

“Australia is heavily reliant on the maritime environment for its national survival and well being¹”.

Introduction

This submission by the Australian Maritime College (AMC) relates to skills in the marine transport system (MTS) which comprises:

- ❑ international shipping;
- ❑ coastal and inland vessel operations;
- ❑ ports including pilotage, associated distribution/logistics infrastructures;
- ❑ maritime services (including ship brokers, port agents, ship managers, stevedores, financiers and insurers, freight forwarders); and
- ❑ regulatory authorities such as the Australian Marine Safety Authority (AMSA) and its State equivalents.

The main thrust of AMC’s submission is that in the context of a probable skills shortage, there is a strategic need to maintain a) a national maritime skills pool and b) AMC as the national provider.

Background

The Australian Maritime College (AMC) was established in 1978 by the Australian government as the national provider of maritime education, training and research. AMC maintains a broad portfolio of educational programmes ranging from short training courses to PhD programmes that cover most aspects of MTS operations and management. Some programmes are available externally by distance education.

Seafarer training has been a core AMC activity since establishment but the College maintains programmes of study in related maritime sectors: marine and maritime engineering; maritime and logistics management; marine resource management (e.g. fisheries management); coastal conservation and ocean governance.

Seafarer training and education can be broadly categorized into four main areas across three levels. The four categories are safety, technical, commerce and ‘other’ (mostly management, administration, marketing and finance) and the three levels are the executive, officer and support. Training and education can be further categorized according to whether programmes are intended to equip participants with the skills and expertise to take up either shore-based or sea-going positions within the maritime industry.

Sea-going executive officers typically serve as master, chief mate, chief or second engineer. Officers take charge of an engineering or navigational watch and control of all functions within a designated area of responsibility. Support level seafarers (ratings) undertake tasks, duties or responsibilities on board under the direction of an officer or executive officer.

Shore-based personnel undertake a broad range of tasks associated with shipping and port management and operations. Throughout the OECD, it is common for shore-

¹ Department of Defence submission to the Joint Standing Committee on Foreign Affairs Defence and Trade Inquiry into Australia's Maritime Strategy – report tabled in June 2004

based executives and middle managers to have spent significant time at sea. It is a commonly held view that shore-based managers need the in depth knowledge of vessel operations that only seafaring qualifications and sea time can provide.

AMC’s programmes in the context of the above categorizations are summarized in Figure 1.

	Shore based		Sea based		
	General	Technical	Deck	Engineers	
Masters degree	MBA Maritime and Logistics Management				Executive
Bachelor degree	B. Bus (Maritime and Logistics management) B. App Sci (Maritime Technology Management)	B. Eng (Naval Architecture) B. Eng (Marine and Offshore Systems) B. Eng (Ocean Engineering)			
Advanced Diploma	Ad Dip Maritime Business		Ad Dip of Applied Science (Nautical Science) Ad Dip of Applied Science (Chief Mate/Master)	Ad Dip (Marine Engineering – Cadet Program) Ad Dip (Marine Engineering – Chief Engineer)	Officer
Diploma	Dip Maritime Business	Dip of Stevedoring (Operations Management)	Dip of Applied Science (Mate/Master < 500GT) Dip of Applied Science (Deck Watchkeeper)	Dip Marine Engineering (Second Engineer) Dip Marine Engineering (Watchkeeper)	
Certificate IV	Cert IV Maritime Business	Cert IV Commercial Marine Surveying	Cert IV Transport & Distribution (Maritime Operations) (Coxswain, Master 4 & 5) Dip of Stevedoring (Operations Management)	Cert IV Marine Engineering	Support
Certificate I to III			Cert III Pre-sea Training (Deck) Cert III Seagoing Training (Deck) Cert I to III Transport & Distribution (Maritime Operations) (Coxswain, Master 4 & 5)	Cert III Pre-sea Training (Engine) Cert II & III Transport and Distribution (Marine Engine Driving)	

Figure 1: AMC’s programme portfolio.

Australian shipping

AMC delivers its programmes in the context of the long term decline of the Australian shipping industry. In 1994, there were 79 Australian flagged vessels². Whilst some 85 vessels were domicile in Australia as of 1 January 2005, only 44 were Australian flagged³. The reasons for the long term decline are numerous and the subject of argument. Possible reasons include:

- ❑ intense global competition and, until comparatively recently, an over supply;
- ❑ advantageous tax regimes in other countries;
- ❑ the erosion of trade barriers;
- ❑ the cost of employing Australian crews;
- ❑ manning inflexibility;

² J. Sharp and P. Morris (2003) *Independent Review of Australian Shipping*, Australian Shipowners Association

³ United Nations Conference on Trade and Development (UNCTAD) (2005) *Review of Marine Transport*, UNCTAD

- ❑ inefficient linkages in the supply chain (ship>>port>>rail or road);
- ❑ competition from rail and road transport in the domestic transport industry;
- ❑ lack of government support for the domestic shipping industry; and
- ❑ an undefined role for the merchant fleet in the context of national security.

Ships' manning levels (statutory number of personnel required to operate a vessel) have also been reducing in the recent past. Over the past two decades, ship compliments have halved from around 36 to 17 berths, of which approximately 8 are officers. Approximately 880 officers were employed in the Australian trading fleet in 2001⁴.

The Australian ship owning sector is also very small in global terms. Deadweight tonnage totals some 2.644 million which amounts to 0.31% of the world total⁵.

Strategic significance of the MTS to the Australian economy

The Australian economy is absolutely dependent upon the MTS for its key exports (energy, raw materials and agricultural commodities) and its imports (manufactured goods). 99.9% by bulk (603.24 million tonnes) and 73.5% by value (\$188.4 billion) of Australian trade in goods is carried by ship⁶ – 95% of which is carried in foreign flagged vessels. One in five jobs in the city and one in four in the country are directly related to exports⁷. The Australian economy is very far from being self-sufficient and our economic well-being is now largely dependent upon foreign-owned and foreign-flagged shipping.

The MTS is also strategically significant in terms of national security. Evidence to the Joint Standing Committee of Foreign Affairs, Defence and Trade's Enquiry into Australia's Maritime Strategy (2003-2004) suggested that Australia's declining merchant fleet and crews, and disincentives to expansion could result in the Australian Defence Force (ADF) being over-reliant on foreign flagged vessels⁸

Ports are also vital to both economic well being and to national security and the maintenance of secure ports is especially important. The terrorist attacks of 9-11 heightened their possible vulnerability to terrorist attacks.

Implications of a declining shipping industry for skills and training

The decline of the Australian shipping industry has had a significant impact upon executive officer and officer training. Cadetships – the traditional method of training merchant navy officers - have eroded and there are fewer training berths on Australian ships.

⁴ Thompson Clarke Pty Ltd (2002) *Maritime Skills Availability Study*, Australian Maritime safety Authority

⁵ UNCTAD (2005) *op cit*.

⁶ Bureau of Transport & Regional Economics (BTRE), Australian Transport Statistics – 2004

⁷ Semaphore (Newsletter of the Sea Power Centre Australia) Issue 8, September 2003 *Australia's Maritime Dependence*

⁸ Joint Standing Committee on Foreign Affairs, Defence and Trade (2004) *Australia's Maritime Strategy* The Parliament of the Commonwealth of Australia, p.110.

The decline in the Australian fleet means that the pool of suitably qualified seafarers is shrinking. Traditionally shore-based executives and officers have been recruited from the Australian Merchant Navy, especially in the area of maritime safety.

“The more closely related the employment sector is to the actual operation and safety of the ship, the greater the reliance there is on shore-based personnel with valid maritime related qualifications”⁹

Maritime Safety surveyors, for example, typically possess Master 1 or Engineer 1 certificate of competency (i.e. they are trained to executive officer level). As at 30 June 2001, AMSA employed 238 permanent personnel of which 68 (30%) held some form of marine qualification. Ports, shipping companies, insurance companies and other sectors of the MTS also recruit seafarers (often after they have undertaken further study in management – AMC’s Master of Business Administration in Maritime and Logistics Management, for example). Ports also need harbourmasters and pilots who hold high level certificates of competency.

The declining need for officers for the Australian shipping industry is counterbalanced by worldwide shortage of qualified officers. The Baltic and International Maritime Council's (BIMCO) ISF manpower report (December 2005), estimates a worldwide shortage of 10,000 qualified officers and a surplus of 135,000 ratings. This creates employment opportunities for both the Australian trained officers who are generally well regarded internationally, and up skilling of Australian skilled ratings to serve as officers in the international fleet. However, it appears that the Australian tax regime may serve as a disincentive because Australian seafarers are required to pay domestic tax on income earned overseas. This is in contrast to seafarers from other OECD countries where concessionary tax arrangements apply (in the UK, for example, seafarers working a minimum of 181 days in international vessels pay no income tax)¹⁰.

It is very likely that the demand for suitably qualified shore-based (maritime) personnel will grow and that the number of Australians with appropriate sea time will continue to decline. This will open up a skills gap that training providers, the maritime industry, and policy makers need to address. Because of the nature and range of its facilities, AMC is in a position to develop alternative training strategies. For example, AMC has a number of simulators that make it possible to simulate sea experience. However, the technology associated with such simulators is developing all the time which means that there is a constant need to upgrade the facilities.

Because AMC is the national provider, it is an active member of the International Association of Maritime Universities (IAMU) and it may be possible for the college to develop co-operative training programmes which will allow Australian cadets to serve their cadetship on ships in other merchant fleets.

However, in order to be able to develop such alternative solutions requires critical mass (staff, students, physical resources) – it would not be prudent to develop such simulators in every State and small state based institutions which would not carry the

⁹ Thompson Clarke Pty Ltd (2002) *op cit.* p.10

¹⁰ J. Sharp and P. Morris (2003) *op cit.*

weight and respect that AMC enjoys in the international arena. AMC thus makes the case that it needs to be maintained and sustained as the national provider of maritime training and education, and research.

The maintenance of the national training facility

AMC is of the view that it is very much in Australia's long term strategic interest to maintain and further develop the *national* marine transport training facility – the Australian Maritime College. Whilst Australian shipping has declined, Australia still needs to maintain a comprehensive maritime skills pool.

There are three main arguments for this:

- ❑ The strategic need to maintain and manage shore-based supply chain and logistics infrastructures. Whilst Australia is now heavily dependent upon foreign shipping for both imports and exports, it still needs to get ships in and out of ports, goods to and from ports and be able to load them on to, and off, ships;
- ❑ Regulatory authorities such as AMSA require personnel with maritime competence; and
- ❑ In times of conflict or national emergency, the Australian Defence Force (ADF) needs to be able to access merchant vessels to transport vital supplies and personnel. Whilst it may be possible to charter foreign vessels¹¹ in the absence of an Australian merchant fleet, it may not always possible to charter foreign crew, and the nation needs to be able to call upon suitably qualified seafarers or to be able to train people very rapidly.

AMC is of the view that it is in the national interest to maintain its extensive suite of training facilities (such as ship simulators) and education programmes. The OECD study¹² into the availability and training of seafarers pointed out:

“Australia's maritime college, which has been hit by falling student numbers, extended its training to overseas students. But these numbers have declined due to tight national immigration requirements”.

The difficulty in recruiting overseas students has been compounded by changes in government policy with regard to the funding of AMC. Up until 2004, the government funded AMC's vocational programmes as well as its higher education programmes. The Commonwealth Department of Education and Science is now of the view that vocational training is the responsibility of the states and has argued that the states should fund AMC's vocational programmes. However, AMC was established by the Australian government as the *national* provider of maritime education and training. If the argument for the strategic need for a national training facility is accepted, it is unreasonable to expect the states (especially Tasmania) to fund AMC's vocational programmes. It is unlikely, for example, that Western Australia will fund AMC to train students from that state.

In the context of a probable skills shortage in a strategically significant area – the MTS – AMC wishes to put the case that the College is well placed to play a key role

¹¹ During the East Timor operation, it is reported that the ADF chartered merchant shipping to support its heavy lift requirements; ironically Indonesian seafarers were among the crew of some chartered vessels.

¹² OECD (2003) *Availability and Training of Seafarers*, OECD

in filling any maritime skills gap that may emerge and that it also has a critical role to play in the maintenance of Australia's maritime skills pool. However, AMC needs to be sustained as Australia's national provider of maritime training and education if it is to fulfil this role.

Recommendations:

Future of Australian economy, national security, and defence is dependent on well trained and high quality maritime human resource, to support both the "sea going" and "shore-based" maritime industries. Based on this AMC recommends in this submission that the Australian government:

1. Develop policies to encourage the growth of the Australian shipping industry and 'flagging back'¹³ (by introducing a tonnage tax regime¹⁴, for example);
2. Develop policies to encourage seafaring as a profession (such as tax exemptions for seafarers);
3. Consider offering additional fee support or fee waivers to encourage young Australians to undertake maritime training and education;
4. Develop well focused initiatives to maximise training within the maritime industries¹⁵
5. Relax the visa requirements for overseas applicants who wish to gain Australian seafaring qualifications and certificates of competency; and
6. Continue and strengthen its support for AMC as the national provider of maritime education and training by increasing its National Institute Funding and support for vocational training provision.

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15 December 2006

¹³ Flagging back means Australian owned ships that are currently foreign flagged becoming Australian flagged

¹⁴ Tonnage Tax is an alternative method of calculating corporation tax profits by reference to the net tonnage of the ship operated. The tonnage tax profit replaces both the tax-adjusted commercial profit/loss on a shipping trade and the chargeable gains/losses made on tonnage tax assets. Other profits of a tonnage tax company are taxable in the normal way. Tonnage tax regimes sometimes link to training and they have been successfully introduced in a number of countries including the UK and Germany (source: UK Marine and Coastguard Agency website (<http://www.mcga.gov.uk>) accessed on 14/12/06.

¹⁵ For example, the UK Government's support for seafarer training is focused on the Support for Maritime Training scheme - known as SMarT. This assists companies to provide training for the merchant navy and so helps to develop an adequate supply of UK maritime expertise.