. The exception to this is the Inland fishery where consent from each survey respondent was provided to publish results based on three responses. The matching approach used to impute non-responding business activity means that any statistic that includes at least one unsurveyed business contains information from at least five surveyed businesses, even if less than five surveyed businesses are included in the group the statistic represents.

Across all fisheries, a total of 124 survey responses were received, representing 15 per cent of active commercial fishing businesses in 2023/24 (Table 2-1).

Due to lower response rates, survey responses from the 2019 survey were used to supplement the sample, as long as they continued to operate in a similar way between the two survey years. Of the 255 businesses who responded in 2019/20, 155 were active in 2023/24. Of these, 70 did not overlap with any other responses in the 2023/24 survey. After filtering for best-fit, 68 supplementary responses were included in the 2023/24 modelling.

The sample size for the 2023/24 analysis is summarised in the tables below by fishery (Table 2-1) and by region (Table 2-2). The total sample, including both 2023/24 survey and 2019/20 supplementary responses, represents 22 per cent of active fishing businesses. The sample represented between 21 per cent (Lower

South Coast) and 28 per cent (Upper North Coast) of active businesses in each region and between 15 per cent (Ocean Trawl) and 43 per cent (Inland) of active businesses in each fishery. The statewide proportion is lower than the individual fisheries and regions as many surveyed businesses fished in multiple regions and fisheries so are double counted in the region and fishery level summary. Data were collected from businesses with different levels of activity, specialisation and profitability. The financial indicators tables presented for each fishery in the fishery reports provide sample and population sizes in each column to show the representativeness of the sample across these various dimensions.

Table 2-1 Survey sample in New South Wales commercial fisheries, by fishery, 2023/24

Fishery	Active businesses	Survey responses	Total sample size ^a	% of total sample size
Abalone	34	7	11	32.4%
Estuary General	359	56	90	25.1%
Estuary Prawn Trawl	47	10	15	31.9%
Inland	7	3	3	42.9%
Lobster	69	7	14	20.3%
Ocean Hauling	61	18	21	34.4%
Ocean Trap & Line	220	43	63	28.6%
Ocean Trawl	127	12	19	15.0%
Sea Urchin & Turban Shell	29	4	5	17.2%
Statewide	858	124	192	22.4%

^a Total sample size includes survey and supplementary responses.

Source: BDO analysis

Table 2-2 Survey sample in New South Wales commercial fisheries, by region, 2023/24

Fishery	Active businesses	Survey responses	Total sample size ^a	% of total sample size
Region 1: Upper North Coast	116	32	18	27.6%
Region 2: Clarence	153	32	20	20.9%
Region 3: North Coast	185	47	35	25.4%
Region 4: Central	268	69	43	25.7%
Region 5: Metropolitan	118	28	17	23.7%
Region 6: Upper South Coast	91	20	13	22.0%
Region 7: Lower South Coast	121	25	18	20.7%
New South Wales	858	192	124	22.4%

^a Total sample size includes survey and supplementary responses.

Source: BDO analysis

Data cleaning of the survey data began with an initial read-through of the data in raw form. During this process, some minor adjustments were made such as separating multiple Fishing Business numbers entered in the same text box with a consistent approach as required for programmatic processing. Following the initial read-through, the process for cleaning the survey data was:

- Identify the Fishing Businesses included in the survey responses and link them with the administrative data, including with respect to nominated fisher and other temporary arrangement.

- Undertake plausibility checks of the survey data such as:
 - Capital depreciation is non-negative and reasonable
 - Employment at least covers days fished
 - Wages and unpaid labour time are consistent with stated employment
 - Outlier checks on estimates of market prices and share values.
- Impute some items such as value of unpaid labour using the national minimum wage
- Exclude responses that fail the plausibility checks.

2.3. Supply chain analysis

The supply chain analysis utilised a method that was recently developed by BDO as part of *FRDC Project 2022-038* (BDO 2023). This approach was used to produce high-level maps of the post-harvest seafood and bait supply chains for the NSW commercial fisheries to help understand the flow of products through the various stages of the supply chain, from production through to end use. These maps helped to estimate the economic activity supported by these supply-chain activities.

To inform the mapping process, BDO conducted six online workshops with stakeholders from similar supply chains gathering collective knowledge on key components of the supply chain. A number of further individual interviews were held to fill any remaining gaps in the supply chains.

The margins at each stage of the supply chain were estimated by calculating the difference between cost of inputs and the revenue generated at each stage. This allows for the estimation of expenditures and direct economic activity associated with each stage, including activities such as fishing, processing, marketing, transport, food service and retail. These estimates were used in combination with ABS national input-output tables and RISE economic models (Regional Industry Structure and Employment) to estimate the economic activity supported by seafood and bait supply-chain activities.

3. Summary of economic indicators

3.1. Catch, value, prices, and final sales destination

The total catch, shown in Table 3-1, in New South Wales commercial fisheries was 9,837 tonnes and 1,504,000 individuals in 2023/24. Gross value of production for this catch was \$88.2 million at beach price, a decrease from \$108.5 million in 2019/20 but an increase from \$81.0 million in 2021/22 in real terms. The value of international exports by commercial fishing businesses accounted for approximately 9 per cent (\$7.9 million) of GVP in 2023/24 at beach price, a decrease from 13 per cent in 2019/20.

Species specific information across all commercial fisheries is presented in Table 3-2. All species for which at least five fishing businesses provided information are included in the table. All other species are grouped into 'other species' at the bottom of the table. Species are ordered by GVP with the most valuable species at the top.

Trends in catch and GVP for the five financial years to 2023/24 are illustrated using an index for each commercial fishery in Figure 3-1. They are presented in real terms to remove the distorting effect of inflation. The index is calculated such that the 2019/20 catch and GVP are equal to 100 and the values in subsequent years show the change relative to 2019/20. For example, an increase in the index value for GVP from 100 to 110 indicates that GVP increased by 10 per cent. This focuses attention on the direction and scale of relative change over time and allows the drivers of change in GVP to be understood. For example, GVP in the Ocean Trap and Line fishery moved closely in line with catch over the four years, implying that price has been relatively stable, and catch was behind the change in GVP. On the other hand, price increased in the Estuary Prawn Trawl fishery while GVP decreased in 2023/24, meaning that a large catch decrease occurred between 2022/23 and 2023/24.

Table 3-1 New South Wales commercial fisheries' gross value of production, catch and final sales export value, by fishery, 2023/24

Fishery	Catch			
	Tonnes (t)	Number ('000)	GVP (\$m)	Export value at beach price (\$m)
Abalone	100	0	3.0	2.3
Estuary General	2,604	1,504	23.4	2.2
Estuary Prawn Trawl	229	0	3.3	0.0
Inland	92	0	1.0	0.0
Lobster	170	0	10.1	0.9
Ocean Hauling	2,681	0	6.5	1.7
Ocean Trap & Line	1,337	0	14.1	0.0
Ocean Trawl	2,287	0	25.9	0.6
Sea Urchin & Turban Shell	338	0	0.9	0.2
Statewide	9,837	1,504	88.2	7.9

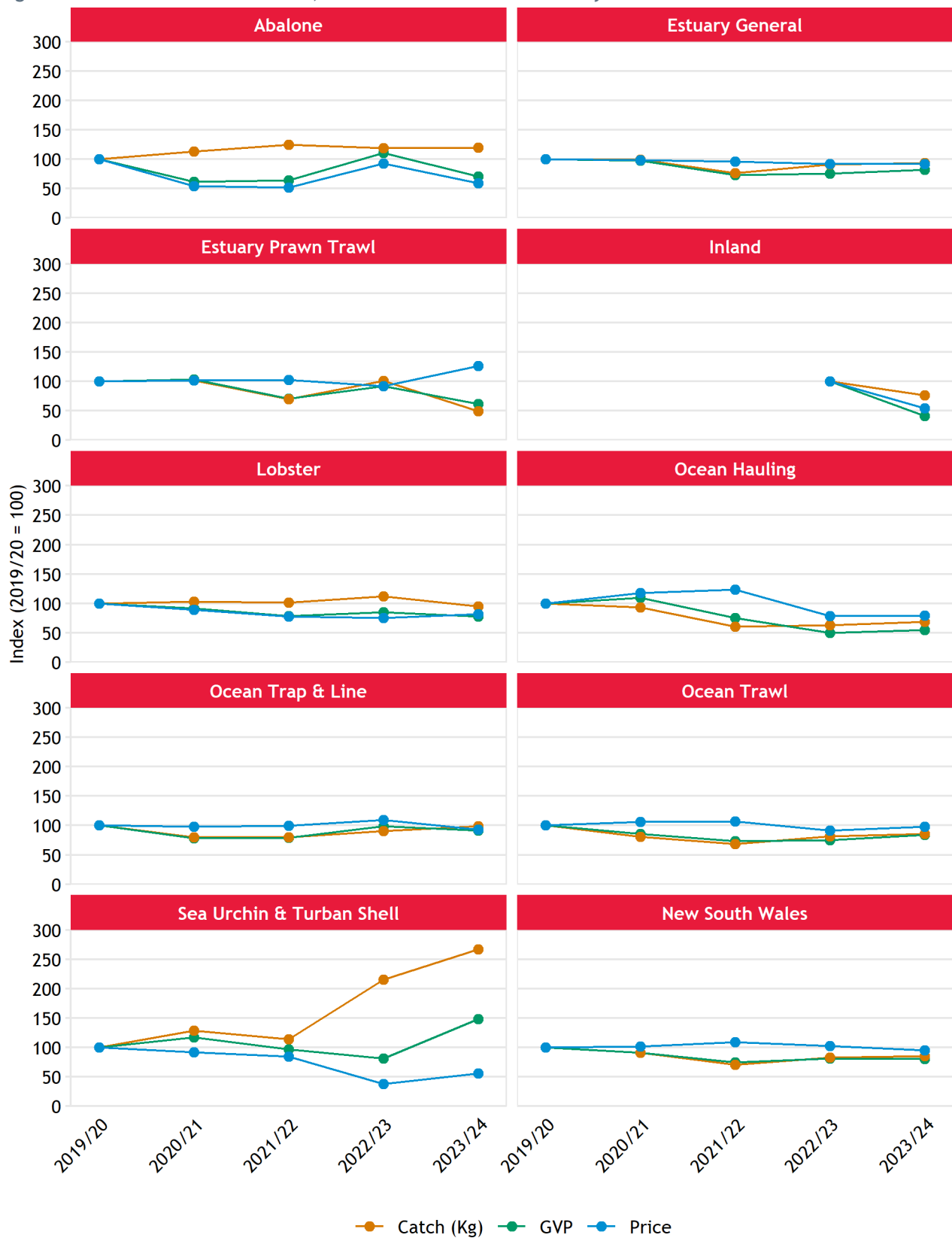
Source: NSW DPIRD and 2025 survey

Table 3-2 New South Wales commercial fisheries' gross value of production, catch and final sales destination, by species, 2023/24

Species	Catch	Price	Unit	GVP (\$m)	Final sales destination (%)		
					NSW	Interstate	Overseas
Eastern King Prawn	734,732	\$19.51	Kg	\$14.3m	97.0%	3.0%	0.0%
Eastern Rock Lobster	161,977	\$61.44	Kg	\$10.0m	91.1%	0.0%	8.9%
Sea Mullet	2,370,316	\$2.71	Kg	\$6.4m	35.2%	4.5%	60.2%
Mud Crab	161,088	\$32.18	Kg	\$5.2m	86.2%	13.8%	0.0%
School Prawn	326,369	\$13.17	Kg	\$4.3m	86.9%	13.1%	0.0%
Yellowfin Bream	275,888	\$11.77	Kg	\$3.2m	85.5%	14.5%	0.0%
Australian Bonito	397,409	\$7.92	Kg	\$3.1m	88.8%	11.2%	0.0%
Blacklip Abalone	99,638	\$30.14	Kg	\$3.0m	22.8%	0.0%	77.2%
Eastern School Whiting	687,437	\$2.92	Kg	\$2.0m	73.9%	10.5%	15.7%
Snapper	156,354	\$12.00	Kg	\$1.9m	88.8%	11.2%	0.0%
Blue Swimmer Crab	100,095	\$17.46	Kg	\$1.7m	92.6%	7.4%	0.0%
Yellowtail Kingfish	120,760	\$14.20	Kg	\$1.7m	88.7%	11.3%	0.0%
Spanner Crab	85,045	\$19.11	Kg	\$1.6m	92.7%	7.3%	0.0%
Blue Mackerel	291,137	\$4.57	Kg	\$1.3m	84.3%	15.7%	0.0%
Dusky Flathead	100,873	\$11.65	Kg	\$1.2m	84.7%	15.3%	0.0%
Sand Whiting	70,343	\$15.29	Kg	\$1.1m	84.7%	15.1%	0.2%
Mulloway	63,288	\$13.65	Kg	\$0.9m	86.5%	13.5%	0.0%
Tailor	79,230	\$9.39	Kg	\$0.7m	87.8%	12.2%	0.0%
Luderick	240,248	\$2.20	Kg	\$0.5m	85.0%	15.0%	0.0%
Beachworms (Polychaete Worms)	194,885	\$1.62	Number	\$0.3m	80.0%	20.0%	0.0%
Australian Salmon	305,400	\$1.03	Kg	\$0.3m	81.7%	18.3%	0.0%
Silver Trevally	27,302	\$10.46	Kg	\$0.3m	87.1%	12.9%	0.0%
Bluespotted Flathead	37,358	\$5.87	Kg	\$0.2m	88.8%	11.2%	0.0%
Spanish Mackerel	10,792	\$19.09	Kg	\$0.2m	88.8%	11.2%	0.0%
Teraglin	20,771	\$9.61	Kg	\$0.2m	88.7%	11.3%	0.0%
Grey Morwong	22,293	\$5.64	Kg	\$0.1m	88.8%	11.2%	0.0%
Spotted Mackerel	6,631	\$17.10	Kg	\$0.1m	88.8%	11.2%	0.0%
Pearl Perch	6,868	\$15.60	Kg	\$0.1m	88.8%	11.2%	0.0%
Flathead (other)	5,816	\$7.54	Kg	<\$0.1m	86.4%	13.6%	0.0%
Cobia	2,145	\$17.86	Kg	<\$0.1m	88.7%	11.3%	0.0%
Other species	2,868,985	\$7.39	Kg	\$21.2m	86.9%	10.9%	2.2%
Other species	1,309,254	\$0.59	Number	\$0.8m	85.5%	10.0%	4.4%
Fishery total	9,836,588	\$8.86	Kg	\$88.2m	82.9%	8.1%	8.9%
Fishery total	1,504,139	\$0.73	Number				

Source: BDO analysis

Figure 3-1 Catch^a and GVP trends, 2019/20 to 2023/24 financial years^{a,b}



^a Catch of each species is expressed either as 'kg' or by 'number' of individuals depending on how fishers price the species and how it is recorded in logbooks. This means that some fisheries include both kg and number and others only kg.

^b Inland fishery is indexed to 2022/23 as this is the first year data are able to be presented.

Source: BDO analysis

3.2. Business financial indicators

The major measures of the financial performance of active businesses in New South Wales commercial fisheries for 2023/24 are presented across three tables in this section (Table 3-3 to Table 3-5). The assets, liabilities and equity of fishing businesses is presented in Table 3-6.

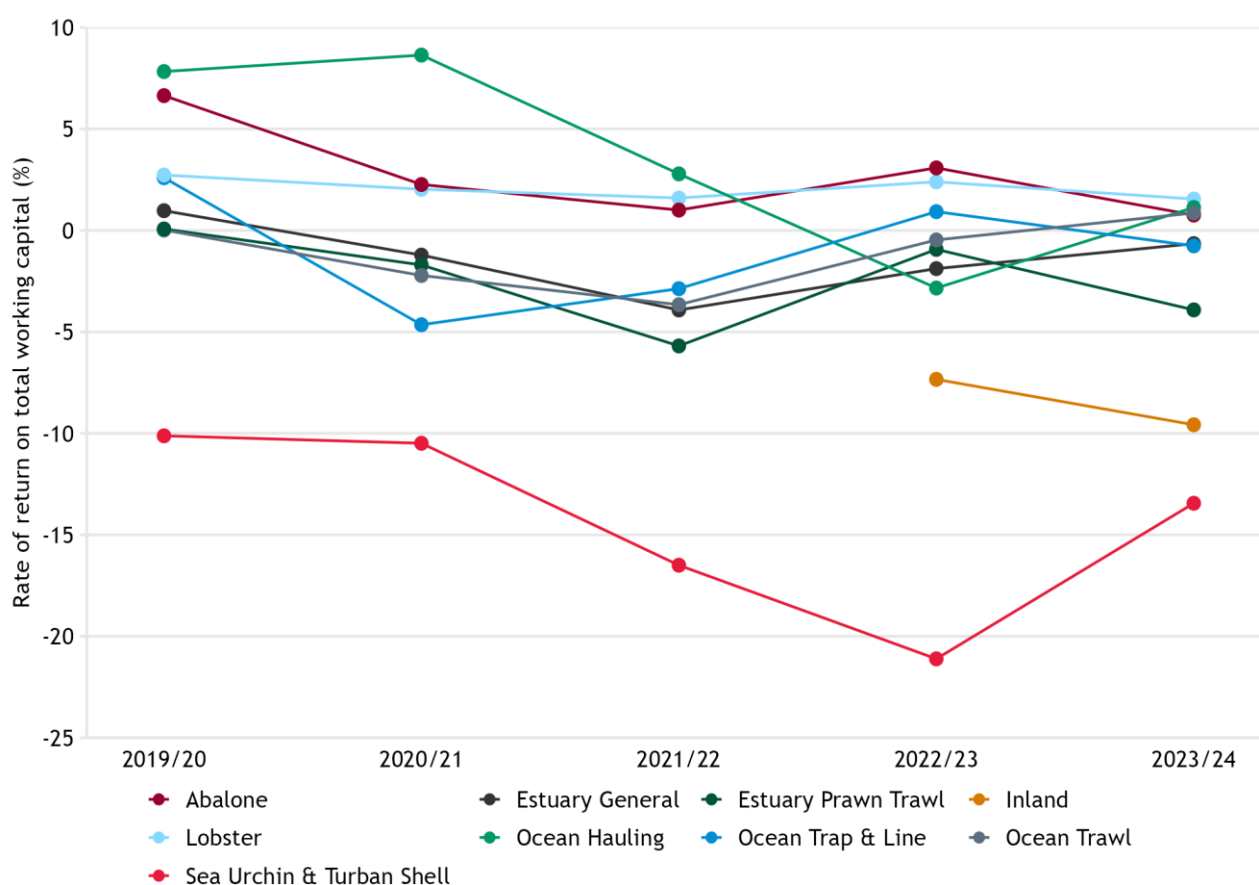
3.2.1. Financial performance

The estimates of financial performance include businesses that participated in the survey, supplementary responses and non-responding businesses modelled at the business level as described in Section 2. The estimates of financial performance are for the average business activity in the fishery for the 2023/24 financial year.

Average financial performance masks significant variation within fisheries across types of businesses and their activities. To describe this variation, the same indicators are presented in individual fishery reports with businesses disaggregated by number of days fished in the fishery, return on investment, level of specialisation in the fishery, level of specialisation by species, and fishing region.

A broad range of business profitability was observed within and between fisheries in 2023/24. Average rate of return on total working capital varied between 1.5 per cent (Lobster) and -13.4 per cent (Sea Urchin and Turban Shell) (Table 3-3 and Table 3-4). Between 2019/20 and 2023/24, all fisheries, except for Ocean Trawl, saw a decrease in their return on investment. However, between 2021/22 and 2023/24, the Estuary General, Estuary Prawn Trawl, Ocean Trap and Line, Ocean Trawl and Sea Urchin and Turban Shell fisheries had an increase in return on investment (Figure 3-2).

Figure 3-2 Rate of return to capital, 2019/20 to 2023/24



Source: BDO analysis

Table 3-3 Financial performance in commercial fisheries, 2023/24, average per business - part 1

Indicator	Fishery		
	Abalone	Estuary General	Estuary Prawn Trawl
Fishing businesses			
Active businesses	34	359	47
Sample size	11	90	15
Fishing activity			
Days fished	16	76	62
Catch (kg)	2,931	7,254	4,870
Catch (no.)	-	4,190	-
Prop. of revenue earned in this fishery	97.3%	90.3%	93.2%
Employment			
Total jobs	1.8	1.1	1.2
Fte jobs	0.7	0.7	0.7
(1) Gross income	\$88,326	\$65,089	\$71,182
Variable costs			
Bait/ice	\$270	\$3,563	\$2,390
Fuel	\$8,257	\$6,774	\$17,067
Labour - paid	\$29,918	\$15,334	\$14,511
(2) Labour - unpaid	\$2,799	\$8,384	\$8,788
Provisions	\$848	\$669	\$751
Repairs & maintenance	\$6,318	\$10,117	\$12,132
Other	\$354	\$1,021	\$225
(3) Total variable costs	\$48,763	\$45,862	\$55,864
Fixed costs			
Insurance	\$4,026	\$1,825	\$2,191
(4) Interest	\$3,782	\$710	\$274
(5) Labour - unpaid	\$5,709	\$3,803	\$7,165
(6) Leasing of building, equipment & quota transfers	\$5,279	\$233	\$471
Legal & accounting	\$1,505	\$1,892	\$1,697
Fishing licence fees	\$5,994	\$2,523	\$1,098
Office & admin	\$356	\$2,279	\$1,814
Other licence fees	\$564	\$1,101	\$508
Slipping & mooring	\$10	\$311	\$2,964
Telephone etc.	\$1,018	\$2,523	\$1,845
Travel	\$1,506	\$505	\$201
Other	\$0	\$0	\$182
(7) Total fixed costs	\$29,749	\$17,705	\$20,408
(8) Total boat cash costs (3+7)	\$78,512	\$63,567	\$76,273
Profitability			
Boat gross margin (1-3)	\$39,562	\$19,227	\$15,318
(9) Total unpaid labour (2+5)	\$8,509	\$12,187	\$15,953
Gross operating surplus (1-8+9)	\$18,322	\$13,709	\$10,862
(10) Boat cash income (1-8)	\$9,813	\$1,522	-\$5,091
(11) Depreciation	\$6,411	\$5,373	\$5,602
(12) Boat business profit (10-11)	\$3,402	-\$3,851	-\$10,693
(13) Profit at full equity (12+4+6) ^a	\$9,874	-\$2,524	-\$9,520
Boat capital			
(14) Fishing gear and equipment	\$170,665	\$157,072	\$154,806
Licence value	\$1,082,113	\$216,808	\$70,311
(15) Total working capital	\$1,252,778	\$373,881	\$225,116
Rate of return			
Rate of return on fishing gear and equipment (13 ^a /14*100)	4.4%	-1.5%	-5.5%
Rate of return on total working capital (13 ^a /15*100)	0.8%	-0.7%	-3.9%

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

Source: BDO analysis

Table 3-4 Financial performance in commercial fisheries, 2023/24, average per business - part 2

Indicator	Fishery		
	Inland	Lobster	Ocean Hauling
Fishing businesses			
Active businesses	7	69	61
Sample size	3	14	21
Fishing activity			
Days fished	30	44	25
Catch (kg)	13,090	2,459	43,948
Catch (no.)	-	-	-
Prop. of revenue earned in this fishery	100.0%	93.5%	69.9%
Employment			
Total jobs	1.7	1.7	2.0
Fte jobs	2.6	1.0	1.0
(1) Gross income	\$149,096	\$145,848	\$106,355
Variable costs			
Bait/ice	\$16,764	\$3,029	\$3,356
Fuel	\$24,709	\$5,895	\$7,589
Labour - paid	\$57,257	\$19,559	\$37,690
(2) Labour - unpaid	\$5,590	\$2,763	\$7,128
Provisions	\$6,707	\$1,193	\$1,230
Repairs & maintenance	\$33,445	\$18,071	\$11,266
Other	\$9,831	\$7,507	\$428
(3) Total variable costs	\$154,303	\$58,016	\$68,688
Fixed costs			
Insurance	\$7,389	\$10,070	\$3,974
(4) Interest	\$0	\$10,563	\$986
(5) Labour - unpaid	\$6,629	\$4,471	\$2,589
(6) Leasing of building, equipment & quota transfers	\$44	\$810	\$5
Legal & accounting	\$14,044	\$5,309	\$1,483
Fishing licence fees	\$2,221	\$6,998	\$888
Office & admin	\$15,378	\$3,037	\$1,315
Other licence fees	\$1,292	\$906	\$868
Slipping & mooring	\$11	\$8,362	\$2,924
Telephone etc.	\$14,341	\$6,325	\$1,913
Travel	\$11,020	\$763	\$263
Other	\$0	\$0	\$0
(7) Total fixed costs	\$72,366	\$57,613	\$17,209
(8) Total boat cash costs (3+7)	\$226,669	\$115,629	\$85,897
Profitability			
Boat gross margin (1-3)	-\$5,207	\$87,832	\$37,667
(9) Total unpaid labour (2+5)	\$12,218	\$7,234	\$9,717
Gross operating surplus (1-8+9)	-\$65,356	\$37,452	\$30,175
(10) Boat cash income (1-8)	-\$77,574	\$30,219	\$20,458
(11) Depreciation	-\$2,266	\$14,291	\$16,219
(12) Boat business profit (10-11)	-\$75,308	\$15,928	\$4,239
(13) Profit at full equity (12+4+6) ^a	-\$68,962	\$27,443	\$5,363
Boat capital			
(14) Fishing gear and equipment	\$190,341	\$189,627	\$340,981
Licence value	\$402,904	\$1,566,396	\$131,516
(15) Total working capital	\$593,246	\$1,756,022	\$472,498
Rate of return			
Rate of return on fishing gear and equipment (13 ^a /14*100)	-21.7%	13.2%	1.6%
Rate of return on total working capital (13 ^a /15*100)	-9.6%	1.5%	1.1%

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

Source: BDO analysis

Table 3-5 Financial performance in commercial fisheries, 2023/24, average per business - part 3

Indicator	Fishery		
	Ocean Trap & Line	Ocean Trawl	Sea Urchin & Turban Shell
Fishing businesses			
Active businesses	220	127	29
Sample size	63	19	5
Fishing activity			
Days fished	44	44	18
Catch (kg)	6,077	18,007	11,658
Catch (no.)	-	-	-
Prop. of revenue earned in this fishery	87.5%	95.5%	92.8%
Employment			
Total jobs	1.4	6.3	2.0
Fte jobs	0.5	1.2	0.7
(1) Gross income	\$63,956	\$204,188	\$30,729
Variable costs			
Bait/ice	\$4,511	\$4,041	\$168
Fuel	\$9,749	\$49,385	\$4,180
Labour - paid	\$15,660	\$46,018	\$22,244
(2) Labour - unpaid	\$10,052	\$8,258	\$6,125
Provisions	\$1,155	\$2,784	\$453
Repairs & maintenance	\$10,075	\$29,972	\$10,070
Other	\$266	\$2,105	\$335
(3) Total variable costs	\$51,468	\$142,563	\$43,575
Fixed costs			
Insurance	\$3,061	\$12,271	\$5,773
(4) Interest	\$595	\$2,278	\$1,079
(5) Labour - unpaid	\$2,744	\$4,510	\$4,732
(6) Leasing of building, equipment & quota transfers	\$1	\$434	\$0
Legal & accounting	\$804	\$3,109	\$1,703
Fishing licence fees	\$177	\$4,869	\$258
Office & admin	\$1,613	\$2,589	\$548
Other licence fees	\$684	\$792	\$925
Slipping & mooring	\$1,132	\$9,465	\$23
Telephone etc.	\$1,184	\$1,504	\$2,192
Travel	\$483	\$1,905	\$1,221
Other	\$0	\$0	\$0
(7) Total fixed costs	\$12,476	\$43,727	\$18,452
(8) Total boat cash costs (3+7)	\$63,944	\$186,291	\$62,028
Profitability			
Boat gross margin (1-3)	\$12,488	\$61,624	-\$12,846
(9) Total unpaid labour (2+5)	\$12,796	\$12,768	\$10,857
Gross operating surplus (1-8+9)	\$12,807	\$30,665	-\$20,441
(10) Boat cash income (1-8)	\$11	\$17,897	-\$31,299
(11) Depreciation	\$3,670	\$16,290	\$16,669
(12) Boat business profit (10-11)	-\$3,658	\$1,607	-\$47,967
(13) Profit at full equity (12+4+6) ^a	-\$2,526	\$4,263	-\$46,889
Boat capital			
(14) Fishing gear and equipment	\$147,914	\$309,886	\$232,821
Licence value	\$173,250	\$178,853	\$115,992
(15) Total working capital	\$321,164	\$488,739	\$348,813
Rate of return			
Rate of return on fishing gear and equipment (13 ^a /14*100)	-1.6%	1.3%	-20.1%
Rate of return on total working capital (13 ^a /15*100)	-0.8%	0.9%	-13.4%

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

Source: BDO analysis

3.2.2. Assets, liabilities, and equity

Commercial fishing businesses in New South Wales utilise valuable fishing shares and endorsements, 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. The table below presents a simple average of the equity of all surveyed businesses that access each of the New South Wales commercial fisheries. The averages are based on business asset and debt data collected in the 2023/24 survey. The averages are 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 each fishery. The average level of equity that fishers have in their businesses varied across fisheries from 86 per cent (Estuary Prawn Trawl) to 98 per cent (Inland).

The estimated values for shares in NSW commercial fisheries are shown in Table 3-7. These values are derived from share value data collected in the 2023/24 survey. Values are shown where the surveys provided at least 5 observations (to maintain confidentiality), these prices were used to calculate indicators.

Table 3-6 Assets, liabilities and equity of average fishing businesses by fishery, 2023/24

Fishery	Share value (\$m)	Working capital (\$m)	Other assets (\$m)	Total assets (\$m)	Total liabilities (\$m)	Total equity (\$m)	Equity / Total assets (%)
Abalone	1.41	0.48	0.43	2.32	0.19	2.13	91.7%
Estuary General	0.42	0.31	0.02	0.76	0.07	0.68	90.1%
Estuary Prawn Trawl	0.11	0.33	0.00	0.45	0.06	0.38	86.0%
Inland	0.42	0.13	0.17	0.72	0.02	0.70	97.5%
Lobster	2.21	0.37	0.25	2.82	0.30	2.52	89.4%
Ocean Hauling	0.50	1.08	0.04	1.61	0.18	1.43	88.6%
Ocean Trap & Line	0.55	0.55	0.09	1.19	0.08	1.11	93.5%
Ocean Trawl	0.50	1.50	0.07	2.07	0.20	1.87	90.5%
Sea Urchin & Turban Shell	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Statewide	0.59	0.54	0.08	1.22	0.11	1.11	91.2%

Source: BDO analysis

Table 3-7 Share values in NSW commercial fisheries, 2023/24^a

Endorsement	Abbreviation	Value per unit
Abalone		
Access share		
Abalone	AB	\$11,000
Estuary General		
Access share		
Estuary General Category One Hauling Region 4	EGC1H4	\$400
Estuary General Eel Trapping Region 3	EGET3	\$80
Estuary General Hand Gathering Region 4	EGHG4	\$240
Estuary General Handline Region 2	EGHL2	\$50
Estuary General Handline Region 3	EGHL3	\$50
Estuary General Handline Region 4	EGHL4	\$52
Estuary General Meshing Region 2	EGM2	\$430
Estuary General Meshing Region 3	EGM3	\$530
Estuary General Meshing Region 4	EGM4	\$400
Estuary General Mud Crab Trapping Region 3	EGMC3	\$180
Estuary General Mud Crab Trapping Region 4	EGMC4	\$160
Estuary General Prawning Region 4	EGP4	\$400
Estuary General Trapping Region 3	EGT3	\$300
Estuary General Trapping Region 4	EGT4	\$300
Quota share		
Estuary General Blue Swimmer Crab Quota	BSCRA	\$120
Estuary General Eel Quota	EEL	\$50
Estuary General Mud Crab Quota	MCRA	\$620
Estuary General Pipi Quota	PIPI	\$60
Lobster		
Access share		
Lobster	LOB	\$14,500
Ocean Hauling		
Access share		
Ocean Hauling General Ocean Hauling Region 4	OHG4	\$375
Ocean Hauling General Ocean Hauling Region 7	OHG7	\$50

Endorsement	Abbreviation	Value per unit
Ocean Trap & Line		
Access share		
Ocean Trap and Line Demersal Fish Trap	OTLD	\$1,000
Ocean Trap and Line Spanner Crab Northern Zone	OTLSCN	\$3,500
Ocean Trawl		
Access share		
Ocean Trawl Inshore Prawn	OTISP	\$1,000
Ocean Trawl Offshore Prawn	OTOSP	\$1,000
Quota share		
Ocean Trawl Prawn Effort Quota	OTPE	\$10
Sea Urchin & Turban Shell		
Access share		
Sea Urchin & Turban Shell - Sea Urchin	SUTSSU	\$100,000
Sea Urchin & Turban Shell - Turban Shell	SUTSTS	\$75,000

^a This table only shows shares with at least five observations. The complete list is shown in Appendix 1.

Source: BDO analysis

3.3. State and regional economic contribution

Estimates of the economic contribution of the NSW commercial fisheries to the NSW and regional economies in 2023/24 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 2019).

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).

3.3.1. Measuring direct and flow-on effects

The following activities have been included in the quantifiable economic contribution:

- the landed beach value of production
- the sustaining capital expenditure of fishing businesses
- the margin value of each stage of the supply chain.

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.

In order to compile a representative cost structure for the fishing sector, costs per boat 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 New South Wales and those goods and services imported from outside the state.

Estimates of the net value of local (i.e. regional and state) post-harvest supply chain activities and capital expenditure per fishing business were derived from the survey of fishing businesses, supply chain workshops 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.

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 avoids double counting, which can occur when using total output as a measure of economic contribution

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.

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.

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.

3.3.2. Post-harvest supply chain

Figure 3-3 illustrates the direct output at key stages of the NSW wild-caught seafood post-harvest supply chain used to calculate economic contribution, along with the final sales destinations (indicated by green

arrows). The market destination values in Figure 3-3 differ from those implied by Table 3-1 as Figure 3-3 captures all value-added products downstream of the landed catch, while Table 3-1 captures catch exported by fishers or processors at beach price. For more detailed insights and fishery-specific supply chains, please refer to the individual reports.

In 2023/24, the value of output from fishing (also known as GVP) generated from NSW fisheries was \$88.2 million. The product then moved through processing and marketing, including wholesaling, which generated approximately \$49.4 million. Around 83 per cent of the product was distributed across the food services and retail sectors within the NSW market, generating an additional \$64.1 million and \$12.9 million, respectively. The remaining 17 per cent was directly exported. Supporting transport activities contributed a further \$13.6 million.

This resulted in a total final sales value of \$228.1 million, comprising \$12.5 million in interstate export sales, \$13.5 million in overseas export sales, and the remainder in NSW sales.

Figure 3-3 NSW wild-caught seafood post-harvest supply chain, direct output generated by each sector and final destination value (\$m)



Source: BDO analysis

3.3.3. Economic contribution to New South Wales and its regions

Estimates of the economic contribution to New South Wales generated in 2023/24 by New South Wales commercial fisheries combined are outlined in Table 3-8. Direct contribution measures fishing activities, associated seafood processing and other post-harvest supply chain activities and capital expenditure. Flow-on contribution measures the economic effects in other sectors of the economy (retail and wholesale trade, manufacturing, etc.) generated by direct and downstream 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 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 at beach price (also known as fishery GVP) generated directly in New South Wales commercial fisheries was \$88.2 million in 2023/24, while total direct output, including associated downstream activities (processing, post-harvest supply chain and capital expenditure), summed to \$230.5 million. Flow-on output is a biased indicator of economic contribution due to double-counting of value so is not reported here.

Household Income

Personal income of \$75.5 million was earned in 2023/24 in New South Wales commercial fisheries, including \$32.5 million earned from fishing directly. An additional \$84.4 million was earned by wage earners in other businesses in New South Wales from the flow-on effects of fishing and associated downstream activities. The total household income contribution in New South Wales was \$159.9 million in 2023/24, an increase from \$158.2 million in 2022/23 (in real terms).

Employment

New South Wales commercial fisheries were responsible for the direct employment of an estimated 1,425 full-time equivalent (fte) jobs in 2023/24, including 762 fte jobs from fishing directly. Flow-on business activity was estimated to support a further 968 fte jobs state-wide. These jobs were concentrated in the retail trade, food and beverage services and professional, scientific and technical services sectors. The total employment contribution to New South Wales was estimated to be 2,393 fte jobs in 2023/24, an increase from 2,329 in 2022/23 and 1,533 in 2021/22 (Figure 3-4). The significant increase in fte jobs between 2021/22 and 2022/23 was driven by the inclusion of additional supply chain activities in 2022/23.

From 2019/20 to 2023/24, the Estuary General fishery was the largest contributor to total fte jobs in NSW. Abalone, Inland, Lobster and Estuary Prawn Trawl were the only fisheries to not see an increase in total fte jobs between 2022/23 and 2023/24 (Figure 3-4).

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 commercial fisheries related contribution to GSP in New South Wales was \$267.4 million in 2023/24, with \$117.0 million generated directly, and \$150.4 million supported in other sectors of the state economy through flow-on effects. Total GSP contribution in 2023/24 was an increase from \$265.6 million in 2022/24 (Figure 3-4). The significant increase in GSP between 2021/22 and 2022/23 was driven by the inclusion of additional supply chain activities in 2022/23.

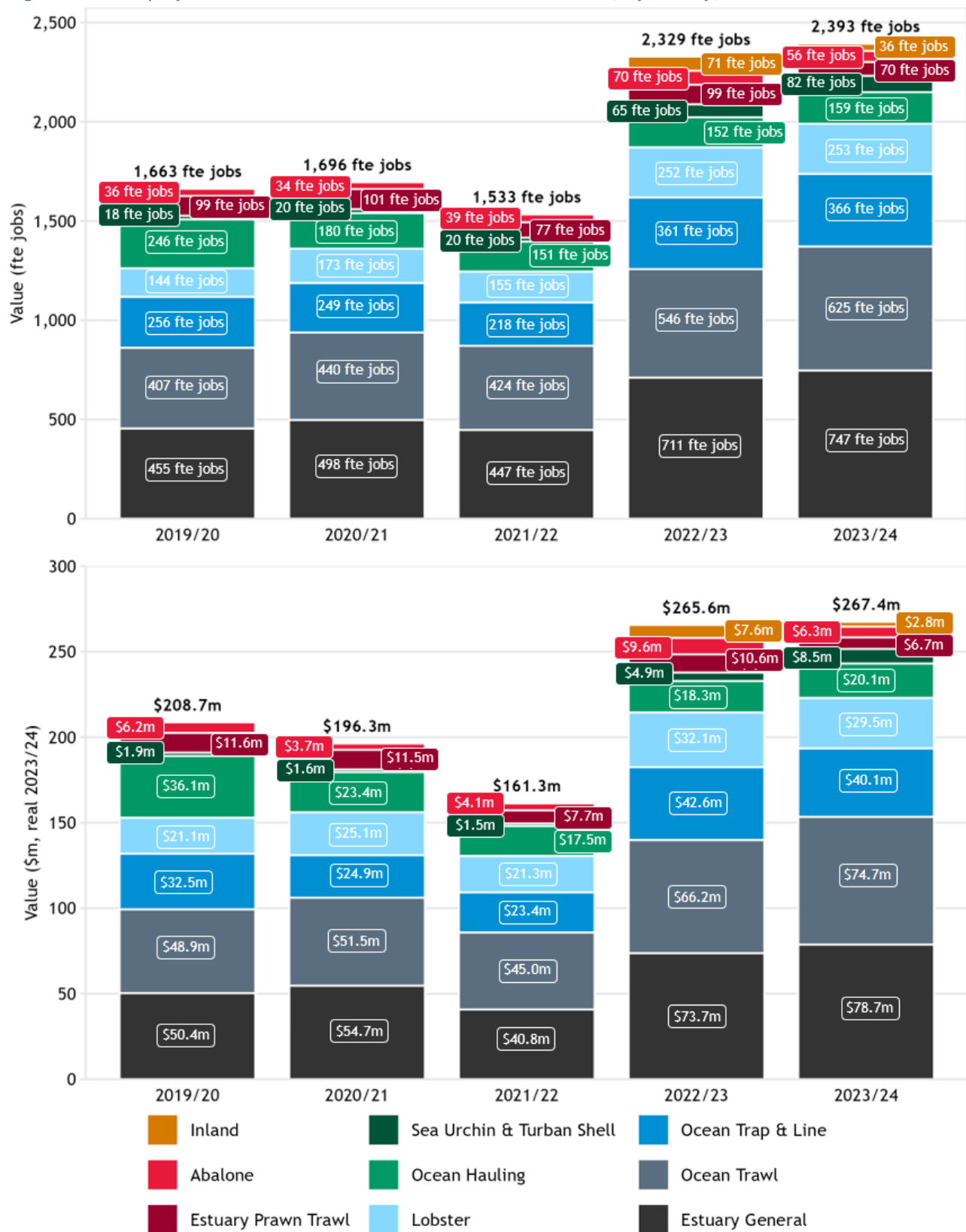
Between 2019/20 and 2023/24, the Estuary General fishery was the largest contributor to total GSP, with the exception of being overtaken by Ocean Trawl in 2021/22. Between 2022/23 and 2023/24, the only fisheries which saw an increase in total GSP contribution during this period were Estuary General, Ocean Hauling, Ocean Trawl and Sea Urchin and Turban Shell (Figure 3-4).

Table 3-8 Economic contribution of New South Wales commercial fisheries to New South Wales, 2023/24

Sector	Output (\$m)	Gross state product (\$m)	Household income (\$m)	Employment (fte jobs)	Employment (total jobs)
Direct					
Fishing business operation	88.2	46.4	32.5	762	1,927
Fishing business capital expenditure	2.4	1.3	0.9	12	13
Processing and marketing	49.4	21.7	9.7	102	94
Transport	13.6	6.9	4.9	46	41
Retail	12.9	7.5	4.7	87	101
Food service	64.1	33.2	22.8	417	547
Total direct	230.5	117.0	75.5	1,425	2,723
Flow-on					
Retail trade		11.6	8.4	128	149
Food & beverage services		8.3	8.1	123	130
Professional, scientific & technical services		8.8	6.4	94	98
Health & community services		12.8	11.9	91	84
Admin support services		5.5	4.6	71	94
Personal & other services		6.3	6.0	66	73
Wholesale trade		8.3	5.5	53	48
Finance		12.0	3.1	35	32
Education & training		6.2	3.6	32	30
Insurance & other financial services		3.3	3.1	32	33
Other sectors		67.4	23.6	244	234
Total flow-on		150.4	84.4	968	1,004
Total contribution		267.4	159.9	2,393	3,727

Source: BDO analysis

Figure 3-4 Employment and GSP contribution to New South Wales, by fishery, 2019/20 to 2023/24^a



^a The results increase from 2022/23 is due to improved supply-chain modelling.

Source: BDO analysis

Estimates of the economic contribution of each commercial fishery to the New South Wales economy are presented in Table 3-9. Direct activities are combined in the upper section of the table, all flow-on effects are combined in the middle section, and the two sections are summed together to calculate total economic contribution presented in the lower section.

The economic contribution of all New South Wales commercial fisheries combined to each region in New South Wales is presented in Table 3-10. The interpretation of the table is similar to Table 3-9. Direct economic contribution includes fishing activity, associated seafood processing and post-harvest supply chain activities and capital expenditure. Flow-on effects include all other economic activity in the region supported by direct activity, and total economic contribution is the sum of direct and flow-on activity. Flow-on economic activity was estimated separately for each region and the state. The flow-on activity within any one region excludes inter-regional flow-on effects, but the New South Wales level estimate includes inter-regional flow-on effects within New South Wales. The sum of flow-on (and total) economic contribution across all regions in Table 3-10 is slightly smaller than the flow-on economic contribution for New South Wales in the same table because of this difference in estimation method.

Table 3-9 Economic contribution of each commercial fishery to New South Wales, 2023/24

Fishery	Output (\$m)	Gross state product (\$m)	Household income (\$m)	Employment (fte jobs)	Employment (total jobs)
Direct					
Abalone	5.0	2.9	1.8	33	71
Estuary General	69.9	33.7	23.0	457	622
Estuary Prawn Trawl	4.4	2.1	1.8	40	60
Inland	1.3	0.2	0.6	19	13
Lobster	23.8	12.4	6.5	142	206
Ocean Hauling	20.5	10.7	5.9	100	167
Ocean Trap & Line	33.0	17.5	12.5	221	434
Ocean Trawl	64.8	33.8	20.5	361	1,053
Sea Urchin & Turban Shell	7.8	3.6	2.9	52	97
Statewide	230.5	117.0	75.5	1,425	2,723
Flow-on					
Abalone		3.4	1.9	22	23
Estuary General		45.0	25.3	291	301
Estuary Prawn Trawl		4.6	2.6	30	31
Inland		2.6	1.5	17	18
Lobster		17.1	9.7	111	114
Ocean Hauling		9.4	5.2	59	62
Ocean Trap & Line		22.5	12.5	144	150
Ocean Trawl		40.9	23.0	264	273
Sea Urchin & Turban Shell		4.9	2.7	30	31
Statewide		150.4	84.4	968	1,004
Total					
Abalone		6.3	3.8	56	94
Estuary General		78.7	48.3	747	924
Estuary Prawn Trawl		6.7	4.4	70	91
Inland		2.8	2.0	36	31
Lobster		29.5	16.2	253	320
Ocean Hauling		20.1	11.1	159	229
Ocean Trap & Line		40.1	25.0	366	584
Ocean Trawl		74.7	43.5	625	1,326
Sea Urchin & Turban Shell		8.5	5.6	82	128
Statewide		267.4	159.9	2,393	3,727

Source: BDO analysis

Table 3-10 Economic contribution of New South Wales commercial fisheries to regions of New South Wales, 2023/24

Region	Output (\$m)	Gross Regional Product (\$m)	Household Income (\$m)	Employment (fte)	Employment (total)
Direct					
Upper North Coast	14.3	7.3	4.7	95	291
Clarence	20.2	9.4	6.6	140	408
North Coast	26.2	13.0	8.3	172	360
Central	40.8	21.9	13.6	274	555
Metropolitan	104.6	52.5	33.7	556	758
Upper South Coast	10.2	5.5	3.6	83	130
Lower South Coast	14.2	7.5	5.0	105	222
New South Wales^a	230.5	117.0	75.5	1,425	2,723
Flow-On					
Upper North Coast		8.2	5.1	65	69
Clarence		10.7	6.3	82	86
North Coast		14.4	8.4	106	112
Central		22.1	12.9	153	161
Metropolitan		60.9	32.7	354	364
Upper South Coast		5.6	3.4	41	44
Lower South Coast		6.4	3.7	47	50
New South Wales^a		150.4	84.4	968	1,004
Total					
Upper North Coast		15.5	9.8	160	360
Clarence		20.0	12.9	222	494
North Coast		27.4	16.7	278	471
Central		44.0	26.5	427	716
Metropolitan		113.3	66.4	910	1,121
Upper South Coast		11.0	7.0	124	174
Lower South Coast		13.8	8.6	152	271
New South Wales^a		267.4	159.9	2,393	3,727

^a Regions do not sum to the state total due to exclusion of inter-regional flow-on effects.

Source: BDO analysis

3.4. 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 value of shares and 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.

Net economic return generated in New South Wales commercial fisheries in 2023/24 was estimated to be -\$19.6 million, a decrease from -\$9.2 million in 2019/20, but an increase from -\$27.4 million in 2021/22 (in real terms). The fishery with the highest, and only positive, estimated net economic return in 2021/22 was Lobster (\$500,000), and the fisheries with the lowest estimated net economic return were Estuary General (-\$6.8 million), and Ocean Trap and Line (-\$3.9 million).

The sensitivity analysis in Table 3-12 shows that, with the varying assumptions about opportunity cost of capital, net economic return was likely in the range of -\$14.1 million to -\$28.8 million.

With a sustained negative net economic return, the market value of shares and endorsements can be expected to decrease over time, however, there is anecdotal evidence from the survey that the market values of shares and endorsements have not decreased over time. This suggests that profitability may be underestimated or that the assumed opportunity cost of capital may be high. Building a time series of economic indicators and increasing participation in the business survey in future would provide evidence to potentially adjust these assumptions away from the standard values used for commercial fishing and better understand the level and changes in net economic return.

Net economic return as a proportion of GVP has seen an overall decrease in every fishery between 2019/20 and 2023/24 with the exception of Ocean Trawl. However, the Estuary General, Ocean Hauling and Sea Urchin and Turban Shell fisheries had an increase in net economic return as a proportion of GVP between 2022/23 and 2023/24 (Figure 3-5).

Table 3-11 Net economic return in New South Wales commercial fisheries, 2023/24

Fishery	GVP (\$m)	Labour cost (\$m)	Materials & services (\$m)	Depreciation (\$m)	Opp. cost of capital (10%) (\$m)	Net economic return (\$m)
Abalone	3.0	1.3	1.2	0.2	0.6	-0.3
Estuary General	23.4	9.9	12.7	1.9	5.6	-6.8
Estuary Prawn Trawl	3.3	1.4	2.1	0.3	0.7	-1.2
Inland	1.0	0.5	1.1	0.0	0.1	-0.7
Lobster	10.1	1.8	5.4	1.0	1.3	0.5
Ocean Hauling	6.5	2.9	2.3	1.0	2.1	-1.8
Ocean Trap & Line	14.1	6.3	7.7	0.8	3.3	-3.9
Ocean Trawl	25.9	7.5	15.9	2.1	3.9	-3.4
Sea Urchin & Turban Shell	0.9	1.0	0.8	0.5	0.7	-2.0
Statewide	88.2	32.5	49.2	7.7	18.3	-19.6

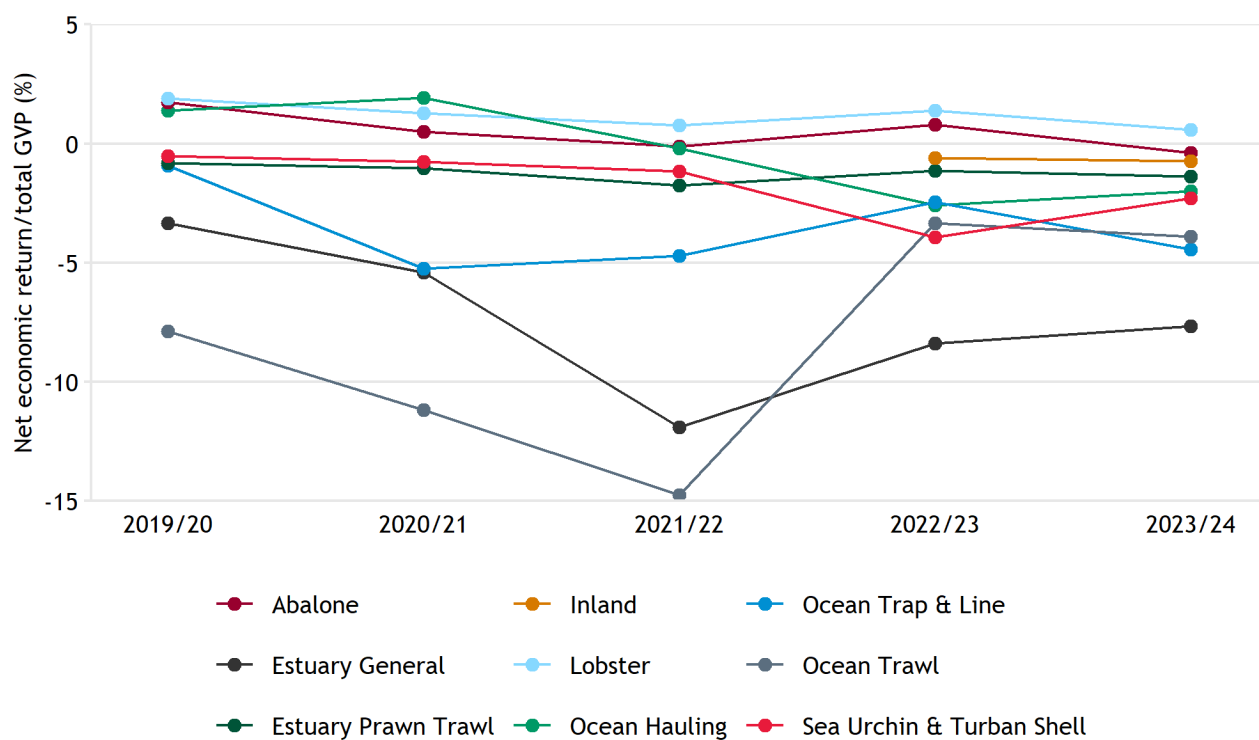
Source: BDO analysis

Table 3-12 Sensitivity analysis of opportunity cost of capital on net economic return in New South Wales commercial fisheries, 2023/24

Opportunity cost of capital (%)	7%	10%	15%
Opp. cost of capital (\$m)	12.8	18.3	27.5
Net economic return (\$m)	-14.1	-19.6	-28.8

Source: BDO analysis

Figure 3-5 Net economic return as a proportion of GVP, 2019/20 to 2023/24

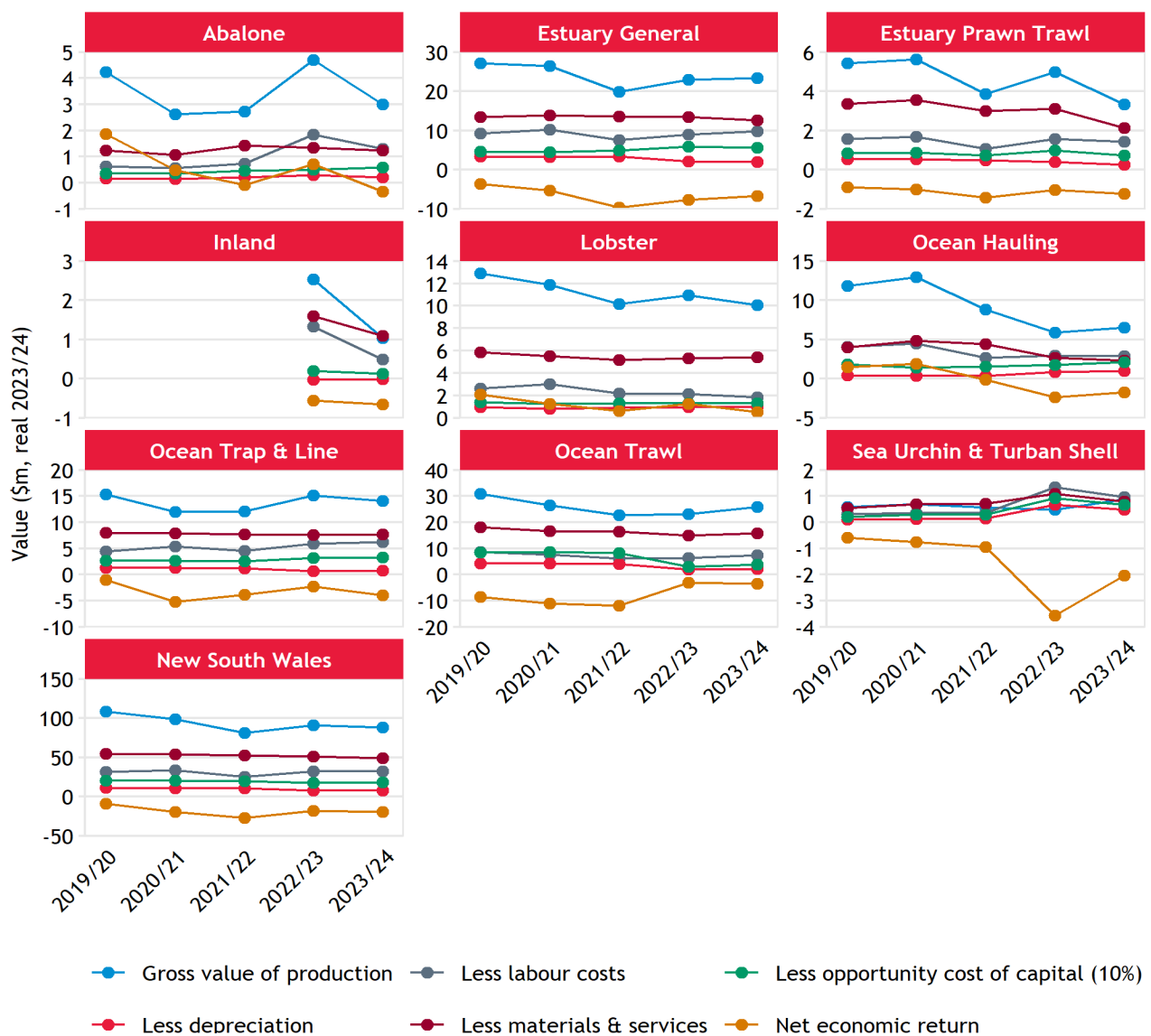


Source: BDO analysis

Change in net economic return and its components for each commercial fishery over the five financial years to 2023/24 is illustrated in Figure 3-6. Each fishery is represented by a small chart in the figure, and each has an independent vertical axis to focus attention on changes in net economic return and its components within each fishery rather than comparing between fisheries. For example, the vertical axis for the Abalone fishery is limited to \$5 million whereas the vertical axis for the Estuary General fishery is limited to \$30 million. Net economic return is represented by the orange line on each chart. This chart only includes five observations so far but will produce more useful trends as more annual data points are added over time.

Net economic return increases as GVP increases (blue line) and decreases as all of the other coloured lines (which represent different categories of economic cost) increase. The movement in the coloured lines therefore explains the movement in net economic return. For example, between 2022/23 and 2023/24, net economic return decreased in the Abalone fishery as GVP (blue line) decreased. Between 2020/21 and 2021/22, GVP increased in the Abalone fishery, but all costs increased as well (by more than GVP when combined), leading to a further decrease in net economic return.

Figure 3-6 Net economic return and associated revenue and cost trends, 2019/20 to 2023/24



Source: BDO analysis

4. Sydney Fish Market

Sydney Fish Market (SFM) plays a vital role in the post-harvest seafood supply chain for NSW commercial fisheries. The economic activity driven by SFM operations (including seafood trading), seafood wholesaling, retail, restaurants, and visitor expenditures at the market significantly influences downstream economic indicators.

In 2023/24, SFM worked with 857 suppliers and 445 buyers, facilitating the movement of seafood from fishers to businesses and consumers across Australia. SFM traded \$162.6 million worth of seafood sales from NSW, interstate and overseas imports. Of this, approximately \$72.5 million worth of seafood was sourced from the NSW wild catch industry. The majority of NSW wild-catch product was sold to buyers in NSW (\$66.0 million), followed by Victoria (\$3.4 million) (Figure 4-1).

An estimated 3 million people visit SFM each year, making it a major tourism destination drawing in significant visitor numbers to Sydney (SFM pers. comm.). Of that, an estimated 38,300 international and 47,900 domestic overnight visitors came to Sydney primarily to visit the market. This analysis excludes incidental visitors to avoid overstating economic contribution. In total, the 86,300 visitors generated an estimated \$148.4 million in tourism expenditure (Figure 4-1). This estimation is likely to be conservative as there is no data available for domestic day trip tourists.

Estimates of the economic contribution to New South Wales generated in 2023/24 by SFM are outlined in Table 4-1.

Table 4-1 Economic contribution of SFM to New South Wales, 2023/24

	Operations	Tenants	Related tourism	Total
Employment (fte jobs)				
Direct	91	215	456	762
Production induced	84	61	170	315
Consumption induced	83	102	259	445
Flow-on total	168	163	429	760
Total	258	378	886	1,522
Gross state product (\$m)				
Direct	10.1	24.9	72.4	107.3
Production induced	13.5	11.3	32.8	57.6
Consumption induced	16.2	19.3	52.7	88.2
Flow-on total	30.4	30.6	85.5	146.5
Total	39.8	55.5	157.9	253.2

Source: Sydney Fish Market Annual Report 2024, SFM data and BDO analysis

Employment

SFM operations, tenants, and related tourism activity were responsible for the direct employment of an estimated 762 fte jobs in 2023/24. Flow-on activity was estimated to support an additional 760 fte jobs across the state. The total employment contribution to New South Wales was estimated to be 1,522 fte jobs in 2023/24.

Contribution to GSP

Total contribution to GSP from SFM operations, tenants, and related tourism was estimated at \$253.2 million in 2023/24, with \$107.3 million generated directly, and \$145.9 million supported in other sectors of the state economy through flow-on effects.

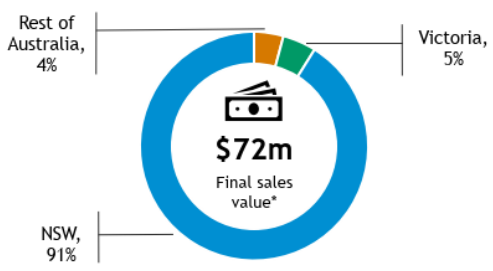
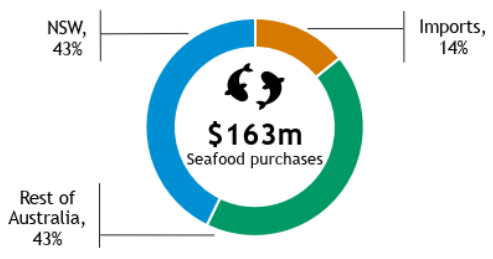
Figure 4-1

Snapshot of Sydney Fish Market in 2023/24

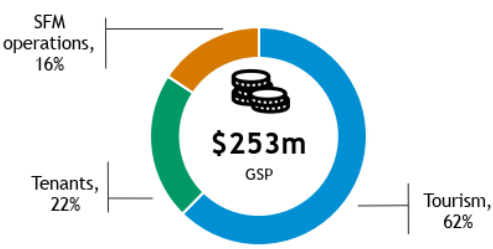
Final sales destination by state



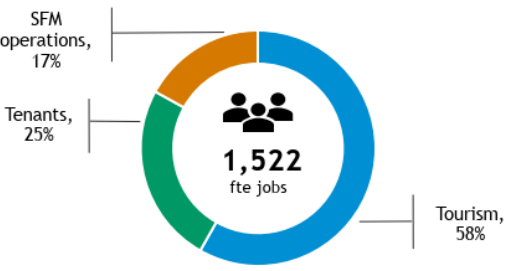
SFM contributions



*Final sales value is NSW Wild catch only.



SFM activity

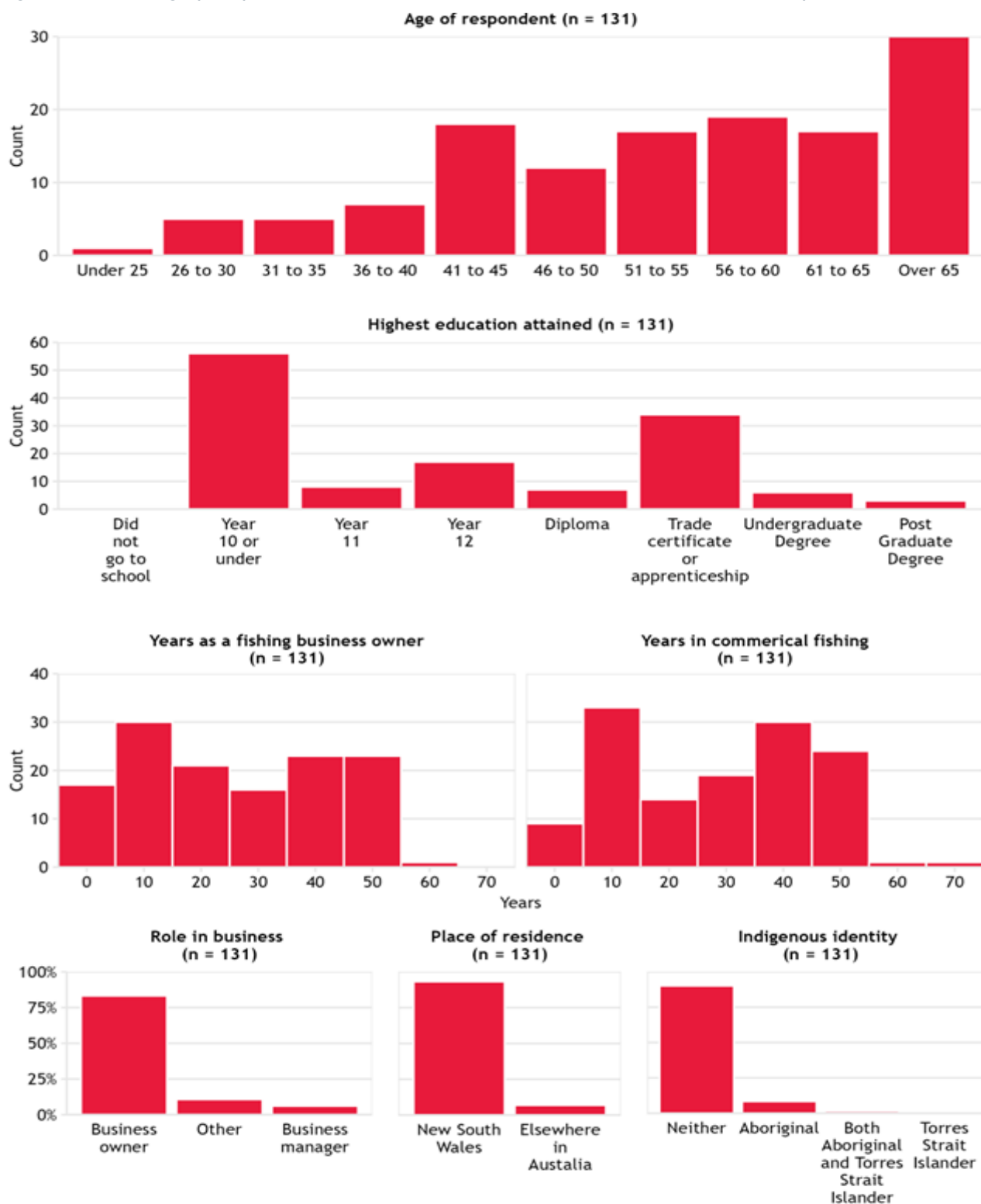


Source: Sydney Fish Market Annual Report 2024 and BDO analysis

5. Demographic indicators

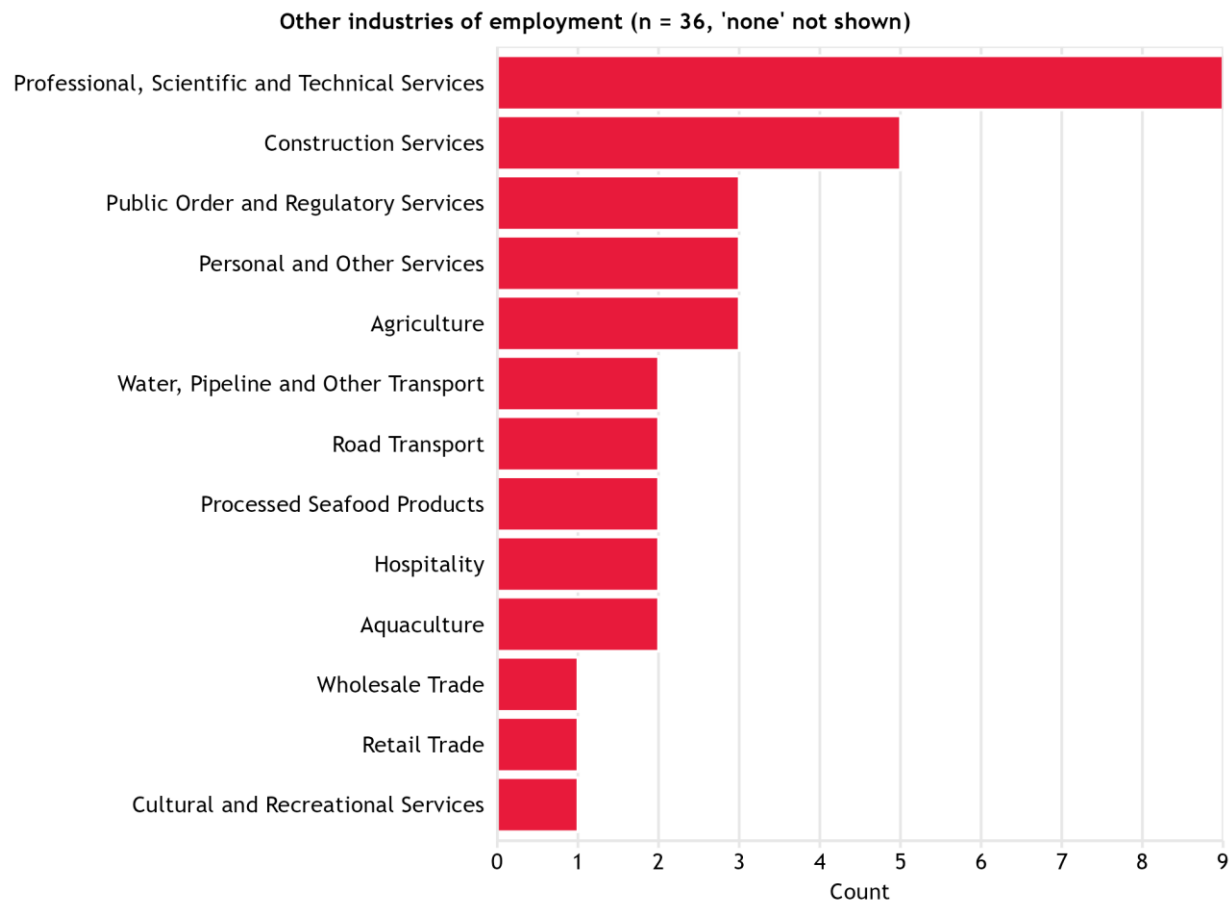
The charts below and on the following page present a demographic profile of fishers who accessed the commercial fisheries in New South Wales in 2023/24.

Figure 5-1 Demographic profile of New South Wales commercial fisheries, 2023/24 - part 1



Source: 2025 survey

Figure 5-2 Demographic profile of New South Wales commercial fisheries, 2023/24 - part 2



Source: BDO analysis

6. Social indicators

Fishers may derive non-financial benefits or costs from New South Wales fisheries 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.

Questions were asked on a point scale of 0 to 10, the annual change is then presented as the change from the average point of 2019/20 to the average point of 2023/24. The results for each fishery are calculated from the unweighted sub-sample of fishers who accessed each fishery during 2023/24.

The results in this section should be interpreted with caution due to potential non-response bias. Since participation in the survey was voluntary, the findings may disproportionately reflect the views of those who chose to respond.

6.1. Management

Figure 6-1 to Figure 6-3 present fishers' perceptions of different aspects of fishery management and participation in management.

Understanding and compliance with regulation

New South Wales fishers were near unanimous in agreement that they had a good understanding of the fishing rules and regulations that apply to their fishing activities (94 per cent). Over three quarters of New South Wales fishers also agreed that most commercial fishers comply with fishing rules and regulations (82 per cent) and that it was easy for their business to comply with them (80 per cent). Both have increased by 0.2 points since fishers were asked in 2019/20 survey. Almost half of fishers surveyed in New South Wales were inclined to report others for doing the wrong thing with respect to fishing rules and regulations (48 per cent). This level of agreement has dropped since the previous survey, and some participants strongly disagreed. Overall, these results indicate a high level of stewardship amongst New South Wales fishers which is associated with lower costs of management and compliance activities, and a greater ability to achieve ecological sustainability.

Confidence in fisheries management

Importantly, a majority of New South Wales fishers do not trust DPIRD Fisheries to make the right decisions for managing commercial fishing in New South Wales (66 per cent), despite a slight improvement (0.4 points) since 2019/20. Fishers are more likely to trust fisheries management if they feel the processes used to make decisions are transparent.

Around 40 per cent of New South Wales fishers indicated that they do not agree that the information DPIRD Fisheries produces is easy to understand, and only 37 per cent of respondents felt that it was easy to access information about commercial fishing management in New South Wales. Under half (40 per cent) of fishers indicated that they do not understand how fisheries management decisions are made, although this has improved by 0.8 points. A majority of New South Wales fishers indicated that they did not feel that consultation processes are satisfactory or that fisheries management is flexible enough (64 per cent). Just over half of New South Wales fishers indicated that they know how to have a say in fishery management if they want to (51 per cent), increasing by 0.5 points.

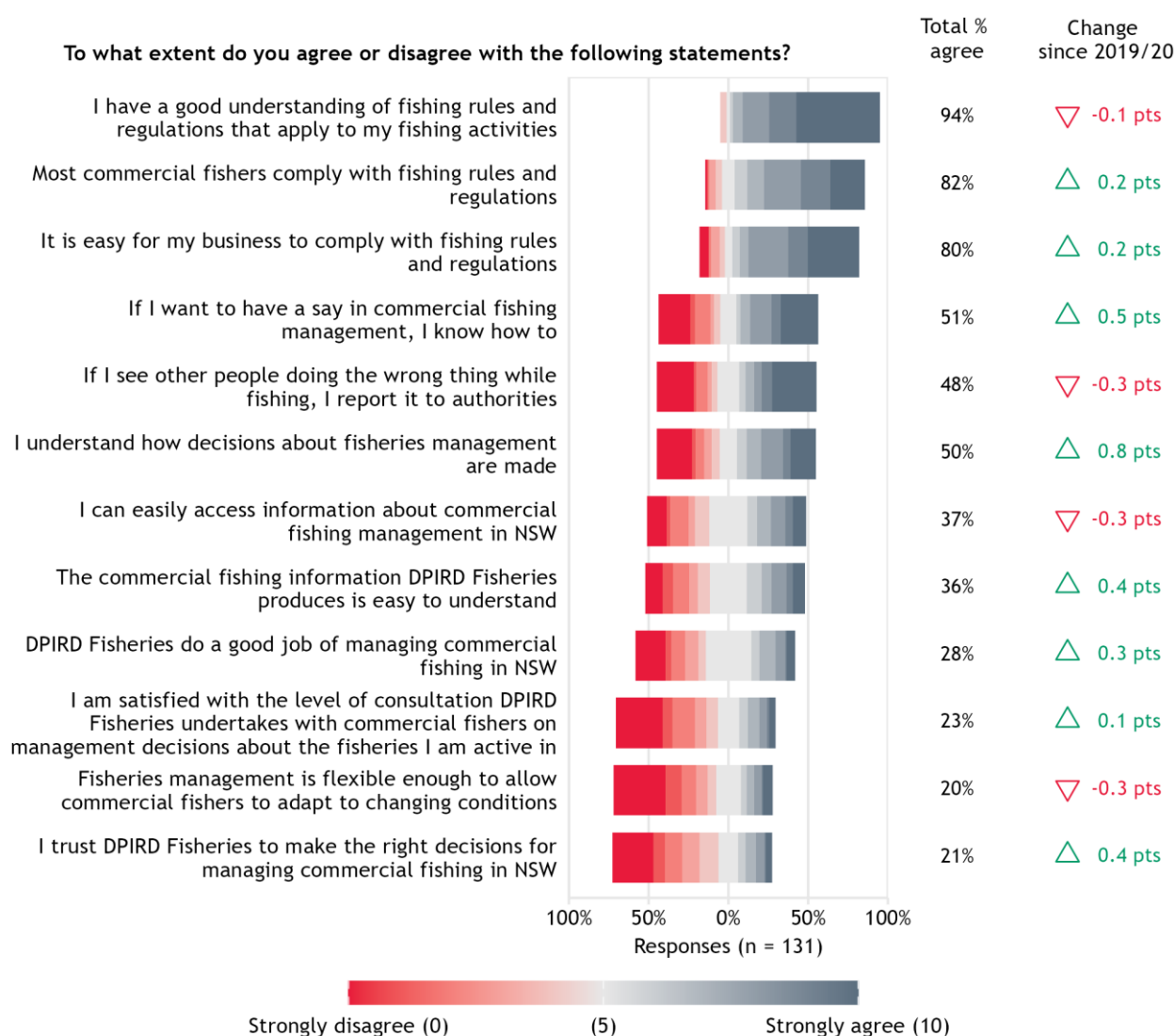
Perceptions of management fairness

Around half of New South Wales fishers indicated that they felt fairly treated by fisheries managers in relation to gear restrictions (46 per cent), despite a 0.5 point fall, and allocation of catch (42 per cent), up by 0.2 points. Though over half indicated that they felt unfairly treated in relation to access to fishing areas (55 per cent) and decision making in fisheries management (63 per cent).

Satisfaction with access to infrastructure

New South Wales fishers indicated general satisfaction relating to infrastructure access across all facilities, with only access to marinas/mooring facilities having less than half satisfied (48 per cent). However, satisfaction has fallen since asked in 2019/20 of all facilities except cold storage which saw no change.

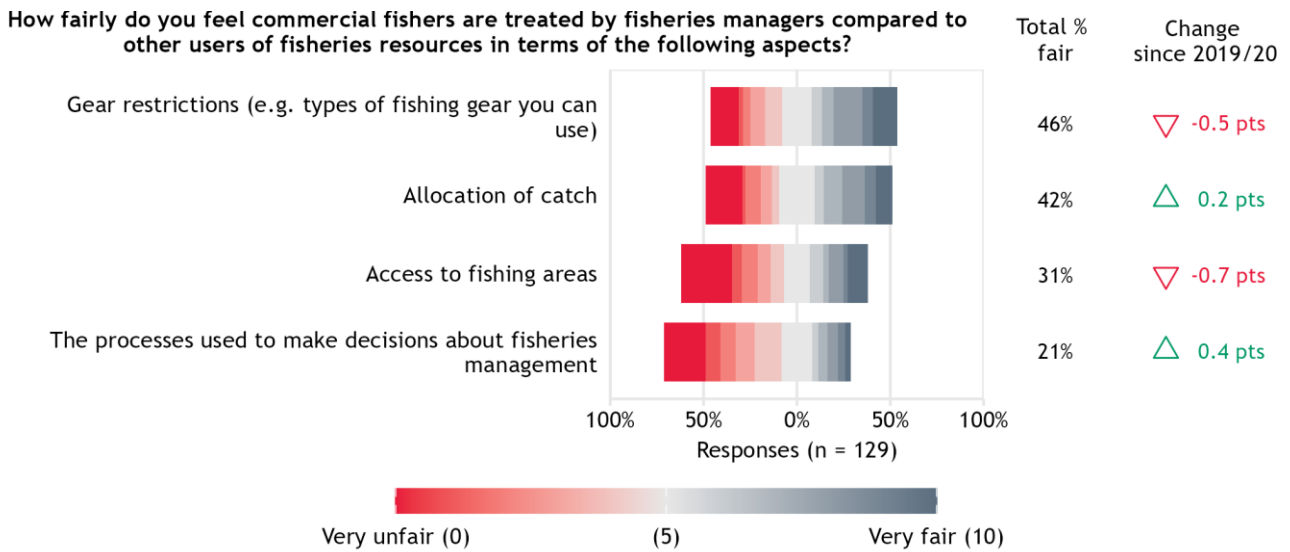
Figure 6-1 Perceptions of fishery management in New South Wales fisheries, 2023/24^a



^a The change between the 2019/20 and 2023/24 surveys is calculated between licence holders who participated in both surveys and is quantified in points out of 10. For example, a change in average from 5 to 6 is stated as a change of 1.0 pts.

Source: 2025 survey

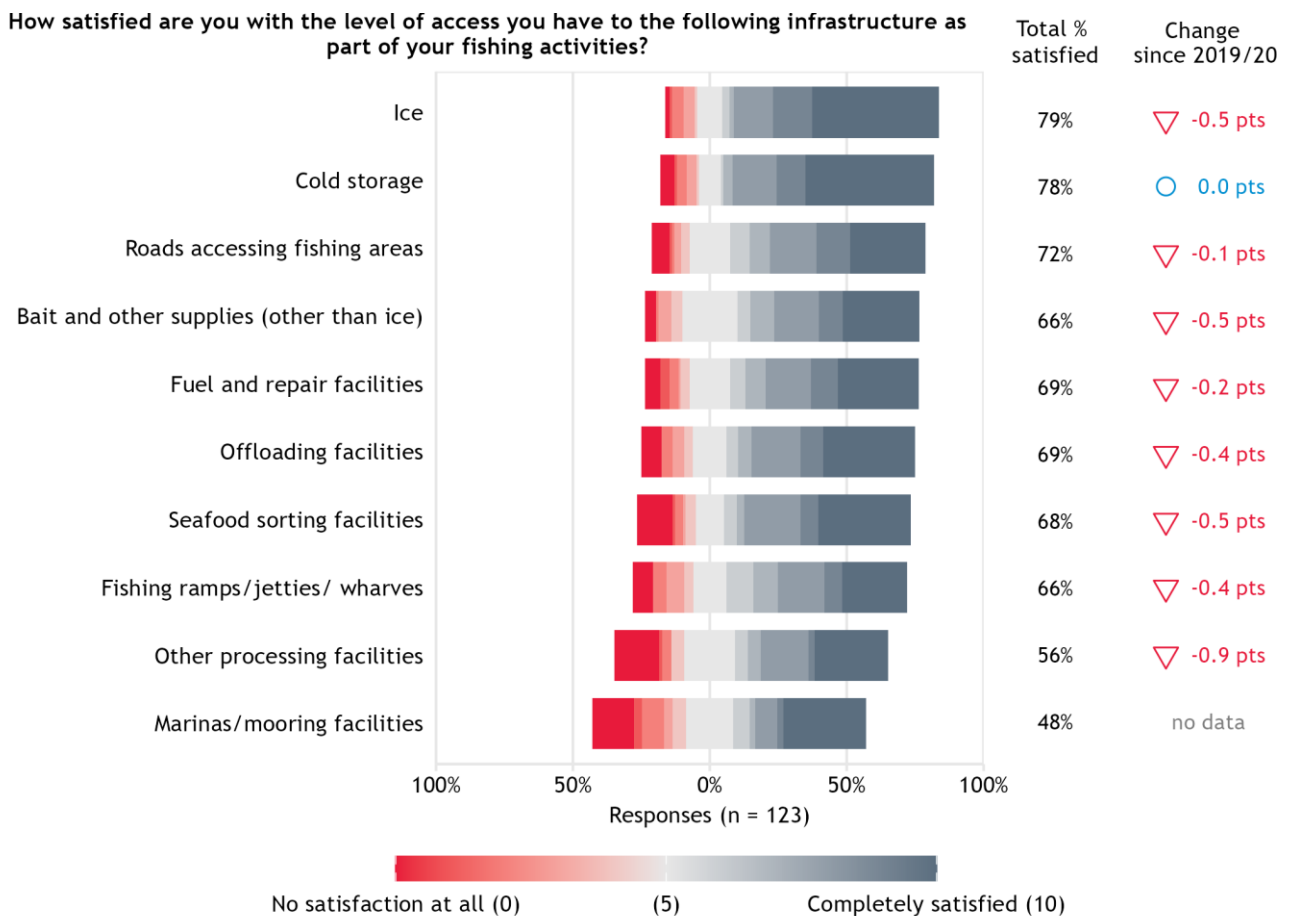
Figure 6-2 Perceptions of management fairness in New South Wales fisheries, 2023/24^a



^a The change between the 2019/20 and 2023/24 surveys is calculated between licence holders who participated in both surveys and is quantified in points out of 10. For example, a change in average from 5 to 6 is stated as a change of 1.0 pts.

Source: 2025 survey

Figure 6-3 Perceptions of infrastructure access in New South Wales fisheries, 2023/24^a



^a The change between the 2019/20 and 2023/24 surveys is calculated between licence holders who participated in both surveys and is quantified in points out of 10. For example, a change in average from 5 to 6 is stated as a change of 1.0 pts.

Source: 2025 survey

6.2. Fishing and lifestyle satisfaction

Figure 6-4 and Figure 6-5 present indicators of continuity, importance and satisfaction with different aspects of fisher's activity in New South Wales commercial fisheries.

Lifestyle satisfaction

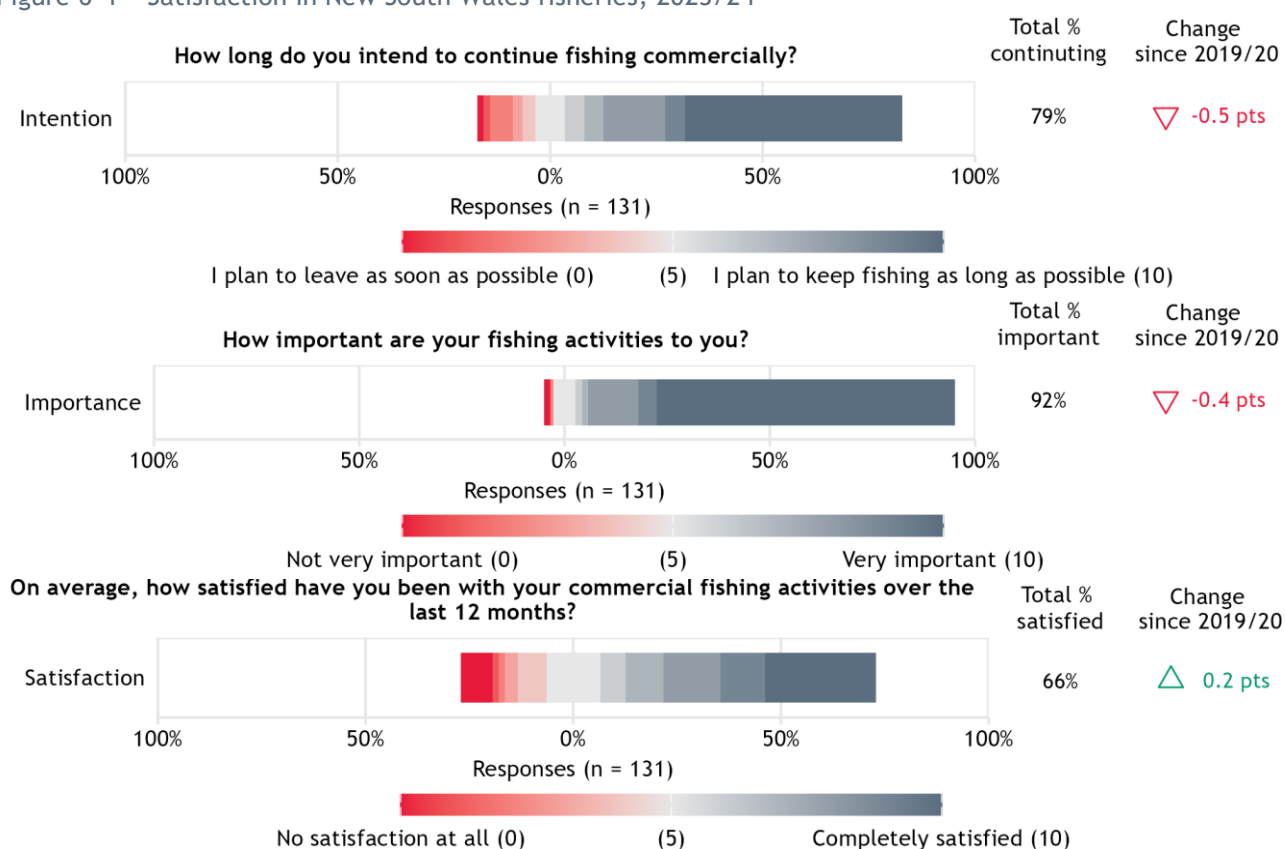
New South Wales fishers were near unanimous in agreement that fishing is a very important aspect of their lives (92 per cent), despite a fall of 0.4 points. A majority also indicated that they intend to continue fishing for as long as possible (79 per cent) and about two-thirds indicated that they were satisfied, or completely satisfied with their commercial fishing activities over the last 12 months (66 per cent), up by 0.2 points.

Fishing satisfaction

A majority of New South Wales fishers were satisfied with most aspects of their current fishing activities. Though some indicated that they had less satisfaction with providing employment opportunities to the community (62 per cent), continuing a family tradition of fishing (58 per cent) and the money made from their business (56 per cent). However, every aspect saw a decrease in satisfaction since the 2019/20 survey, ranging from 0.1 points (being on my own) to 1.0 points (providing employment opportunities).

Overall, and despite slight decreases across the board, these results indicate that New South Wales fishers are achieving satisfaction with the cultural, recreational and lifestyle benefits derived from their fishing activities (as per Triantafillos et al.).

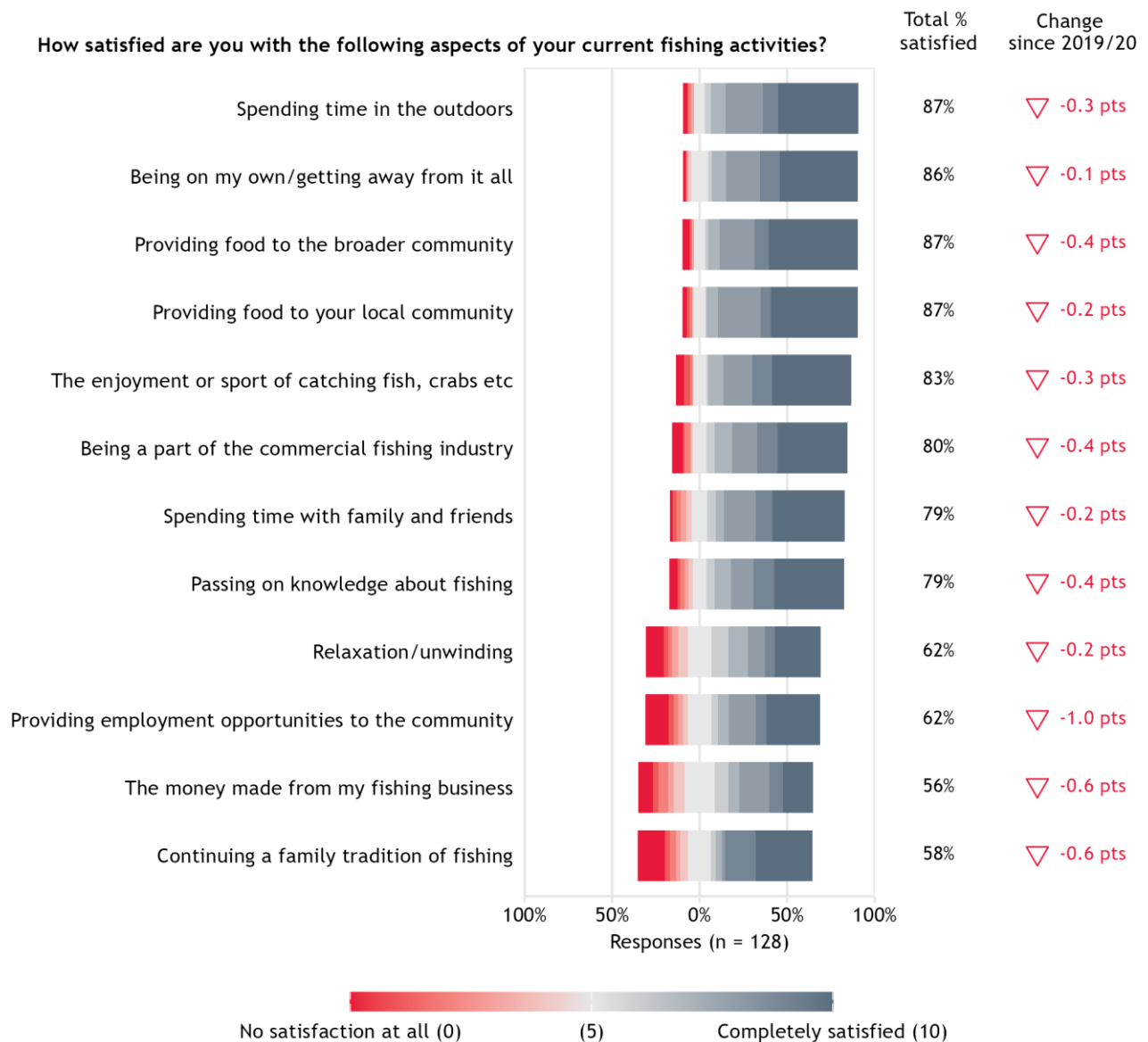
Figure 6-4 Satisfaction in New South Wales fisheries, 2023/24^a



^a The change between the 2019/20 and 2023/24 surveys is calculated between licence holders who participated in both surveys and is quantified in points out of 10. For example, a change in average from 5 to 6 is stated as a change of 1.0 pts.

Source: 2025 survey

Figure 6-5 Satisfaction with aspects of New South Wales fisheries, 2023/24^a



^a The change between the 2019/20 and 2023/24 surveys is calculated between licence holders who participated in both surveys and is quantified in points out of 10. For example, a change in average from 5 to 6 is stated as a change of 1.0 pts.

Source: 2025 survey

6.3. Global life satisfaction and personal wellbeing

Global life satisfaction index

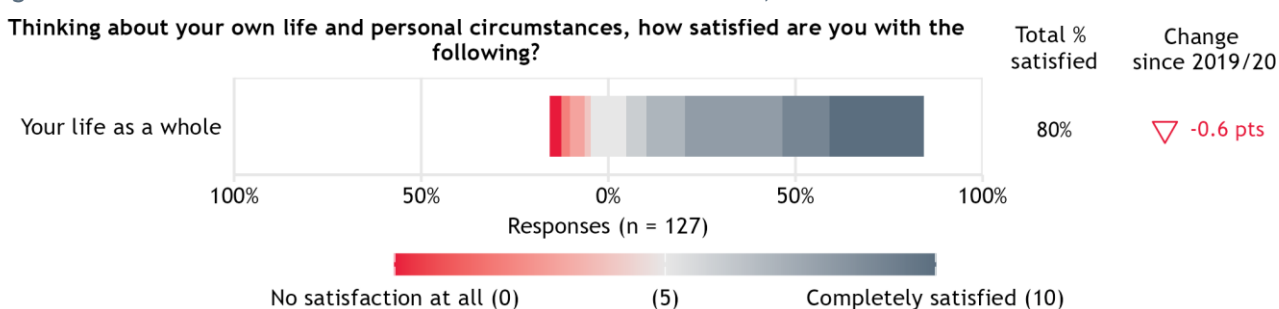
The Global Life Satisfaction (GLS) index is a widely recognised, validated measure of overall life satisfaction, designed to capture an individual's subjective assessment of their life as a whole. The GLS provides a benchmark for comparing life satisfaction between groups, regions, or over time. A higher GLS score indicates greater overall satisfaction with life.

The GLS is typically calculated based on survey responses to a single, global question such as “All things considered, how satisfied are you with your life as a whole these days?”. Respondents rate their satisfaction on a scale from 0 (not at all satisfied) to 10 (completely satisfied). The average of these responses, multiplied by 10, forms the GLS index.

This index is particularly useful for summarising the overall quality of life experienced by individuals, beyond specific domains of wellbeing. The GLS index for New South Wales fisheries (Figure 6-6) is compared against the average for Australia, New South Wales and regional New South Wales, as reported in the Regional Wellbeing Survey (UC 2023), below:

- Australia: 71.9
- New South Wales: 71.6
- Regional New South Wales: 71.8
- New South Wales fisheries: 74.2.

Figure 6-6 Global life satisfaction in New South Wales fisheries, 2023/24^a



^a The change between the 2019/20 and 2023/24 surveys is calculated between licence holders who participated in both surveys and is quantified in points out of 10. For example, a change in average from 5 to 6 is stated as a change of 1.0 pts.

Source: 2025 survey

Personal wellbeing index

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.

The PWI is based on the answers of respondents to the seven questions shown in Figure 6-7. Each question asks about satisfaction with a specific domain of life. Respondents rate each domain on a scale from 0 (completely dissatisfied) to 10 (completely satisfied). The PWI is then calculated as the average of these seven questions, multiplied by 10.

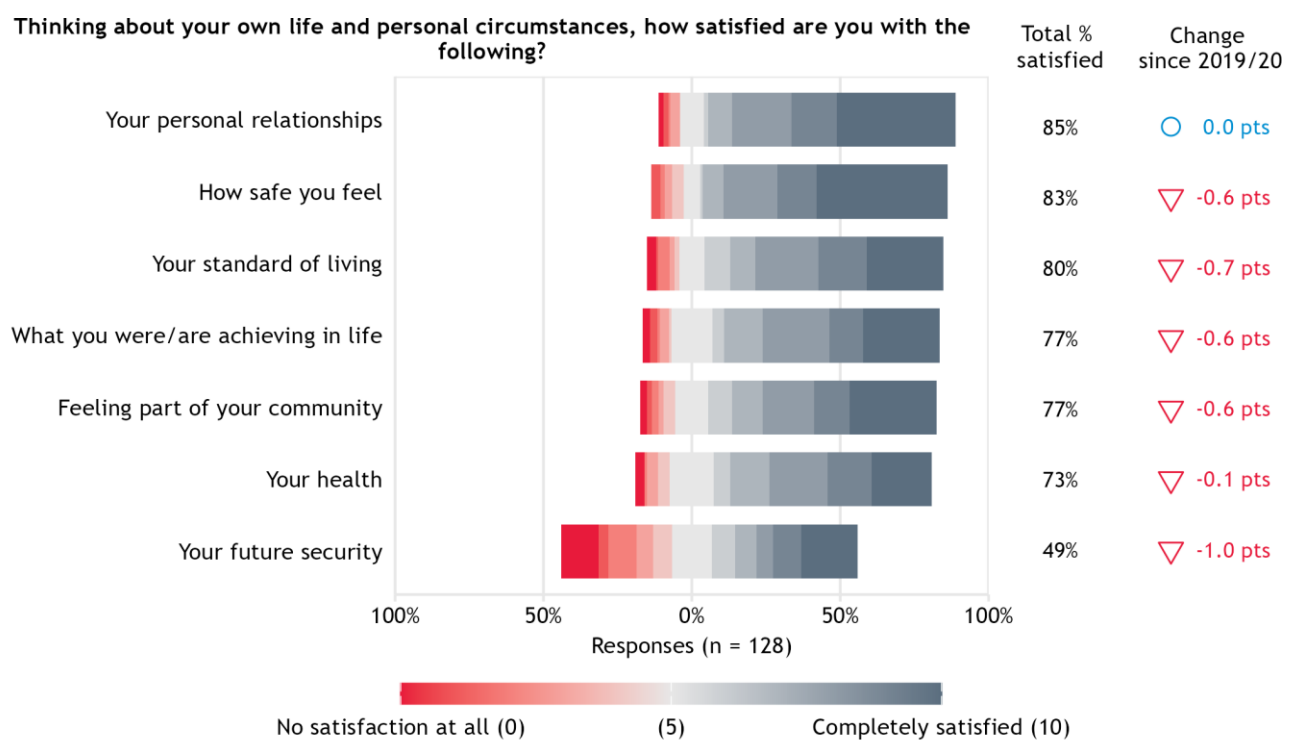
While the PWI offers a valuable overall measure, the individual questions themselves also provide useful information about the levels of different domains of wellbeing for fishers that access New South Wales

fisheries. The PWI for New South Wales fisheries is compared against the average for Australia, New South Wales and regional New South Wales, as reported in the Regional Wellbeing Survey (UC 2023), below:

- Australia: 70.9
- New South Wales: 71.0
- Regional New South Wales: 70.8
- New South Wales fisheries: 73.3.

New South Wales fishers indicated that they had very high levels of personal wellbeing across all PWI domains. However, 37 per cent of New South Wales fishers indicated that they were dissatisfied with their future security and all but one domain had seen a decrease in satisfaction.

Figure 6-7 Personal wellbeing in New South Wales fisheries, 2023/24^a



^a The change between the 2019/20 and 2023/24 surveys is calculated between licence holders who participated in both surveys and is quantified in points out of 10. For example, a change in average from 5 to 6 is stated as a change of 1.0 pts.

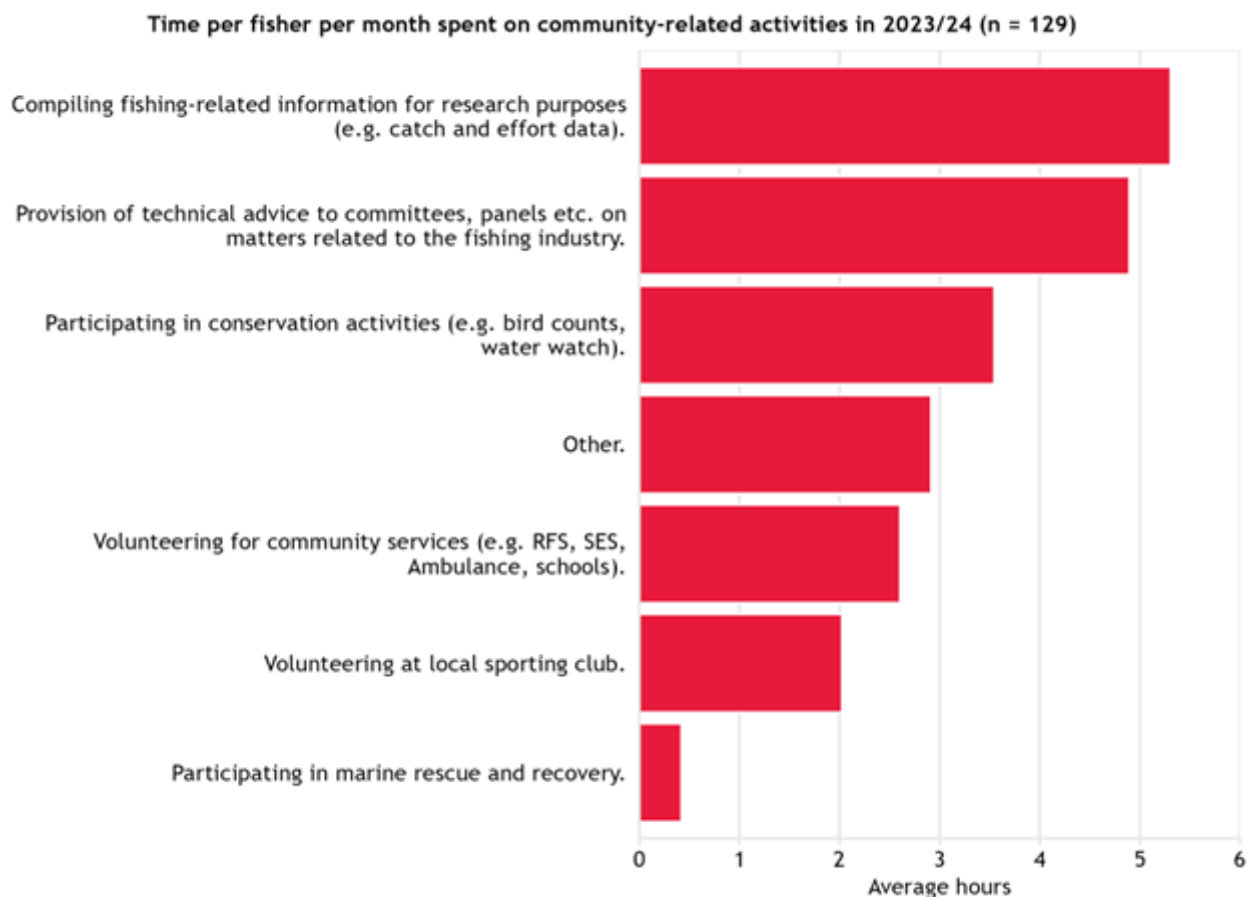
Source: 2025 survey

6.4. Community contribution

Fishers that access the New South Wales commercial fisheries spend some of their time contributing to the community through various activities. The average number of hours contributed per month in 2023/24 is presented in Figure 6-8.

New South Wales fishers indicated that they make a substantial contribution to the community. This was particularly in the form of time spent contributing to compiling fishing-related information for research, providing technical advice related to the fishing industry and participating in conservation activities.

Figure 6-8 Community contribution in New South Wales fisheries, average per month, 2023/24



Source: 2025 survey

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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.

Appendix 1 Complete share value list, NSW commercial fisheries, 2023/24

Appendix Table 1-1 Share values in NSW commercial fisheries (full), by fishery, 2023/24^a

Endorsement	Abbreviation	Value per unit
Abalone		
Access share		
Abalone	AB	\$11,000
Estuary General		
Access share		
Estuary General Category One Hauling Region 1	EGC1H1	n.p.
Estuary General Category One Hauling Region 2	EGC1H2	n.p.
Estuary General Category One Hauling Region 3	EGC1H3	n.p.
Estuary General Category One Hauling Region 4	EGC1H4	\$400
Estuary General Category One Hauling Region 5	EGC1H5	n.p.
Estuary General Category One Hauling Region 6	EGC1H6	n.p.
Estuary General Category One Hauling Region 7	EGC1H7	n.p.
Estuary General Category Two Hauling Region 1	EGC2H1	n.p.
Estuary General Category Two Hauling Region 2	EGC2H2	n.p.
Estuary General Category Two Hauling Region 3	EGC2H3	n.p.
Estuary General Category Two Hauling Region 4	EGC2H4	n.p.
Estuary General Category Two Hauling Region 5	EGC2H5	n.p.
Estuary General Category Two Hauling Region 6	EGC2H6	n.p.
Estuary General Category Two Hauling Region 7	EGC2H7	n.p.
Estuary General Eel Trapping Region 1	EGET1	n.p.
Estuary General Eel Trapping Region 2	EGET2	n.p.
Estuary General Eel Trapping Region 3	EGET3	\$80
Estuary General Eel Trapping Region 4	EGET4	n.p.
Estuary General Eel Trapping Region 5	EGET5	n.p.
Estuary General Eel Trapping Region 6	EGET6	n.p.
Estuary General Eel Trapping Region 7	EGET7	n.p.
Estuary General Hand Gathering Region 1	EGHG1	n.p.
Estuary General Hand Gathering Region 2	EGHG2	n.p.
Estuary General Hand Gathering Region 3	EGHG3	n.p.
Estuary General Hand Gathering Region 4	EGHG4	\$240
Estuary General Hand Gathering Region 5	EGHG5	n.p.
Estuary General Hand Gathering Region 6	EGHG6	n.p.
Estuary General Hand Gathering Region 7	EGHG7	n.p.
Estuary General Handline Region 1	EGHL1	n.p.

Endorsement	Abbreviation	Value per unit
Estuary General Handline Region 2	EGHL2	\$50
Estuary General Handline Region 3	EGHL3	\$50
Estuary General Handline Region 4	EGHL4	\$52
Estuary General Handline Region 5	EGHL5	n.p.
Estuary General Handline Region 6	EGHL6	n.p.
Estuary General Handline Region 7	EGHL7	n.p.
Estuary General Handline and Hauling Crew Region 1	EGHHC1	n.p.
Estuary General Handline and Hauling Crew Region 2	EGHHC2	n.p.
Estuary General Handline and Hauling Crew Region 3	EGHHC3	n.p.
Estuary General Handline and Hauling Crew Region 4	EGHHC4	n.p.
Estuary General Handline and Hauling Crew Region 5	EGHHC5	n.p.
Estuary General Handline and Hauling Crew Region 6	EGHHC6	n.p.
Estuary General Handline and Hauling Crew Region 7	EGHHC7	n.p.
Estuary General Meshing Region 1	EGM1	n.p.
Estuary General Meshing Region 2	EGM2	\$430
Estuary General Meshing Region 3	EGM3	\$530
Estuary General Meshing Region 4	EGM4	\$400
Estuary General Meshing Region 5	EGM5	n.p.
Estuary General Meshing Region 6	EGM6	n.p.
Estuary General Meshing Region 7	EGM7	n.p.
Estuary General Mud Crab Trapping Region 1	EGMC1	n.p.
Estuary General Mud Crab Trapping Region 2	EGMC2	n.p.
Estuary General Mud Crab Trapping Region 3	EGMC3	\$180
Estuary General Mud Crab Trapping Region 4	EGMC4	\$160
Estuary General Mud Crab Trapping Region 5	EGMC5	n.p.
Estuary General Mud Crab Trapping Region 6	EGMC6	n.p.
Estuary General Mud Crab Trapping Region 7	EGMC7	n.p.
Estuary General Prawning Region 1	EGP1	n.p.
Estuary General Prawning Region 2	EGP2	n.p.
Estuary General Prawning Region 3	EGP3	n.p.
Estuary General Prawning Region 4	EGP4	\$400
Estuary General Prawning Region 5	EGP5	n.p.
Estuary General Prawning Region 6	EGP6	n.p.
Estuary General Prawning Region 7	EGP7	n.p.
Estuary General Trapping Region 1	EGT1	n.p.
Estuary General Trapping Region 2	EGT2	n.p.
Estuary General Trapping Region 3	EGT3	\$300

Endorsement	Abbreviation	Value per unit
Estuary General Trapping Region 4	EGT4	\$300
Estuary General Trapping Region 5	EGT5	n.p.
Estuary General Trapping Region 6	EGT6	n.p.
Estuary General Trapping Region 7	EGT7	n.p.
Quota share		
Estuary General Beachworm Quota	BWORM	n.p.
Estuary General Blue Swimmer Crab Quota	BSCRA	\$120
Estuary General Cockle Quota	COCKL	n.p.
Estuary General Eel Quota	EEL	\$50
Estuary General Ghost Nipper Quota	NIPPR	n.p.
Estuary General Mud Crab Quota	MCRA	\$620
Estuary General Pipi Quota	PIPI	\$60
Estuary Prawn Trawl		
Access share		
Estuary Prawn Trawl Clarence River	EPTCR	n.p.
Estuary Prawn Trawl Hawkesbury River	EPHAR	n.p.
Estuary Prawn Trawl Hunter River	EPHUR	n.p.
Inland		
Access share		
Inland Class A Yabby and Carp (Transferable)	INLAYC	n.p.
Inland Class B Carp (Transferable)	INLBC	n.p.
Inland Class D Carp (Non-Transferable)	INLDC	n.p.
Lobster		
Access share		
Lobster	LOB	\$14,500
Ocean Hauling		
Access share		
Ocean Hauling Garfish Net Hauling Region 1	OHGN1	n.p.
Ocean Hauling Garfish Net Hauling Region 2	OHGN2	n.p.
Ocean Hauling Garfish Net Hauling Region 3	OHGN3	n.p.
Ocean Hauling Garfish Net Hauling Region 4	OHGN4	n.p.
Ocean Hauling Garfish Net Hauling Region 5	OHGN5	n.p.
Ocean Hauling Garfish Net Hauling Region 6	OHGN6	n.p.
Ocean Hauling Garfish Net Hauling Region 7	OHGN7	n.p.
Ocean Hauling General Ocean Hauling Region 1	OHG1	n.p.
Ocean Hauling General Ocean Hauling Region 2	OHG2	n.p.
Ocean Hauling General Ocean Hauling Region 3	OHG3	n.p.

Endorsement	Abbreviation	Value per unit
Ocean Hauling General Ocean Hauling Region 4	OHG4	\$375
Ocean Hauling General Ocean Hauling Region 5	OHG5	n.p.
Ocean Hauling General Ocean Hauling Region 6	OHG6	n.p.
Ocean Hauling General Ocean Hauling Region 7	OHG7	\$50
Ocean Hauling Hauling Net General Purpose Region 1	OHGPN1	n.p.
Ocean Hauling Hauling Net General Purpose Region 2	OHGPN2	n.p.
Ocean Hauling Hauling Net General Purpose Region 3	OHGPN3	n.p.
Ocean Hauling Hauling Net General Purpose Region 4	OHGPN4	n.p.
Ocean Hauling Hauling Net General Purpose Region 5	OHGPN5	n.p.
Ocean Hauling Hauling Net General Purpose Region 6	OHGPN6	n.p.
Ocean Hauling Hauling Net General Purpose Region 7	OHGPN7	n.p.
Ocean Hauling Pilchard Anchovy and Bait Net Hauling Region 1	OHPAB1	n.p.
Ocean Hauling Pilchard Anchovy and Bait Net Hauling Region 2	OHPAB2	n.p.
Ocean Hauling Pilchard Anchovy and Bait Net Hauling Region 3	OHPAB3	n.p.
Ocean Hauling Pilchard Anchovy and Bait Net Hauling Region 4	OHPAB4	n.p.
Ocean Hauling Pilchard Anchovy and Bait Net Hauling Region 5	OHPAB5	n.p.
Ocean Hauling Pilchard Anchovy and Bait Net Hauling Region 6	OHPAB6	n.p.
Ocean Hauling Pilchard Anchovy and Bait Net Hauling Region 7	OHPAB7	n.p.
Ocean Hauling Purse Seine Net	OHPS	n.p.
Quota share		
Ocean Hauling Australian Sardine Quota	ASARD	n.p.
Ocean Hauling Blue Mackerel Quota	BMACK	n.p.
Ocean Hauling Eastern Sea Garfish Quota	ESGAR	n.p.
Ocean Hauling Yellowtail Scad Quota	YSCAD	n.p.
Ocean Trap & Line		
Access share		
Ocean Trap and Line - Line Fishing Eastern Zone	OTLLE	n.p.
Ocean Trap and Line - Line Fishing Western Zone	OTLLW	n.p.
Ocean Trap and Line Demersal Fish Trap	OTLD	\$1,000
Ocean Trap and Line School & Gummy Shark	OTLSG	n.p.
Ocean Trap and Line Spanner Crab Northern Zone	OTLSCN	\$3,500
Ocean Trap and Line Spanner Crab Southern Zone	OTLSCS	n.p.
Quota share		
Ocean Trap and Line Bass Grouper Quota	BGRO	n.p.
Ocean Trap and Line Bigeye Ocean Perch Quota	BOPER	n.p.
Ocean Trap and Line Blue-eye Trevalla Quota	BEYE	n.p.
Ocean Trap and Line Gemfish Quota	LGEM	n.p.

Endorsement	Abbreviation	Value per unit
Ocean Trap and Line Hapuku Quota	HAPU	n.p.
Ocean Trap and Line Pink Ling Quota	PLING	n.p.
Ocean Trap and Line Spanner Crab Quota	SCRA	n.p.
Ocean Trawl		
Access share		
Ocean Trawl Deepwater Prawn	OTDP	n.p.
Ocean Trawl Fish Northern Zone	OTFN	n.p.
Ocean Trawl Inshore Prawn	OTISP	\$1,000
Ocean Trawl Offshore Prawn	OTOSP	\$1,000
Quota share		
Ocean Trap and Line Bass Grouper Quota	BGRO	n.p.
Ocean Trap and Line Bigeye Ocean Perch Quota	BOPER	n.p.
Ocean Trap and Line Blue-eye Trevalla Quota	BEYE	n.p.
Ocean Trap and Line Gemfish Quota	LGEM	n.p.
Ocean Trap and Line Hapuku Quota	HAPU	n.p.
Ocean Trap and Line Pink Ling Quota	PLING	n.p.
Ocean Trap and Line Spanner Crab Quota	SCRA	n.p.
Ocean Trawl Bluespotted Flathead Quota	BFLAT	n.p.
Ocean Trawl Gemfish Quota	TGEM	n.p.
Ocean Trawl Prawn Effort Quota	OTPE	\$10
Ocean Trawl Silver Trevally Quota	STREV	n.p.
Ocean Trawl Tiger Flathead Quota	TFLAT	n.p.
Ocean Trawl Whiting Quota	TWHIT	n.p.
Sea Urchin & Turban Shell		
Access share		
Sea Urchin & Turban Shell - Sea Urchin	SUTSSU	\$100,000
Sea Urchin & Turban Shell - Turban Shell	SUTSTS	\$75,000

^a n.p. represents values that are not published due to confidentiality.

Source: BDO analysis

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