Industry Skills Australia

Coordination of Sea Time
Final Report

August 2025

JSC Jobs and Skills Council
Transport and Logistics
An Australian Government Initiative

Contents

Executive summary

This report considers options aimed at effectively coordinating sea time nationally for trainee seafarers to complete the necessary training, as required under the International Convention of Standards Training and Certification and Watchkeeping (STCW)[1] and to obtain certification under the National Law Domestic Certificates of Competency (CoC)[2] issued by the Australian Maritime Safety Authority (AMSA)[3].

1 International Convention on Standards for Training Certification and Watchkeeping for Seafarers 1978, as amended

2 AMSA (Retrieved 2025) https://www.amsa.gov.au/qualifications-training/domestic-certificates-competency-cocs

3 AMSA (Retrieved 2025) https://www.amsa.gov.au/

The Strategic Fleet Taskforce, in its Final Report,[4] noted that:

ISA should work with industry to consider an appropriate mechanism to better coordinate on-the-job training to facilitate expedited access to appropriate vessels for seafarers to complete their mandatory training obligations to obtain STCW qualifications.

Coordinating sea time is also a priority action from the Maritime Industry 2025 Workforce Plan that states:

The lack of training berths limits opportunities to meet certification requirements.

This report incorporates technical information to support any further analysis that may be required for policy decision making. The report is structured to review sea time requirements in Australia and overseas, map career pathways for seafarers seeking STCW certification on board coastal and international vessels, develop options for sea time coordination for trainee seafarers and provides a set of recommendations based on stakeholder engagement and analysis undertaken.

Engagement with the maritime sector has provided insights into matters relating to coordination of sea time. A summary of stakeholder engagement undertaken is provided in **APPENDIX A I Stakeholder Engagement Summary**. Key concerns pertinent to coordination of sea time for trainee seafarers are collated below:[5]

- Trainee seafarers (deck cadets, engine cadets and trainee ratings) can be reluctant to invest in pre-sea training before they have been offered jobs as trainees by prospective employers
- Australian employers of seafarers would be more willing to employ trainees if they had greater confidence in the future availability of a skilled seafaring workforce. This sentiment reflects the high upfront training costs, particularly in the case of deck and engineer officers, where employers seek a return on their investment

4 Strategic Fleet Taskforce (2023) https://www.infrastructure.gov.au/sites/default/files/documents/strategic-fleet-taskforce-final-report.pdf

5 ISA industry consultation held across March to July 2025

- Noting the limited opportunities of operating Australian vessels, employing additional trainees in the absence of certainty of employment is not always commercially viable
- High upfront costs for trainee seafarers as well as employers often act as a disincentive.

Desktop research of sea time coordination pathways as part of seafarer training models in place in Canada, Denmark, the Netherlands, Norway, Philippines, Singapore, United Kingdom and the United States of America together with training models in place in Australia have been sampled for comparative analysis.

Cases studies together with the information from sampled jurisdictions and insights gained from stakeholder engagement in context of this report have been used to inform the **Multi-Criteria Analysis (MCA)** that has been applied to comparatively assess the different sea time coordination options in this report.

This report considers four coordination options and uses the MCA for comparative assessment of the options, noting that nothing in the sea time coordination options under consideration prevents seafarers, trainees and companies from continuing with the status quo:

Figure 1 | Summary of sea time coordination options

Using the MCA detailed in Section 8, each option is ranked comparatively as shown in Table 1. Two options ranked highly – a consortium of training service providers and an independent sea time coordinator.

Option One	Option Two	Option Three	Option Four
CTSPs	ISC	RA	SQ
33	35	20	12

Table 1 Comparative Assessment of proposed options based on MCA

Potential next steps

Potential next steps to be progressed based on the MCA are summarised below:

1: Progress CTSP and ISA models

Option One (CTSP Model) and Option Two (ISC Model) have been attributed scores that are higher than Option Three (Recruitment Agency Model) and Option Four (Status Quo). On this basis, it is recommended that CTSP and ISC models are further evaluated with the maritime sector.

2: Develop a feasibility business case

Assess the viability of the CTSP and ISC model in an Australian context by undertaking a feasibility business case. This includes stakeholder engagement to identify one preferred national sea time coordination model that may be suitable for a national pilot program.

3: Develop an implementation plan for a sea time pilot program

Develop an implementation plan for a national sea time coordination pilot program to train seafarers based on the skills that are in high demand.

4: Provide better visibility of seafaring as a career

Improve visibility of seafaring as a career pathway in conjunction with the National Maritime Skills Network, a collaboration of registered training organisations facilitated by ISA.

This recommendation is expected to be implemented by the program currently being delivered by the National Maritime Skills Network with an update to DEWR due in June 2026.

5: Collaborate with Australian Government agencies

Collaborate with Australian government agencies to understand their requirements for specific skills and regulatory hurdles that might be removed for trainee seafarers. Examples of such collaboration opportunities involve Australian Boarder Force (ABF) and Australian Defence Force (ADF).

This opportunity is expected to be examined in the Occupational Mobility for Defence project currently being delivered by ISA with findings and recommendations due in April 2027.

6: Leverage learnings from Commonwealth initiatives

When developing the pilot program for the national coordination of sea time, leverage learnings and insights gained by Department of Infrastructure, Transport, Regional Development, Communications, Sports and the Arts (DITRDCSA) through the works undertaken to support the Strategic Fleet and Maritime Industry Skills and Training Initiative (MISTI) which may be instrumental in maximising highest and best value for money.

7: Explore regional collaboration

Explore potential opportunities for regional collaboration with countries such as Pacific Island Countries,[6] New Zealand, Singapore, South Korea and Papua New Guinea to grow a regional seafarer workforce.

8: Trial innovative training methods

The pilot program should incorporate innovative methods of training delivery, such as use of simulation, that are in place in sampled jurisdictions such as Norway.

6 European Commission (Retrieved 2026) https://international-partnerships.ec.europa.eu/countries/pacific-islands-countries_en

Further actions

Subject to the outcomes of the feasibility business case and implementation plan, implement the National Sea Time Coordination Pilot Program over two phases as shown in Figure 2.

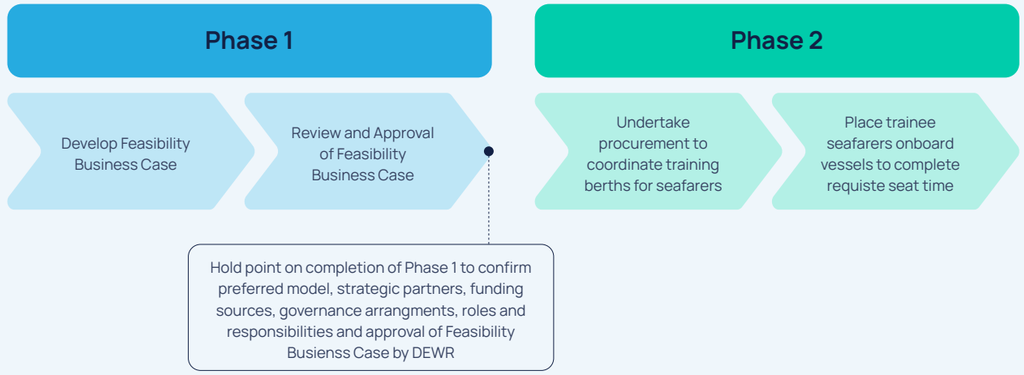


Figure 2 | National Sea Time Coordination Pilot Program

PHASE 1

Phase 1 involves the development of a feasibility business case to design and implement a program where trainee seafarers obtain actual sea time and complete shore-based training during Phase 2 of the program.

A feasibility business case would encompass all the above aspects and any other such considerations that may be relevant for implementing Phase 2. These considerations will determine viability of moving to Phase 2.

PHASE 2

Subject to resolution of considerations to be explored in the feasibility business case such as funding, commitment from strategic partners, implementation arrangements and governance, Phase 2 could progress a procurement process to facilitate trainee seafarers to complete their sea time. Phase 2 would be subject to an approval process by DEWR and any other relevant government agencies.

01

Introduction

The purpose of this report is to demonstrate the data and evidence for the scoping, designing and assessment of model options to support the effective coordination of coordination of sea time for qualifying seafarers for the Australian Maritime Industry.

This activity directly supports Recommendation 9 in the Government Response to the Strategic Fleet Taskforce Final Report 2023. It is also a key action from the Maritime Industry 2025 Workforce Plan.

Technical and industry advice collected by this report aims to assist the broader maritime industry to gain access to berths for trainee seafarers to complete qualifying seagoing service, which is a major barrier to maritime training.

The Government response to the Strategic Fleet Taskforce Final Report highlights the importance of working with industry to 'consider an appropriate mechanism to better coordinate on-the-job training to facilitate expediated access to appropriate vessels for seafarers to complete their mandatory training obligations to obtain STCW qualifications'.

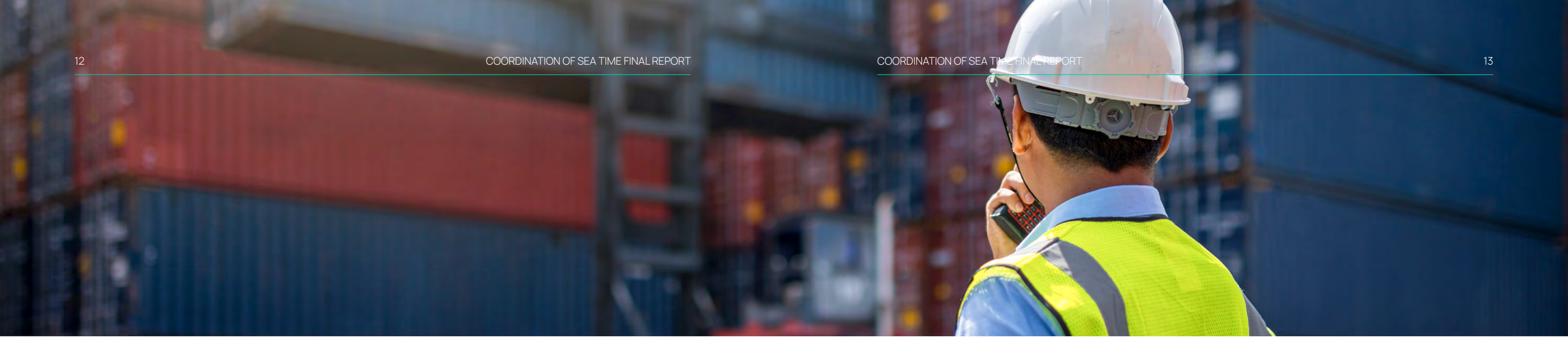
Establishing an agreed model for the effective coordination of sea time will support the development of the Strategic Fleet, crew requirements for the broader maritime industry and ongoing requirements of cadets and trainees.

The Maritime Industry 2025 Workforce Plan highlights limited availability of training berths as a major barrier to completing qualifying sea time. Without completing qualifying sea service, seafarers are unable to be AMSA certified and are unable to work in the industry. The inability to complete qualifying seagoing service to achieve AMSA certification makes it critical to start working on solutions to maximise access to training berths.

This report is intended to be used by multiple Federal and State government agencies and other government stakeholders including, and not limited to, the Department of Employment and Workforce Relations (DEWR) and the DITRDCSA.

This report builds on the Options Paper submitted to DEWR on 12 June 2025 and provides evidence-based recommendations for two options that are recommended to be progressed to the next phase, if approved by DEWR.

An abridged version of this report is expected to be released publicly (not more than two pages). This version will be used to highlight the data and evidence collected and includes the options from the Options Paper as well as the recommendations from this report.



1.1 Project methodology

The project was undertaken using the methodology outlined below:

- Identification of a broad representation of the maritime and education sectors from government and industry, including industry and subject matter experts, that need to be engaged through the consultative process.
- Confirmation of the occupational roles and the role of sea time in AMSA certification and AMSA approved nationally endorsed qualifications for these job roles.
- Desktop research and virtual consultation to confirm the international models currently used to facilitate sea time, key characteristics, and strengths/weaknesses.
- A review and analysis of the Australian regulatory framework currently being used to facilitate sea time to identify any regulatory limitations or points of tension.
- An analysis of the domestic models currently used to facilitate sea time and identify the key characteristics, strengths/weaknesses, any barriers or bottlenecks, and critical success factors.
- Development of an Options Paper to identify draft model options for the coordination of sea time using findings from research and consultation and validated with industry.
- Preparation of a Final Report based on the research, analysis, and consultative findings.

This report is the last deliverable for the Coordination of Sea Time Project to develop options to improve coordination of training berths for seafarers seeking to complete requisite sea time to achieve STCW qualifications.

1.2 Stakeholder engagement approach

A wide range of maritime sector stakeholders were engaged to inform the Coordination of Sea Time model options. Stakeholders engaged included registered training organisations, group training organisations, port authorities, vessel owner and operators, crew management services organisations, industry associations, unions, state and federal government departments and agencies, and AMSA.

Stakeholder engagement commenced in March 2025 and continued until late July 2025. Over 38 engagement sessions were conducted during this time, including face to face and online meetings with groups or individuals. All states and territories were represented in the engagement meetings. The gender balance of stakeholders was significantly higher than in the maritime workforce.

Due to the complex nature of the subject matter, desk-based research informed the early development of concepts to coordinate sea time that were further developed with stakeholders during engagement sessions.

The agile approach to engagement was implemented to capture a set of valued principles by stakeholders. Consultation with stakeholders was dynamic (one meeting per stakeholder group) and some stakeholders had more than one meeting. Initial meetings with stakeholders uncovered sea time complexities, which required further investigation, then further consultation. At times during the development of the options and recommendations, it was important to bring different stakeholders together. This was to ensure that the proposals in the report could work within Australia and for all stakeholder groups.

A summary of stakeholder engagement undertaken with quotes and insights on the value stakeholders seek from a national model are summarised with further detail available in **APPENDIX A I Stakeholder Engagement Summary**.

02

High-demand maritime occupations

The Maritime Industry 2025 Workforce Plan[7] highlights the high demand roles for domestic and internationally qualified seafarers holding STCW qualifications.

Figure 3 summarises occupations in high demand as noted in the Maritime Industry 2025 Workforce Plan.

Occupation title	2021	2022	2023	2024
Deck Hand	NT	NSW, NT	NSW, NT, QLD	NT, QLD, SA
Marine Surveyor		VIC, WA		WA
Marine Transport Professionals nec		VIC		NSW, WA
Ship's Engineer	NT	NT, VIC, WA	AUST	AUST
Ship's Master	NT	NT, VIC, WA	NT, QLD	AUST
Ship's Officer		VIC, WA	NSW	NSW, WA

Figure 3 | Maritime Occupations in Shortage

This report outlines the pathways for seafarers to obtain STCW certification as required by AMSA for domestic and international qualifications. The options considered in this report for coordination of sea time for seafarers seeks to improve the current arrangements in place for seafarers to gain access to training berths.

7 Industry Skills Australia (2025) https://www.industryskillsaustralia.org.au/2025-workforce-plans/

03

Australian regulatory framework

This section provides a broad overview of the Australian regulatory framework, in addition to STCW requirements as it relates to sea time.

The Navigation Act provides the legislative power for Australia to implement the following treaties developed by the International Maritime Organization (IMO), the International Labour Organization and United Nations Conferences:[8]

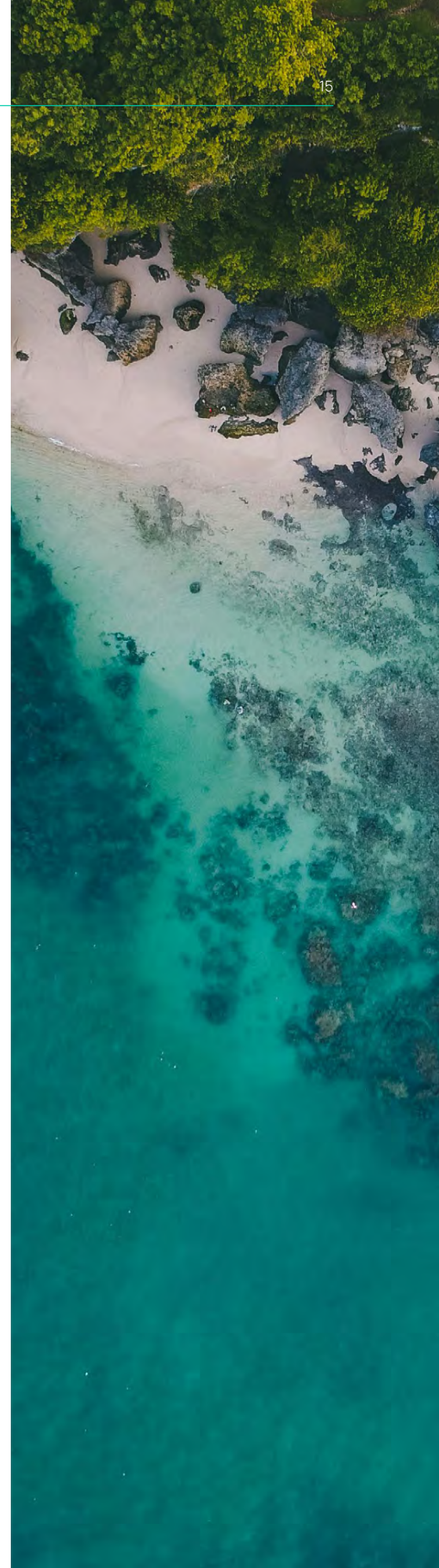
- International Convention for Standards of Training, Certification and Watchkeeping for Seafarers (STCW)[9]
- Maritime Labour Convention (MLC)[10]
- International Convention on Load Lines (Load Lines)[11]

8 AMSA (2025) https://www.amsa.gov.au/sites/default/files/amsa242-watchkeeping-standards.pdf

9 AMSA (2013) https://www.amsa.gov.au/sites/default/files/amsa242-watchkeeping-standards.pdf

10 International Labour Organisation (Retrieved 2025) https://www.ilo.org/international-labour-standards/maritime-labour-convention-2006

11 International Convention on Load Lines, 1966 [1968] https://www.austlii.edu.au/cgi-bin/viewdoc/au/other/dfat/treaties/1968/23.html



- International Convention for the Safety of Life at Sea (SOLAS)[12]
- Convention on the International Regulations for Preventing Collisions at Sea (COLREGS)[13]
- International Convention for Safe Containers (CSC)[14]
- International Convention on Tonnage Measurement of Ships[15]
- International Convention for the Prevention of Pollution from Ships (MARPOL)[16]
- Convention on Limitation of Liability for Maritime Claims[17]
- International Convention on Salvage[18]
- United Nations Convention on the Law of the Sea (UNCLOS)—only certain parts.[19]

Figure 4 provides an overview of the role AMSA plays in maritime regulation in Australia. Amongst other functions, AMSA is responsible for maintaining standards of training and certification of seafarers onboard commercial vessels.

Figure 4 Role of AMSA in maritime regulation

12 International Convention for the Safety of Life at Sea, 1974 [1983] https://www.austlii.edu.au/cgi-bin/viewdoc/au/other/dfat/treaties/1983/22.html
13 COLREG 1972 (Consolidated edition, 2018) https://www.samgongustofa.is/media/log-og-reglur/COLREG-Consolidated-2018.pdf
14 International Convention for Safe Containers (1972) https://treaties.fcdo.gov.uk/awweb/pdfopener?md=1&did=67813
15 Multilateral International Convention on tonnage measurement of ships (1969) https://treaties.un.org/doc/Publication/UNTS/Volume%201291/volume-1291-I-21264-English.pdf
16 MARPOL (Retrieved 2025) https://www.imo.org/en/about/conventions/pages/international-convention-for-the-prevention-of-pollution-from-ships-(marpol).aspx
17 Multilateral Convention on limitation of liability for maritime claims (1976) https://treaties.un.org/doc/Publication/UNTS/Volume%201456/volume-1456-I-24635-English.pdf
18 International Convention on Salvage (1989) https://law.uq.edu.au/files/36530/A13-Salvage-Convention-1989.pdf
19 UNCLOS (Retrieved 2025) https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf

The Seafarers Act establishes a workers' compensation and rehabilitation scheme for seafarers employed on ships engaged in trade within Australia and in international waters. Key purpose of the Seafarers Act is to ensure that seafarers who suffer injuries or illness due to their work receive financial support and rehabilitation services to help in returning to health and employment.[20]

The Seafarers Act is part of the Seacare Scheme that provides accreditation services to training providers offering occupational health and safety training for **health and safety representatives** (**HSR**).[21]

AMSA is primarily responsible for governing the regulatory framework for seafarer training. These responsibilities include compliance with international and national standards for training and certification of seafarers, including and not limited to, sea time requirements.

Key regulations and standards in relation to seafarer training requirements and standards are outlined below:

- Marine Orders[22]
- Domestic Qualifications[23]
- Seacare Scheme for HSR[24]

Whilst training of HSR under the Seacare Scheme is not directly related to seafarer certification, the role of HSR in ensuring seafarer wellbeing is a critical consideration for seafarers joining and continuing their sailing careers and has therefore been included for completeness.

Different regulations and standards are designed to ensure adequate controls are in place, amongst other factors, to ensure seafarer training standards are maintained. However, this can be a complex process for individuals to navigate, particularly when considering seafaring as a career option.

20 Seacare (2026) https://www.seacare.gov.au/
21 Seacare (2025) https://www.seacare.gov.au/roles/training-providers
22 AMSA (2023) https://www.amsa.gov.au/about/regulations-and-standards/conventions-underpinning-marine-orders
23 AMSA (Retrieved 2025) https://www.amsa.gov.au/qualifications-training/domestic-certificates-competency-cocs
24 Seacare (2025) https://www.seacare.gov.au/about-us/about-the-seacare-authority

The following key insights in relation to the seafarer training system have been raised by stakeholders:

Complexity of training requirements[25]

Marine Orders and National Law exemptions can be difficult to navigate. This often leads to administrative challenges for training providers and seafarers. Trainee seafarers often seek clarity of career pathways when considering seafaring as a career option and in absence of the right guidance, can find it difficult to navigate different pathways and requirements.

AMSA provides guidance on obtaining a CoC for working on a commercial vessel in Australian Waters. These are primarily related to Domestic Commercial Vessels (DCV). Information about the exemptions list of RTOs and types of certificates required is also provided.[26]

25 AMSA (Retrieved 2025) https://www.amsa.gov.au/about/regulations-and-standards

26 AMSA (2025) https://www.amsa.gov.au/qualifications-training/domestic-qualifications/steps-getting-certificate-competency

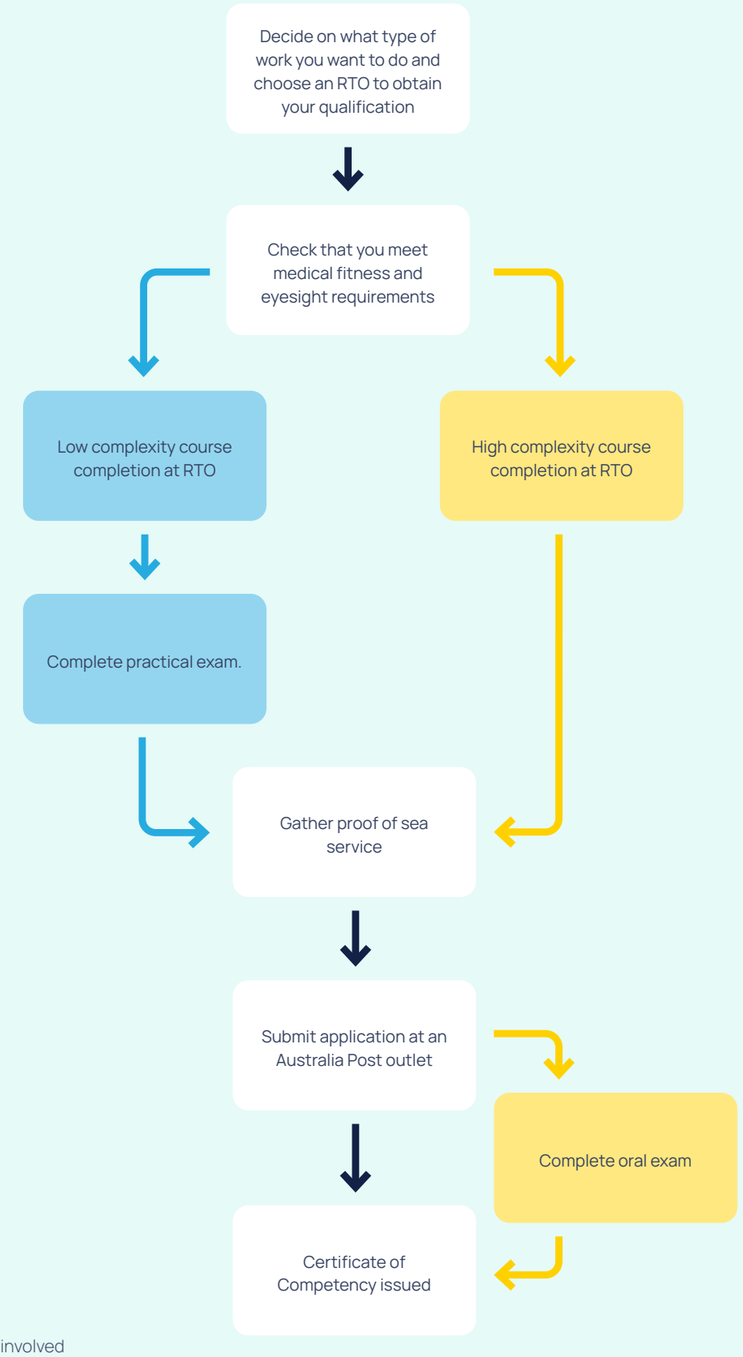


Figure 5 Steps involved in obtaining CoC on domestic vessels

Figure 6 provides an overview of the complexity faced by trainee seafarers when seeking employment with organisations that can provide them with the necessary sea time recognised by AMSA. This must be done in parallel when considering RTOs who can provide the necessary training whilst simultaneously working out funding sources for accommodation and living expenses when attending college and sitting the required exams.

Trainee seafarers must also remain abreast of any changing requirements in relation to seafarer training standards to ensure their CoC remains valid for the intended purpose. This becomes more pertinent since not all RTOs are required to be approved by AMSA.

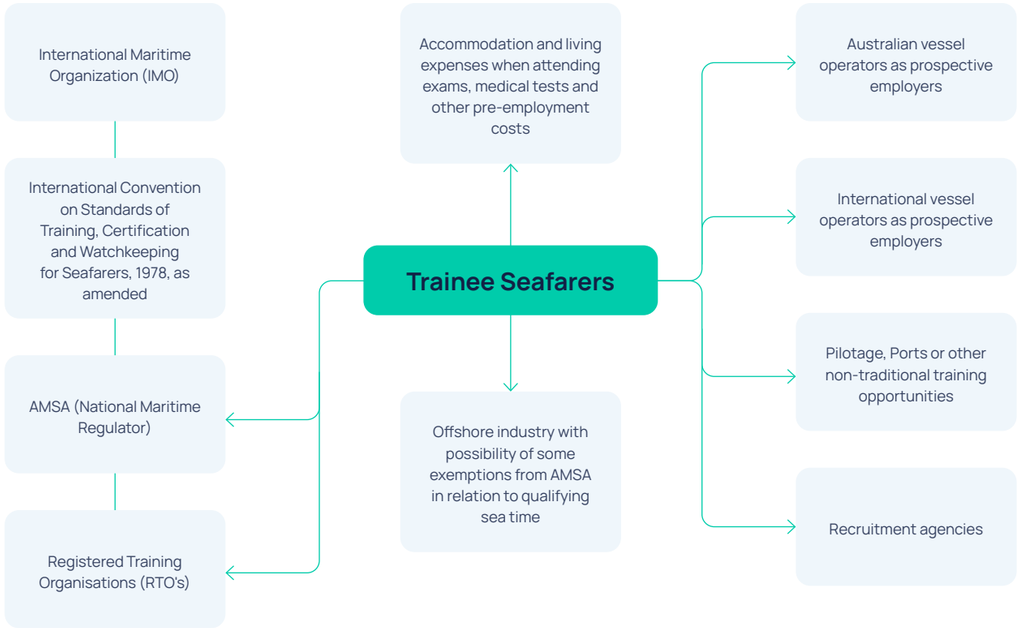


Figure 6 Trainee Seafarer Training Complexity | Overview

If an RTO delivers training for a CoC issued under the Navigation Act, the RTO must be approved by AMSA.[27]

If an RTO delivers training under National Law, the training needs to comply with Australian Skills Quality Authority (ASQA) requirements.

Maritime training that does not lead to AMSA-issued CoC only needs to comply with Australian Skills Quality Authority (ASQA) requirements.[28]

27 AMSA (Retrieved 2026) https://www.amsa.gov.au/qualifications-training/training-organisations
28 ASQA (2026), https://www.asqa.gov.au/

Such nuances can be tricky to navigate for trainee seafarers considering seafaring as a career option.

Access to training berths

The training model in Australia does not offer a coordinated approach for trainee seafarers to be able to access training berths to complete the requisite sea time. This problem can be exacerbated for trainees seeking access to international vessels.

Further, upfront costs incurred by trainee seafarers can be expensive as it can involve travel, accommodation and certification fees that must be paid upfront by trainee seafarers before they can meet minimum requirements to be placed on board vessels as trainees.

Availability of training berths depends on industry demand. In the absence of training berths being available on-board international vessels, trainee seafarers can explore alternatives such as in the offshore industry. However, this creates an added complexity where it is necessary for AMSA to exercise discretion or equivalence in terms of how the sea time is recognised for STCW compliance.[29]

Variance in training standards

AMSA sets the standards and minimum requirements for personnel to obtain STCW certification or certificates under the Navigation Act 2012 and domestic certificates under the National Law Act 2012.

Further, the Companion Volume Implementation Guide[30] provides details of the Units of Competency and their Assessment Requirements that must be achieved to award Australian Qualifications Framework (AQF) qualifications.

It can be quite complex for trainee seafarers to understand which training providers are best suited to provide the requisite training. From the training provider perspective, it is conceivable that not every training provider can provide training for all AQF qualifications in the MAR Maritime Training Package.

This places the onus on the trainee seafarer to navigate the complexity of finding the most appropriate training provider where they can meet AMSA requirements to obtain the necessary certification on completion of training.

Health and safety concerns

The Seacare Act provides a mechanism for seafarers' wellbeing. Ongoing discussions about improving seafarer welfare for seafarers on international vessels are proposed to be included.[31]

However, access to ongoing support such as pastoral care and other aspects of seafarer wellbeing appear to be inadequate when trainee seafarers are comparing careers options with other non-maritime industries.

29 AMSA (2026) https://www.amsa.gov.au/qualifications-training/sea-service-and-task-books/qualifying-near-coastal-sea-service
30 Industry Skills Australia (2025) https://training.gov.au/api/files/org/17a128dc-007f-4762-b9ad-483a056f1803/3793d6e8-96db-492e-811b-08665bd00775.pdf
31 Seacare (2025) https://www.seacare.gov.au/about-us/news/march-2025-meeting-outcomes

04

Role of AMSA in Seafarer Certification

STCW Convention is a global framework established by the International Maritime Organization (IMO) to ensure uniform training and competency standards for seafarers worldwide.

The STCW Code ensures uniformity in maritime training worldwide and helps seafarers meet international safety and operational standards. It has undergone multiple amendments, including the 2010 Manila Amendments, which introduced stricter competency and safety measures.[32]

Australia is a member of the IMO and a signatory to the STCW Convention. Through the Navigation Act 2012 (Cth), AMSA has been assigned the responsibility to ensure compliance with the STCW Convention (See Section 3 Australian regulatory framework for further details).

Amongst other functions, AMSA has the responsibility to ensure Australia remains compliant with the STCW Convention and is critical in maintaining high quality standards of seafarers holding a CoC issued in Australia.[33, 34]

32 IMO (Retrieved 2025) https://www.imo.org/en/ourwork/humanelement/pages/stcw-conv-link.aspx

33 IMO (Retrieved 2025) https://www.imo.org/en/ourwork/humanelement/pages/stcw-conv-link.aspx

34 IMO (2021) https://wwwcdn.imo.org/localresources/en/OurWork/HumanElement/Documents/MSC.1-Circ.1163-Rev.13%20-%20Parties%20to%20the%20STCW%20Convention.pdf

A Registered Training Organisation (RTO) approved by AMSA can deliver courses for domestic certification training and international certification training, but AMSA has no oversight of the quality of training for domestic seafaring.

Domestic certification training is for a CoC issued under the Marine Safety (Domestic Commercial Vessel) National Law Act 2012 (Cth). International certification training is for a CoC issued under the Navigation Act 2012 (Cth).

For some practical assessment activities, RTOs may require AMSA approval.[35]

Applicable STCW standards that apply to AMSA approved RTOs are:[36]

- Regulation I/6 Training and Assessment, STCW Code Section A-I/6 and Section B-I/6 Guidance regarding training and assessment.
- Regulation I/8 Quality Standards, STCW Code Section A-I/8 and section B-I/8 Guidance regarding quality standards.
- Regulation I/12 Use of Simulators, STCW Code Section- A-I/12 Standards governing the use of simulators and STCW Code Section B- I/12 Guidance regarding the use of simulators.
- RTOs are required to comply with one or both regulatory requirements including all STCW courses to be approved must be listed on the RTO scope of registration as follows:
    - Higher education sector complies with the Tertiary Education Quality and Standards Agency's (TEQSA)[37] / Higher Education Standards Framework (Threshold Standards) 2015.[38]
    - Vocational Education and Training (VET) comply with Australian Skills Quality Authority's (ASQA).[39]

Additionally, AMSA is committed to reducing administrative barriers for RTOs by recommending that STCW standards are included in RTO Standards. This is in addition to AMSA accepting ASQA and TEQSA standards.

This is particularly relevant since AMSA aims to ensure that under all circumstances, the STCW Code and IMO model courses take precedence in the event of any interpretation of course outcomes and content.

35 AMSA (2023) https://www.amsa.gov.au/qualifications-training/training-organisations/performing-assessments-amsa-approved-final-assessor
36 AMSA (2025) https://www.amsa.gov.au/qualifications-training/training-organisations/stcw-training-and-assessment-quality-standards-and
37 TEQSA (Retrieved 2025) https://www.teqsa.gov.au/
38 Higher Education Standards Framework (Threshold Standards) (2011) https://www.legislation.gov.au/F2012L00003/latest/text
39 ASQA (Retrieved 2025) https://www.asqa.gov.au/rtos/2025-standards-rtos

4.1 Domestic and International Certification

This section outlines the possibilities for seafarers to transition from domestic certification to international certification.

Table 2 below provides a summary of Near Coastal (NC) and International STCW CoC issued by AMSA and the number of seafarers holding a respective CoC as of 06 December 2024.[40]

Table 2 I Summary of Near Coastal and International STCW CoC issued

	NC Certificates	NC Seafarers	STCW Certificates	STCW Seafarers
Deck	33,264	30,589	2,525	2,269
Engine	13,135	12,704	1,972	1,712
Total	**46,399**	**32,268**	**4,497**	**3,981**

The number of CoC issued for Near Coastal seafarers is significantly higher than the number of International CoC issued. This is because it is common for seafarers to hold dual engineering and deck certification in the domestic shipping industry in Australia.

Seafarers that have both deck and engine CoC are counted in both the deck and engine category, while the total represents the total number of seafarers. Hence, the total number of domestic CoC issued by AMSA and valid on 06 December 2024 is higher than the number of domestic qualified seafarers.

The total number of seafarers with Domestic CoC listed is lower than the individual number of seafarers holding Deck and Engine CoC. Figures conform to Marine Orders 505 issued 1 January 2023.[41]

40 AMSA (2025) https://www.amsa.gov.au/seafarer-certification-annual-statistics
41 AMSA (2025) https://www.amsa.gov.au/about/regulations-and-standards/marine-order-505-certificates-competency-national-law

In other words, for every seafarer with International CoC issued by AMSA, there are eight seafarers with Domestic CoC which provides a potential opportunity to increase the number of Australian seafarers with International CoC.

Seafarers can pursue a CoC that enables them to sail on board domestic as well as international vessels. Although closely aligned, Near Coastal CoCs do not fully comply with STCW requirements and primarily cater to domestic operations within the Australian Exclusive Economic Zone (EEZ), including inland waters. Transition from Near Coastal to STCW CoCs requires further training. Training and certification for seafarers to have this ability is overseen by AMSA and is outlined below.

Pursuing a Near Coastal Qualification[42] opens several opportunities for seafarers to work on board different vessel types. Such opportunities can be included as part of increasing industry awareness **(see Potential next steps in Section 9 in this document)** about the maritime industry and seafaring as a career choice. For example, Master of a domestic vessel less than 100 meters in length can undertake necessary training and examinations to become a Chief Mate on board a vessel less than 3000 GT and then to Master Class 1 on board international vessels.

Engineer officers have similar pathways available. Engineer Class 3 Near Coastal can move to the position of Engineer Watchkeeper on international vessels on successful completion of training and examinations as required by AMSA.

42 AMSA (2026) https://www.amsa.gov.au/qualifications-training/sea-service-and-task-books/qualifying-near-coastal-sea-service

4.2 Sea Time requirements for high demand roles

4.2.1 Deck Officers and Master Mariners I International Certificate[43]

Deck officers typically progress to become Master Mariners. The CoC held by seafarers determines the type of ships they can work onboard and the highest rank they can be employed for. As an example, a seafarer holding a Master Class 1 CoC can sail on board a vessel as a Watchkeeper Deck. However, a seafarer holding a Watchkeeper Deck CoC cannot sail as Master on board a vessel. The sea time requirements for deck officers and Master are outlined in this section.

Regardless of the CoC held, all seafarers must undertake revalidation courses every five years from the date of issue of their CoC. At the time of revalidation, minimum sea time requirements to sail onboard specialist vessels such as oil, chemical and gas tankers are assessed as well.

Table 3 I Sea Time Requirements - Deck Officers to obtain Master Class 1 COC

Breakdown of sea time required by Deck Cadets to obtain Master Class 1 CoC – STCW Pathway

Rank	Minimum Duration	Maximum Duration
Sea service as Deck Cadet	18 months	36 months
Sea service as Watchkeeper Deck	12 months	12 months
Sea service as Watchkeeper Deck (including 12 months as Chief Mate)	24 months	36 months
Total sea time to obtain Master Class 1 CoC	**54 months**	**84 months**

43 AMSA (2024) https://www.amsa.gov.au/qualifications-training/international-qualifications/career-path-master-and-deck

To obtain a Master Class 1 (Foreign Going) Certificate of Competency under the STCW Code (**Master Class 1 CoC**), first the prospective Master must qualify as a Watchkeeper Deck i.e. Ship's Officer.

Sea time required by AMSA in Australia to obtain Master Class 1 CoC can range from 54 months (4.5 years) to 84 months (7 years).

Seafarers commence their career as trainee deck officers. This term has been used for the purpose of this report to avoid confusion with deck cadets (under STCW requirements) and trainees (under VET programs).

The sea time requirements for international certification for a Watchkeeper Deck are:

a. an approved pre-sea course and an approved monitored onboard training program for trainee deck officers including at least 18 months documented qualifying seagoing service on vessels ≥500 GT; or
b. a pre-sea course and an approved and monitored onboard training program for trainee deck officers at least 24 months documented qualifying seagoing service on vessels ≥500 GT; or
c. an approved and monitored onboard training program for integrated ratings including at least 24 months documented qualifying seagoing service on vessels ≥500 GT while holding a certificate of proficiency as Integrated Rating; or
d. at least 36 months documented qualifying seagoing service on vessels ≥24 m plus other requirements as a trainee deck officer.

   Sea Time Requirement as trainee deck officer - **18 months to 36 months**

On completion of the requisite sea time outlined above, the trainee deck officer must complete the requisite training and examinations as prescribed by AMSA. On successful completion of the examinations, trainee deck officers can obtain Watchkeeper Deck CoC which is an international certificate under the STCW Code.[44]

Once qualified as a Watchkeeper Deck, the prospective Master must then qualify as a Chief Mate. The sea time requirements for this are:

a. completed at least 12 months documented qualifying seagoing service in charge of a navigation watch on vessels ≥500 GT.

   Minimum Sea Time Requirement – **12 months**

44 AMSA (2025) https://www.amsa.gov.au/qualifications-training/international-qualifications/watchkeeper-deck

Once qualified as a Chief Mate, the prospective Master must then complete:

a. at least 36 months documented qualifying seagoing service in charge of a navigation watch on vessels ≥500 GT of which at least 6 months was served on vessels ≥1500 GT;

   or

b. at least 24 months documented qualifying seagoing service in charge of a navigation watch on vessels ≥500 GT, of which at least 6 months was served on vessels ≥1500 GT and 12 months was served in the capacity of Chief Mate or Master, while holding a certificate of competency as Master < 3000 GT.

   Sea Time Requirement – **24 months to 36 months**

Sea time requirements outlined above do not consider time spent on leave which can vary on individual preferences and number of attempts taken to complete the examination for relevant CoC. A consequential consideration of the duration of sea time required is that seafarers need access to multiple vessels to ensure they can continue their career progression.

Seafarers seeking to progress their career on board vessels that require specialist training such as oil, chemical or gas tankers,[45] need continual access to such vessels since the certificates must be revalidated every five years. If seafarers are unable to sail on such specialist vessels over a period of five years, they may not be eligible for reissuance of such certificates that enable them to sail on board specialist vessels.

4.2.2 Engine Officers and Chief Engineer I International Certificate[46]

Engine cadets typically progress to become Chief Engineers. The CoC held by engineer officers determines the type of ships they can work onboard and the highest rank they can be employed for. As an example, a seafarer holding Motor Class 1 CoC can sail on board a vessel with a Watchkeeper Engineer. However, a seafarer holding a Watchkeeper Engineer CoC cannot sail as Chief Engineer on board a vessel. Table 4 summarises the sea time requirements for Engineer Officers and Chief Engineers outlined in this section.

Regardless of CoC held, all seafarers must undertake revalidation courses every five years from the date of issue of their CoC. At the time of revalidation, minimum sea time requirements to sail onboard specialist vessels such as oil, chemical and gas tankers are assessed as well.

45 AMSA (2025) https://www.amsa.gov.au/qualifications-training/international-qualifications/international-endorsements
46 AMSA (2020) https://www.amsa.gov.au/qualifications-training/international-qualifications/career-path-engineer

Table 4 I Sea time requirements - Engineer Cadets to Chief Engineer

Breakdown of sea time required by Engine Cadets to obtain Motor Class 1 CoC – STCW Pathway

Rank	Minimum Duration	Maximum Duration
Sea service as engine cadet	9 months	36 months
Sea service as Watchkeeper Engine Class 2	12 months	24 months
Sea service as Watchkeeper Engine (including 12 months as Engineer Class 2)	36 months	36 months
Total sea time to obtain Motor Class 1 CoC	**57 months**	**96 months**

To obtain the highest Certificate of Competency as an Engineer Officer - Chief Engineer (Engineer Class 1), first the prospective Chief must qualify as an Engineer Watchkeeper i.e. Ship's Engineer.

Seafarers commence their careers as trainee Engineer Officers. This term has been used for the purpose of this report and to avoid confusion with engineer cadets (under STCW requirements) and trainees (under VET programs).

Sea time requirements to become a Chief Engineer can range from 57 months (4.75 years) to 96 months (8 years).

It important to note that sea time requirements for Engineer Officers are defined by vessels with propulsion engine size in kW. Similar to the requirement for trainee deck cadets and deck officers to have access to multiple vessels, trainee engineer officers and engineer officers need access to multiple vessels as their career progresses.

The sea time requirements for trainee engineer officers are:

a. Completion of at least one of the following engineer training programs:
   I. an engineer cadet program of at least 3 years duration;
   II. a trainee engineer program;
   III. an engineering experience training program; and - if the person has only completed the engineering experience training program — hold or have held for at least 12 months an Engineer Class 3 NC certificate of competency or an unrestricted Engineer Class 3 certificate of competency issued by a State before 1 July 2013.

All the programs require qualifying seagoing service that is of at least 36 weeks on vessels ≥750 kW propulsion power, performing engineer watchkeeper duties or functions in an engine room.

Minimum Sea Time Requirement – **9 months (36 weeks equivalent)**

Once qualified as an Engine Watchkeeper the prospective Chief Engineer must then qualify as Engineer Class 2 – the requirements are:

a. at least 12 months qualifying seagoing service on vessels ≥750 kW propulsion power while holding an Engineer Watchkeeper certificate or its equivalent of which at least 9 months was on vessels using propulsion of the kind to which the certificate relates; or
b. at least 24 months qualifying seagoing service on vessels ≥750 kW propulsion power while holding an Engineer Class 3 route endorsement Chief Engineer < 3000 kW.

Sea Time Requirement – **12 months to 24 months**

Once qualified as an Engineer Class 2, the prospective Chief Engineer (Engineer Class 1) must complete the following sea time:

a. at least 36 months in charge of an engine room watch on vessels ≥750 kW propulsion power while holding either an Engineer Watchkeeper or Engineer Class 2 certificate of competency, of which at least 12 months was served on vessels ≥3000 kW using propulsion of the kind to which the certificate relates; and
b. at least 12 months while holding a certificate of competency as Engineer Class 2.

Minimum Sea Time Requirement – **36 months**

Sea time requirements outlined in this section do not consider time spent on leave which can vary due to individual preferences and number of attempts taken to complete the examination for relevant CoC.

4.2.3 Deck Rating (Navigational Watch Rating) I International Certificate[47]

On completion of required sea time, trainee ratings can perform functions of a Navigational Watch rating. Navigational Watch ratings can progress their careers to deck officers, engineer officers, integrated ratings or able-bodied seafarers.

The requirements of the rank of Navigational Watch Rating i.e. Deck Hand are:

a. completion of an approved program of study, that includes shore based vocational training (that complies with STCW Code section A-II/4); and

b. at least 2 months of documented qualifying seagoing service; or

c. at least 6 months qualifying sea service that includes vocational training (that complies with STCW Code section A-II/4).

Sea Time Requirement – **2 months to 6 months**

47 AMSA (2025) https://www.amsa.gov.au/qualifications-training/international-qualifications/navigational-watch-rating

4.2.4 Engine Rating (Engine Room Watch Rating) I International Certificate[48]

On successful completion of training requirements, Engine ratings perform the functions of Engine Room Watch Rating which includes assisting the Engineer Officer in watchkeeping duties.

The requirements of Engine Room Watch Rating are:

a. completion of an approved program of study that includes shore based vocational training (that complies with STCW Code sections A-III/4); and

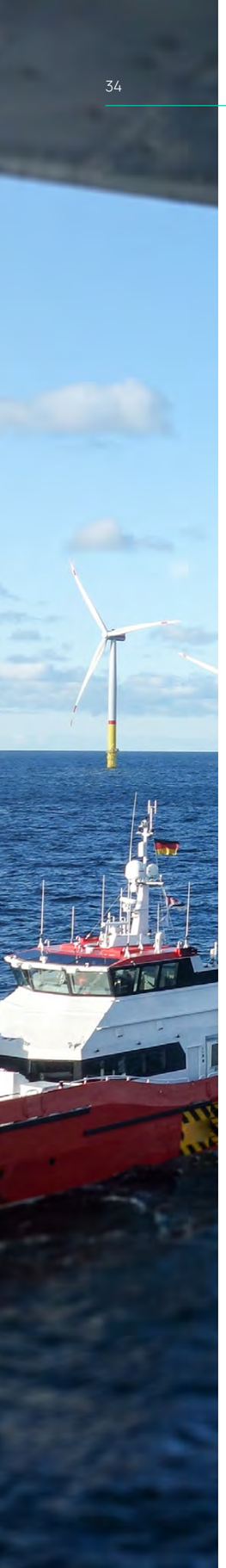
b. at least 2 months of documented qualifying seagoing service; or

c. have completed at least 6 months documented qualifying seagoing service while qualified to serve as a rating forming part of an engine-room watch on an appropriate vessel.

Sea Time Requirement – **2 months to 6 months**

The sea time requirements in this section are accompanied by other training requirements such as successful completion of Task and Guided Study books (TAGS).

48 AMSA (2024) https://www.amsa.gov.au/qualifications-training/international-qualifications/engine-room-watch-rating



05

Australian context

The following section synthesises the role of Australian maritime sector as pertinent to effective coordination of sea time for trainee seafarers.

Australia's maritime economic footprint

Australia's maritime industry is an important component of the national economy, contributing an estimated 5.2% (AUD105.3 billion) to gross domestic product (GDP).[49] The sector supported approximately 462,000 direct and indirect jobs in 2020-21, spanning shipping, port operations, offshore oil and gas, logistics, and maritime services.[50] Shipping remains the backbone of Australia's trade, accounting for approximately 99% of the country's imports and exports by volume.[51]

Reflecting its scale of engagement, Australia ranks as the 5th largest user of international shipping services globally,[52] underscoring the strategic importance of maintaining a sustainable and skilled maritime workforce to support trade, resource exports, and sovereign maritime capabilities.

49 Australian Institute of Marine Science (2023) https://www.aims.gov.au/information-centre/news-and-stories/australias-blue-economy-grew-through-covid-new-report-shows

50 INPEX (2023) https://www.areea.com.au/wp-content/uploads/2024/07/2024-07-23_INPEX_Maritime_Workforce_Position_Paper.pdf

51 Australian Naval Institute & Naval Studies Group University of NSW (Canberra) (2022). https://navalinstitute.com.au/wp-content/uploads/Protecting-Australian-Maritime-Trade-Report-2022-Final-version.pdf

52 Australian Naval Institute & Naval Studies Group University of New South Wales (Canberra) (2022) https://navalinstitute.com.au/wp-content/uploads/Protecting-Australian-Maritime-Trade-Report-2022-Final-version.pdf

Workforce supply and demand in Australia

The maritime workforce in Australia is under significant strain, with projections indicating a 140% increase in crewing demand leading to 2030.[53] This growth is driven by planned and potential offshore LNG operations, major decommissioning activities, and emerging offshore renewable energy projects.[54] However, this demand is emerging in the context of ongoing workforce attrition. The past year alone saw a 12% decline in deckhand numbers and a 23% reduction in marine professionals,[55] indicating a concerning contraction in workforce supply.[56] Compounding these challenges are critical shortages of maritime officers[57] and an ageing workforce,[58] with a large proportion of experienced personnel approaching retirement. Recruitment and retention remain difficult in the face of a competitive global labour market and the lack of clear, competitive career pathways for Australian seafarers.[59]

Maritime training and education landscape

Australia's maritime training system is supported by a limited number of institutions, including the Australian Maritime College in Tasmania,[60] South Metropolitan TAFE in Western Australia,[61] TAFE NSW,[62] the Great Barrier Reef International Marine College,[63] Whitsunday Maritime Training Centre.[64] Despite their significance, these institutions currently face several constraints. In 2022, only 30 international maritime students were enrolled nationally, limiting Australia's ability to attract skilled labour from abroad.[65] The average cost of a Certificate III maritime qualification varies by institution, these costs can act as a barrier to entry for many aspiring seafarers. Furthermore, sea service requirements – typically 18 months for advanced certificates and 9 months for entry-level qualifications[66] – can be difficult to fulfil in a fragmented domestic shipping environment.[67]

53 INPEX (2023) https://www.areea.com.au/wp-content/uploads/2024/07/2024-07-23_INPEX_Maritime_Workforce_Position_Paper.pdf

54 INPEX (2023) https://www.areea.com.au/wp-content/uploads/2024/07/2024-07-23_INPEX_Maritime_Workforce_Position_Paper.pdf

55 INPEX (2023) https://www.areea.com.au/wp-content/uploads/2024/07/2024-07-23_INPEX_Maritime_Workforce_Position_Paper.pdf

56 INPEX (2023) https://www.areea.com.au/wp-content/uploads/2024/07/2024-07-23_INPEX_Maritime_Workforce_Position_Paper.pdf

57 INPEX (2024) https://www.inpex.com.au/news-and-updates/media-centre/media-releases/seafarer-shortage-pushes-national-resilience-to-the-brink/

58 INPEX (2023) https://www.areea.com.au/wp-content/uploads/2024/07/2024-07-23_INPEX_Maritime_Workforce_Position_Paper.pdf

59 NSS (Retrieved 2025) https://www.nsspl.com.au/seafarer-shortage-approaching-flashpoint/

60 AMC (Retrieved 2025) https://www.amc.edu.au/study

61 South Metropolitan TAFE (2026) https://www.southmetrotafe.wa.edu.au/maritime-studies

62 TAFE NSW (Retrieved 2025) https://www.tafensw.edu.au/course-areas/maritime

63 TAFE Queensland (Retrieved 2025) https://tafeqld.edu.au/about/campus-locations/north-queensland/great-barrier-reef-international-marine-college

64 Whitsunday Maritime Training Centre (2026) https://www.maritimetrainingcentre.com.au/courses/certificate-iii-in-maritime-operations-master-up-to-24-metres-near-coastal

65 INPEX (2023) https://www.areea.com.au/wp-content/uploads/2024/07/2024-07-23_INPEX_Maritime_Workforce_Position_Paper.pdf

66 AMSA (2026) https://www.amsa.gov.au/qualifications-training/sea-service-and-task-books/qualifying-near-coastal-sea-service?

67 INPEX (2023) https://www.areea.com.au/wp-content/uploads/2024/07/2024-07-23_INPEX_Maritime_Workforce_Position_Paper.pdf

The maritime industry and government jointly invest between AUD30 – 36 million annually into cadetship programs; however, demand continues to outstrip supply. Additional funding has been directed into simulation-based training, including an AUD2 million investment by the Western Australian Government,[68] supporting the development of essential technical competencies for seafaring roles.

Ageing and non-diverse workforce

Australia's maritime workforce is characterised by an ageing demographic and persistent diversity challenges. More than 55% of STCW CoC holders are aged 46 years or older,[69] and a similar trend exists for near-coastal certificate holders, of whom 52% are in the same age bracket, affecting long-term workforce planning. Meanwhile, the share of workers under the age of 30 has declined markedly, from 18% to just 8% in recent years, highlighting difficulties in attracting and retaining younger workers.[70]

Gender diversity also remains a structural issue in the sector. While the proportion of women in the maritime workforce increased from 2% to 5% between 2014 and 2018, female participation remains well below other sectors, limiting the pool of available talent and restricting the industry's broader diversity and inclusion goals.[71]

Australia's maritime infrastructure and project pipeline

Australia's offshore energy and maritime project pipeline is substantial and expanding. Investment in the offshore gas sector is forecast to grow from AUD31.9 billion to 43.7 billion by 2030,[72] reflecting continued global demand for Australian energy exports. In 2020-21, the sector generated a AUD15.9 billion trade surplus,[73] displaying economic significance. At present, approximately AUD73 billion in oil and gas projects are undergoing feasibility or planning assessment.[74] This expanding activity is expected to generate considerable labour demand, including an estimated 1,020 workers required for offshore decommissioning projects in the near term.[75]

In addition, the proposed Strategic Fleet[76] – intended to bolster sovereign shipping capability – will require a dedicated workforce of approximately 400 crew members.[77] Looking to the future, the development of 10.5 gigawatts of offshore wind projects[78] presents a transformative opportunity for Australia's maritime sector, requiring upskilling, workforce diversification, and new training pipelines to meet emerging technical and operational demands.

68 Jobs & Skills WA (2025) https://www.jobsandskills.wa.gov.au/news/2-million-world-class-maritime-simulators-south-metropolitan-tafe
69 INPEX (2023) https://www.areea.com.au/wp-content/uploads/2024/07/2024-07-23_INPEX_Maritime_Workforce_Position_Paper.pdf
70 INPEX (2023) https://www.areea.com.au/wp-content/uploads/2024/07/2024-07-23_INPEX_Maritime_Workforce_Position_Paper.pdf
71 INPEX (2023) https://www.areea.com.au/wp-content/uploads/2024/07/2024-07-23_INPEX_Maritime_Workforce_Position_Paper.pdf
72 Department of Climate Change, Energy, the Environment and Water (2022) https://www.energy.gov.au/publications/australian-energy-update-2022
73 Department of Climate Change, Energy, the Environment and Water (2022) https://www.energy.gov.au/publications/australian-energy-update-2022
74 NOPTA (2022) https://www.nopta.gov.au/_documents/Annual-Report-of-Activities-2022-23.pdf
75 INPEX (2023) https://www.areea.com.au/wp-content/uploads/2024/07/2024-07-23_INPEX_Maritime_Workforce_Position_Paper.pdf
76 The Hon Cathrerine King MP (2024) https://minister.infrastructure.gov.au/c-king/media-release/strategic-fleet-forging-ahead
77 INPEX (2023) https://www.areea.com.au/wp-content/uploads/2024/07/2024-07-23_INPEX_Maritime_Workforce_Position_Paper.pdf
78 Department of Climate Change, Energy, the Environment and Water (2026) https://www.dcceew.gov.au/energy/renewable/offshore-wind

5.1 Maritime sector insights

Stakeholder engagement focused on the role, characteristics and value that a national sea time coordination system could bring to diverse maritime stakeholders.

The following insights represent industry sentiments that have been universally expressed and are key factors that have been considered when developing model options for the national coordination of sea time.

(It is important to note that other projects being undertaken by ISA are aimed at addressing some of the concerns highlighted below.)

- **Place the learner at its core:** A national model would facilitate easier access to learners for employers, and easier identification of available berths on vessels for learners. It would be a learner-centric model, creating the perception of a single learning journey (including both qualification and certification processes) with learner privacy and welfare embedded in governance and practice.
- **Be dynamic and match learner placements with real-time berth availability:** It would improve coordinating learner berth placements by being updated in alignment with shipping schedules as they change.
- **Support ambitions of improved training services:** Allow RTOs and GTOs to better align their activities and training programs with vessel and journey availabilities through direct, formalised connections between relevant agencies and stakeholders. There is an opportunity to support training providers to provide a 'closed loop' service to match learners to available sea berths via employers and vessel operators, as required, to grow and accelerate access to certified seafarers.
- **Provide a formal mechanism for consent and data exchange:** Create a central repository where all sea time learners who require berths are registered, and all vessels who can provide berths are listed. This repository can be used by existing business models operating in the maritime sector to match and recruit suitable trainees with vessels. This may provide an opportunity to create a link to AMSA's sea time certification process.

- **Complement existing business models**: Considering the diverse and commercial interests of public and private sector organisations serving the maritime industry, a coordinated national model would aim to complement existing business models so that all parties can benefit.
- **An incentive may be required**: A national model would need to complement existing or future incentive programs initiated by government investment or funding partners. Regulatory bodies such as Port Authorities may not have the ability to provide sea berths but they can contribute in other ways to support training of seafarers.
- **Industry advocacy and broader co-operation**: Stakeholders have highlighted a strong desire to work collaboratively with other entities in Australia such as ABF and ADF as well as regional players. The collaboration opportunities that can be explored include the role of training organisations in Australia to provide training to seafarers from other countries. Further, the regional co-operation platform should be used to advocate for the role of seafarers and highlight their importance for island nations like Australia that do not benefit from hinterland connectivity of island nations in Europe, for example.
- **Lack of awareness of seafaring as a career**: This matter has been highlighted as one of grave concern. School leavers looking to decide a career option do not have a very good visibility of pathways in seafaring. The efforts are largely concentrated through voluntary initiatives across different parts of the industry. There is no nationally orchestrated push to create awareness of seafaring as a career pathway.
- **Complexity of training requirements**: Understanding the various training requirements, role of sea time, classroom-based training and simulation-based training is not clearly understood by people considering seafaring as a career pathway. Unless people have friends or family connections who can explain how to navigate the various requirements, it can get cumbersome very quickly for people considering seafaring as a career option to try and understand the various training and certification requirements.

- **Variance in training standards**: In Australia, AMSA determines the training requirements when assessing candidates for respective certification. Some other jurisdictions may exercise discretion over some training requirements creating the perception that AMSA requirements are onerous. This matter should be included in the awareness programs for the maritime industry and the importance of AMSA's role in maintaining safety standards across the industry.
- **Health and safety concerns**: Access to ongoing support programs, particularly for mental wellbeing has been flagged as a matter that should be addressed. Support if generally available when vessels are in port or in/ around coastal waters. However, when vessels are at high seas, not all vessels have the ability to provide affordable care. When considering funding support to training options, consideration should be given to incorporating such support to understand its effectiveness and costs involved.

Based on stakeholder engagement, it is imperative that the industry is kept abreast of next steps and invited to actively contribute towards any alternate models that are being considered for coordinating sea time.

5.2 Australian case studies

The Australian training model case studies below provide insights into how organisations have gone about implementing training programs for trainee seafarers and constraints in providing access to training berths.

Port of Brisbane (PoB)

Availability of sea berths for seafarers to complete requisite sea time was highlighted as the biggest constraint.

PoB have 2 trainees on board their DCV vessels, who will transition to their RAV next year to complete their sea time for STCW qualifications.

50 seafarers are currently employed by PoB — 34 operating their single dredge RAV and 16 across their ~12 DCVs.

Port Authority of New South Wales (PANSW)

In 2023, PANSW paid the cadets wages while the shipping companies provide berths and victualling. The program involves an intake of 2 cadets at a time and have had 12 cadets since the program's inception in 2018.

Unlike the PPA, PANSW do not support pre-sea training costs, and the expectation is that cadets complete 18 months sea time in two years.

Minimum sea time requirements are derived from Marine Orders 70, 71 and 72.[1]

Gladstone Ports Corporation (GPC)

GPC currently employs 36 Master Class 1 CoC holders who provide pilotage services.

GPC also employ 15 full time launch crew and 3 casual launch crew holding MED 1/2 and Master < 45m NC / Master < 24m NC CoC.

Co-ordinating sea time remains the hurdle to employ local cadets. They are exploring placing local cadets on ships that regularly operate in Gladstone.

1 AMSA (2025) https://www.amsa.gov.au/about/regulations-and-standards/index-marine-orders

06

International case studies

A study of training models relevant to coordination of sea time was gathered from jurisdictions listed below:

- Canada
- Denmark
- The Netherlands
- Norway
- Philippines
- Singapore
- United Kingdom
- United States

A summary comparison of each jurisdiction (and their approach to the coordination of sea time) with the identified model options presented in this paper is available in **Appendix B I Jurisdictional Summary for Coordination of Sea Time**.

More detailed information about each jurisdiction studied is available in **Appendix C I Detailed Evaluation of International Case Studies**.

Both the jurisdictional summary and the detailed evaluation of international case studies have been used to inform the analysis of different options for the coordination of sea time undertaken in this report.

07

Sea time coordination options under consideration

Stakeholder engagement has evidenced a strong preference that any effective sea time coordination model must complement existing business models and add value to their businesses for it to be successful.

This means employers must have the option to participate in any proposed option. Registered and Group Training Organisations can provide an integrated value-added service by referring sea time learners to the adopted model for matching to appropriate vessels (for example). Preference is that business models as they exist today should not undergo a material change to implement the option(s) selected.

Based on stakeholder preferences, feedback, the requirement to implement the recommendations of the Strategic Fleet Taskforce and to enable an improved trainee seafarer experience, the five principles below form the basis of coordination of sea time options design:

Principle 1 – Equity

All options considered in this report incorporate equity. If an entity incurs a cost, they are entitled to receive value in return. Equally, if an entity stands to benefit from an option, then they are expected to contribute towards the functioning of the model. Where roles remain unchanged, such as AMSA performing its regulatory functions, there are no changes proposed to AMSA's role.

Principle 2 – Competitive and free markets

All options preserve the ability for market participants to make a choice. Trainee seafarers are free to select training providers, recruiters and/or employers they work with. Equally, training providers, recruiters, vessel operators and any other stakeholder remain free to choose who they work with.

This principle ensures that every participant can make their own assessments of cost, benefits or any other assessment they may deem appropriate.

Principle 3 – Regulatory requirements remain unchanged

The role of AMSA, any legislation (such as Coastal Trading Act (*Cth*) 2012) or any other regulatory requirements remain unchanged in all the options assessed in this report.

The options assessed in this report have been designed such that any regulatory review or change can be undertaken independently of the selected sea time coordination option implementation.

Principle 4 – Deliver a neutral or better outcome for all stakeholders than current state

All options have been designed with the trainee seafarer's perspective as the key focus. However, all options consider the impact on all other stakeholders. Therefore, all stakeholders are either better off or remain unaffected by the proposed options. The role of AMSA as a regulator, for example, is neutral across all options considered in this report. Trainee seafarers, on the other hand, can be expected to benefit to varying degrees under each option when compared to the current training pathway. The model aims to create a single interface between trainee seafarers and their qualifying seagoing service.

Principle 5 – Information symmetry

Stakeholder engagement has demonstrated the need for a central data repository that is used by all stakeholders for different purposes. Workforce planning, identifying critical skills, planning by training providers for trainee seafarers coming through, availability and timing of berth access and informing policy initiatives are some examples where a consistent data set is expected to be extremely useful. Importantly, all stakeholders will be using the same data set and therefore information asymmetry will be reduced systemically.

All options propose the entity providing a single interface for trainee seafarers will be responsible for providing a reliable data set. A mechanism for data hosting including governance and matters relating to protection of personal information are proposed to be investigated in preparation of the feasibility business case (see Potential next steps in Section 9).

All options outlined in this paper aim to accommodate opportunity to work within existing operational processes and enable exploration of the potential for an evolution of current practice to effectively coordinate the placement of trainees into sea berths.

This includes across the Australian and international shipping industry to complete mandatory appropriate sea time requirements to obtain STCW (and domestic) AMSA certification with a particular focus on the priority roles required by the Australian maritime industry.

The options have been shared with stakeholders for their preliminary feedback and no major concerns have been raised.

The four options assessed in this report are:

- **Option 1** - Consortium of Training Service Providers
- **Option 2** - Independent Sea Time Coordinator
- **Option 3** - Recruitment Agency
- **Option 4** - Status Quo

Based on desktop research and stakeholder engagement, model options to address the challenge of accessing sea berths for sea time include the following features, which are considered essential for the system to deliver optimal outcomes for all maritime stakeholders:

- Working with shipping companies, vessel owners and operators to identify and unlock suitable sea berth availability
- Promoting the important role of accessing appropriate sea time and the value in national coordination to learners, employers, unions, and training providers, to address the maritime skills shortage
- Understanding and accommodating agreements and arrangements between trainees, training providers, and the shipping companies providing sea time placement
- Monitoring a trainee seafarer's progress and sea time placements, including the provision of pastoral care and supporting mental well-being, creating a single learning experience
- Facilitating a trainee seafarer's movement between shipping companies, where required, to ensure a trainee seafarer can achieve their sea time placement to meet their AMSA certification requirements
- Supporting the provision of administrative support, including ensuring that trainee seafarers keep necessary records to comply with AMSA sea time requirements
- Maintaining a digital system that records and monitors learner sea time placements; and
- Providing regular reporting to funding partners and the maritime industry (including AMSA) on how sea time coordination is tracking against specific maritime sector key performance indicators.

The Status Quo option considers the value of no change to the system and the impacts on the Australian maritime workforce if no alternative is implemented.

Under all options considered, the role of AMSA (including and not limited to, as the national regulator for sea time requirements, assessor of sea time and auditor of training organisation) remains unchanged. No changes to AMSA's role are proposed in any of the options considered in this report.

For the purpose of this report, recruitment agencies include crewing agencies and ship management companies that are awarded crewing contracts from vessel operators. Ship managers and ship operators are classified as employers. It is reasonable to expect that employers and recruitment agencies could be the same entity which can be explored in more detail as the options progress through further assessment beyond the scope of this report.

7.1 Option 1 | Consortium of Training Service Providers

Group training is designed to encourage the employment of apprentices and trainees. It involves an organisation employing an apprentice or trainee under an apprenticeship/traineeship training contract and placing them with a host employer.

The first group training companies were established in the early 1970s[79] and have grown from employing a small percentage of the total number of apprentices and trainees, to employing today, around 14% of the total. There are approximately 200 group training companies in Australia operating in all states and territories and across most regions.[80]

There are a small number (four) of group training companies that operate in the maritime sector presently.

Option One proposes that a Consortium of Training Service Providers (CTSPs) would centralise the end-to-end co-ordination of sea time for seafarers seeking to achieve AMSA STCW and domestic certifications (see Figure 7). This includes providing access to training, sea berths and employment opportunities to complete required sea time. The aim is to create a single interface between the trainee seafarer and training berths to achieve qualifying sea time.

79 Nic Croce, Duncan Macdonald, Phillip Toner, Cathy Turner (2004) https://www.ncver.edu.au/__data/assets/file/0025/5992/nr1031bs1.pdf

80 Phillip Toner, Duncan Macdonald, Nic Croce (2004) https://www.ncver.edu.au/research-and-statistics/publications/all-publications/group-training-in-australia-a-study-of-group-training-organisations-and-host-employers

The CTSPs will also be responsible for collating data in relation to seafarers. Hosting and other governance matters in relation to the data are expected to be investigated in the feasibility business case. Consistent with the principles of the different models outlined earlier, if the CTSPs are expected to provide services such as data hosting then they can expect to be compensated for costs incurred for such services.

The CTSPs could be a single entity that provides all the services a trainee seafarer requires to complete their training.

Alternately, the CTSPs could be made of multiple entities who represent the end-to-end value chain for seafarers and enter into agreements with each other to form an alliance that allocates roles and responsibilities to ensure the trainee seafarer requirements are met. In such a case, the consortium will need to provide a single interface for the trainee seafarer as opposed to multiple touch points with CTSPs members.

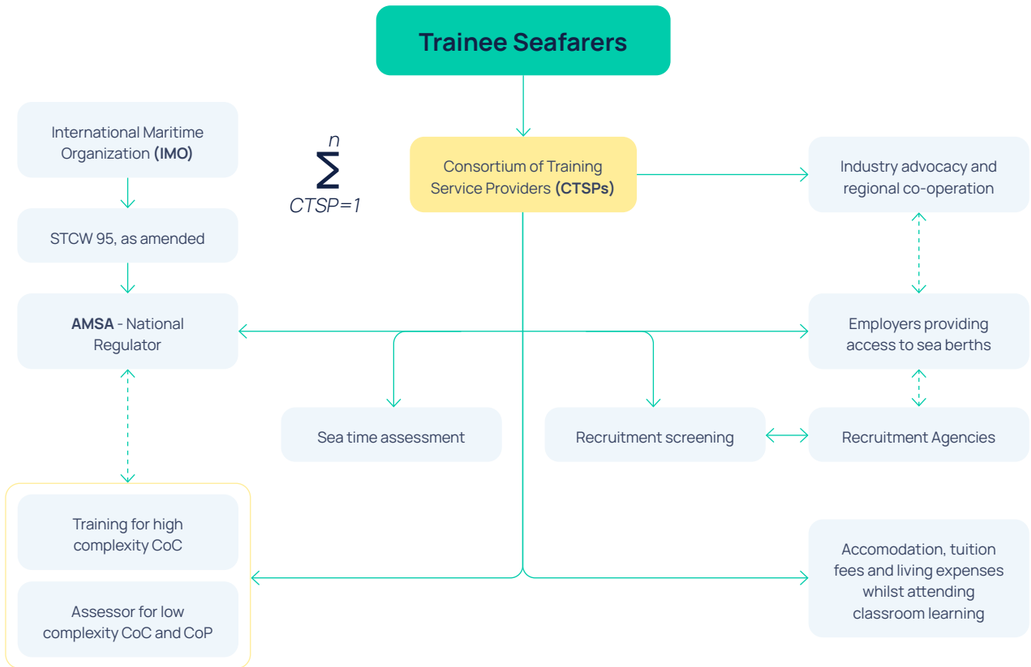


Figure 7 Option One | CTSP Model

Roles and responsibilities that are not directly attributed to CTSPs in the proposed model are shown as dotted lines in Figure 7.

To enable a trainee to complete required sea time, the CTSP would employ and match trainees with a host employer to complete required sea time. The model would prioritise trainees for high demand maritime occupations such as Ship's Master, Ship's Engineer, Ship's Officers and Deck Hand.

The service offered by the CTSPs under this option would include managing search, suitability screening, recruitment and employment for the specific maritime roles that require sea time. This includes remuneration and entitlements in alignment with employment, workplace relations, health and safety obligations.

This would include support to learners to achieve their sea time service requirements through to AMSA certification and includes (but is not limited to):

- sourcing trainee seafarers to fill available sea berths
- sourcing available and suitable sea berths on vessels for trainee seafarers
- matching trainee seafarers to available berths in cooperation with vessel owners and operators
- supporting the wellbeing of trainee seafarers
- seeking and placing mentors
- tracking placements of trainee seafarers across multiple vessel operators
- supporting the recording of sea time
- tracking the inflow and outflow of learners through to achieving AMSA certification.

The CTSP would also support industry to attract new learners to the maritime sector and support workforce planning for employers.

In Australia and within most industries, learners (such as trainees, apprentices, cadets and existing workers) are employed by a legal employer of apprentices and trainees. The trainees hold agreements with employers who arrange class-based training and on-the-job training.

Figure 8 shows the proposed contractual relationships between participants in Option One (shown in light blue arrows). Trainee seafarers are proposed to have a single point of contact as part of their learning journey and will be paid by the CTSPs. Proposed payments include, and are not limited to, wages, accommodation and living expenses while undertaking classroom training, travel expenses, health insurance and tuition fees.

The CTSPs are proposed to have contractual arrangements with employers who provide access to sea berths to train seafarers. Also, employers can have contractual relationships with recruitment agencies. These arrangements between CTSPs and employers as well as employers and recruitment agents exist currently and any changes to industry practice is not proposed under Option One.

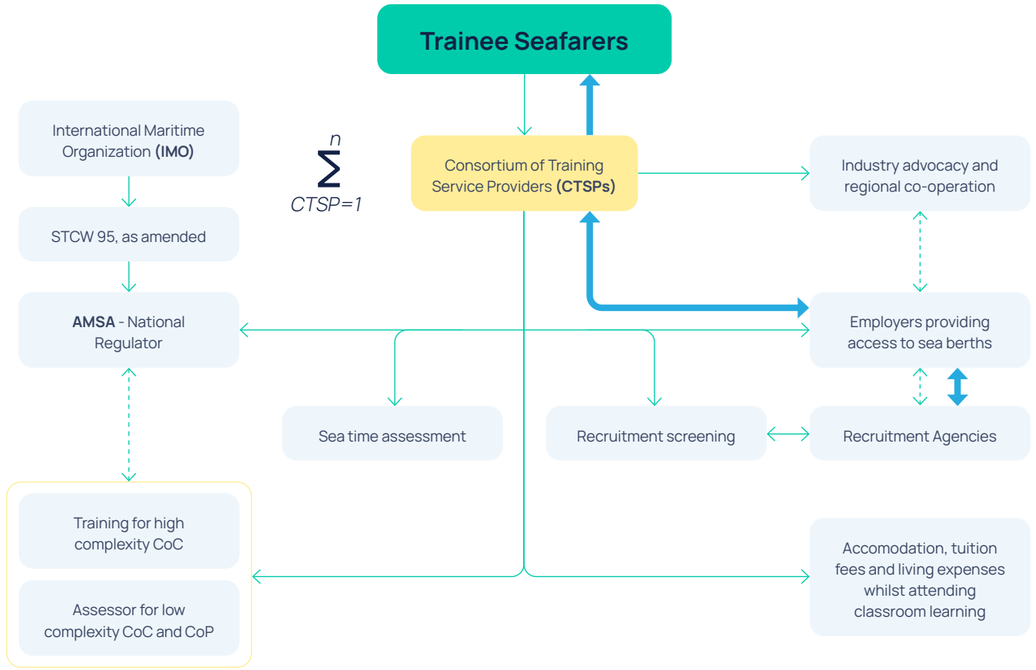


Figure 8 Option One | Contractual relationships

The National Standards for Group Training Organisations provide a formal framework that promotes national consistency and quality for group training services across Australia.

Currently, all Group Training Organisations (GTOs) must comply with the National Standards to be registered.

Only registered GTOs can apply for funding from the Australian Government or State or Territory Government group training program. Registered GTOs are published on the Group Training National Register Website.

GTOs have been successful in ensuring well-trained and supported apprentices and trainees in several Australian industries. A combination of one or more GTOs, combination of GTOs and RTOs or any other such combinations including, and not limited to, vessel operators providing training, can be a CTSP.

The CTSP will coordinate the placement of maritime learners undertaking maritime training package qualifications/AMSA approved STCW courses through to certification which is an option already in use to support industry to achieve a skilled and competent workforce that meets AMSA certification requirements.

It should be noted that very few GTOs currently operate in Australia's maritime industry. Those that do are typically focused on a small scope of maritime occupations. This option seeks to engage one or multiple training organisations as a collective network to support the national coordination of sea time with a priority on the high demand maritime occupations in shortage.

Industry advocacy and regional co-operation have emerged as key themes that stakeholders would like to see implemented in a structured model to achieve intended outcomes, one of which is to increase the seafarer pool.

Key strengths

- A key strength of the CTSPs model is in its ability to manage legal employment obligations and the depth of its existing employer and vessel owner relationships.
- Training service providers already work with a pool of vessel owners and employers to place learners for sea time service.
- Adding administrative responsibilities of coordinating sea time for learners nationally is an activity that could be evolved under this model using existing governance structures, business practices and processes.
- As the model adoption is embedded in the maritime industry, vertical integration is another consideration. Organisations such as Maersk[81] provide training to seafarers. Training services similar to those provided by training organisations contemplated in Option One can be provided by such employers and trainee seafarers and are likely to benefit from synergies and economies of scale that a company such as Maersk is able to create.

Key risks

- Limitations of the CTSPs model include that, as private businesses, they are likely to require a sustainable funding mechanism to upscale to implement a national coordination function. Without government funding to cover additional administrative costs, it is likely that CTSPs would need to pass on additional costs to trainee seafarers or employers.
- In addition, the established network of maritime RTOs that do not operate as GTOs or are unable to offer the suite of services required as a CTSP, may be disrupted by this proposed model because induced market demand for CTSP training services may result in reduced market share for established RTOs with existing maritime training courses on scope. This creates the possibility of concentration risk arising whereby a few training providers may be the only CTSPs left to choose from unless the RTOs are part of the CTSP.
- Industry acceptance of a CTSP model would need to consider the host employers requirements such as culture and suitability of learners and any other pre-requisites to enable an efficient and effective process. Screening of individuals will be an important quality assurance process that may need to be factored in.

81 Maersk Training (Retrieved 2025) https://www.maersktraining.com/

- Coordination amongst members of a CTSP may need consideration under competition regulations which have not been investigated in this report. A key risk of Option One that may need addressing is price setting. The regulatory authorities may require to be satisfied that while CTSP members engage in coordination of services required to facilitate training for trainee seafarers, that there are sufficient controls in place to ensure that CTSPs are not engaging in activities such as collusion on prices or other matters of concern to the competition regulator.
- Employers may prefer to use RTOs and train their own seafarer pool through contractual relationships with trainee seafarers (as is currently the case).

7.2 Option 2 | Independent Sea Time Coordinator

Option Two proposes to establish an independent mechanism (either a coordinating entity or a central repository held as a publicly accessible service) to coordinate the placement of trainees on vessels to complete mandatory STCW and domestic sea time requirements.

Trainee seafarers would have a single point of interface with this coordinating body. Structure of how this public service could be funded is proposed to be assessed in the feasibility business case.

This independent mechanism could produce the method for multiple parties to exchange data administered by a public, private or not-for-profit entity with appropriate governance to coordinate sea time placement of trainee seafarers across directly impacted organisations to support the Australian maritime industry.

The independent sea time mechanism is an opportunity to connect the following data sources (list is not exhaustive) to provide a visible and active connection between relevant parties to match learners' sea time requirements with a schedule of available berths and AMSA's certification requirements:

- Nominated available trainee sea berth data from vessel owners and operators
- Shipping arrival schedule data (and updates as schedules change) to ensure learners arrive in time to access an allocated sea berth, despite dynamic schedule changes due to weather and other factors
- Sea berth allocations across a schedule of priority vessel types and sizes (as a priority this could match high demand STCW and strategic fleet roles, then support domestic certification requirements)
- Learners' applications and enrolment requests for sea berth availability for a certain type and size of vessel for a certain job role for vessel operators to review and consider
- Training provider data with learner consent to match the future pipeline of learner's undertaking studies that require sea time to upcoming available sea berths with learners
- Pending consent, provide inflows or receive outflows via AMSA's register of sea time hours achieved by each learner to support the logging and tracking of qualifying sea time hours.

The independent mechanism would require a central host and establishment funding. For long term sustainability, partners or co-contributors from across the maritime sector, who seek to gain faster access to competent seafarers, are required to sustain this model in line with industry needs.

Figure 9 shows the process overview of how Option Two is proposed to work from the trainee seafarer's perspective. A single coordinating entity would provide a single interface for trainee seafarers.

The current pool of training providers is proposed to remain unchanged under this option. A key differentiator of this option as compared to Option One is that risk of RTOs becoming uncompetitive remains unchanged, when compared to the current scenario. Pathways mapped in light blue in Figure 9 are intended to articulate the process when RTOs are involved in providing training to Australian seafarers.

The coordinating entity is proposed to be an independent mechanism to provide best outcomes for Australian seafarers.

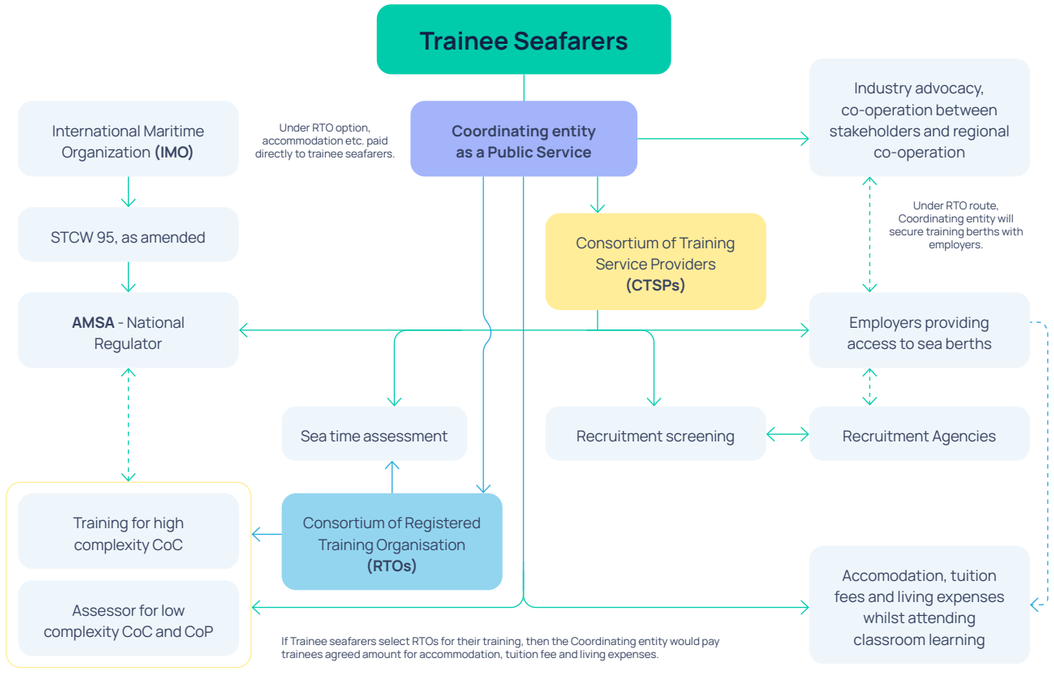


Figure 9 Option Two | Independent Sea Time Coordinator

This option may involve the establishment of a new independent mechanism or an increase in scope for an existing public or private sector entity to centralise the coordination of sea time for the benefit of the maritime industry.

Figure 10 maps the proposed contractual relationships for Option Two. The coordinating entity is proposed to provide a single point of contact for trainee seafarers. Depending on the

needs of trainee seafarers, the co-ordinating entity will be responsible for liaising with relevant training service providers.

In practice, the coordinating entity might take a governance role and allow trainee seafarers direct access to the relevant training organisation. Such considerations can be further investigated in a detailed business case for the option under review.

If trainee seafarers select RTOs for their training, then the coordinating entity would pay trainees a lump sum amount for accommodation, tuition fee and living expenses. Similarly, the coordinating entity is proposed to liaise directly with employers to secure training berths if trainee seafarers undertake training through RTOs and not CTSPs. As such, the coordinating entity is expected to have contractual relationships with RTOs, CTSPs and employers who provide training berths.

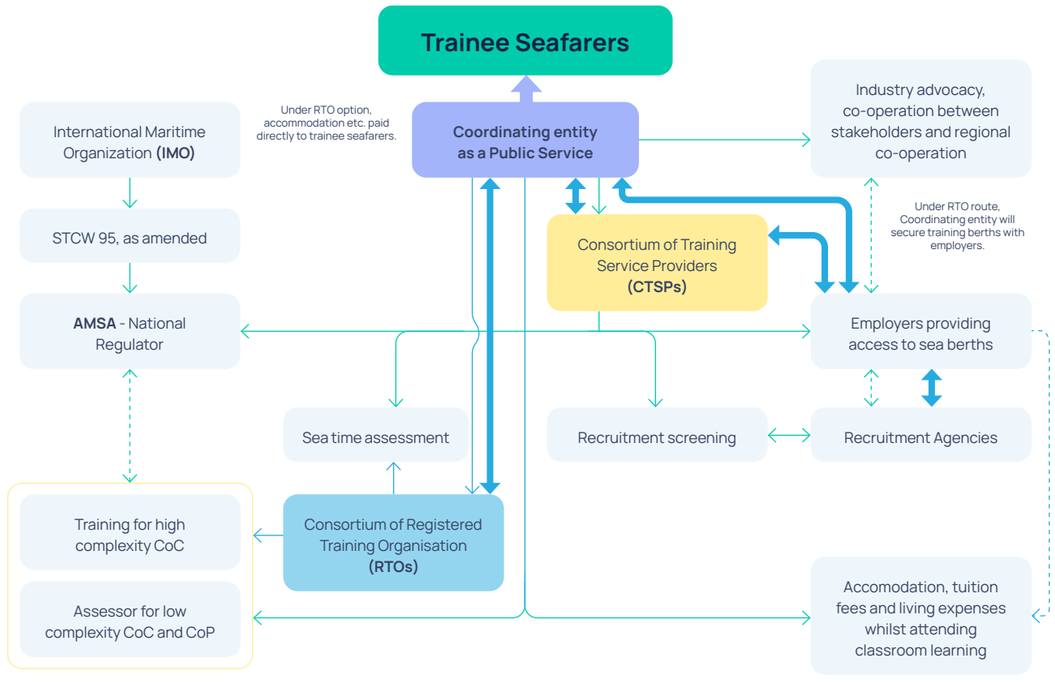


Figure 10 Option Two | Contractual relationships

Key strengths

- Similar to the CTSP model (Option One), a key strength of the independent model is the ability for a central repository to link vessel owners and operators with learners, training providers and the regulator; all who are key parties in the maritime sector that can enable and facilitate the achievement of qualifying sea time.
- The independent model seeks to complement and not inhibit the current processes and procedures for multiple and diverse existing business models. This model would seek to support all participating parties to provide or add value to the services they provide to their customers and employees. It may also increase efficiency by providing faster access to information and by automating tasks.
- It may lead to improved productivity due to accelerated access to seafarers (e.g. knowing learners in the pipeline yet to qualify), better planning to invest in new learners (enabling employers to make investment decisions in new learners) and visibility of existing seafarers who may be seeking to revalidate or upskill and increase the level of their sea time certification.
- The independent model would seek to provide a value add or more efficient service for participating parties who offer or share data as part of the mechanism. A data governance model would need to be established and agreed by the maritime sector.
- The coordinating entity is likely to be able to ensure that skills pipeline is future focussed and aligns with other Government policies (e.g. Role of MARAD in USA).

Key risks

- As a new concept, the main limitation of this model is that there is no precedent in Australia. Research on global approaches found examples in sampled jurisdictions such as Philippines, United Kingdom and United States where the coordinating entity takes a governance role to ensure the national objectives are met. However, such arrangements are interlinked with other government policies and objectives. As such, further investigation of these models through stakeholder engagement in respective jurisdictions is required to understand the drivers for such models.
- It would require the establishment of strategic partnerships between public and private sector stakeholders across the maritime sector to be effective. Third party data agreements would need to be negotiated, established and monitored. A high level of trust in the entity responsible for stewarding this model is required particularly noting the coordinating entity is not proposed to have commercial interest, unlike the CTSP model in Option One.
- Further exploration of the feasibility of an appropriate independent coordinator, its governance and ongoing funding arrangements is needed to ensure it is viable and sustainable in the longer term.
- The coordinating entity will require funding which is likely to come at a cost for its set up and ongoing operations.

7.3 Option 3 I Recruitment Agency

Options One and Two, maintain the status quo in terms of the role that recruitment agencies play in the maritime industry.

Option Three proposes a recruitment agency be engaged to find and retain trainees coming through the maritime skills pipeline and match them to available and appropriate sea berth vacancies to facilitate the coordination of qualifying sea time. This option provides trainee seafarers with the ability to approach the recruitment agency or the training service provider (see Figure 11).

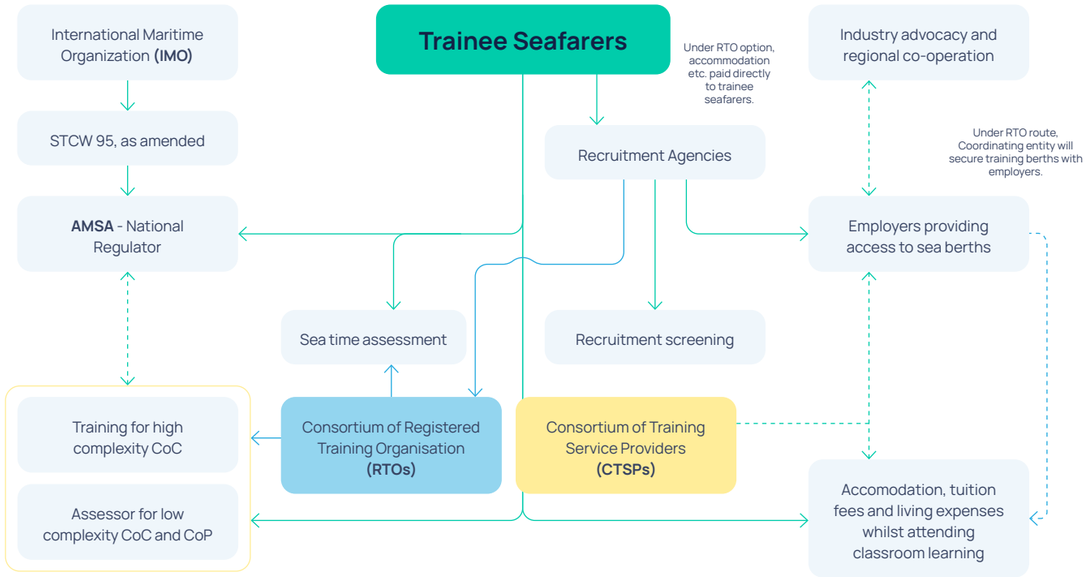


Figure 11 Option Three I Recruitment Agency

In this model, the recruitment agency would manage relationships with participating employer vessel owners and operators. Unlike the CTSP model in Option One, the recruitment agency would not hold exclusive employment rights with the trainee seafarer who would be free to choose the participating host employer or training service provider as per existing business models, nor would it arrange training unless otherwise agreed with the trainee seafarer (this relationship can remain between the individual and a registered training organisation).

However, recruitment agencies could offer a point of differentiation to trainee seafarers as a single point of contact and offer to coordinate with RTOs and employers on the trainee seafarers' behalf. Employers would have the opportunity to select sea time service participants through contractual arrangements with the recruitment agencies.

This model relies on short-, medium- and long-term forecasts (2, 5, 10 years) of high demand roles required by the maritime industry, and it would consider the peaks and troughs of the highly dynamic offshore resources sector. This forecast would assist to guide the number of learners that the recruitment agency would need to seek and supply for participating vessel owners and operators to undertake qualifying sea time service.

Operating in competitive markets, recruitment agencies will be incentivised by employers to focus on recruiting trainees for high demand roles. Industry could set the key performance indicators (**KPIs**) based on the forecast predictions to manage the supply of learners to meet industry's needs. KPIs could be monitored by industry to ensure delivery and to mitigate any barriers to achieving industry's goals.

The recruitment agency would perform a suitability assessment of individuals prior to applying for sea time placement which is currently the case. The recruitment agency would also facilitate a preliminary round of screening of learners (physical and psychometric) to ensure fit for seafaring and suitability for employers.

The recruitment agency would maintain a contractual relationship with participating vessel operators and owners to align with maritime sector requirements. This may include the administrative tasks for the maritime sector associated with tracking and monitoring sea time hours for learners as well as maintaining a central repository of data which the whole industry can access.

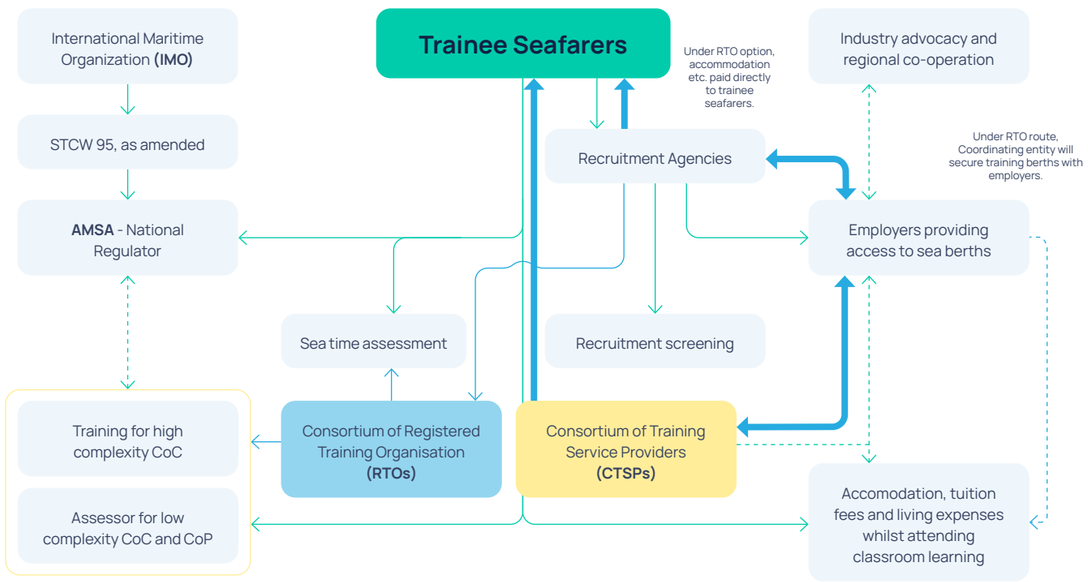


Figure 12 Option Three I Contractual relationships

This model would create a real-time national pool of trainee seafarers seeking sea time on specific vessel types and sizes in specific high-demand maritime roles and functions. Participating vessel owners and operators would contribute available sea berths, vessel specifications and real-time voyage dates and times, as well as ongoing employment opportunities.

In Australia, there are many recruitment agencies, with several specialising in maritime recruitment and have the ability to train seafarers since they also hold ship management contracts. However, many of these organisations currently focus on recruitment for near-coastal operations.

Key strengths

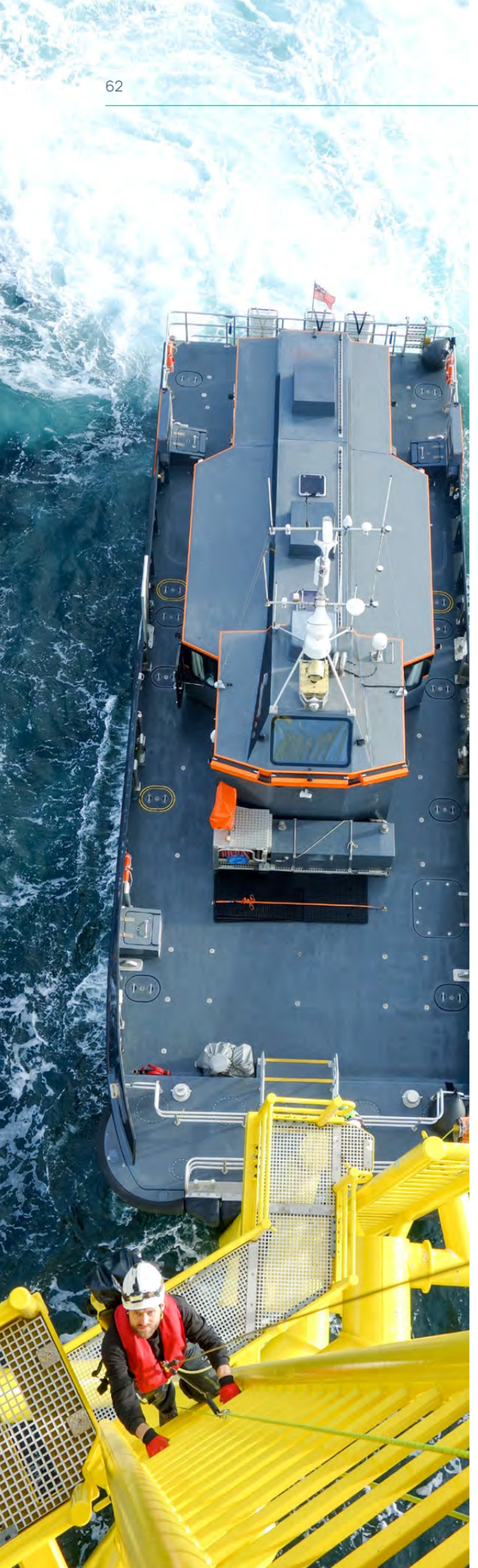
- The strength of this model is that it creates a measurable value-added service for diverse parties operating across the maritime training ecosystem without needing to change operations significantly.
- Employers can be more efficient by outsourcing attraction and pre-screening tasks. They are supported in selecting suitable learners and gain access to a potential new national seafarer employee talent pool. Training service providers gain visibility of upcoming sea berth availability based on learner requirements. Learners have a central point of contact to plan their sea time in advance, including across vessel types. The maritime industry can set and monitor the achievement of targets and assist to mitigate barriers and take advantage of opportunities as they arise.

  To be successful, the model may need to interface with national and Indo-Pacific vessel operators and owners to be able to accelerate the volume and scale across different vessel types and sizes required by the maritime industry. A separate entity may still need to be established to focus on maintaining a database of information that industry can use for effective sea time coordination.
- As the reach of recruitment agencies can extend far beyond the maritime industry, it could help in attracting more potential seafarers to the industry, as the recruitment agency uses its reach to educate people about the sector.
- Similar to Option One, as the model adoption is embedded in the maritime industry, vertical integration is another consideration. Many organisations[82] hold contracts for ship management including crewing of vessels under management. Such companies can reduce interface costs that can be expected when recruitment agencies deal with employers. Trainee seafarers are likely to benefit from synergies and economies of scale from such integration.

Key risks

- Limitations of the recruitment agency model are related to funding, contractual relationships, and their ability to efficiently and effectively undertake the components of sea time coordination that fall outside of their usual scope of work – tracking compliance with STCW requirements for example.
- This option would involve establishment of a legal entity to focus on sea time coordination (rather than being just one of several functions in a business).
- Conversely, there is a risk a recruitment agency could divert people interested in maritime positions towards other industries that offer better pay or differing benefits.

82 AMSA (2026) https://www.amsa.gov.au/vessels-operators/seafarer-safety/private-seafarer-recruitment-and-placement-services



7.4 Option 4 I Status Quo

Under Option Four, sea time coordination would remain as it currently exists – a process of regulatory oversight, training institutions, employers, and seafarers that take several disconnected steps along a pathway to AMSA certification.

Each participant in the supply chain for the Australian seafarer workforce operates independently.

Goodwill and learner personal connections facilitate access to sea berths across Australia.

Under this option, individual seafarers would continue to look for opportunities to gain access to sea berths to progress through their sea time placement requirements for the attainment of STCW certification.

The process of finding and accessing sea berths appears fragmented. For example:

- Trainee seafarers are responsible for finding an employer with a sea berth to complete qualifying sea time service to achieve their AMSA certification. The learner must ensure that the sea berth is on the right specified vessel type for the job role and rank they seek and undertake their sea service in accordance with AMSA certification requirements.
- Group Training Organisations employ learners and match their sea service requirements to sea time placements that they have sourced from host employers (vessel operators). Currently this only occurs in a small number of maritime occupations.

- Registered training providers and maritime colleges use their networks to informally assist learners to connect with potential employers and vessel operators to support their achievement of qualifying sea time and to track their AMSA certification achievement.
- Family members working in maritime also provide connections to employers and sea berths.

The current model places the onus on trainee seafarers considering a career at sea to navigate various training and employment pathways. Through the stakeholder engagement conducted to support preparation of this report, a lack of awareness of career pathways as a seafarer for people leaving school or graduating from university has been noted as a key issue that should be addressed.

Industry stated that the status quo is not a viable option, as the current model has contributed to the decline of seafarers.

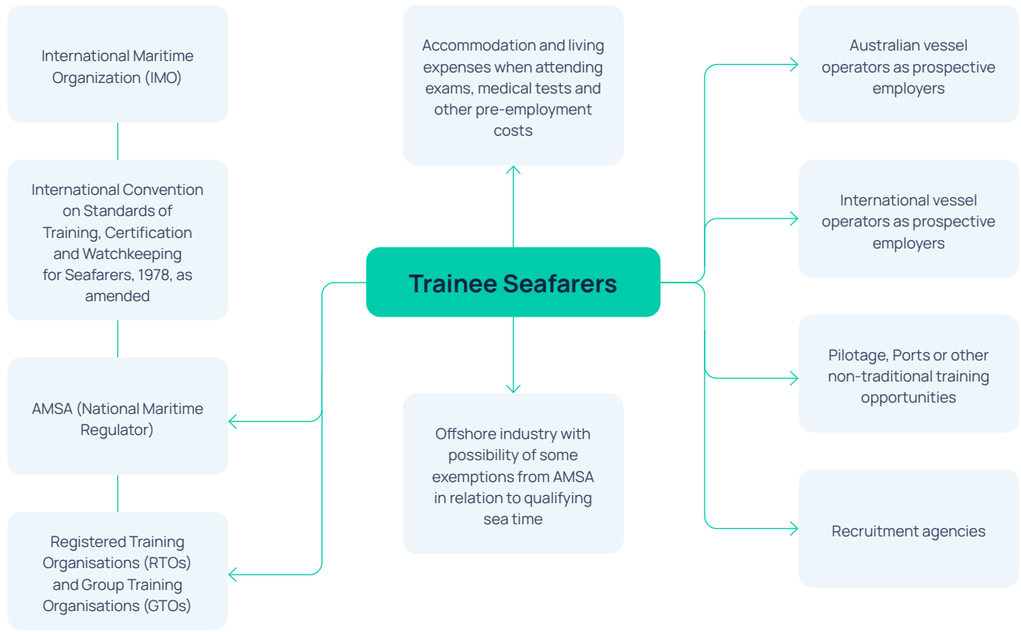


Figure 13 Option Four I Status quo

Key strengths

- The strength in this option is that no additional resources, time or effort will be given to sea time coordination reform.
- There is an opportunity to accommodate a broader range of maritime occupations through existing organisations that support the facilitation of sea time. However, noting the current model has not been successful in increasing the number of Australian seafarers, it is unlikely to yield a different outcome moving forward.

Key risks

- Limitations of the status quo are that all the issues associated with the current sea time coordination system will continue, which could lead to further industry decline.
- The fragmented approach towards training seafarers will likely continue to deliver sub-optimal outcomes and undermine the efforts of vessel operators and Australia's vocational education and training system to facilitate an adequate supply of certified seafarers.
- Individuals are left to navigate the complexity of a maritime career when making career choices. This translates into a risk for the maritime industry where no new entrants are entering the workforce.
- Currently, there is little visibility of seafaring careers for individuals looking to make career choices when completing school and university education. As such, the risk of no change occurring remains unaddressed.

08

Multi-Criteria Analysis

A Multi-Criteria Analysis (MCA) has been developed to assist with the assessment of different sea time coordination model options under consideration in this report.

The steps below outline how the MCA is intended to be used and its utility through the life of the program.

1. The MCA developed can be augmented and used throughout the life of this project and beyond.
2. When assessing the different options under consideration, any new options can be added as new columns, if needed.
3. Similarly, if new criteria are developed as the project progresses or during the implementation phase to assess the effectiveness of the program, additional criteria can be added as rows.
4. The criteria have been ranked using a consistent rating scale.
5. The MCA is designed for relative assessment. A high or low ranking is not intended to be interpreted as absolute. The overall ratings should be interpreted as relative analysis of the different options being considered

8.1 Methodology

Below is an overview of the methodology used in applying the MCA:

Step 1 – Evidence gathering

- Based on desktop research, stakeholder engagement and case studies, examples of training models deployed in other jurisdictions was gathered (see **APPENDIX B I Jurisdictional Summary for the Coordination of Sea Time** and **APPENDIX C I Detailed Evaluation of International Case Studies** for details on sampled jurisdictions).
- Desktop Research, insights from stakeholder engagement and case studies have been collectively termed as Evidence for the purpose of this MCA.

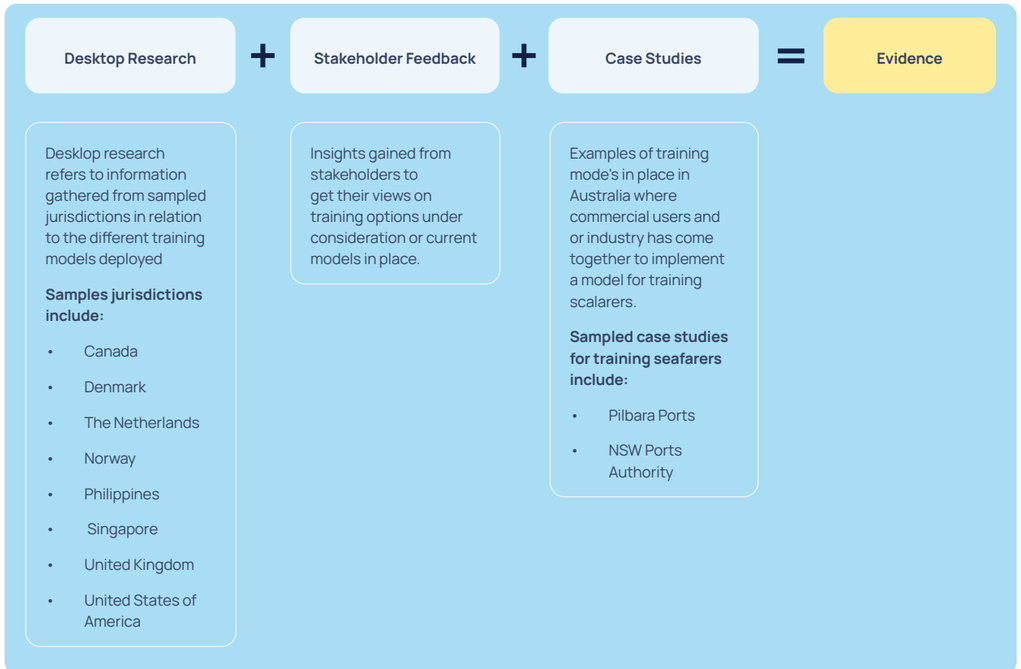


Figure 14 Evidence used in MCA

- The training models gathered may not have exact grouping as the options discussed in this report.
- Examples from different jurisdictions are used as a frame of reference for informing the ratings

Step 2 – Develop assessment criteria

- Criteria developed are meant to rate each option under consideration.
- The current model is captured as Status Quo.
- Criteria are meant to assess different aspects of each model to make them comparable from different perspectives.
- Evidence gathered in Step 1 is used as the basis for assessing options proposed in this report.

Step 3 – Define ratings

- Each criteria developed in Step 2 above is to be ranked using the ratings.
- For consistency of application and interpretation, each rating is defined as below. This approach enables the user to remove any unknown biases when using the rating scale from 0-5.

Rating	Description
0	The Evidence does not show any application of this criterion.
1	Evidence shows some application. Fragmented or complete lack of inclusion of this criterion in the model deployed. Reliance on commercial industry participants to find and implement solutions.
2	Evidence shows some application in multiple jurisdictions. Fragmented or complete lack of effectiveness in the model deployed in the Evidence. Reliance on commercial industry participants to find and implement solutions.
3	Evidence shows some application of the criterion to meet industry standards in multiple jurisdictions. Exceeding minimum industry standards is not deliberately included in the model deployed. Reliance on commercial industry participants to find and implement solutions with some support from government agencies.
4	Evidence shows some application of the criterion to meet industry standards in multiple jurisdictions. Models are designed to meet minimum industry standards and sometimes, exceed minimum requirements. Reliance on commercial industry participants to find and implement solutions with some support from government agencies.
5	Demonstrable application of this criterion in sea time models deployed in other jurisdictions. Multiple jurisdictions seek to emulate this criterion in their training models and deploy learnings in their own jurisdictions. Methodology used to incorporate this criterion in their training model sets a new industry best practice benchmark to measure and assess outcomes. Government agencies actively collaborate with commercial participants to continually invest in improving seafarer training models.

Table 6 I Ratings Definitions used in the MCA

Step 4 – Undertake Multi Criteria Analysis

- Ratings are assigned to the criteria for each training option.
- Low rating does not mean that the training option is not viable. It is a relative rating of how the training option is assessed as low against a specific criterion using the consistent rating scale.

8.2 Summary of Options

The MCA framework has been used for assessing the following 4 coordination of sea time training options:

- **Option One I Consortium of Training Service Providers (CTSPs)**
  Option One proposes that one or more training service providers would centralise the end-to-end co-ordination of sea time for seafarers seeking to achieve AMSA STCW and domestic certifications.
- **Option Two I Independent Sea Time Coordinator (ISC)**
  Option Two proposes to establish an independent mechanism (either a coordinating entity or a central repository held as a publicly accessible service) to coordinate the placement of trainees on vessels to complete mandatory STCW and domestic sea time requirements.

  This independent mechanism could produce the method for multiple parties to exchange data administered by a public, private or not-for-profit entity with appropriate governance to coordinate sea time placement of trainee seafarers across directly impacted organisations to support the Australian maritime industry.
- **Option Three I Recruitment Agency (RA)**
  Option Three proposes a recruitment agency be engaged to find and retain trainees coming through the maritime skills pipeline and match them to available and appropriate sea berth vacancies to facilitate the coordination of qualifying sea time. This option provides trainee seafarers with the ability to approach the recruitment agency or the CTSP.
- **Option Four I Status Quo (SQ)**
  No change from the current Australian system. A national regulator (e.g. AMSA) oversees sea time coordination and is responsible for seafarer certifications. AMSA sets the rules and standards for sea time, training, and certification under international conventions (e.g. STCW). Seafarers hold the responsibility of recording their sea service, which must be verified by vessel operators. Training organisations (such as RTOs and GTOs) may assist with placements and documentation; however, the national regulator still sets the standards and assesses sea time for certification under the STCW convention framework.

8.3 Multi-Criteria Analysis – Overview

Table 5 summarises the MCA for each coordination of sea time option for trainee seafarers.

The MCA uses eight criteria that build on the previous criteria. This approach has been adopted to demonstrate an incremental assessment methodology of the Options outlined in this report.

Criteria 1 and 2 refer to the existence and effectiveness of the Options.

Criteria 3 to 5 address the impacts of the Options on stakeholders.

Criteria 6 and 7 assess the ability to transfer skills to and from other industries.

Criterion 8 provides a lens on any new or innovative practices that may be relevant to Australia.

Criteria	CTSP	ISC	RA	SQ
C1 – Is this model deployed in other jurisdictions?	5	5	2	2
C2 – Is it demonstrable that the option has been successful in other jurisdictions?	4	5	2	0
C3 – Have cascading risks from this model been mitigated?	3	4	2	1
C4 – Does the model provide visibility of career pathways for trainee seafarers?	5	5	3	1
C5 – Are all industry stakeholders actively supportive of the model?	4	4	2	1
C6 – Does the model replicate other industries so it's easily relatable when people are considering seafaring as a career option?	4	5	2	2
C7 – Does the model offer the opportunity for trainees to pursue transferable qualifications recognised by other industries or multiple qualifications?	4	4	4	4
C8 – Does the model propose a novel or new initiative that may be of relevance for Australian seafarers?	4	4	3	1
Overall MCA Score based on assigned scores	**33**	**35**	**20**	**12**

Table 5 I MCA of sea time coordination options

8.3.1 Multi-Criteria Analysis I Detailed overview

C1 – Is this model deployed in other jurisdictions?

While this criterion assesses the evidence of whether an Option is deployed in other jurisdictions, it does not address whether the Option has been successful. This is addressed through the next criteria.

CTSP	ISC	RA	SQ
5	5	2	2

CTSP Deployed in multiple sampled jurisdictions such as Denmark, Norway and Singapore. Training service providers form part of wider government policies in place to facilitate growth of seafarer pipeline in the jurisdictions.

ISC Deployed in sampled jurisdictions such as the Netherlands, Philippines, United States and United Kingdom. Not used as a standalone solution for sea time coordination with other programs in place to support seafarers. Single point of contact for seafarers provided so seafarers do not need to interact with multiple agencies, employers and training organisations.

RA Exists in competitive commercial markets. The role of recruitment agencies is to attract trainee seafarers, which is well received by the industry and is embedded in commercial agreements with employers i.e. vessel operators who may often have the final say on the number of trainee seafarers on board. Recruitment agencies are typically not expected to carry the entire responsibility of recruiting trainee seafarers and managing their training pathways.

SQ The status quo of Australia can be replicated to that of Canada. Based on the evidence, this model has multiple hurdles for trainee seafarers. Importantly, this model does not seek to resolve the circular conversation around insufficient seafarers resulting in declining vessel fleets registered in a jurisdiction which then results in reduced training opportunities.

C2 – Is it demonstrable that the option has been successful in other jurisdictions?

Together with criterion 1, this criterion addresses if a deployed Option has been successful in different jurisdictions. However, broader impact and effectiveness of the Option(s) is not addressed in these criteria and is captured through subsequent criteria, starting with cascading risks of the deployed option in C3.

CTSP	ISC	RA	SQ
4	5	2	0

CTSP Intended outcomes have been achieved in some sampled jurisdictions such as the Netherlands and Norway. However, the training service provider model in isolation has received criticism and issues around availability of training berths and retention of seafarers remain completely unresolved.

ISC Delivers qualifications effectively and certainty of training berths alleviates concerns around careers paths in jurisdictions such as Denmark, Philippines and United States.

RA This option has some success in matching and adapting recruitment strategies towards an area of shortage but does not embrace integration with training. Success of this option can often be transactional and short-term. No systemic tracking of long-term career success or visibility of skills that are likely to be required in future unless recruitment agencies are aligned with employers providing training berths.

SQ No structured success metrics. Often criticised for leaving trainee seafarers unsupported which in turn leads to underemployment or dropout.

C3 – Have cascading risks from this model been mitigated?

This criterion has not been assessed based on a detailed risk assessment. Purpose of this criterion is to highlight the importance of mitigating any cascading risks that can arise out of different model options. This criterion addresses cascading risks of the Option(s) deployed in different jurisdictions. Additional impacts of the Option(s) are addressed through criteria that follow from C4 to C7.

CTSP	ISC	RA	SQ
3	4	1	1

CTSP Operational risks in relation to accessing training berths are actively managed. However, other risks that may arise or require addressing are not actively mitigated. For example, the impact of geopolitics on trade and vessel demand may impact training berths availability.

ISC Operational risks in relation to access to training berths are largely mitigated since jurisdictions such as Denmark and United States have control over vessels providing training berths. However, deployment of such vessels may not be entirely immune to externalities that have not been explored in detail in this assessment.

RA Recruitment agencies are largely dictated by commercial pressures and can be expected to adopt a reactive risk management approach as far as providing access to training berths is concerned. Further, in absence of financial incentives, recruitment agencies could view the process of managing trainee seafarer journeys through different career paths as onerous. This can result in additional risks that may require addressing such as the risk of seafarers leaving the workforce mid-career.

SQ Similar to the RA model, the status quo does not entail any specific risk mitigation measures. The status quo is market driven and reliance on competitive commercial markets to create demand for trainee seafarers to join the workforce. Some incentives are in place for vessel owners to register vessels on Australian International Shipping Register (for example). However, whether these incentives translate into additional trainee seafarers joining the workforce is not clearly evident.

C4 – Does the model provide visibility of career pathways for trainee seafarers?

This criterion addresses the specific matter of career visibility for trainee seafarers. Broader stakeholder aspects are addressed through the next criterion C5.

CTSP	ISC	RA	SQ
5	5	3	1

CTSP Structured pathways with mentorship and milestones. Clear career progressions between different STCW qualification pathways in sampled jurisdictions. Support is provided through structured training programs offered by training service providers, often with milestone tracking and mentorship opportunities.

ISC Similar to the CTSP model, structured oversight for seafarer training provides clear direction of career pathway. Dual certification opportunities offered in Denmark is an example where trainee seafarers can pursue what may be considered non-traditional career pathways in other jurisdictions.

RA Incentives to support long-term career development are linked to commercial contracts that recruitment agencies may hold with employers and providers of sea-berths. As an intermediary, recruitment agencies can provide trainee seafarers with multiple career pathways with different types of employers. However, this is conditional on recruitment agencies being contracted by different vessel operators operating international and near coastal vessels.

SQ Career pathways are unclear and inconsistent. Trainee seafarers need to understand the different career pathways and keep abreast of changing legislation to fully understand the range of possible career options.

C5 – Are all industry stakeholders actively supportive of the model?

Building the MCA from the perspective of all stakeholders other than trainee seafarers, this criterion addresses whether the industry is actively supportive of the Options.

CTSP	ISC	RA	SQ
5	5	2	1

CTSP Collaboration built on multi-party participation and agreements between government, industry, unions and training providers in countries like Norway and Singapore. The model might not be perfect and has been criticised by some stakeholders. Government agencies actively review the incentives in place to support the growth of the seafarer pipeline.

ISC Government agencies are an active stakeholder, and the model is often linked to other national policies such as national maritime resilience (e.g. United States) or seafaring as a major employment industry (e.g. Philippines).

RA Vessel operators have contractual arrangements with recruitment agencies for crewing vessels. Such arrangements often include recruiting trainee seafarers on board vessels. Co-ordinating the training journey can be undertaken by recruitment agencies. However, such services will generally attract an additional cost.

SQ Stakeholders have highlighted concerns over lack of structure and coordinated support aimed at facilitating the career path for trainee seafarers (see **APPENDIX A I Stakeholder Engagement Summary**).

Criteria that follow in C6 and C7 address the transferability of skills and qualifications gained in the maritime industry to other industries.

C6 – Does the model replicate other industries so it's easily relatable when people are considering seafaring as a career option?

This criterion assesses if the Option deployed is unique to the maritime industry. Individually, this criterion assesses the extent to which the Options are not easily relatable to other industries.

CTSP	ISC	RA	SQ
4	5	2	2

CTSP Apprenticeship-style models are applicable in other industries. Examples include construction, manufacturing and mining.[83] However, the ability to transfer skills from the maritime industry to other industries is not evidently clear to trainee seafarers.

ISC Jurisdictions such as United States[84] and United Kingdom[85] integrate classroom-based learning with sea time and the successful completion of the course leads to an undergraduate qualification (BSc. Nautical Science).

RA The service offered by recruitment agencies is similar to other industries to the extent that trainee seafarers can approach recruitment agencies for placement on board vessels. This is comparable to the essential function that recruitment agencies provide in any other industry.

SQ In jurisdictions such as Australia, BSc in Nautical Science is offered as a pathway.[86] However, trainee seafarers need to establish for themselves about career possibilities outside the maritime industry.

C7 – Does the model offer the opportunity for trainees to pursue transferable qualifications recognised by other industries or multiple qualifications?

Building on criterion C6, this criterion addresses the transferability of maritime training and qualifications to, and potentially, from other industries.

CTSP	ISC	RA	SQ
4	4	4	4

83 DEWR (Retrieved 2025) https://www.yourcareer.gov.au/industries
84 Northeast Maritime Institute (Retrieved 2025) https://www.cms.nmi.edu/nautical-science-degree-program/
85 Warsash Maritime School (Retrieved 2025) https://maritime.solent.ac.uk/courses/deck/bsc-hons-nautical-science
86 University of Tasmania (Retrieved 2025) https://www.utas.edu.au/courses/cse/courses/23q-bachelor-of-applied-science-nautical-science

Ability to transfer qualifications obtained in any jurisdiction is determined by the relevant regulatory body. As such, regardless of the option deployed in various jurisdictions, ability for trainee seafarers to transfer their qualifications will not be influenced by the option deployed.

The criterion has been included for completeness of comparative assessment of the different options.

Whilst all the criteria from C1 to C7 addresses the Options deployed in sampled jurisdictions, criterion C8 addresses the relevance of any new or novel approaches in the Options that may be of relevance to Australia.

C8 – Does the model propose a novel or new initiative that may be of relevance for Australian seafarers?

This criterion specifically looks at any new or novel approaches deployed in sampled jurisdictions that may be relevant for Australia.

CTSP	ISC	RA	SQ
4	4	3	1

CTSP Innovations like simulation training in the Netherlands and process enhancement like digital certification in Norway are examples of how the learning journey of trainee seafarers in Australia could be enhanced.

ISC Dedicated training vessels like those in Denmark or a nationalised training academy like in the United States are examples where learning from those models could be deployed under this option in Australia.

RA The recruitment agencies are likely to require sustainable incentives to support the learning journey of trainee seafarers. Clear applicability of this option has not been noted in the Evidence. However, the role of recruitment agencies is often embedded with employers in the different models in the sampled jurisdictions.

SQ No new initiatives are proposed as the option, by definition, means no change to the current model. Some initiatives by industry participants, mostly organisations that require seafarers, have deployed training programs (e.g. NSW Ports and Pilbara Ports Authority).

8.3.2 Analysis of Overall MCA Ranking Scores

Table 6 summarises the MCA scores for different options analysed in this report.

CTSP	ISC	RA	SQ
43	27	18	7

Table 6 I MCA Score

Options One and Two provide the ability for trainee seafarers to have a single point of contact. This is aimed at facilitating the mapping of career options for people contemplating a career at sea. The approach is intended to improve the number of trainee seafarers. With that context, Options Three and Four still provide multiple interfaces that trainee seafarer must navigate to fully understand what a career in the maritime industry might look like.

Based on desktop research, countries such as Singapore and Norway have iterations of the CTSP model as outlined in Option One (see **APPENDIX C I Detailed Evaluation of International Case Studies**) with government agencies providing support and oversight to support seafarer training. This option is recommended to be tested through a feasibility business case, and if viable, a pilot program.

Noting there are training service providers already operating in Australia, a pilot program can be co-designed with industry input. A collaborative approach in feasibility development, pilot program design and sharing learnings is likely to help achieve consensus of key issues and pain points that would need to be addressed if the option was to be implemented beyond the recommended pilot phase.

Jurisdictions such as Denmark, Philippines, United States and United Kingdom have implemented iterations of Option Two outlined in **APPENDIX C I Detailed Evaluation of International Case Studies**. Success of this model is measured differently by each jurisdiction. Relevance and efficacy of Option Two in Australia can therefore be tested through the feasibility business case recommended pilot program.

Exact cost of implementing the ISC model can be established by conducting a feasibility business case and through the recommended pilot program. Since the recommended pilot program is intended to deliver trained seafarers on completion of the schedule, the mechanism of assessing costs of implementing Option Two is likely to deliver best value for money. A desktop research exercise to ascertain cost involved with implementing Option Two is likely to give lowest value for money.

09

Potential next steps

Based on the research, analysis, MCA and stakeholder engagement undertaken, this section outlines potential next steps in relation to developing an effective national model for coordinating sea time.

9.1 Progress CTSP and ISC models

Option One (CTSP Model) and Option Two (ISC Model) have been attributed scores that are higher than Option Three (Recruitment Agency Model) and Option Four (Status Quo).

On this basis, it is recommended that CTSP and ISC models are further evaluated with the maritime sector.

Option One	Option Two	Option Three	Option Four
CTSP	ISC	RA	SQ
33	35	20	12

Table 7 I Overall MCA Score of different options

The next steps in following sections are based on progressing both options to next stages.

As the options are progressed, the learnings can be attributed to either or both options to further understand if there's clearly a better sea time coordination option that could be deployed in Australia to increase the number of Australian trainee seafarers.

9.2 Develop a feasibility business case

Assess the CTSP and ISC models in an Australian context through a feasibility business case that is to be developed and is expected to entail:

- Targeted and ongoing stakeholder engagement to understand industry pain points
- Cost barriers and considerations for implementing the CTSP or the ISC option
- Detailed risk assessment of each option
- Legislative review to understand scope and magnitude of regulatory change required to achieve desired outcomes if either training model was deployed
- Resourcing and capabilities required to implement either option
- Relevance of learnings from other jurisdictions to train Australian seafarers
- Any other key considerations for both CTSP and ISC options.

It is important to structure the feasibility business case for the two identified options in a way that key risks and associated costs of CTSP and ISC option remain discrete.

Learnings from both evaluations can then be applied to the option selected for implementation.

9.3 Develop a sea time pilot implementation plan

Develop a sea time pilot implementation plan to design a pilot to train seafarers based on the skills that are in high demand. The pilot program can be structured in a manner that at the end of the program, trained seafarers can enter the maritime industry. This would ensure the funds allocated towards a pilot program deliver tangible benefit to the maritime industry whilst the industry gathers learnings from the pilot program.

The pilot program is recommended to be structured in a way that it is co-designed with industry and learnings are shared with industry to foster better collaboration and transparency, including and not limited to, employers, training providers, regulatory bodies and other government agencies that may have an interest in sea time coordination for the maritime industry.

9.4 Provide better visibility of seafaring as a career

Career pathways for trainee seafarers considering seafaring as a career option are not entirely clear. Stakeholder engagement has validated the need for better visibility

of seafaring as a career pathway. This can be accelerated through partnerships with existing industry bodies, focussed advocacy groups and industry-led campaigns or other means. Increased awareness of career pathways in the maritime industry needs to be considered in greater detail as part of any programs that might be considered to change the current sea time coordination model deployed in Australia.

This step is being supported by the National Maritime Skills Network, facilitated by ISA.

9.5 Collaborate with Australian Government agencies

Collaborate with Australian government agencies to understand their requirements for specific skills and regulatory hurdles that might be removed for trainee seafarers. Examples of such collaboration opportunities involve ABF and ADF.

Stakeholder engagement with ABF has revealed a pressing need for seafarers to meet ABF requirements.

ABF and ADF could also be considered key stakeholders to provide input into the design of the pilot program. This will enable a better understanding of implementation costs, risks and mitigation measures that are specific to ADF and/or ABF requirements and seeks to support occupational mobility objectives.

This next step is expected to be included in the Occupational Mobility for Defence project currently being undertaken by ISA.

9.6 Leverage learnings with DITRDCSA

The Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts of Australia (DITRDCSA) has recently undertaken a program of work to design and implement the Strategic Fleet Pilot Program, as well as to develop a program design for the Maritime Industry Skills and Training Initiative (MISTI). When developing the next steps for a pilot program for the national coordination of sea time, leveraging learnings and insights gained by DITRDCSA through the works undertaken to support the Strategic Fleet and develop MISTI can be instrumental in maximising highest and best value for money.

Examples of DITRDCSA capability that can be leveraged includes, and is not limited to, procurement, risk analysis and mitigation, feasibility analysis, regulatory and legislative review and intra-agency collaboration protocols (as applicable). Industry Skills Australia can reciprocate by sharing learnings and insights.

9.7 Explore regional collaboration

Explore the potential for regional collaboration with countries such as Pacific Island Countries,[87] New Zealand, Singapore, South Korea and Papua New Guinea. Such regional collaboration opportunities could deliver on other regional leadership outcomes sought by Australia. Importantly, the opportunity to learn from constraints experienced by other regional nations who are facing similar pressures in terms of reducing maritime workforce[88] could be incorporated and tested during the pilot program to create a wider regional seafarer pool.

9.8 Trial innovative training delivery methods

The pilot program should incorporate methods of training delivery, such as the use of simulation, that are in place in sampled jurisdictions such as Norway. The role of such innovative training delivery methods will need to be developed in close collaboration with AMSA as well as training providers and employers.

87 European Commission (Retrieved 2026) https://international-partnerships.ec.europa.eu/countries/pacific-islands-countries_en

88 Refer Stakeholder engagement, NZ meeting minutes

10

Proposed next steps

To assess the viability and design a preferred national sea time coordination model with the maritime sector, ISA has submitted a project proposal to DEWR to pursue a feasibility business case and a pilot program implementation plan for delivery in 2026.

The design of the pilot program is recommended to test systemic change for Australian trainee seafarers.

Designing and implementing the pilot program is important to ensure the pilot program delivers trained seafarers at the end of the program. This approach will not only provide an opportunity to test a new end-to-end sea time coordination model in Australia but also provide value for money as the pilot program is intended to be designed such that trainee seafarers achieve the relevant qualifications at the end of the program.

11

Conclusion

Global sea time coordination models have been helpful to inform Australia's approach to developing an effective model for coordinating sea time. Outcomes of intensive stakeholder engagement across the maritime sector produced a strong set of guiding principles and a clear set of criteria to assess all options. A summary of training costs to seafarers and employers pursuing high-demand maritime occupations is included in this report.

Out of four sea time coordination options and based on a multi-criteria assessment conducted in this report, the recommended next steps include that two options (CTPS and ISC) be taken to the next stage for feasibility assessment and for a pilot program to be designed to support implementation of the preferred option.

Engagement with the maritime sector is intended to continue to co-design the preferred national model.

Funding arrangements and long-term sustainability opportunities for the preferred option to be implemented need to be assessed during the feasibility business case. This will ensure the preferred model attracts best value for money by supporting trainee seafarers to complete their training (sea time, simulator based, and classroom based) that contributes towards a CoC issued by AMSA.

The set of proposed next steps also includes continued collaboration with Australian Government departments and agencies, exploration of regional collaboration to increase the seafarer pool and to use the opportunity of a proposed pilot program to trial innovative training delivery methods.

APPENDICES

Appendix A I Stakeholder Engagement Summary

Background

The Australian Government has committed to the establishment of a Strategic Fleet of up to 12 Australian-flagged and crewed vessels to strengthen economic sovereignty and support improved national security outcomes.

The Strategic Fleet Taskforce, in its Final Report noted that:

ISA should work with industry to consider an appropriate mechanism to better coordinate on-the-job training to facilitate expedited access to appropriate vessels for seafarers to complete their mandatory training obligations to obtain STCW qualifications.

Many industries provide on-the-job training, so learners have access to worksite conditions under the guidance of skilled workers. In the Maritime workplace, on-the-job training is referred to as 'sea time'.

There are significant barriers for learners to secure access to sea time on vessels and gaining the necessary hours to achieve certification. This is particularly complex given the remote and complex nature of maritime operations.

Purpose

The Coordination of Sea time project aims to develop a national model to effectively coordinate sea time and expedite access to training berths for maritime trainees. The project will address the ongoing requirements of cadets and trainees to access training berths to complete their qualifying seagoing service and achieve AMSA certification.

The project will establish a skilled workforce for the Strategic Fleet and support the broader maritime industry to meet critical and immediate occupational shortages.

Engagement methodology

A wide range of Stakeholders were consulted for the Coordination of Sea Time Project. The target audience included Registered Training Organisations, Group Training Organisations, crew management service providers, vessel owner and operators, the Australian Maritime Safety Regulator, industry bodies, unions, port authorities, federal and state government departments and agencies.

Stakeholder engagement across the maritime sector commenced in March 2025 and continued until late July 2025. Over 38 engagement sessions were conducted during this time, including face to face and online meetings with groups or individuals. All states and territories were represented in the engagement meetings. The gender balance of stakeholders was significantly higher than in the maritime workforce.

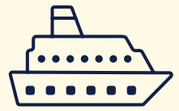
The engagement methodology can best be described as agile, which aligned with the agile project management methodology. Desk-based research informed the early development of concepts to coordinate sea time, due to the complex nature of the subject matter. These concepts were developed with stakeholders during the engagement sessions.

The agile approach to engagement was implemented to capture a set of valued principles by stakeholders. Consultation with stakeholders was not linear (one meeting per stakeholder group) and some stakeholders had more than one meeting.

Initial meetings with stakeholders uncovered sea time complexities, which required further investigation, then further consultation. At times during the development of the options and recommendations, it was important to bring different stakeholders together. This was to ensure that the proposals in the report could work within Australia and for all stakeholder groups.

Maritime Stakeholder Engagement

9 Stakeholder Cohorts from 6 Stakeholder groups



28 Maritime Organisations/Advisory Groups Represented

38 Stakeholder Meetings

62 Individual Stakeholders

Gender balance
38 Male : 28 Female

Engagement Matrix

The project was informed by extensive consultation with stakeholders including government departments and agencies, maritime unions, industry associations, employer, training organisations and regulators.

There are no ACT maritime stakeholders and are represented by the national stakeholders of four groups.

Stakeholders representing all states and territories were consulted, directly or indirectly.

	Regulator	Union	Association	Government	Employer	RTO/GTO
National						
NT						
SA						
VIC						
NSW						
TAS						
QLD						
WA						
ACT*						
	National: No state or territory based					

Direct Engagement

Indirect Engagement through National stakeholders

Table of Engagement

Organisation	Stakeholder Type	Number of Meetings	Stakeholders Male: Female
Australian Maritime Union (AMOU)	Union	1	1F
Australian Institute of Marine and Power Engineers (AIMPE)	Union	1	1M
ATC Work Smart	GTO	1	1F
Australian Boarder Force (ABF)	Employer/ Defence	3 (1 joint DITRDSCA)	4M: 4F
Australian Maritime College	RTO/Higher Education	1	2F
Australian Maritime Safety Authority (AMSA)	Regulator	2	1M
Australian Resources and Energy Employer Association (AREEA)	Association	1	1F
Canada Steamship Lines (CSL)	Employer	1	1F
Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts (DITRDCSA)	Government	3 (one joint with ABF)	3M: 2F
Fremantle Simulation Centre	Training Provider	1	1M
Gladstone Ports	Employer	1	1M
Maritime Employees Training Ltd (METL)	GTO	2	1M
Maritime Industry Australia Ltd (MIAL)	Association	2	1F
Maritime Union of Australia (MUA)	Union	1	1M
National Maritime Skills Network (NMSN)	Advisory Panel	1	2M:5F
Offshore and Specialist Ships Australia (OSSA)	Association	2	4M
Pilbara Ports	Employer	1	1M: 1F
Port of Brisbane	Employer	1	1F
SeaLink	Employer	2	2M
SeaRoad	Employer	1	1M

South Metropolitan TAFE	RTO	1	1M
Strategic Workforce Planning Committee (SWPC)	ISA Committee	4	5M:2F
TAFE NSW	RTO	1	1M
TAFE Queensland	RTO	2	4F
Teekay	Employer	2	1M: 1F
West Coast Wilderness	Employer	1	1F
Woodside	Employer	1	2M
Powering Skills Australia	JSC	1	1M
Total Engagements	**28**	**38**	**62 Individuals 34M: 28F**

Results and Discussion Outcomes

Consultation with stakeholders reflected a sector with diverse opinions and relationships with sea time requirements. Examples of stakeholder comments are represented below.

Priorities	Stakeholder Comments
	*"It's very important for us to see our students succeed, and they need the support during sea service to succeed".* *"Sea time is about optimising onboard space and not overwhelming what can sometimes be slim crew numbers."* *"Employers have a big incentive in making sure trainees are properly trained as they want to retain the person as an employee."*
Problems	**Stakeholder Comments**
	*"The maritime workforce is aging and stagnant. It contains lots of workers with no formal qualifications."* *"We know sea time is a problem because it takes too long and people are too rigid around finding ways to address it."* *"People get lost in the existing (sea time coordination system), and there is no ownership of responsibility."* *"The financial cost of entering the maritime industry is preventing people from taking jobs at sea."* *"You would need to consider the housing and feeding (of trainees), which seems like it's a small part, but that's where it gives the most angst in this programme."* *"If one engineer goes down right now, we are scrambling to cover the position. We want to highlight that engineers are our greatest workforce shortage."* *"We're getting plenty of people through training, but where are they going? ……how do we keep them here in Australia?"* *"The current sea time system is very murky, and for young people trying to find a path, things are too confusing."* *"One of the challenges in the current system is not knowing enough about the trainees coming down the pipeline."*

Insights	Stakeholder Comments
	*"The thing to keep in the back of your mind is that seagoing skills, maritime skills are a global issue, not an Australian issue in and of themselves."* *"As it currently stands, the host employers prefer to have a cohort that's assigned to them and stay in house, and that's largely in response to the IR shortage, prompting them to."* *"I think that any vessel that can do that (offer sea time hours) is of value, not just something that looks the same as what the strategic fleet will look like because ultimately it allows more people trained to that entry level and also gets sea time up for those higher levels."* *"The costs associated with seafarers are almost irrelevant compared to company support of the seafarer, and what incentives are being offered to companies to take on seafarers"* *"From the training perspective, we prefer to take those people who have the right sea time. When I say right, I mean sea time from a vessel that actually contains the same components of the training they're receiving."* *"We are excited that the government is looking to support trainees back into the industry"*

Ideas	Stakeholder Comments
	*"If there's another (training) funding model which allowed a rebate it would soften the blow for employers when giving trainees berths"* *"Bringing together different ground, like have in terms of that consortium model, could be a strong idea, because I think that there is definitely value there for all parties"* *"If there was that central repository and that structure of support people it could work. People could submit their sea service to one place, and opportunities for employment could flow from there"* *"A system that considers the full term of a person's training, including job placement, is vital for industry success"* *"A smooth throughput of trainees should be an objective of the new model"*

A summary of Stakeholder Insights

Stakeholder feedback to date has focused on the role, characteristics and value that a national sea time coordination system could bring to diverse maritime stakeholders. The following insights represent industry sentiments that have been universally expressed so far and are key factors to consider when developing the most suitable model option.

- **Place the learner at its core:** A national model would facilitate easier access to learners for employers, and easier identification of available berths on vessels for learners. It would be a learner-centric model, creating the perception of a single learning journey (including both qualification and certification processes) with learner privacy and welfare enshrined in governance and practice.
- **Be dynamic and match real-time berth availability:** It would improve coordinating learner berth placements by being updated in alignment with shipping schedules as they change.
- **Support ambitions of improved training services:** It would allow training service providers to better align their activities and training programs with vessel and journey availabilities by providing direct, formal links across different value-creating system actors. There is an opportunity to support training providers to provide a 'closed loop' service to match learners to available sea berths via employers and vessel operators, as required, to grow and accelerate access to certified seafarers.
- **Provide a formal mechanism for consent and data exchange:** It would create a central repository where all sea time learners who require berths are registered, and all vessels who can provide berths are listed. This repository can be used by existing business models operating in the maritime sector to match and recruit suitable trainees with vessels. There may be an opportunity to create a link to AMSA's sea time certification process.
- **Complement existing business models**: Considering the diverse and commercial interests of public and private sector organisations serving the maritime industry, a coordinated national model aims to complement existing business models so that all parties can benefit.
- **An incentive may be required**: A national model would need to complement existing or future incentive programs of government investors or funding partners. Regulatory bodies such as Port Authorities may not have the ability to provide sea berths but they can contribute in other ways to support training of seafarers.
- **Industry advocacy and broader co-operation**: Stakeholders have highlighted a strong desire to work collaboratively with other entities in Australia such as ABF and ADF as well as regional players. The collaboration opportunities that can be explored include the role of training organisations in Australia to provide training to seafarers from other countries.

Further, the regional co-operation platform should be used to advocate for the role of seafarers and highlight their importance for island nations like Australia that do not benefit from hinterland connectivity of island nations in Europe, for example.

- **Lack of awareness of seafaring as a career**: This matter has been highlighted as one of grave concern. School leavers looking to decide a career option do not have a very good visibility of pathways in seafaring. The efforts are largely concentrated through voluntary initiatives across different parts of the industry. There is no nationally orchestrated push to create awareness of seafaring as a career pathway.
- **Complexity of training requirements**: Understanding the various training requirements, role of sea time, classroom-based training and simulation-based training is not clearly understood by people considering seafaring as a career pathway. Unless people have friends or family connections who can explain how to navigate the various requirements, it can get cumbersome very quickly for people considering seafaring as a career option to try and understand the various training and certification requirements.
- **Variance in training standards**: In Australia, AMSA determines the training requirements when assessing candidates for respective certification. Some other jurisdictions may exercise discretion over some training requirements creating the perception that AMSA requirements are onerous. This matter should be included in the awareness programs for the maritime industry and the importance of AMSA's role in maintaining safety standards across the industry.
- **Health and safety concerns**: Access to ongoing support programs, particularly for mental well-being has been flagged as a matter that should be addressed. Support if generally available when vessels are in port or in/ around coastal waters. However, when vessels are at high seas, not all vessels have the ability to provide affordable care. When considering funding support to training options, consideration should be given to incorporating such support to understand its effectiveness and costs involved.

Principles informing sea time model option design

Consultation with stakeholders identified five overarching principles which were raised by many stakeholders and disagreed by none. These are surmised in the **7. Sea Time Coordination Options Under Consideration** section of the Final Report. The five common Principles are outlined in the table below.

Principle1	Description
Equity	*Every proposed option in this report must be equitable, and if an entity incurs cost, it should be entitled to benefits*
Principle 2	
Competitive and free markets	*All options preserve the ability for market participants to make a choice. This principle ensures that every participant can make their own assessments of cost, benefits or any other assessment they may deem appropriate*
Principle 3	
Regulatory requirements remain unchanged	*The role of AMSA, any legislation (such as Coastal Trading Act (Cth) 2012) or any other regulatory requirements remain unchanged in all the training options assessed in this report.*
Principle 4	
Deliver a neutral or better outcome for all stakeholders than current state	*All options have been designed with the trainee seafarer's perspective as the key focus. However, all options consider the impact on all other stakeholders. Therefore, all stakeholders are either better off or remain unaffected by the proposed training options*
Principle 5	
Information symmetry	*Stakeholder engagement has demonstrated the need for a central data repository that is used by all stakeholders for different purposes.*

Jobs and Skills Councils Engagement

A requirement of the project was to inform and provide updates to the following Jobs and Skills Councils:

- Mining and Automotive Skills Alliance – Onshore Oil and Gas
- Powering Skills Organisation – Clean Energy
- Public Skills Australia – Defence
- Skills Insight – Seafood and Aquaculture
- Service and Creative Skills Australia – Tourism.

The Jobs and Skills Councils were engaged in the following ways:

- Project updates were provided through the ISA newsletter
- An invitation to one-on-one meetings to discuss the project was dispatched.

Conclusion

The Strategic Fleet Taskforce highlighted the need for better coordination and improved access to training berths on vessels in its Final Report. This would expediate seafarers to complete their mandatory sea time training obligations.

The Coordination of Sea Time project included extensive stakeholder engagement, conducting 38 engagement sessions with groups or individuals. The engagement methodology uncovered multiple insights that have been used to inform the development of model options to coordinate sea time nationally.

Consultation with maritime stakeholders identified five principles for the future coordination of sea time:

- Equity
- Competitive and free markets
- Regulatory requirements remain unchanged
- Deliver a neutral or better outcome for all stakeholders than current state
- Information symmetry.

Maritime stakeholders understand that working together to provide easier access to sea time is in the interests of all parties. It will help to establish a skilled workforce for the Strategic Fleet and support the long-term sustainability of Australian maritime operations. More broadly the impact will strengthen Australia's supply chains and humanitarian operations and national security.

Appendix B I Jurisdictional Summary for coordination of sea time

Summary of sea time coordination models applied in sampled jurisdictions is outlined in Table 8

Table 8 I Jurisdictional Summary for coordination of sea time

Sampled jurisdiction	Comparable Option	Summary
Canada	Option 4 I Status Quo	Most similar to Status Quo. It mirrors the Australian model in that cadets must independently secure sea time. Training service providers assist with placement and coordination.
Denmark	Option 2 I Independent Sea Time Coordinator	Most similar to Independent Sea Time Coordinator. It features government-led coordination, structured sea time integration, and financial support mechanisms, making it highly effective in ensuring cadet development and placement. Trainee seafarers coordinate with the relevant Maritime Educational Institutions overseen by the Danish Agency for Higher Education (**DAHE**). Access to sea berths for trainee seafarers (Ordinary Ratings) is included as part of this programme with two dedicated training vessels. Officers have the opportunity to pursue Dual STCW Certification (Deck and Engine) in international waters.
The Netherlands	Option 1 I Consortium of Training Service Providers	A coordinated model that functions similarly to a CTSP. Training service providers actively coordinate sea time placements with industry partners, under the oversight of national maritime authorities. Trainee seafarers have access to vessels and employers from European Union to obtain their sea time.

Norway	Option 1 I Consortium of Training Service Providers	Norway's model is similar to a CTSP. It features central oversight, integrated sea time coordination, and stakeholder collaboration, aimed at supporting workforce development. Training model deployed for seafarers in Norway provides various tax incentives and financial support to seafarers as well as employers. This is intended to encourage employers to employ trainee seafarers to provide them with opportunities to complete their sea time. Such incentives extend to all seafarers, not just trainee seafarers. Training institutions accredited by the Norwegian Maritime Authority (NMA) provide training options for seafarers seeking to obtain STCW qualifications.
Philippines	Option 2 I Independent Sea Time Coordinator	ISC model deployed for seafarers is controlled by the Maritime Industry Authority (MARINA). MARINA requires the Higher Education Institutions (MHEI) to coordinate availability of training berths with employers to ensure trainee seafarers are provided with berth access. Commercial vessel operators have also established accredited training institutions (MHEI) which provides them with the opportunity to roster trainees for sea time and shore-based training.
Singapore	Option 1 I Consortium of Training Service Providers	Model is most similar to CTSP. Trainee seafarers can select a training institution depending on the chosen career option and seafarers must coordinate directly with employers to obtain access to sea berths to complete requisite sea time for STCW qualifications. Scholarships and other financial incentives are available to eligible trainees.
United Kingdom	Option 2 I Independent Sea Time Coordinator	Model deployed in UK is most similar to Independent Sea Time Coordinator Option. Accredited training providers work collaboratively with employers to provide trainee seafarers with a single point of access and ability to schedule their shore-based training and sea time. Financial support for eligible trainee seafarers is provided through the SMarT scheme which further reduces the cost of undertaking training for STCW qualifications. ISWAN Action Plan is an industry collaboration programme aimed to encourage further collaborations between training providers and employers.
United States	Option 2 I Independent Sea Time Coordinator	Most similar to Independent Sea Time Coordinator Option. Seafarers are trained at the US Merchant Marine Academy (USMMA) and on successful completion of training, seafarers are STCW qualified. The USMMA takes responsibility of ensuring all trainees complete their sea time and shore-based training. A key difference to Australia is that trainee seafarers who obtain STCW qualifications from the USMMA are also qualified to sail on board naval vessels without the need for any further certification or learning requirements.

Appendix C I Detailed Evaluation of International Case Studies

Australia's maritime workforce challenges must be considered in the context of broader international trends. The Baltic and International Maritime Council (BIMCO) and International Chamber of Shipping (ICS) Seafarer Workforce Report projects a global shortage of 89,510 STCW-certified officers by 2026. [89] This suggests that Australia is not alone in facing skills deficits, underscoring the need for increased training and recruitment to meet the growing demands of the maritime industry.

Although the global maritime industry is required to meet IMO standards, and the requirement for sea time is universal, dedicated national models to coordinate sea berths are not widely established. Based on desktop research undertaken, no clear evidence could be found in nations comparable to Australia. Rather, sea time coordination relies on a mix of government oversight, educational institutions and industry partnerships.

While formulating the draft model options in this report, desktop research on the approaches used by the following countries was conducted to determine any features that might inform options for Australia:

- Canada
- Denmark
- The Netherlands
- Norway
- Philippines
- Singapore
- United Kingdom
- United States

Of these, the following countries have mature systems with features that might be considered when designing a robust and sustainable model for implementation in Australia. Further stakeholder engagement with jurisdictions deemed appropriate for Australian training options is recommended to understand the nuances and risks associated with training options deployed in respective jurisdictions.

89 BIMCO & ICS (2021) https://www.ics-shipping.org/press-release/new-bimco-ics-seafarer-workforce-report-warns-of-serious-potential-officer-shortage/

Scope of training models assessed in respective jurisdictions are for STCW career pathways except for US. Owing to local nuances and partnerships with EU (for example), a comparison of Australian coastal qualifications using desktop research with other jurisdictions is unlikely to provide material insights. Targeted stakeholder engagement with specific jurisdictions is recommended to compare training pathways for domestic qualifications in different jurisdictions.

DWT and Global Fleet Size Rankings

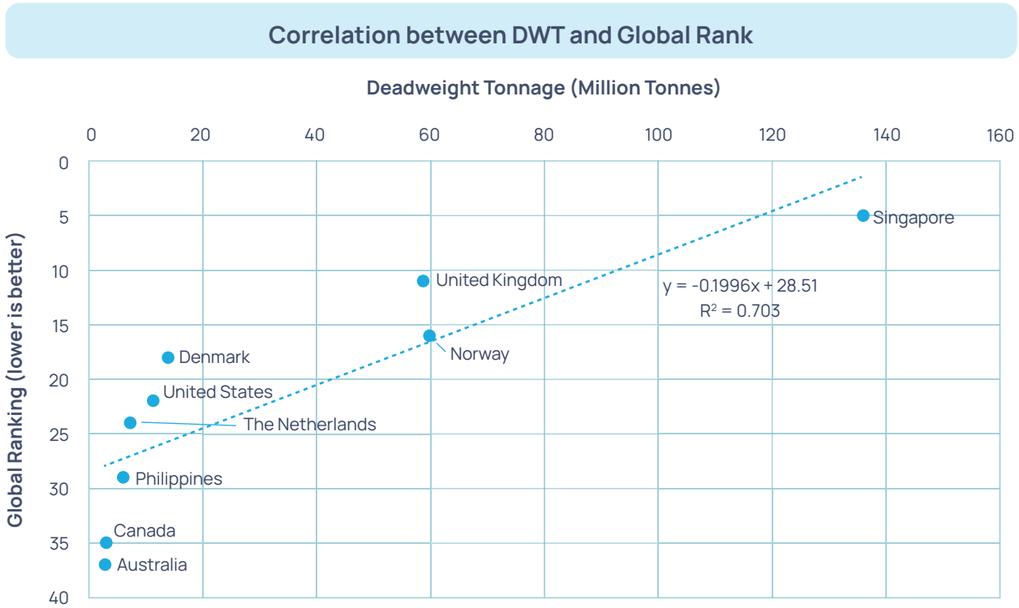
Global rankings refer to a country's position relative to others based on the total deadweight tonnage (DWT) of its merchant fleet. This ranking is determined and reported by the United Nations Conference on Trade and Development (UNCTAD) using official fleet registration and tonnage data.

The global rank serves as an indicator of a nation's maritime capacity and competitiveness, reflecting the scale of its shipping industry within the global fleet hierarchy, which helps to benchmark Australia's maritime sector against peer nations. Whilst contextualising Australia's position, it also highlights the implications for workforce development, training demand, and the necessity for international partnerships.

As an indicator, the global rank provides a quantifiable measure of maritime presence and is strongly correlated with the demand for qualified seafarers, thus influencing national strategies for training, certification and industry growth.

Country	DWT (million tonnes)	Global Ranking *Global ranking in the context of deadweight tonnage (DWT) refers to a country's position relative to others based on the total carrying capacity of its merchant fleet.*
Australia	2.8	36-38th
Canada	3	35th
Denmark	13.8	18th
The Netherlands	7.2	24th
Norway	59.9	16th
Philippines	6	29th
Singapore	136	5th
United Kingdom	58.7	11th
United States	11.2	22nd

Figure 18 Registered tonnage of sampled countries



There is a connection between deadweight tonnage and global rankings for fleet size. In this context, a higher DWT corresponds to a better (lower) global rank. The correlation coefficient calculated is approximately -0.98, indicating a strong negative correlation. This means that as a country's DWT increases, its global rank improves (i.e. the rank number decreases).

Key Insights I DWT & Global Ranking

Figure 18 offers insights into how maritime nations can shape their seafarer training pathways and policies. Countries with higher registered tonnage—such as Singapore, Norway, and the United Kingdom—translates into greater demand for qualified seafarers. This demand drives investment in maritime education and training (MET) institutions, cadetship programs, and national certification systems. In contrast, countries with smaller fleets, like Canada and Australia, may not generate enough domestic demand to sustain large-scale training systems. Instead, they often rely on international partnerships to place their seafarers on foreign-flagged vessels. Alternately, rely on competitive markets to address market demand. An additional insight that can be gleaned is if a country had ambitions of growing its registered tonnage without sufficient effort to build a pipeline of seafarers with requisite qualifications to crew those vessels, its fleet may not grow at expected rate unless alternatives such as seafarers from other countries to crew those vessels are put in place.

Canada

Key Insights I Canada

Training model deployed for seafarers is similar to Australia. Commercial operators are left to determine the need for training seafarers and providing sea berths. Trainee seafarers need to engage with companies employing trainees and providing necessary sea time for STCW qualifications.

Canada ranks 35th globally in terms of deadweight tonnage with an approximate fleet size of 3 million DWT. [90]

Canada's maritime industry, benefits from its advantageous geographical positioning.[91] Canada boasts the longest coastline in the world and large navigable waterways, with access to the Atlantic, Pacific, and Arctic Oceans. In 2023, ports and marine shipping carried almost CA$139 billion in Canada' exports and brought in CA$182 billion of Canada's total imports. This includes over 351 million tonnes of cargo volume being handled at Canada's 17 major ports.[92] The Canadian government has emphasised supply chain resilience as a national priority, integrating it into its Maritime Security Strategic Framework as a move towards protecting critical infrastructure and ensuring economic stability.[93]

90 UNCTAD (Retrieved 2025) https://unctadstat.unctad.org/insights/theme/107
91 Government of Canada (2025) https://publications.gc.ca/collections/collection_2025/tc/T29-174-2025-eng.pdf
92 Government of Canada (2025) https://publications.gc.ca/collections/collection_2025/tc/T29-174-2025-eng.pdf
93 Government of Canada (2025) https://tc.canada.ca/en/marine-transportation/publications/tp-15627-canada-s-maritime-security-strategic-framework

The training model for seafarers in Canada is similar to Australia where seafarers are entrusted with the responsibility to liaising with necessary industry participants and regulatory bodies to secure sea time and certification (see Figure 19).

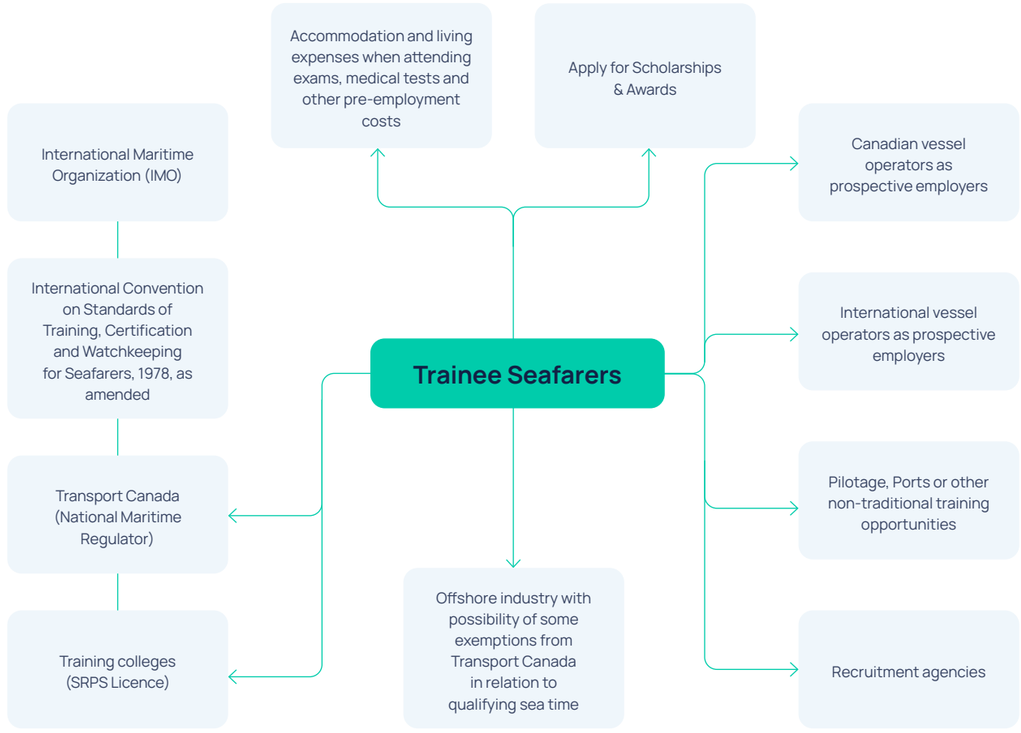


Figure 19 Current training model for Trainee Seafarers I Canada

Modelling itself after global leaders such as Norway and Singapore,[94] Canada aims to balance growth with environmental and economic realities, ensuring resilience and competitiveness in the global maritime landscape.

94 Kevin Heffner, Debbie Murray et al (2022) https://www.itscanada.ca/files/National-Maritime-Single-Window-POSITION%20PAPER-Oct-03-2022.pdf

British Columbia Institute of Technology (BCIT) Marine Campus offers a range of courses and programs in navigation, marine engineering, seamanship, and maritime safety and security.[95]

Scholarships & Awards –

1. *Navy League of Canada Scholarships* – offers several scholarships, including the Rear-Admiral Fred Mifflin Memorial Scholarship and the maritime Affairs Scholarship to support cadets pursuing maritime education.[96]
2. *Douglas M Johnston MASC Scholarship in Marine Affairs* – A $5,000 scholarship awarded annually to Canadian citizens pursuing a Master of Marine Management degrees. This can open up seafarer career pathways leading to Ship Officer roles.[97]

Transport Canada Certification – Transport Canada ensures that maritime training institutions comply with the International Maritime Organization's (IMO) Standards of Training, Certification, and Watchkeeping for Seafarers (STCW)[98]. The Marine Personnel Regulations (MPR) require seafarers to hold a Certificate of Competency issued by Transport Canada[99]. This is a compulsory certification for all seafarers and marine professionals in Canada which ensures that seafarers meet the necessary qualifications and standards.

The certification process is designed to increase the number of qualified seafarers through several key initiatives:

1. *Seafarer Certification Services Modernisation project* – aiming to streamline and digitise certification services; including cloud-based applications to manage profiles, request services and update online information to reduce administrative barriers and increase process efficiency.[100]
2. *Equivalency and recognition* – Transport Canada recognises equivalent qualifications and skills from other authorities, including the Royal Canadian Navy, helping experienced personnel to transition into commercial marine roles with less barriers.[101]

Seafarer Recruitment and Placement Service (SRPS) License system which regulates the recruitment and placement of seafarers. [102]

The issues impeding on the industry's ability to attract, train and retain seafarers are not too dissimilar to those faced in Australia. Complex regulatory landscape including simultaneous adherence to the Marine Safety Management System Regulations (MSMSR),[103] the Canada

95 BCIT (Retrieved 2025) https://www.bcit.ca/transportation/areas-of-study/marine-studies/
96 The Navy League of Canada (Retrieved 2025) https://navyleague.ca/awards-and-scholarships
97 DRTC (Retrieved 2025) https://drtc.nl/en-us/
98 Transport Canada (Retrieved 2026) https://tc.canada.ca/en/marine-transportation/marine-training-certification-individuals
99 Government of Canada (Retrieved 2025) https://tc.canada.ca/en/marine-transportation/marine-safety/certificates-competency
100 Government of Canada (2026) https://tc.canada.ca/en/marine-transportation/seafarer-certification/seafarer-certification-services-modernization
101 Government of Canada (2026) https://tc.canada.ca/en/marine-transportation/marine-training-certification-individuals
102 Government of Canada (2018) https://tc.canada.ca/en/marine-transportation/marine-safety/certificates-competency
103 EDU Maritime (2022) https://www.edumaritime.net/netherlands/simwave-inland-shipping-academy-barendrecht

Shipping Act,[104] the International Labour Organization (ILO) Maritime Labour Convention (MLC, 2006)[105] to name a few can be difficult to navigate for trainee seafarers considering seafaring as a career option.

The need to comply with various national and international regulations can make the entry process daunting for potential seafarers.

There is also the potential risk of having standardisation issues between training providers when trying to ensure that training programs comply with different regulatory requirements.

Denmark

Key Insights I Denmark

Training model deployed for seafarers is controlled by the Government and is significantly different to training model currently used in Australia. Trainee seafarers coordinate with the relevant Maritime Educational Institutions overseen by the Danish Agency for Higher Education (DAHE). Access to sea berths for trainee seafarers (Ordinary Ratings) is included as part of this programme with two dedicated training vessels. Officers have the opportunity to pursue Dual STCW Certification (Deck and Engine) in international waters.

Denmark ranks 18th globally in terms of deadweight tonnage with an approximate fleet size of 13.8 million DWT.[106] Denmark's strategic location in Northern Europe, coupled with its advanced port infrastructure, positions it as a key player in maritime trade. According to Danish Shipping's official reports, over 95% of Danish shipping activity is international.[107] This means that Danish seafarers are trained to meet international maritime standards (such as the IMO's STCW Convention), gain experience on varied vessel types, and gain access to different trade routes.

There are several key factors that have influenced Denmark's rise and sustained maritime position. Denmark has the world's 9th largest trading fleet and has seen a steady rise in the number of vessels sailing under the Danish flag since 2021 reaching 764 vessels from 731 vessels[108] in the previous year, and with a 4.8% increase in gross tonnage reaching 22.3 million GT.[109] Between 2024 and 2025, the fleet continued to grow, reaching over 740 vessels and over 60 million tonnes of operated tonnage, contributing to Denmark's rise to 9th place in terms of trading fleet size.[110] Key drivers behind this growth include the introduction of the Danish

104 Canadian Vessel Registry (2023) https://canadianvesselregistry.ca/canada-shipping-act-a-comprehensive-overview-for-mariners/
105 ILO (Retrieved 2025) https://www.ilo.org/international-labour-standards/maritime-labour-convention-2006
106 UNCTAD (Retrieved 2025) https://unctadstat.unctad.org/insights/theme/107
107 Danish Shipping (2023) https://danishshipping.dk/en/about/danish-shipping/annual-report-2023/
108 Danish Shipping (2020) https://danishshipping.dk/en/about/danish-shipping/annual-report-2020/
109 Ministry of Foreighn Affairs of Denmark (2021) https://investindk.com/insights/the-danish-flagged-merchant-fleet-sets-a-new-record-in-2020
110 Danish Shipping (2025) https://danishshipping.dk/en/latest-news/2025/denmark-advances-on-the-list-of-the-worlds-largest-maritime-nations/

International Ship Register, the Tonnage Tax Scheme, and Denmark's political and regulatory stability – all of which is discussed in further detail below.

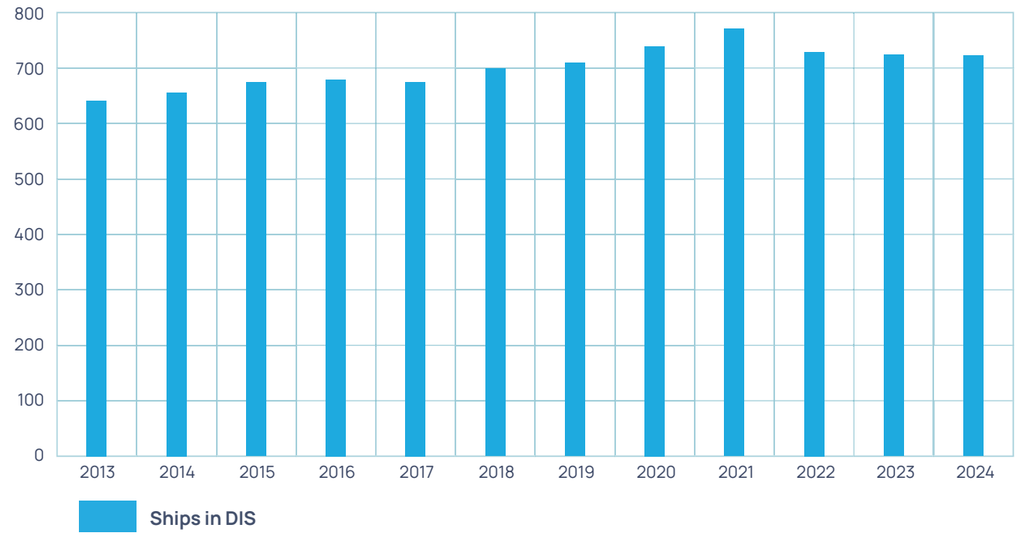


Figure 20 Number of ships under the Danish flag in the Danish International Ship Register[111]

The Danish Maritime Authority (DMA) oversees the certification and training of seafarers, ensuring compliance with international regulations. The DMA emphasises smart and efficient enforcement, digitalisation, and collaborative governance, all of which contribute to a predictable and stable regulatory environment.[112]

111 DMA (Retrieved 2025) https://www.dma.dk/about-us/key-figures
112 DMA (Retrieved 2025) https://www.dma.dk/growth-and-framework-conditions/international-maritime-organization/imo-council

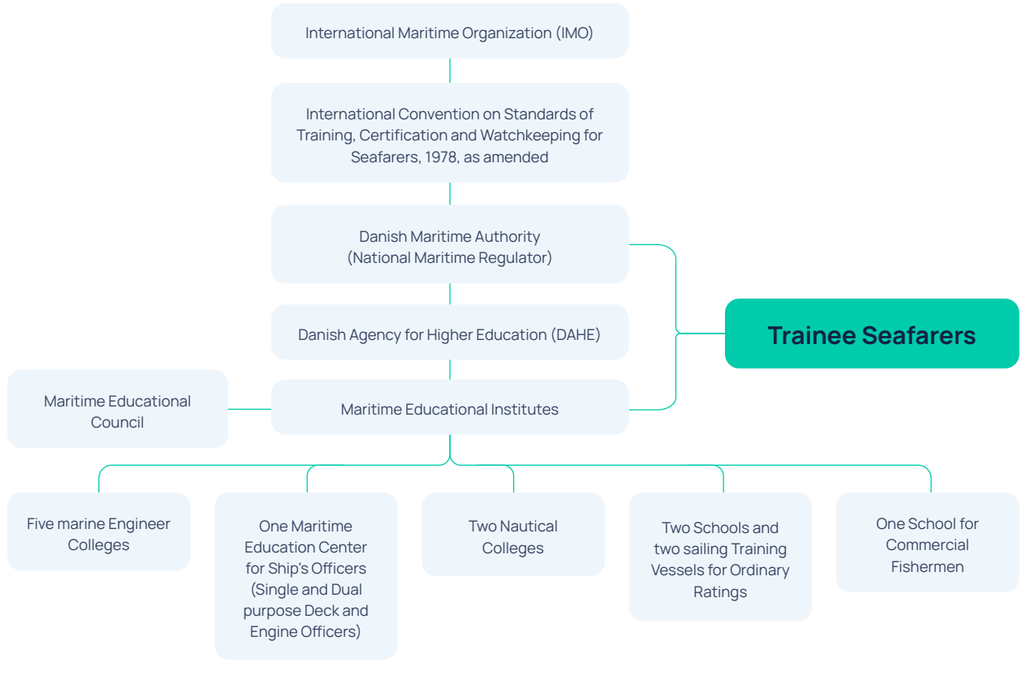


Figure 21 Current training model for Trainee Seafarers I Denmark

Denmark divides its training regulation between two organisations which helps to provide centralised government oversight: The Danish Agency for Higher Education (**DAHE**) and the DMA.[113,114] Their vocational education system emphasises on-the-job training, with the average course offering a 2-1 time split between on-the-job training and classroom education.[115]

DMA – Undertakes national STCW obligations and provides Certificate of Competency (CoC) and Certificates of Proficiency (CoP). Sea time hour regulations are set by the DMA to comply with STCW regulations, however the DAHE supervises maritime training programs, within which mandatory sea time hours must be accrued by trainees.[116]

Notably, the DMA offers subsidies for ship owners who provide work experience placements for maritime students.[117] Eligible shipping companies are those who

- employ seafarers enrolled in approved Danish maritime training programs provide prescribed work experience periods on Danish merchant ships; and
- have an approved training agreement in place.

113 DMA (Retrieved 2025) https://www.dma.dk/seafarers-and-manning/maritime-courses
114 DMA (Retrieved 2026) https://ufsn.dk/english/education/the-higher-education-system/maritime-educations/
115 Cedefop (2019) https://www.cedefop.europa.eu/files/4168_en_dk.pdf
116 DMA (Retrieved 2025) https://www.dma.dk/seafarers-and-manning/maritime-courses
117 The Danish Maritime Authority (2009) https://www.dma.dk/Media/637792371151879992/Order%20on%20subsidies%20for%20work-experience%20placements%20on%20ships.pdf

The subsidy is designed to partially cover wages, meals and travel expenses amounting to DKK 20,000 (AUD 4,697.54)[118] per three-month period of actual service.[119]

There are also study grants available for adult education and supplementary maritime courses.[120] Eligibility includes both initial qualifications and continuing education for seafarers.[121]

DAHE – Provides governance for training programmes, educational plans, guidelines and training books and provides supervision of maritime training programs provided by different maritime educational institutions.[122]

Programs cover essential areas like maritime safety, firefighting, and simulator training.[123] Key institutions offering simulator training:

- **Svendborg International Maritime Academy (SIMAC)** – Denmark's leading maritime educational institution providing courses in areas such as maritime safety, automation, and vessel traffic services.[124]
- **Maritime Training of Southern Denmark (MTSD)** – A collaboration between SIMAC and Svendborg Søfartsskole offering extensive simulation facilities, including 5 full-mission bridge and 2 engine room simulators.[125]
- **Danish Maritime Institute (DMI)** – DMI, now part of Force Technology, is a private, non-profit organisation specialising in marine simulation services, including full-mission bridge simulators and computational fluid dynamics (CFD) facilities for training, design validation, and operational optimisation. Their simulation services support STCW-compliant training, offshore lifting operations, risk assessments, and development of automation systems for maritime and offshore industries.[126]
- **Maersk Training Centres** – Located in Esbjerg and Svendborg, offering simulation facilities.[127]
- **Maritime and Polytechnic College (MARTEC)** – Located in Frederikshavn, providing a range of simulator-based courses, including ECDIS, Bridge Resource Management, and GMDSS training.[128]

Through the DAHE, Denmark provides funding for **dedicated training vessels**, including the

118 Currency Converter, Convert Danish Krone to Australian Dollar | DKK to AUD (Accessed 29 May 2025, 1349 hrs) https://themoneyconverter.com/DKK/AUD
119 The Danish Maritime Authority (2009) https://www.dma.dk/Media/637792371151879992/Order%20on%20subsidies%20for%20work-experience%20placements%20on%20ships.pdf
120 DMA (Retrieved 2025) https://www.dma.dk/seafarers-and-manning/maritime-courses
121 DMA (Retrieved 2026) https://www.dma.dk/seafarers-and-manning/maritime-courses
122 UFM (Retrieved 2026) https://ufm.dk/english/legislation/laws-and-regulations/education/maritime-education/
123 DMA (Retrieved 2025) https://www.dma.dk/seafarers-and-manning/maritime-courses
124 SIMAC (2026) https://simac.dk/
125 MTSD (Retrieved 2025) https://www.mtsd.dk/
126 Force Technology (Retrieved 2025) https://forcetechnology.com/en/all-industry-facilities/simulations-and-cfd
127 Maersk Training (Retrieved 2025) https://www.maersktraining.com/locations/denmark
128 EduMaritime (Retrieved 2025) https://www.edumaritime.net/denmark/martec-maritime-and-polytechnic-college

training ships *Skoleskibet DANMARK* and *Georg Stage*, whose sole purpose is to provide on the job training for trainee seafarers. These ships operate under a mix of public and private oversight – the *Skoleskibet DANMARK* is a state-owned training ship operated by the marine engineering school MARTEC in Frederikshavn, while the Georg Stage is operated by a private foundation (Georg Stage Memorial Foundation[129]) while working closely with public authorities and following national maritime education standards.[130] DAHE is part of the Ministry of Higher Education and Science, providing government oversight and support due to its responsibilities being tied to maritime training and education, including training on the training ships.[131] Time spent aboard these ships counts towards sea time accrual aligned with the STCW Convention.[132]

Other contributing factors include:

- **Recognition of foreign certificates** – DMA certificates of recognition allow international seafarers to work on Danish-flagged ships based on foreign CoCs. The process ensures adherence to the STCW and helps to facilitate the integration of skilled seafarers from various countries into Denmark's maritime workforce.[133]
- **Financial incentives – The Danish International Ship Register (DIS) scheme** was introduced to attract international shipowners by offering favourable tax conditions, flexible labour laws, and streamlined registration. Offshore activities were added to DIS in recent years, bringing more vessels under the Danish flag.[134] The scheme includes income tax exemptions for seafarers working on ships registered under the Danish flag. This applies regardless of nationality[135] which works to enhance competitiveness.
- Additionally, the **Tonnage Tax Regime** is used instead of corporate income tax for shipping companies, making it financially attractive to register ships in Denmark.[136] Although made to primarily benefit shipowners, the regime indirectly supports seafarers by encouraging more shipping companies to operate under the Danish flag as taxable income is calculated based on the net tonnage of the fleet rather than actual profits, leading to lower and more predictable tax liabilities.[137]
- Political and Regulatory Stability – Denmark has made transparency, governance, and enforcement key priorities in its maritime policy; especially in its role within the International Maritime Organization (IMO) Council[138].

129 Georg Stage Memorial Foundation (2024) https://ufm.dk/aktuelt/pressemeddelelser/2024/august/regeringen-vil-sikre-at-skoleskibene-danmark-og-georg-stage-kan-sejle-to-aarlige-togter-de-naeste-fire-aar/
130 UFM (Retrieved 2026) https://ufm.dk/ministeriet/organisation/institutioner-under-ministeriet/
131 UFSN (Retrieved 2026) https://ufsn.dk/english/education/the-higher-education-system/maritime-educations/
132 DMA (Retrieved 2025) https://www.dma.dk/seafarers-and-manning/maritime-courses
133 DMA (2018) https://www.dma.dk/Media/637740529396489328/Order%20on%20the%20recognition%20of%20foreign%20certificates%20for%20service%20on%20merchant%20ships%20and%20training.pdf
134 Danish Shipping (2020) https://danishshipping.dk/en/about/danish-shipping/annual-report-2020/
135 DMA (Retrieved 2025) https://www.dma.dk/growth-and-framework-conditions/framework-conditions/economic-framework-conditions
136 Danish Shipping (2020) https://danishshipping.dk/en/about/danish-shipping/annual-report-2020/
137 DMA (Retrieved 2025) https://www.dma.dk/growth-and-framework-conditions/framework-conditions/economic-framework-conditions
138 DMA (Retrieved 2025) https://www.dma.dk/growth-and-framework-conditions/international-maritime-organization/imo-council

The **Danish Maritime Education Council**, operating under the DMA, plays a key role in coordinating sea time for seafarers by overseeing the certification and documentation of seagoing service. It ensures that seafarers meet the necessary requirements for education, training, and practical experience at sea, in line with international standards such as the STCW Convention. This includes managing discharge books, verifying sea service records, and facilitating the recognition of qualifications. The Council also supports the integration of naval experience and foreign certifications into the Danish system, helping seafarers maintain compliance and progress in their maritime careers.[139]

Maritime Educational Institutions provide a near-centralised model for trainee seafarers considering seafaring as a career option, particularly the co-ordination of access to training berths on board dedicated training vessels.

Limitations to consider are the investment required to supply training ships[140], and concerns surrounding the integration of vocational and academic training which could possibly compromise the quality of seafarers' competence.[141]

The Netherlands

Key Insights | The Netherlands

Training model deployed for seafarers allows seafarers to undertake education in countries outside the Netherlands. This is the most material difference to the training model for STCW qualifications in Australia. Trainee seafarers in the Netherlands need to coordinate with employers, similar to Australia, to obtain necessary sea time. However, trainee seafarers have access to vessels and employers from European Union to obtain their sea time.

The Netherlands ranks 24th globally in terms of deadweight tonnage with a fleet size of approximately 7.2 million DWT.[142, 143] The Netherlands follows a hybrid approach when it comes to attracting, training, and retaining seafarers; combining national incentives with European Union frameworks and support as part of broader European and global maritime efforts.[144, 145, 146] Notable mechanisms in place include:

- **EU-Level Involvement**: Major EU initiatives such as the European Maritime Skills Forum (2025) [147] are supported by multiple bodies like the European Commission, the European Community Shipowners' Associations (**ECSA**), and the European Transport Workers' Federation (**ETF**).

  These forums are aimed at addressing the skills gaps in the maritime sector, promote upskilling and reskilling for the industry's green and digital transition, and foster cooperation among maritime stakeholders including training institutions and unions.

  The European Commission's Maritime Affairs and Fisheries department (**DG MARE**) [148] is the main EU body responsible for maritime policy, including funding and skills development programs for seafarers such as Blue Careers [149] and SkillSea. [150]

- **European Maritime Safety Agency (EMSA)** – Ensures that all EU member states comply with international standards like the STCW Convention. EMSA conducts inspections and assessments of maritime education, training institutions and seafarer certification systems.[151]

Although the Netherlands aligns with EU directives, they also hold autonomy in the implementation of their training programs, to adapt them to the local industry context and national education structures.

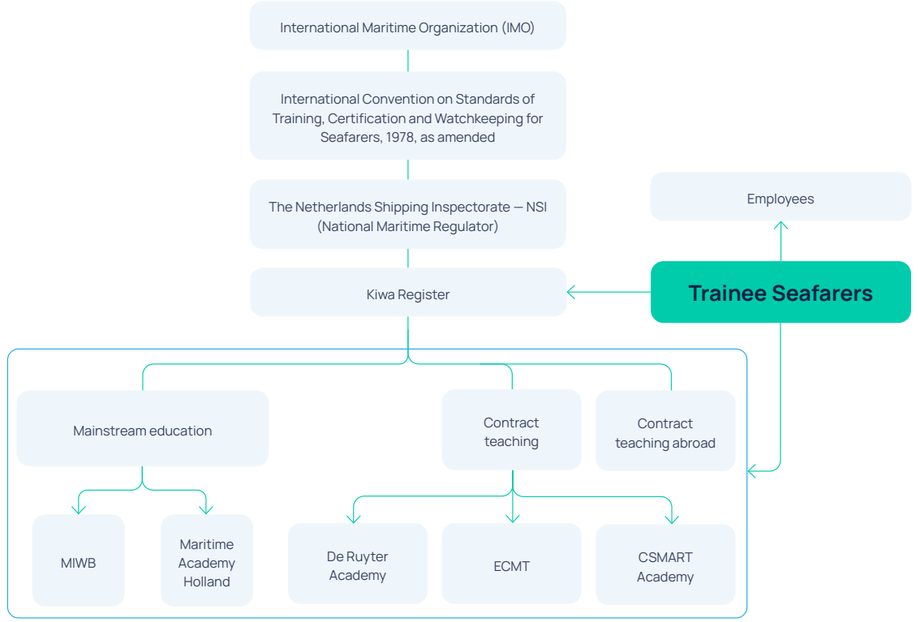


Figure 22 Current training model for Trainee Seafarers | The Netherlands

139 DMA (Retrieved 2025) https://www.dma.dk/seafarers-and-manning
140 The Maritime Executive (2023) https://maritime-executive.com/article/90-year-old-tall-ship-danmark-may-shut-down-due-to-funding-issues
141 Michael Ekow Manuel (2017) https://link.springer.com/article/10.1007/s13437-017-0130-3
142 Department of Transport (UK) (Retrieved 2025) https://www.gov.uk/government/statistical-data-sets/shipping-fleet-statistics
143 UNCTAD (Retrieved 2025) https://unctadstat.unctad.org/insights/theme/107
144 NL Flag (Retrieved 2025) https://nlflag.nl/manning/seafarer-documents
145 NSI (Retrieved 2025) https://puc.overheid.nl/nsi/
146 Government of the Netherlands (Retrieved 2025) https://www.government.nl/topics/maritime-transport-and-seaports
147 SWZ Maritime (2025) https://swzmaritime.nl/news/2025/01/28/new-european-maritime-skills-forum-to-tackle-skills-gap/
148 European Commission (Retrieved 2025) https://commission.europa.eu/about/departments-and-executive-agencies/maritime-affairs-and-fisheries_en
149 EU (2022) https://cinea.ec.europa.eu/funding-opportunities/calls-proposals/emfaf-call-proposals-blue-careers-sustainable-blue-economy_en
150 SkillSea (Retrieved 2025) https://www.skillsea.eu/
151 EMSA (Retrieved 2025) https://www.emsa.europa.eu/we-do/assistance/visits-and-inspections/127-maritime-education/69-training-of-seafarers.html

Education in the Netherlands for future seafarers comprises of mainstream education and contract teaching.[152] Mainstream education comprises of study programs covered by legislation and is supervised by the Inspectorate of Education. Contract teaching comprises short maritime health and safety training programs and courses, which are supervised by the Netherlands Shipping Inspectorate due to international treaties such as the STCW 95 Code and EU directives.[153]

- **Netherlands Shipping Inspectorate** (**NSI**), which operates under the Inspectie Leefomgeving en Transport (ILT), is responsible for enforcing international maritime regulations in the Netherlands. While the NSI itself does not directly accredit training institutions, it ensures that maritime training and certification in the Netherlands complies with international standards, particularly those set by the IMO under the STCW Convention.[154]
- **Kiwa Register BV** – Kiwa acts on behalf of the Dutch Ministry of Infrastructure and Water Management, and is the official body for issuing CoCs, CoPs, recognising foreign certificates, issuing endorsements for foreign seafarers, and managing seaman's books and other official maritime documents.[155] These certifications comply with the STCW Convention.
- **The Netherlands Regulatory Framework for Maritime (NeRF-Maritime)** plays a role in the maintenance and growth of seafarer numbers by creating a structured, internationally aligned and supportive environment for maritime professionals through the alignment with international standards (incorporates mandatory instruments from the IMO and International Labour Organization (ILO), as well as EU directives).[156] This ensures that Dutch seafarers are trained and certified to globally recognised standards, making them competitive and employable worldwide.[157]
    - The framework includes detailed provisions for CoCs and CoPs, recognition of foreign certificates, and requirements for training, sea time and medical fitness.[158]
    - The Dutch system allows for certification based on MBO-level (secondary vocational education) diplomas from nautical colleges. This opens maritime careers to a broader segment of the population, including those not pursuing university degrees.[159]
    - **The Seafarers Act**, which is part of NeRF-Maritime, includes temporary derogations and transitional measures to ease compliance with new regulations. This flexibility helps to avoid career disruptions and supports seafarers during regulatory changes.[160] The Seafarers Act allows for national adaptation of international and EU standards. For example, the Netherlands permits certification for roles like "Officer in Charge of a Navigational Watch" based on MBO Level 3 diplomas from Dutch nautical colleges, which reflects the integration of national vocational education pathways.[161]
    - The framework is developed in consultation with key maritime stakeholders such as the Royal Association of Netherlands Shipowners (KVNR) and Nautilus International to ensure that policies are aligned with industry needs and seafarer welfare.[162]

152 ILT (Retrieved 2025) https://english.ilent.nl/topics/shipping/training-approval/study-programmes-for-seafarers
153 ILT (Retrieved 2025) https://english.ilent.nl/topics/shipping/training-approval/study-programmes-for-seafarers
154 Government of the Netherlands (Retrieved 2025) https://www.rijksoverheid.nl/onderwerpen/scheepvaart-en-havens/veilig-werken-in-de-zeevaart
155 NL Flag (Retrieved 2025) https://nlflag.nl/manning/seafarer-documents
156 ILT (2018) https://puc.overheid.nl/nsi/doc/PUC_86961_14/2/
157 ILT (2019) https://puc.overheid.nl/nsi/doc/PUC_80377_14/6/
158 Netherlands Enterprise Agency, (Retrieved 2025) https://business.gov.nl/regulations/seafarer-certificate-competency/
159 ILT (2019) https://puc.overheid.nl/nsi/doc/PUC_80377_14/6/

Dutch maritime academies and training centres align their curricula with EU and international maritime standards, while also exercising significant autonomy to innovate in areas such as sustainability, digitalisation, and leadership. This helps programs to remain competitive, industry-relevant, and tailored to educational structures.[163, 164] Compared to Denmark, where maritime education is largely integrated into a government-supported framework, the Netherlands adopts a more market-oriented model, allowing institutions greater autonomy in curriculum development and partnerships with industry. This results in a more decentralised but flexible system, particularly suited to evolving maritime technologies and global standards.[165]

Several of institutions are captured below, and each cover a different facet of seafarer training:

- STC Group (Shipping and Transport College)[166] – shipping, logistics & transport – Foreign masters who wish to serve on Dutch-flagged vessels must meet additional legal requirements beyond the STCW recognition. STC Group issues these certificates upon completion of a specialised training program deigned to familiarise foreign officers with the legal and procedural framework of the Netherlands' maritime sector. One of these is a certificate in Dutch Maritime Law and Public Order which covers Dutch maritime legislation, flag state responsibilities, and the ability to interact with Dutch authorities. This certificate is compulsory to sail as a master on a Dutch ship.[167]
- Maritime Institute Willem Barentsz (MIWB)[168] – maritime officer training, ocean technology
- Nova Maritime College (Maritime Academy Holland)[169] – inland shipping, harbour training
- De Ruyter Academy / Scalda[170] – basic and advanced maritime training, safety & survival

160 ILT (2019) https://puc.overheid.nl/nsi/doc/PUC_80377_14/6/
161 ILT (2019) https://puc.overheid.nl/nsi/doc/PUC_80377_14/6/
162 ILT (2019) https://puc.overheid.nl/nsi/doc/PUC_80377_14/6/
163 NHL Stenden (Retrieved 2025) https://www.nhlstenden.com/en/courses/maritime-innovations-master-part-time
164 The Dutch Maritime Network (2025) https://maritiemland.nl/en/news/first-european-maritime-skills-forum-officially-launched/
165 Government of the Netherlands (Retrieved 2025) https://www.government.nl/topics/secondary-vocational-education-mbo-and-tertiary-higher-education/tertiary-higher-education
166 STC (Retrieved 2025) https://stc.nl/home
167 STC Next (2024) https://stc-group.nl/wp-content/uploads/2024/04/Syllabus-Maritime-Dutch-Law-Assessment.pdf
168 NHL Stenden (Retrieved 2025) https://www.nhlstenden.com/en/miwb
169 EduMaritime (Retrieved 2025) https://www.edumaritime.net/netherlands/nova-college-maritime-academy-holland
170 Scalda (Retrieved 2025) https://www.scalda.nl/

- Simwave B.V.[171] – a 360-degree familiarisation tool allowing seafarers to virtually explore vessel areas like the bridge and engine room, including interactive hotspots with instructional videos, operational manuals, and safety procedures[172] some of which are also delivered online.[173] Simwave offers a diverse range of simulator-based courses tailored to various maritime sectors:
  - Bridge and Navigation Training – ship handling (basic and advanced), bridge resource management, advanced COLREGS, polar code training (basic and advanced)[174, 175]
  - Engine Room and Technical Training – engine room resource management, fault finding and prevention, IGF code training [176]
  - Cargo Operations – cargo resource management, ship-to-ship transfer operations[177]
  - Inland Navigation – EU-qualified inland skipper, inland ECDIS training[178]
- Emergency Control Maritime Training BV (ECMT)[179] – safety & emergency response training
- CSMART Academy (Carnival Corporation)[180] – advanced training for LNG-fuelled ships, high-voltage systems.

These institutions span both MBO (middelbaar beroepsonderwijs – i.e. secondary vocational education) and HBO (hoger beroepsonderwijs – i.e. higher professional education / university of applied sciences) levels. MBOs and HBOs are not exclusively colleges in the traditional sense but are vocational and applied science institutions, respectively. They are typically publicly funded but independently operated, with some private providers also active in the sector.[181, 182] STC offers HBO programs (through the Rotterdam Mainport Institute) for roles such as maritime officers, naval architects, or port logistics managers.[183] The table below captures the differences between the two:

171 Simwave (Retrieved 2025) https://simwave.nl/
172 Simwave (Retrieved 2025) https://simwave.nl/maritime-familiarization-technology/
173 Simwave (Retrieved 2025) https://simwave.nl/online-course/
174 Simwave (retrieved 2025) https://simwave.nl/bridge-training/
175 Simwave (Retrieved 2025) https://simwave.nl/3776-2/
176 EduMaritime (Retrieved 2025) https://www.edumaritime.net/netherlands/simwave-inland-shipping-academy-barendrecht
177 Simwave (Retrieved 2025) https://simwave.nl/cargo-2/
178 Simwave (Retrieved 2025) https://simwave.nl/inland/
179 ECMT (Retrieved 2025) https://www.ec-mt.com/en/
180 Csmart (Retrieved 2025) https://www.csmartalmere.com/
181 Nuffic (Retrieved 2025) https://www.nuffic.nl/en/education-systems/the-netherlands/educational-institutions-and-study-programmes
182 Government of the Netherlands (Retrieved 2025) https://www.government.nl/topics/secondary-vocational-education-mbo-and-tertiary-higher-education/tertiary-higher-education
183 Rotterdam Mainport Institute (Retrieved 2025) https://www.rotterdamuas.com/about/organisation/schools/rotterdam-mainport-university-of-applied-sciences/programmes/#flex

Table 9 I MBO and HBO comparisons[184, 185, 186, 187]

Feature	MBO	HBO
Education Level	Post-secondary, below higher education	Bachelor's degree level
Duration	1-4 years, depending on the level (levels 1-4)	Typically, 4 years
Focus	Practical, hands-on vocational training	Combines theoretical knowledge with professional training
Typical Outcomes	Prepares students for operational and technical roles, such as ship's crew, logistics workers, or marine engineering technicians	Prepares students for management and specialist positions in maritime, logistics, or transport sectors
Progression Path	Can progress to HBO	Can progress to Master's degree

There have been criticisms on the efficacy of current national level resources and incentives, yet unions and lobbyists have made significant traction in reforming seafarer welfare. For example:

- **Nautilus International** – key maritime union involved in advocating for better training, welfare, and entry incentives for seafarers.[188]
- **Dutch Maritime Charity Lobbying for Welfare Funding** – Dutch organisations have successfully lobbied for government support for seafarer welfare services to support recruitment and retention.[189]

Despite a variety of pathways to qualification and training, there have been challenges related to the Dutch maritime training and certification system, particularly in the context of regulatory updates and their impact on seafarers, over-complexity and administrative burden.[190]

While the Dutch maritime certification system ensures compliance with international norms, the complexity of implementing frequent STCW amendments has occasionally posed challenges, particularly for foreign seafarers and smaller operators. In some cases, transitional measures or temporary derogations have been necessary to accommodate delays in full implementation.[191]

184 Government of the Netherlands (Retrieved 2025) https://www.government.nl/topics/secondary-vocational-education-mbo-and-tertiary-higher-education/secondary-vocational-education-mbo
185 Government of the Netherlands (Retrieved 2025) https://www.government.nl/topics/secondary-vocational-education-mbo-and-tertiary-higher-education/tertiary-higher-education
186 STC (Retrieved 2025) https://stc.nl/opleidingen/mbo
187 STC (Retrieved 2025) https://stc.nl/opleidingen/hbo-master
188 Nautilus International (Retrieved 2025) https://stc.nl/opleidingen/hbo-master
189 Nautilus International (2021) https://www.nautilusint.org/en/news-insight/telegraph/dutch-maritime-charity-successfully-lobbies-for-funding-of-seafarer-welfare-services/
190 Nautilus International (2020) https://www.nautilusint.org/en/news-insight/telegraph/seafarers-opinions-of-stcw-in-the-skillsea-project/
191 ICS (2020) https://www.ics-shipping.org/current-issue/a-review-of-the-stcw-convention-2020/

Industry groups like Nautilus International have raised concerns about the practicality and accessibility of maritime certification systems, particularly in the Netherlands.[192] Nautilus has highlighted issues such as high training costs, limited access to approved training institutions, and difficulties in recruiting and retaining foreign officers—especially due to the language and legal demands of mandatory certification in Dutch Maritime Law.[193] These requirements, while legally necessary, can act as barriers to entry for non-Dutch seafarers and smaller operators.

Norway

Key Insights I Norway

Training model deployed for seafarers in Norway provides various tax incentives and financial support to seafarers as well as employers. This is intended to encourage employers to employ trainee seafarers to provide them with opportunities to complete their sea time. Such incentives extend to all seafarers, not just trainee seafarers. Training institutions accredited by the Norwegian Maritime Authority (NMA) provide training options for seafarers seeking to obtain STCW qualifications.

Whilst tax and other financial incentives have not been explored in detail in this report, this is a distinct factor when compared to the training model deployed in Australia for trainee seafarers seeking STCW qualifications.

Norway ranks 16th globally in terms of deadweight tonnage with a fleet size of approximately 59.9 million DWT.[194] Norway, like many maritime nations in Europe, is actively addressing the challenges of attracting, training, and retaining seafarers through a combination of national initiatives and broader European collaborations.[195] These efforts align with the European Commission's maritime education and training strategy, which emphasises maintaining high standards of seafarer competence across EU and EEA countries, including Norway. The strategy supports national programs and cross-border cooperation to ensure a sustainable maritime workforce.[196]

In Norway, seafarer training and certification are overseen by the Norwegian Maritime Authority (NMA), which ensures compliance with international standards like the STCW Convention.[197]

192 Nautilus International (Retrieved 2025) https://www.nautilusint.org/en/our-union/what-we-do/voice-of-the-maritime-industry/
193 Hellenic Shipping News (2025) https://www.hellenicshippingnews.com/get-serious-about-fixing-barriers-to-maritime-careers-nautilus-tells-european-shipping-summit/
194 Statistics Norway (Retrieved 2025) https://www.ssb.no/en/transport-og-reiseliv/sjotransport/statistikk/handelsflaten-norskregistrerte-skip
195 European Commission (Retrieved 2025) https://transport.ec.europa.eu/transport-modes/maritime/seafarers/education-and-training_en
196 European Commission (Retrieved 2025) https://transport.ec.europa.eu/transport-modes/maritime/seafarers/education-and-training_en
197 Norwegian Maritime Authority (Retrieved 2025) https://www.sdir.no/en/Seafarers/

Education is provided by several accredited institutions, including government-owned institutions such as the Norwegian University of Science and Technology (NTNU)[198] and the University of South-Eastern Norway (USN),[199] and regional maritime schools such as those in Ålesund, Bodø, Kristiansund, and Sørlandet.[200] These programs are STCW-compliant, ensuring international standards for seafarer training. These institutions offer a range of programs from vocational training to advanced degrees in nautical science, marine engineering, and Arctic operations.[201, 202]

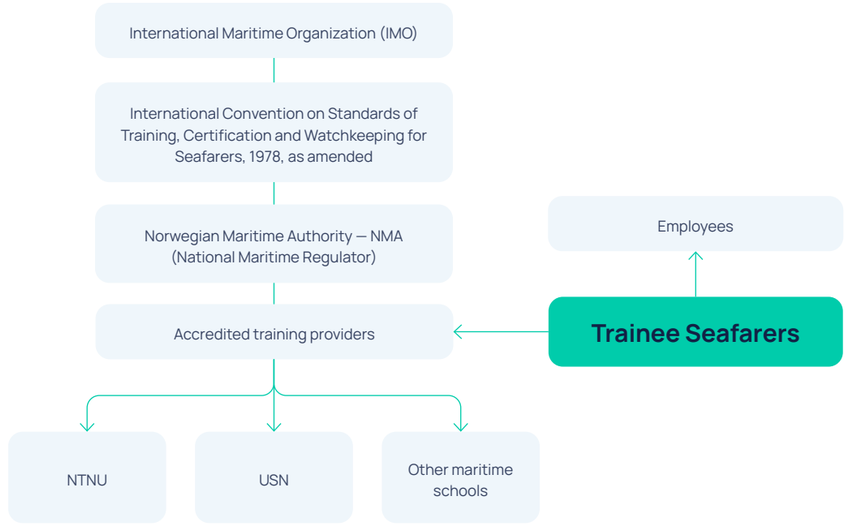


Figure 23 Current training model for Trainee Seafarers I Norway

NTNU is internationally recognised for its Department of Marine Technology, which leads in areas such as naval architecture, marine engineering, and ocean technology, and hosts major research centres like the **Centre for Ships and Ocean Structures (CeSOS)**.[203] It also leads and participates in major EU-funded projects and national research centres like SFI Smart Maritime and SFI MOVE, bridging academia and industry.[204]

USN complements this with a focus complements Norway's maritime education landscape with a strong focus on applied maritime education, offering programs in maritime management and engineering that are closely aligned with the needs of the maritime industry.[205]

198 EduMaritime (Retrieved 2025) https://www.edumaritime.net/norway/norwegian-university-of-science-and-technology
199 USN (Retrieved 2025) https://www.usn.no/english/about/organization/faculties/faculty-of-technology-natural-sciences-and-maritime-sciences/department-of-maritime-operations/
200 Government of Norway (Retrieved 2025) https://www.regjeringen.no/en/dep/kd/organisation/kunnskapsdepartementets-etater-og-virksomheter/Subordinate-agencies-2/state-run-universities-and-university-co/id434505/
201 NTNU (Retrieved 2025) https://www.ntnu.no/studier/353mn
202 NMA (Retrieved 2025) https://www.sdir.no/en/Seafarers/Certificates/Informasjon_om_maritime_sertifikater_og_kvalifikasjoner/
203 NTNU (Retrieved 2026) https://www.ntnu.edu/imt/marine-structures
204 NTNU (2023) https://rapporter.ntnu.no/imtreport2023/
205 USN (Retrieved 2025) https://www.usn.no/english/academics/find-programmes/?tab=tab_studies&q=&filters=&filters%5bcategories%5d%5bselectedValues%5d%5b%5d=27048

These programs were developed in collaboration with industry partners and include guest lecturers, company visits, and industry-supervised master's theses.[206]

Attraction and retention mechanisms for seafarers to choose a career at sea include:

- **Maritime Education and Training Network (MET-NET)** – A European initiative that updates curriculums to reflect technological and environmental changes in the industry makes courses attractive as they are directly applicable to the current industry contexts.[207]
- **Green and Digital Skills** – Training programs are being adapted to include competencies in alternative fuels, automation, and digital navigation systems; aligning with the maritime sector's green transition and staying on top of emerging industry trends.[208]
- **Diversity@Sea pilot project** (2024-25) – The All Aboard Alliance, established by the Global Maritime Forum which includes Norwegian companies, coordinated the Diversity @Sea project that offered flexible work schedules, 24/7 internet access, and inclusive onboard facilities[209,210]. Norway has since formally adopted a majority of these practices including integrations into their National Strategy[211] through the leadership of the Norwegian Shipowners' Association (NSA) and its collaboration with government bodies.

The NMA issues Certificates of Equivalent Competency (**CEC**) which allow holders of foreign maritime certificates to serve on Norwegian-flagged vessels.[212] NMS now issues electronic certificates which are recognised internationally and can be accessed via their NMA Seafarer app or the My Page for Seafarers portal, simplifying the process for foreign seafarers and shipping companies, and making documentation more accessible and inspection ready.[213]

Norwegian seafarers enjoy strong labour protections and competitive conditions. Potential Norwegian seafarers and foreign seafarers enjoy several financial incentives including tax benefits, competitive wages, and social protections:

- **Special Allowance for Seafarers** – the Norwegian Tax Administration offers a special allowance, or Sjømannsfradrag, which allows eligible seafarers to deduct a portion of their income from tax on the condition that they have worked at least 130 days on board a vessel in a calendar year and includes stationary ships with continuous onboard shifts of at least three weeks.[214]
- **Net Wage Schemes** – Some shipping companies offer net-wage agreements, where the employer covers the seafarer's taxes, ensuring a fixed take-home pay. This is common for offshore and international fleet workers, making earnings more predictable and attractive. NMA highlights that this scheme can reimburse up to 100% of the Norwegian tax, making it easier for companies to hire and retain qualified seafarers.[215]
- **National Insurance scheme** – Seafarers employed under Norwegian contracts are typically covered by Norway's national insurance scheme, which includes health care, disability and unemployment benefits, and pension contributions.[216]
- **Competitive salaries** – Norwegian seafarers often earn above-average wages compared to many other maritime nations[217], especially in specialised roles (e.g., offshore, LNG, and Arctic operations). Wages are typically negotiated through collective bargaining agreements with unions like the Norwegian Seafarers' Union (**NSU**).[218]

While Norway's maritime labour model is widely respected, it has drawn criticism in several areas.

Maritime unions have voiced concern over caps on the net wage scheme, arguing that these limits reduce the competitiveness of Norwegian-flagged vessels and hinder promised reforms.[219] Additionally, the increasing use of the Norwegian International Ship Register (NIS) and flags of convenience for vessels operating in domestic waters has raised fears of social dumping, where foreign crews are employed under lower standards, undermining Norwegian wages and working conditions.[220]

There are also concerns about the decline in ships registered under the Norwegian Ordinary Ship Register (NOR), which traditionally ensures full Norwegian labour protections.[221]

These trends have sparked debate about the long-term sustainability of national maritime employment and the integrity of Norway's labour standards. Further, issues like restricted shore leave—a key part of seafarers' welfare—have also been flagged by NMA, highlighting ongoing challenges in balancing operational demands with crew rights.[222]

206 USN (Retrieved 2025) https://www.usn.no/english/academics/find-programmes/?tab=tab_studies&q=&filters=&filters%5bcategories%5d%5bselectedValues%5d%5b%5d=27048
207 Safety4Sea (2025) https://safety4sea.com/cm-european-maritime-skills-forum-key-strategies-for-attracting-and-equipping-the-future-maritime-workforce/
208 Nautilus Federation (2025) https://www.nautilusfederation.org/globalassets/federation/resources/int_nfed_recruitment-and-retention-report.pdf
209 PhD Susanne Justesen & Juš Javornik (2023) https://assets.ctfassets.net/gk3lrimlph5v/OOIjiJQaizSCucsfgQAEA/c247d7b38cfb0f035b97d4b59fab8359/All-Aboard-Alliance_Diversity_Sea-report-no.-1_15-key-pain-points-for-women-at-sea.pdf
210 PhD Zoë Ogahara, PhD Susanne Justesen & Juš Javornik (2025) https://assets.ctfassets.net/gk3lrimlph5v/J2xwqwwRsqD6OxBVA378d/2012b0184adcb055b4df4d7b6ba9712b/All_Aboard_Alliance_Diversity_Sea_The_journey_to_the_sustainable_crewing_guidelines.pdf
211 Safety4Sea (2025) https://safety4sea.com/norway-takes-steps-to-boost-gender-equality-in-maritime/
212 NMA (Retrieved 2025) https://www.edumaritime.net/nma-norway/norwegian-maritime-certificate-of-equivalent-competency
213 NMA (2025) https://www.sdir.no/en/news/as-of-new-year-seafarers-can-sail-internationally-with-electronic-certificates/
214 The Norwegian Tax Admisnitration (2024) https://www.skatteetaten.no/en/business-and-organisation/employer/the-a-melding/the-a-melding-guide/special-groups/special-allowance-for-seafarers/
215 NMA (Retrieved 2025) https://www.sdir.no/en/the-norwegian-ship-registers/new-registration-of-vessels-in-nor-nis-and-the-shipbuilding-register/register-a-ship-or-a-mobile-offshore-unit-mou-in-the-norwegian-international-ship-register-nis/Why-choose-Norwegian-International-Ship-Register-NIS/why-choose-the-norwegian-flag/
216 NAV (2014) https://www.nav.no/en/home/rules-and-regulations/national-insurance-coverage
217 Regjeringen (2025) https://www.regjeringen.no/no/aktuelt/norsk-lonn-til-sjos-vedtatt-sikrer-rettferdighet-i-norske-farvann/id3110060/
218 Norwegian Seafarers Union (Retrieved 2025) https://nsu.org/about-us
219 NMS (2021) https://www.sdir.no/en/news/shore-leave-concerns/
220 NMS (2021) https://www.sdir.no/en/news/shore-leave-concerns/
221 NMA (2025) https://www.sdir.no/en/news/concerning-trends-for-the-norwegian-registered-fleet/
222 NMA (2021) https://www.sdir.no/en/news/shore-leave-concerns/

Philippines

Key Insights I Philippines

In the Philippines, maritime training rules are primarily governed by the Maritime Industry Authority (MARINA). This is a materially different model to the one deployed in Australia for trainee seafarers seeking to obtain STCW qualifications. MARINA requires the Higher Education Institutions (MHEI) to coordinate availability of training berths with employers to ensure trainee seafarers are provided with berth access[223]. Commercial vessel operators have also established accredited training institutions (MHEI) which provides them with the opportunity to roster trainees for sea time and shore based training.

The Philippines is ranks 29th globally in terms of deadweight tonnage with a fleet size of approximately 6.05 million DWT[224], with Filipino entities owning around 3.42 million DWT worth of vessels.[225]

Filipino maritime workers make up 25% of the world's 1.6 million seafarers.[226] This positions them as the leading supplier of seafarers globally, with the Philippines deploying approximately 504,000 Filipino seafarers in 2024.[227] Its model for training, attracting, retaining, re-training, and recognising foreign qualifications involves a mix of government regulation, private sector involvement, and international collaboration.

- **Partnering with Industry** – Maritime Higher Education Institutions (**MHEI**) are central to this model, offering both academic and practical training. Key institutions include the MOL-Magsaysay Maritime Academy (MMMA) which is a joint venture between Japan's Mitsui OSK Lines (MOL) and the Magsaysay Maritime Corporation.[228]

  There are 83 MHEI across the country[229], primarily regulated by the Maritime Industry Authority (**MARINA**)[230]. MARINA has recently taken over responsibility of key maritime education functions from the Commission of Higher Education (CHED) in the MARINA-CHED (Commission of Higher Education) Transition Plan[231].

223 MARINA (2019) https://marina.gov.ph/wp-content/uploads/2019/07/JCMC-No.-1-s.-2019-PSG-BSMT-BSMarE.pdf
224 UNTAD (Retrieved 2025) https://unctadstat.unctad.org/insights/theme/107
225 UNTAD (Retrieved 2025) https://unctadstat.unctad.org/CountryProfile/MaritimeProfile/en-GB/608/index.html
226 European Commission (2024) https://transport.ec.europa.eu/news-events/news/eu-and-philippines-team-boost-seafarers-training-certification-and-labor-conditions-2024-11-11_en
227 Office of the President of the Philippines (2025) https://pco.gov.ph/news_releases/pbbm-pays-tribute-to-ph-seafarers-as-global-asset-and-national-pride/
228 Seatrade Maritime News (2018) https://www.seatrade-maritime.com/regulations/mol-and-magsaysay-inaugurate-philippines-training-academy-featuring-a-ship-in-campus-
229 Centre for Educational Measurement, Inc (2025) https://www.cem-inc.org.ph/nammat/files/downloads/List_of_MHEIs_v3.pdf
230 MARINA (2024) https://marina.gov.ph/2024/09/23/ra-12021-consolidates-functions-relating-to-seafarers-education-training-and-certification/
231 GMA News (2026) https://www.gmanetwork.com/news/topstories/nation/971851/marina-takes-over-key-maritime-education-functions-under-ched-transition-plan/story/

  Previously CHED has committed to enhancing maritime curricula to meet international standards, especially after the EU threatened to derecognise Philippine-issued certificates due to EMSA flagging non-compliance issues.[232] There are however concerns regarding infrastructure gaps, with some MHEI lacking modern training facilities, affecting the quality and uniformity of education standards.[233]

- **Magna Carta for Filipino Seafarers bill** – Came into effect in 2024, covers Filipino seafarers working on international vessels, including cadets in training. Rights such as just working conditions, fair wages, discrimination and harassment protections, legal access, fair medical assessments and disability claims process, and women seafarer protections are included.[234]
- Legislation such as the **Republic Act No. 12021** (which is an act providing for the Magna Carta of Filipino Seafarers) consolidates functions by providing comprehensive guidelines relating to the education, training, and certification of seafarers.[235]
- There are also initiatives such as the Maritime Industry Development Plan 2028 (MIDP) which is a 10-year plan aiming to develop a clearly defined and coordinated roadmap for the integrated development and strategic direction of the Filipino maritime industry.[236]

The vocational education systems of the Philippines and Australia both employ competency-based models but differ in key aspects that affect the mutual recognition of qualifications. The Philippines' vocational education system is overseen by the Technical Education and Skills Development Authority (TESDA), a national government agency.[237] TESDA develops National Training Regulations (NTRs) in collaboration with industry stakeholders.

These regulations define the competency standards for national qualifications and guide the registration, delivery, assessment, and certification of Technical and Vocational Education and Training (TVET) programs. Assessments are conducted by TESDA-accredited assessors, and successful candidates receive National Certificates indicating their competency level.[238]

In contrast, Australia's vocational education and training (VET) system is governed by the Australian Skills Quality Authority (ASQA) and the Standards for Registered Training Organisations (RTOs) 2015. Competency standards are developed nationally with input from Industry Reference Committees and are incorporated into training packages that RTOs must adhere to. Assessments are carried out by RTOs, and qualifications are awarded based on demonstrated competency against the standards outlined in training packages.

232 Business Mirror (2023) https://businessmirror.com.ph/2023/04/12/ched-shutters-15-maritime-programs-following-review/
233 Sheryl J Urdaneta (Accessed 2026) https://lajm.lt/wp-content/uploads/2025/04/Compressed_Maritime_Education_Philippines.pdf
234 Assistance PH (Retrieved 2025) https://assistance.ph/magna-carta-of-filipino-seafarers/
235 MARINA (2024) https://marina.gov.ph/2024/09/23/ra-12021-consolidates-functions-relating-to-seafarers-education-training-and-certification/
236 Office of the President of the Philippines (2024) https://pco.gov.ph/news_releases/pbbm-approves-adopts-10-year-maritime-industry-development-plan-2028/
237 TESDA (Retrieved 2026) https://www.tesda.gov.ph/
238 TESDA (2026) https://www.tesda.gov.ph/Download/Training_Regulations

The Australian Qualifications Framework (AQF) facilitates the recognition and portability of qualifications across states and territories.[239]

Due to these differences, many TESDA certifications are not automatically recognised in Australia. Individuals seeking recognition of their Philippine qualifications may need to undergo skills assessments or additional training to meet Australian standards. Trades Recognition Australia (TRA)[240] provides assessment services for individuals with trade skills gained overseas, which is often a necessary step for those aiming to work in Australia.

While both countries utilise competency-based vocational education systems, variations in the development, assessment, and recognition of competencies contribute to challenges in the mutual recognition of qualifications.

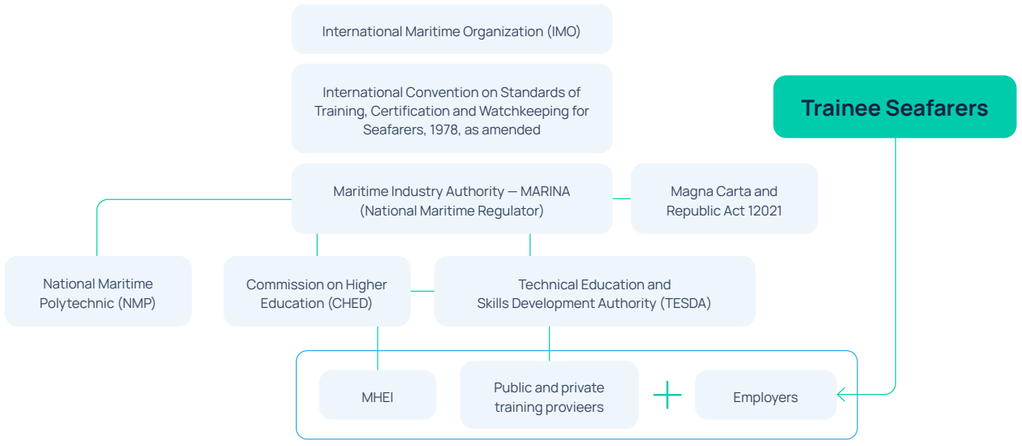


Figure 24 Current training model for Trainee Seafarers | Philippines

In the Philippines, maritime training rules are primarily governed by the Maritime Industry Authority (MARINA). MARINA is a government organisation armed with regulatory authority, which undertakes the following roles and responsibilities:

- Implementing STCW conventions
- Accrediting maritime training institutions
- Enforcing training requirements
- Maintaining and overseeing sea time coordination practices, including logbook collation, and training placement arrangements between trainees and vessels; and
- Regulating sea time hour requirements.

239 ASQA (2025) https://www.asqa.gov.au/rtos/2025-standards-rtos/
240 Trades Recognition Australia (Retrieved 2025) https://www.tradesrecognitionaustralia.gov.au/

In the Philippines, sea time berths (shipboard training) are often arranged between the training organisations and vessel owners or shipping companies.[241] This is a standard practice among institutions like the Maritime Academy of Asia and the Pacific (MAAP)[242], which establish partnerships with shipping companies to secure training berths for their cadets. MARINA oversees the regulatory and accreditation requirements of sea berths. MARINA's guidelines stipulate that shipowners and shipping companies are responsible for implementing onboard training plans and maintaining records of cadet accommodations.[243] These responsibilities are outlined in MARINA's Memorandum Circulars which provide detailed procedures for conducting onboard training.[244] The STCW Convention remains the benchmark for maritime training in the Philippines, and MARINA ensures that all accredited institutions adhere to these international standards.

The National Maritime Polytechnic (NMP) is a government maritime training and research institution which is officially recognised by MARINA as an accredited training and assessment centre.[245] NMP is not classified as a MHEI in the Philippines, instead it functions as the sole government maritime training and research centre.[246] NMP's primary mandate is to provide specialised and upgrading training programs for Filipino seafarers and to conduct research and studies on maritime technologies and related fields through STCW-compliant training programs.[247] Unlike MHEIs, which offer bachelor's degree programs such as Bachelor of Science in Marine Transportation (BSMT) and Bachelor of Science in Marine Engineering (BSMarE),[248] NMP focuses on non-degree training courses aimed at enhancing the competencies of maritime professionals.[249]

241 IMEC (Retrieved 2026) https://www.imec.org.uk/maritime-training/philippines-cadet-training
242 MAAP (Retrieved 2026) https://maap.edu.ph/
243 MARINA (Retrieved 2025) https://stcw.marina.gov.ph/
244 MARINA Board (2021) https://stcw.marina.gov.ph/wp-content/uploads/2016/02/DRAFT-CIRCULAR_Guidelines-on-the-conduct-of-OBT-in-domestic-ships.pdf
245 NMP (Retrieved 2025) https://nmp.gov.ph/
246 NMP (Retrieved 2025) https://nmp.gov.ph/mandates/
247 OWWA Member (Retrieved 2205) https://owwamember.com/nmp-national-maritime-polytechnic/
248 Centre for Educational Measurement, Inc (2025) https://www.cem-inc.org.ph/nammat/files/downloads/List_of_MHEIs_v3.pdf
249 MARINA (2019) https://marina.gov.ph/2019/01/16/marina-ched-pmma-mheis-revamp-ph-maritime-education-programs/

Notable facets of the Philippines maritime training system include:

- **Strong regulatory oversight by an empowered central maritime organisation** – This ensures that regulatory requirements are met, and any regulatory concerns can be handled by this organisation.
- **Easy access to trainees and vessels** – The Philippines is globally recognised as a major supplier of maritime labour.[250] The maritime industry in the Philippines has a reputation for dependable work that allows access to travel and working abroad; with Filipino seafarers having the advantage of being known for their skills, work ethic, and most importantly their English proficiency.[251] While the Philippines does have vessels sailing under its flag, its national fleet is relatively modest in size. The country is not among the top flag states by deadweight tonnage despite encouragement from the members of the government,[252] but remains active in international shipping through its labour force and maritime services.[253] It currently lags behind major flag states like Panama, Liberia, and the Marshall Islands. As such, many vessels pass through or near the Philippines, but not all are Philippine-flagged. This implies that access to berths often depends on partnerships with international shipping companies rather than the flag state alone.

The Filipino model for seafarer training and deployment, while globally significant, has drawn several key criticisms. A major concern is the inconsistent quality of maritime education and training, with EMSA repeatedly flagging non-compliance with the STCW Convention, risking the recognition of Filipino seafarer certifications in the EU.

EMSA audits from 2006 through 2017 consistently found that many maritime training institutions in the Philippines failed to meet international standards.[254]

Furthermore, despite the large number of MHEIs, many are under-equipped, lacking modern simulators and facilities, which undermines graduate competency.

There is also an oversupply of maritime graduates, leading to underemployment and difficulty in securing mandatory shipboard training. Additionally, regulatory fragmentation with overlapping mandates among CHED, MARINA, and the Department of Migrant Workers—has led to inefficiencies and slow policy implementation. Critics argue the system is often reactive, implementing reforms only under international pressure rather than through proactive, strategic planning.[255]

250 European Union (2024) https://www.eeas.europa.eu/delegations/philippines/phl-eu-raise-seafarers-training-certification-labor-conditions-int%E2%80%99l-standards_en?s=176
251 MARINA (2021) https://marina.gov.ph/wp-content/uploads/2022/06/Core-Program-2-.-Promotion-and-Expansion-of-Philippine-Overseas-Shipping-Industry.pdf
252 Inquirer (2023) https://globalnation.inquirer.net/220630/fwd-promote-ph-as-flag-state-hub-for-intl-ships-senator
253 MARINA (2021) https://marina.gov.ph/wp-content/uploads/2022/06/Core-Program-2-.-Promotion-and-Expansion-of-Philippine-Overseas-Shipping-Industry.pdf
254 Senate of the Philippines (2022) (https://legacy.senate.gov.ph/press_release/2022/0303_villanueva1.asp
255 Senate of the Philippines (2022) https://legacy.senate.gov.ph/press_release/2022/0303_villanueva1.asp

Singapore

Key Insights I Singapore

Training model deployed for seafarers is most similar to Norway. Trainee seafarers can select a training institution depending on the chosen career option and they must coordinate directly with employers to obtain access to sea berths to complete requisite sea time for STCW qualifications. Scholarships and other financial incentives are available to eligible trainees which is different to the training model deployed in Australia.

Singapore currently possesses the 5th largest trading fleet in the world in terms of deadweight tonnage, with a fleet size of approximately 136 million tonnes[256] accounting for around 5.8% of global deadweight tonnage.[257]

Singapore has been widely recognised as the world's premier global maritime hub for the past decade (Xinhua-Baltic ISCD Index).[258]

Singapore's geographical positioning at the crossroads of major shipping routes has naturally positioned it as a global maritime hub.[259] This strategic advantage is leveraged through continuous development and modernisation of port facilities.[260] Comprehensive planning also plays a key role in Singapore's success, with publicised visions (*such as the Sea ITM*) outlining clear focus on retaining competitiveness and resilience.[261, 262] This contextual environment, coupled with coordinated efforts and robust industry backing consensus, stable governance and supportive policies, and significant funding; creates a maritime system that is relatively resilient to market interference and adverse market conditions.[263]

256 UNCTAD (Retrieved 2025) https://unctadstat.unctad.org/insights/theme/107
257 UK Government (Retrieved 2025) https://www.gov.uk/government/statistical-data-sets/shipping-fleet-statistics
258 MPA (2023) https://www.mpa.gov.sg/media-centre/details/singapore-retains-world-s-top-maritime-centre-for-10th-consecutive-year
259 Civil Service College Singapore (2018) https://knowledge.csc.gov.sg/ethos-issue-19/connecting-to-the-world-singapore-as-a-hub-port/
260 MOT Singapore (Retrieved 2025) https://www.mot.gov.sg/what-we-do/maritime/shaping-the-future-of-maritime-singapore/
261 MPA (2022) https://www.mpa.gov.sg/media-centre/details/sea-transport-industry-transformation-map-2025-to-achieve-singapore-s-vision-as-a-global-maritime-hub-for-connectivity-innovation-and-talent
262 MPA (2025) https://www.mpa.gov.sg/media-centre/details/driving-growth-and-innovation-to-strengthen-maritime-competitiveness-and-resilence
263 Open Gov Asia (2025) https://archive.opengovasia.com/2025/03/07/singapore-digitalisation-and-tech-strengthening-maritime-resilience/

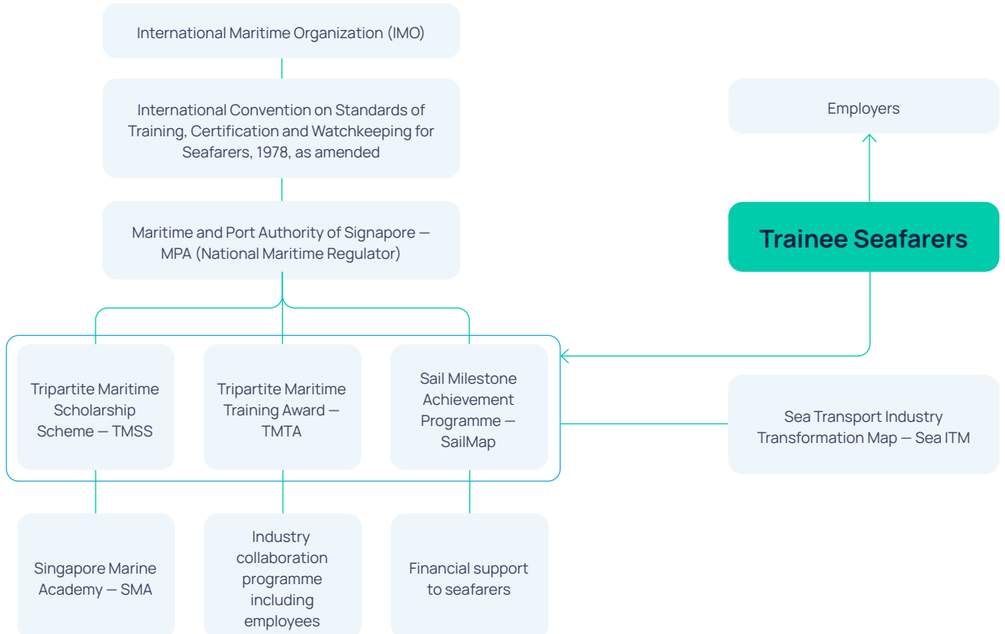


Figure 25 Current training model for Trainee Seafarers | Singapore

The country offers a comprehensive range of cadetship programs, university courses, and industry-supported initiatives including but not limited to:

- The Tripartite Maritime Scholarship Scheme (TMSS) is a key initiative to attract new talent by providing scholarships for cadet training at the Singapore Maritime Academy (SMA) – the country's main maritime training institution. This scheme covers tuition fees and provides allowances whilst offering a full range of maritime diplomas and specialist diplomas, CoC courses, as well as STCW courses.[264]

  The three distinct maritime disciplines of focus are Maritime Business, Nautical Studies, and Marine Engineering including Shipboard Operations and Offshore Technology options.

- The Tripartite Maritime Training Award (TMTA) is a structured training programme designed to support mid-career individuals with the necessary skills and certifications to transition into seafaring roles to serve as 3rd Officers and 5th Engineers on foreign-going ships. The programme was established in 2009 by the Singapore Maritime Officers' Union (SMOU) and is a multi-organisational collaboration between the Maritime and Port Authority of Singapore (MPA), NTUC's Employment and Employability Institute (e2i), and SkillsFuture Singapore (SSG), with support from the Singapore Shipping Association (SSA).[265] The programme is split into 3 phases over a 22-month period.

264 EduMaritime (2021) https://www.edumaritime.net/singapore/singapore-maritime-academy
265 SMOU (Retrieved 2025) https://www.smou.org.sg/resources/tmta

- Sail Milestone Achievement Programme (SailMAP) – The primary goal is to ensure a continuous supply of skilled maritime professionals through financial incentives and support. Benefits include a monthly allowance of SGD $1,000, CoC Class 3/5 first examination attempt waiver fees, and completion bonuses of up to SGD $10,000[266] upon completion of each shipboard training milestone to a maximum of SGD $50,000.[267] Note that TMSS scholars are not eligible for SailMAP during their bond period and can only apply for SailMAP incentives after completing their bond.[268]
- Sea Transport Industry Transformation Map (Sea ITM) – The Sea ITM is a government launched vision for Singapore to become a global maritime hub for connectivity, innovation and talent and is organised by the MPA. The initiatives above fall under this vision. The aim is to grow Singapore's maritime sector value-add by $2 billion or an average rate of 2-3% annually between 2020 and 2025.[269] As part of this strategy, one of the key focal points is to develop a future-ready maritime workforce equipped with global skillsets. To do so, the Sea Transport sector is supporting job role redesign to reskill and upskill current workers whilst strengthening local talent pipelines by attracting fresh graduates and facilitating mid-career conversions. With emphasis on automation, digitalisation and sustainability; the plan aims to create 1,000 local jobs by 2025 in data analytics, data science, Internet of Things engineering, software engineering, and sustainability management.[270]

Singapore's model for seafarer training and retention, while robust and well-supported institutionally, faces several notable criticisms. A key issue is the persistent shortage of qualified seafarers, particularly officers. Despite efforts to promote maritime careers, the industry struggles to attract young talent due to the perceived unattractiveness of seafaring life—marked by long absences from home, limited social interaction, and demanding work conditions.[271]

266 MPA (2022) https://www.mpa.gov.sg/docs/mpalibraries/media-releases/2022/21-aspiring-seafarers-awarded-financial-incentives-through-the-sailmap-scheme.pdf
267 MPA (retrieved 2025) https://www.mpa.gov.sg/events-careers/maritime-careers/sail-milestone-achievement-programme-%28sailmap%29
268 MPA (Retrieved 2025) https://www.mpa.gov.sg/events-careers/maritime-careers/sail-milestone-achievement-programme-%28sailmap%29
269 MPA (2022) https://www.mpa.gov.sg/media-centre/details/sea-transport-industry-transformation-map-2025-to-achieve-singapore-s-vision-as-a-global-maritime-hub-for-connectivity-innovation-and-talent
270 MPA (2022) https://www.mpa.gov.sg/media-centre/details/sea-transport-industry-transformation-map-2025-to-achieve-singapore-s-vision-as-a-global-maritime-hub-for-connectivity-innovation-and-talent
271 Thai, Vinh & Balasubramanyam, Linkesh & Yeoh, Karen & Norsofiana, Sofian. (2013). Revisiting the seafarer shortage problem: The case of Singapore. Maritime Policy & Management. 40. 10.1080/03088839.2012.744480.

Training programs, though comprehensive, are sometimes criticised for not keeping pace with industry needs, especially in areas like digitalisation and green shipping. It is noted that despite widespread recognition of the need for upskilling in alternative fuels and new technologies, progress has been slow, and many seafarers feel undervalued and overworked.[272]

Retention is another challenge. While Singapore promotes the "Employer of Choice" (EOC) strategy, its success varies across companies. Research from Nanyang Technological University highlights that both tangible benefits (like salary and bonuses) and intangible ones (such as welfare and corporate social responsibility) are crucial for retention, but not consistently provided.[273]

Finally, although Singapore emphasises tripartite collaboration between government, industry, and training institutions, critics argue that more cohesive and proactive coordination is needed to address future workforce demands effectively.[274]

272 Nautilus Federation (2025) https://www.nautilusfederation.org/globalassets/federation/resources/int_nfed_recruitment-and-retention-report.pdf

273 Thai, Vinh & Balasubramanyam, Linkesh & Yeoh, Karen & Norsofiana, Sofian. (2013). Revisiting the seafarer shortage problem: The case of Singapore. Maritime Policy & Management. 40. 10.1080/03088839.2012.744480.

274 Thai, Vinh & Balasubramanyam, Linkesh & Yeoh, Karen & Norsofiana, Sofian. (2013). Revisiting the seafarer shortage problem: The case of Singapore. Maritime Policy & Management. 40. 10.1080/03088839.2012.744480.

United Kingdom (UK)

Key Insights | United Kingdom

Training model deployed in UK is similar to Philippines. Accredited training providers work collaboratively with employers to provide trainee seafarers with a single point of access and ability to schedule their shore-based training and sea time. Financial support for eligible trainee seafarers is provided through the SMarT scheme which further reduces the cost of undertaking training for STCW qualifications. ISWAN Action Plan is an industry collaboration programme aimed to encourage further collaborations between training providers and employers. This model is distinctly different to the training model deployed in Australia.

The UK ranks 11th globally in terms of deadweight tonnage with a fleet size of approximately 58.7 million tonnes275 accounting for 0.4% of the world's deadweight tonnage.276 It is estimated that the Maritime sector – which includes shipping, ports, and marine engineering – directly supported over £55 billion in business turnover, over £18 billion in gross value add and over 227,000 jobs for UK locals in 2019.[277] They have a well-established maritime training system focusing on cadetships, university programs, and industry support.

Like some other nations, the coordination of sea time in the UK is managed through a collaborative effort involving educational institutions, industry employers, regulatory bodies, and seafarers' associations. Together, they are aimed at ensuring a steady supply of skilled seafarers to meet the demands of the maritime industry.

275 UNCTAD (Retrieved 2025) https://unctadstat.unctad.org/insights/theme/107

276 UK Government (2025) https://www.gov.uk/government/statistics/shipping-fleet-statistics-2024/shipping-fleet-statistics-2024

277 Maritime UK (2022) https://www.maritimelondon.com/wp-content/uploads/2022/06/CEBR-report-2022pdf.pdf

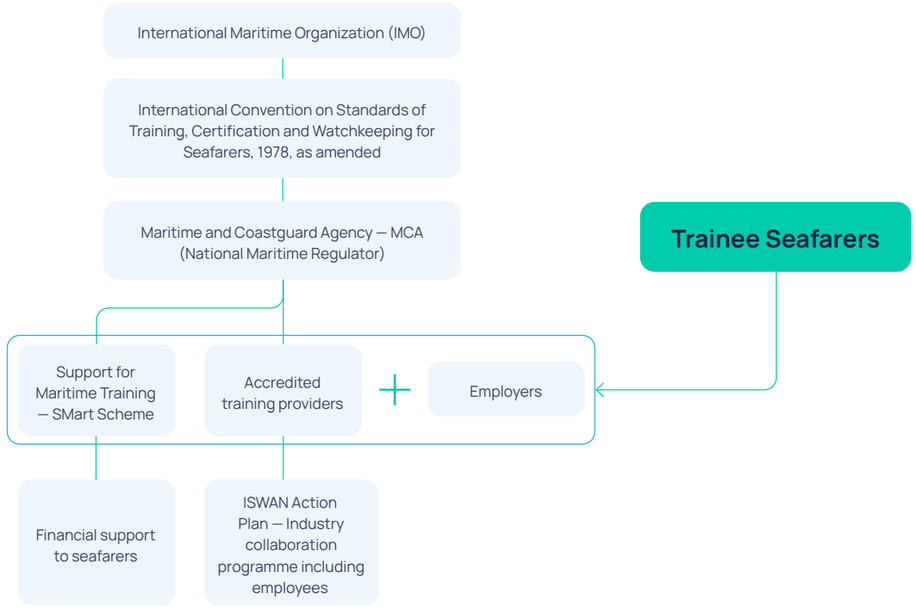


Figure 26 Current training model for Trainee Seafarers | United Kingdom

- **ISWAN Action Plan** – The International Seafarers' Welfare and Assistance Network (ISWAN) emphasises the need for fair pay, job security, and better onboard conditions to make seafaring more attractive.[278] The plan focuses on fair work, inclusive culture, and technology for seafarers. While ISWAN is advocating for widespread adoption, the plan currently serves as a guiding framework rather than a binding policy. It is being used to influence stakeholders—including shipping companies, training institutions, and regulators—to align their practices with the plan's recommendations. The maritime sector is encouraged to adopt these principles, but implementation varies by organisation and region.[279]
- **Training Programs**: Maritime training institutions in the UK often incorporate sea time into their educational programs. Maritime academies and training institutions are updating curricula to reflect the digital and green transitions in the industry. This includes training in automation, decarbonisation technologies, and cybersecurity;[280] with the program facilitating industry collaboration and involving the Merchant Navy Training Board (MNTB), shipping companies, unions, and training colleges. UK Cadets follow a pattern of alternating periods of sea service and college/university-based learning. Cadet training

278 ISWAN (2023) https://www.iswan.org.uk/news/iswan-publishes-action-plan-for-addressing-the-maritime-recruitment-crisis/
279 ISWAN (Retrieved 2025) https://www.iswan.org.uk/news/iswan-advocates-for-a-seafarer-centred-future/
280 Safety4Sea (2025) https://safety4sea.com/cm-european-maritime-skills-forum-key-strategies-for-attracting-and-equipping-the-future-maritime-workforce/

involves five-phases that alternate between college learning and sea time. Phases two and four are at sea.[281] Cadets are on board to learn and classed as 'supernumerary' during sea time – that is, not considered operational crew so that they can prioritise learning. However, cadets can take advantage of opportunities that may arise on board in addition to completing Training Record Book (TRB) requirements.

- **Government Support**: The Maritime and Coastguard Agency (MCA) administers the Support for Maritime Training (SMarT) scheme, providing financial assistance to maritime training providers.[282] This funding supports the placement of trainees on vessels, facilitating the acquisition of requisite sea time. MCA also oversees training and certification, ensuring compliance with international standards, which helps maintain high-quality seafarer training.
- **Cadet Training and Modernisation Programme**: The UK's Cadet Training & Modernisation (CT&M) Programme, led by the MCA, is a comprehensive initiative aimed at updating maritime education to meet the evolving demands of the shipping industry. Based on 23 recommendations from the Maritime Skills Commission's 2021 review, the programme focuses on modernising cadet curricula, updating TRBs and enhancing career pathway tools. It introduces new content on alternative fuels, cybersecurity, and sustainability, while also revising assessments and safety materials. Set for full rollout in September 2025, the programme aims to improve recruitment, retention, and readiness of UK cadets for a rapidly changing maritime environment.[283]
- **Zero to Hero Apprenticeship**: This program provides opportunities for apprenticeships within the UK small vessel sector, offering a pathway from no experience to fully qualified seafarer. UK government funding of up to UK£27,000 can be accessed to support each trainee.[284]
- **Increase of sovereign-flagged commercial vessels** – UK direct-owned trading vessels increased by 70% compared to 2023, primarily due to one large private company moving a significant portion of its fleet to UK direct ownership.[285] This shift led to a nearly fourfold increase in deadweight tonnage under UK ownership and has significant implications for seafarers, potentially increasing job opportunities, especially for those with UK certifications, while also subjecting crews to the UK's higher regulatory and safety standards. It may lead to improved working conditions and wages, though the actual impact will depend on the company's crewing policies. Additionally, this move could enhance the UK's strategic maritime influence and boost demand for maritime training.

281 MNTB (2024) https://www.mntb.org.uk/wp-content/uploads/2024/03/MNTB-Training-at-Sea-Guidance-for-Cadets.pdf
282 UK Government (2025) https://www.gov.uk/government/publications/min-678-m-enhancement-to-the-current-support-for-maritime-training-smart-fund-and-additional-support-for-junior-officers/min-678-m-enhancement-to-the-current-support-for-maritime-training-smart-fund-and-additional-support-for-junior-officers
283 UK Government (Retrieved 2025) https://www.gov.uk/seafarer-skills-and-training
284 UK Chamber of Shipping (2025) https://www.ukchamberofshipping.com/news/new-zero-hero-apprenticeship-launched-provide-new-opportunities-career-sea
285 UK Government (2025) https://www.gov.uk/government/statistics/shipping-fleet-statistics-2024/shipping-fleet-statistics-2024

Feedback has been raised regarding the impracticalities of some initiatives, such as the SMarT program, which has faced criticisms ranging from funding limitations, the need for more practical support for cadets, and industry concerns about effectiveness including the ability for the program to meet the evolving needs of the maritime sector.[286, 287]

United States of America (USA)

Key Insights | United States of America

Seafarers are trained at the US Merchant Marine Academy (USMMA) and on successful completion of training, seafarers are STCW qualified. The USMMA takes responsibility of ensuring all trainees complete their sea time and shore-based training. The training model deployed in US is uniquely different to Australia. This is primarily because the US sees trainee seafarers as part of broader maritime capability aimed at increasing the country's resilience. Another key difference to Australia is that trainee seafarers who obtain STCW qualifications from the USMMA are also qualified to sail on board naval vessels without the need for any further certification or learning requirements.

The US ranks 22nd globally in terms of deadweight tonnage with a fleet size of approximately 11.2 million tonnes.[288] The US model for seafarer training, attraction, retention, re-training, and foreign qualification recognition is a complex system supported by a combination of federal agencies, maritime academies, and industry stakeholders.

Training is primarily delivered through the US Merchant Marine Academy and six state maritime academies, such as SUNY Maritime and Massachusetts Maritime Academy. These institutions are accredited by the US Coast Guard (**USCG**), which sets national standards for maritime education and licensing. The Maritime Administration (MARAD), under the Department of Transportation, provides funding and oversight for these academies.[289]

286 Nautilis International (2023) https://www.nautilusint.org/en/news-insight/telegraph/shocking-conditions-for-uk-cadets/
287 Lloyd's List (2023) https://www.lloydslist.com/LL1144469/UK-officer-training-study-finds-deeply-concerning-deficiencies
288 The Executive Office of the President (2025) https://www.federalregister.gov/documents/2025/04/15/2025-06465/restoring-americas-maritime-dominance
289 Executive Office of the President (2025) https://www.federalregister.gov/documents/2025/04/15/2025-06465/restoring-americas-maritime-dominance

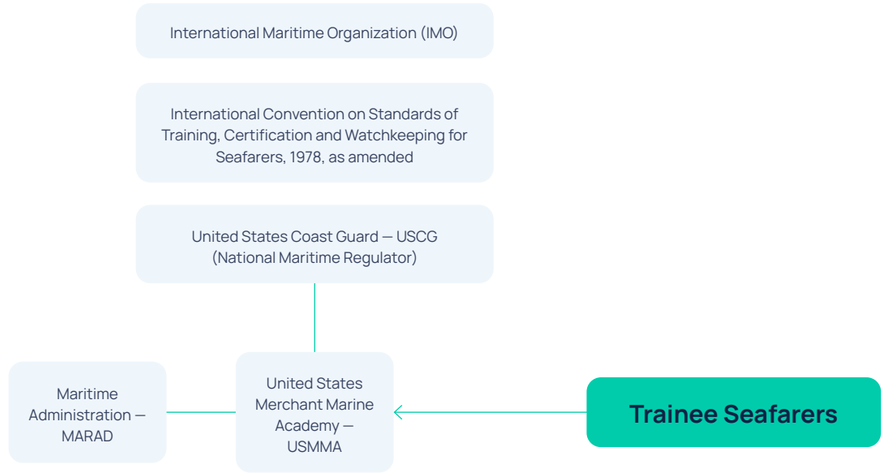


Figure 27 Current training model for Trainee Seafarers | United States

- **Maritime Action Plan (MAP)** – To address declining interest in maritime careers, the federal government has launched initiatives to attract new talent. A 2025 Executive Order titled "Restoring America's Maritime Dominance" mandates the creation of the MAP to revitalise the maritime workforce. This includes strategies for recruitment, training, and retention, as well as rebuilding the maritime industrial base.[290]

  Re-training and upskilling are also addressed in the MAP, which calls for leveraging tools like the Defense Production Act to fund workforce development in shipbuilding and marine transportation. This aims to ensure that the maritime workforce can adapt to evolving industry needs.[291]

There are several financial incentives in place in the U.S. to support the training, recruitment, and retention of seafarers and maritime workers, particularly in the context of revitalising the maritime industrial base:

- **Federal Incentives for Workforce Development** – Under 10 U.S. Code § 8696, the U.S. Navy is authorised to provide special incentives for shipbuilding workforce development. These include attraction and retention bonuses, and on-the-job training programs to develop key manufacturing and maritime skills. These incentives are part of a broader effort to strengthen the Navy's shipbuilding capabilities and ensure a skilled workforce is available to meet national defence needs.[292]

290 The White House (2025) https://www.whitehouse.gov/presidential-actions/2025/04/restoring-americas-maritime-dominance/
291 The Executive Office of the President (2025) https://www.federalregister.gov/documents/2025/04/15/2025-06465/restoring-americas-maritime-dominance
292 Cornell Law School (2022) https://www.law.cornell.edu/uscode/text/10/8696

- **MAP and Budgetary Support** – MAP, outlined above, includes durable federal funding for maritime workforce development; fiscal assessments to support training and retention programs; and the use of the Defense Production Act Title III to fund workforce expansion and retraining in shipbuilding, marine transportation and port infrastructure.[293] This plan is designed to make U.S.-flagged and built vessels more competitive and to rebuild the maritime workforce through targeted financial support.
- **Navy Programs** – The US Navy also offers a range of financial incentives for officer retention through the Career Intermission Program (**CIP**), Fleet Scholars Education Program (FSEP), Targeted Re-entry Program (TRP), and the Low-Residency Graduate Education Program (LRGEP). These programs aim to provide flexibility, educational opportunities, and career advancement to encourage long-term service.[294]
    - **CIP**[295] allows sailors to take a one-time sabbatical from active duty for up to three years to pursue personal or professional goals, such as education or family commitments. Participants transition to the Individual Ready Reserve during this time and return to active duty with a two-for-one service obligation for the time spent away.[296]
    - **FSEP**[297] allows selected U.S. Navy officers to pursue full-time graduate education at civilian institutions. It is designed to enhance the Navy's intellectual capital by enabling officers to gain advanced degrees in disciplines that support naval operations and strategy. Officers remain on active duty while attending school, and the program covers tuition and associated costs.[298]
    - **TRP**[299] is aimed at high-performing officers who voluntarily separate from active duty. It provides them with a streamlined path to return to service later, preserving their career trajectory. The program identifies top talent at the time of separation and maintains contact, offering them priority consideration for reentry if they choose to return. This initiative is part of the Navy's broader effort to retain institutional knowledge and leadership potential, even among those who temporarily leave the service.[300]
    - **The LRGEP**[301] is one of several initiatives the U.S. Navy has implemented to enhance naval officer retention by offering greater flexibility in professional development. Unlike traditional in-residence programs, this model allows officers to pursue graduate education while remaining in their current duty assignments, minimising career disruption.[302] Unlike traditional graduate education, the program requires the students to spend a limited time on campus and supplement this time with online learning. It is designed to accommodate the operational demands of naval service while still providing access to advanced education.[303]
    - This approach is particularly appealing to officers who may be unable or unwilling to relocate for full-time study due to family or professional obligations. The program is part of a broader suite of retention tools under the Navy's Sailor 2025 initiative, which aims to modernise personnel management and improve career satisfaction.[304]

293 The White House (2025) https://www.whitehouse.gov/presidential-actions/2025/04/restoring-americas-maritime-dominance/
294 Lieutenants Sam Calaway and John Bice, U.S. Navy (2020) https://www.usni.org/magazines/proceedings/2020/december/navy-needs-retention-strategy
295 MyNavy HR (retrieved 2025) https://www.mynavyhr.navy.mil/Career-Management/Reserve-Personnel-Mgmt/IRR/Career-Intermission/
296 United States Navy (2017) https://www.navy.mil/Press-Office/News-Stories/display-news/Article/2254847/navys-career-intermission-program-balances-service-and-flexibility/
297 MyNavy HR (Retrieved 2025) https://www.mynavyhr.navy.mil/Career-Management/Fellowships/NPS-CIVINS/Fleet-Scholars-Education-Program/
298 Lieutenants Sam Calaway and John Bice, U.S. Navy (2020) https://www.usni.org/magazines/proceedings/2020/december/navy-needs-retention-strategy
299 MYNave HR (Retrieved 2025) https://www.mynavyhr.navy.mil/Career-Management/Transition/Targeted-Re-Entry-Program/
300 Lieutenants Sam Calaway and John Bice, U.S. Navy (2020) https://www.usni.org/magazines/proceedings/2020/december/navy-needs-retention-strategy
301 MYNavy HR (Retrieved 2025) https://www.mynavyhr.navy.mil/Portals/55/Messages/NAVADMIN/NAV2021/NAV21121.txt

The Navy's retention efforts have been described as a "web of disparate programs" lacking cohesion, requiring a unified strategy that includes leadership development, innovation opportunities, and modernised personnel assessments.[305]

Despite these incentives, retention remains a significant challenge, particularly within the U.S. Coast Guard. A 2025 Government Accountability Office (**GAO**) report found that the Coast Guard has consistently lost more enlisted personnel than it recruited between 2019 and 2023. Key issues include frequent relocations, demanding work environments, and more competitive compensation in the private sector. In response, the Coast Guard has implemented both monetary and non-monetary incentives and established a Talent Management Transformation Program to address these challenges. However, the GAO criticised the Coast Guard for lacking sufficient data and strategic planning to effectively manage retention efforts.[306]

Recognition of foreign maritime qualifications is managed by the USCG's National Maritime Center (NMC), which evaluates credentials under the STCW framework. However, foreign mariners often need to complete additional U.S.-specific training or testing to meet national requirements. Key organisations involved in managing this system include the USCG, MARAD, the Department of Transportation, the Department of Defense, and the White House National Security Council. Despite these efforts, criticisms persist regarding underinvestment, lack of coordination, and insufficient data collection, all of which hinder the effectiveness of workforce development and retention strategies. [307]

302 US DOD (2020) https://media.defense.gov/2020/Aug/03/2002469641/-1/-1/1/LGEP%20FAQS%2020200717%20-%20FOR%20WEBSITE%20(1).DOCX
303 US DOD (2020) https://media.defense.gov/2020/Aug/03/2002469641/-1/-1/1/LGEP%20FAQS%2020200717%20-%20FOR%20WEBSITE%20(1).DOCX
304 Lieutenants Sam Calaway and John Bice, U.S. Navy (2020) https://www.usni.org/magazines/proceedings/2020/december/navy-needs-retention-strategy
305 Lieutenants Sam Calaway and John Bice, U.S. Navy (2020) https://www.usni.org/magazines/proceedings/2020/december/navy-needs-retention-strategy
306 GAO (2025) https://www.gao.gov/products/gao-25-107869
307 GAO (2025) https://www.gao.gov/products/gao-25-107869

Appendix D I Methods of Training Delivery

This report considers different training options that may be deployed in Australia. A Pilot Program has been recommended to assessment the selected option(s). In designing the Pilot Program, including innovative methods of training delivery that are in place in some sampled jurisdictions (e.g. dedicated training ships for trainee sea farers or the role of simulation-based training) has been recommended.

This section outlines the current methods of delivery for training seafarers and is intended to provide a frame of reference for any innovative methods of training delivery that may be considered as part of the Pilot Program.

AMSA, as required by the STCW and Marine Order 70,[308] approves courses which lead to the attainment of an STCW certificate of competency. In approving such courses AMSA utilises the MTP supported by the IMO model courses.[309]

Delivery of training for seafarers comprises of three predominant methods as outlined in Figure 28. Focus of this section is on seafarers training that is within AMSA purview.

Figure 28 Methods of delivering training to seafarers

Classroom based learning for theoretical knowledge

This is often limited to subjects such as introduction to ship construction, ship stability, principles of navigation and practical navigation. Information learnt in classroom environment is then expected to be used when trainee seafarers are on board vessels to complete requisite sea time.

For example, learning how to calculate the ship's position using terrestrial objects (lighthouse, leading lights etc) or celestial bodies (sun, moon or stars) is covered in classroom environment. These calculations are then used to determine the ship's position when sailing on board as a trainee seafarer as

308 DITRDCSA (2024) https://www.legislation.gov.au/F2014L00177/latest/versions
309 AMSA (2025) https://www.amsa.gov.au/qualifications-training/training-organisations/stcw-training-and-assessment-quality-standards-and

part of practical on-board training.

Another example is the Certificate of Safety Training (**COST**)[310] which is the first international qualification needed to become a seafarer. The COST can also be used for DCV catering crewing.

COST comprises of:

- Personal safety and social responsibilities (STCW Reg VI/1 Code A–VI/1 Table A–VI/1–4)
- Personal survival techniques (STCW Reg VI/1 Code A–VI/1 Table A–VI/1–1)
- Fire prevention and firefighting (Basic) (STCW Reg VI/1 Code A–VI/1 Table A–VI/1–2)
- Elementary first aid (STCW Reg VI/1 Code A–VI/1 Table A–VI/1–3)
- Security awareness Training (STCW Code Section A-VI/6 para. 4)

All above courses are delivered in classroom environment.

Simulated training in simulated or real maritime environments

There are aspects of seafarer training that require a level of proficiency. On successful completion of such training, seafarers are issued a Certificate of Proficiency.[311]

Examples of such courses include:

Advanced Fire Fighting (STCW Code Section A-VI/1 para. 1-4)

This course includes practical training in a simulated environment where trainees learn how to don and use a breathing apparatus, fire suppression techniques and live fire scenarios (including rescuing personnel) in simulated shipboard environments.

Medical Care on board ships (STCW Code Section A-VI/4 para. 4)

This course provides theoretical, practical and simulated training for seafarers in charge of providing medical care on board. Examples of simulation-based learning includes how to use syringes, wound dressing and applying plaster for broken bones. Communicating effectively with Telemedical Assistance Services (**TMAS**) and maintaining medical records on board is also included.

On board training by acquiring requisite sea time

Sea service is a requirement for most certificates of competency. Depending on the role on board the vessels, a specified amount of sea time must be completed by trainee seafarers. Prescriptive requirements for sea time for varying roles are determined by AMSA and may be revised from time to time.[312]

Time spent on board and specific training requirements completed whilst on board must be entered in the Task Books.[313]

Task Books are a key component of recording appropriate skills have been acquired by trainee seafarers whilst on board and are used by seafarers, supervisors and training organisations.

310 AMSA (2025) https://www.amsa.gov.au/qualifications-training/international-qualifications/certificate-safety-training/
311 AMSA (2021) https://www.amsa.gov.au/qualifications-training/international-qualifications/revalidation-rating-certificates-proficiency
312 AMSA (2025) https://www.amsa.gov.au/qualifications-training/sea-service-and-task-books/australian-seafarers-service-book
313 AMSA (2025) https://www.amsa.gov.au/qualifications-training/sea-service-and-task-books/australian-seafarers-service-book

- All Australian seafarers can use an AMSA approved Task Book to record their sea service, training and experience on board a vessel. A Task Book helps trainee seafarers record the practical training and experience on board a vessel. The AMSA approved Task Book has practical tasks that trainee seafarers must carry out on board a vessel. Completing these tasks helps trainee seafarers to gain the qualifications needed to become a competent coxswain, master, watchkeeper or engineer.[314]

  Task Books do not have to be completed for the issue of your certificate of competency. Completing the task book allows trainee seafarers to reduce the amount of sea time needed. The reduction in sea service for a completed task book depends on the certificate of competency and previous experience, but it will be reduced by at least 50 per cent.

  Trainee seafarers can get a task book for most certificates of competency, other than general purpose hand near coastal, coxswain grade 3 near coastal, sailing master coastal near coastal, and sailing master offshore near coastal.

- Supervisors are responsible for signing off on the task performed by trainee seafarers on board vessels. Each task performed and recorded in the task book must be witnessed and signed off by a supervisor or qualified person who is connected with the vessel's operation. This can be a master, engineer, owner or operations manager, depending on the seafarer's current certificate level and the certificate they are working towards. It must be someone in a supervisory role.[315]

- Task Books issued by AMSA are based on the MAR Training Package[316] and can be used by RTOs, together with other criteria, as third-party evidence to evaluate the competence of a trainee. If this is the case, the RTO must validate the entries in the task book and sign off task book completion before the candidate is deemed competent and a certificate or diploma is issued. The Task Book does not cover all performance and assessment criteria specified in the MAR Maritime Training Package.

  RTOs may, however, help a seafarer gain access to commercial vessels and equipment through industry partnerships, or provide an opportunity for task book completion on board training vessels or in an RTOs workshop where that opportunity is independent of formal training activities.[317]

314 AMSA (2020) https://www.amsa.gov.au/qualifications-training/sea-service-and-task-books/how-supervisors-use-task-books
315 AMSA (2020) https://www.amsa.gov.au/qualifications-training/sea-service-and-task-books/how-supervisors-use-task-books
316 DEWR (2025) https://training.gov.au/training/details/MAR/qualifications
317 AMSA (2022) https://www.amsa.gov.au/qualifications-training/sea-service-and-task-books/how-registered-training-organisations-use-task

Registered Training Organisation (RTO)

RTOs deliver training and qualifications for issue of a certificate of competency and are regulated by the Australian Skills Quality Authority (ASQA)[318] or in some cases, the state regulator who ensure that RTOs comply with conditions and standards of registration.

RTOs that wish to offer training for domestic or international certificates must be approved by AMSA. RTOs can also be the final assessor for issuing low complexity qualifications.[319]

International CoC and high complexity domestic CoC requirements can only be assessed by AMSA. These include:

- All International CoC for deck officers, engineer officers and ratings.[320]
- Master of less than 45 metres near coastal;[321]
- Master of less than 100 metres near coastal;[322]
- Marine engine driver grade 1 near coastal;[323]
- Engineer class 3 near coastal.[324]

Specific criteria required by RTOs as final assessor of low complexity qualifications for domestic CoC are outlined below:[325]

- the RTO is registered with the ASQA, the Training Accreditation Council Western Australia (**TAC**) or the Victorian Registration and Qualifications Authority (**VRQA**) to deliver a MAR Maritime Training Package qualification
- the RTO is not in liquidation or insolvency administration
- the RTO has told AMSA of the kind of assessment it is to deliver; and the RTO is to deliver assessment of a kind that complies with the Standards for Registered Training Organisations (RTOs) 2015
- the RTO has a documented assessment strategy that will be followed for all assessments associated with the approval
- the RTO has told AMSA about any proposed partnership or subcontracting arrangements for the delivery of assessments on its behalf; and
- the RTO has told AMSA the names of each person who is to deliver assessments for the organisation
- each person who is to deliver assessment for the RTO is named on the RTOs letter of approval as a final assessor and has a current and valid certificate of competency appropriate for the kind of assessment being delivered.

318 ASQA (Retrieved 2025) https://www.asqa.gov.au/
319 AMSA (2022) https://www.amsa.gov.au/audiences/rto
320 AMSA (Retrieved 2025) https://www.amsa.gov.au/qualifications-training/international-qualifications
321 AMSA (2024) https://www.amsa.gov.au/qualifications-training/domestic-qualifications/master-less-45-metres-near-coastal
322 AMSA (2024) https://www.amsa.gov.au/qualifications-training/domestic-qualifications/master-less-100-metres-near-coastal
323 AMSA (2024) https://www.amsa.gov.au/qualifications-training/domestic-qualifications/marine-engine-driver-grade-1-near-coastal
324 AMS (2024) https://www.amsa.gov.au/qualifications-training/domestic-qualifications/engineer-class-3-near-coastal
325 AMS (2023) https://www.amsa.gov.au/sites/default/files/amsa132-administrative-arrangements-for-approval-of-rtos-as-final-assessors.pdf

Simulator-based training

Role of simulator-based training for CoP has been briefly outlined in this section. Applicable standards for use of simulators are Regulation I/12 Use of Simulators, STCW Code Section-A-I/12 Standards governing the use of simulators and STCW Code Section B-I/12 Guidance regarding the use of simulators:[326]

Each RTO shall ensure that any simulator used for mandatory simulator-based training must:

1. Be suitable for the selected objectives and training tasks.
2. Be capable of simulating the operating capabilities of shipboard equipment concerned, to a level of physical realism appropriate to training objectives, and include the capabilities, limitations and possible errors of such equipment
3. Have sufficient behavioural realism to allow a trainee to acquire the skills appropriate to the training objectives.
4. Provide a controlled operating environment, capable of producing a variety of conditions, which may include emergency, hazardous or unusual situations relevant to the training objectives.
5. Provide an interface through which a trainee can interact with the equipment, the simulated environment and, as appropriate, the instructor.
6. Permit an instructor to control, monitor and record exercises for the effective debriefing of trainees.

In conducting mandatory simulator-based training, instructors must:

1. Adequately brief trainees beforehand on the exercise objectives and tasks and give sufficient planning time before the exercise starts.
2. Give trainees adequate familiarisation time on the simulator and its equipment before any training or assessment exercise commences.
3. Make sure guidance given and exercise stimuli are appropriate to the selected exercise objectives and tasks and to the level of trainee experience.
4 Effectively monitor exercises, supported as appropriate by audio and visual observation of trainee activity and pre and post-exercise evaluation reports.
5 Effectively debrief trainees to ensure that training objectives have been met and that operational skills demonstrated are of an acceptable standard.
6 Make sure simulator exercises are designed, tested and suitability for the specified training objectives.

The use of peer assessment during debriefing is encouraged.

Where simulators are used to assess the ability of candidates to demonstrate levels of competency, assessors must ensure:

1. Performance criteria are clearly identified, valid and available to the candidates.
2. Assessment criteria are clearly established so that the assessment is reliable and uniform to optimise objective measurement and evaluation—subjective judgements must be kept to a minimum.
3. Candidates are clearly briefed on the:
    - tasks and/or skills to be assessed and on the tasks
    - performance criteria by which their competency will be determined.
4. Assessment of performance considers normal operating procedures and any behavioural interaction with other candidates on the simulator or with simulator staff.
5. Scoring or grading methods to assess performance are used with caution until they have been validated.
6. The candidate demonstrates the ability to carry out a task safely and effectively to the satisfaction of the assessor.

In accordance with standard international practice, AMSA conducts evaluations of RTOs as a condition of the ongoing approval of their training courses and conducts oral assessments of candidates for the unlimited STCW Certificates of Competency as well as the higher end near coastal certificates.[327]

Classroom learning

AMSA encourages RTOs to use e-learning, distance learning, and blended learning in the training of seafarers in accordance with the standards of training and assessments set out in section A-I/6 of the STCW Code and the guidance given below:[328]

1. E-learning, distance learning, and blended learning are approved by AMSA.
2. The type of course delivery is suitable for the selected objectives and training tasks meet the competence level for the subject covered.
3. It has clear and unambiguous instructions for the trainees to understand how the program operates.
4. It provides learning outcomes that meet all the requirements to provide the underpinning knowledge and proficiency of the subject.
5. It is structured in a way that enables the trainee to systematically reflect on what has been learnt through both self-assessment and tutor-marked assignments.
6. It provides professional tutorial support through telephone or e-mail communications.

326 AMSA (2025) https://www.amsa.gov.au/qualifications-training/training-organisations/stcw-training-and-assessment-quality-standards-and

327 AMSA (2025) https://www.amsa.gov.au/qualifications-training/training-organisations/evaluations-stcw-certificate-competencyproficiency

328 AMSA (2025) https://www.amsa.gov.au/qualifications-training/training-organisations/stcw-training-and-assessment-quality-standards-and

Guidance for assessing a trainee's progress and achievements for training by e-learning, distance learning, and blended learning is outlined below:

1. AMSA approved assessment procedures are provided for any e-learning, distance learning and blended learning program.
2. Clear information is given to the trainees on the way that tests and examinations are conducted and how the results are communicated.
3. There are test questions that are comprehensive and will adequately assess a trainee's competence and are appropriate to the level being examined.
4. Procedures are in place to ensure questions are kept up to date.
5. The conditions where the examinations can take place and the procedures for invigilation to be conducted are satisfactory.
6. There are secure procedures for the examination system so that it will prevent acting dishonestly.
7. There are secure validation procedures to record results for authenticity checks required by the STCW Convention.

Australian Border Force (ABF) Training

Navigation Act 2012 (*Cth*) requires all ABF vessels to hold a valid Vessel Management Plan (VMP) approved by AMSA.[329] Amongst other requirements, the VMP must state the kind of operations the vessel will conduct. In order to undertake the proposed operations documented in the VMP, the ABF conducts training of Marine Unit Officers[330] in co-ordination with Australian Maritime College[331] and other RTO's.

The training programme involves classroom training for theoretical knowledge and training on board vessels. This training for Marine Unit Officer is different to crewing capability provided by contracted crewing companies for large hulled vessels such as the Ocean Shield.[332]

Entry-level Marine Unit Officers complete a 6-week Border Force Officer Recruit Trainee program and a 16-week marine-specific training program.[333]

The 16-week marine-specific training includes:

- seamanship and other professional mariner skills through a Certificate I in Maritime Operations
- basic use of force and personal defensive skills
- maritime legislation and powers
- boarding vessels at sea
- small boat operations
- navigational watch standing, ship's husbandry, deck maintenance

Entry-level Marine Unit Officers need to complete a workbook during their training. A designated person signs off each completed task in the workbook. These tasks have to be completed onboard actual vessels as opposed to simulated environments.[334]

329 Commonwealth of Australia (2023) https://classic.austlii.edu.au/au/legis/cth/num_reg/nr2023202301329248/s9.html
330 ABF (2024) https://www.abf.gov.au/about-us/careers/border-force-officer-recruit-training-program/marine
331 AMC (Retrieved 2025) https://www.amc.edu.au/
332 ABF (2024) https://www.abf.gov.au/what-we-do-subsite/Pages/Border-command/Patrol-vessels.aspx
333 ABF (2024) https://www.abf.gov.au/about-us/careers/border-force-officer-recruit-training-program/marine
334 ISA stakeholder engagement with ISA Australian Border Force, June 2025