Australian Government
Australian Maritime Safety Authority

Domestic New Build Trends

2023-2024

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- Vessel location data is derived from the address of the Certificate of Survey (CoS) holder and may not reflect the vessel's operational location.
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Foreword

This report provides a snapshot of ship construction and new build certification activity for Australian Domestic Commercial Vessels (DCV's) over the 2023-2024 financial year period. It aims to provide readers insight into the type of new domestic commercial vessels entering service in Australia, while also allowing readers also to gain an understanding of maritime economic activities driving new construction, and how these economic drivers influence the types of vessels emerging across our maritime landscape.

Within the Australian domestic fleet, the Australian Maritime Safety Authority (AMSA) regulates an estimated 33,000 Australian DCVs. These vessels underpin the domestic marine industry, which, in 2023 generated an annual output of AUD $118.5 billion and supported 462,000 full-time equivalent jobs, according to the Australian Institute of Marine Science (AIMS) Index of Marine Industry 2023 (AIMS Index of Marine Industries).

By examining the growth of the Australian domestic fleet, it is possible to gain insights into industry demand that can inform strategic planning. These insights not only support AMSA in its role as a regulator but also prove valuable to industry sectors such as Accredited Marine Surveyors, boat builders, designers, and maintenance facilities, helping them anticipate trends and align business strategies with regulatory direction.

Ranging from compact 2m long inflatable boats to 123m transhipment vessels, the domestic maritime industry is remarkably diverse, making it both economically significant and operationally complex. This diversity and complexity introduce unique regulatory challenges, as stakeholder needs differ widely depending on vessel type, purpose and operating environment. To address this, AMSA employs risk-based regulatory practices tailored to the varied nature of the fleet.

When it comes to risk-based vessel certification practices, AMSA utilises a wide range of data sources, including application review data, surveyor evaluations and vessel inspections, to determine how to assess an application. This information-driven strategy enables AMSA to allocate its resources effectively, focusing efforts where the risks are greatest and ensuring that safety and compliance remain consistent across the fleet.

Activity in the sector remains steady, although financial pressures and broader economic uncertainty may be contributing to a slowdown in new vessel construction. Demand is being shaped by emerging trends, including shifts in technology, trade and resource industries, which continue to drive the need for new builds. These developments are not only reshaping opportunities across the domestic maritime landscape but also informing AMSA's ongoing regulatory practices to ensure alignment with future industry needs.

Rob Maher

Principal Naval Architect

Vessel Safety Unit

Overview of new Australian Flagged DCV’s 2023-2024

Overview

In the 2023-24 financial year 1,445 new vessels entered service in the Australian DCV Fleet:

- 363 of these new vessels were certificate of survey (CoS) vessels,
- 126 were Restricted C vessels (EX40), and
- the remaining 957 were non-survey vessels (EX02).

The non-survey portion of the fleet makes up 66% of the total and, with this forming such a large part of the fleet, it is of vital importance for AMSA to have effective and defendable non-survey certification processes. AMSA streamlined EX02 service delivery during 2023-24, transferring certification activities from regional staff to the Vessel Safety Unit (VSU) centralised processing team. This freed up regional resources to undertake high value tasks, such as vessel inspections, whilst ensuring greater consistency in initial EX02 assessments. Further streamlining of certification activities is planned to continue into 24-25 using risk-based methods to transition more application types to the VSU centralised processing team.

During 2023-24, 363 new certificate of survey vessels joined the fleet, reflecting continued significant growth in larger vessels. New builds included more than 20 superyachts, 20 new tugs and 2 notable mining transhipment vessels over 100m in length. The majority of transhipment vessels operating in Australia are DCVs reflecting the nature of their operations.

These vessels of significant size continue to be put into service for several reasons which are discussed further in this paper. It is evident that the growth in the large vessel sector was driven primarily by strong mineral prices and an expansion in the Australian superyacht industry.

While 363 additions in the survey fleet might seem modest compared to the 957 new vessels entering the non-survey fleet, this single year's intake of surveyed domestic commercial vessels is substantial - being roughly three times the number of the Navigation Act Regulated Australian vessel (RAV) fleet. These new DCV entrants include some of the largest vessels under the Australian flag, with a few rankings among the top ten by size.

Within the restricted C fleet (EX40), the 126 new entrants were primarily located in Queensland (QLD), New South Wales (NSW), and Western Australia (WA). A clear trend is evident between the east and west coasts, with most WA vessel categorised as 2CR, while vessels in NSW and QLD are predominantly 3CR (fishing). This pattern reflects the different types of commercial activity occurring in these states.

Largest, average, and smallest DCVs 2023-24

The average length of a DCV placed into survey over the 2023-24 financial year was 15.02m. 15m is typical of a workboat used in the Australian domestic fleet such as the pilot vessel shown in Figure 1 below.

Figure 1- Example of the average sized DCV entering survey in 2024 - Svitzer Marlin – UVI-461351

Including all non-survey vessels (Note: their inclusions reduces the average because a non-survey vessel cannot be more than 12m long) the average size of a vessel entering the fleet was 8.1 m. Rigid inflatable boats such as the example vessel Borun, Figure 2, are popular for their performance, sea keeping and ability to come along side other vessels without fendering. They form a significant part of the DCV fleet.

Figure 2 - Example of average length vessel - Borun UVI-463624

The average EX40 vessel is 6.62m long and the average EX02 vessel is 6.21m long. These exemptions have the flexibility to permit entry for production vessels built to recreational type standards such as AS 1799.1 or ISO 12215. Fibre Reinforced Plastic (FRP) vessels like the example vessel Joker, see Figure 3, feature frequently.

Figure 3 - Example of average EX02 / EX40 vessel - The Joker UVI-463624

The largest new DCV's for 2023-24 were the two 123.8m transhippers, the MinRes Coolibah and MinRes Airlie. See Figure 4. These vessels underpin Onslow Irons flagship $3 billion project in WA, to ship 35 million tonnes of iron ore a year, with an expected mine life of more than 30 years.

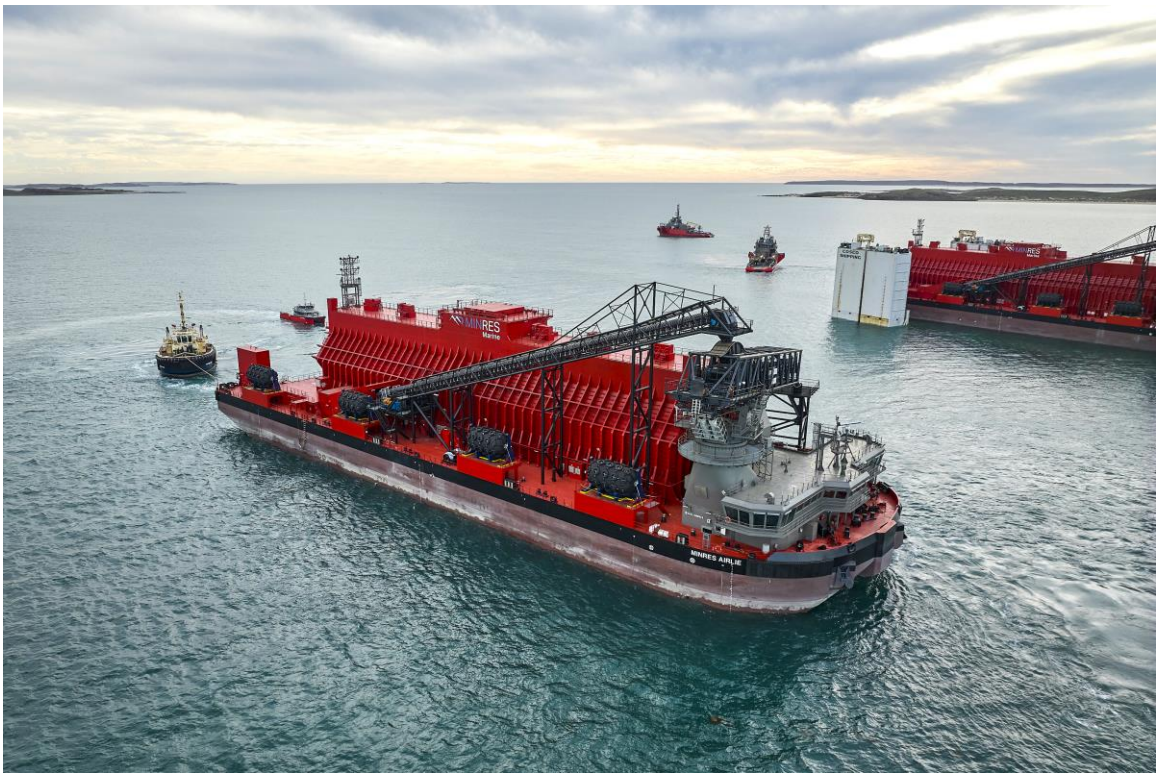


Figure 4– MinRes Airlie – 460374 – one of the two largest new DCV in 2023-24

At the other end of the spectrum, the smallest vessel to enter the domestic fleet in 2023-24 was a 2m long, inflatable, 2E, non-survey vessel. This is vessel is certified to carry 2 crew in 2E waters and equipped to conduct hydrographic seabed surveys in 2E waters. It was used for a specific project carried out by Maritime Constructions SA, who provide a spectrum of services including hydrographic survey, jetty design, construction and dredging.

Figure 5 - Smallest new DCV in 23-24 - Mercury IRB – 463966

Construction materials

The most common construction material, making up around 50% of all new DCV's, is aluminium. See Figure 6.

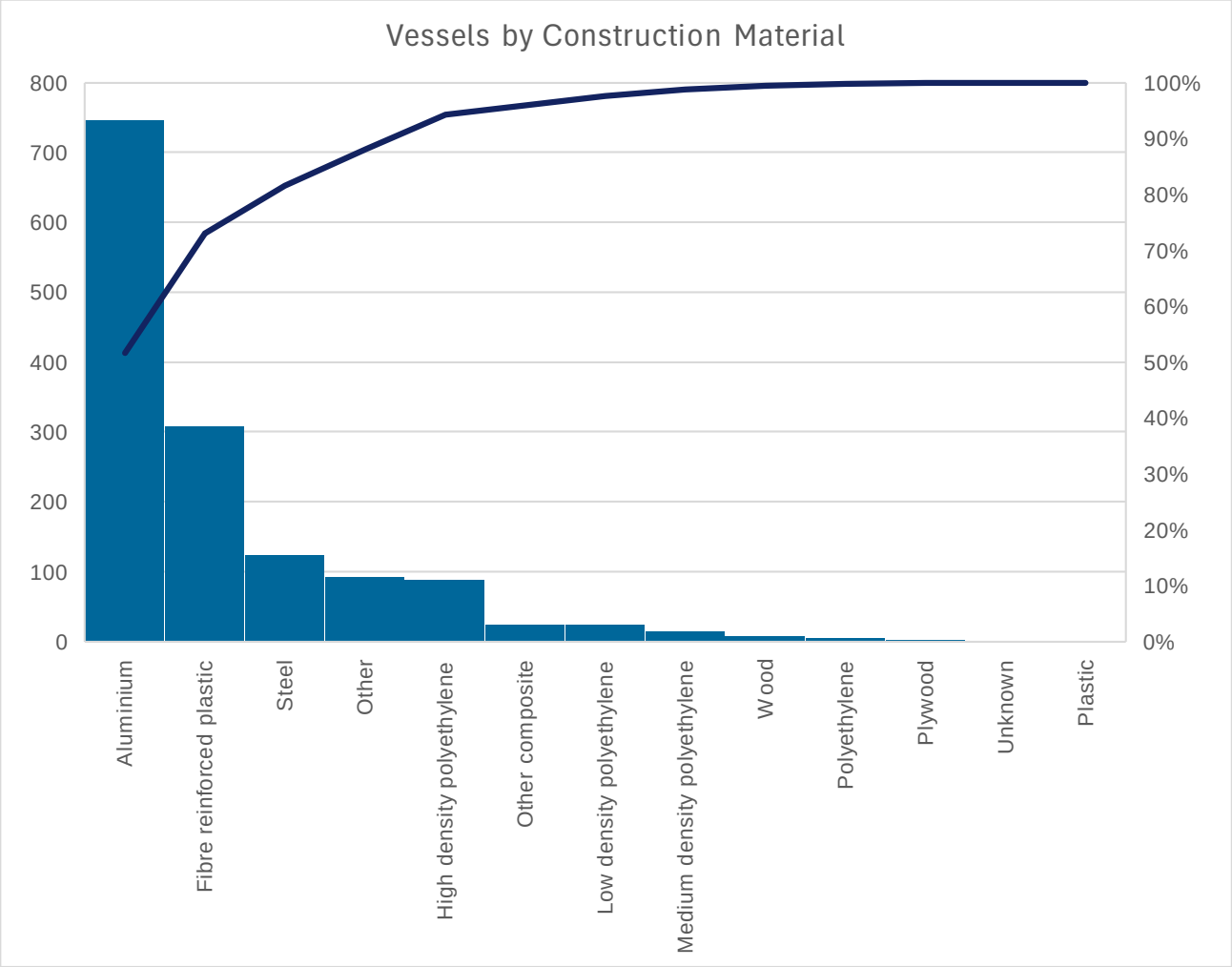


Figure 6 - vessels by construction material

Aluminium is an attractive construction material for DCVs due to its light weight and high strength. Additionally, as most DCVs are fully custom-built, aluminium is well-suited to this process as it does not require specialised tooling or moulds for vessel construction.

Fibre-reinforced plastic (FRP) and other composite materials are the second most common choice for construction. Construction of a composite vessel requires tooling such as moulds which can make the material less attractive for one-off builds. However, in applications where production vessels are used, this is a popular material. The majority of FRP vessels appear within the non-survey, EX40 and hire-and-drive fleet where production vessels are more common. Australia also boasts several boat builders producing larger purpose-built commercial work and pilot vessels.

High-density polyethylene (HDPE) ranks fourth in material popularity, trailing steel by a narrow margin. This material, once considered novel, has seen a marked increase in popularity in recent years. The material appears to be particularly attractive for workboats due to its mechanical toughness. The vessels built from polyethylene are commonly welded or roto moulded.

Vessel use categories

As shown in Figure 7, the most common use category for a vessel in the Australian fleet, by a significant margin, is Class 2, making up 70% of new entrants in 2023-24. Class 2 vessels are versatile, being able to undertake commercial work type activities and carry a small number of passengers.

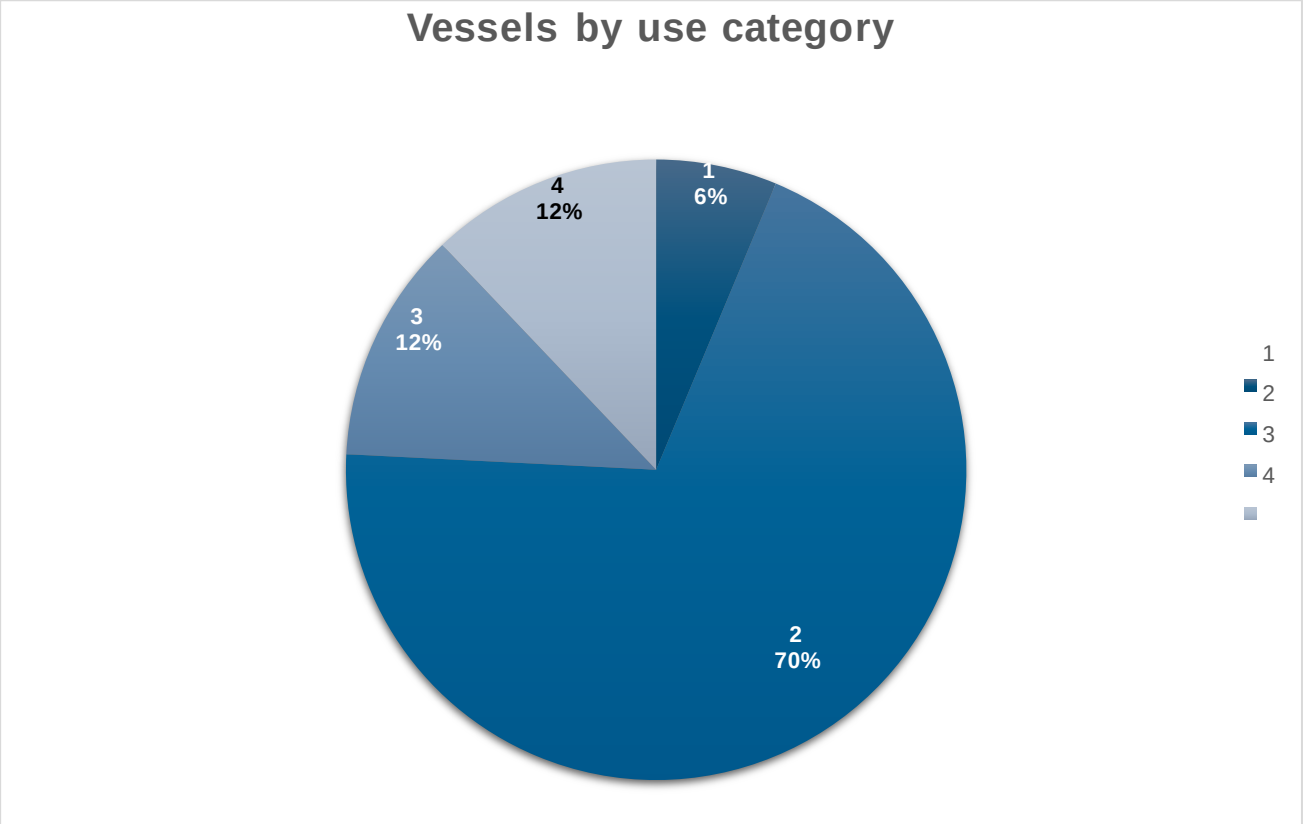


Figure 7 - 2023-24 vessels by use category

Looking into this data in more detail, as shown within Figure 8, the majority of Class 2 vessels are within service category 2D, with these vessels making up around one-third of all new builds in 2023–24. This concentration of vessels, most of which hold non-survey certification, reinforces the need for strong, consistent, and well-defended decision-making processes for non-survey certification.

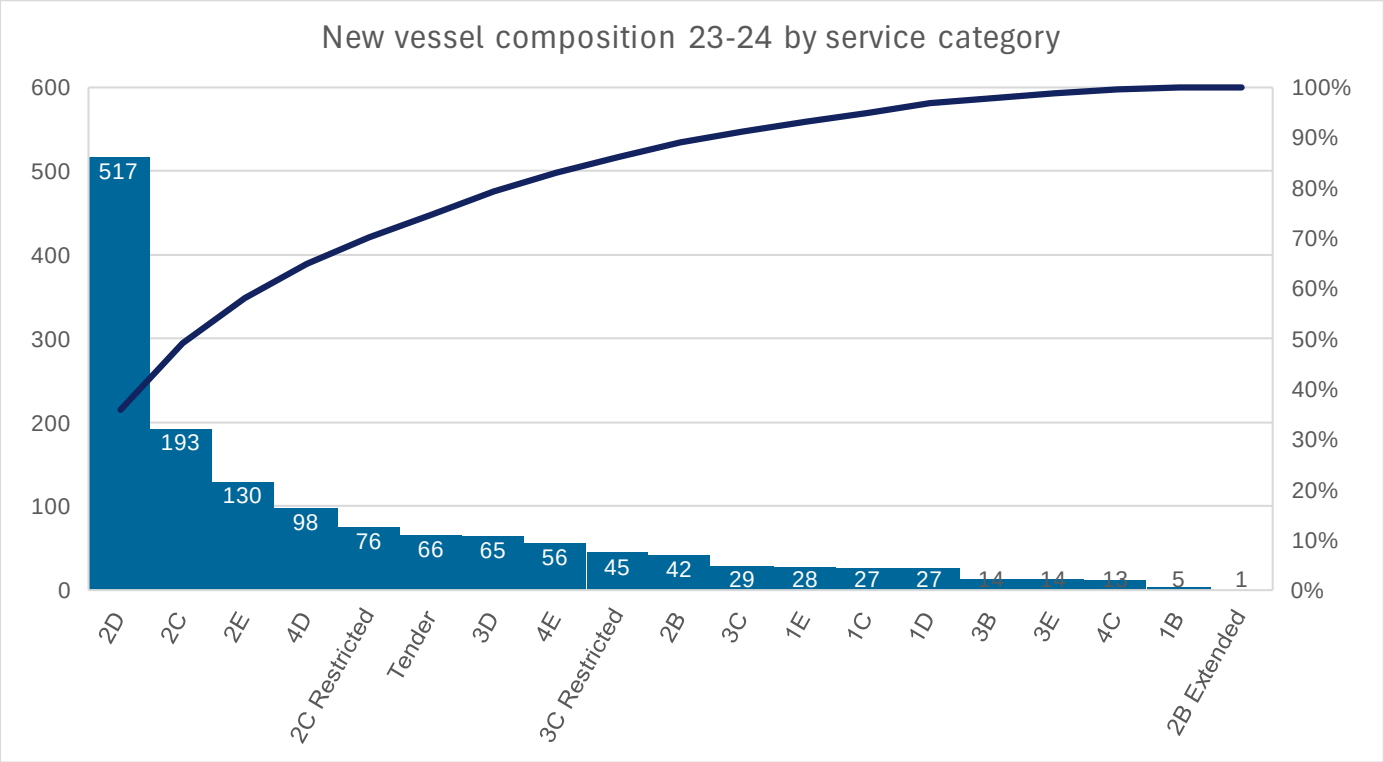


Figure 8 - 2023-24 cumulative vessels by service category

Economic drivers of geographic distribution

As noted above, approximately one-third of all new builds in 2023–24 were approved with a 2D service category (see Figure 8). A closer analysis of this data reveals that 71% of new 2D vessels are located in Queensland and NSW, with NSW accounting for 48% of the total on its own (see Figure 9).

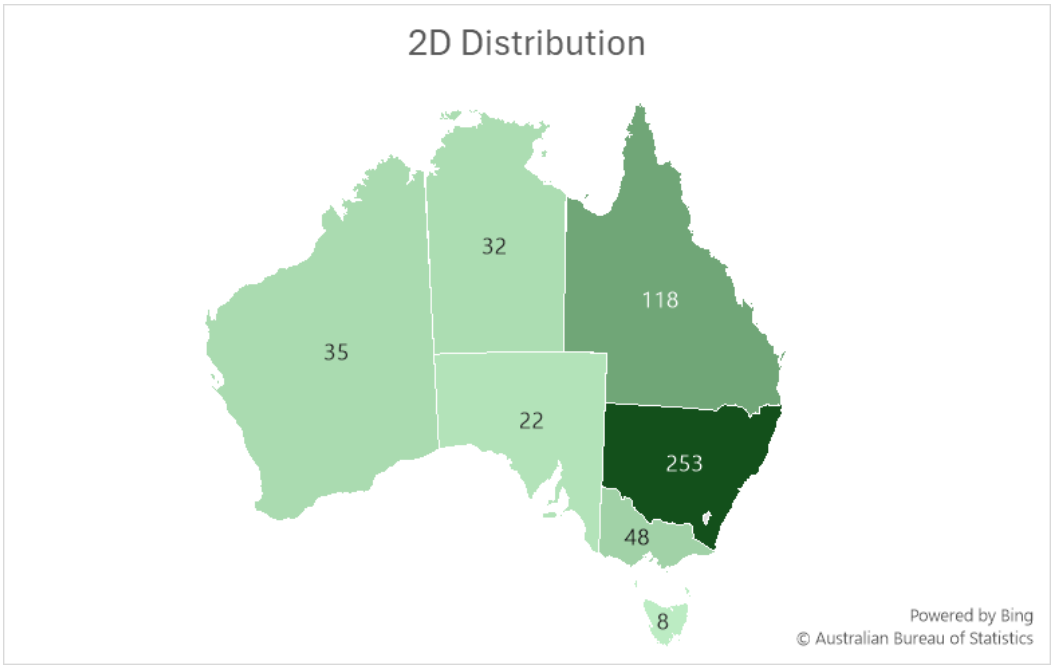


Figure 9 - Geographical distribution of new 2D vessels 2023-24

Regional influences on domestic vessel investment

NSW only has a few designated partially smooth (D) waters with 6 gazetted areas. This compares to 14 in the Northern Territory (NT), 13 in WA, and 19 in SA.

At first glance, this limited availability of D waters in NSW might suggest it would contain fewer Class D vessels, however, the data show the opposite. NSW leads the country in the number of D waters vessels. The key driver is Sydney Harbour, a significant economic hub and home to a gazetted D water area. The concentration of economic activity on and around Sydney Harbour drives investment in D water vessels and illustrates how local conditions and regional economies directly influence vessel investment decisions.

Different patterns emerge elsewhere in the country. In WA, for example, vessels are on average significantly larger than in other states, as much of the economic activity along the WA coast occurs further offshore in C and B waters. This activity is driven by industries like mineral and gas extraction and has led to a higher proportion of large vessels and B water-certified vessels being added to the WA fleet. Notably, despite WA having nearly twice as many gazetted D waters as NSW, the number of D water vessels in WA is only a fraction of those found in NSW - a clear indicator of how macroeconomic conditions, rather than regulatory settings alone, influence fleet distribution.

Infrastructure investment also plays a role in influencing the fleet. In 2023-24, Tasmania had the largest average size for new vessels, see Figure 10, with the average length in this state for the year being 27.2 metres. This is notably higher than the long-term average for the state. This spike is directly tied to the Bridgewater Bridge Project, a $786 million infrastructure development that required 12 x 55-metre barges to span the river and illustrates how major economic undertakings can drive investment into new vessel builds and certifications.

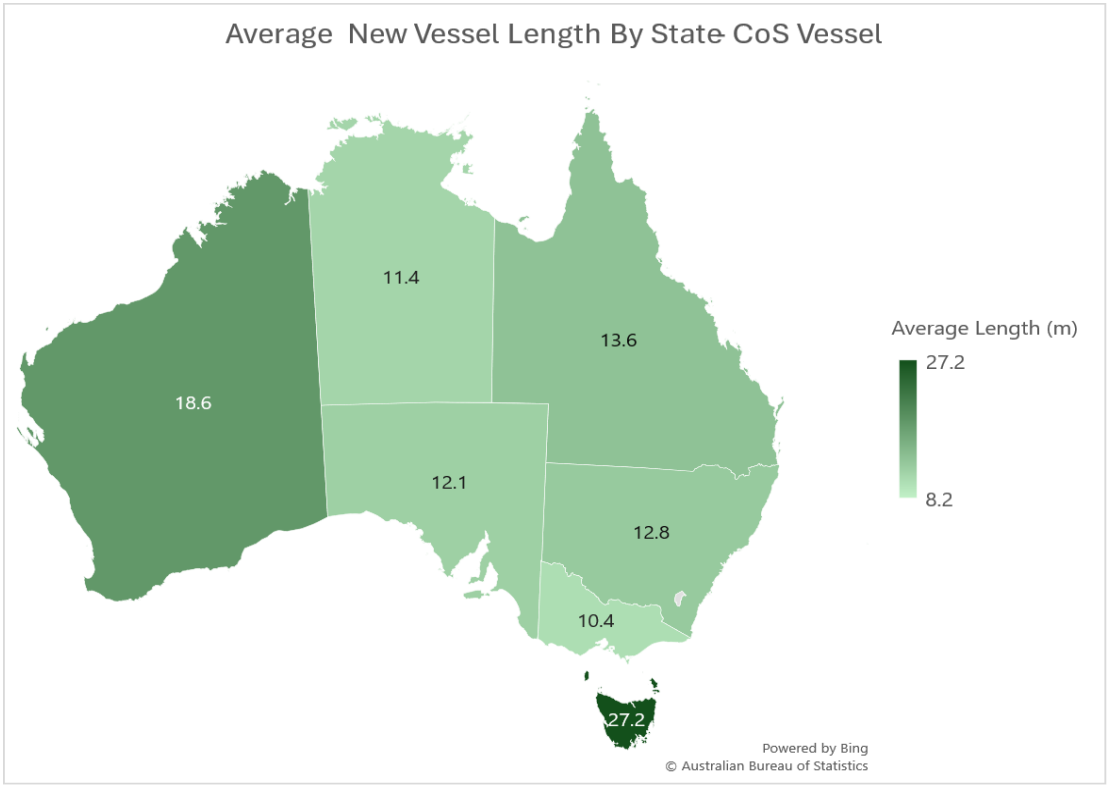


Figure 10 - Average vessel length CoS only

Within the hire-and-drive market, Queensland and NSW have the highest concentration of Class 4 vessels (see Figure 11). Protected waterways and generally favourable weather combined with well-

developed tourism infrastructure and higher population densities, creates strong demand for vessel hire in these states.

In contrast, Tasmania presents a different picture, despite boasting significant sheltered waterways, particularly around Hobart and Bruny Island. The state's cooler climate and rougher weather, especially during winter, likely limit the number of viable operating days for hire-and-drive services. These conditions appear to reduce the attractiveness of investment, despite Tasmania's otherwise favourable tourism market and natural beauty. No new Class 4 vessels were built for Tasmania in the period of 2023-24.

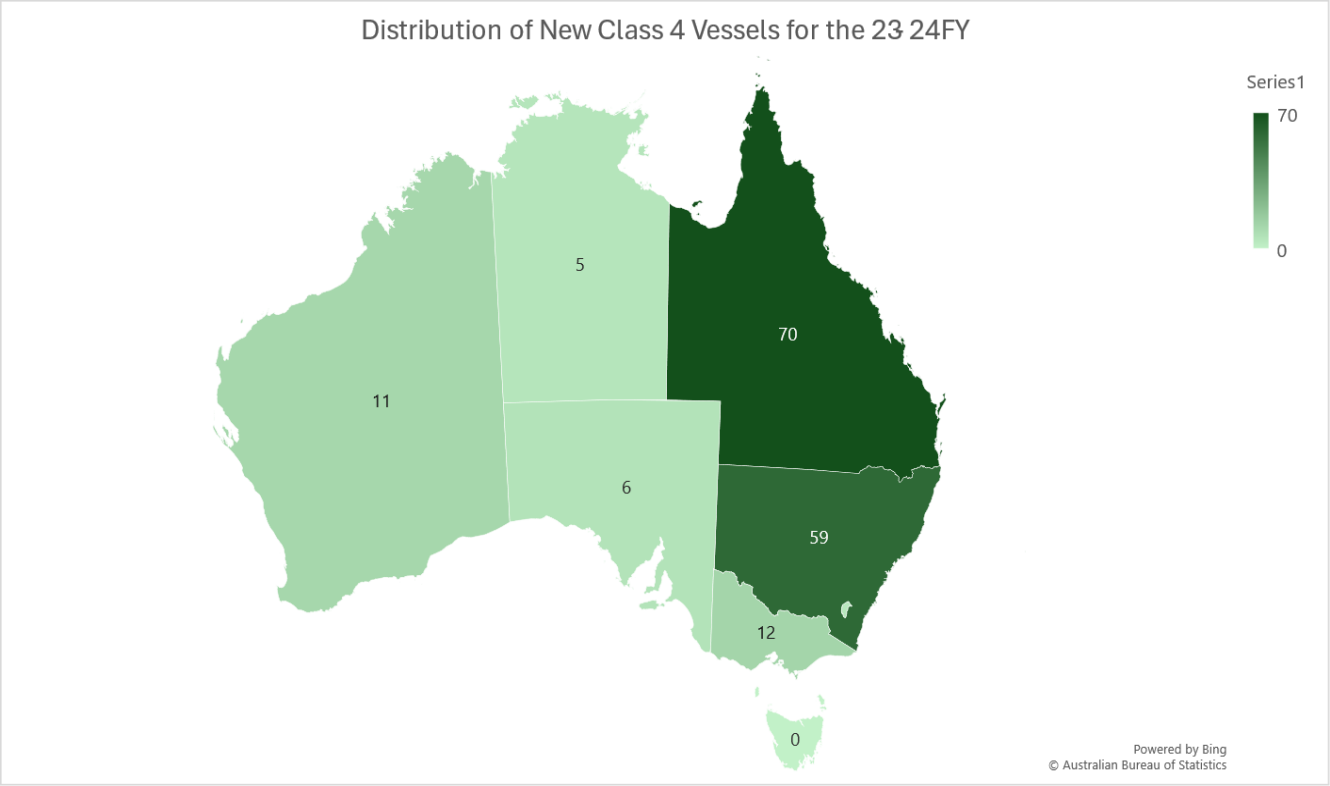


Figure 11 - Distribution of new Class 4 vessels for 2023-24

Summary of observations

With such a diverse range of vessels ranging from 2 to 120 metres in length, and significantly different macroeconomic conditions around the country, regulating the domestic industry is a complicated and delicate business. Each state has unique characteristics that influence vessel design, size, and certification trends, reflecting the relationship between environmental factors, economic activities, and infrastructure investment.

Through 2023-24, NSW, with its economic activity centred around Sydney Harbour, leads in 2D vessel certifications. Meanwhile, WA and Tasmania have showcased how large-scale industrial and infrastructure projects can drive demand for large, specialised vessels, such as the barges required for the Bridgewater Bridge Project.

Queensland and NSW dominate the Class 4 hire-and-drive vessel market thanks to their weather and strong tourism industries. This contrasts sharply with the challenges faced in regions like Tasmania and the NT, where harsher conditions and limited demand affect investment viability.

These patterns highlight the critical need to understand how regional economic activities, weather, and waterway classifications influence the fleet.

Future outlook: anticipated trends and fleet growth drivers

Trends in the Australian domestic market

Trend 1 – Gazettal of offshore wind farm areas

The world is looking to diversify energy sources, reduce carbon emissions, and meet ambitious renewable energy targets. A significant trend within Australia is the gazettal of coastal waters to support the development of the offshore wind farm industry. With its potential for large-scale, reliable energy production, this emerging industry may become a key pillar in Australia's transition to a clean energy economy.

The establishment of offshore wind farms is poised to generate substantial economic benefits including thousands of jobs across construction, operations, and maintenance along with supply chain opportunities such as vessel manufacturing. Whilst wind farm vessels are not a significant part of the current fleet, economic activity within the energy sector is likely to drive significant investment into new wind farm vessel construction in the future.

Developing and operating offshore wind farms requires specialised vessels and maritime expertise. Wind farms are commonly located in offshore waters with demanding environmental conditions. This creates an opportunity for the domestic fleet, driving investment into purpose-built vessels, including service operation vessels (SOVs) and crew transfer vessels (CTVs).

As one specific example, the Department of Climate Change, Energy, the Environment and Water (DCCEEW) has forecast that the Gippsland declared offshore wind area in Victoria alone will generate a potential 15,000 jobs during construction and 7,500 ongoing jobs (see DCCEEW). This workforce will need to be transported by water and this transport will mostly occur on DCVs.

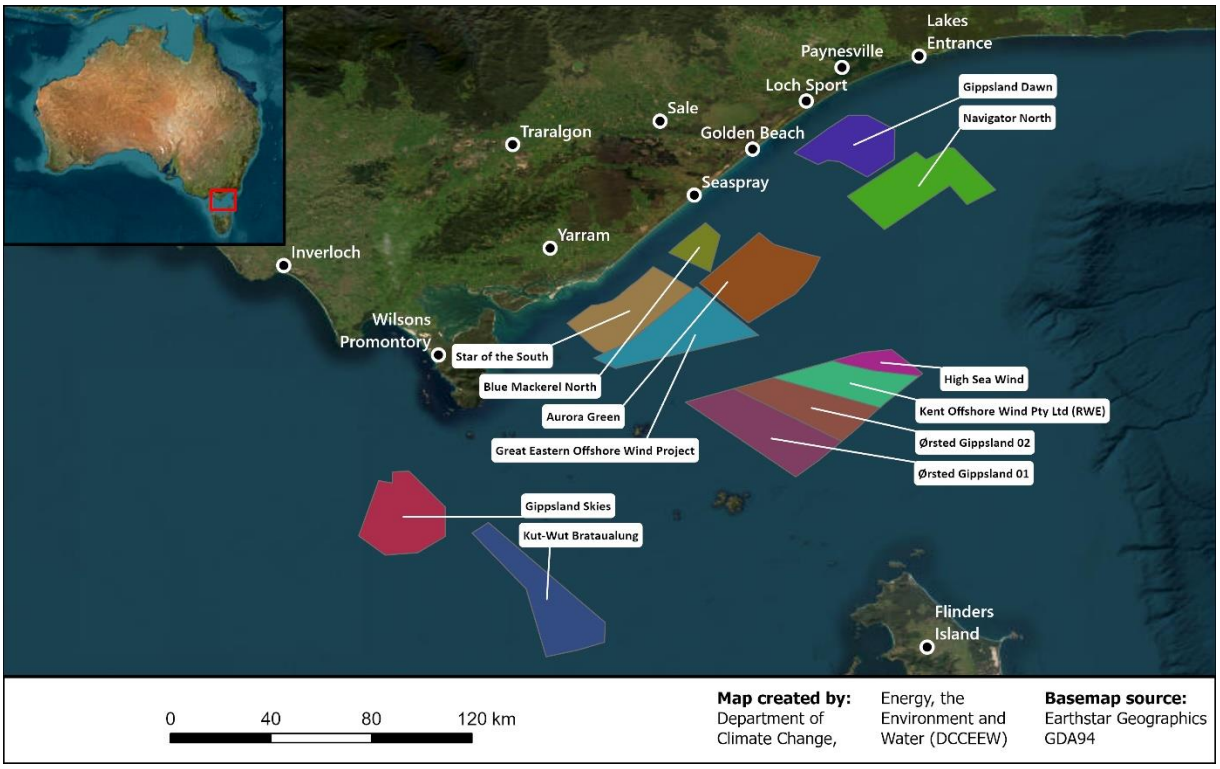


Figure 12 - Map of declared area around Gippsland, Victoria

Trend 2 – Large vessels and superyachts

A growing number of large vessels are choosing the national system. In 2023-24 this included the MinRes Coolibah, MinRes Airlie (123.8m), a significant number of superyachts, and approximately 20 new ocean-going tugs.

Figure 13 - MinRes Airlie and Odin loading a bulk carrier

Operators are increasingly recognising the benefits of the Marine Safety National Law Act 2012 (the National Law)—particularly the more flexible crewing arrangements—compared to the Navigation Act 2012. For comparable domestic operations, the National Law allows greater flexibility by allowing operators to undertake a risk-based approach to their specific operations as opposed to the prescriptive requirements of international conventions enacted by the Navigation Act 2012.

To support the ability to choose, AMSA has actively reduced regulatory friction between the National Law Act and Navigation Act 2012. A key initiative was the introduction of Exemption 49 (Ex49), which simplifies the process for vessels previously operating under the Navigation Act 2012 to obtain domestic certification. Under EX49, eligible vessels do not need to re-demonstrate compliance with the National Standards for Commercial Vessels (NSCV), provided they continue to meet the standards previously applicable under the Navigation Act 2012.

This policy directly addresses challenges faced by larger vessels, such as limitations in domestic slipping infrastructure, by reducing friction when a vessel changes between regulatory systems to undertake international maintenance voyages. AMSA's proactive regulatory response is enabling operators of superyachts, tugs, and other large vessels to confidently opt into the national system with reduced compliance burden and greater certainty.

Trend 3 – Autonomous technologies

The National Law framework provides flexible pathways that support innovation across Australia's maritime sector.

The growing interest in autonomous technologies has led to a diverse range of applications under the National Law. Notable examples include the PBAT Sentinel, EMAPS, the Anduril Ghost Shark X-Large USV, ASV DRIX 17, along with numerous others. During 2023-24, AMSA approved operation of approximately 30 autonomous vessels under the National Law. This included several world-first approvals, reinforcing Australia's reputation as a regulatory leader in this domain.

This ongoing work highlights the value of the performance-based regulatory framework within the National Law, providing practical pathways for the trialling and operation of new technologies. This ensures Australia remains at the forefront of maritime innovation.

Automation within specific operational domains such as hydrographic survey, has the capacity to increase significantly in the coming years. In these contexts, autonomous and remotely operated technologies act as productivity multipliers—enabling high-resolution data collection and improved safety outcomes.

Platforms like ASV DRIX and EMAPS are already demonstrating how automated systems can enhance survey accuracy, reduce operational costs, and extend mission duration in challenging or remote environments.

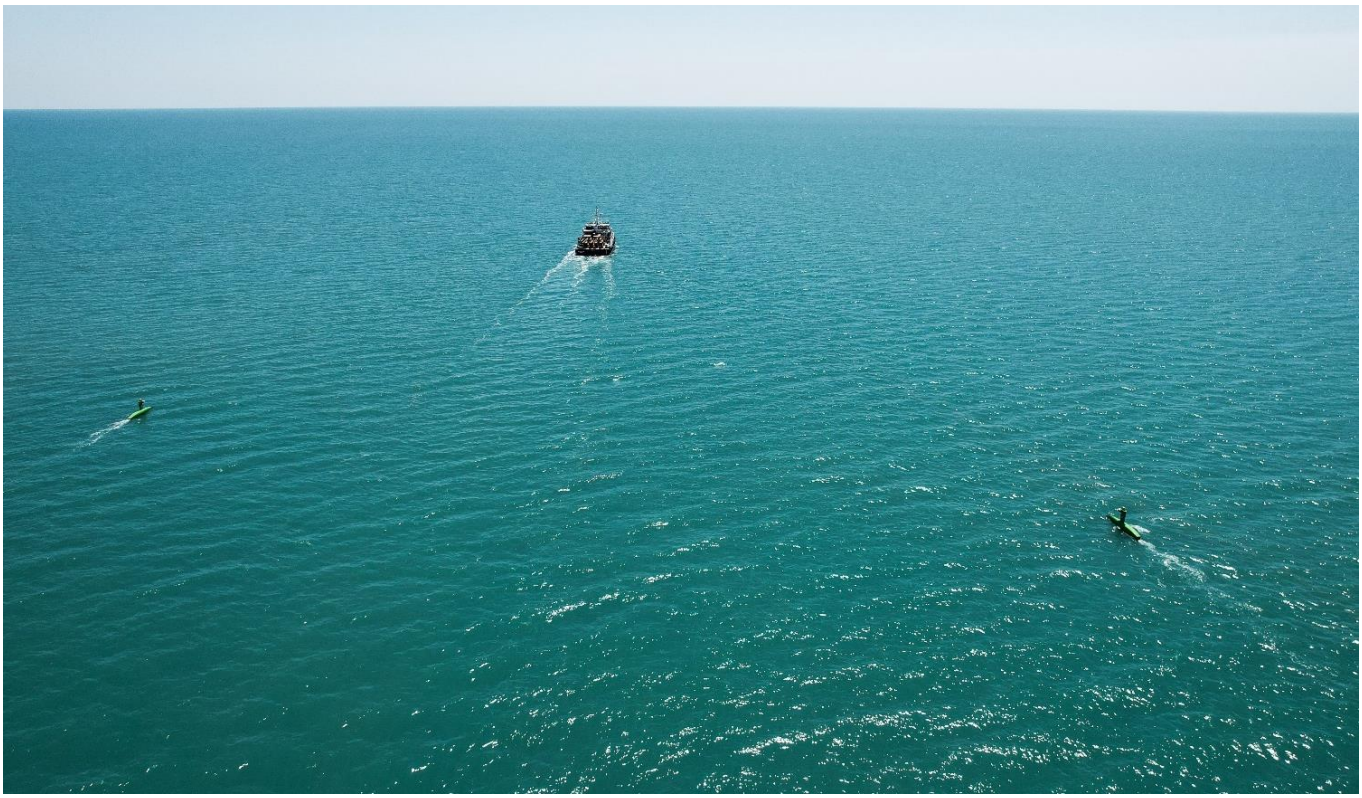


Figure 14 - two ASV DRIX 17 operating with a parent vessel

Trend 4 – High-density polyethylene

High-density polyethylene (HDPE) is emerging as a construction material of growing interest within Australia's new DCV fleet, now ranking as the fourth most common hull material.

Since the introduction of a generic equivalent solution in 2016 permitting polyethylene construction, HDPE has steadily gained traction across a range of industries. Vessels such as the Sentinel-class craft, developed by Plastic Fabrications, illustrate the potential of this material to support durable, lightweight and highly customisable vessel designs.

Figure 15 - Plastic Fabrications Sentinel Class LMC

HDPE vessels are typically fabricated using methods like those used for aluminium construction, yet the material's unique mechanical properties require distinct design considerations. Its low modulus of elasticity and relatively soft surface mean that traditional structural assumptions do not always apply, particularly for bolted joints or areas subject to high loads. For more complex installations—such as inboard engines paired with jet units—proponents have made use of the National Law's performance-based framework to develop tailored equivalent solutions, demonstrating compliance through methods such as material testing, finite element analysis, and comprehensive safety case development.

A practical demonstration of this innovative approach is evident in the Sentinel-class Littoral Manoeuvre Craft (LMC), developed in Tasmania by Plastic Fabrications – Figure 15. The vessel demonstrates how Australian builders are using the flexibility of the National Law to develop safe and functional designs using non-traditional materials.

Trend 5 – Offshore aquaculture

Offshore aquaculture is a significant area of growth within Australia's maritime sector, driven by technological innovation and the pursuit of sustainable food production.

While aquaculture has traditionally been centred in protected coastal areas—such as Tasmania's D'Entrecasteaux Channel—interest is shifting towards offshore farming. In deeper waters with stronger currents, operators benefit from improved waste dispersion and higher oxygen levels, offering potential environmental and productivity gains.

These operational advantages, however, also bring with them new challenges, including greater exposure to weather and sea conditions. These challenges require robust engineering and vessels that can safely operate in more dynamic environments.

As a result, the move offshore is prompting a shift towards larger domestic commercial vessels and an increased reliance on automation and remote operations. Feeding, monitoring, and harvesting activities are increasingly being automated and managed from onshore control centre. A number of these automated and remotely operated vessels are already in service within Australian waters, approved under the National Law framework. Their integration into aquaculture operations demonstrates the adaptability of the current system to accommodate new technologies and evolving industry needs.

Figure 16 - Tassal remote operations centre

Trend 6 – Alternative fuel technologies

By leveraging the expertise of recognised organisations, the National Law enables innovation while maintaining high safety standards.

The launch of Sea Change, the world's first hydrogen fuel cell-powered vessel in the USA, demonstrates the potential of these new and emerging technologies.

Within Australia, proponents exploring battery-electric propulsion and other alternative energy systems are accommodated via certification as novel vessels with recognised organisation survey.

Recognised organisations are particularly well-positioned to support innovation in this space. Their capacity to undertake detailed technical assessments—such as Failure Mode, Effects, and Criticality Analysis (FMECA), Hazard Identification (HAZID), and component verification—provides proponents with a clear pathway to certification even where standards are still evolving.

AMSA also recognises that classification is not always a viable pathway for some new technologies, particularly on smaller non-passenger vessels where the complexity and cost of classification may be disproportionate to the risk. In response, AMSA is developing a new regulatory framework under the National Law for some vessels utilising novel technologies. This framework is intended to provide a clear and proportionate alternative approval pathway that supports innovation while maintaining the high safety standards expected by the community and industry stakeholders. It aims to give proponents greater clarity, consistency and confidence in the certification process for non-traditional vessel designs and systems. By leveraging this flexibility, the National Law enables innovation while maintaining high safety standards.

Notable Australian flagged DCVs 2023-24

Notable Australian flagged DCVs 2023-24

Mining and construction

MinRes Coolibah and MinRes Airlie

The two new 123.8m long Australian Flagged domestic transhippers, the MinRes Coolibah and MinRes Airlie, are currently loading iron ore aboard a bulk carrier off the Port of Ashburton, WA. These domestic vessels unlock Onslow Iron's flagship $3 billion project, and in full production will ship 35 million tonnes a year, with an expected mine life of more than 30 years.

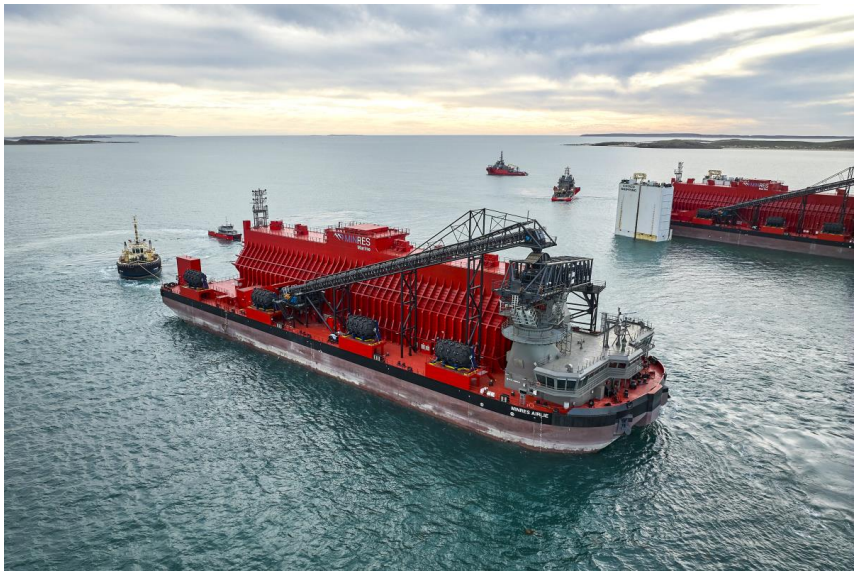


Figure 17 - Minres Airlie 123.8m UVI - 863367

The MinRes Odin

The MinRes Odin (ex-Mermaid Sound) was modified to operate as a pusher tug for the first of the Minerals Resources iron ore transhipment barges and entered service as a DCV. The vessel is a 49.95 m long Cheoy Lee tug.

Figure 18 - MinRes Odin 49.95m UVI – 858332

The New Bridgewater Bridge (NBB) barges

Enabling the construction of the new Bridgwater bridge in Tasmania are the 12 new 55m long NBB barges. These barges have been placed across the span of the river to provide equipment such as large cranes and construction vehicles access across the river. They are central to the construction of the new $786 million bridge.

Figure 19 - the 12 NBB barges 12 x 55m spanning the Derwent river

Large yachts

The MY Legacy

MY Legacy is a 31m long Gulf Craft yacht. Designed to maximize space and carry the outdoor experience through to the interior, MY Legacy is certified for 1D day operations with up to 105 passengers and for 2C overnight operations with 11 berthed passengers. Key features include a sky lounge and expansive foredeck space.

Figure 20 - MY Legacy – 460952

The Bluestone 1

This 28.5m long Gulf Craft is certified for 1E operations with 100 passengers, 1D operations with 36 passengers or overnight 2C operations for 12 berthed passengers. A Nomad 101 model, the vessel features electric stabilisers and luxury finish throughout.

Figure 21 - Bluestone 1 UVI - 462100

Tugs

RA Star tugs

7 new Robert Allan Star 2800-CL tugs were put into service by Svitzer in the 2023-24 financial year. These 28.4m tugs feature a versatile design allowing for varied propulsion, machinery, and accommodation configurations. They achieve a bollard pull of 82.1 tonnes and a speed of 13.3 knots.

Figure 22 - RAstar 2800-CL terminal / berthing escort tugs Svitzer Bilby, Kingfisher & Rowley

Government vessels

RV Djildjit

Government vessels form a significant part of the Australian fleet, and this new 18.6m long research vessel, the RV Djildjit, is a typical example of the kind of vessel used by Australian fisheries and police forces. The design features a spacious aft deck that supports a variety of operations, and an aft recovery ramp that enables the deployment and retrieval of a high-speed tender at sea.

Figure 23 - RV Djildjit 461774 – research vessel, WA

Ferries

New Brisbane city cats

Built by Aus Ships in Brisbane and designed by Aus Yachts, the new Generation 4 double-decker Brisbane ferries are a defining feature of the Brisbane City Council's public transport system. Each vessel accommodates up to 170 passengers and contributes to a fleet that transports more than 21,000 people daily.

Figure 24 - Tugulawa II and Binkinba II 461419

New Sydney ferries

Built by Richardson Devine Marine in Tasmania and designed by Incat Crowther, two new Parramatta ferries entered service in 2023-24. Each ferry has a capacity of 200 passengers and make up part of a planned seven-vessel fleet which will transport approximately 250,000 passengers each month from Circular Quay and Paramatta.

Figure 25 - John Nutt 462936, Frances Bodkin 462934

Hire-and-drive

The Aqua Fox

Aqua Fox, a Leopard 50 sailing catamaran, is listed among the vessels available for hire—either as a bareboat or with a skipper in the Whitsundays. At 50 feet (15.4 metres), it is one of the larger vessels in the hire and drive category. It operates from Airlie Marina in Airlie Beach, QLD.

Figure 26 - Figure 31 - Aqua Fox – Leopard 50

Pacific 320

The Pacific 320 is a Sundance 320 Coupe outboard vessel included in the Pacific Boating charter fleet. It is certified under service category 4D for up to 8 persons. These vessels operate in the Sydney and Pittwater regions and are designed with an accommodation layout that includes a bow seating area.

Figure 27 - Pacific 28 UVI 463381

Experiences

The Kuuma

The Kuuma Pontoon Boat is designed as a floating sauna experience for up to 8 people. Based out of Margate Tasmania, the vessel is 11.8m long and transports passengers out into North West Bay.

Figure 28 - Figure 32 - Kuuma 462711 – floating sauna experience

Jet Car

Jet Car Australia reinvents Jet Ski hire by turning Jet Skis into sleek, floating luxury cars. These modified jet skis are advertised as letting hirers cruise the Gold Coast waters in style, with a guide in the passenger seat to highlight key sights and ensure a safe, memorable adventure.

Figure 29 - Figure 33 - Jet Car UVI 463419

Autonomous vessels

Around 30 new autonomous vessels entered service over the 2023-2024 period, a similar number compared the autonomous vessels that entered service in 2022-23 FY. The largest vessel incorporating autonomous technologies to be domestically certified in the 2023-24 period was the 57m long PBAT Sentinel.

PBAT Sentinel

The Patrol Boat Autonomy Trial (PBAT) sentinel is an Austal modified Armidale-class Patrol Boat (the former HMAS Maitland). Austal and project partners Trusted Autonomous Systems and Greenroom Robotics successfully demonstrated the viability of employing robotic and autonomous systems in a large maritime platform, culminating in the completion of a four-day, 700nm endurance trial off the coast of Western Australia.

Leveraging Austal's on-board control and monitoring system, Marinelink, 'PBAT Sentinel' was extensively modified to incorporate higher levels of automation across the fuel, fire, bilge, HVAC and electrical systems, enabling extended endurance without crew intervention. At 57m LOA, it is the largest vessel in Australia to be operated remotely and autonomously (with crew onboard) to date.

Figure 30 – PBAT Sentinel VES-863256 - 57m long autonomous technologies research platform

The trials were controlled from onboard the vessel and from a remote command centre at Austal's Henderson shipyard in WA (**Error! Reference source not found.**). The vessel successfully completed a series of navigation and collision avoidance trials both in a simulated environment, and at sea, with the project team controlling the vessel remotely and programming autonomous operations. The valuable lessons learned from PBAT will help Austal and industry partners continue to develop remote and autonomous solutions into the future.

DRIX

DRIX are autonomous surface vessels designed for hydrographic survey work and similar operations. Ranging from 5 to 15 metres in length, this specific model measures 7.36 metres long with a beam of 0.824 metres. DRIX feature a narrow beam, which results in a small waterplane area. This minimised waterplane area significantly reduces the vessel's sensitivity to heave and pitch motions caused by waves, making it a stable platform for hydrographic survey work.

One of the key benefits of autonomous and remote operations is this ability to reduce waterplane area where payloads and personnel are not required onboard. Not only does it improve seakeeping, it also reduces fuel usage.

DRIX is one of the only commercial applications of remote / autonomous operations for 2023-24.

Figure 31 - ASVDRIX 17 463530

Anduril Dive XL

The Anduril Dive XL is an experimental defence platform that will provide the Navy with a cost-effective, stealthy, long-range, trusted undersea capability that can conduct persistent and disruptive intelligence, surveillance, reconnaissance and strike. The vessels are 11.910m in length and around 3.5m in beam.

Figure 32 - Anduril Dive XL 463497

Speartooth V 4.0

Speartooth is a Large Uncrewed Underwater Vehicle (LUUV) designed for long range, long duration undersea defence operations. It is 8m long and around 1m in beam. It brings a combination of highly advanced capabilities together with a modular, rapidly reconfigurable design specifically focused on manufacturing scalability, high volume production and deployment. C2 Robotics have conducted thousands of hours of testing using their AMSA approval.

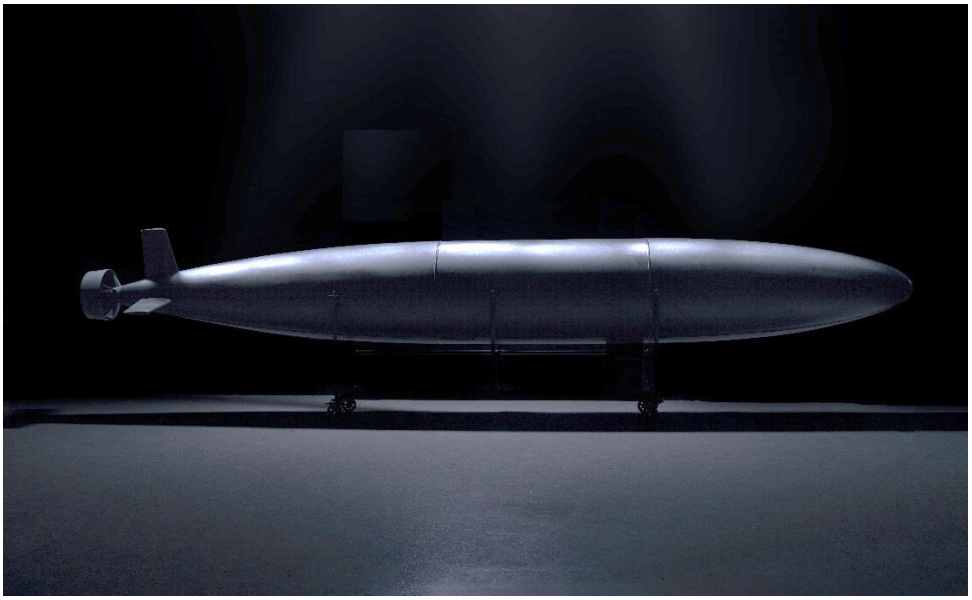
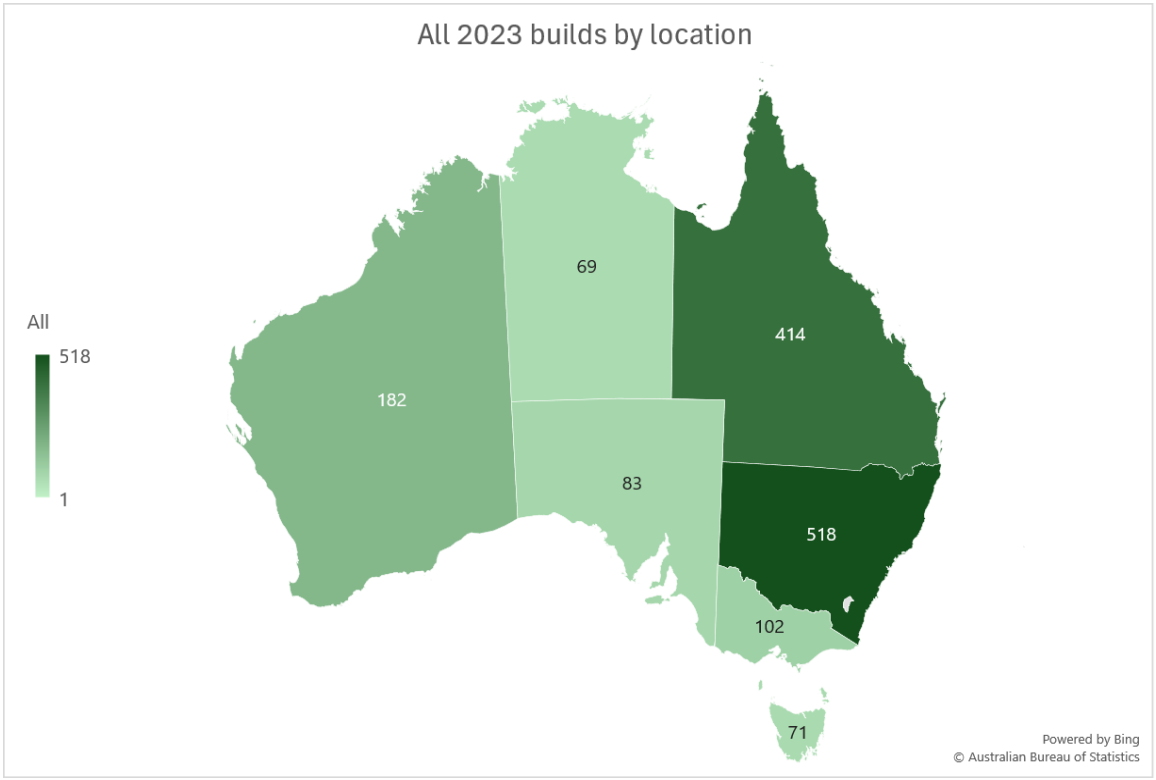


Figure 33 - C2 Robotics Speartooth V4.0 463912

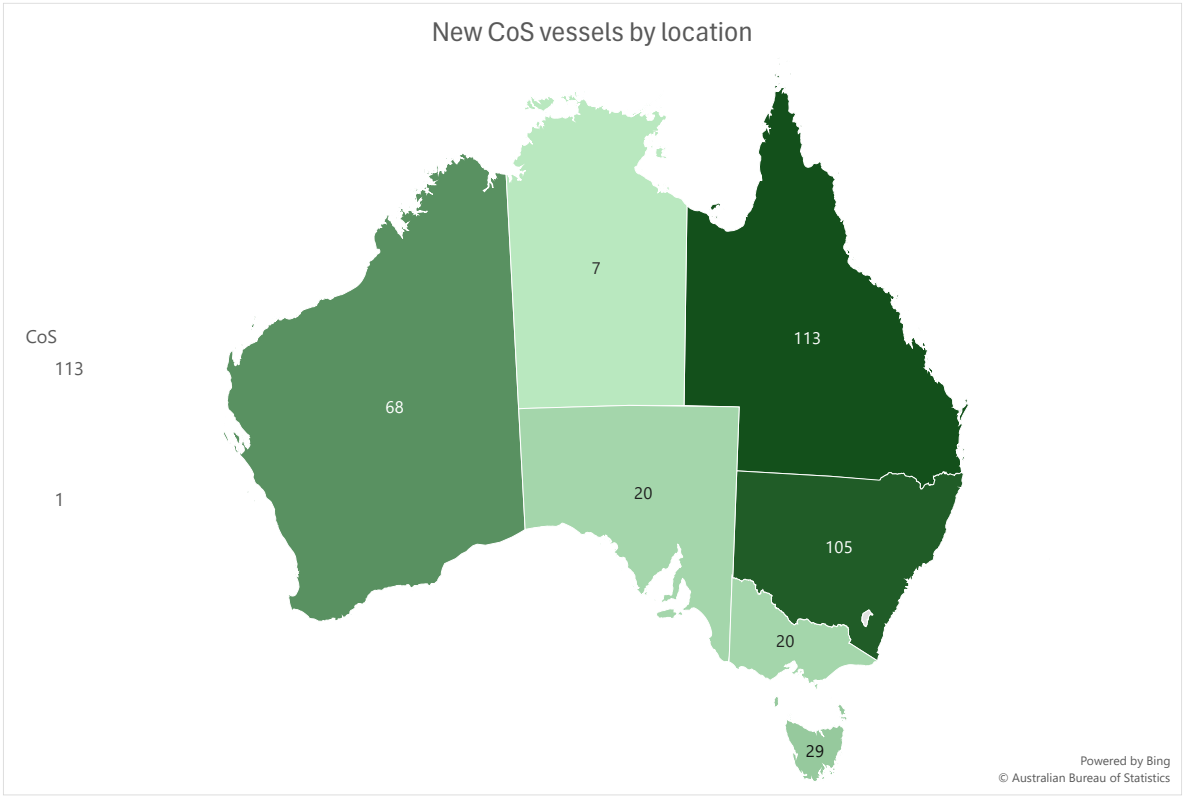
Annexes

Annex A – Number of new builds by certificate type

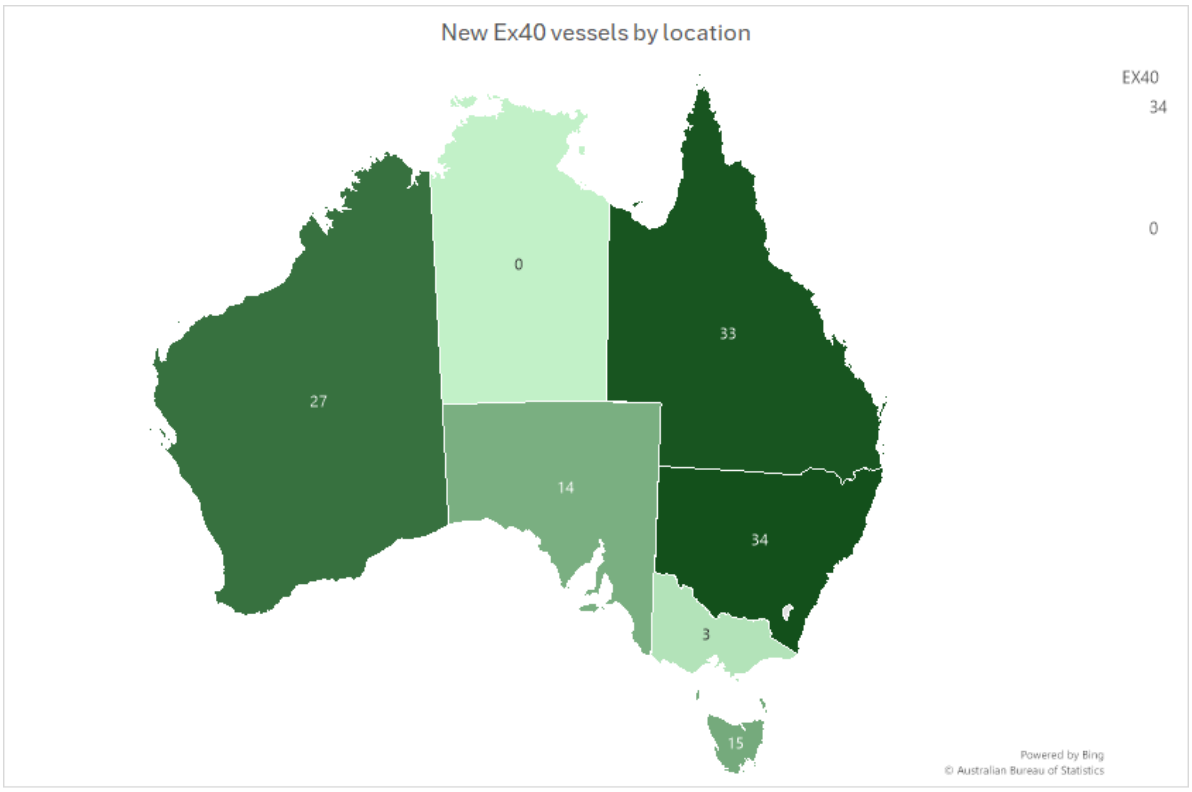
2023-24 All vessels built by location



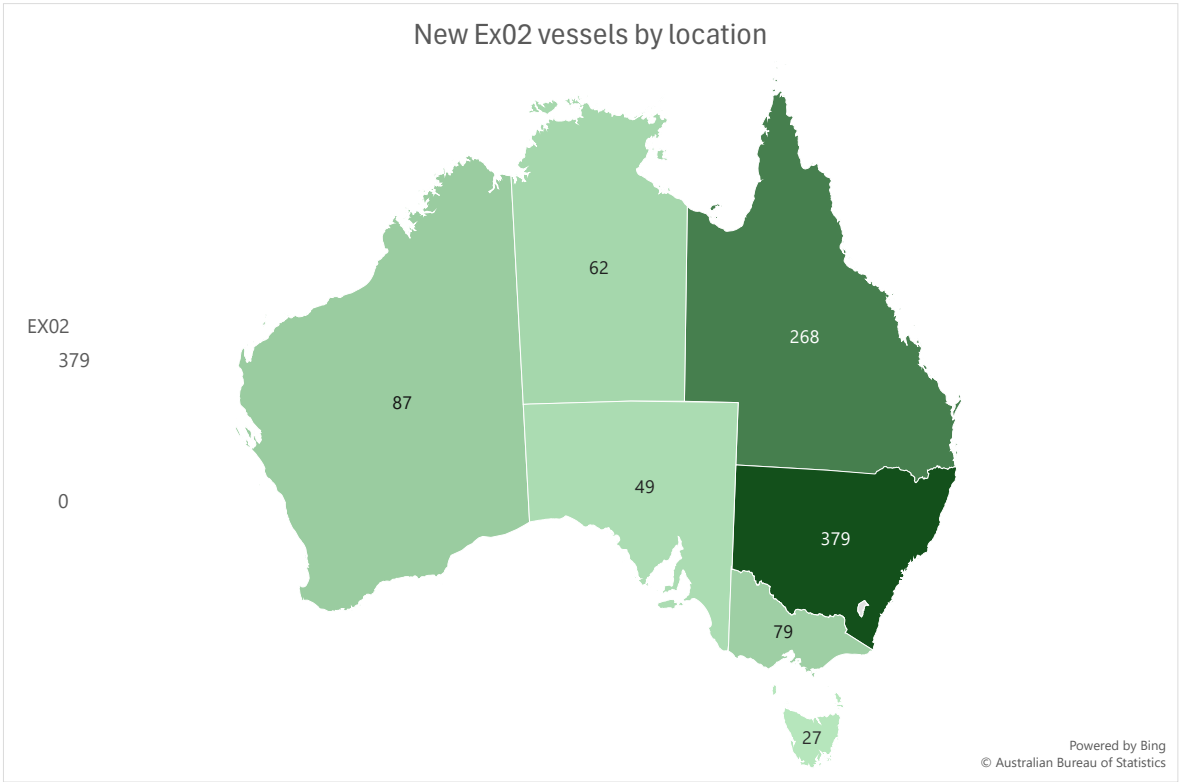
2023-24 New CoS vessels by location



2023-24 EX40 vessels by location

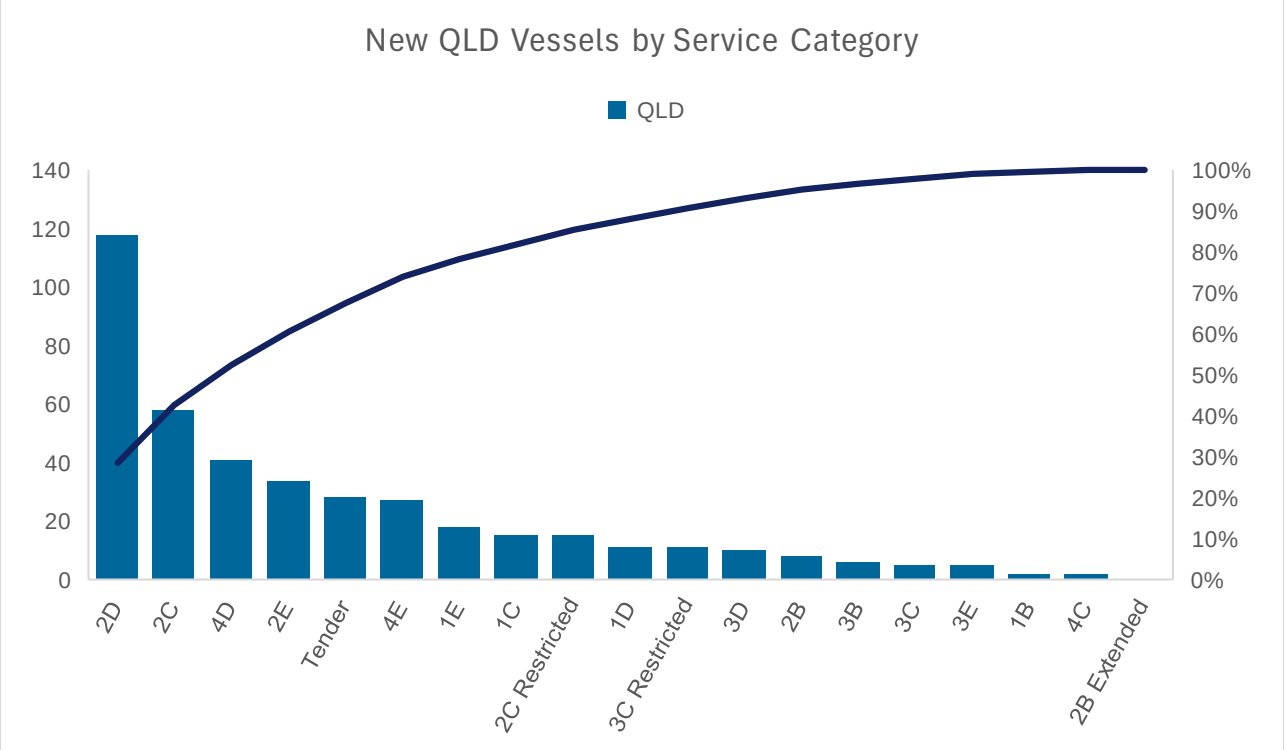


2023-24 EX02 vessels by location

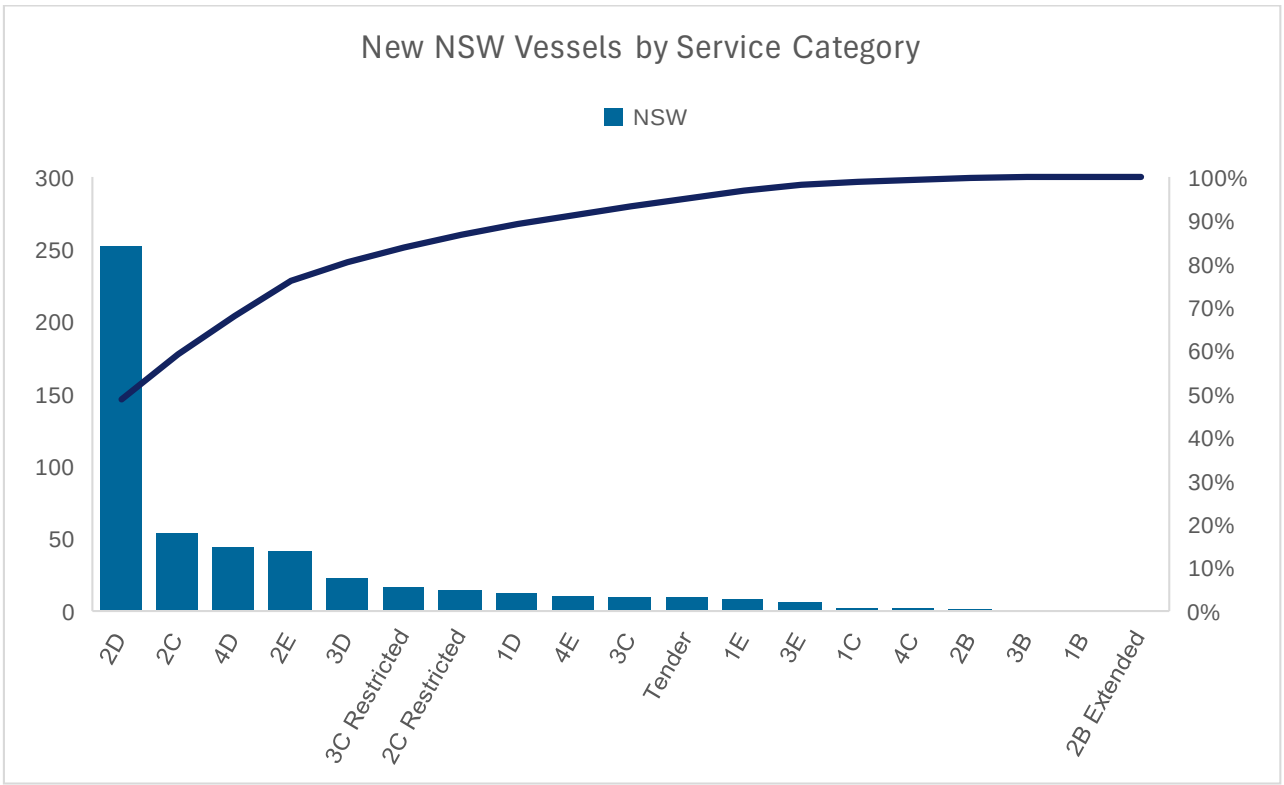


Annex B – Service categories for new builds 2023-24

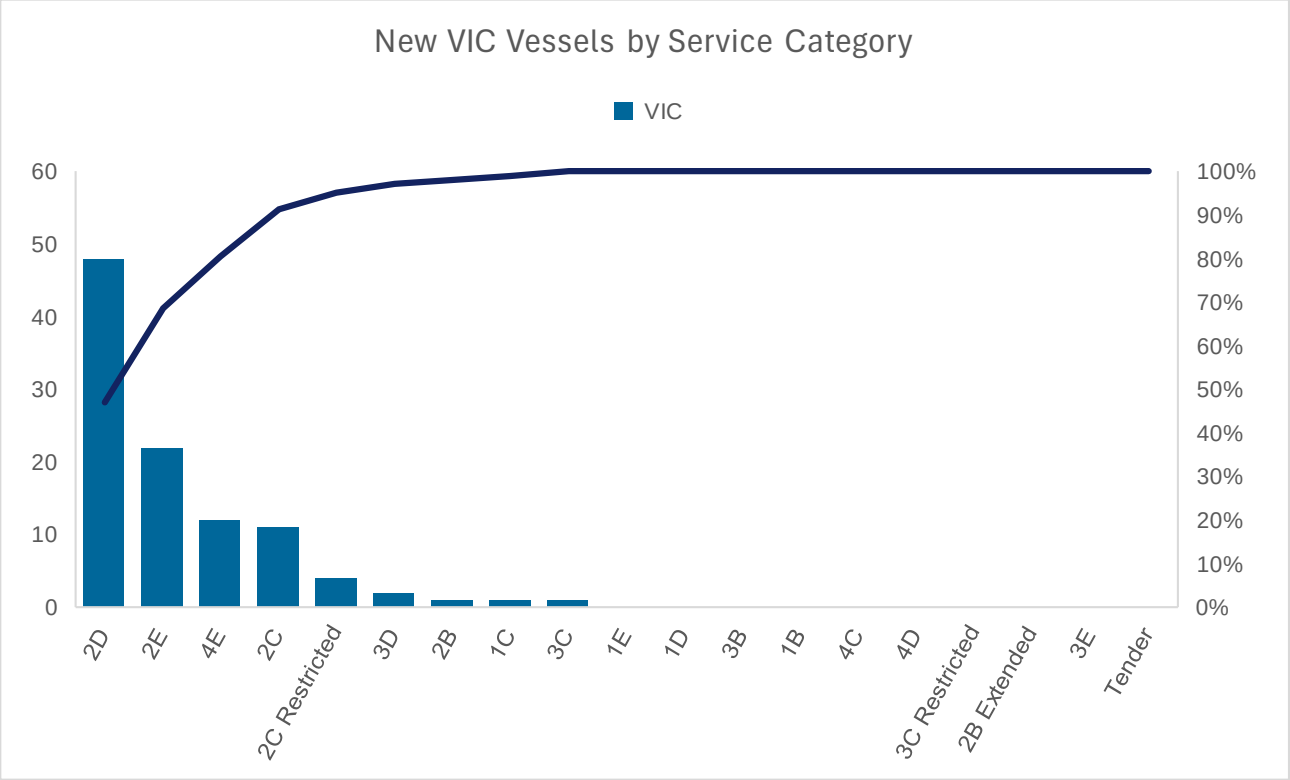
2023-24 QLD vessels by service category



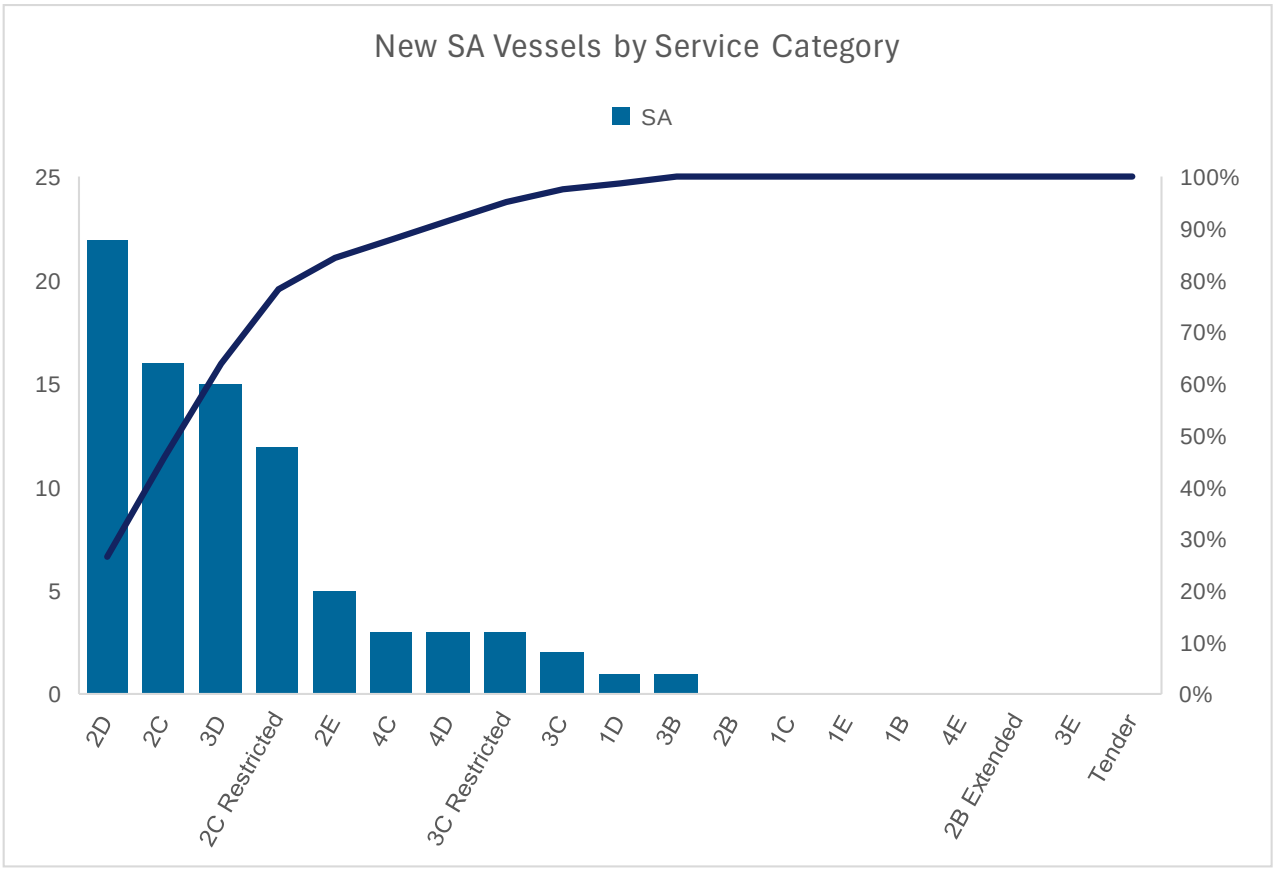
2023-24 NSW vessels by service category



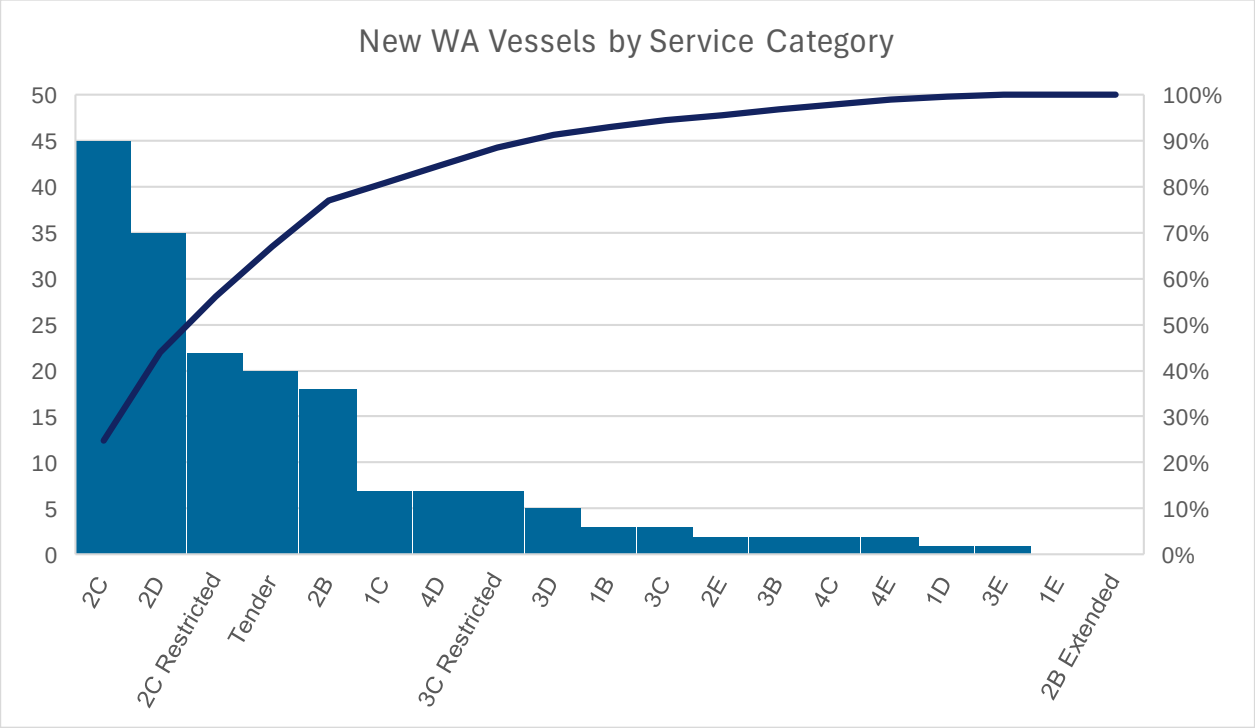
2023-24 Victorian vessels by service category



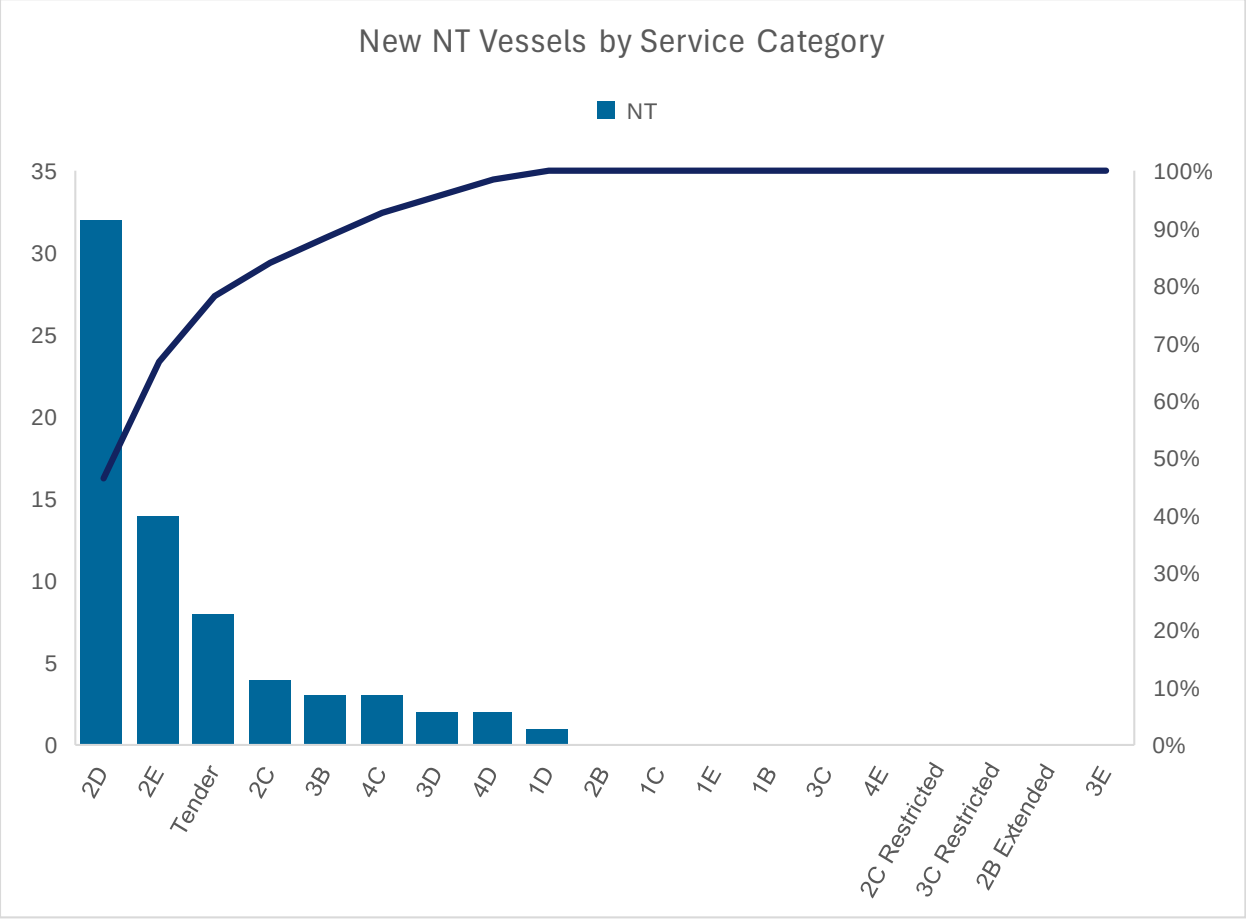
2023-24 South Australian vessels by service category



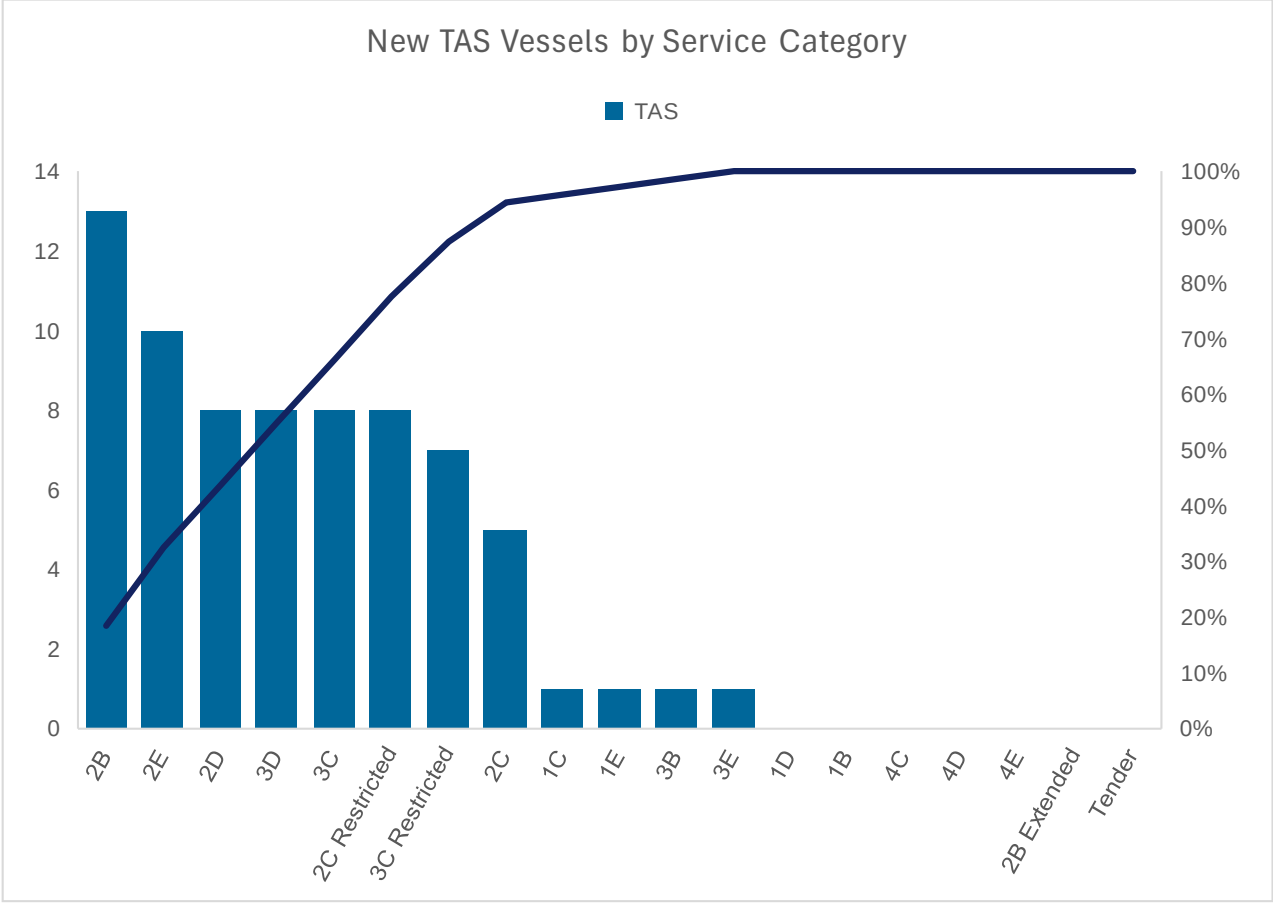
2023-24 Western Australian vessels by service category



2023-24 Northen Territory vessels by service category

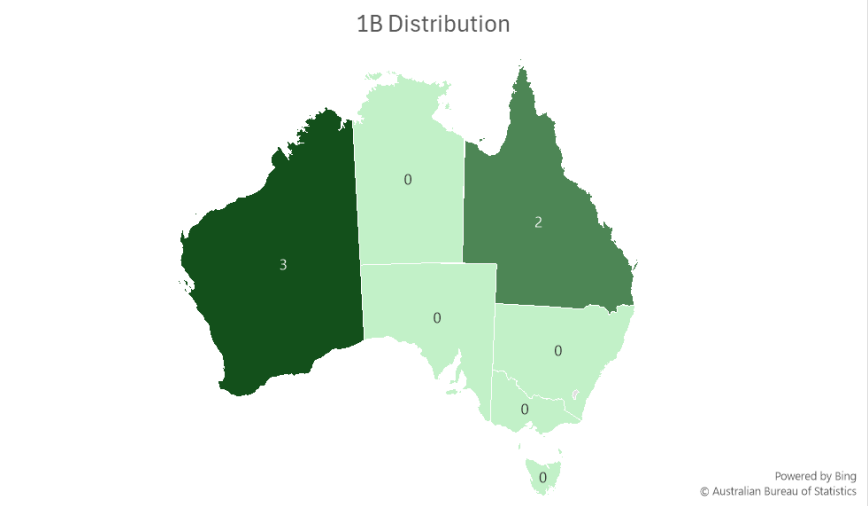


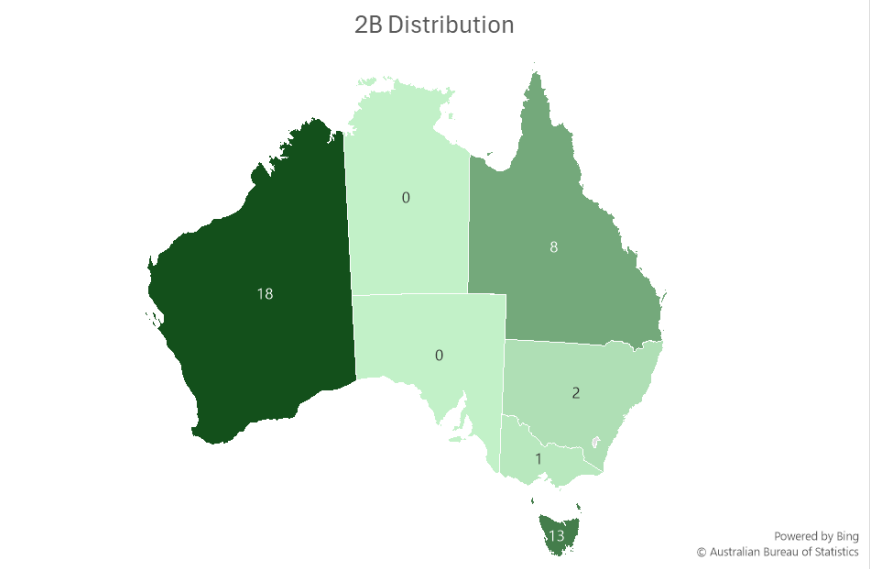
2023-24 Tasmanian vessels by service category

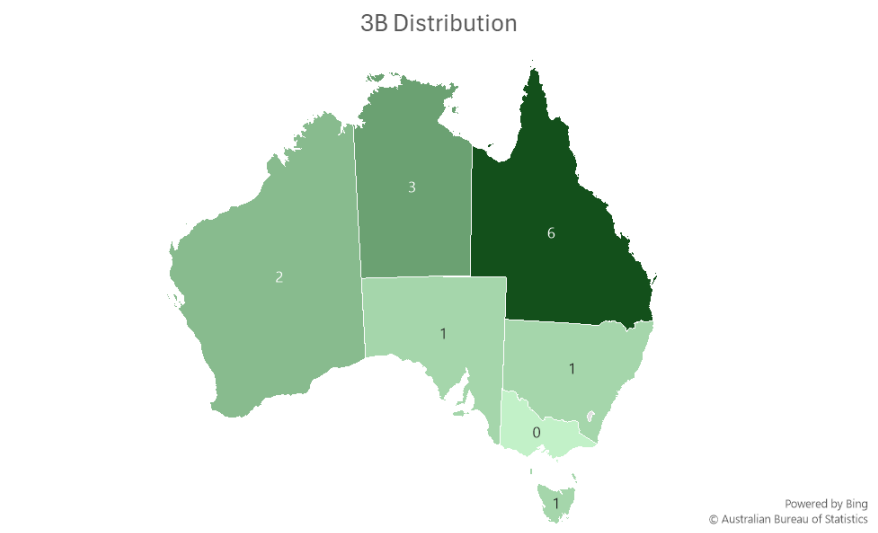


Annex C –New build distribution by service category

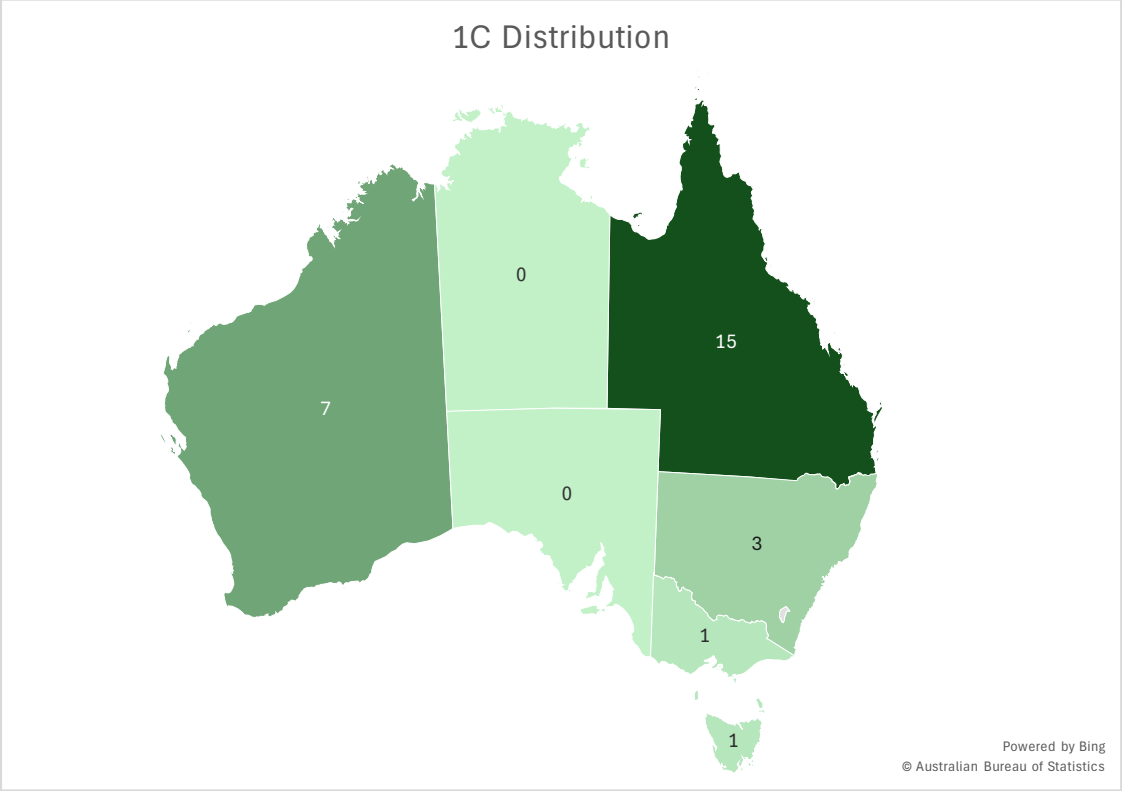
2023-24 B waters distribution

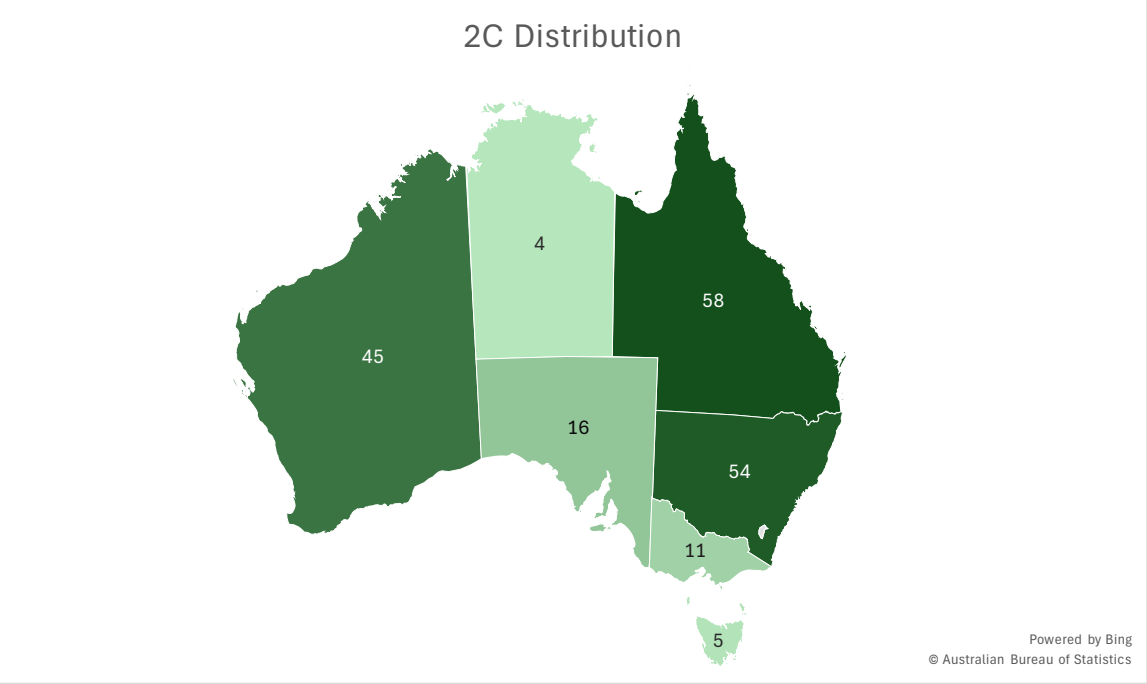


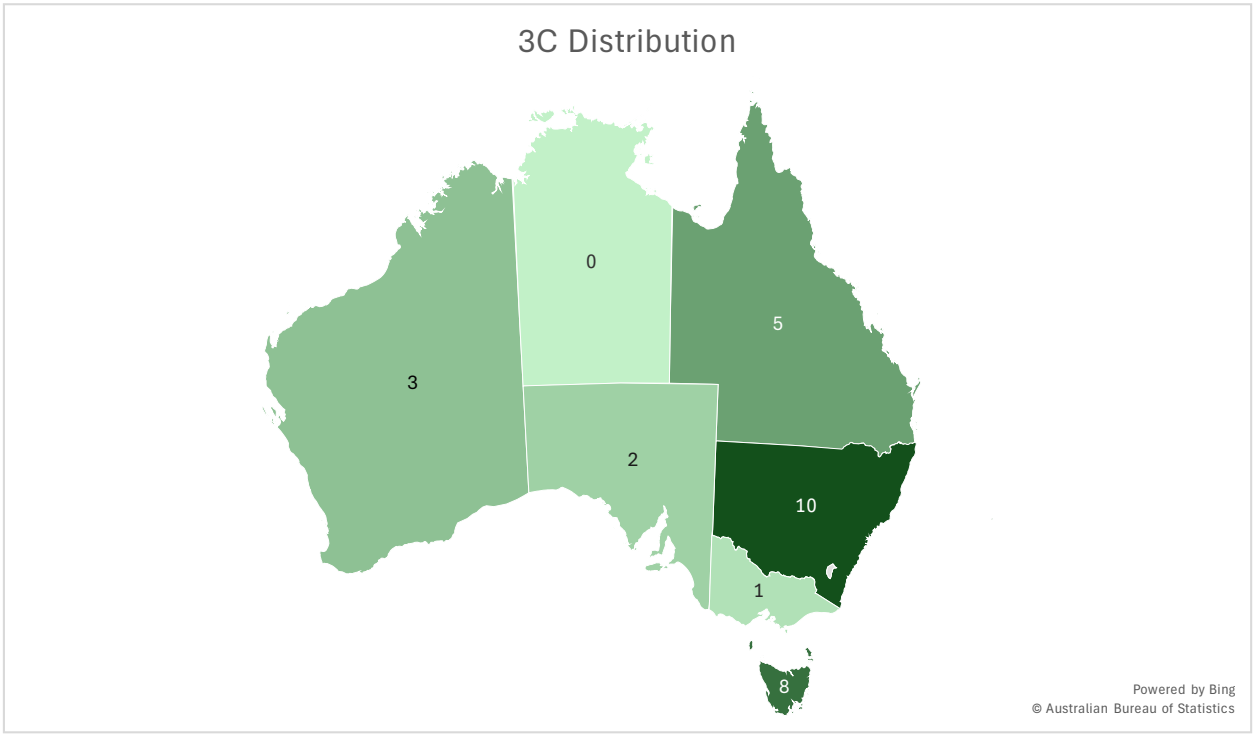




2023-24 C waters vessel geographical distribution



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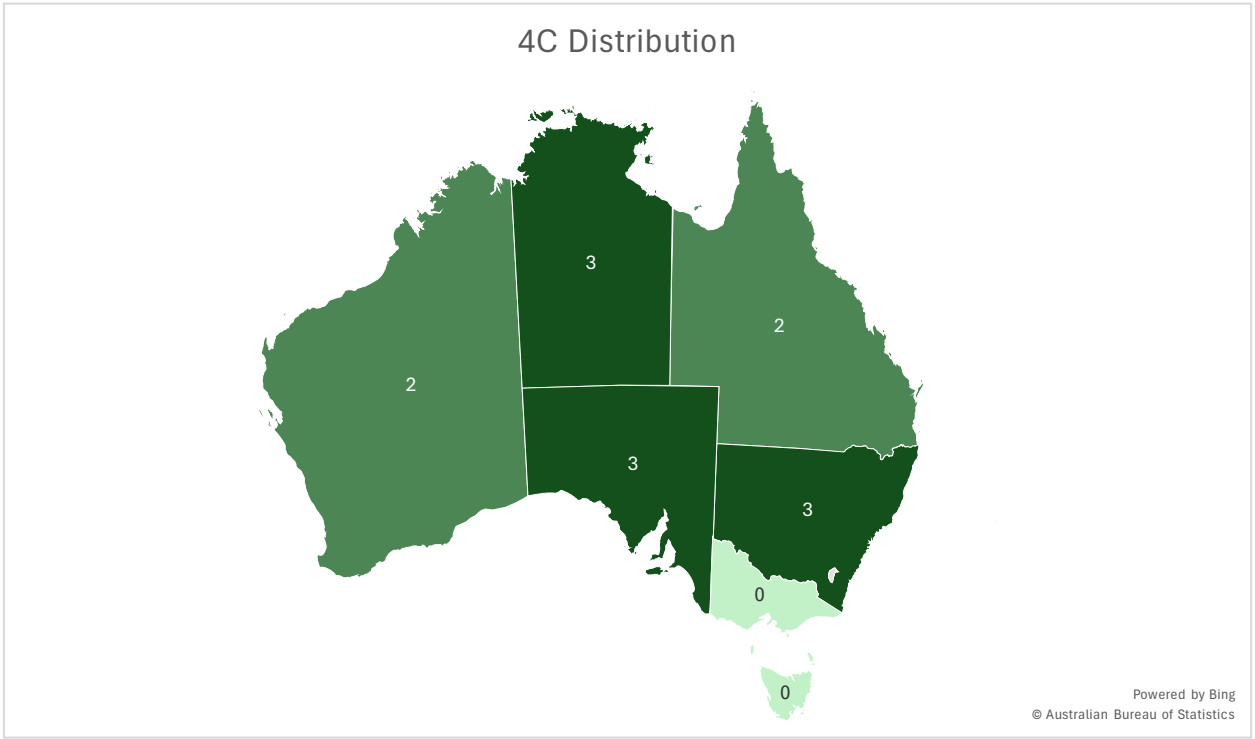
4C Distribution
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3
3
0
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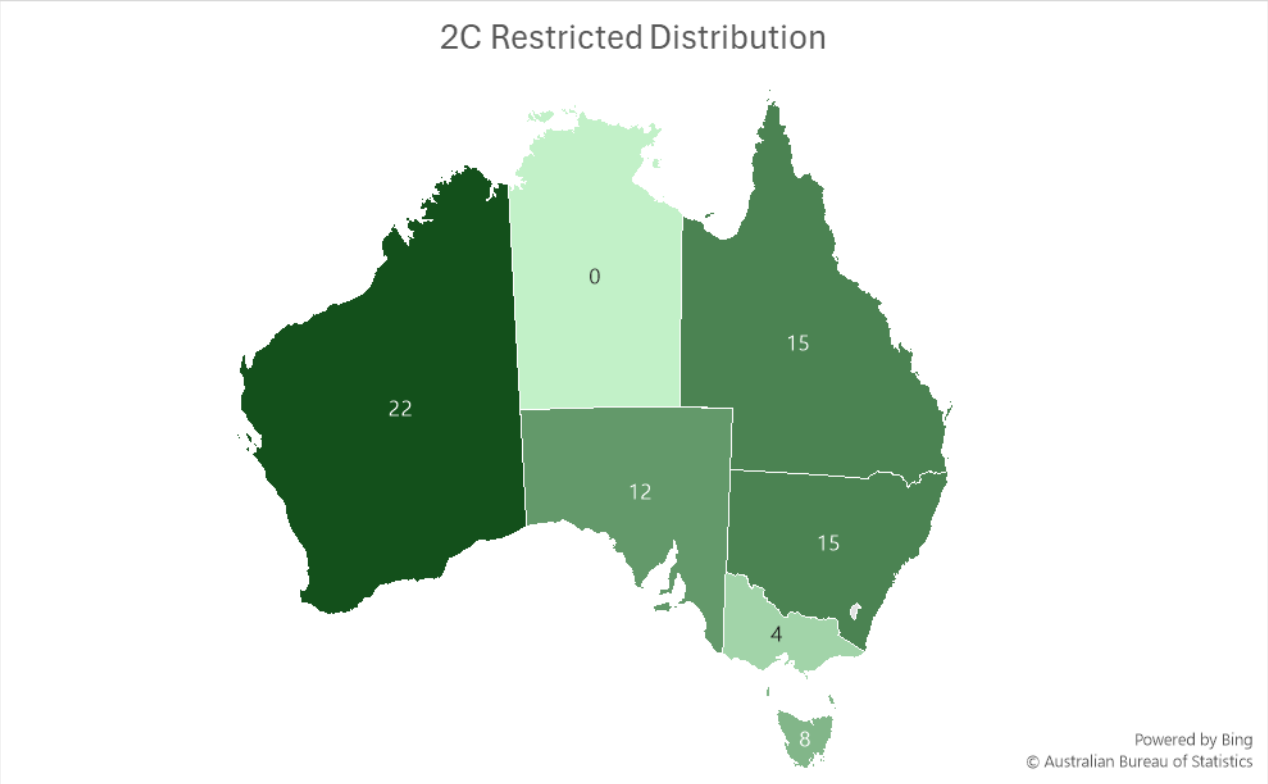
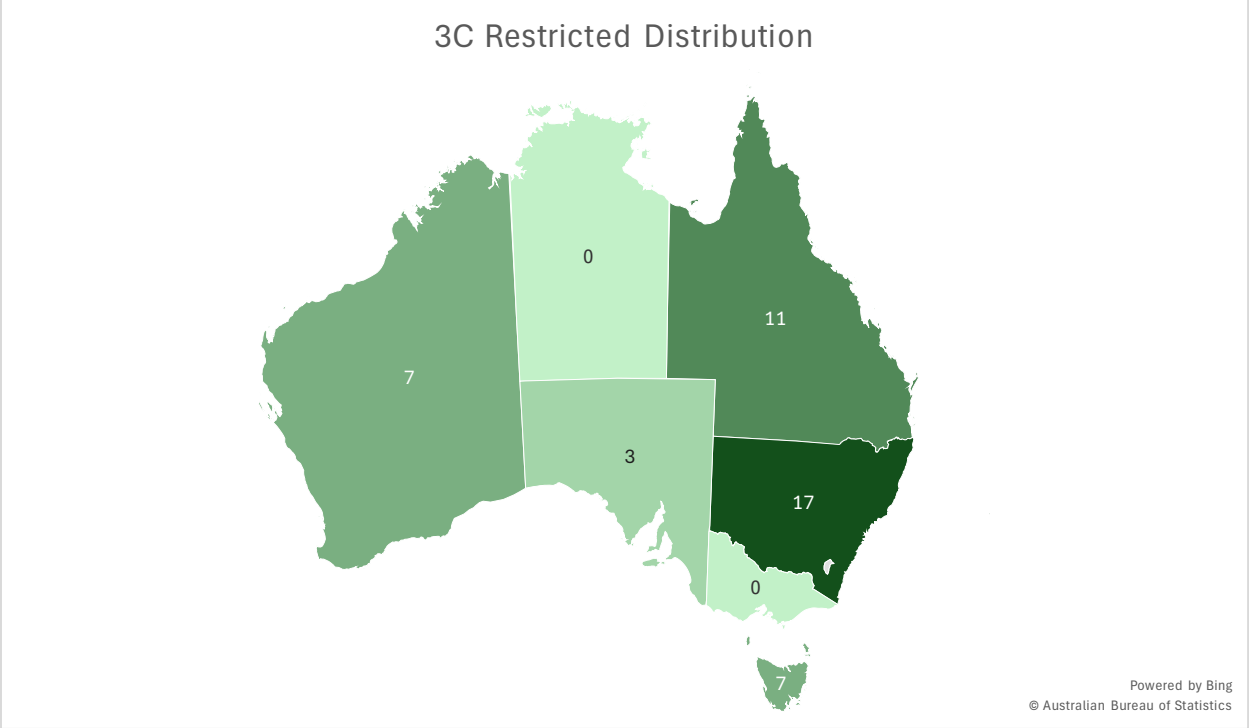
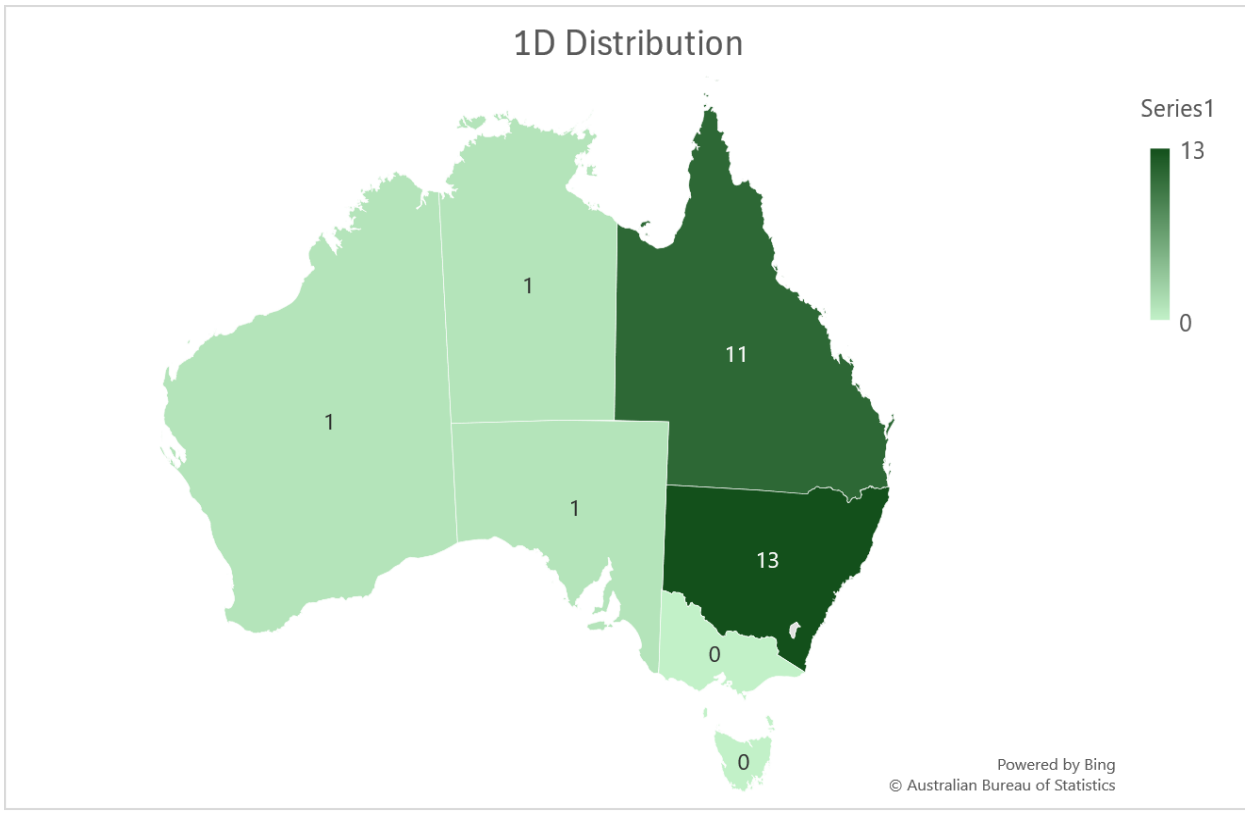
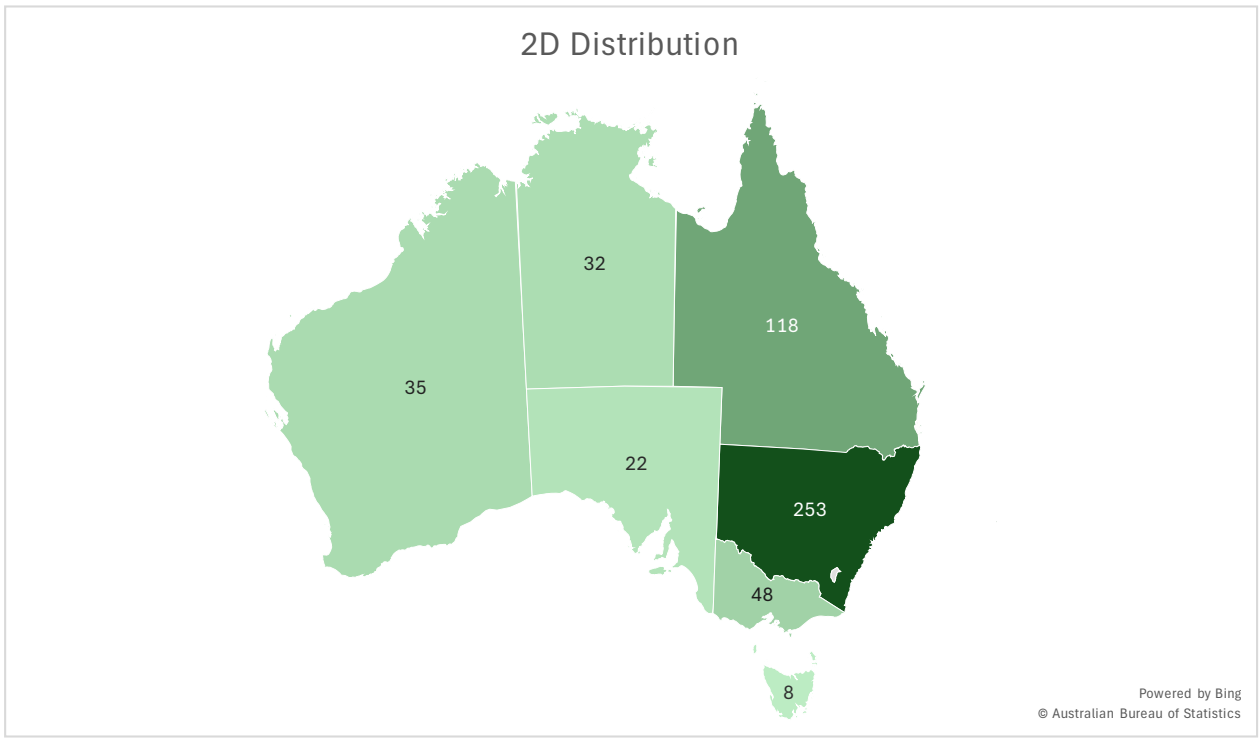
2023-24 Restricted C waters vessel geographical distribution

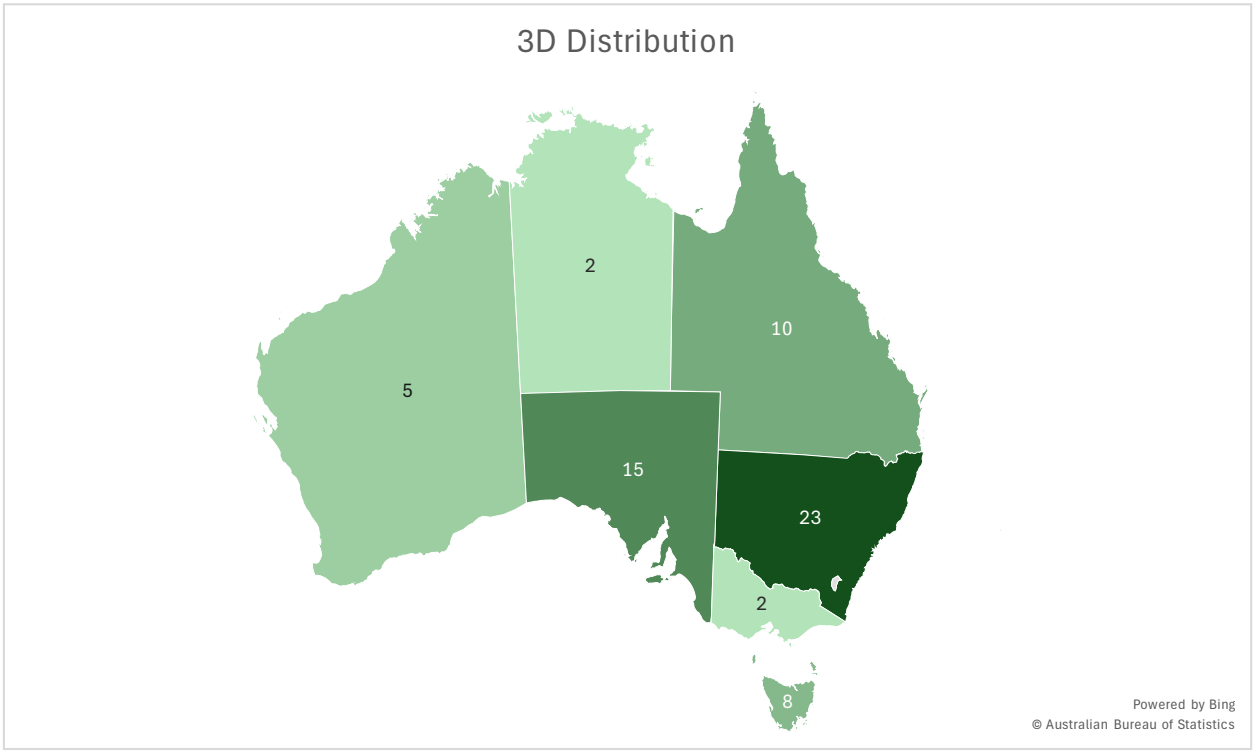




2023-24 D waters vessel geographical distribution



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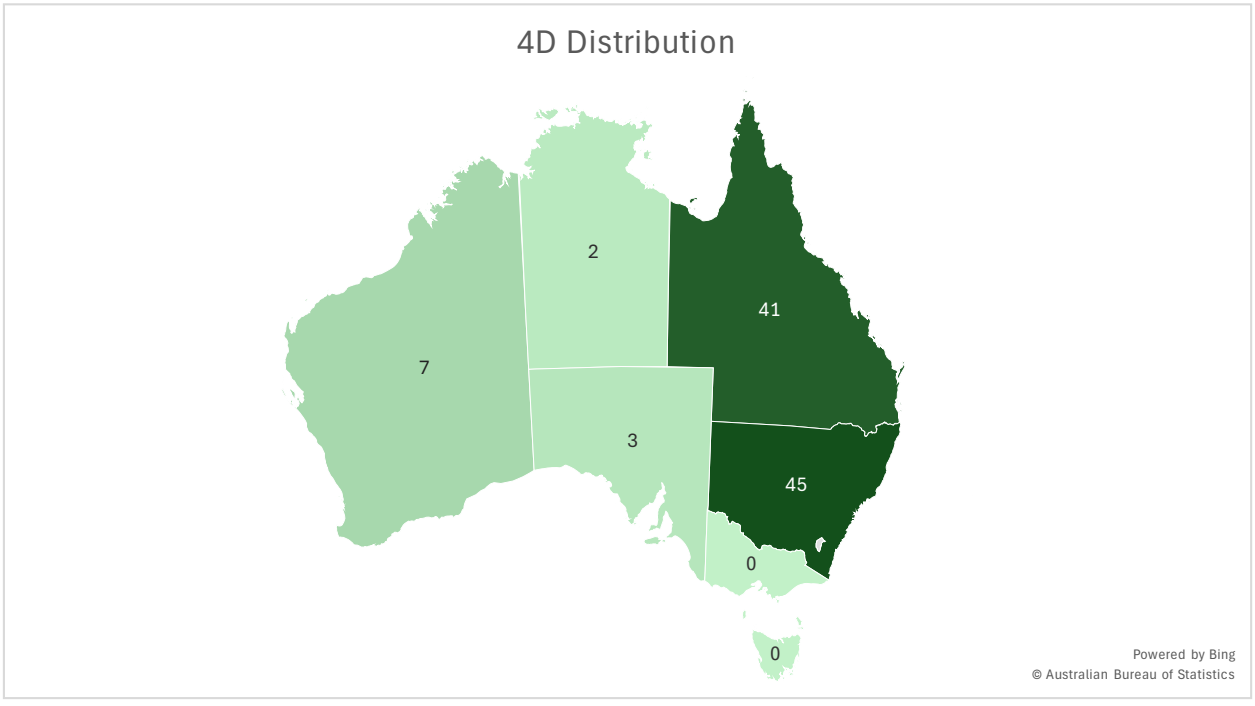
4D Distribution
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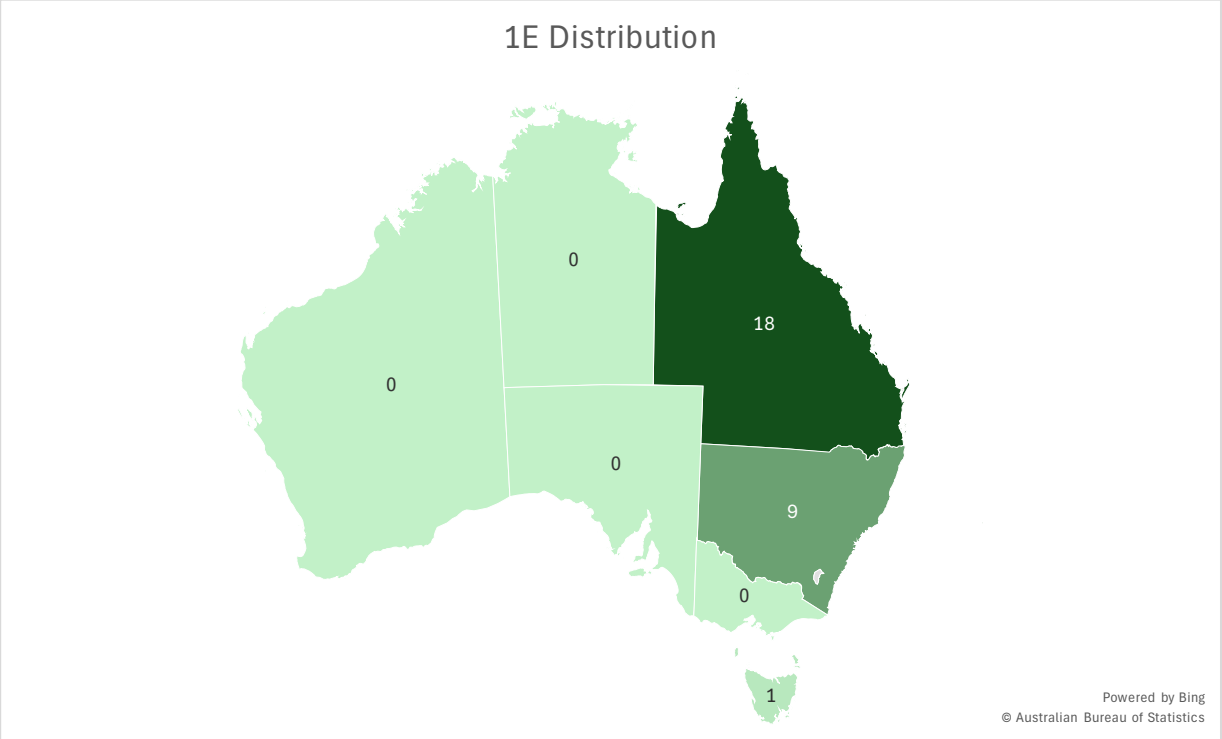
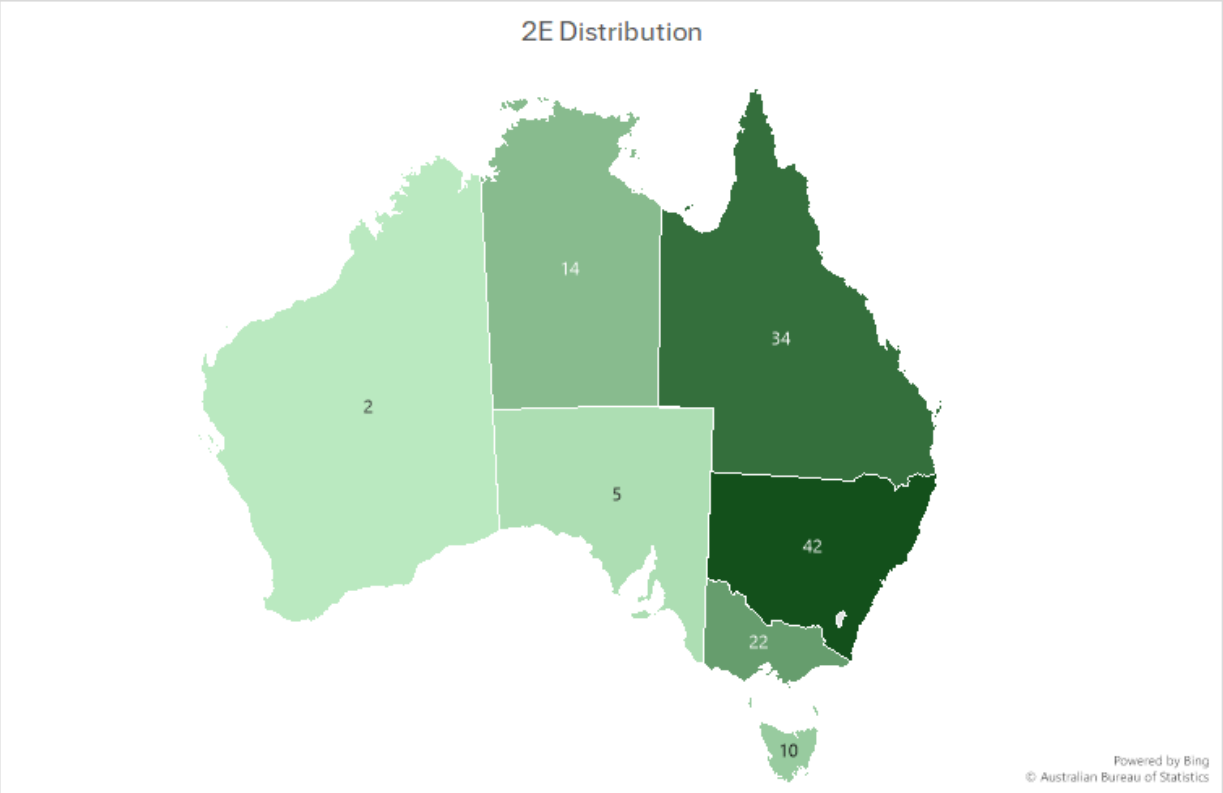
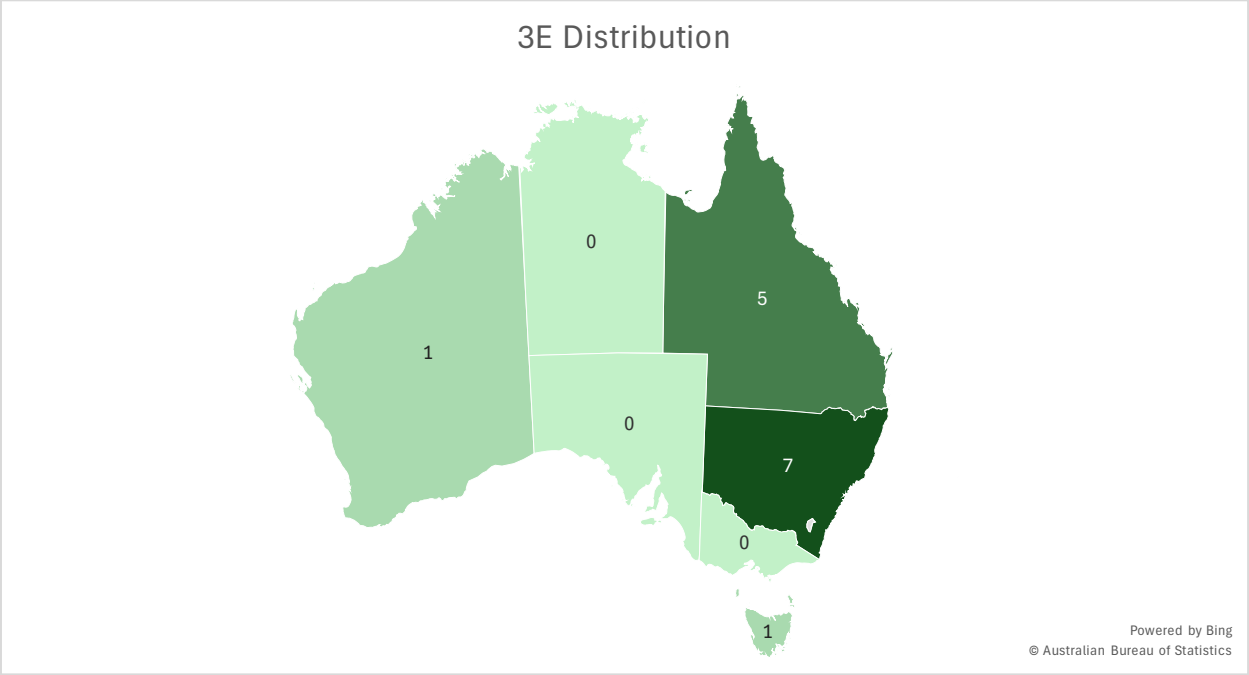
2023-24 E waters vessel geographical distribution



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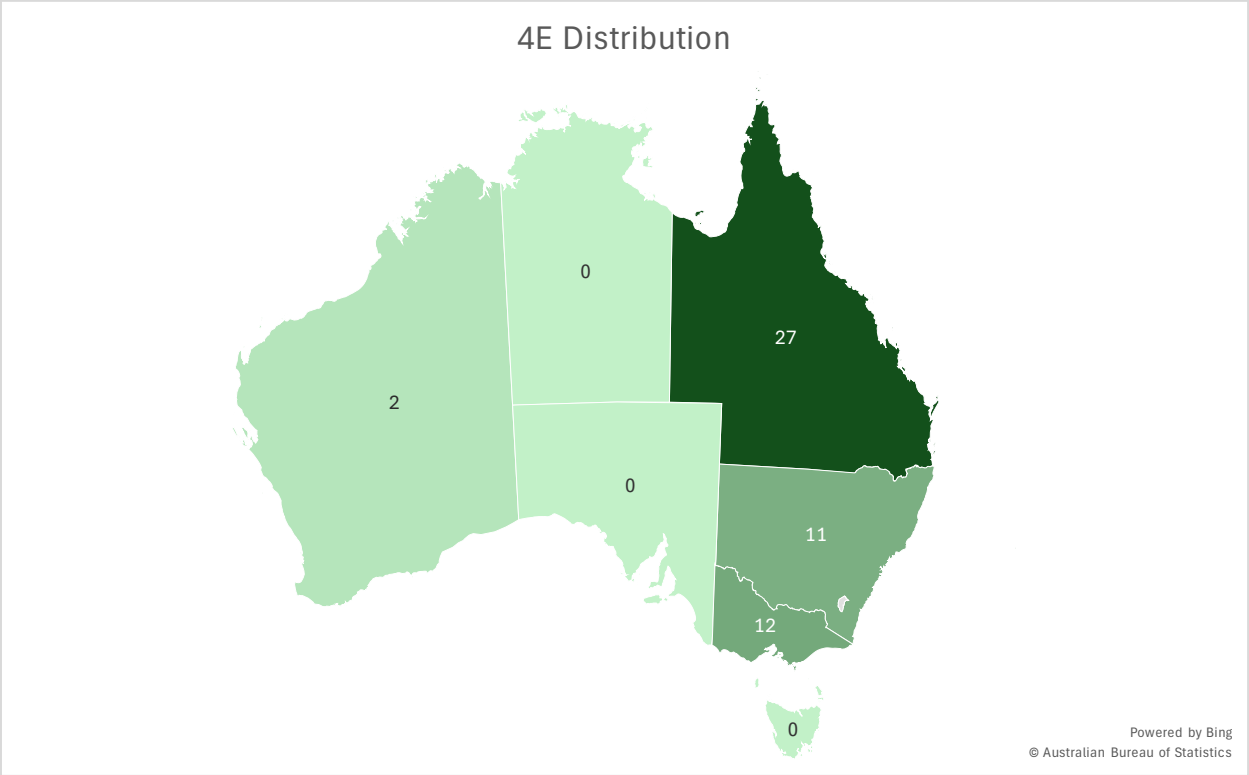
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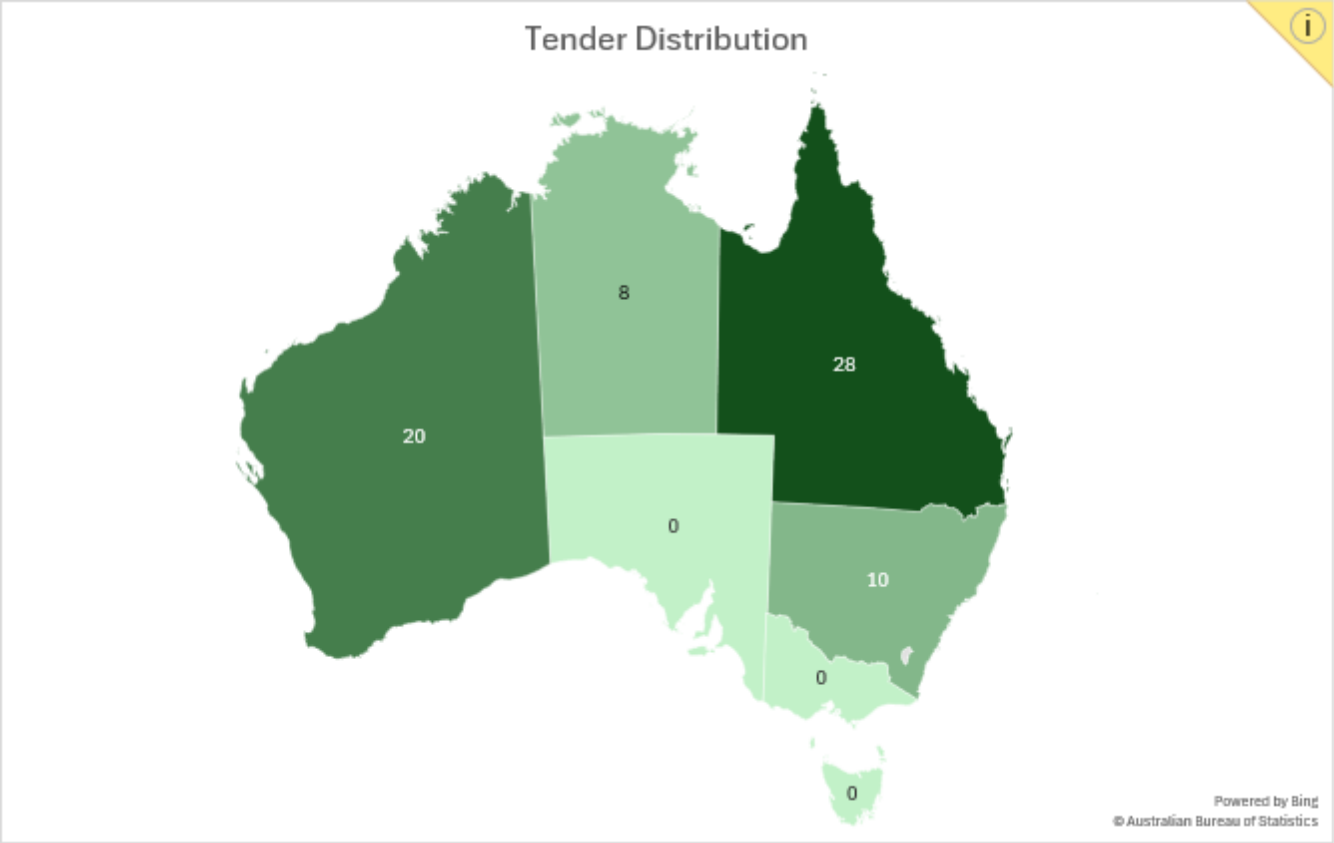
2023-24 Tender vessel distribution



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