Ross Lobegeiger report to farmers

Aquaculture production summary for Queensland 2023–24

This publication has been compiled by Skye Lewis of Fisheries Queensland, Department of Primary Industries.

Enquiries and feedback regarding this document can be made as follows:
Email: info@daf.qld.gov.au
Telephone: 13 25 23 (cost of a local call within Australia)
Monday, Tuesday, Wednesday and Friday: 8 am to 5 pm, Thursday: 9 am to 5 pm
Post: Department of Primary Industries GPO Box 46 BRISBANE QLD 4001 AUSTRALIA
Website: daf.qld.gov.au

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Dedication

In 2011, there was widespread support to rename this report the *Ross Lobegeiger report to farmers* to acknowledge and honour the pivotal role that Ross played in developing and supporting the Queensland aquaculture industry. Ross provided the aquaculture industry with almost 20 years of dedicated service and was responsible, as co-author, for producing the very first edition of this annual report in 1991. Overall, he produced a total of 19 issues. As such, Ross Lobegeiger's name has become intrinsically linked with the report and it seems only fitting for the publication to continue to carry his name.

Tragically, Ross Lobegeiger passed away in 2010. He was such a well-known and enormously liked individual that his loss has been felt deeply by a great many people in his professional network and the aquaculture industry.

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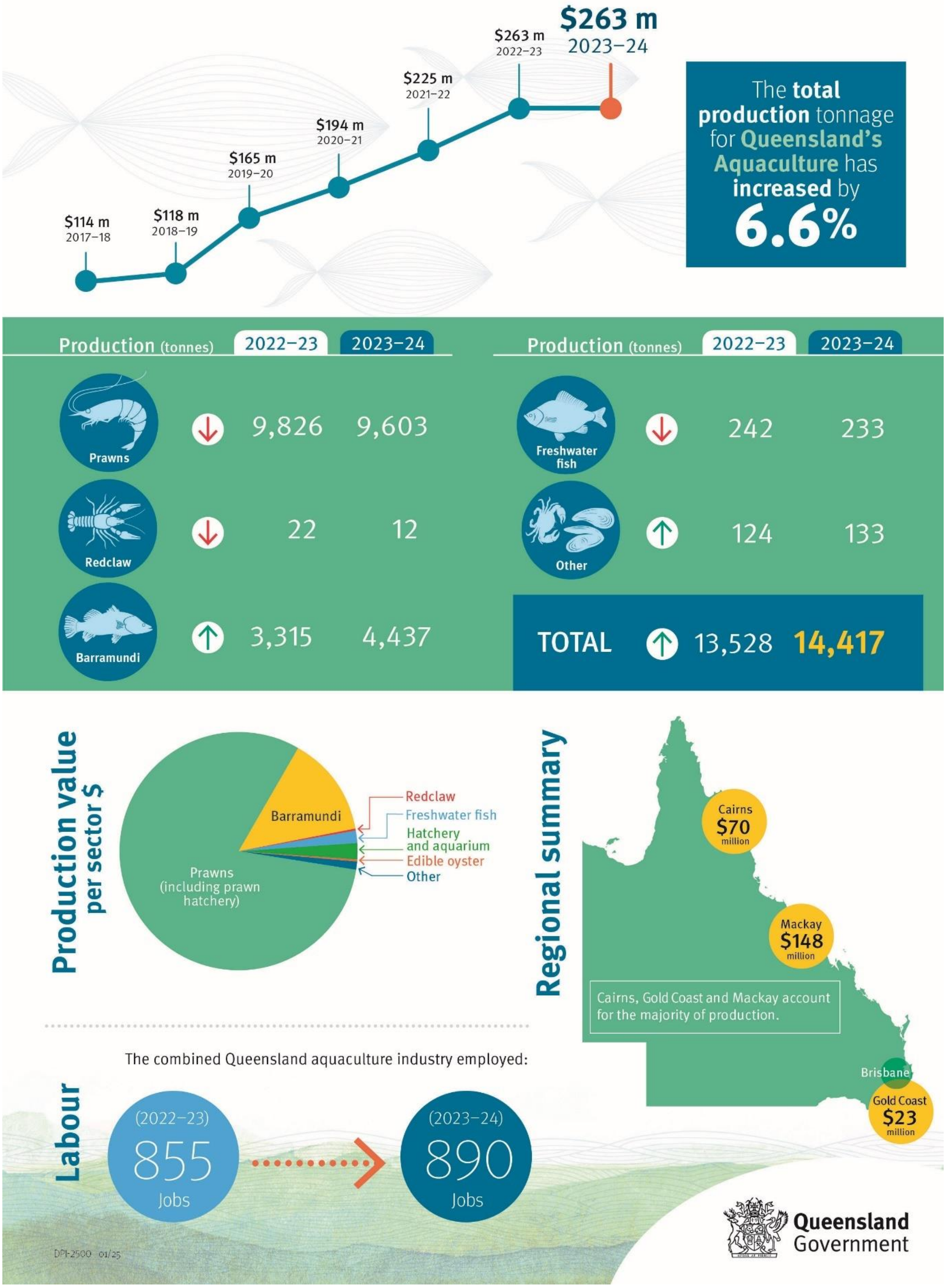
1 Queensland aquaculture industry summary 2023–24



2 Overall value and production

The total value of the Queensland aquaculture industry has increased by 0.03%, with the value of production in 2023–24 being $263.3 million.

In 2023–24, the total value of fisheries production (total value of commercial wild caught fisheries and aquaculture) in Queensland is $421.3 million. The relative importance of aquaculture to Queensland's total fisheries production has increased, from 60.1% in 2022–23 to 62.5% in 2023–24. For the commercial wild caught fisheries, only human consumption sectors are included.

Table 1 – Queensland fisheries production—gross value (2017–18 to 2023–24)

Queensland figures [(1)]			
Year	**Total fisheries ($m)**	**Aquaculture ($m)**	**Aquaculture (%)**
2017–18	$294.8	$114.2	38.7
2018–19	$277.3	$118.4	42.7
2019–20	$321.5	$164.9	51.4
2020–21	$350.6	$193.5	55.2
2021–22	$391.7 (Updated)	$224.7	57.4 (Updated)
2022-23	$438.2 (Estimate)	$263.2	60.1
2023-24	$421.3 (Working Estimate)	$263.3	62.5

The trend of aquaculture industry growth in Queensland over the past seven years can be seen in Figure 1 (page 3). The most valuable sectors of the Queensland aquaculture industry continue to be prawn and barramundi respectively. The dollar value of each sector is given in Table 2 (page 5). Acknowledging there will always be some degree of fluctuation between years (for example, due to climatic events), there is a clear trend the overall industry value has been increasing, on average, at a rate of 7.4% per annum since 1999–2000.

Gains in value in the 2023–24 financial year have been in the barramundi, freshwater and other sectors. The prawn, redclaw, edible oyster and hatchery/aquarium sectors recorded a decline in value from the previous year.

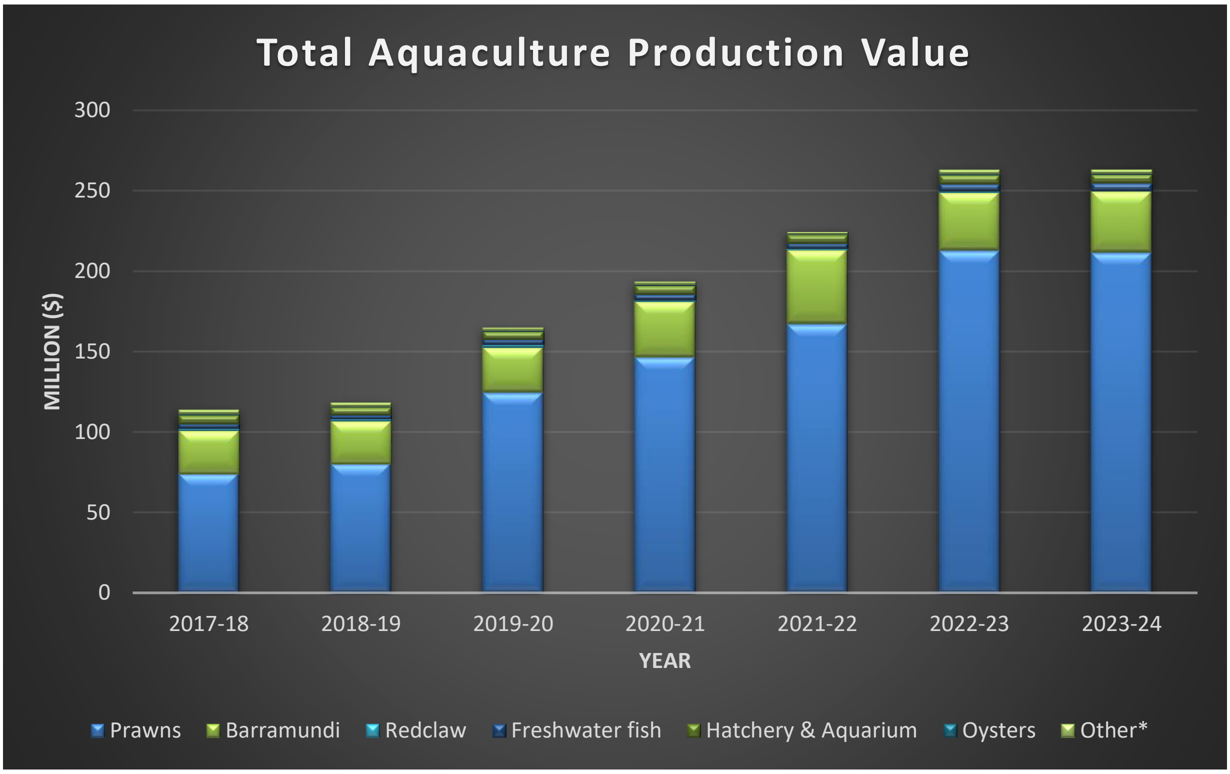


Figure 1 – Trend in value ($ million) of Queensland aquaculture production
*'Other' includes marine fish, algae, crustaceans and other bivalves.

In 2023–24, there was a 0.03% increase in total production value compared to the previous year. The long term, 24-year average has the industry GVP increasing at a rate of 7.4% per annum (Figure 1). The total production tonnage in 2023–24 saw an increase of 6.6% compared to 2022–23. The long term, 24-year average has the industry tonnage increasing at 7.1% (Figure 2). Production figures (tonnes) for each sector are in Table 3 (page 5).

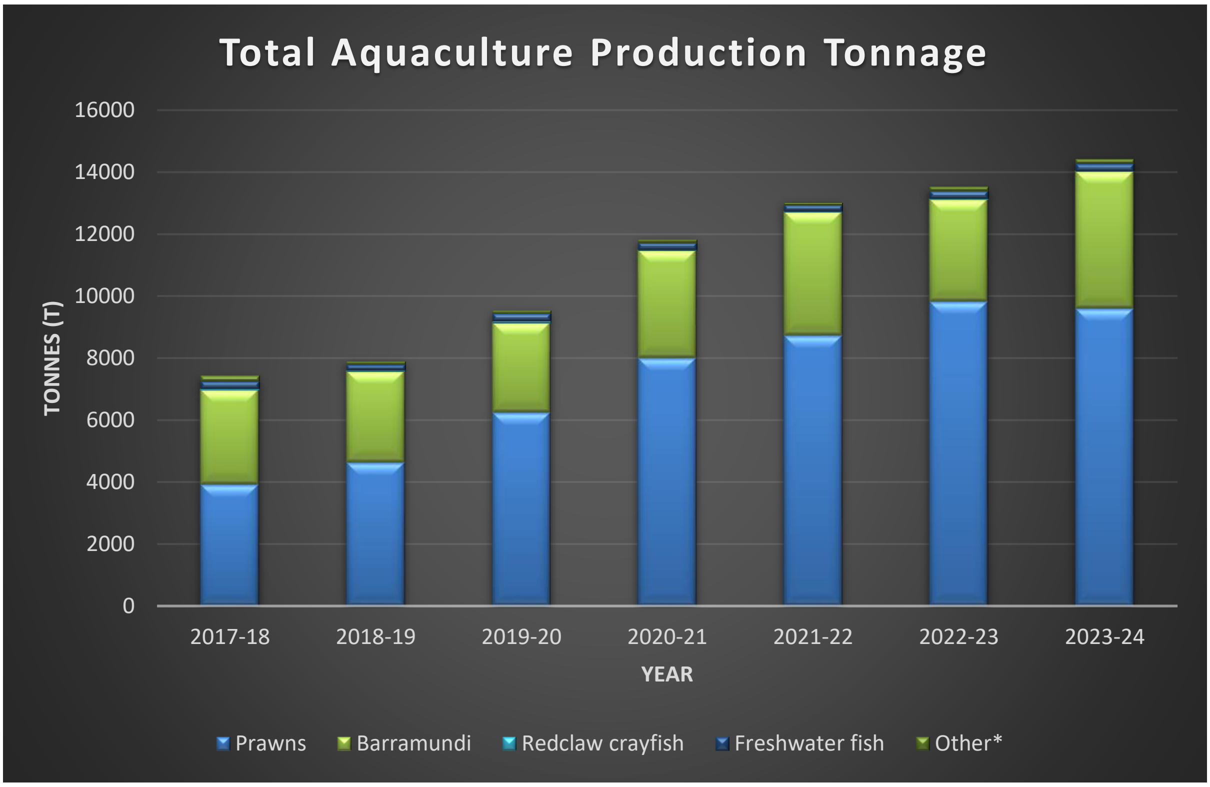


Figure 2 – Trend in Queensland aquaculture total production (tonnes)
*'Other' includes marine fish, algae, crustaceans and other bivalves.

3 Return methods

Production statistics for the 2023–24 financial year were collected from all sectors of the Queensland aquaculture industry. The requirement to complete the production survey is a mandatory condition for all holders of a current aquaculture development authority.

Of the 377 current registered aquaculture development approvals in Queensland, 350 authority holders completed the production survey this year. There was an increase in properties with registered aquaculture development approvals sold in the 2023–24 financial year. For a number of these sold properties, new owner contact details have not yet been provided to the Department of Primary Industries. Of the 377 registered aquaculture development approvals, 11 are without contact details. This has resulted in a response rate decrease from 97.4% in 2022–23 to 92.8% in 2023–24.

The following conversion factors and definitions are used in the report:

- **Feed conversion ratio**
  Estimated average feed conversion ratios are published for most species sectors. However, these ratios are only estimates as they are reported as direct ratios of the weight of feed provided versus the weight of product sold. Therefore, a number of other relevant factors, such as the weight of stock remaining in ponds at the end of the reporting period (i.e. fed but not yet harvested), are not considered.
- **Fingerling fish**
  Fingerling fish are small fish in the 2–10 g range.
- **Labour conversion**
  Labour Full Time Equivalent (FTE) employees are calculated by adding the total permanent labour units to the casual labour units and then converting to FTEs. Thirty-eight hours per week casual labour for 52 weeks per year is considered one FTE labour unit.

4 Third Party Accreditation and Certification

Third-party accreditation for an aquaculture farm refers to the process where an independent, external organisation evaluates and certifies the farm’s operations against specific standards. The accreditation ensures that the farm is meeting or exceeding certain practices related to sustainability and environmental responsibility. Accreditation provides transparency and assures consumers, businesses, and regulators that aquaculture farms are following responsible and sustainable practices. Two programs that aquaculture farms in Queensland utilise include:

- Best Aquaculture Practices (BAP). A program under the Global Seafood Alliance (GSA). The program is dedicated to advancing responsible seafood practices through education, advocacy, and third-party assurances.
- Aquaculture Stewardship Council (ASC). The ASC is an independent, international non-profit organisation that manages a certification and labelling programme for responsible aquaculture.

In 2023–24, 94% of authorities that produced prawns in Queensland came from aquaculture farms that have an independent third-party accreditation. For the barramundi sector, 12.5% of authorities that produced barramundi had an independent third-party accreditation.

5 Aquaculture sector production and value

Prawn

Queensland's marine prawn industry produced two species of prawns—black tiger (*Penaeus monodon*) and banana (*Fenneropenaeus merguiensis*). Production in the prawn sector decreased by 2.3% (from 9825.5 tonnes in 2022–23 to 9603.5 tonnes in 2023–24), and the value decreased slightly by 0.6% (from $212.9 million in 2022–23 to $211.7 million in 2023–24). Hatchery sales of prawns for the year were $1.5 million, which is a decrease from $4.2 million in 2022–23. The number of post larvae produced decreased from 194.5 million in 2022–23 to 124.2 million in 2023–24. The number of authorities associated with prawn hatchery and grow-out production for 2023–24 was 17.

Barramundi

Barramundi production has increased by 33.8%, from 3315.3 tonnes sold in 2022–23 to 4437 tonnes in 2023–24. The value of the barramundi sector increased by 4.5%, from $36.4 million in 2022–23 to $38 million in 2023–24. Over this period, the average price of whole fish decreased, from $10.98/kg in 2022–23 to $8.57/kg. Most of the barramundi production is in pond-based systems. The number of authorities associated with barramundi hatchery and grow-out production for 2023–24 was 24. The total feed used in ponds and tanks increased from 6636.6 tonnes in 2022–23 to 8178.4 tonnes. The estimated average feed conversion ratio has decreased from 1.97 to 1.8 in 2023–24.

Table 2 – Queensland aquaculture production—gross value by sector ($ million)

	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23	2023–24
Prawns (includes prawn hatchery)	$74.7	$80.4	$124.6	$146.6	$167.1	$212.9	$211.7
Barramundi	$26.9	$26.8	$28.3	$34.9	$46.3	$36.4	$38.0
Redclaw crayfish	$1.3	$1.2	$1.8	$0.9	$0.9	$0.7	$0.4
Freshwater fish	$2.9	$2.3	$3.2	$3.4	$3.4	$4.4	$4.9
Hatchery and aquarium	$5.3	$4.9	$4.8	$5.4	$5.2	$5.6	$5.5
Edible oysters	$0.9	$0.6	$0.5	$0.7	$0.4	$0.8	$0.5
Other (1)	$2.3	$2.2	$1.6	$1.6	$1.4	$2.4	$2.3
Total	**$114.2**	**$118.4**	**$164.9**	**$193.5**	**$224.7**	**$263.2**	**$263.3**

Note: (1) Not available for publication (included in 'Other'). 'Other' includes marine fish, algae, crustaceans and other bivalves.

Freshwater fish

The freshwater fish growout sector produced several species including silver perch (*Bidyanus bidyanus*), barcoo grunter (*Scortum barcoo*), and Murray cod (*Maccullochella peelii peelii*). The total production of freshwater fish (species other than barramundi) was 232.6 tonnes, which has decreased from 242.4 tonnes produced in 2022–23. The value of the sector increased to $4.9 million, from $4.4 million in 2022–23. The number of authorities associated with freshwater hatchery and grow-out production for 2023–24 was 24.

Silver perch production decreased during this reporting season however due to client confidentiality reasons the total tonnage cannot be shared. The value of the silver perch sector (inclusive of hatchery and grow out) increased from at $0.9 million to $1.1 million in 2023–24. The average price increased from $17.79/kg to $20.52/kg. Due to client confidentiality, the total feed and feed conversion ratio cannot be shared.

Barcoo grunter production decreased from 69 tonnes in 2022–23 to 61 tonnes in 2023–24. The value of barcoo grunter sales totalled $1.2 million with an average price of $18.87/kg.

While many other species contribute to the freshwater fish sector, detailed production data cannot be published due to client confidentiality.

Redclaw

Production of the redclaw crayfish sector decreased by 45.7% (from 21.6 tonnes in 2022–23 to 11.7 tonnes). Value of the redclaw sector decreased to $0.4 million in 2023–24 from $0.7 in 2022–23. The number of authorities associated with redclaw hatchery and grow-out production for 2023–24 was 18. Average price was $31.69/kg in 2023–24.

Table 3 – Queensland aquaculture production (tonnes) by sector

	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23	2023–24
Marine prawns	3921.2	4630.0	6245.2	8002.7	8727.5	9825.5	9603.5
Barramundi	3060.9	2950.2	2904.4	3477.9	3991.6	3315.3	4437.0
Redclaw crayfish	48.8	44.9	61.6	32.5	31.2	21.6	11.7
Freshwater fish	231.7	168.3	235.3	224.2	196.6	242.4	232.6
Other (1)	176.4	96.9	89.3	87.3	76.1	123.5	132.6
Total	**7439**	**7890.3**	**9535.8**	**11824.6**	**13023.0**	**13528.3**	**14417.4**

Note: (1) ‘Other’ includes marine fish, algae, crustaceans and other bivalves.

Hatchery and aquarium

The hatchery and aquarium sector includes growers who produce ornamental aquarium species and native fish fingerlings for commercial grow-out (aquaculture) and stocking in public impoundments. The value of the hatchery sector decreased from $4.8 million in 2022–23 to $4.5 million in 2023–24. Fingerling sales increased for barramundi and golden perch.

The value of fingerlings sold to the aquaculture sector for commercial grow-out was $3.3 million—this was an increase in sales compared to 2022–2023 at $2.9 million. Value of fingerlings sold for the state fish restocking program into public impoundments decreased by 40.1%, from $1.65 million in 2022–23 to $1.0 million in 2023–24. Ornamental sales have increased by 18%, from $1 million in 2022–23 to $1.2 million in 2023–24.

Edible Oysters

Total edible oyster production decreased by 23%, from 79 086 dozen in 2022–23 to 60 860 dozen in 2023–24. The value of the edible oyster industry decreased from $0.8 million in 2022–23 to $0.5 million in 2023–24. Average price per dozen of oysters decreased from $10.62 per dozen to $8.53 per dozen.

Labour

The combined Queensland aquaculture industry employed 890.1 FTEs (calculated by combining numbers of permanent and casual labour). The total employment figure includes farms which were operational in 2023–24 but reported nil production. The prawn farming sector was the largest employer with 492.3 FTE workers or 55.3% of the industry’s total labour force.

6 Regional summary

Information has been analysed to provide a regional overview of the aquaculture industry in Queensland. The regions are based on the Australian Statistical Geography Standard SA4 statistical division adopted by the Australian Bureau of Statistics. Figure 3 shows that most of the industry value comes from the Cairns, Townsville, Mackay and Gold Coast statistical divisions.

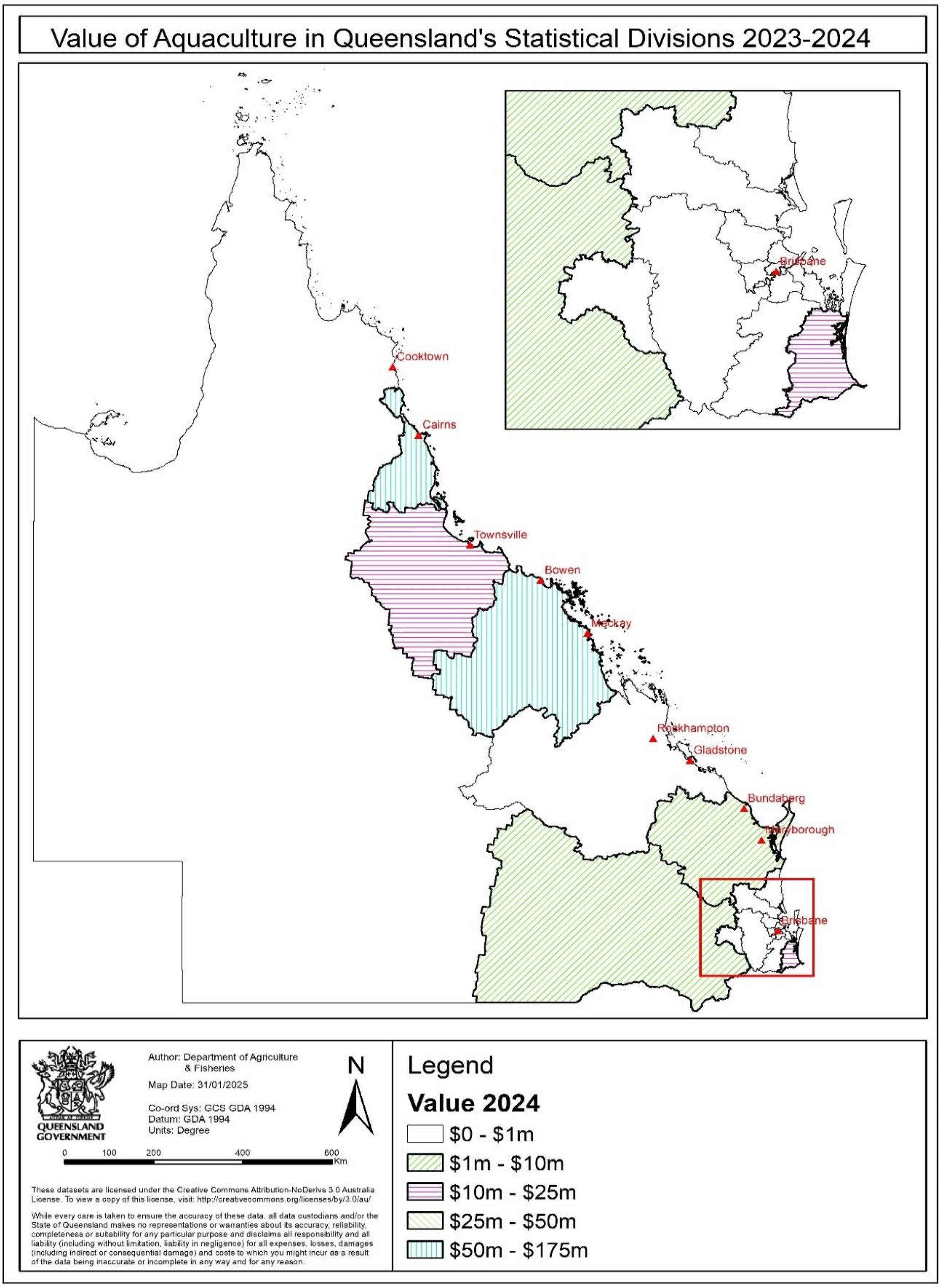


Figure 3 – Value of aquaculture ($ million) for each Australian Bureau of Statistics statistical division within Queensland

Information presented in Table 4 was compiled from the annual production returns received from registered aquaculture authority holders. Table 4 shows how some of the major production parameters such as production, labour and total production value are divided between the respective Australian Bureau of Statistics Queensland statistical divisions.

Table 4 – Production, employment and total production value of the Queensland aquaculture industry (2023–24)

Statistical division	Production (tonnes)	Employment (FTE)	Total production value ($ million)
Brisbane – East		5.9	$0.4
Brisbane – North			
Brisbane – West			
Cairns	4 804.6	256	$69.9
Central Queensland			
Darling Downs – Maranoa			
Gold Coast		63.6	$22.6
Ipswich			
Logan – Beaudesert	0.6	4	$0.2
Mackay	6 993.2	306.8	$147.6
Moreton Bay – North			
Moreton Bay – South			
Queensland – Outback		12	$1.0
Sunshine Coast		3.5	$0.2
Toowoomba			
Townsville	1 037.5	51.4	$12.7
Wide Bay-Burnett	161.4	165.8	$5.1
Total	**17 174.6**	**890.1**	**263.3**

Note: Due to client confidentiality detailed production, employment and total production value data cannot be published for all statistical divisions (see red highlighted boxes).