

## THE OFFICER SHORTAGE: HOW THE IMO AND SOME COUNTRIES HAVE ADDRESSED THE ISSUE

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**Abstract.** This paper reports on research conducted by the Maritime Transport Policy Centre of the Australian Maritime College which examines a number of different approaches that have been adopted to alleviate the officer shortage and increase the pool of skilled officer seafarers. Many of these approaches actively involve maritime education and training.

Following a brief examination of the worldwide supply and demand for seafarers, and taking account of the global financial crisis and its affect on the maritime industry, a number of the key issues which have created the current shortage of skilled and qualified officer seafarers are identified.

Having outlined the magnitude and scope of the problem, there follows an examination of the different approaches taken by five countries to address the issue. An analysis of these different approaches leads to the identification of solutions for specific situations; namely solutions for a shortage caused by:

- lack of local entrants to seafaring;
- training costs;
- lack of training berths;
- poor retention rates of trained seafarers.

A number of these solutions directly affect maritime education and training organisations.

In conclusion, the paper suggests that governments must take a lead by providing both a policy and operating environment which will ensure there are sufficient qualified seafaring officers to meet the demands of both the sea and shore based sectors of the maritime industry.

### INTRODUCTION

More than 90 % of world trade is carried by sea, and without sea transport the movement of goods on the scale necessary for the modern world to function would be very difficult, if not impossible.

It is estimated that there are approximately 50,000 merchant ships trading internationally, transporting people and all kinds of goods. This fleet is registered in over 150 nations, and manned by over a million seafarers of virtually every nationality. Marisec [1]. The worldwide population of seafarers serving on merchant ships which trade internationally is estimated to be in the order of 466,000 officers and 721,000 ratings i.e. approximately 1.2 million seafarers in total. Marisec [2]. However, there are also many seafarers employed in the fishing industry as well as on vessels which operate solely within national coastal boundaries. Unfortunately their numbers remain unclear as they are excluded from most data.

BIMCO/ISF have identified the sources of officer seafarers as 29 % OECD countries, 29 % Far East, 21 % Eastern Europe, 13 % Indian sub-continent, and 8 % Africa/Latin America. The centre of gravity of the labour market has continued to shift from the traditional maritime countries of Western Europe, Japan and North America towards the Far East, Indian sub-continent and Eastern Europe. China has seen a significant increase in maritime labour supply, although most of that additional workforce is currently used by the Chinese-owned fleet to meet expanding domestic requirements. Warwick Institute of Employment Research [3].

Many countries are experiencing a shortage of skilled officer seafarers and this has consequences for both the sea and shore based sectors of the maritime industry as there are inextricable links between the skills required for both the sea and shore based sectors of the maritime industry. The results of the BIMCO/ISF surveys of seafarer supply and demand illustrate the magnitude of the problem and are summarised in Table 1.

Table 1

### Supply and demand for seafarers, 2000 – 2015

	1995		2000		2005		2010 estimate		2015 estimate	
	000s	%	000s	%	000s	%	000s	%	000s	%
Officers	-18	-4	-16	-4	-10	-2,1	-46	-12	-27	-5,9
Ratings	+219	+36	+224	+27	+135	+18,8	+255	+30	+167	+21,6

Note: 2010 estimates prepared in 2000; 2015 estimates prepared in 2005

Warwick Institute of Employment Research [4].

In November 2008, the International Maritime Organisation [5] reported that maritime industry analysts Drewry Shipping Consultants assessed the current shortfall of officers in the global shipping fleet to be some 34,000, against a total requirement of 498,000. Moreover, based on Drewry's fleet growth projections, and the assumption that officer supply will only increase at the current rate, the report predicts that by 2012 the officer shortfall will have grown to 83,900. As a result of the uncertainty caused by the global financial crisis the shipping scene is currently particularly volatile and, as a consequence, Drewry recently revised the latter projection. The 2009 evaluation predicts a base case shortfall figure for 2013 of a 56,000, assuming fleet growth totaling 14,6 %. Prudently, given the growing order book uncertainty, the projections provide an alternative case which cuts this shortfall figure to nearer 43,000. While the problem may be experiencing a temporary reprieve, it has not gone away. Drewry Shipping Consultants [6]. Regardless of the accuracy of these projections, and bearing in mind the current market volatility, there is a high degree of probability that there will be a continuing worldwide shortage of officers and a surplus of ratings for the foreseeable future.

### SOME KEY ISSUES

The shortage of officer seafarers is a not just matter of worldwide concern to sea transport operators because the skill sets acquired by seafarers are also needed for many jobs in the shore-based maritime sector. The nature of employment in the maritime sector is such that seafaring has traditionally been viewed as a starting point which can lead to a range of shore-based maritime careers. A recent survey of 229 serving seafarers indicated that approximately one third intended to make seafaring a lifelong career, whilst two thirds indicated they would move ashore as soon as circumstances permitted. Shiptalk [7].

Seafaring skills and experience are of direct use and importance for a range of maritime shore-based careers including pilotage, marine surveying, terminal/cargo operations, port operations, ship management, marine administration, and maritime education and training. Company of Master Mariners [8]. To further illustrate the point, sea-related employment provides about 5 million jobs across Europe, of which some 70 % are onshore, in shipping, shipbuilding, and related services and fields, ranging from cargo handling and coastal tourism to offshore energy fields, fishing and aquaculture. European Union [9]. Whilst it is true that not all these jobs require seafaring skills, it is also evident that a significant percentage are dependent upon the skills acquired by seafarers.

This flow of seafarers from ship to shore is important, as it ensures that relevant skills and experience are not lost to the maritime industry. It is generally accepted that a majority of ex-seafarers remain within the shore-based maritime industry; however, if there are insufficient new seafarer entrants, there are ultimately insufficient skilled seafarers to move to shore employment. Norwegian ship and crew management OSM Group chairman, Jan Morten Eskilt, was recently reported in Lloyd's List DCN [10]

as saying: 'The best way for the shipping industry to tackle its recruitment crisis was to stop treating seafarers badly... most important of all, basic professional respect rather than pay rates.' His view is based on the fact that officers may spend up to five years in university and with that level of commitment could just as easily study professions with a higher level of respect, such as economics or law; a piece of advice that, no doubt, has general application.

Like many countries Australia is suffering from a shortage of officer seafarers; however, the Australian Shipowners Association (ASA) reports that in excess of 400 applications are received annually from people wishing to pursue a career at sea. This is without any significant effort to attract individuals or to promote the careers on offer within the industry. This places Australia in what appears to be a unique position internationally, since advice from almost every other country is that they cannot attract the young people to pursue a career at sea. ASA [11]. There is general acceptance that the level of unsolicited applicants wishing to go to sea indicates that there is a reasonable pool of young Australians interested in seafaring as an initial career, yet there is still a shortage of qualified Australian officer seafarers. The problem in Australia is not recruitment; rather it is the impediments faced in turning this pool of potential recruits into qualified officer seafarers.

A recent Maritime Skills, Shortages and Training Forum held by the Maritime Transport Policy Centre (MTPC) of the Australian Maritime College (AMC) in Melbourne, to examine the Australian situation identified three key structural impediments, namely:

- Limited availability of sea time;
- Lack of flow-through from 'brown water' to 'blue water' fleet and compartmentalisation (e.g. qualified fishers not employed in 'brown water' fleet);
- Company-centric rather than industry-wide views (e.g. prevalence of 'poaching').

In addition, the costs associated with turning new recruits into trained and certificated seafarers were identified as a further impediment and the following issues were identified:

- No incentive for industry to train, e.g. there is no tonnage tax system in Australia such as is found in the UK;
- Australian employers have to fund all costs associated with sea-time training periods;
- Training costs are borne by a few employers but benefit the whole maritime industry;
- Access to government-funded maritime traineeships is difficult. MTPC [12].

The shortage of skilled, qualified, officer seafarers is a dilemma which is not unique to Australia, in that many developed countries have faced similar problems and have tried a variety of approaches to redress the shortage of skilled personnel for their seafaring and broader maritime sectors.

## **ADDRESSING THE MARITIME SKILLS SHORTAGE; EXAMPLES**

Several countries provide government assistance for maritime training. A variety of approaches is evident including assistance to the trainee, assistance to the training provider, assistance to the employer, and linking training requirements to beneficial commercial operating environments such as a tonnage tax regime. The mechanisms used to deliver this assistance vary from the simple to the complex depending upon the aim to be achieved. Lewarn [13].

### **Germany**

To preserve and develop maritime skills, the German Federal Government established a Maritime Alliance between the Association of German Shipowners, the trade unions and the federal coastal states. European Union [14]. The ASA [15] records that under the Maritime Alliance there is a subsidy for

wage-related ancillary costs of seafarers from the Federal Republic of Germany, as well as seafarers from the rest of the EU, employed on board German merchant ships. Additionally, there is financial support for seafarer training which incorporates a financial contribution on the part of the German Shipowners Association. In order to promote seafarer training the financial contribution of the German Federal Government was increased to EUR 30,000 per trainee from 2002. Heitmann [16] reports that the wage costs reduction measures along with tonnage tax requirements were estimated to have created 1850 jobs in 2004.

### **United Kingdom**

The UK instigated a seafarer training support scheme as a key element of its tonnage tax regime which was, in turn, aimed at increasing the number of ships on the UK register. This imposes a minimum training obligation on companies entering the tonnage tax regime to train one officer trainee per year for every 15 officer posts in the company's effective officer complement. This scheme is administered by the UK Department for Transport through the Marine and Coastguard Agency (MCA) and provides financial assistance to training providers for the training of officers and ratings. The support available presently amounts to roughly half of the cost of training provided by maritime colleges. In 2007 – 2008 the scheme cost GBP 10.835 million, which was a 10 % increase on the previous year due to a further increase in the numbers undergoing training. MCA [17]. As a measure of the scheme's effectiveness, when it was introduced in 2000 the officer cadet intake was approximately 400 whereas by 2008 it was approximately 800. Department of Transport [18].

### **Ireland**

The Irish Government has adopted a different approach to the maritime skills shortage issue by focusing on and encouraging seafarer training. In 1999 it established the Irish Maritime Development Office (IMDO) as a statutory government agency with responsibility for the development of the maritime sector. Amongst its responsibilities, the IMDO oversees and coordinates seafarer development including maritime education and training. The approach taken by the Republic of Ireland is to provide financial support for both the trainee, while ashore and at sea, and the maritime training institution. In Ireland the difficulty is not one of encouraging shipping companies to undertake training, but of attracting young people to the sector. For this reason the government decided there should be no commitments or financial penalties linking seafarer training to the Irish tonnage tax regime, rather the government decided to invest directly in:

- A EUR 58m state-of-the-art National Maritime College;
- New and more appropriate educational courses;
- Grants for trainee officers;
- Increased tax allowances for seafarers. IMDO [19].

Once a cadet is accepted into nautical college, training to their 1st Certificate of Competency occurs with financial support from the government's Irish Seafarer Education Assistance Scheme (ISEAS) which provides funding to 90 cadets per year. This support covers all costs for mandatory training courses and, in addition, a seagoing training allowance of EUR 350 is made available for each cadet on a monthly basis. The Irish approach, which provides government grants to cover the costs of training both ashore and at sea, seeks to attract new entrants and support ship operators which provide training berths. It should be noted that not all European governments are prepared to contribute to the on-board component of training, but those which do include Germany, Greece, Ireland, Portugal, and UK. Krishnan [20].

### **Hong Kong**

In Hong Kong it was recognised that some seafaring experience is a valuable precursor to working in the shore-based maritime industry. In 2004 the Hong Kong Government, with the support of the Hong Kong Maritime Industry Council, set up the Sea-going Training Incentive Scheme to provide financial incentives for people to take up sea-going training as cadets, to pave the way for them to become shore-

based professionals in the maritime industry. The scheme is administered by the Marine Department, and a cadet may receive as an incentive HK\$ 4,000 per month during the training period. Hong Kong Maritime Industry Council [21].

The scheme had an initial allocation of HK\$ 9 million and 32 applications were approved in the first year (2005); training completions were reported as 6 in 2005, 13 in 2006, whilst in 2007 it was reported that, thus far, 72 deck cadets and engine cadets had joined the Sea-going Training Incentive Scheme. Marine Department [22]. Whilst the numbers involved are relatively small, the Hong Kong approach is a good example of government and industry ensuring that there is a flow-through of appropriate skills to the shore-based maritime industry.

### **Norway**

In an attempt to increase the skill base of the shore-based maritime sector, a traineeship program was implemented by the Norwegian Shipowners Association (NSA) in 2005. The 'Maritime Trainee' program recruits newly-qualified students with a master's degree in economics, technology, law, or equivalent qualifications from maritime university colleges, with the first intake completing its two-year program in 2007. NSA believes the scheme is unique in that it is the result of more than 20 enterprises from across the entire maritime industry: shipping companies and rig operators, shipyard and equipment industry, shipping-related services in classification, banking, brokerage and legal services, joining forces to mount a program offering trainees great breadth in both their training and networking opportunities. Equally, the trainees gain broader insights into the entire maritime industry than is possible from a traineeship with a single company. Through these postings to different enterprises, the trainees extend their knowledge of a wide range of specialist and technical fields within the entire maritime cluster, which is invaluable for their future careers and the Norwegian shipping industry. Norwegian Shipowners' Association [23].

These five approaches provide an illustration of a number of the solutions used to alleviate the shortage of skilled personnel for both the seafaring and shore-based sectors of the maritime industry. The success, or otherwise, of these approaches provides a fruitful area for further research.

## **REVIEW OF SOLUTIONS**

The research conducted by the Maritime Transport Policy Centre of the Australian Maritime College examined a number of different approaches that have been adopted to alleviate the officer shortage and increase the pool of skilled officer seafarers. Lewarn's [24] research findings are summarised below:

### **Solutions for shortage caused by lack of local entrants to seafaring**

These approaches tend to be either very general or relatively narrow in nature and, therefore, can be viewed as underpinning activities to the more comprehensive solutions. They include:

- Recruitment campaigns e.g. IMO [25] 'Go to Sea' campaign;
- Second register e.g. allows labour laws to be modified to employ seafarers who are not nationals; thus reducing pressure on the number of local seafarers needing to be employed;
- Making qualified seafarers a priority immigration category;
- Attracting ex-seafarers by use of a sign-on bonus, part-time employment etc.

### **Solutions for shortage caused by training costs**

Some countries provide direct financial support/incentives for maritime training. This support may be available to some or all of the following:

- Trainees, e.g. financial incentive to cover training costs ashore and/or afloat;
- Ship operators, e.g. financial incentive to assist with costs of employing/training a seafarer ashore and/or afloat;

- Maritime education and training institutions, e.g. financial incentive to assist with costs of providing seafarer training courses.

### **Solutions for shortage caused by lack of training berths**

Increasing the number of ships on a country's register, by using the right incentives to attract ship operators, can increase the number of training berths available. As part of their tonnage tax regime, some countries link a requirement to provide training berths to the incentives used to attract additional ship operators. Well-trying and tested incentives to attract ship operators include:

- a tonnage tax regime;
- the creation of a second/international register;
- financial incentives/subsidies.

### **Solutions for shortage caused by poor retention rates of trained seafarers**

These solutions tend to focus on financial incentives to retain seafarers at sea and keeping maritime skills in the broader maritime industry by improving career prospects. These approaches include:

- Providing loyalty bonuses for seafarers to remain at sea for 'x' years (with financial penalty for leaving early);
- Improving the professional recognition and treatment of seafarers, as well as providing adequate employment conditions;
- Sponsoring training/professional development to progress a career within a company;
- Supporting career progression, sea, sea to shore, and ashore as part of the employment package.

Underpinning these solutions are two fundamental, but common, government policies namely; creation of a commercial ship operating environment that reflects the important requirement for a robust national maritime skills base; and support for the users and providers of maritime education, training and research.

## **CONCLUSION**

Governments in many developed countries have recognised that a problem exists, and accept that they need to find and fund the solution. The critical requirement is to fund an operating environment which ensures national flag ships are competitive. Once this is in place, associated issues such as training costs and lack of training berths can be successfully resolved.

In conclusion, and in the context of the maritime skills shortage, a government-supported operating environment ensures:

- National flag ships are competitive, which;
- Increases the attractiveness of the national ship register, which;
- Increases the number of national flag ships, which;
- Increases the number of training berths available, which;
- Provides opportunities for increased numbers of trainees, which;
- Increases the maritime skills base, and
- Reduces/eliminates the maritime skills shortage.

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