

Ross Lobegeiger report to farmers

Aquaculture production summary for Queensland 2022–23

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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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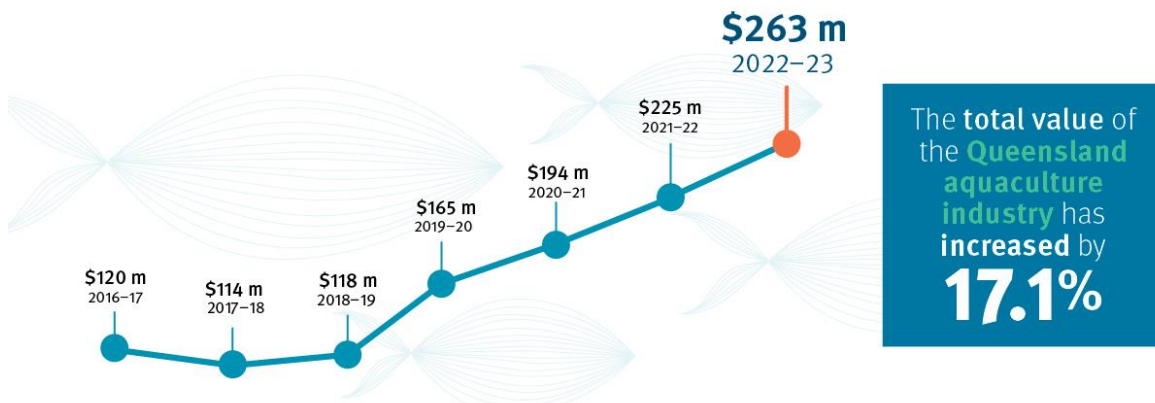
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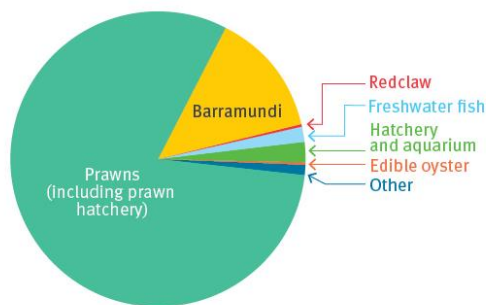
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1 Queensland aquaculture industry summary 2022–23

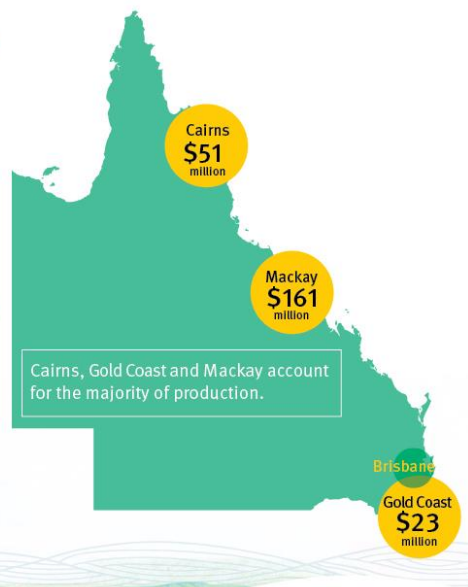


Production (tonnes)		2021-22	2022-23	Production (tonnes)		2021-22	2022-23
	↑	8,727	9,826		↑	197	242
	↓	31	22		↑	76	124
	↓	3,992	3,315	TOTAL	↑	13,023	13,528

Production value



Regional summary



The combined Queensland aquaculture industry employed:

Labour



DAF2183 02/24



2 Overall value and production

The total value of the Queensland aquaculture industry has increased by 17.1%, with the value of production increasing from \$224.7 million in 2021–22 to a new record high of \$263.2 million in 2022–23.

The total value of fisheries production in Queensland for 2022-23 was unavailable at the time of publication, therefore the Aquaculture production value from 2022-23 could not be compared to the Queensland total fisheries production.

Table 1 – Queensland fisheries production—gross value (2016–17 to 2022–23)

Queensland figures ⁽¹⁾			
Year	Total fisheries (\$m)	Aquaculture (\$m)	Aquaculture (%)
2015–16	\$296.6 (figure updated)	\$120.2	40.5 (figure updated)
2016–17	\$313.1 (figure updated)	\$119.7	38.2 (figure updated)
2017–18	\$294.8 (figure updated)	\$114.2	38.7 (figure updated)
2018–19	\$277.3 (figure updated)	\$118.4	42.7 (figure updated)
2019–20	\$321.5 (figure updated)	\$164.9	51.4 (figure updated)
2020–21	\$350.6 (figure updated)	\$193.5	55.2 (figure updated)
2021–22	Figure unavailable at the time of publication	\$224.7	Figure unavailable at the time of publication
2022-23	Figure unavailable at the time of publication	\$263.2	Figure unavailable at the time of publication

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 (*Lates calcarifer*) respectively. The actual dollar value of each sector is given in Table 2 (page 5). Acknowledging that there will always be some degree of fluctuation between years (for example, due to climatic issues), there is still a clear trend that the overall industry value has been increasing, on average, at a rate of 7.8% per annum since 1999–2000.

Gains in value in the 2022–23 financial year have been in the prawn, freshwater, aquarium, oyster and other sectors. The redclaw and barramundi sectors recorded a decline in value from the previous year.

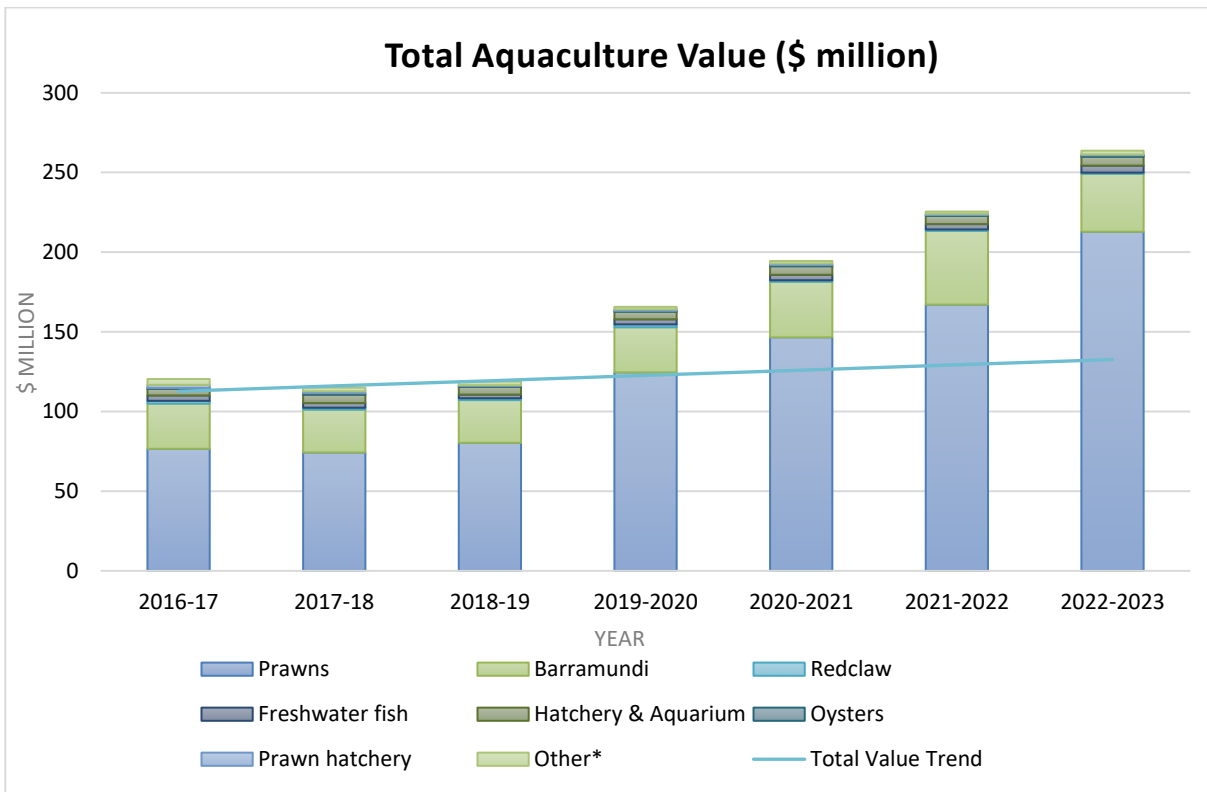


Figure 1 – Trend in value (\$ million) of Queensland aquaculture production

*Other' includes marine fish, algae, crustaceans and other bivalves.

In 2022–23, there was a 17.1% increase in total production compared to the previous year. The long term, 24-year average has the industry increasing at a rate of 7.1% per annum (Figure 2). Actual production figures (tonnes) for each sector are in Table 3 (page 6).

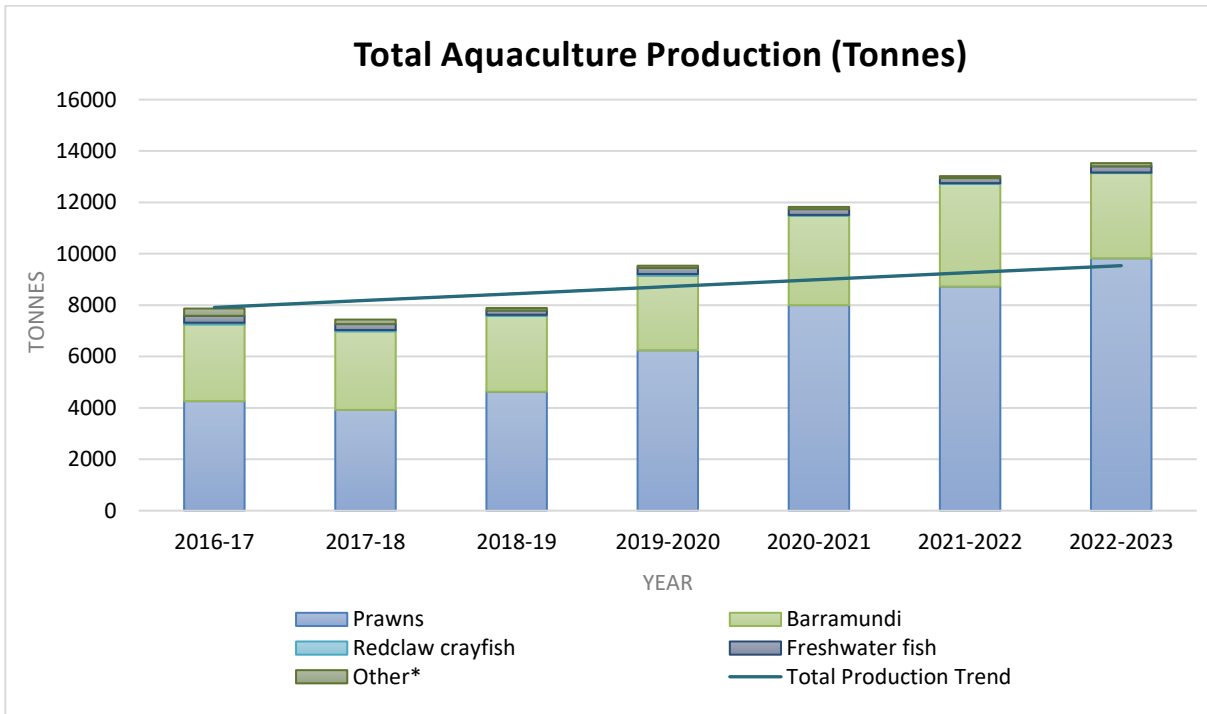


Figure 2 – Trend in Queensland aquaculture total production (tonnes)

*Other' includes marine fish, algae, crustaceans and other bivalves.

3 Return methods

Production statistics for the 2022–23 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 397 current registered aquaculture authority holders in Queensland, 387 producers completed the production survey this year—a response rate of 97%. The results presented reflect the information provided by the industry through these statistical returns.

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

- **Conversion factors**
Fish production is reported on a whole fish basis. For example, gilled and gutted barramundi to whole fish (0.89:1 on weight basis) and fillet barramundi to whole fish (0.48:1 on weight basis).
- **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 Aquaculture sector production and value

Prawn

Queensland's marine prawn industry produced two species of prawns—black tiger (*Penaeus monodon*) and banana (*Fenneropenaeus merguensis*). Production in the prawn sector increased by 12.6% (from 8727.5 tonnes in 2021–22 to 9825.5 tonnes in 2022–23), while the value increased by 27.4% (from \$167.1 million in 2021–22 to \$212.9 million in 2022–23). Hatchery sales of prawns for the year were \$4.19 million, which is a substantial increase from \$0.5 million in 2021–22. The number of post larvae produced increased from 20.2 million in 2021–22 to 194.5 million in 2022–23. The number of producing farms has decreased from 17 in 2021-22 to 16 in 2022-23.

Barramundi

Barramundi production has decreased by 16.9%, from 3991.6 tonnes sold in 2021–22 to 3315.3 tonnes sold in 2022-23. The value of the barramundi sector decreased by 21.4%, from \$46.3 million in 2021–22 to \$36.4 million in 2022-23. Over this period, the average price (whole fish basis) decreased, from \$11.60/kg in 2021–22 to \$10.98/kg in 2022-23. Most of the barramundi production is in pond-based systems. The number of producing farms remained steady at 17 in 2022-23. The total feed used in ponds and tanks decreased from 6764.7 tonnes in 2021–22 to 6636.6 tonnes in 2022-23. The estimated average feed conversion ratio has increased from 1.7:1 in 2021–22 to 1.97:1.

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

	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22	2022-23
Prawns (includes prawn hatchery)	\$77.8	\$74.7	\$80.4	\$124.6	\$146.6	\$167.1	\$212.9
Barramundi	\$28.4	\$26.9	\$26.8	\$28.3	\$34.9	\$46.3	\$36.4
Redclaw crayfish	\$1.7	\$1.3	\$1.2	\$1.8	\$0.9	\$0.9	\$0.7
Freshwater fish	\$3.4	\$2.9	\$2.3	\$3.2	\$3.4	\$3.4	\$4.4
Hatchery and aquarium	\$4.2	\$5.3	\$4.9	\$4.8	\$5.4	\$5.2	\$5.6
Edible oysters	\$0.5	\$0.9	\$0.6	\$0.5	\$0.7	\$0.4	\$0.8
Other ⁽¹⁾	\$3.7	\$2.3	\$2.2	\$1.6	\$1.6	\$1.4	\$2.4
Total	\$119.7	\$114.2	\$118.4	\$164.9	\$193.5	\$224.7	\$263.2

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 silver perch (*Bidyanus bidyanus*), jade perch (*Scortum barcoo*), and Murray cod (*Maccullochella peelii peelii*). The total production of freshwater fish (species other than barramundi) was 242.4 tonnes, which has increased from the 196.6 tonnes produced in 2021–22. The value of the sector increased to \$4.4 million, from \$3.36 million in 2021–22. The number of producing farms decreased to 10 from 14 in 2021-22.

Silver perch production decreased during this reporting season to 51.9 tonnes, down from 54.4 tonnes in 2021–22. The value of the silver perch sector remained at \$0.9 million with an increase of average price to \$17.79/kg. For silver perch production, the total feed used decreased from 138.8 tonnes in 2021–22 to 119.3 tonnes in 2022–23. Based on the silver perch harvest figures, this equates to a feed conversion ratio of 2.3:1.

Jade perch production decreased from 74 tonnes in 2021–22 to 69 tonnes in 2022–23. The value of jade perch sales totalled \$1.2 million with an average price of \$17.3/kg.

While Murray cod contributes to the freshwater fish sector, in 2022–23 only two growers produced this species and detailed production data cannot be published due to client confidentiality.

Redclaw

Production of the redclaw crayfish sector decreased by 30.9% (from 31.2 tonnes in 2021–22 to 21.6 tonnes in 2022–23). Value of the redclaw sector decreased to \$0.7 million down from \$0.9 million in 2021–22. The number of producing farms for 2022–23 has decreased, from 15 the previous financial year to 14 in 2022-23. Average prices increased from \$27.25/kg in 2021–22 to \$31.86/kg in 2022-23.

Table 3 – Queensland aquaculture production (tonnes) by sector

	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23
Marine prawns	4264.1	3921.2	4630.0	6245.2	8002.7	8727.5	9825.5
Barramundi	2987.4	3060.9	2950.2	2904.4	3477.9	3991.6	3315.3
Redclaw crayfish	64.8	48.8	44.9	61.6	32.5	31.2	21.6
Freshwater fish	268.6	231.7	168.3	235.3	224.2	196.6	242.4
Other ⁽¹⁾	284.3	176.4	96.9	89.3	87.3	76.1	123.5
Total	7869.2	7439	7890.3	9535.8	11824.6	13023.0	13528.3

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

Hatchery and aquarium

The hatchery and aquarium sector encompasses growers who produce ornamental aquarium species and native fish fingerlings for commercial growout (aquaculture) and stocking in public impoundments. In 2022–23, 7.9 million fish were sold. The value of the hatchery sector increased, from \$4.6 million in 2021–22 to \$4.8 million in 2022–23. Fingerling sales increased for Barramundi and Golden perch.

The value of fingerlings sold to the aquaculture sector for commercial growout was \$2.9 million—this was a decrease in sales compared to 2021–22 at \$3.0 million. Value of fingerlings sold for the state fish restocking program into public impoundments increased by 13%, from \$1.5 million in 2021–22 to \$1.65 million in 2022–23. Ornamental sales have increased by 47%, from \$0.7 million (figure updated) in 2021–22 to \$1 million in 2022–23.

Oysters

Total edible oyster production increased by 54.8%, from 50,547 dozen in 2021–22 to 79,086 dozen in 2022–23. The value of the edible oyster industry increased from \$0.4 million in 2021–21 to \$0.8 million. Average price per dozen of oysters increased from \$8.76 to \$11.05.

Labour

The combined Queensland aquaculture industry employed 854.8 FTEs—calculated by combining numbers of permanent and casual labour. The prawn farming sector was the largest employer at 621.4 FTE workers or 72.7% of the industry's total labour force.

5 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 illustrates the majority of the industry value comes from the Cairns, Townsville, Mackay and Gold Coast statistical divisions.

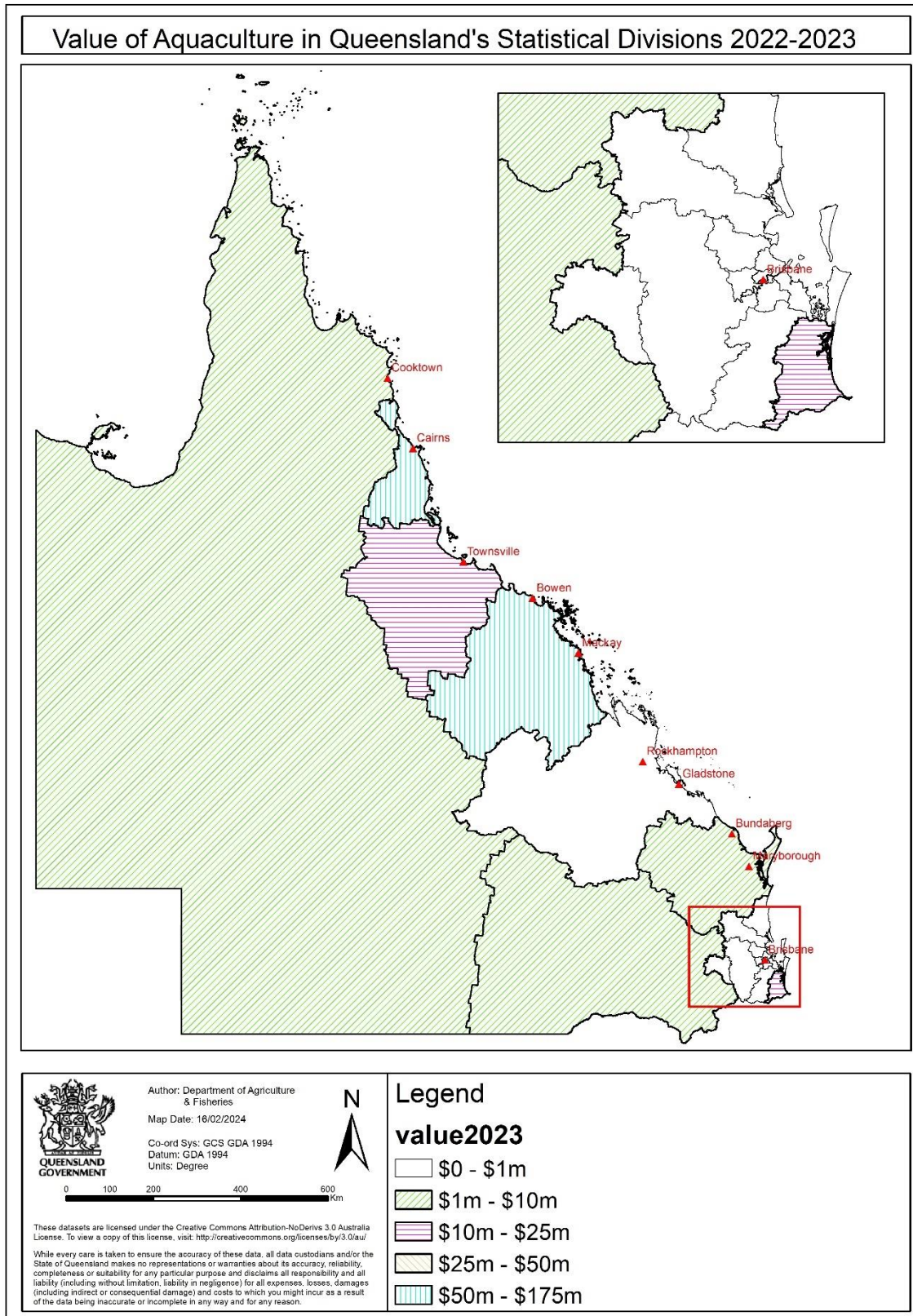


Figure 3 – Value of aquaculture (\$ million) for each Australian Bureau of Statistics statistical division within Queensland

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

Table 4 – Production, ponded area, employment and total production value of the Queensland aquaculture industry (2022–23)

Statistical division	Production (tonnes)	Ponded area (hectares)	Employment (FTE)	Total production value (\$ million)
Brisbane – East			10.92	0.5
Brisbane – North				
Brisbane – West				
Cairns	3051.1	351.08	165.29	50.7
Central Queensland				
Darling Downs – Maranoa				
Gold Coast	1178.1	92.4	49.66	22.5
Ipswich				
Logan – Beaudesert				
Mackay	7784.2	406.8	467.45	160.7
Moreton Bay – North				
Moreton Bay – South				
Queensland – Outback			11.51	1.5
Sunshine Coast		34.78	2.96	0.3
Toowoomba				
Townsville			71.77	18.3
Wide Bay-Burnett	203.0	191.08	52.83	5.5
Total	13528.3	1253.67	854.81	263.2

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