MARITIME WORKFORCE DEVELOPMENT FORUM

Australian Maritime Industry Census

On behalf of the Maritime Workforce Development Forum (the Forum), I am pleased to provide you with the inaugural Australian Maritime Industry Census Report.

As one of the organisations that provided detailed information to inform the development of the 2012 Census, I am sure that you will appreciate the invaluable snapshot of the maritime industry workforce that this Census provides.

The Forum would like to thank you very much for your participation in this important Census and let you know that your results will feed into the first-ever national data base on the maritime industry workforce.

The Census is one of the most comprehensive surveys of the Australian maritime industry ever undertaken. Across the industry spectrum, 92 organisations (including the blue water fleet, ports and onshore operators, the offshore sector, towage and maritime safety regulators) provided information with responses that met the criteria for inclusion.

Top levels results from the Census show that respondents directly employed 10,329 seafarers, 3,941 of which hold certificates issued by the Australian Maritime Safety Authority. Significant parts of the broader maritime industry hold certificates issued by a state/territory regulator, rather than AMSA, and these will be picked up in future censuses.

The Census included the Navy and Customs, which together have 4,500 mariners operating in like-activities.

Of the AMSA certified seafarers, there are 1,502 ratings, 1,098 engineer officers and 1,341 are masters and deck officers. Almost all of the certified seafarers are men (97%), and 2% identify as being Aboriginal or Torres Strait Islanders.

For the first time, we have reliable data showing the switch in the nature of the commercial maritime sector from blue water activities to offshore work. The commercial sector is made up of: offshore oil and gas (32%), blue water (19%), towage (18%), dredging (6%), crew management (6%), government vessels (6%), pilotage (5%), ports (3%), regulation (2%), and other (1%).

The results reveal an ageing workforce, where nearly half of all seafarers are over 45 years old. The average age across this group is 44 years, increasing to 47 years for the engineering stream. Yet there are only 234 current cadets and trainees. These figures indicate that retirements will intensify the labour supply pressures in the future. This issue, coupled with

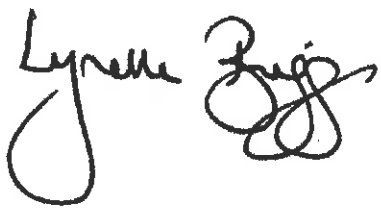
the emerging trend of qualified seafarers moving to the lucrative offshore sector, indicates that strategies are needed now to ensure the national pool of trained seafarers is maintained.

Even though the Census is not an exhaustive account of the current state of the industry, it is a sound reflection of the current make-up of the industry workforce. It is the view of the Forum members that the results presented in the Census are consistent with their observations of industry trends.

On behalf of the Forum I would like to thank you for your contribution to this, the first of what is hoped will be a regular census of the maritime industry workforce conducted every two years. We look forward to your continued involvement in this valuable work.

I would like to commend the Department of Infrastructure and Transport for managing the Census. The Census report will be published on the Department of Infrastructure and Transport's internet site at www.infrastructure.gov.au. I am sure that it will provide a useful resource to you and other members of the maritime industry.

Yours sincerely



Lynelle Briggs AO

Chairperson

26 April 2013

Department of Infrastructure and Transport

The Australian Maritime Industry Census Report

January 2013

Melbourne Canberra Sydney
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I. Introduction

A. Background

The census of the maritime workforce (the census) was undertaken by the Commonwealth Department of Infrastructure and Transport (the Department) on behalf of the Maritime Workforce Development Forum (the Forum).

The Forum was established in late 2011 by the Minister for Infrastructure and Transport as part of the Australian Government's shipping reforms to progress key skills and training priorities across the maritime industry. The Forum commissioned the census in order to provide guidance as to what skills are needed in each sector of the industry, and to inform their development of a national maritime workforce plan.

It was not expected that the census would be able to provide a definitive overview of the current state of the maritime industry workforce and requirements, but rather would assist in giving an up-to-date indicator of the various aspects of the maritime industry workforce and upcoming pressures.

ORIMA Research Pty Ltd was commissioned by the Department to assist in the development, conduct and reporting on the census. The census was conducted as an online survey from 6 August 2012 to 2 November 2012. More details on the data collection process are provided in the methodology section below.

B. Methodology

This census was designed to comprehensively capture data on the demand and supply of seafarers working across the key maritime sectors in Australia with Australian Maritime Safety Authority (AMSA) certification or equivalent qualifications. To meet this objective, a questionnaire was developed by the Maritime Workforce Development Forum, the Department of Infrastructure and Transport and ORIMA Research.

The census questionnaire was conducted via an online instrument, which was programmed and hosted by ORIMA Research on a secure web server located in Australia. Pilot testing of the questionnaire was conducted via the online form with two key organisations, and the questionnaire was cleared by the ABS Statistical Clearing House (Approval No. 02279--01).

A copy of the questionnaire was available for downloading from the census website to facilitate the collection and collation of information by organisations. As some questions sought sector and AMSA classification specific information, the online form was able to target questions to specific sectors for each responding organisation in a way that the hardcopy form would not be able.

The Department was responsible for the identification of organisations comprising the maritime industry and the collation of the appropriate contact information.

The online census was launched Monday 6 August with the emailing of survey passwords to the list of 164 organisations provided by the Department. Reminder emails were sent on the 14 and 21 August. Following an initial presentation of results by ORIMA Research to the Forum on 20 September, it was agreed that the census would be left open and that Forum members and the Department would seek further participation from key organisations. The census remained open until 2 November 2012.

Features of the online survey included:

- The online survey and database were located in a secure environment within Australia.
- Access to the online survey was via an encrypted SSL weblink, and organisations were required to use their unique survey password, which was emailed to them by ORIMA Research.
- Organisations were able to access the online forms as many times as required during the survey period.
- Supporting documentation and contact information was provided on the website to assist the responding organisations.
- Live monitoring enabled targeted reminders to be sent to non-responding organisations.

The research was carried out in accordance with the international quality standard AS ISO 20252.

This report presents the results of the census.

C. Response Rate

165 organisations were invited to participate in the survey. From these a total of 101 organisations provided a response – resulting in a response rate of 61%.

Of these 101 respondents, 9 organisations did not need to complete the survey as they responded 'No' to both question 3 (did they employ staff who hold Australian Maritime Safety Authority (AMSA) certificates or equivalent) and question 4 (did they employ staff working in Australia on a visa or from New Zealand (and therefore employed under reciprocal working agreements)). Therefore, the main results in this report present the results of the remaining 92 organisations.

D. Presentation of Results

Non-sampling errors

As the survey was conducted as a census of organisations within the maritime industry, sampling error does not apply. Rather, the following non-sampling errors need to be considered. Unlike sampling error, these errors are not mathematically measurable.

Coverage error—this error occurs when all relevant population units are not included in the population survey frame. This error would apply to the census to the extent that key employers of the maritime workforce were not selected to participate in the survey process. Given the close oversight of the Forum members and their consideration of the list of organisations being surveyed, it is considered unlikely that this error will have a significant impact on the census results.

Non-response error—this error potentially applies to any survey with a less than 100% response rate. While the response rate for this survey (61%) is considered high for a government to business survey, discussions of the results by the Forum indicate that key workforce employers have not participated. This means that the results are known to have captured only a subset of the maritime workforce. However, discussions of the results by forum members indicate that, in general, the results appear to provide a good indication of the broader trends and characteristics of the maritime workforce. Therefore, while the presence of this error needs to be kept in mind when considering the results, the results are considered to be useful and indicative of the industry as a whole.

- Furthermore, many respondents were not able to provide responses to all questions, for example they may not have had access to the required human resources information. To help understand where this may be an issue, all charts and tables clearly show the number of organisations that responded to the particular question.

Respondent error—this error occurs when a respondent does not answer a question correctly and can apply in any survey. While the pilot testing process and support options would have helped to minimise this error, the technical nature of the topic and potential for differences in interpretation means that this error needs to be kept in mind when consider the census results.

II. Executive Summary

Background

The census of the maritime workforce (the census) was undertaken by the Commonwealth Department of Infrastructure and Transport (the Department) on behalf of the Maritime Workforce Development Forum (the Forum).

The forum did not expect that the census would be able to provide a definitive overview of the current state of the maritime industry workforce and requirements, but rather would assist in giving an up-to-date indicator of the various aspects of the maritime industry workforce and upcoming pressures.

ORIMA Research Pty Ltd was commissioned by the Department to assist in the development, conduct and reporting on the census. The questionnaire was developed by the Maritime Workforce Development Forum, the Department of Infrastructure and Transport and ORIMA Research, and was cleared by the ABS Statistical Clearing House (Approval No. 02279--01). The census was conducted as an online survey from 6 August 2012 to 2 November 2012.

165 organisations – selected by the Department in consultation with the Forum – were invited to participate in the survey. From these a total of 101 organisations provided a response, giving a respectable response rate of 61%.

Of these 101 respondents, 9 organisations did not need to complete the survey as they did not employ staff who hold Australian Maritime Safety Authority (AMSA) certificates or the equivalent, nor did they employ staff working in Australia on a visa or from New Zealand. Therefore, the results in this report cover the results of the remaining 92 organisations.

While this is a good number of responses, and is considered an indication of a successful process, discussions of the results with the Forum indicate that some key workforce employers have not participated. However, despite this lack of complete coverage, discussions of the results by forum members indicate that, in general, the results appear to provide a good indication of the broader trends and characteristics of the maritime workforce.

Number of Seafarers

Responding organisations reported they directly employed a total of 10,329 seafarers, comprising:

- 3,941 seafarers with AMSA certifications (or equivalent – including international certificates but excluding state certificates). These seafarers comprised:
    - 1,502 Ratings (15% of the total number of seafarers);
    - 1,098 Engineer Officers (11% of the total number of seafarers); and
    - 1,341 Master and Deck Officers (13% of the total number of seafarers).

- 6,388 seafarers without AMSA certifications, primarily 4,158 Navy personnel (40% of total seafarers), the towage sector employing 660 non-certified seafarers and the offshore oil and gas sector employing 600 non certified seafarers (see Figure 13 on page 19 for the sector breakdown without the Navy component).

Demographic Profile

According to the responding organisations, almost all (97%) of the reported seafarers are male. Only 4% of Ratings, none of the Engineers, and 3% of Master and Deck Officers are female.

The average age of the seafarers was reported as 44 years. The average age for Engineer Officers was reported as higher (at 47 years), while Master and Deck Officers were reported as having an average age of 42 years. Ratings were reported as having an average age of 44 years.

- Nine per cent of all seafarers are aged over 60 years, with 9% of Ratings, 14% of Engineer Officers and 6% of Master and Deck Officers aged over 60 years.

The responding organisations reported that 2% of their seafarers had identified as being Aboriginal or Torres Strait Islanders (3% of Ratings, none of the Engineer Officers, and 2% of Master and Deck Officers).

Employment of non-Australian citizens or residents

Around half of the responding organisations reported that they employed seafarers who were neither Australian citizens nor permanent residents. The organisations that provided a breakdown of these seafarers reported that they employed 424 foreign seafarers, which represents 10.8% of the 3,941 AMSA certified seafarers directly employed by the responding organisations.

- Seafarers holding 457 visas represent 6.2% of the reported AMSA certified seafarers;
- New Zealand workers (working under reciprocal working arrangements) represent 4.1% of the reported AMSA certified seafarers; and
- Seafarers holding Maritime Crew visas[1] or other foreign resident visas represent 0.5% of the reported number of AMSA certified seafarers.

[1] Note that this excludes 432 seafarers with Maritime Crew visas from the Cruise sector. This exclusion was done on the advice of the Forum, who were concerned that this sector would be skewing the results for the visa categories.

Expected Growth of the Maritime Workforce

Responding organisations were asked to indicate the approximate number of seafarers they expected to have in their workforce as at 30 June 2013, 30 June 2015 and 30 June 2017. Note that these figures need to be treated as a broad indicator of possible requirements, and not a set of projections or forecasts.

The expectations foreshadow an increase in the seafarer workforce from the 2012 levels of around 4,000 to around 5,000 in June 2013. Further growth to around 6,000 in June 2015 was indicated, with expected levels largely unchanged to June 2017.

- The expected growth rates were broadly similar across the Ratings, Engineer Officers and Master and Deck Officers.

Meeting the Requirements for the Expected Workforce

The questionnaire sought information on various sources of seafarers to help meet the expected demand. Additional information was also provided separately via the Forum. While the information outlined below indicates that the expected requirements are potentially available, it should be noted that this is not a workforce plan per se. Rather, this information is intended to help inform such a plan being developed via a separate process.

Current Cadets and Trainees

Responding organisations reported that they have 234 current cadets and trainees (or 6% of the current number of seafarers being directly employed). Of these, 105 are Ratings cadets/trainees, 60 are Engineer cadets/trainees and 69 are Master and Deck cadets/trainees.

Available Training Berths

Organisations indicated that an additional 202 training berths could be made available if existing constraints were addressed. These constraints (nominated by the organisations) included:

- the amount of available space on-board for additional cadet/trainees;
- the cost of providing the training;
- the time of providing training (including the issue of not being able to count seatime towards training);
- the availability of qualified staff to provide practical training;
- a supply of suitable cadets and trainees; and
- safety or contract issues with having cadets/trainees on board.

New Cadets and Trainees

Organisations were asked to indicate the number of cadets and trainees that they expected to take on in each of the following five years (ie from 2012–13 to 2016–17). In general, around 250 cadets or trainees were expected to be taken on each year, with the numbers of Ratings, Engineers and Master and Deck cadets/trainees broadly similar to the 2012 levels.

Foreign Workers

It is reasonable to assume that around 11% of growth in the expected maritime workforce could come from overseas workers, based on their current share of the seafarers workforce.

Other Parts of the Maritime Sector

Around three-quarters of organisations expect that important sources of intake over coming years will be people shifting from other parts of the maritime sector.

Seafarers working on-shore

One component of this would be seafarers who are currently working on-shore. Organisations report that they currently employ 420 shore-based staff with current AMSA certifications (or equivalent), and 361 shore-based staff with non-current AMSA certifications. These include:

- 37 employees with current Ratings certification (and 19 with non-current Ratings certifications);
- 153 employees with current Engineer certification (and 88 with non-current Engineer certifications); and
- 230 employees with current Master/Deck Officer certification (and 254 with non-current Master/Deck Officer certifications).

Unemployed Seafarers

An additional source would be seafarers who are currently unemployed. Information provided to the Forum indicates that there are currently 506 seafarers currently seeking employment.

Navy Personnel

Figures provides to the Forum by the Navy indicate that there are nearly 5,000 navy personnel with qualifications similar to AMSA certifications:

- 3,857 Navy Marine Technicians, Electronics Technicians, and Bosuns Mate (Deckhands), which are similar to the Ratings certifications;
- 143 Navy Marine Engineering Officers; and
- 908 Navy Maritime Warfare Officers (similar to Master and Deck Officers).

III. Census Results

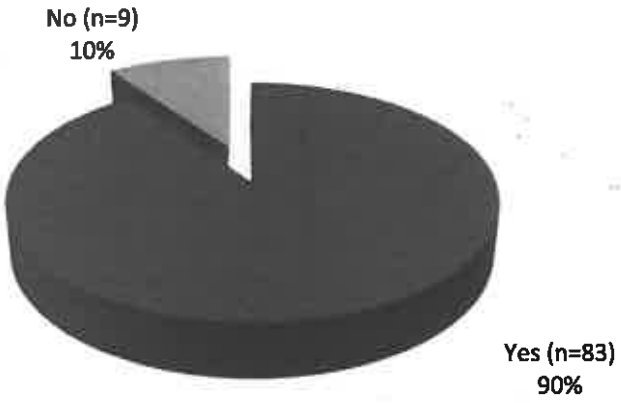
A. About the responding organisations

Of the 92 responding organisations who completed the survey, the vast majority (90% – n=83) employed staff holding Australian Maritime Safety Authority (AMSA) certificates or equivalent qualifications (see Figure 1).

- Throughout this report, *equivalent qualifications* includes international certificates, but excludes state certificates.

Figure 1: Have staff who hold Australian Maritime Safety Authority (AMSA) certificates or equivalent qualifications

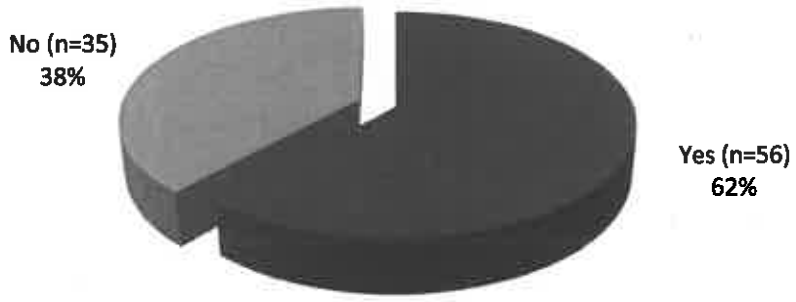
Question 3 – n=92 responding organisations



Nearly two-thirds of the responding organisations (62% – n = 56) employed staff who were working in Australia on a visa (e.g. 457 visa program, temporary business visa, maritime crew visa or other foreign resident visa) or who were from New Zealand (and therefore are employed under reciprocal working agreements) (see Figure 2).

Figure 2: Have staff who are working in Australia on a visa or are from New Zealand

Question 4 – n=91 responding organisations

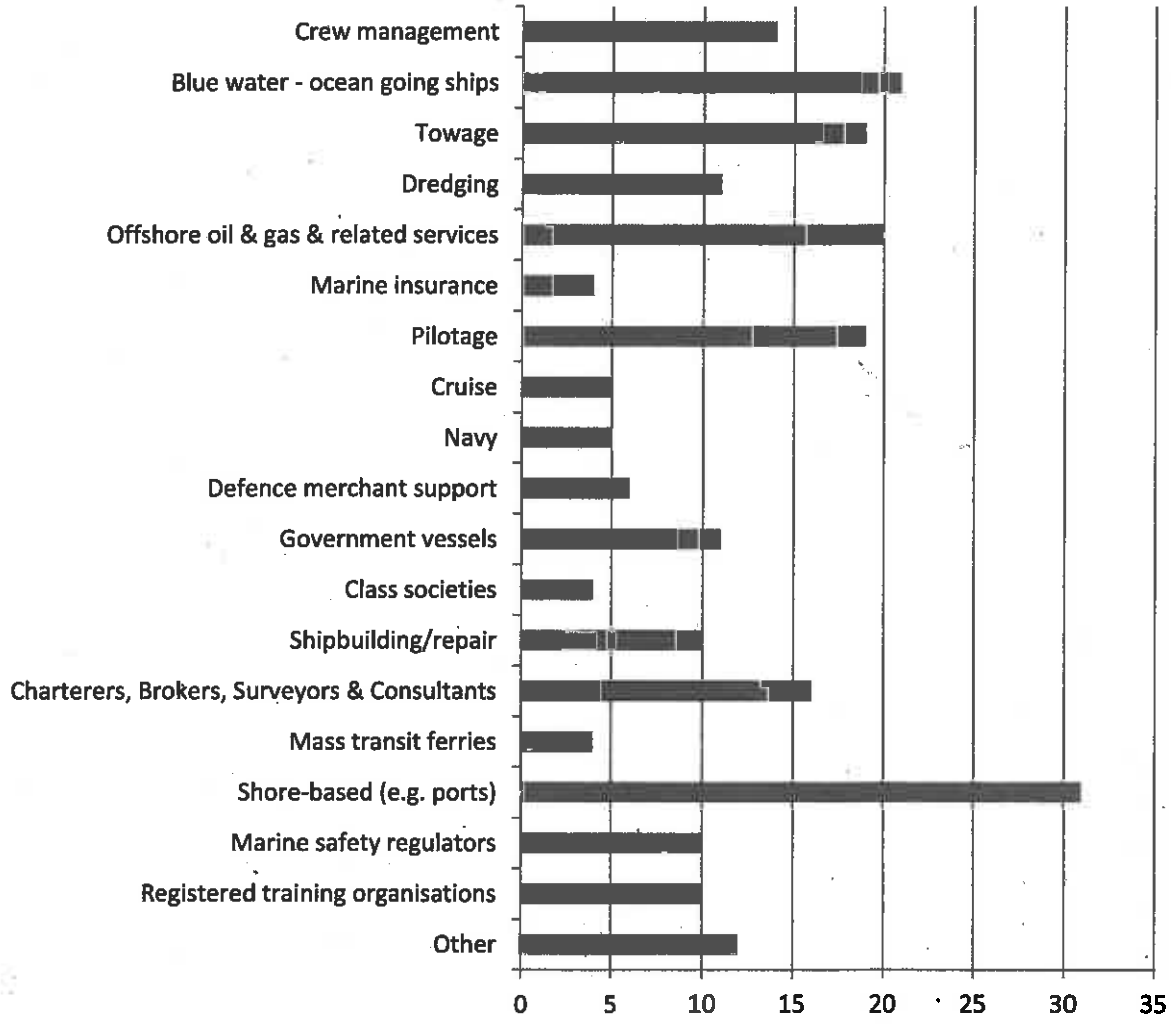


Maritime Industry Sectors

Organisations were asked to indicate in which sector(s) of the maritime industry their business was involved (see Figure 3). A large number of organisations (n=31) operated all or some of their operations on-shore.

Figure 3: In which sectors of the maritime industry is your business involved

Question 5 – n=92 responding organisations (respondents could select more than one sector)

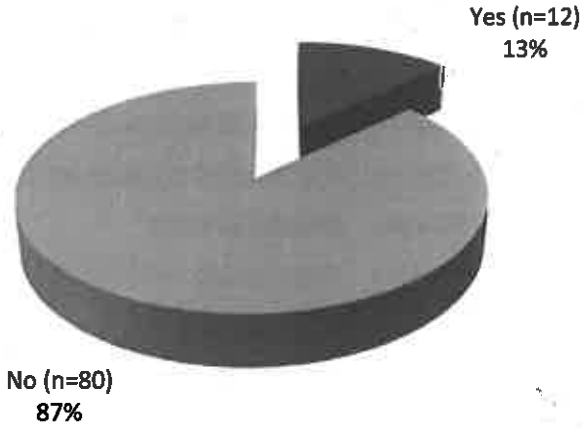


B. Crew Management Company Workforce

A minority of responding organisations (n =12) indicated that they utilised the services of crew management companies (see Figure 4).[2]

Figure 4: Use of the services of a crew management company

Question 6 – n=82 responding organisations



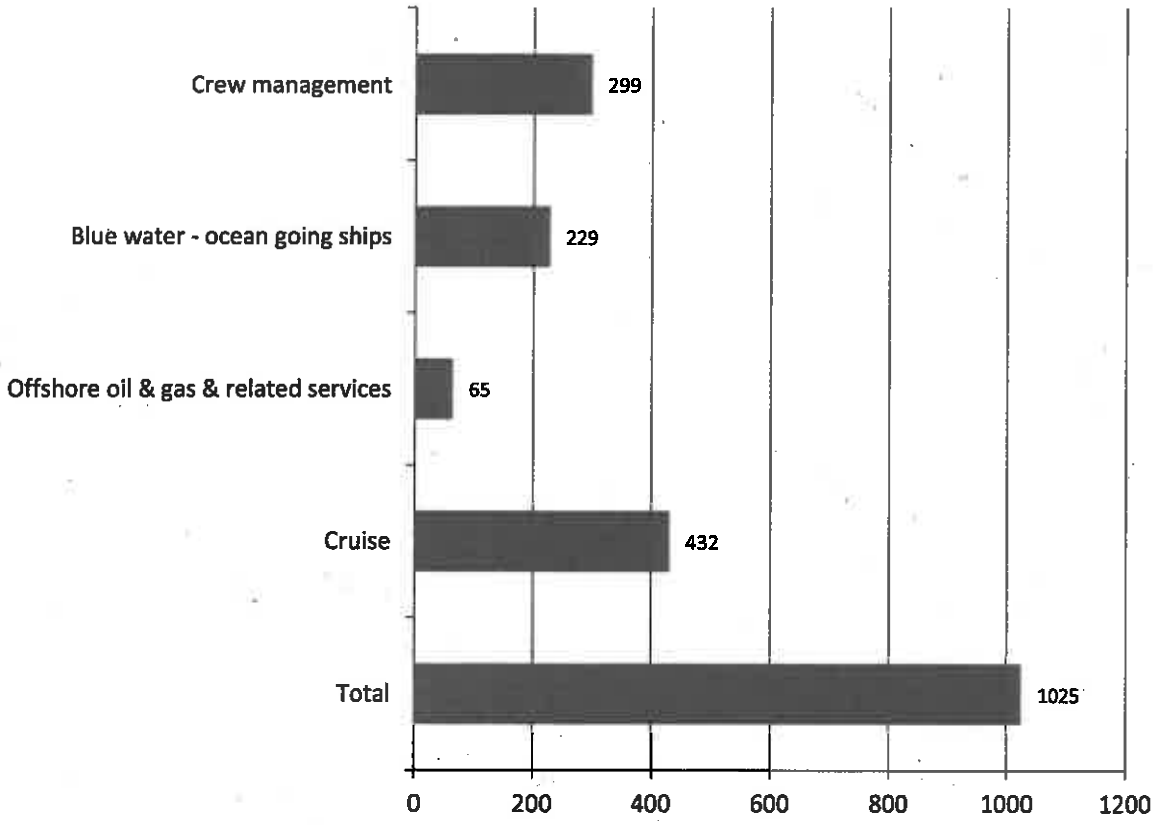
[2] It was noted by the Forum that this section was unlikely to be a realistic summary of the requirements for crew management services, as these would often be used by shipping coming into and out of Australia.

Across the respondents who use the services of a crew management company, n=7 provided the number of seafarers working in the Australian maritime industry with AMSA certification or equivalent (including international certificates, but excluding state certificates) who were employed by their organisation through a crew management company (see Figure 5).

- The largest sector employing the services of crew management companies was the cruise sector (432 employees).
- The 299 staff employed through a crew management company *within* the crew management company are within one organisation which operates across more than one sector (including the provision of crew management services).

Figure 5: The number of seafarers working in the Australian maritime industry with AMSA certification or equivalent who are employed by your organisation through a crew management company

Question 7 – n=7 responding organisations who use crew management services



C. Shore-Based Staff

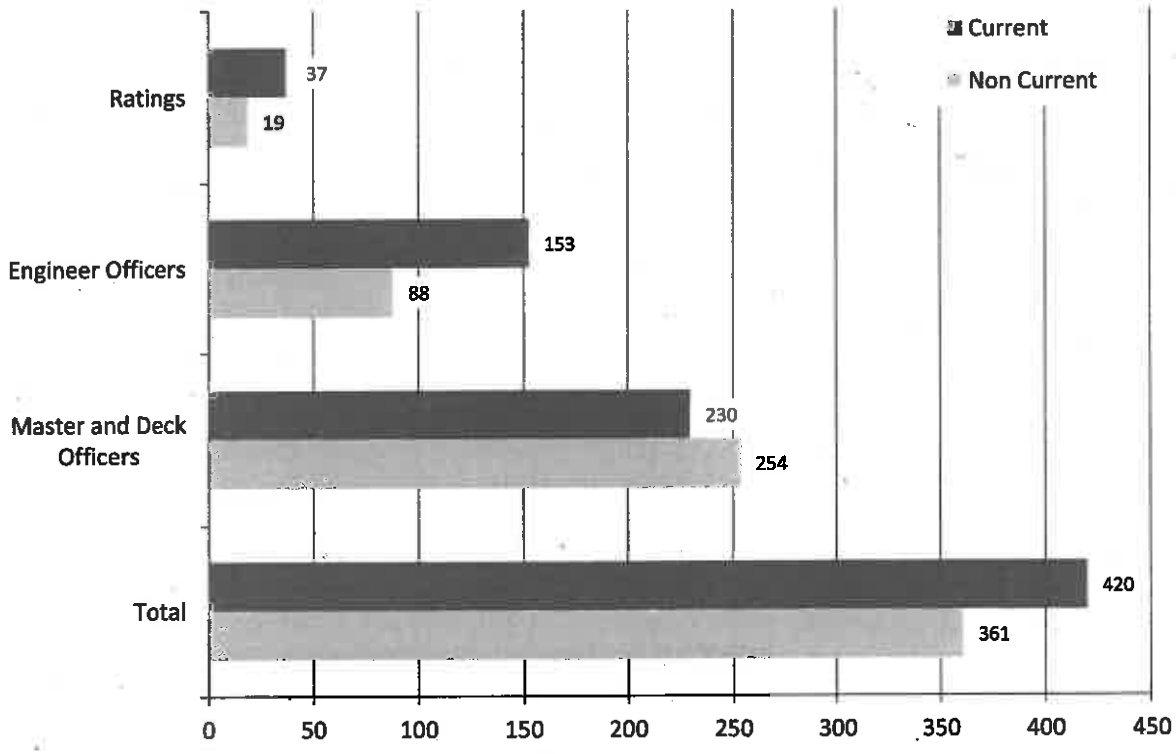
The responding organisations reported that they directly employed 38,186 shore-based staff.

Of these, 420 staff have current AMSA certificates (or equivalent), and 361 staff have non-current (lapsed) AMSA certificates (or equivalent) (see Figure 6).

- For the n=420 staff with current AMSA certificates (or equivalent), just over half (n=230) are master and deck officers.
- Of the n=361 staff with non-current AMSA certificates (or equivalent), primarily master and deck officers (n=254).

Figure 6: Number of shore-based staff holding AMSA certificates: current and non-current

Question 9 & 10 – n=77 responding organisations



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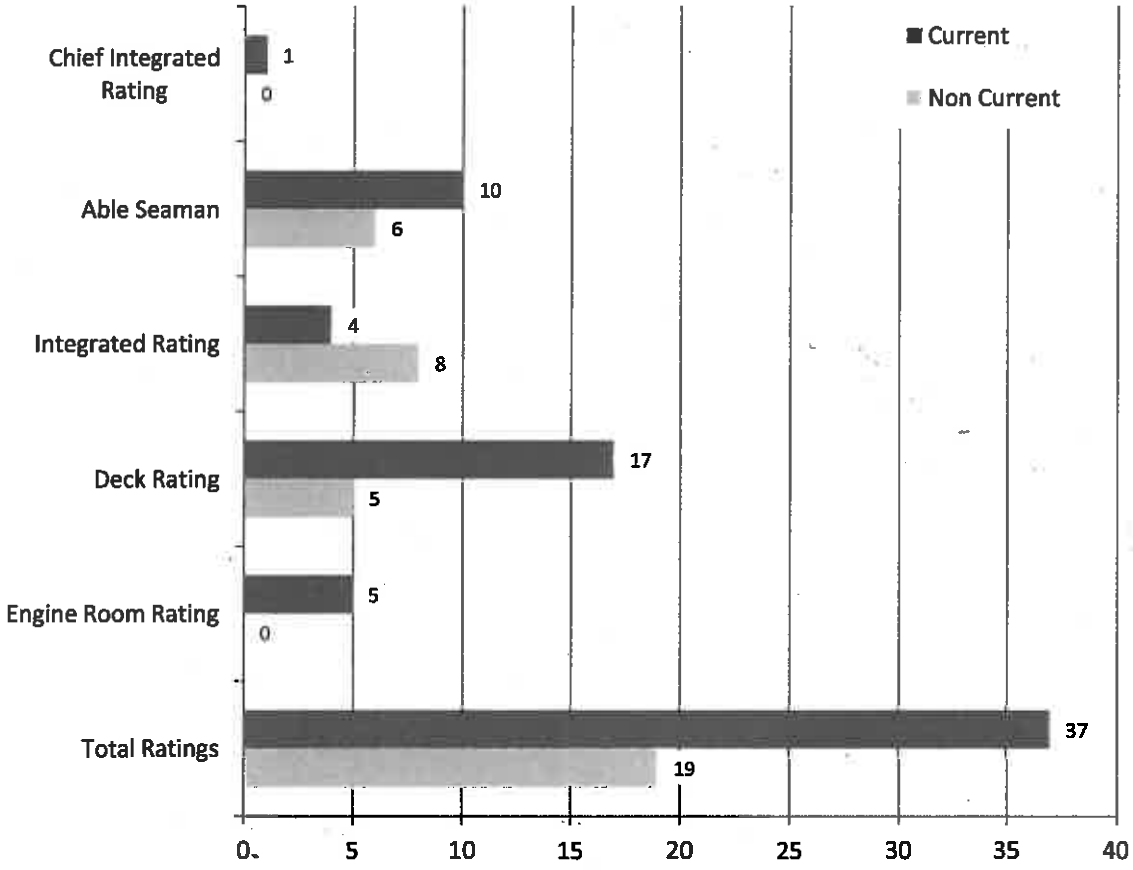
For the 37 shore-based staff with current Ratings certification, the majority are Able Seaman or Deck Ratings[3] (see Figure 7).

- The 19 staff with non-current Ratings certification are spread across the Able Seaman, Integrated and Deck Ratings classifications.

Figure 7: Number of shore-based staff holding Ratings AMSA certificates: current and non-current

Question 10 – n=77 responding organisations

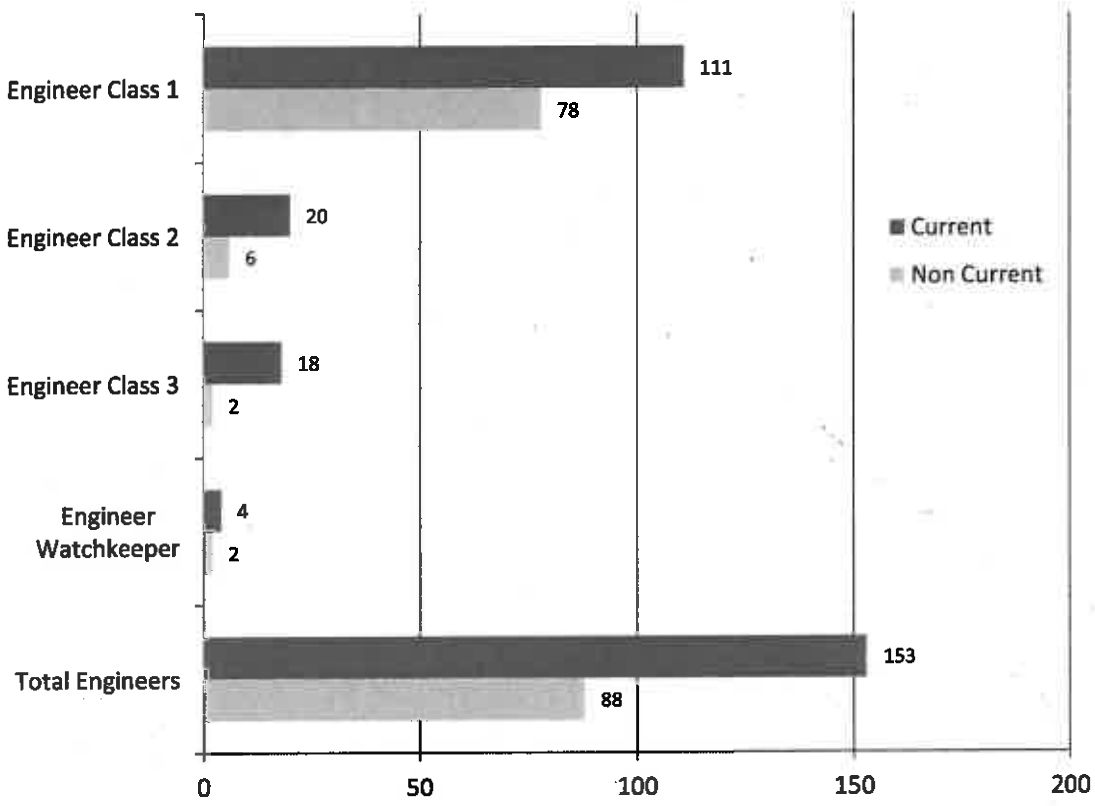


[3] The majority of the shore-based staff with current Deck Rating certification are within a single organisation within the Towage sector. All on-shore staff with current Engine Room Rating certification are within a single organisation within the Government vessels sector.

The majority of shore-based engineers (both current and non-current) hold (or held) Engineer Class 1 certificates (see Figure 8).

Figure 8: Number of shore-based staff holding Engineer Officers AMSA certificates: current and non-current

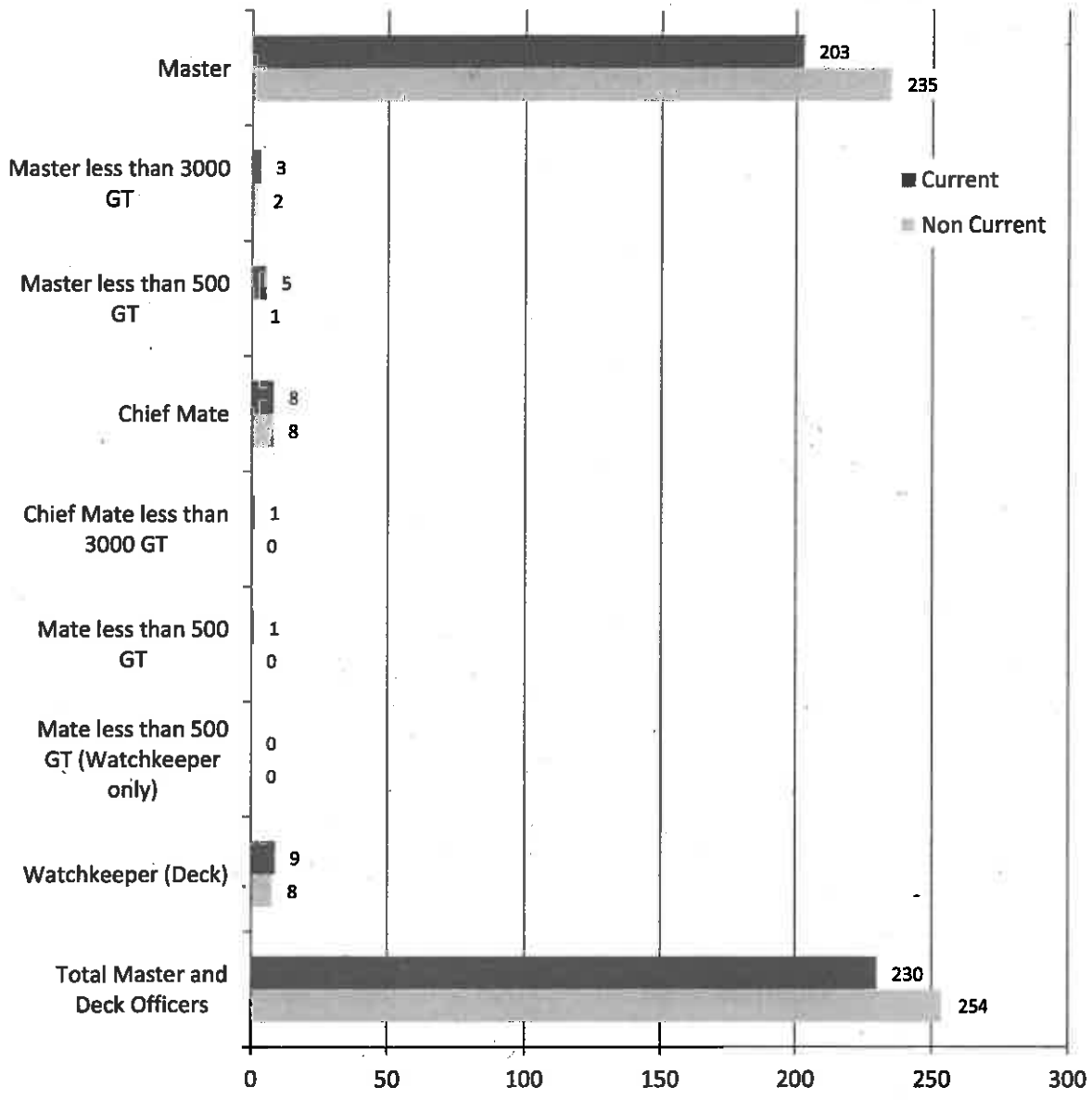
Question 10 – n=77 responding organisations



The majority of shore based staff with Master and Deck Officer certificates (both current and non-current) held Master certificates (see Figure 9).

Figure 9: Number of shore-based staff holding Master and Deck Officers AMSA certificates: current and non-current

Question 10 – n=77 responding organisations



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D. Seafarers Working in Maritime Industry

Total Seafarers

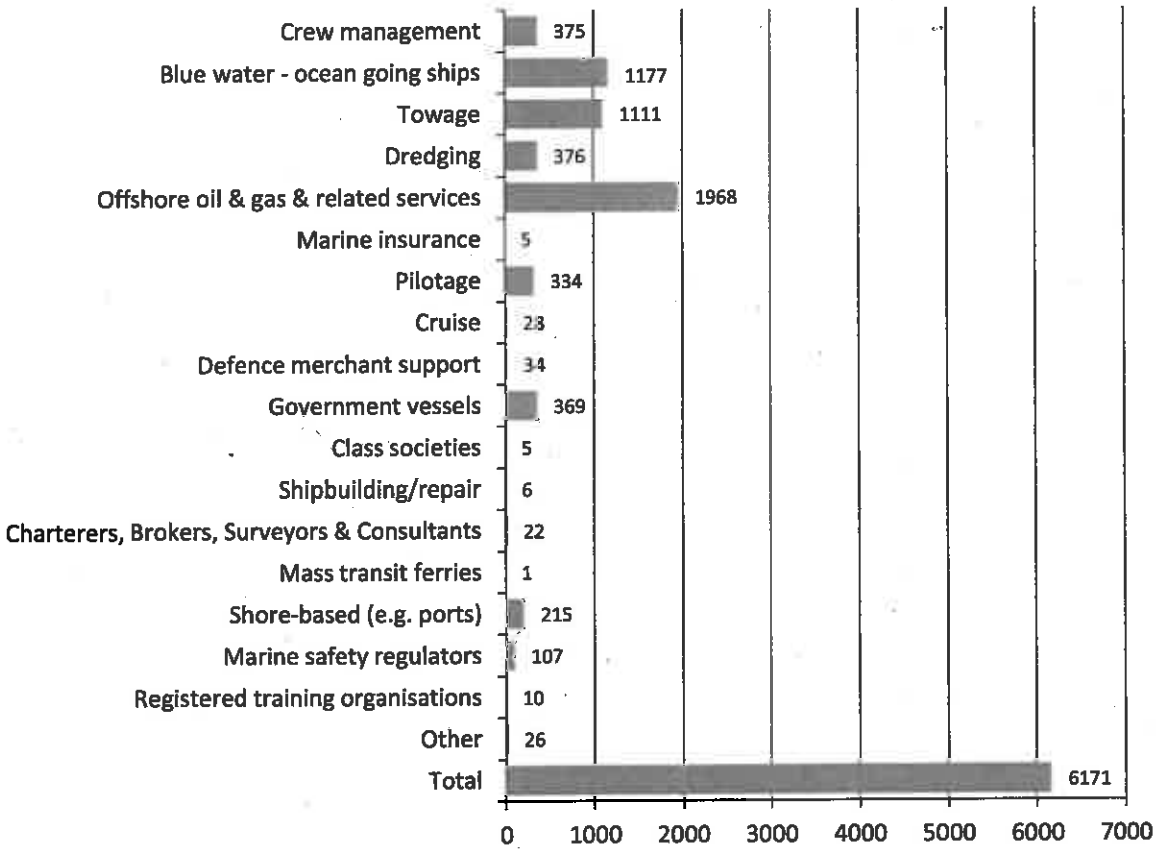
Responding organisations reported they directly employed a total of 10,329 seafarers, comprising:

- 3,941 seafarers with AMSA certifications (or equivalent – including international certificates but excluding state certificates); and
- 6,388 seafarers without AMSA certifications, primarily 4,158 Navy personnel (see Figure 13 for the sector breakdown without the Navy component).

Figure 10 shows the number of seafarers directly employed by organisations (other than Navy personnel) within each sector, with the percentage distribution of these seafarers across the sectors shown in Figure 11.

Figure 10: Number of seafarers directly employed by the organisation[4]

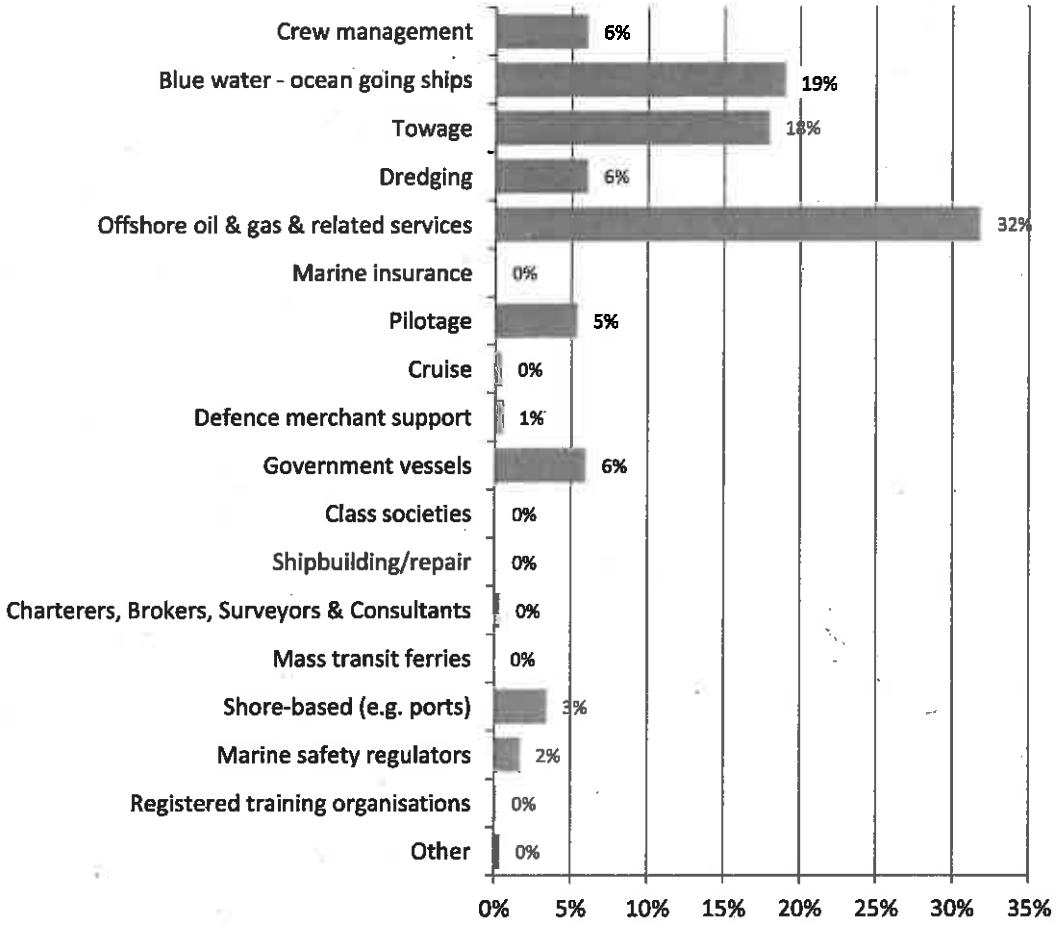
Question 12 & 13 – n=54 responding organisations, excluding the Navy[4]



[4] This chart, and the total figure of 6,171, excludes the 4,158 Navy personnel without AMSA certification.

Figure 11: Percentage distribution of seafarers directly employed by the organisation[5]

Question 12 – n=67 responding organisations, excluding the Navy[5]



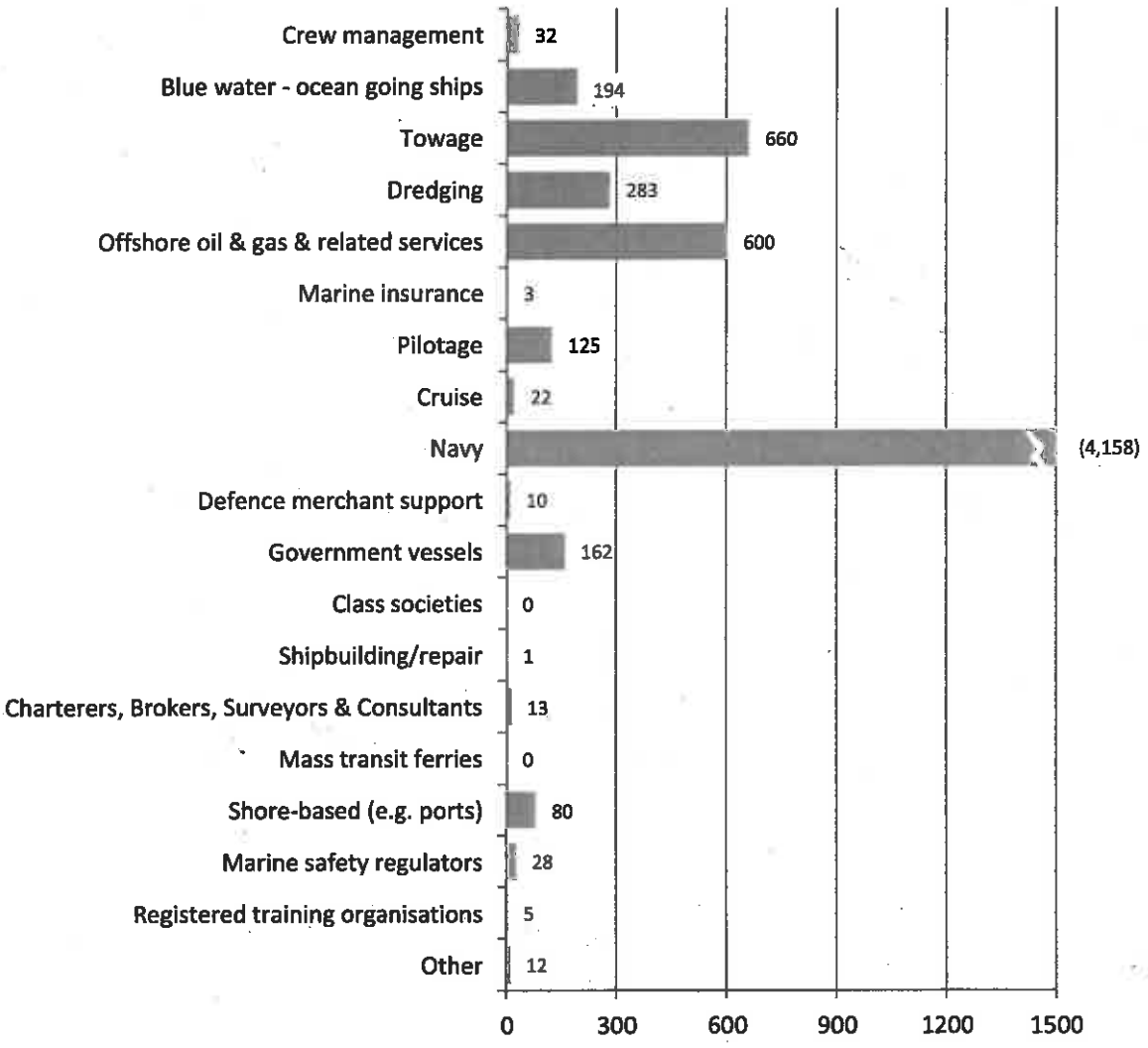
[5] This chart excludes the 4,158 Navy personnel without AMSA certification.

Non-Certified Seafarers

Organisations reported that they directly employed 6,388 seafarers without AMSA certifications, with the majority (4,158) being navy seafarers, with towage employing 660 non-certified seafarers, and offshore oil & gas employing 600 non-certified seafarers (see Figure 12).

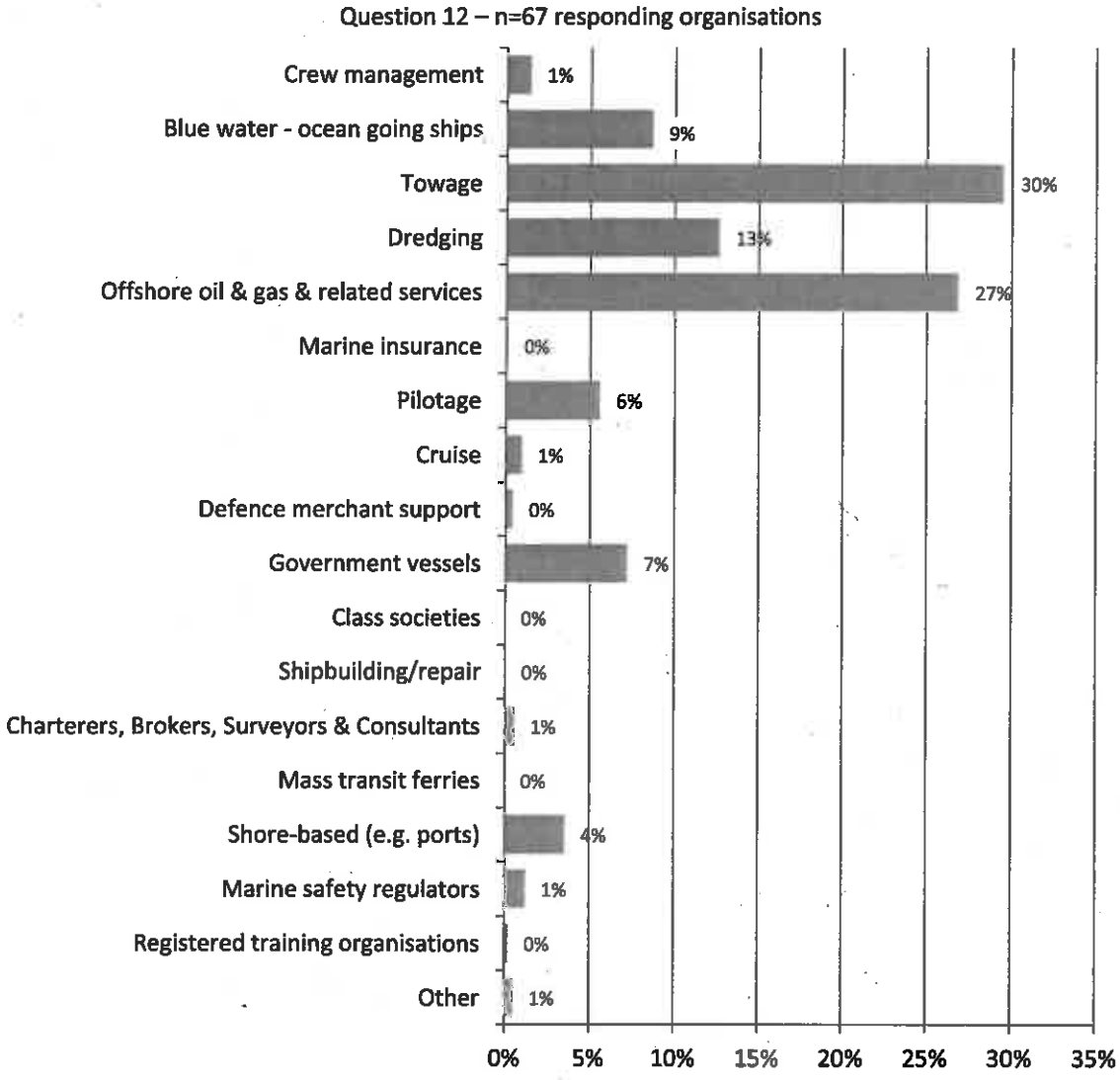
Figure 12: Number of seafarers directly employed by the organisation without AMSA certification (or equivalent)

Question 12 – n=67 responding organisations



Excluding the navy seafarers, over one-half of the non-certified seafarers are employed in either the towage or offshore oil & gas sectors (see Figure 13).

Figure 13: Percentage distribution of seafarers (excluding navy) directly employed by the organisation <u>without</u> AMSA certification (or equivalent)



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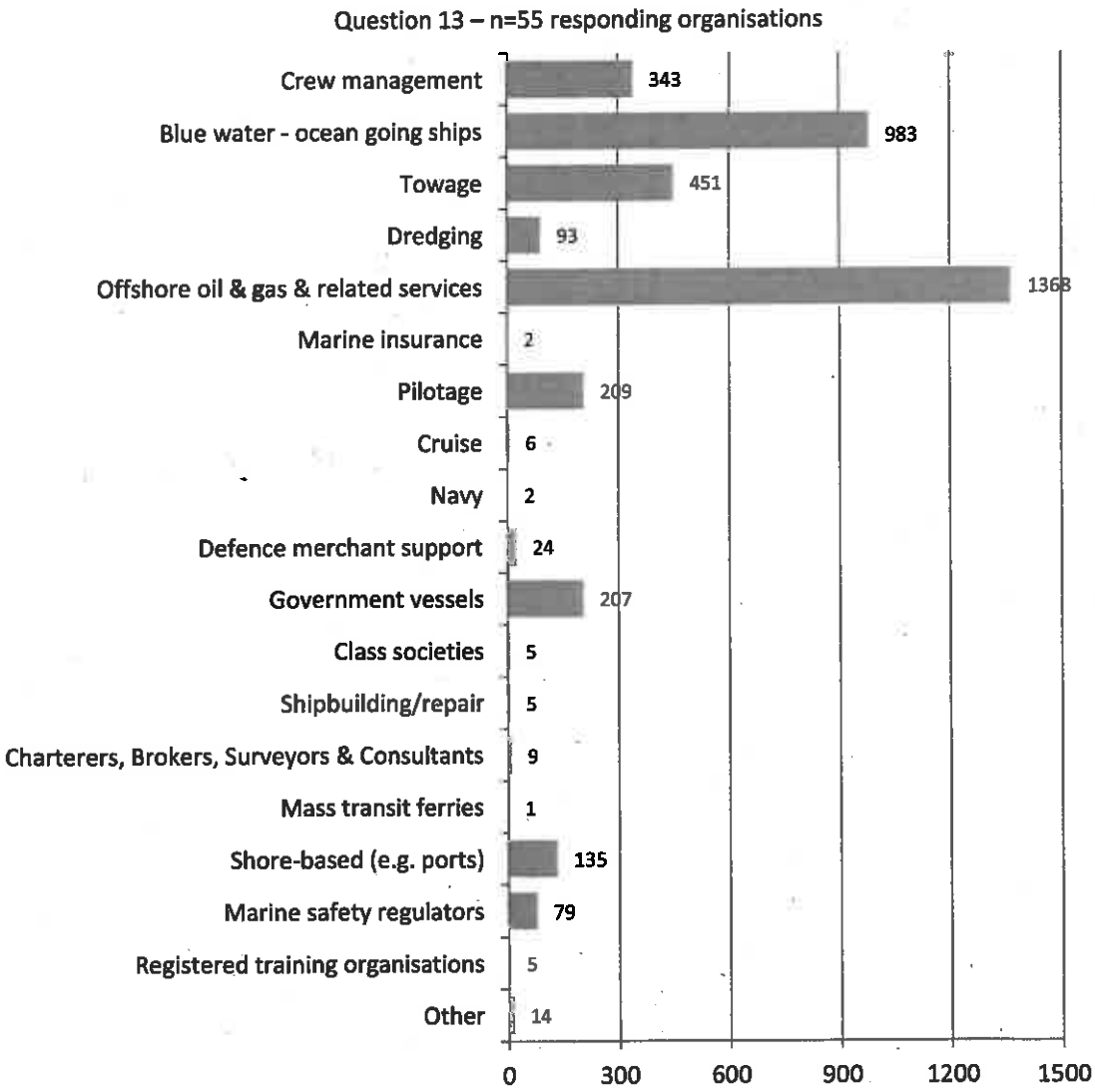
AMSA Certified Seafarers

Organisations reported that they directly employed 3,941 seafarers with AMSA certificates (see Figure 14), with the majority in the offshore oil & gas (n=1,368) or blue water (n=983) sectors.

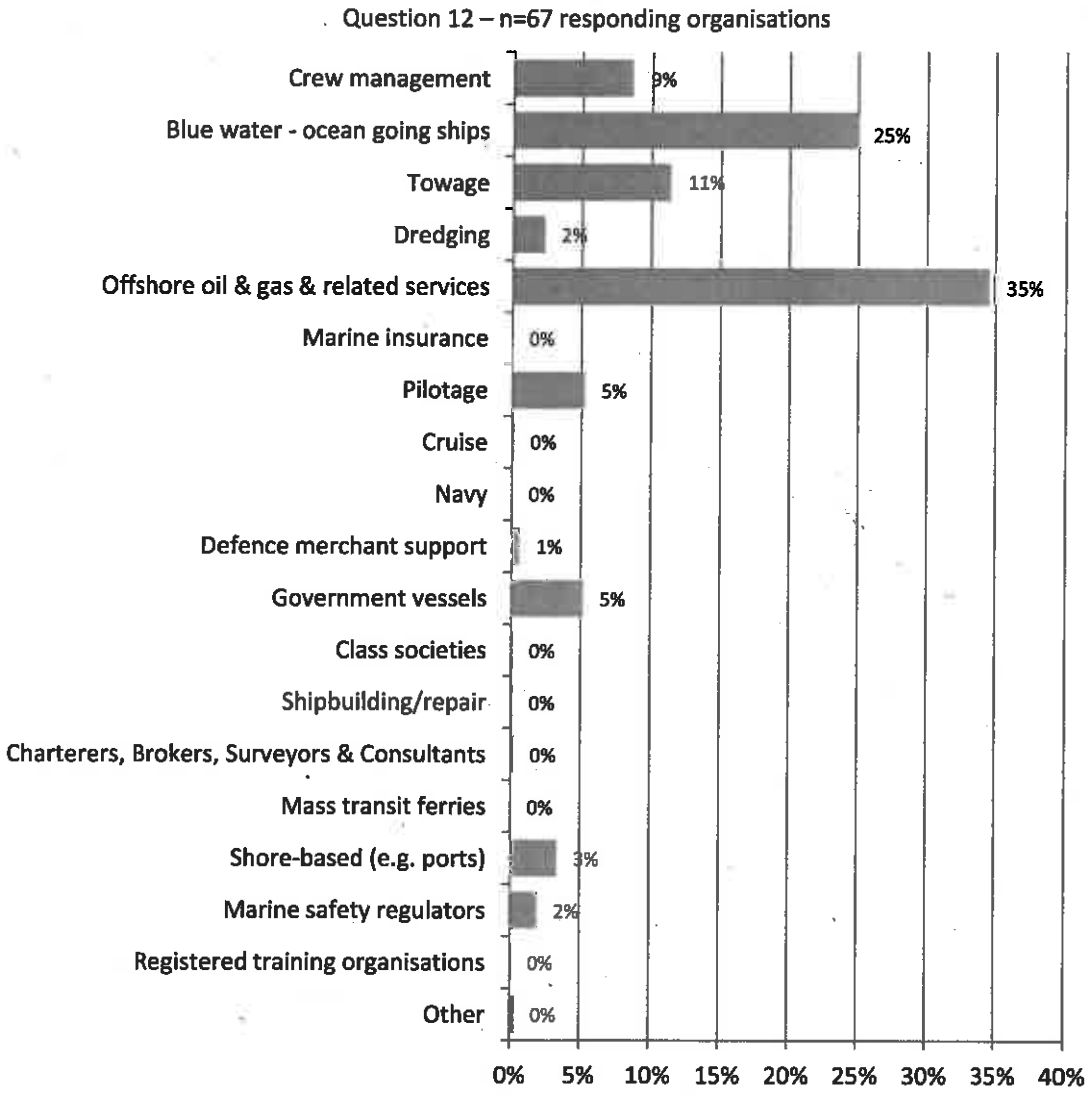
- While there are 343 seafarers reported as being employed within the crew management sector, the organisations who provide crew management services also reported an additional 751 seafarers employed across the other sectors shown in Figure 14, primarily within the blue water sector (645 seafarers), with the remainder spread primarily across the towage, offshore oil and gas, defence merchant support and government vessels sectors. Note, however, that not all of these seafarers are necessarily being employed via crew management services, rather they may be being employed directly by the organisation offering crew management services.

Figure 14: Number of seafarers directly employed by the organisation with AMSA certification



As shown in Figure 15, around one-third of AMSA certified seafarers are in the offshore oil & gas sector, and one-quarter are in the blue water sector.

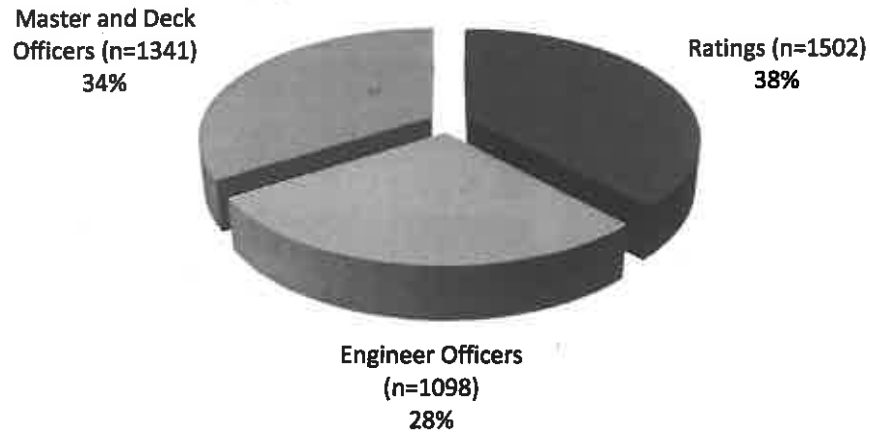
Figure 15: Percentage distribution of seafarers directly employed by the organisation with AMSA certification (or equivalent)



Across all sectors, 38% of seafarers with AMSA certification (or equivalent) are Ratings (n=1,502), 28% are Engineer Officers (n=1,098) and 34% are Master and Deck Officers (n=1,341) (see Figure 16).

Figure 16: Number of seafarers by AMSA certification

Question 13 – n=55 responding organisations, by certification



The majority of Rating seafarers (66%) are Integrated Ratings (n=984), with 23% (n=340) being Deck Ratings. Just over half of Engineers are Engineer Class 1 (n=533), and half of Master and Deck Officers have Master certification (n=668) (see Figure 17).

Figure 17: Number of seafarers by AMSA certification

Question 13 – n=55 responding organisations

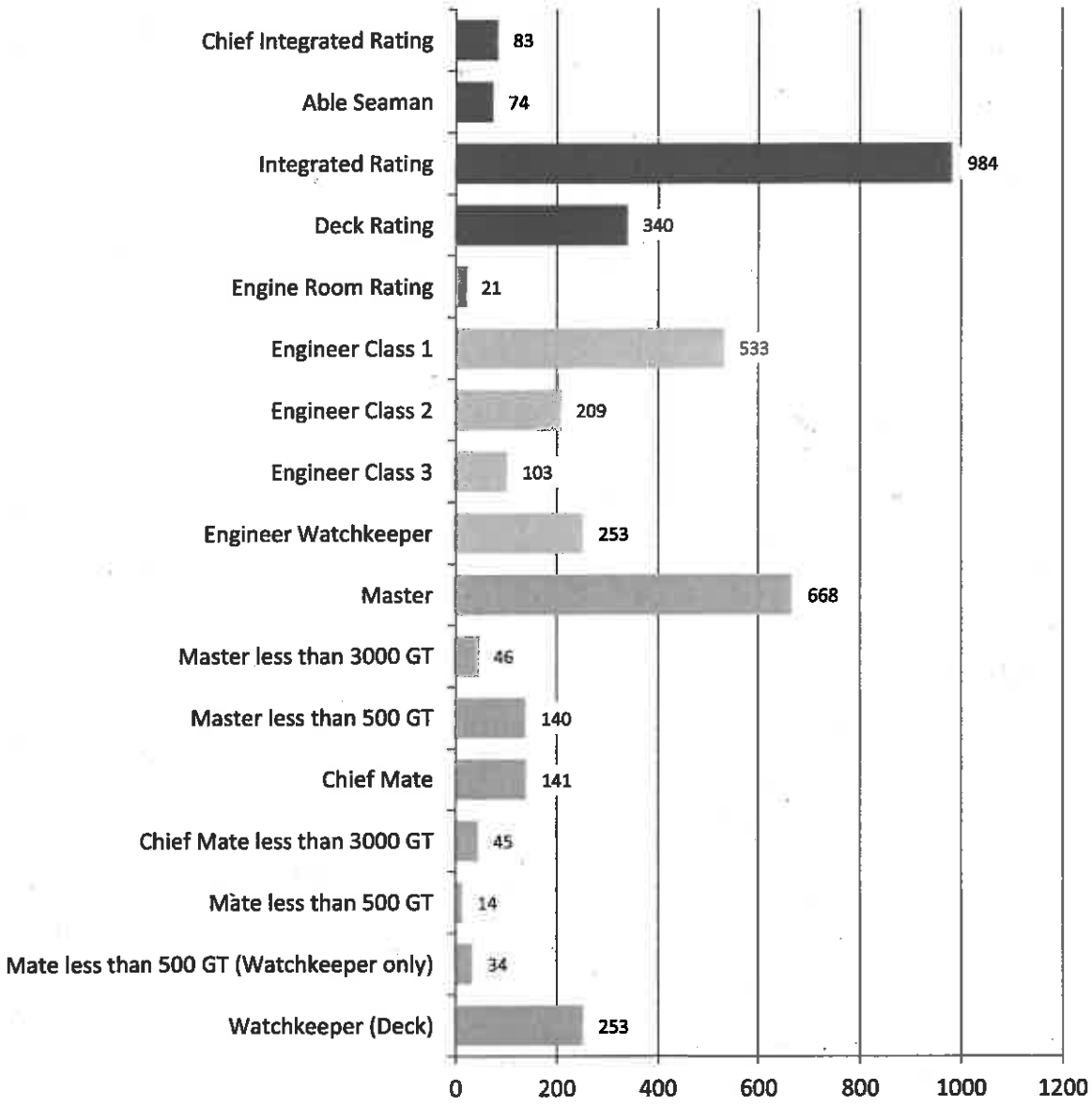


Figure 18 provides an overview of the number of seafarers directly employed within each sector with Ratings, Engineer and Master and Deck Officer certifications. Subsequent figures (Figure 19 to Figure 27) provide more detail for each of the larger sectors shown below.

Figure 18: Number of seafarers by AMSA certification

Question 13 – n=55 responding organisations

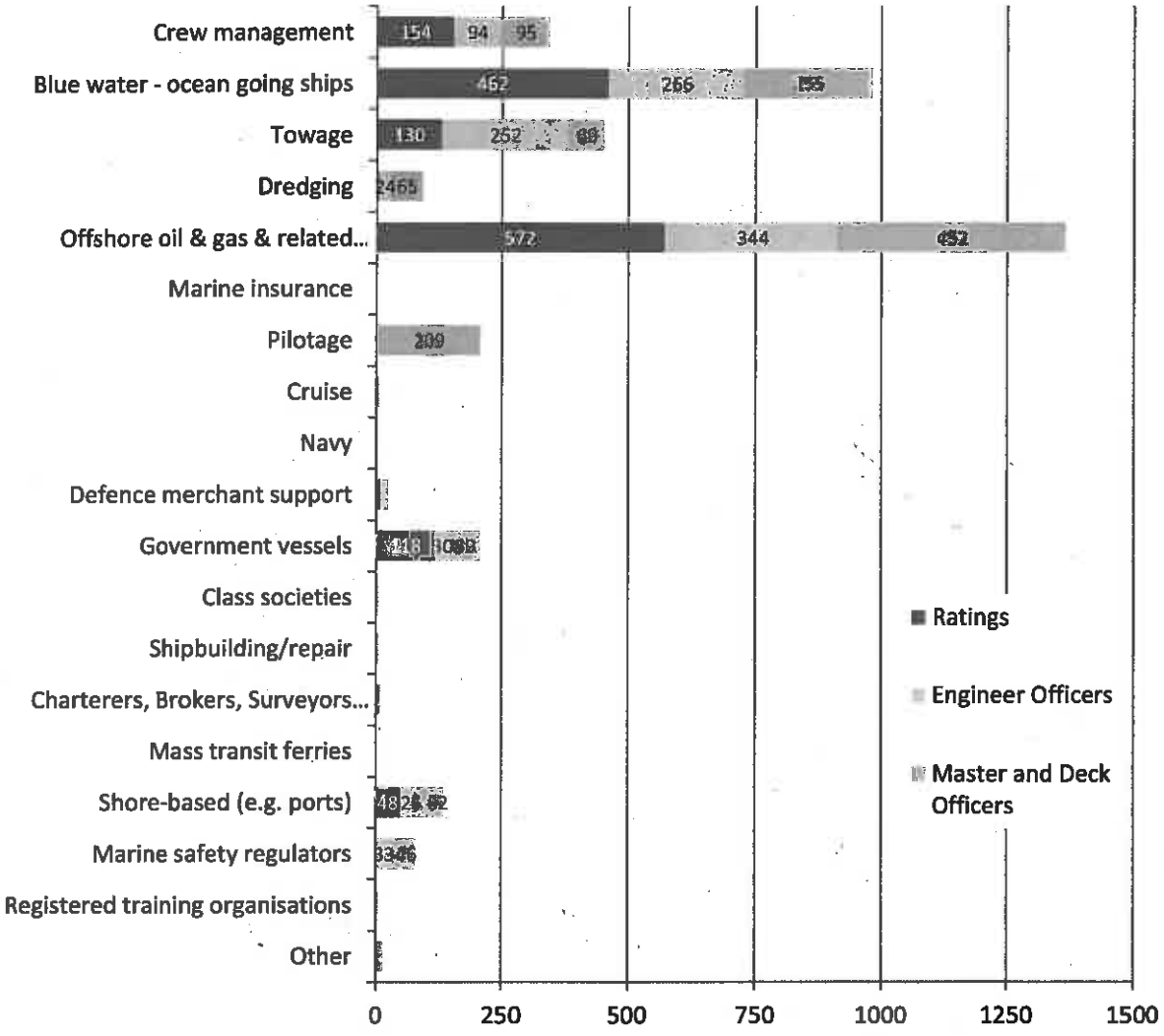


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Figure 19: Number of seafarers by AMSA certification – Crew Management Sector

Question 13 – n= 4 responding organisations

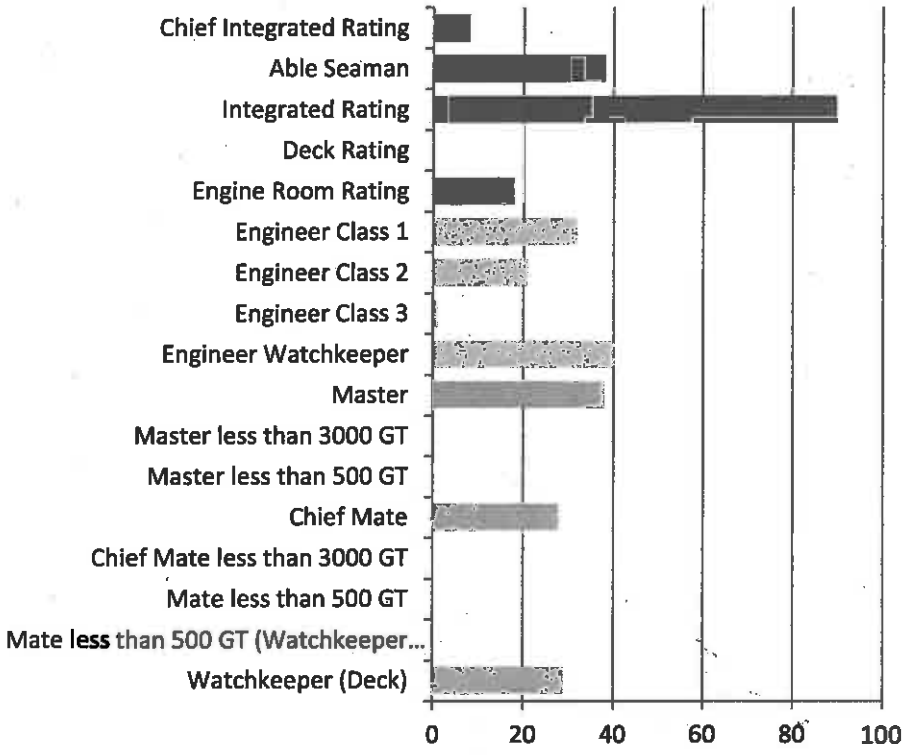


Figure 20: Number of seafarers by AMSA certification – Blue Water - Ocean Going Ship Sector

Question 13 – n=9 responding organisations

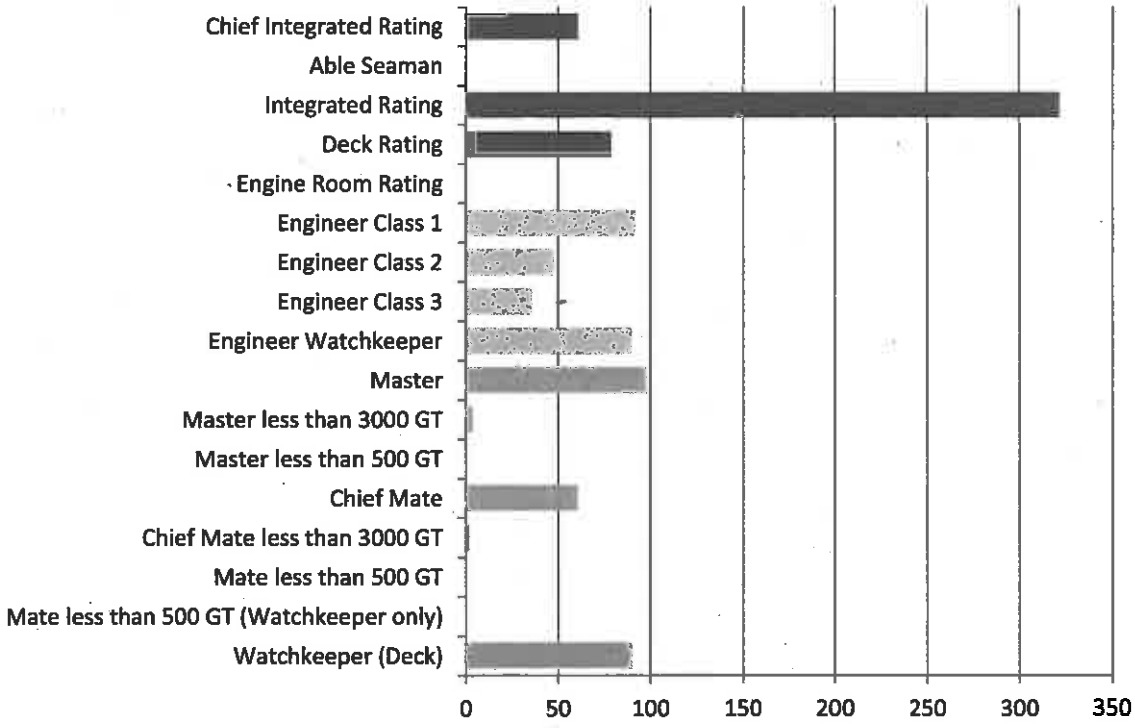


Figure 21: Number of seafarers by AMSA certification – Towage Sector

Question 13 – n=12 responding organisations

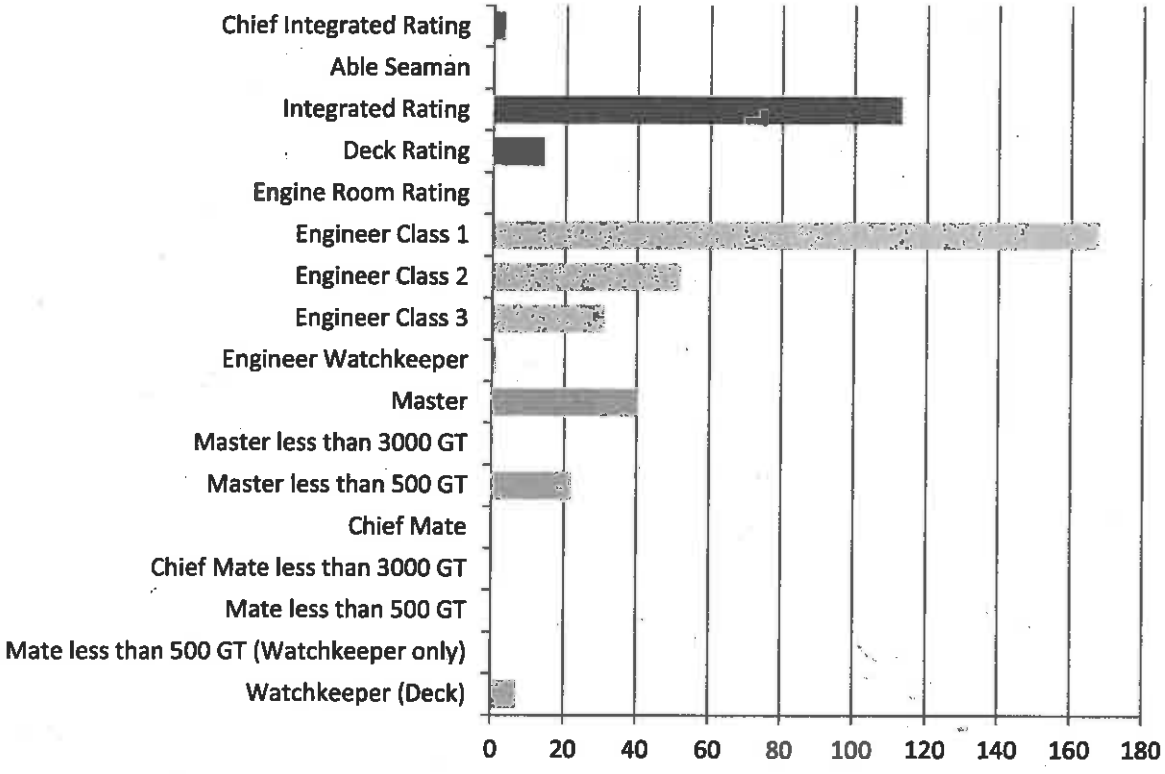


Figure 22: Number of seafarers by AMSA certification – Dredging Sector

Question 13 – n=3 responding organisations

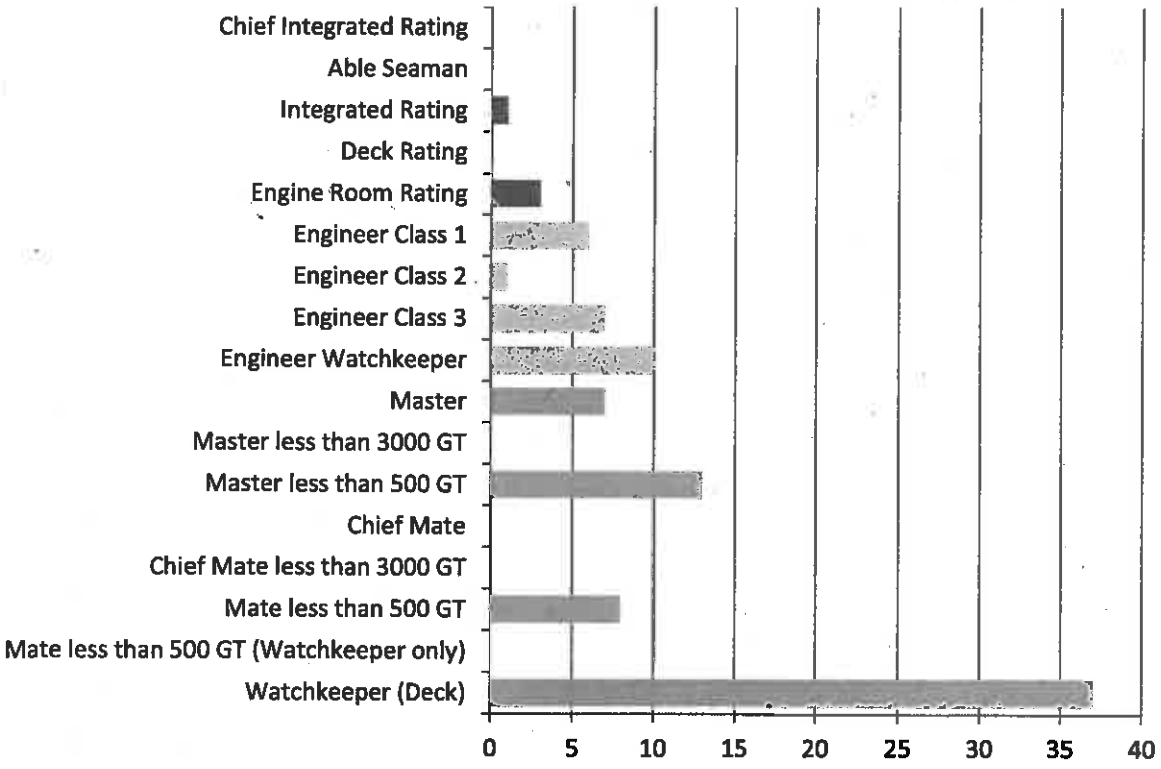


Figure 23: Number of seafarers by AMSA certification – Offshore Oil and Gas and Related Services Sector

Question 13 – n=10 responding organisations

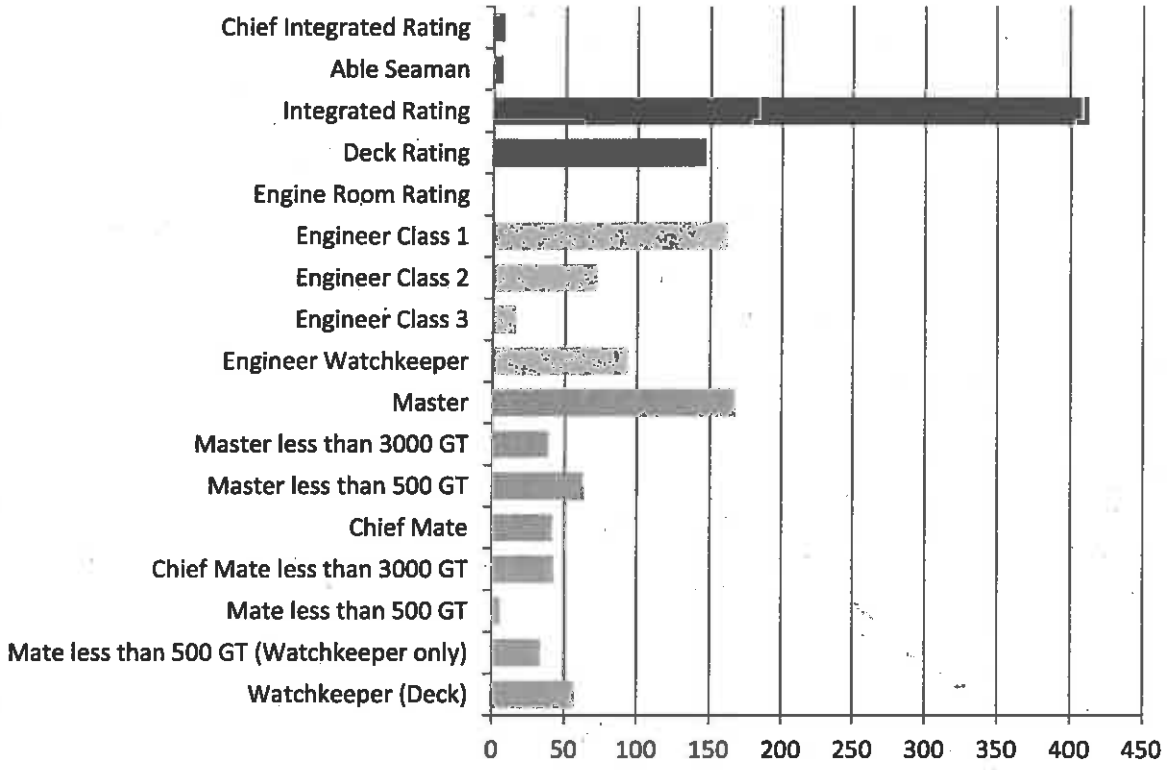


Figure 24: Number of seafarers by AMSA certification – Pilotage Sector

Question 13 – n=13 responding organisations

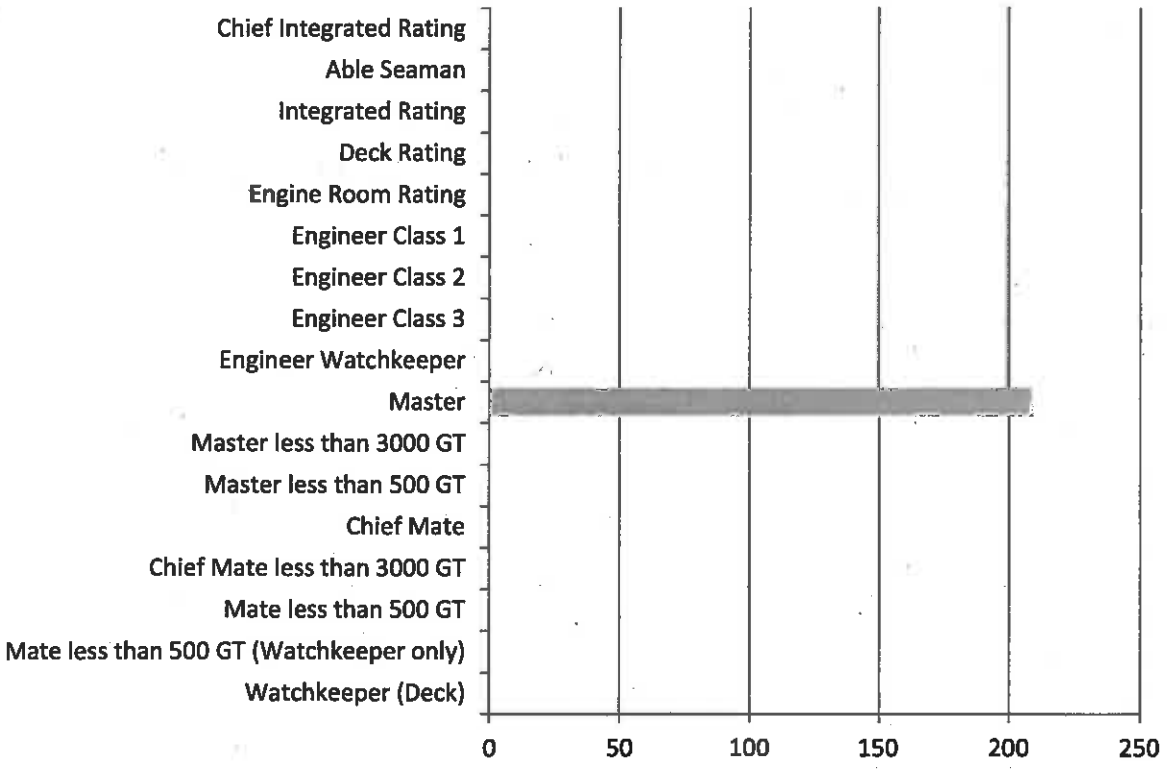


Figure 25: Number of seafarers by AMSA certification – Government Vessels Sector

Question 13 – n=5 responding organisations

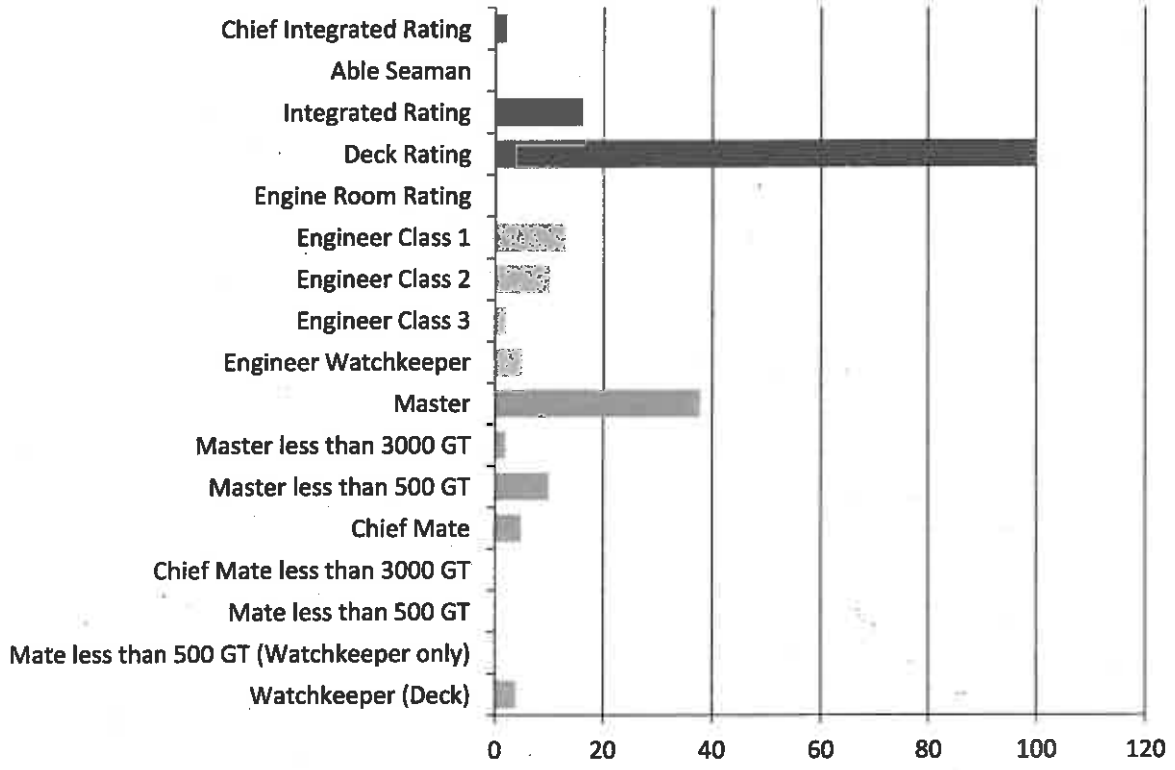


Figure 26: Number of seafarers by AMSA certification – Shore Based Sector

Question 13 – n=9 responding organisations

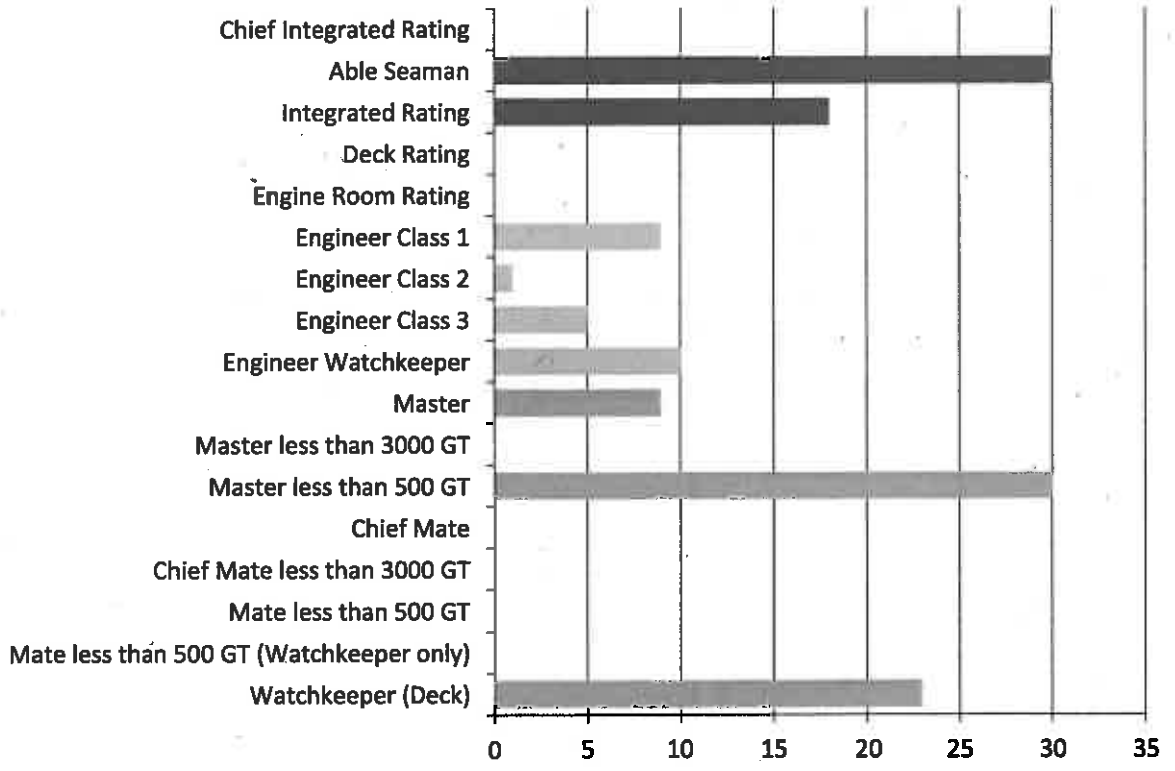
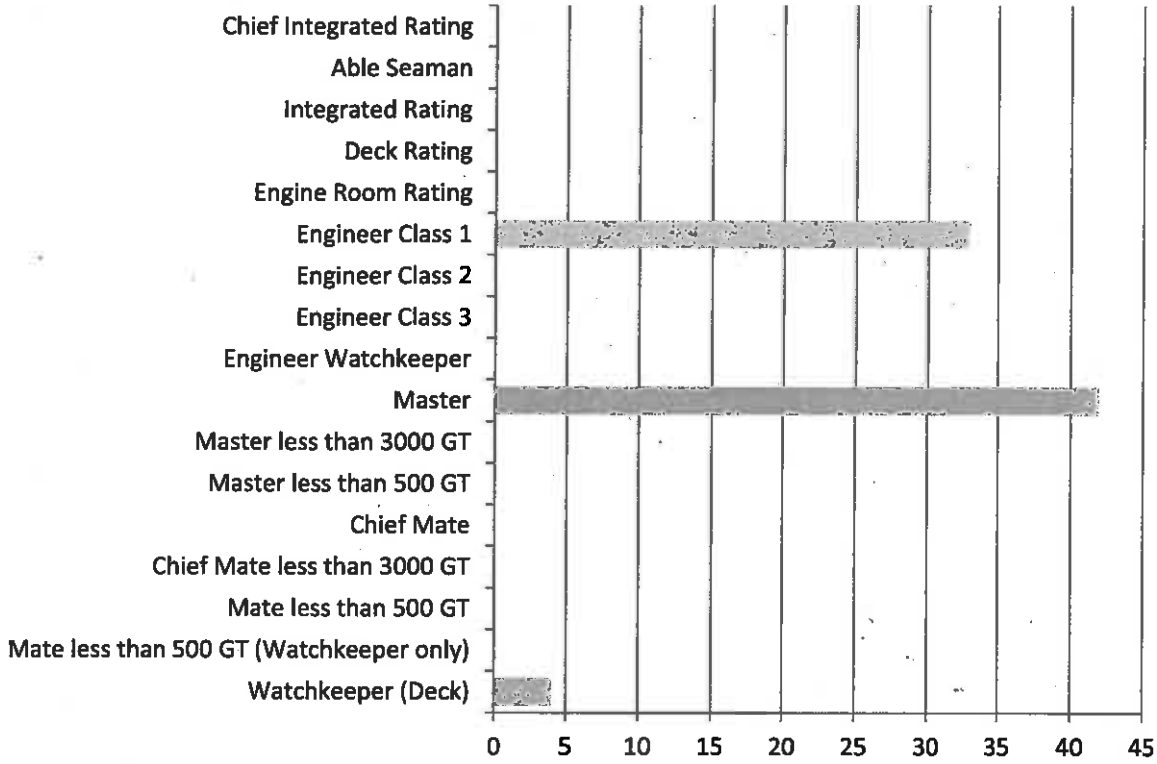


Figure 27: Number of seafarers by AMSA certification – Marine Safety Regulators Sector

Question 13 – n=4 responding organisations

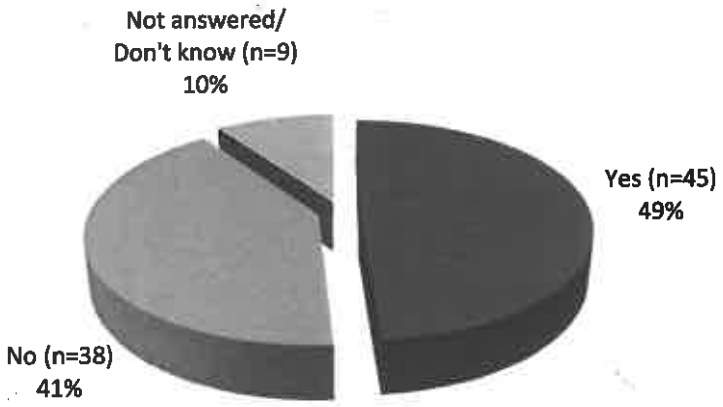


E. Employment of non-Australian citizens/residents

Around half of responding organisations indicated that they employed persons who were not Australian citizens or permanent residents (see Figure 28).

Figure 28: Does the organisation employ anyone who is not an Australian citizen or permanent resident?

Question 14 – n=92 responding organisations



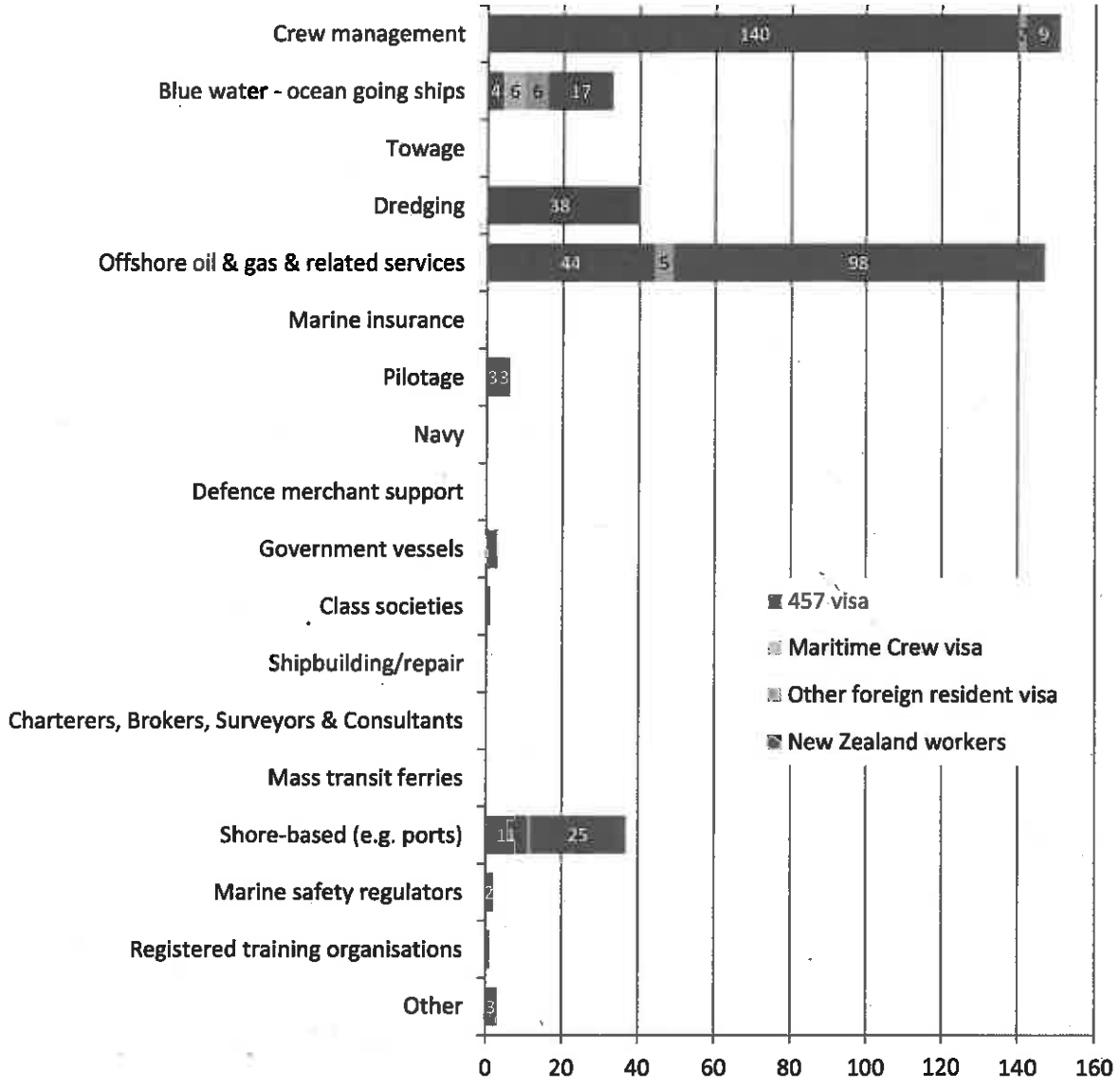
Organisations were asked to provide a breakdown of their employed seafarers who were neither Australian citizens or permanent residents. Across the 26 organisations who provided a breakdown, there were 424 such employees[6] (see Figure 29), which represents 10.8% of the 3,941 AMSA certified seafarers directly employed by the responding organisations.

- The 'crew management' sector reported the highest number of 457 visas (n=140), while New Zealand workers were pre-dominantly in the 'offshore oil and gas and related services (n=98).

[6] In addition, there were 432 seafarers with Maritime Crew visas from the Cruise sector. On the advice of the Forum, these have been excluded from the results for q15 discussed in this report as it was felt that they would be skewing results for the visa categories.

Figure 29: Seafarers working in the Australian maritime industry by residency/visa status (excluding Cruise sector seafarers)

Question 15 – n=26 responding organisations



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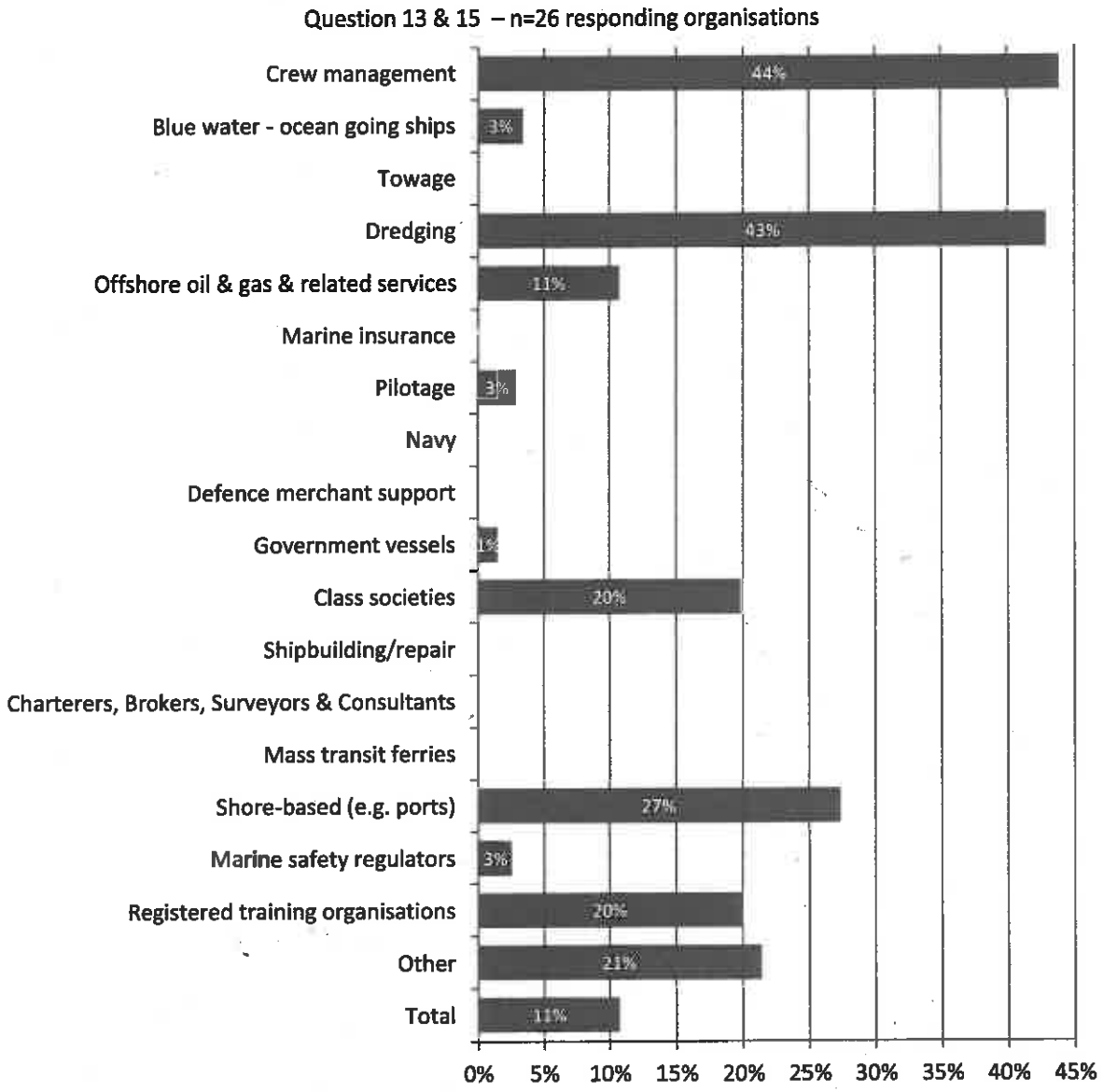
The Crew Management and Dredging sectors had the highest proportion of foreign workers (44% and 43% respectively) (see Figure 30).

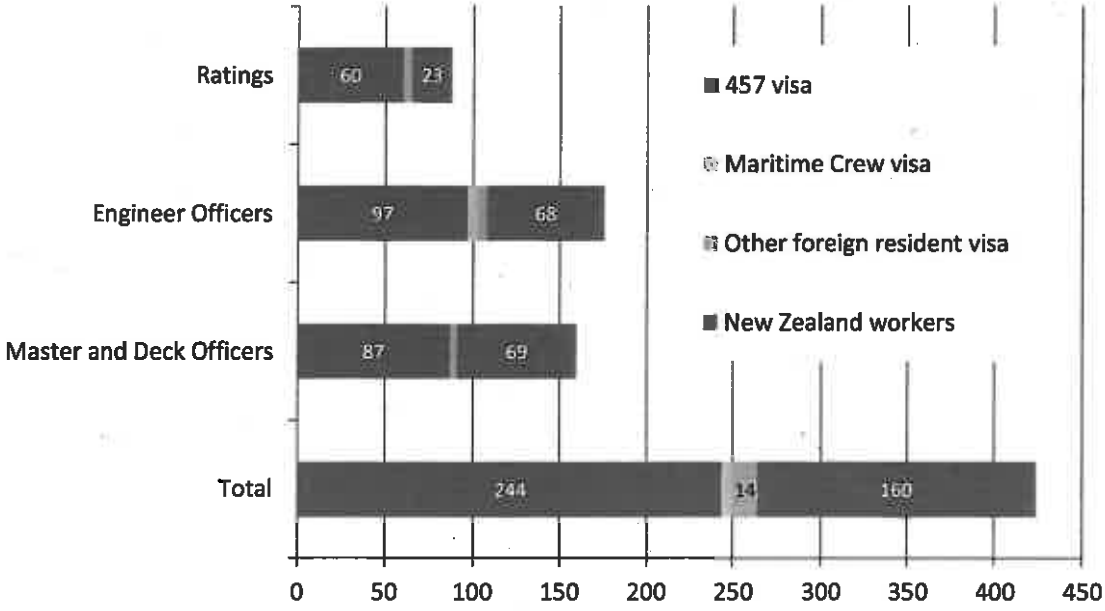
Figure 30: Percentage of seafarers working in each sector who are not an Australian citizen or permanent resident (excluding Cruise sector)



The reported number of seafarers with 457 visas was fairly evenly spread across Ratings, Engineer Officers and Master and Deck Officers, while New Zealand employees were more likely to be Engineer Officers or Master and Deck Officers (see Figure 31).

Figure 31: Seafarers working in the Australian maritime industry by residency/visa status (excluding Cruise sector)

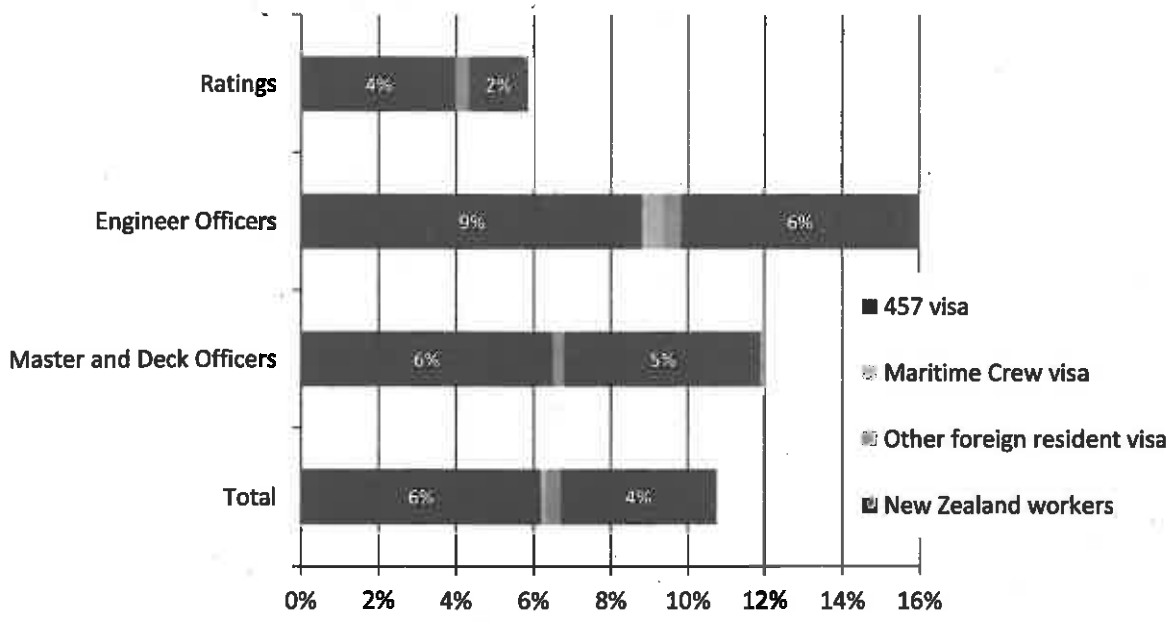
Question 15 – n=26 responding organisations



Engineers had the highest concentration of overseas workers (at 16%), compared to 12% for Master and Deck Officers and 6% for Ratings (see Figure 32).

Figure 32: Percentage of seafarers working in the Australian maritime industry who are not an Australian citizen or permanent resident (excluding Cruise sector)

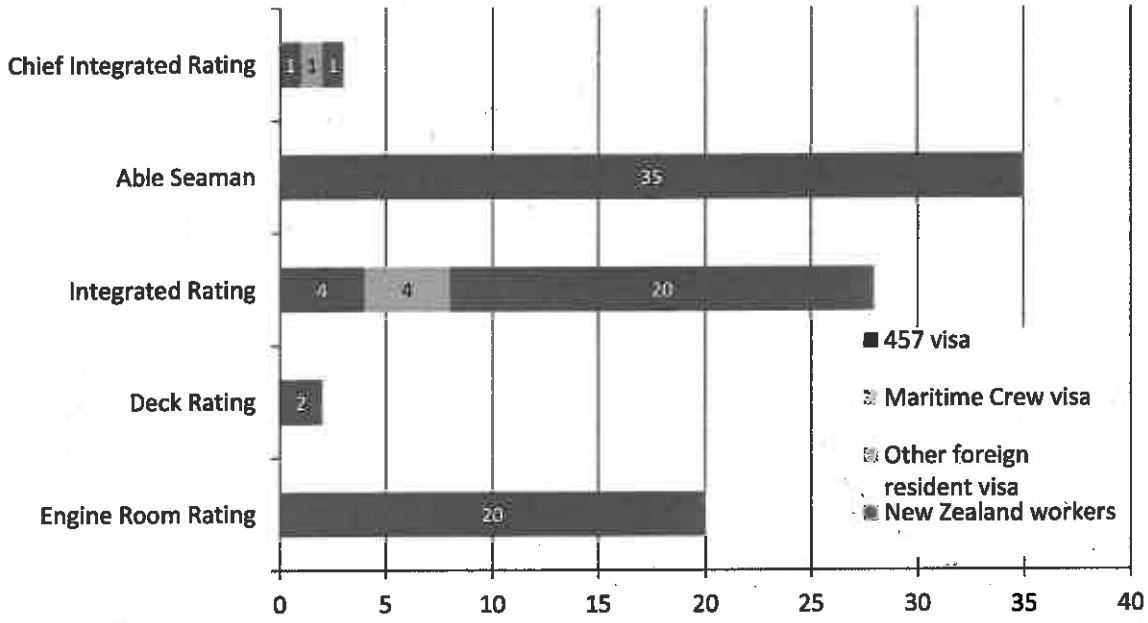
Question 15 – n=26 responding organisations



The foreign Rating workers with 457 visas were predominantly Able Seaman and Engine Room Ratings (see Figure 37), with the New Zealand Ratings mainly Integrated Ratings.

Figure 33: Ratings working in the Australian maritime industry by residency/visa status (excluding Cruise sector respondents) (q15)

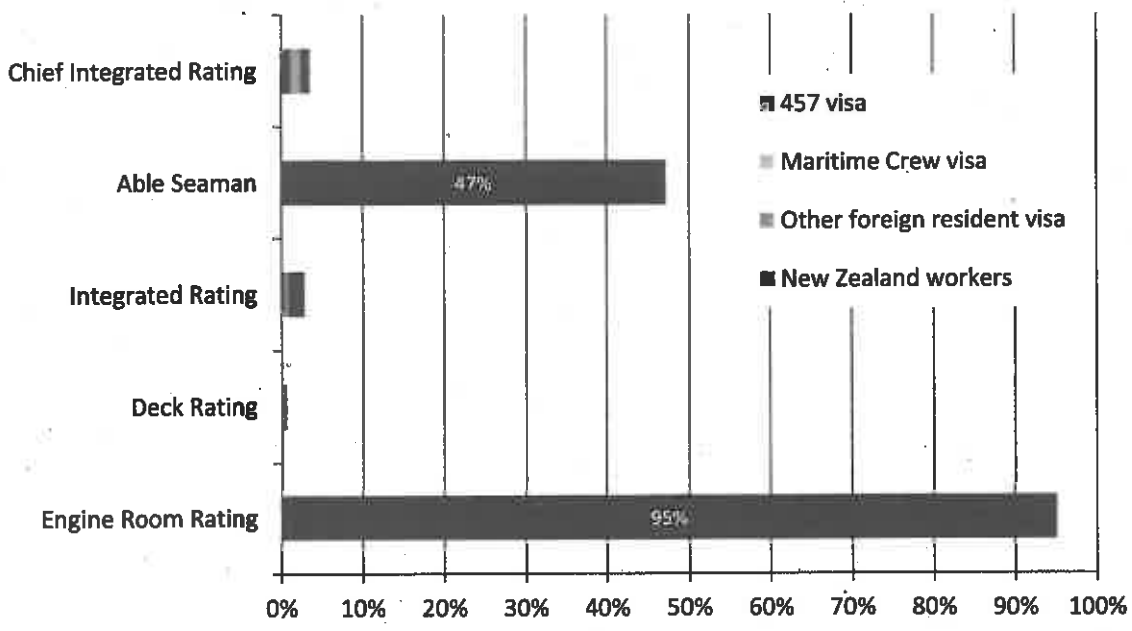
Question 15 – n=26 responding organisations



The Able Seaman with 457 visas made up nearly half of the overall population of Ratings seafarers, while the Engine Room Ratings with 457 visas were almost all of the number of Engine Room Ratings reported by organisations (see Figure 34Figure 36).

Figure 34: Percentage of Ratings working in the Australian maritime industry who are not an Australian citizen or permanent resident (excluding Cruise sector)

Question 13 & 15 – n=26 responding organisations



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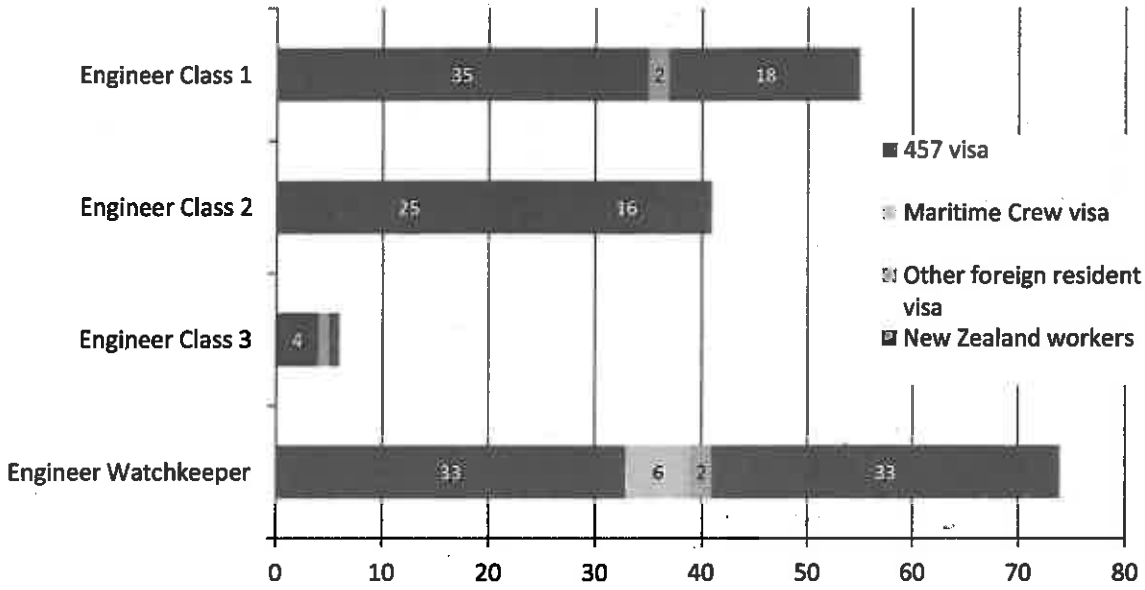
Foreign Engineers with 457 ratings were reasonably evenly spread across the Class 1, Class2 and Watchkeeper certifications. Around half of the New Zealand engineers were Watchkeepers (see Figure 35).

Figure 35: Engineers working in the Australian maritime industry by residency/visa status (excluding Cruise sector) (q15)

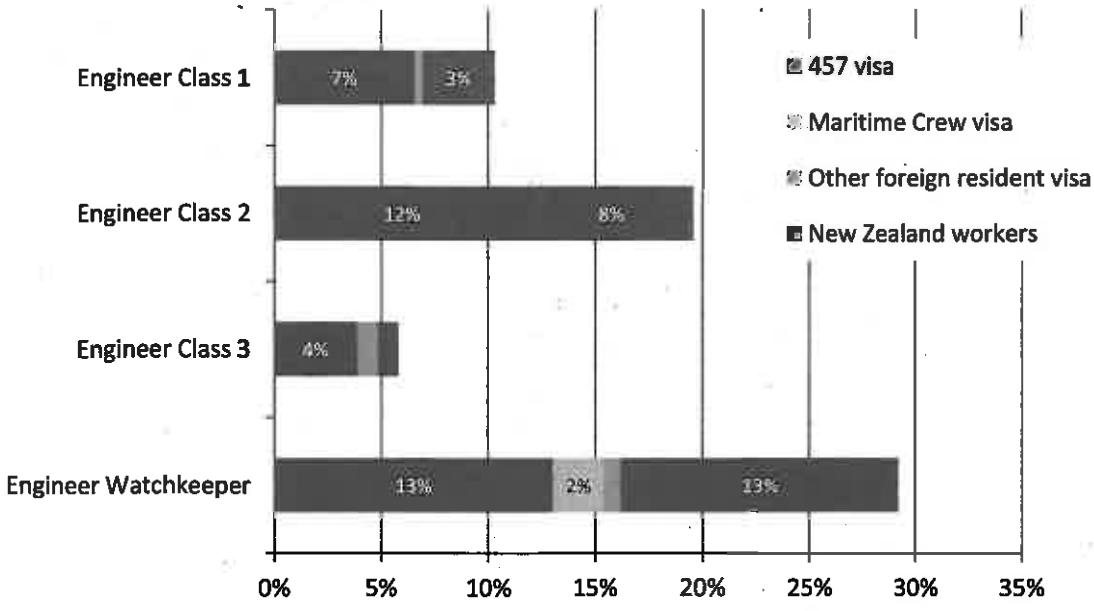
Question 15 – n=26 responding organisations



Nearly one-third of the entire reported population of Engineer Watchkeepers are foreign workers, with nearly 20% of the reported Engineer Class 2 population being either 457 visas or New Zealand workers (see Figure 36).

Figure 36: Percentage of Engineers working in the Australian maritime industry who are not an Australian citizen or permanent resident (excluding Cruise sector)

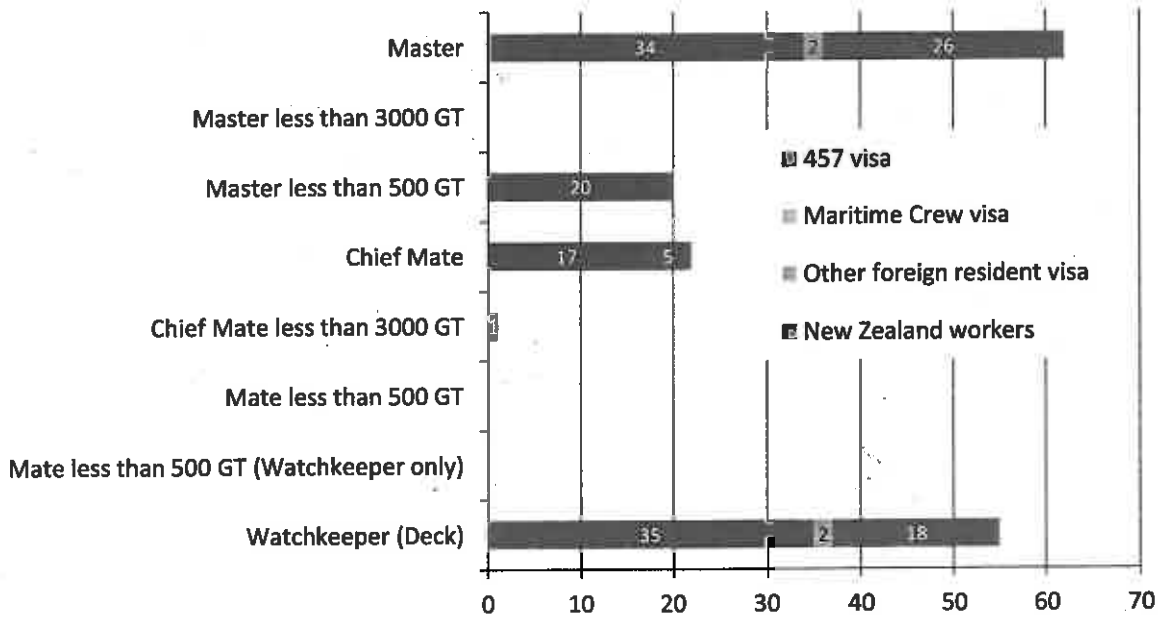
Question 13 & 15 – n=26 responding organisations



The majority of foreign Master and Deck Officers were reported as having either Master or Watchkeeper (Deck) certification, with the majority of these being 457 visas and a significant minority being New Zealand workers (see Figure 37).

Figure 37: Master and Deck Officers working in the Australian maritime industry by residency/visa status (excluding Cruise sector) (q15)

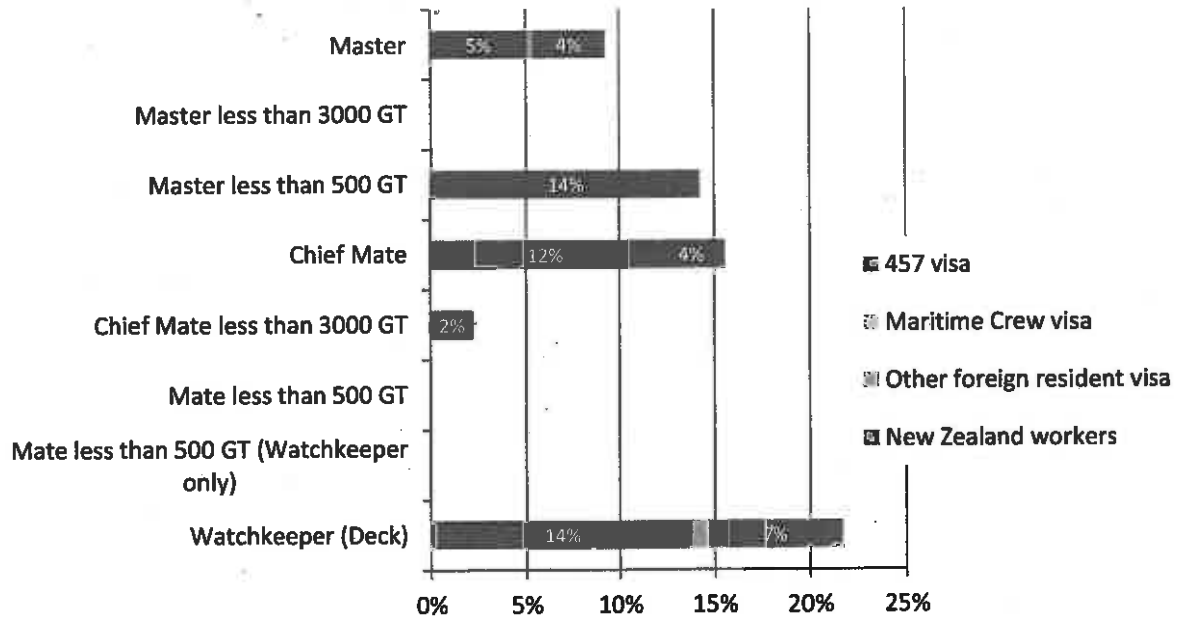
Question 15 – n=26 responding organisations



Just over 20% of the Watchkeeper (Deck) population reported by responding organisations are from overseas , with around 15% of Chief Mates and Master less than 500 GT being from overseas (see Figure 38).

Figure 38: Percentage of Master and Deck Officers working in the Australian maritime industry who are not an Australian citizen or permanent resident (excluding Cruise sector)

Question 13 & 15 – n=26 responding organisations



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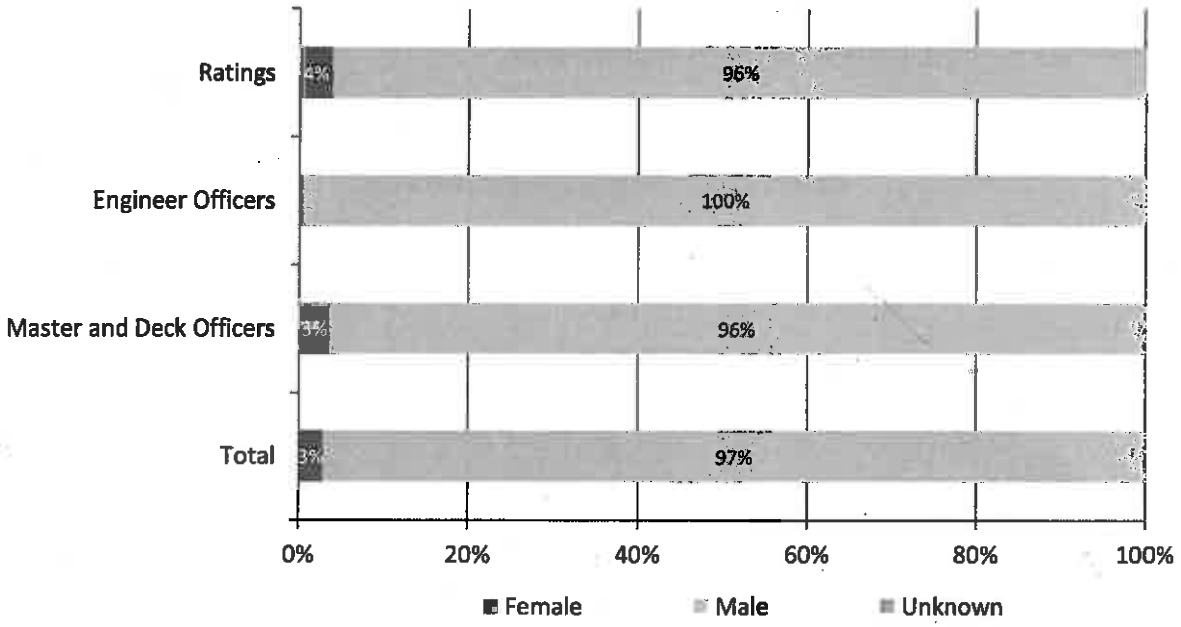
F. Demographic breakdown of seafarers

Gender Profile

The gender profile of the maritime seafarers reported by responding organisations is predominately male, especially for Engineer Officers (see Figure 39).

Figure 39: Seafarers working in the Australian maritime industry by gender

Question 16 – n=51 responding organisations



Age Profile

Organisations were asked to provide a breakdown by age groups of the Ratings, Engineers and Master and Deck Officers.

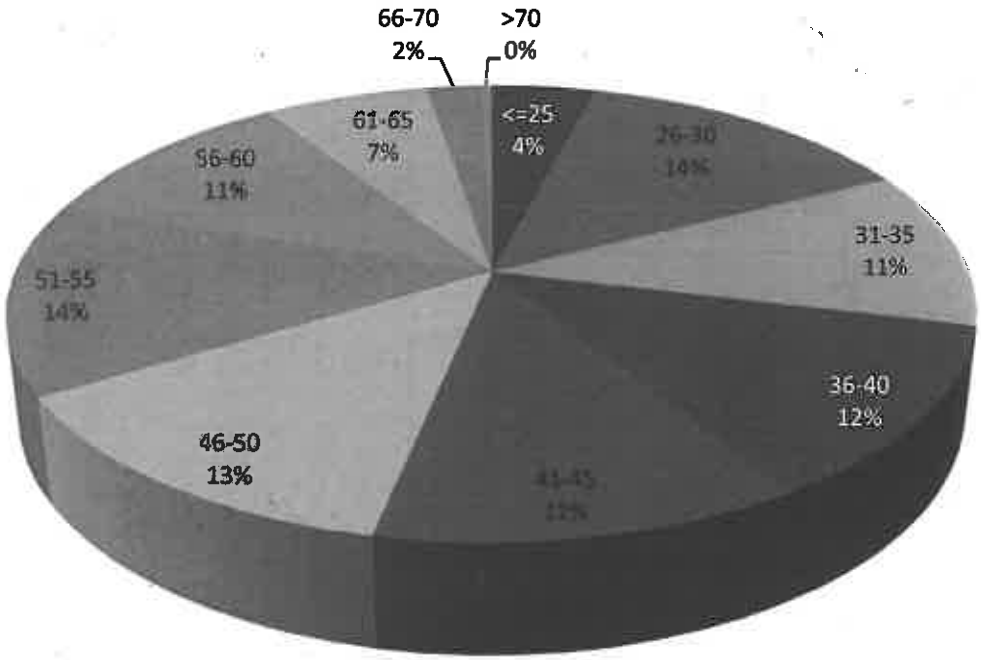
The age breakdown across all seafarers is shown in Figure 40.

- Just over half of all seafarers (53%) are aged up to 45 years.
- 80% are aged up to 55 years.
- 91% are aged up to 60 years.

Based on these age groups, an approximate average age of 44 years can be calculated for the seafarers working in the responding organisations.

Figure 40: Seafarers working in the Australian maritime industry by age

Question 17 – n=51 responding organisations



The reported age profile for the Ratings seafarers was similar to the overall seafarers profile (see Figure 41):

- 52% of Ratings are aged up to 45 years;
- 82% are aged up to 55 years; and
- 91% are aged up to 60 years.

Based on these age groups, an approximate average age of 44 years can be calculated for the Ratings seafarers working in the responding organisations.

Figure 41: Ratings Seafarers working in the Australian maritime industry by age

Question 17 – n=20 responding organisations

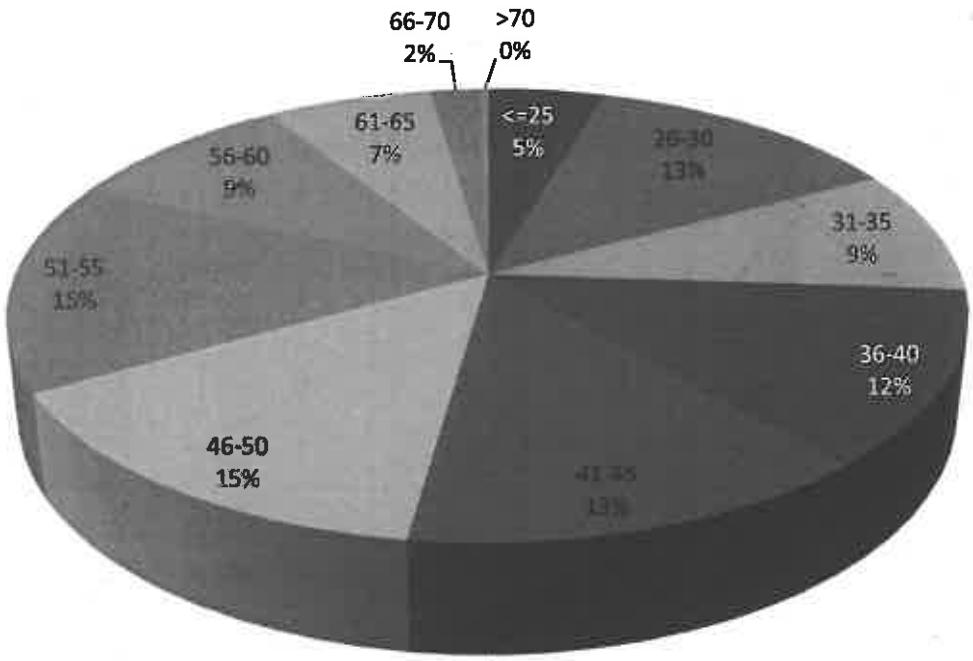
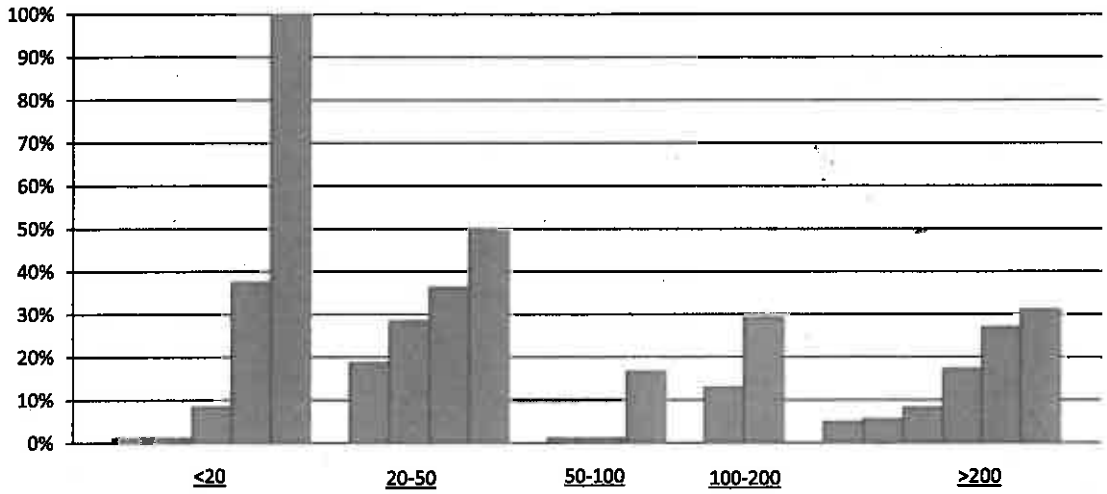


Figure 42 provides an analysis of the relationship between the size of the organisation and the proportion of Ratings within the organisation that are aged over 55 years. Each column represents an organisation, and the groupings indicate the total number of seafarers (based on question 13) within the organisation.

- The chart shows that, with only a few exceptions, the proportion of Ratings aged over 55 years is below 40%, and tends to be lower for larger organisations.
- For the smaller organisations (with less than 20 seafarers), one organisation has all ratings aged over 55 years.

Figure 42: Percentage of Ratings Seafarers aged over 55 within each organisation (grouped by total number of seafarers in organisation)

Question 13 & 17 – n=20 responding organisations



Organisations grouped by the number of seafarers directly employed (q13)

The reported age profile for the Engineer Officers was older than that for Ratings (see Figure 43). In particular, the proportion of Engineers aged over 55 years is 10 percentage points higher than that for Ratings.

- 43% of Engineer Officers are aged up to 45 years;
- 72% are aged up to 55 years; and
- 86% are aged up to 60 years.

Based on these age groups, an approximate average age of 47 years can be calculated for the Engineer Officer seafarers working in the responding organisations.

Figure 43: Engineer Officer Seafarers working in the Australian maritime industry by age

Question 17 – n=28 responding organisations

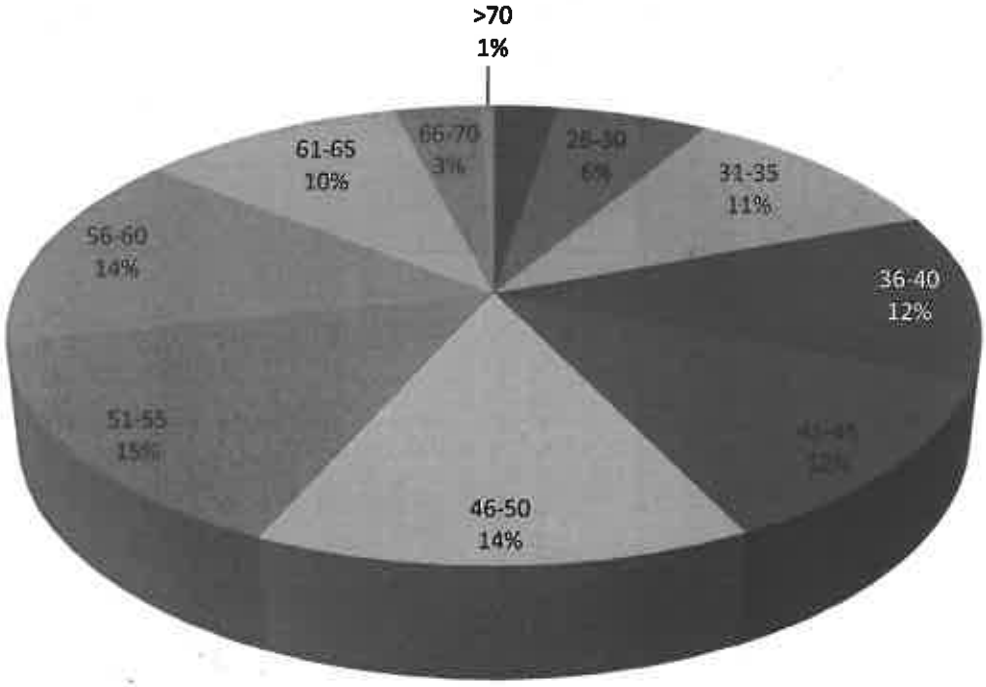
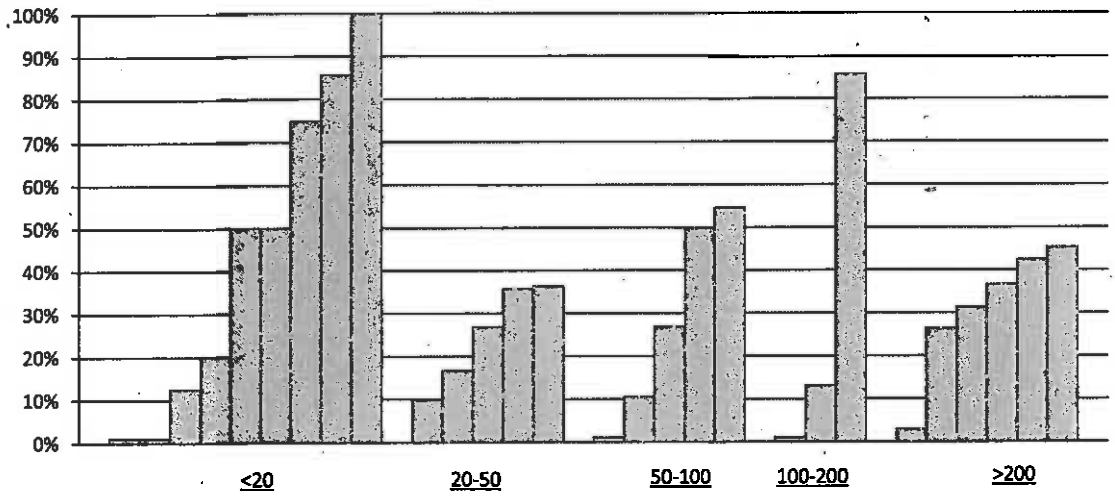


Figure 44 provides an analysis of the relationship between the size of the organisation and the proportion of Engineers within the organisation that are aged over 55 years. Each column represents an organisation, and the groupings indicate the total number of seafarers (based on question 13) within the organisation.

- The chart shows that for the majority of smaller organisations (those with less than 20 seafarers), 50% or more of their Engineers are aged over 55 years.
- For the other organisations with at least 20 seafarers, the proportion of Engineers aged over 55 years is generally no more than 30–50% (with the notable exception of one organisation with between 100 and 200 seafarers).

Figure 44: Percentage of Engineer Officer Seafarers aged over 55 within each organisation (grouped by total number of seafarers in organisation)

Question 13 & 17 – n=28 responding organisations



Organisations grouped by the number of seafarers directly employed (q13)

The reported age profile for the Master and Deck Officers was younger than that for Ratings and Engineers (see Figure 45). In particular, the proportion of Master and Deck Officers aged 45 years or less is 18 percentage points higher than that for Engineers.

- 61% of Master and Deck Officers are aged up to 45 years;
- 84% are aged up to 55 years; and
- 94% are aged up to 60 years.

Based on these age groups, an approximate average age of 42 years can be calculated for the Master and Deck Officers working in the responding organisations.

Figure 45: Master and Deck Officer Seafarers working in the Australian maritime industry by age

Question 17 – n=38 responding organisations, by Master and Deck Officers

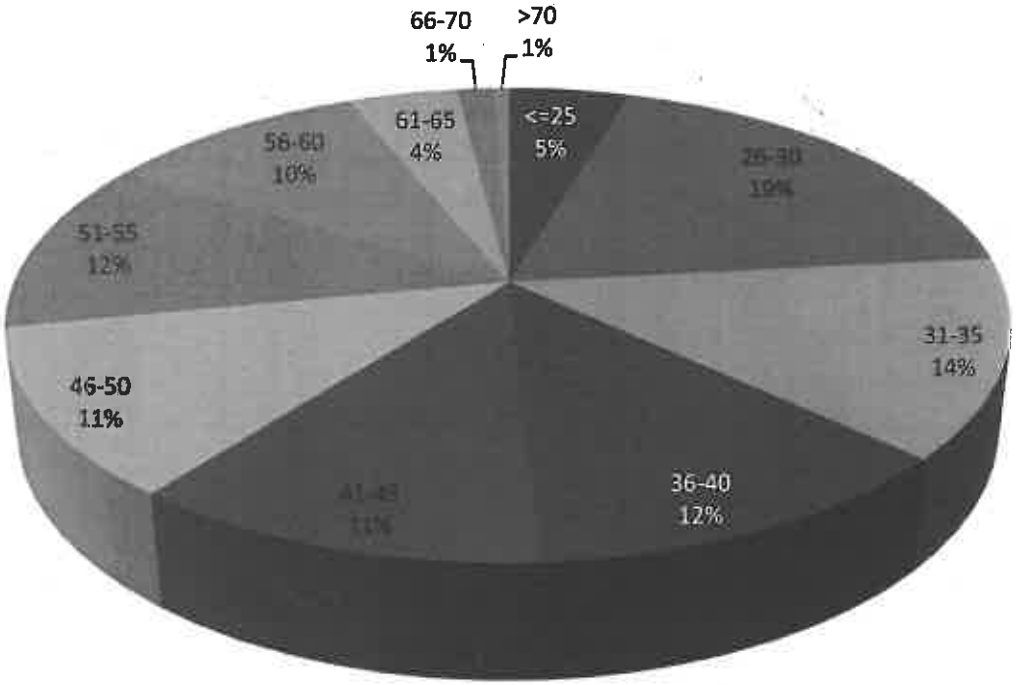
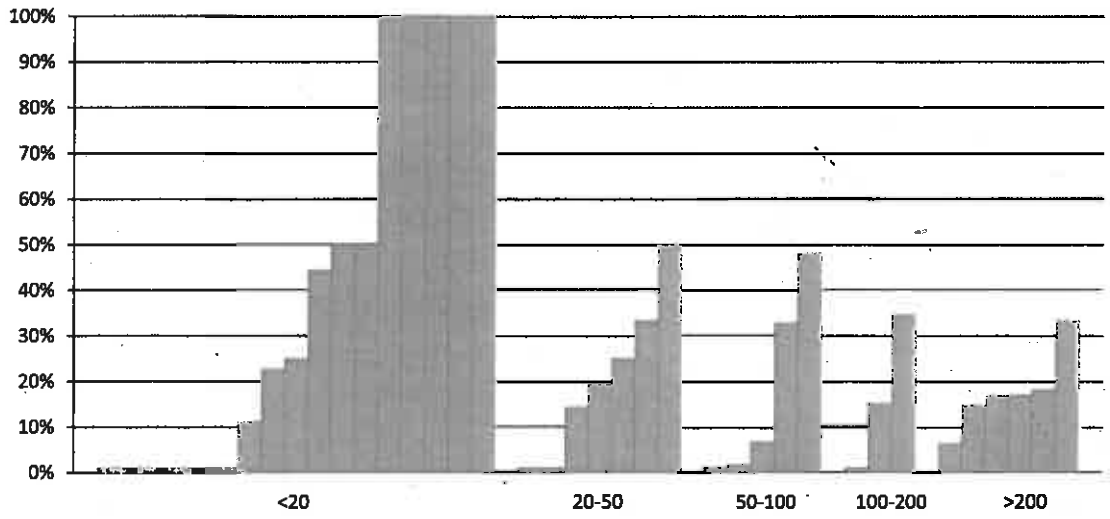


Figure 46 provides an analysis of the relationship between the size of the organisation and the proportion of Master and Deck Officers within the organisation that are aged over 55 years. Each column represents an organisation, and the groupings indicate the total number of seafarers (based on question 13) within the organisation.

- The chart shows that the proportion of Master and Deck officers who are aged over 55 years is generally lower the larger the organisation.
- For a number of smaller organisations (less than 20 seafarers), all of their Master and Deck Officers are aged over 55 years.

Figure 46: Percentage of Master and Deck Officer Seafarers aged over 55 within each organisation (grouped by total number of seafarers in organisation)

Question 13 & 17 – n=38 responding organisations



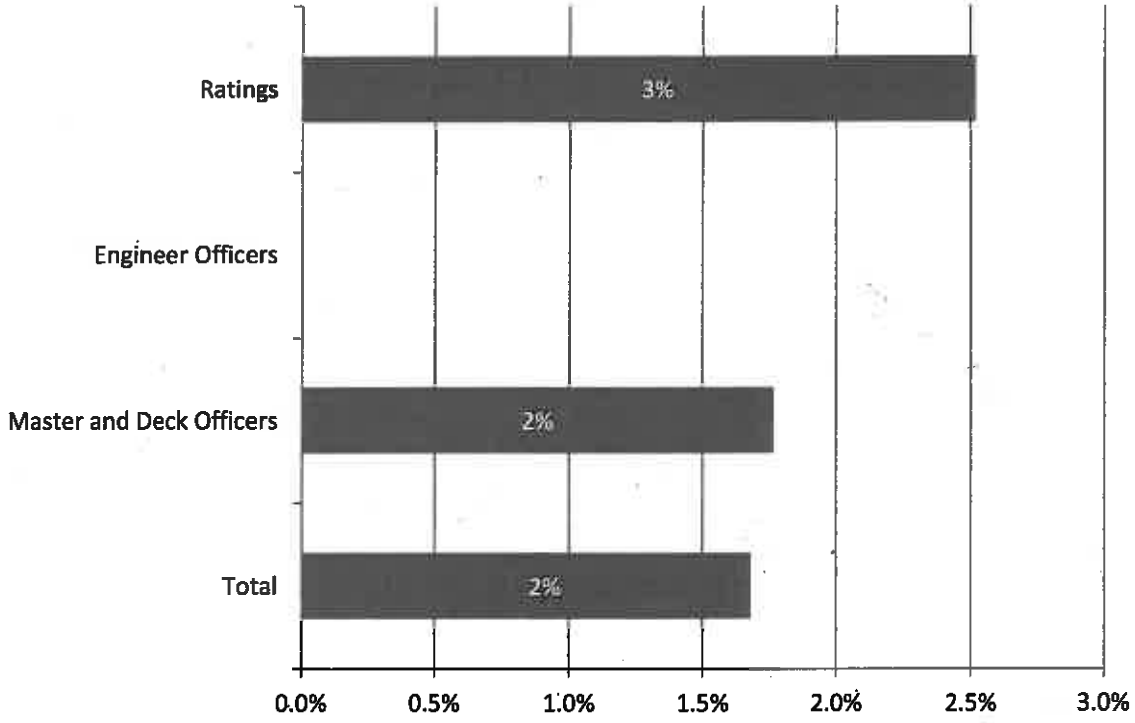
Organisations grouped by the number of seafarers directly employed (q13)

Aboriginal or Torres Strait Islander (ATSI)

Organisations were asked to provide the number of seafarers who had identified as being an Aboriginal or Torres Strait Islander. Across the responding organisations, around 2% of their seafarers have identified as being an Aboriginal or Torres Strait Islander, with around 3% of Ratings, none of the Engineers, and 2% of Master and Deck Officers (see Figure 47).

Figure 47: Percentage of Seafarers working in the Australian maritime industry who have identified as being an Aboriginal or Torres Strait Islander

Question 18 – n=19 responding organisations



G. Expected Growth of the Maritime Workforce

Responding organisations were asked to indicate the approximate number of seafarers they expected to have in their workforce as at 30 June 2013, 30 June 2015 and 30 June 2017.

These figures need to be treated as a broad indicator of possible requirements, and not a set of projections or forecasts.

- Several responding organisations and the Forum commented on the difficulty of making these types of forecasts, particularly given the 'lumpiness' of some large projects, whereby the requirements for a significant number of potential employees could hinge on the status of particular projects at that point in time.
- For the 2015 and/or 2017 figures, the expected number of seafarers was not provided for 13 organisations. To avoid having to factor in a 100% decline in workforce for these organisations, zero growth has been assumed for these organisations.

The expectations show an increase in seafarers from around 4,000 in 2012 to around 5,000 in June 2013, and up towards 6,000 in June 2015 and 2017, with approximately similar rates of growth for each of the Ratings, Engineers and Mast and Deck Officer groups (see Figure 48).

- Figure 49 to Figure 51 show the breakdown of expected workforce for each of the Ratings, Engineers and Master and Deck Officer classifications.

Figure 48: Number of seafarers expected within the organisation's workforce

Question 13 & 23 – n=65 responding organisations

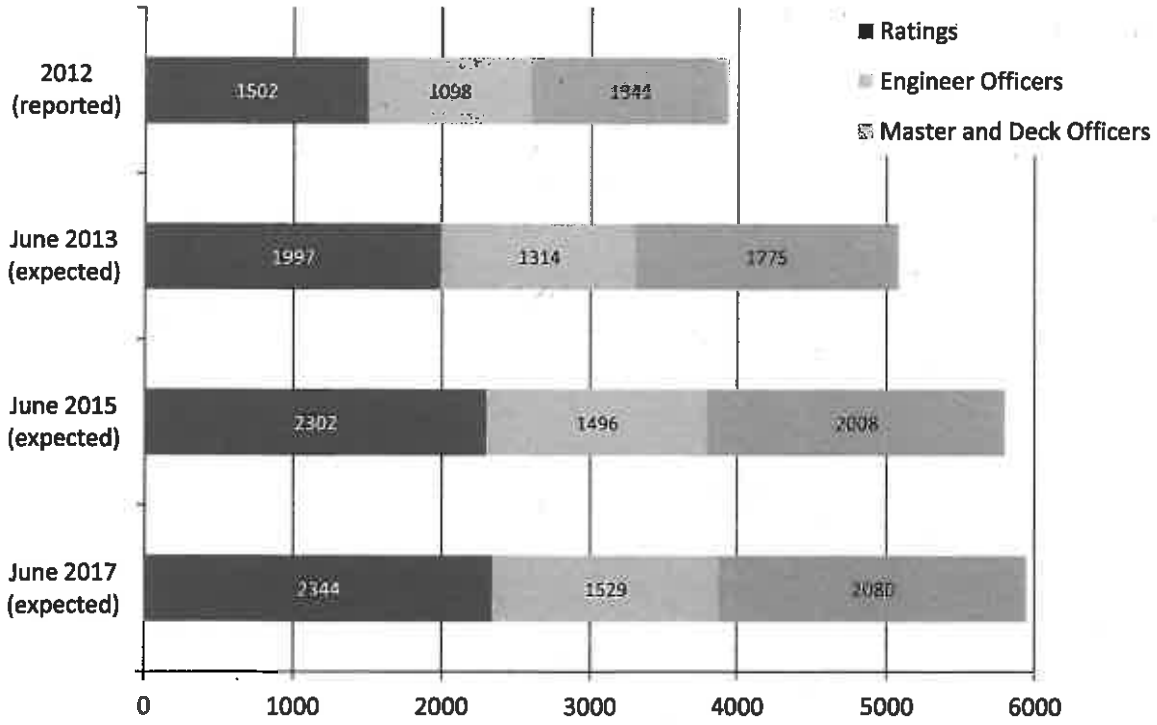


Figure 49: Expected number of Ratings

Question 23 – n=65 responding organisations,

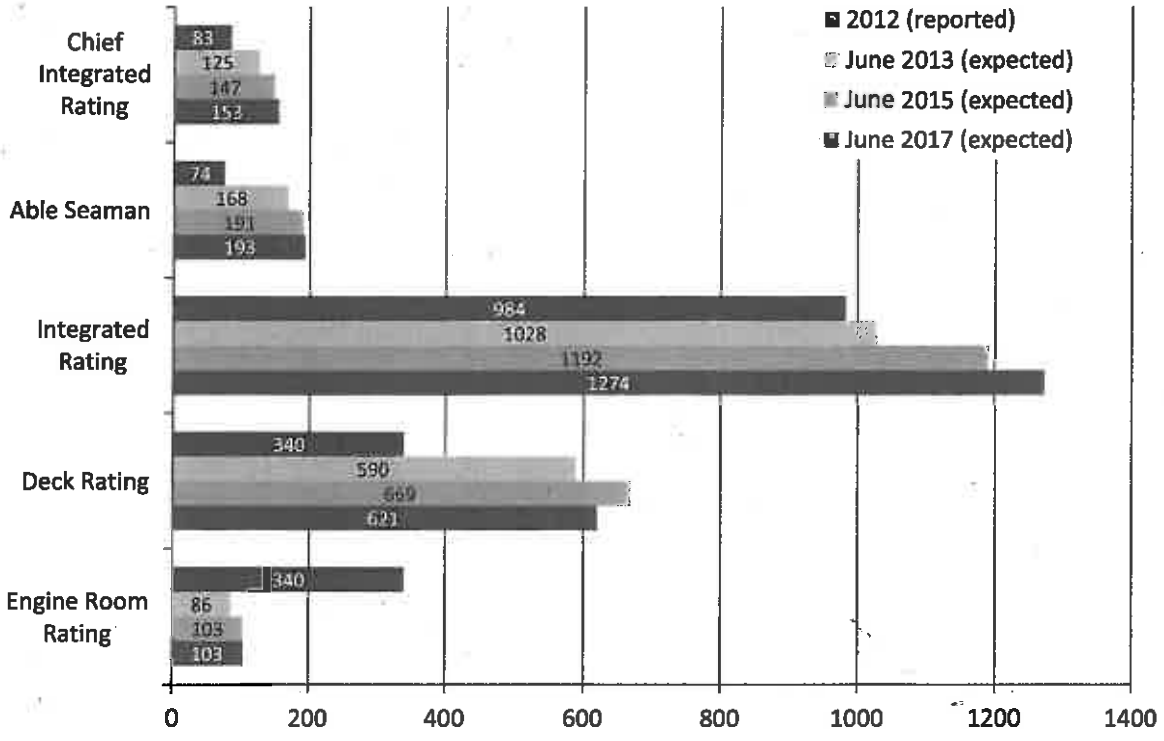


Figure 50: Expected number of Engineer Officers

Question 23 – n=65 responding organisations

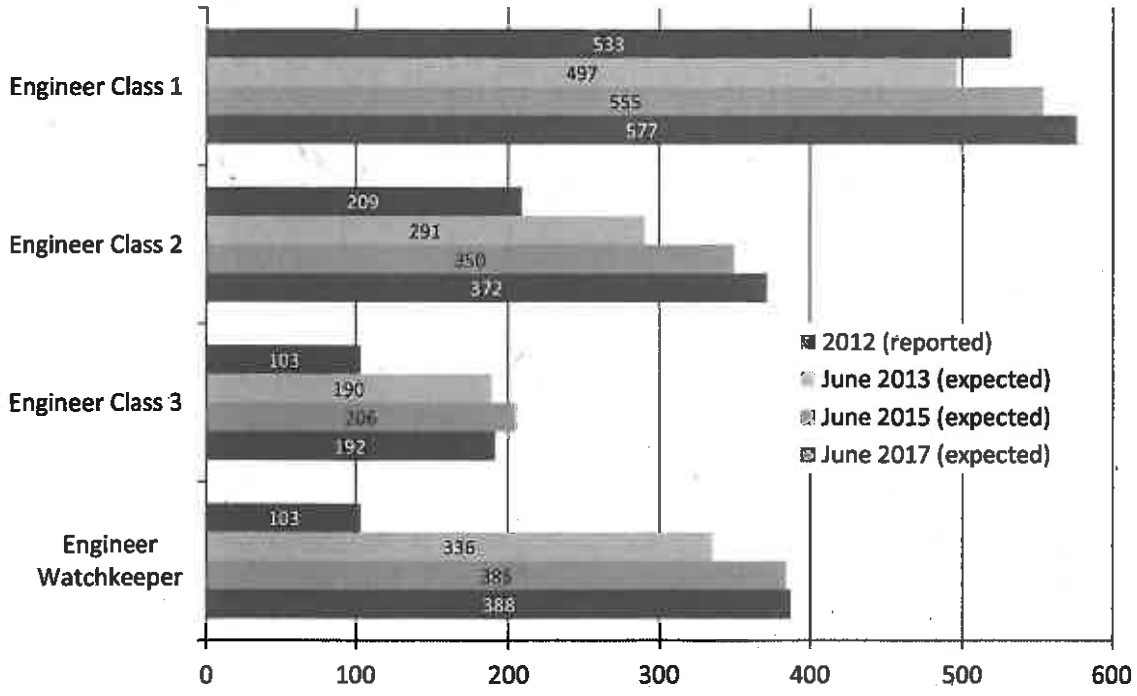
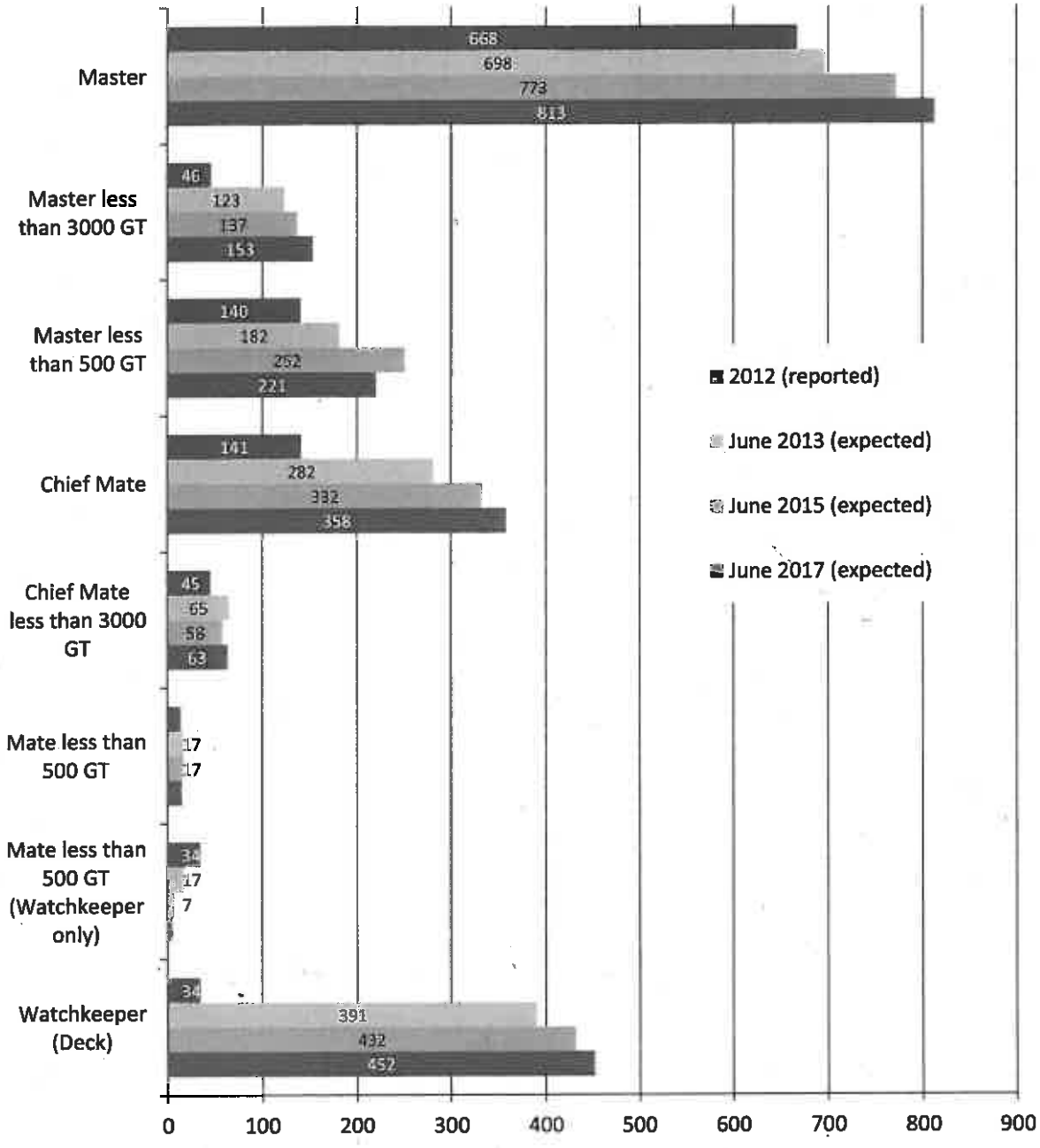


Figure 51: Expected number of Master and Deck Officers

Question 23 – n=65 responding organisations, by Master and Deck Officers



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H. Meeting the Requirements for the Expected Workforce

Various sections in the questionnaire sought information on the possible supply of seafarers to help meet the potential requirements outlined above. These include:

- the current supply of cadets and trainees;
- potential additional training berths that could utilised; and
- the expected number of cadets and trainees to be taken on in each of the next five years.

In addition, information provided by Forum members provides some intelligence on potential supplies of seafarers from unemployed seafarers and the Navy.

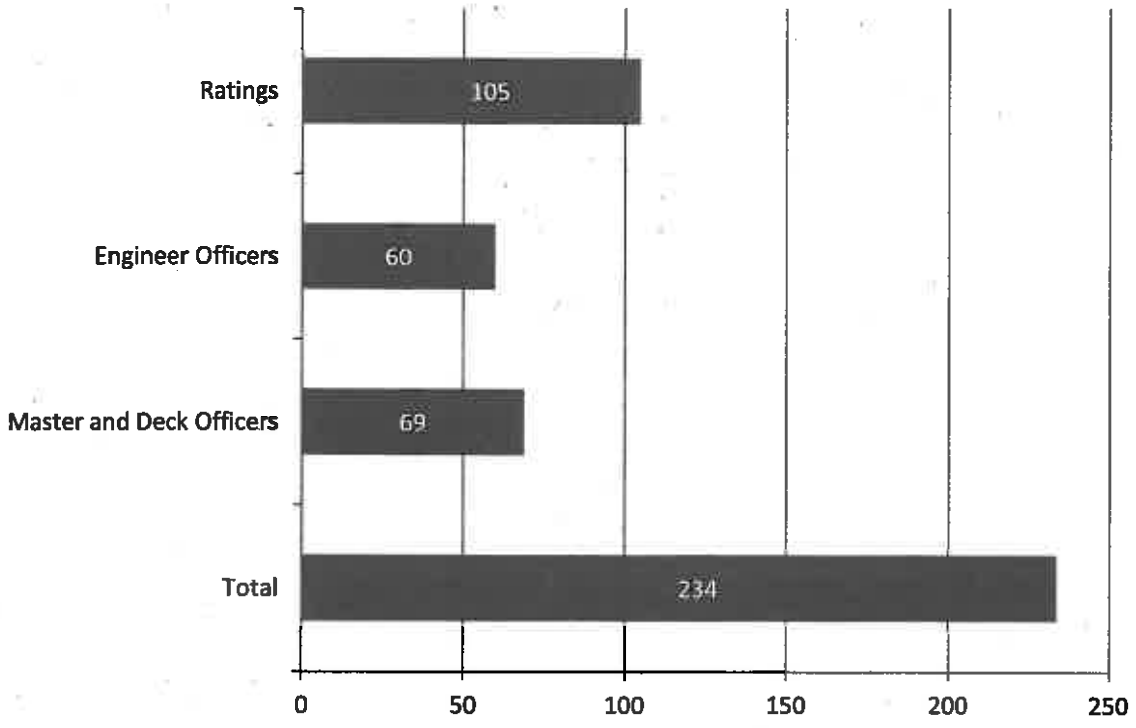
Current Cadets and Trainees

The responding organisations reported that they have 234 current cadets and trainees – or 6% of the total number of seafarers they directly employed (see Figure 52).

- Of these, 105 were Ratings cadets/trainees (7% of the total number of Ratings employed), 60 were Engineer cadets/trainees (5% of the total number of Engineer Officers), and 69 were Master and Deck cadets/trainees (5% of the total number of Master and Deck Officers).

Figure 52: Number of cadets and trainees working in the Australian maritime industry

Question 19 – n=32 responding organisations

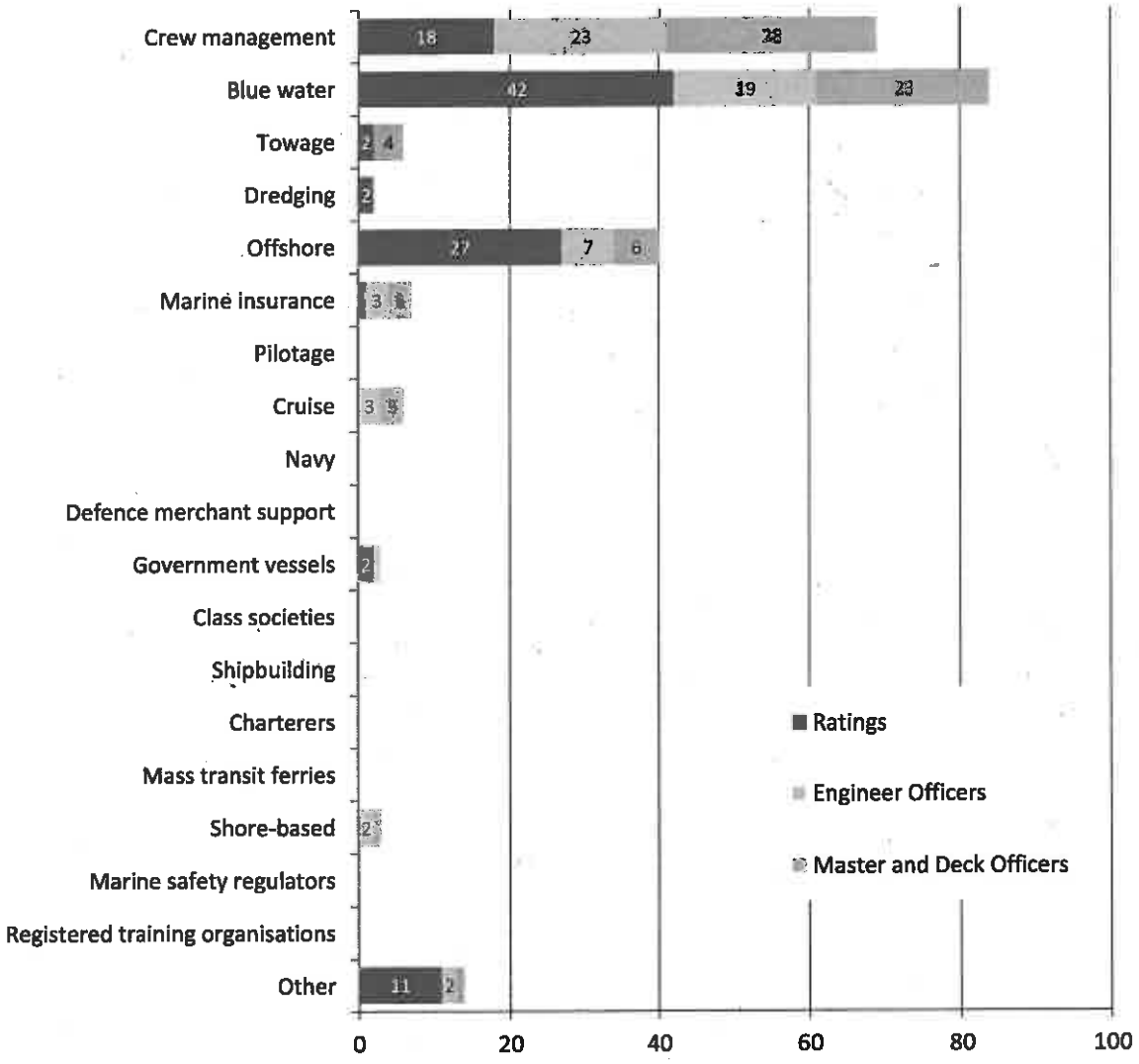


The largest number of cadets and trainees are in:

- Crew Management (n=69, which is 21% of the total number of seafarers employed in this sector);
- Blue Water (n=84, which is 9% of the total number of seafarers employed in this sector); and
- Offshore (n=40, which is 3% of the total number of seafarers employed in this sector) (see Figure 53).

Figure 53: Number of cadets and trainees working in the Australian maritime industry

Question 19 – n=32 responding organisations



Training Berths Available

Organisations were asked to indicate the total number of berths that were necessary for their maritime operational requirements (across all of their vessels)[7]. Excluding one large organisation[8], the total number of berths necessary for operational requirements is 2,235 (q20 – n=32 respondents).

Constraints raised by organisation in providing additional training berths included:

- Available space (nominated by organisations who together had around 1,100 berths);
- Cost (nominated by organisations who together had around 360 berths);
- Time (including not able to count seatime towards training) (nominated by organisations who together had around 100 berths);
- Qualified staff to provide practical training (nominated by organisations who together had around 70 berths);
- Supply of trainees (nominated by an organisation who had around 20 berths); and
- Safety/contract issues (nominated by organisations who together had around 40 berths).

If these constraints were addressed, respondents estimated that they could utilise an additional 202 training berths (q22 – 22 respondents).

[7] Crew management companies were not required to answer these questions on training berths.
[8] This organisation was excluded as their required number of berths for operational requirements numbered in the tens of thousands, and would skew the results.

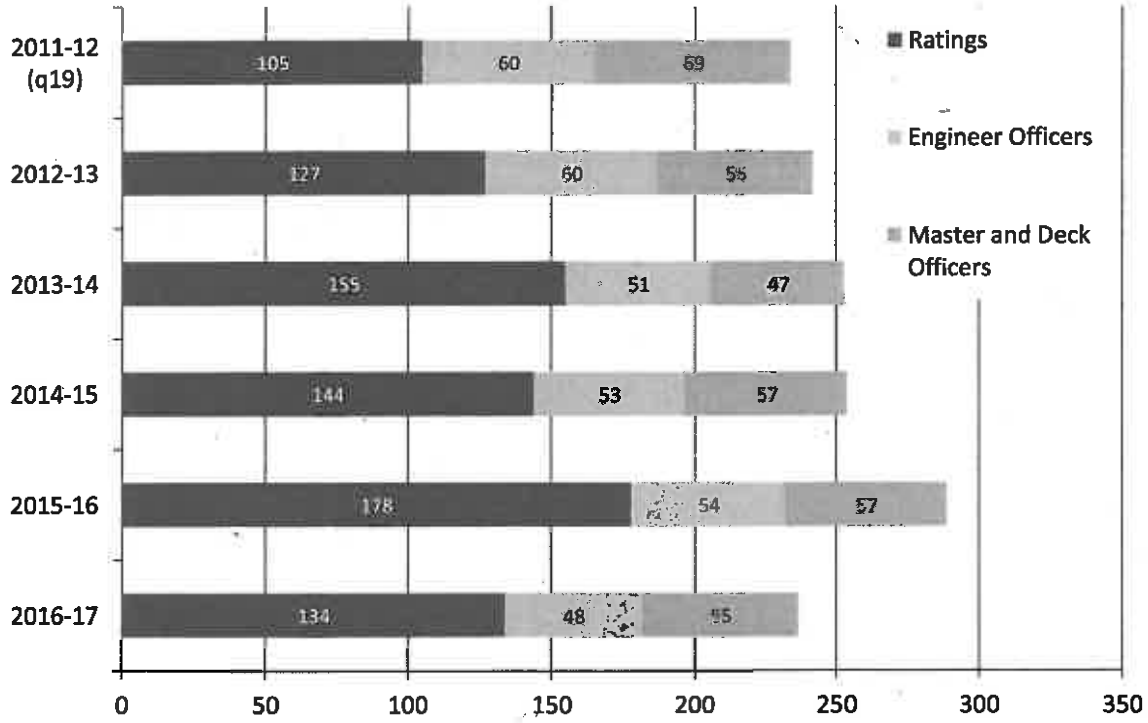
New Cadets and Trainees

The organisations were asked to indicate the number of cadets and trainees that they expected to take on in each of following five years. The estimates for the first three years are broadly consistent with the current number of cadets and trainees (see Figure 54), with slight growth rates of 3% and 5% for the first two years.

- As with the earlier discussions on the expectations for the overall size of the seafarer workforce in coming years, these figures need to be treated as a broad indicator of possible demand for cadets and trainees, and not a set of projections or forecasts (particularly for 2015–16 and 2016–17).

Figure 54: Number of new cadets and trainees expected to be taken on in each of the next five years

Question 19 & 24 – n=24 responding organisations



ORIMA RESEARCH

Meeting this expected demand

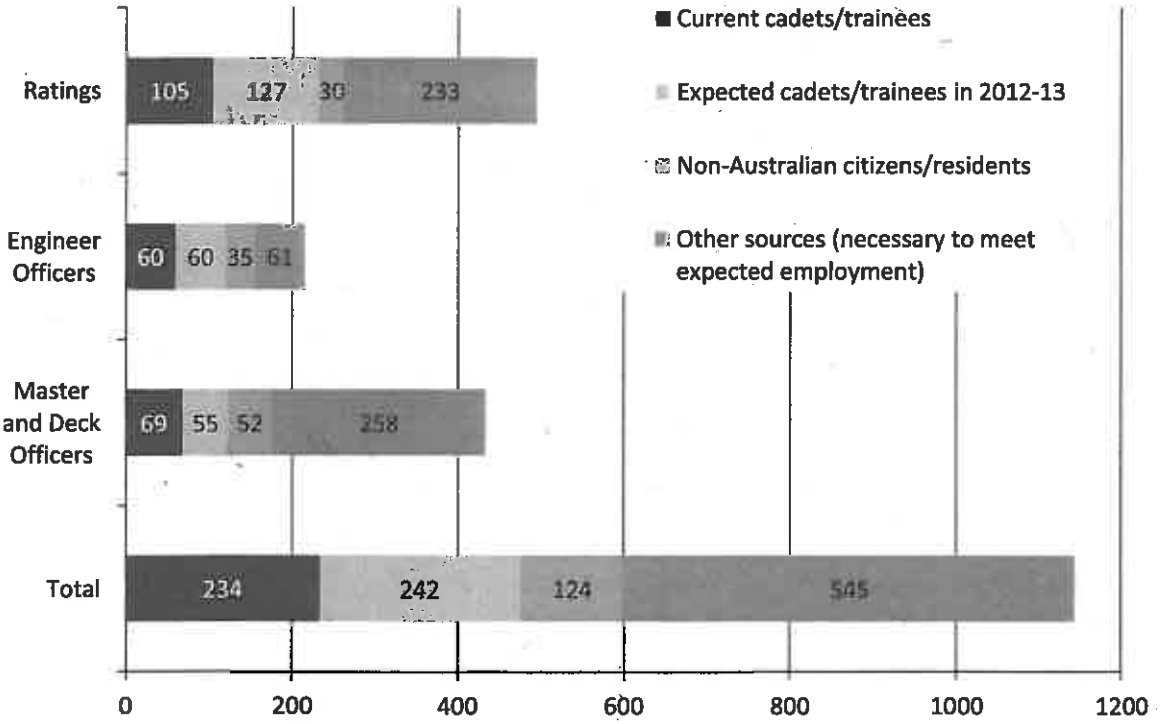
This section brings together the results of earlier discussions to explore the extent to which the expected demand for seafarers can be met from the expected stream of cadets and trainees, as well as other possible sources including on-shore staff, additional training berths, non-Australian citizens / residents, unemployed seafarers, and the Navy.

Expected demand to June 2013

As shown in Figure 48 earlier, the expected size of the workforce at June 2013 is 5,086, which implies an increase of 1,145 seafarers over the current workforce (n=3,941).

Up to 40% of this required increase could come from the current and expected population of cadets and trainees[9] (see Figure 55). A further 11% could come from non-Australian citizens/residents (based on their current share of the seafarers workforce). This leaves just under half of the expected workforce which would have to be found from 'other' sources. Most of this potential shortfall is in Ratings (n=233) and Master and Deck Officers (n=258).

Figure 55: Expected increase in seafarer workforce to June 2013



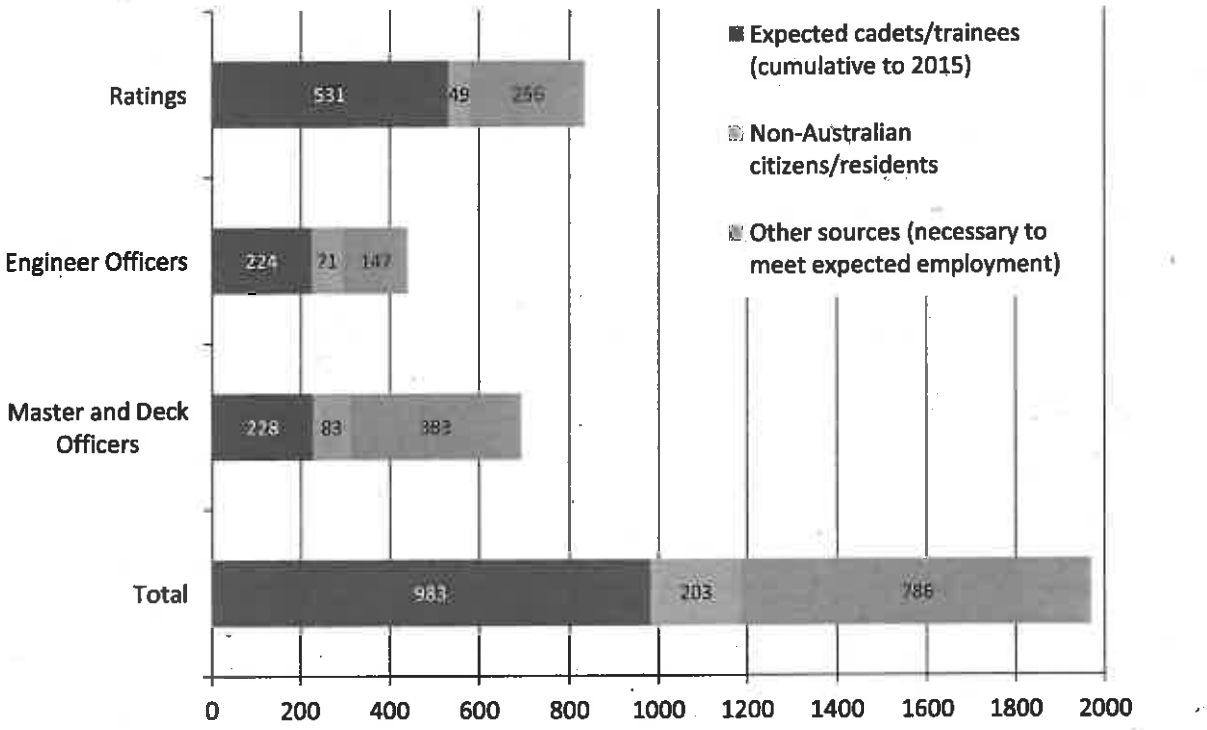
[9] Note that this is almost certainly an over-estimate of the number of cadets and trainees available to meet growth in the workforce, as some proportion of the current cadets and trainees would already be counted in the workforce, and not all of the 2012–13 cadet and trainee cohort would be considered to be part of the workforce by June 2013.

Expected demand to June 2015

For June 2015, the expected size of the workforce is around 5,800. Assuming the retirement of nearly 3% of the current workforce (based on the proportion of Ratings, Engineer Officers and Master and Deck Officers currently over the age of 65), the implied increase in the seafarer workforce from 2012 levels is nearly 2,000 seafarers (see Figure 56).

Nearly half of this expected growth could come from the cumulative number of cadets and trainees (as reported in Figure 54), primarily for the expected growth in Ratings. With an assumed further 11% coming from non-Australian citizens/residents (thus maintaining their current share of the seafarers workforce), this leaves around 40% of the expected workforce to be found from 'other' sources. Around half of this potential shortfall is in Master and Deck Officers (n=335).

Figure 56: Expected increase in seafarer workforce to June 2015

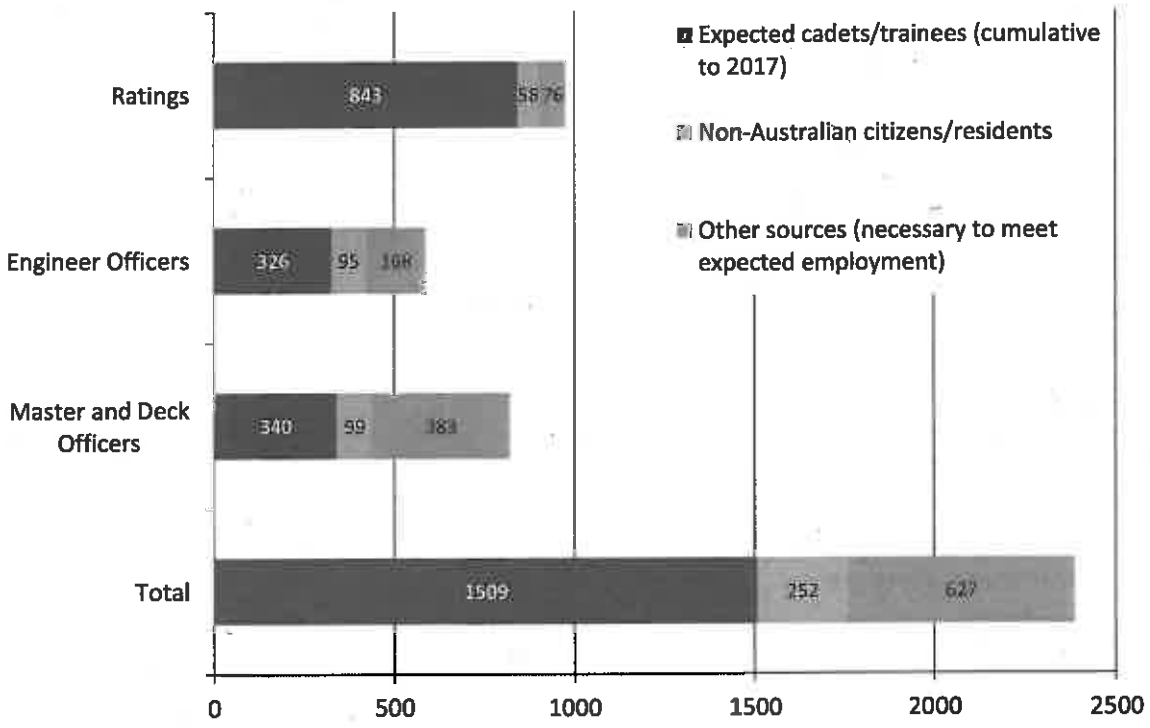


Expected demand to June 2017

For June 2017, the expected size of the workforce is nearly 6,000. Assuming the retirement of nearly 10% of the current workforce (based on the proportion of Ratings, Engineer Officers and Master and Deck Officers currently over the age of 60), the implied increase in the seafarer workforce from 2012 levels is nearly 2,400 seafarers (see Figure 57).

As with the growth to June 2015, more than half of this expected growth could come from the cumulative numbers of cadets and trainees (as reported in Figure 54), primarily for the expected growth in Ratings. With an assumed further 11% coming from non-Australian citizens/residents (thus maintaining their current share of the seafarers workforce), this leaves around one-quarter of the expected workforce to be found from 'other' sources. Just over half of this potential shortfall is in Master and Deck Officers (n=383).

Figure 57: Expected increase in seafarer workforce to June 2017



Important sources of intake

Responding organisations were asked to select the sources of intake that they consider would be important in the next three years. Consistent with the potential sources of intake discussed above, especially the use of shore-based staff and navy, around three quarters of respondents reported that an important source of intake in coming years would be the shifting of personnel from other areas of the maritime sector.

Figure 58: Important sources of intake in each of the following three years

Question 25 – n=68 responding organisations