the mackinnon partnership

Skills Needs Assessment for the Maritime Sector

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Introduction

1. The Maritime Skills Alliance (MSA) is a strategic alliance, which is the Sector Skills Body (SSB) for the maritime sector. It is responsible for maritime sector skills issues and ensuring that a joint approach is adopted wherever appropriate to the development of education and training, occupational standards and qualifications frameworks for those involved with maritime activities. The MSA's membership has grown from its inception, and now includes the following parties:

   - The Merchant Navy Training Board (MNTB);
   - Port Skills and Safety (PSS);
   - Seafish Industry Authority (SFIA);
   - Maritime and Coastguard Agency (MCA);
   - British Marine Federation (BMF), with the Royal Yachting Association;
   - Royal Navy;
   - British Tugowners Association (BTA).

2. This report builds on the original Maritime Sector Labour Market Assessments, carried out in 2005 and 2007 and aims to inform the development of the sector's Qualification Strategy. It provides more up-to-date data and analysis as well as analysis of the sectors which have joined the MSA in the intervening period.

Description of the sector

3. The sector can be divided into seven main sub-sectors:

   - fishing;
   - leisure marine (excluding boat building);
   - marine search and rescue;
   - Merchant Navy;
   - ports;
   - Royal Navy;

- tugs and workboats.

4. The maritime sector:

- has a turnover of £11.1bn and its Gross Value Added is £4.5bn;
- has saved over 15,000 lives through marine search and rescue activities;
- supports the UK economy more widely;
- employs 171,000 people in 6,435 enterprises.

Common Themes

5. The MSA and partners have already taken a range of actions to address the issues raised in previous Labour Market Assessments (2005 and 2007). However, these are long-term issues and are still relevant. Further work needs to be undertaken to reinforce the actions already taken. There is great variety across the sector in terms of starting points and progress made, but there are clear benefits to building on inter-relationships and reinforcing the transferability of skills across the sector to address these skills issues. The evidence provided here suggests that action in the sector needs to focus on eight areas.

1. Raising management skills

6. Many of the industries have identified a need to continue to raise the level of management skills in the workforce, which was also highlighted as a skills gap by NESS in the maritime sector. This is a particular need in the industries which have many small businesses or self-employed workers. There are slight differences in emphasis between industries in other areas:

- skippers in the fishing industry require greater business and financial management skills;
- new port managers need greater commercial awareness in terms of managing the port's assets;
- ship officers need skills to deal with increasing amount of information and to deal with the additional ship management functions that are moving onboard ship;
- the towage sector industry is seeking to put more managerial responsibility back on to tugs. This requires Tug Masters and Engineers to have greater management skills;

- leisure marine managers need a better understanding of how to recruit and retain staff.

2. Engineering skills

7. As in a number of other sectors the maritime sector is concerned about the availability of engineers and has to compete for a limited pool of new and experienced engineers. The ports industry has difficulty recruiting and retaining engineers in particular locations depending on the local labour market, while the fishing industry finds it is not attractive to engineers who can get relatively well-paid shore-based jobs. This also applies to other sub-sectors in relation to retaining experienced engineers, as many move to shore-based jobs.

3. Raise the sector's image and attract new entrants

8. The sector is not attracting the quantity or calibre of new entrants that it requires and this has long-term implications. Although the Merchant Navy has consistently increased the quantity and quality of applicants over the last two years, other parts of the sector have not been so successful. Actions need to move on from generic promotion of the sector to focusing on addressing specific issues. The sector needs to:

- build on activities such as Sea Vision to raise awareness of the sector and its career opportunities amongst young people;

- ensure working practices are as attractive as possible to encourage new recruits and to retain existing workers;

- ensure, that where they do not already exist, there are attractive career paths that provide compatible qualifications that are viable alternatives to the general full-time education route and allow entrance to young people with different academic experiences.

4. Career progression

9. There is a need to ensure the sector provides the appropriate opportunities for career progression not only so that it attracts young people as we discuss above, but also so that it retains a workforce that can progress to more senior positions. Whilst some parts of the sector are addressing recruitment difficulties by employing foreign nationals, there is a danger these workers will return to their home nation to take up more senior posts and this will result in a significant gap in the UK senior management workforce.

10. New flexibility may be required to try and overcome career bottlenecks in particular parts of the sector. There is also a need to consider how the movement between parts of the maritime sector can be encouraged more easily within the regulatory framework. Action in this area will need to have close involvement of both the Maritime and Coastguard Agency and employers.

5. Ensuring the sector responds to future labour market and skills challenges

11. A number of changes are anticipated in the sector and the environment in which it works which will impact on the size and nature of the workforce as well as the skills required. The MSA and partners need to ensure that the skills and learning infrastructure is in a position to respond to challenges and opportunities such as:

- the UK Marine and Coastal Access Bill. The implications of the bill on the skill needs of the sector are still unclear, but the it is likely to impact on the knowledge requirements of those working in the sector;
- the expansion of off-shore renewable energy and the maritime based requirements of this expansion;
- the increased use of Liquefied Natural Gas (LNG) ships and the additional skills required to operate these ships;
- the increase in the number of Superyachts and the requirements to crew these vessels.

6. Strengthening qualification and training provision

12. There is a need to strengthen the training and qualification provision throughout the sector, particularly in light of changes in funding arrangements. There is low take-up of qualifications across some parts of the sector and some awarding organisations are re-considering the financial viability of maintaining them. The Qualifications Strategy development process provides an opportunity to make these qualifications more attractive. Some changes have already been put in place, including:

- moving towards a mandatory skipper's licence for all vessels in the fishing sector by 2011 (at present this is voluntary);
- the development of Foundation Degrees and Apprenticeships for different roles in the ports sub-sector, beginning in the 2011 academic year;
- reforms in the HND/HNC courses offered by the MNTB and the introduction of Foundation Degrees;

- establishment of the Maritime Studies Qualification to replace the majority of N/SVQs in the sector which have been less successful.

13. Central to the success of any qualification reform will be linking qualifications to the regulatory requirements that already exist. This approach has already been successful within the higher education elements of the Merchant Navy related qualifications.

14. The geographically dispersed nature of the sector has led to difficulties in providing economically viable training in some parts of the sector. There is a need to ensure that there is sufficient provision to meet the sector's needs in key geographic areas. As part of this the sector needs to continue to investigate innovative and cost-effective forms of delivery.

7. Addressing language skills needs

15. It is essential that there is good communication between people working in often dangerous environments in the sector. With the increasing use of foreign nationals in the fishing and ports industries there is a danger that a lack of English language skills may create hazardous situations or reduce efficiency. Even in the Merchant Navy where many mariners will have passed the Marlins English language test, there is some feedback that this may not be sufficient to meet employers' needs. Therefore there may be an increasing demand from employers and employees for additional English language courses.

8. Addressing the loss of maritime skills

16. Many of the previous actions will help to address the specific issues facing the sector of a loss of maritime skills. In addition the maritime sector and others sector's relying on ex-seafarers need to:

    - consider whether some shore-based roles can be undertaken by non ex-seafarers (as has been done in the ports industry);

    - consider whether some shore-based roles can be changed to require less seafaring experience;

    - work in partnership with DfT and others to monitor the impact of the current policies and activities to revive the UK shipping industry on the supply of British seafarers.

1. Introduction

Context

1.1 The Maritime Skills Alliance (MSA) is a strategic alliance, which is the Sector Skills Body (SSB) for the maritime sector. The MSA's membership has grown from its inception, and now includes the following parties:

- The Merchant Navy Training Board (MNTB);
- Port Skills and Safety (PSS);
- Seafish Industry Authority (SFIA);
- Maritime and Coastguard Agency (MCA);
- British Marine Federation (BMF), with the Royal Yachting Association;
- Royal Navy;
- British Tugowners Association (BTA).

1.2 The MSA was set up in the absence of a maritime Sector Skills Council (SSC), and overlaps with many other SSCs including Improve, Skills for Logistics, GoSkills and People 1st. It is responsible for maritime sector skills issues and ensuring that a joint approach is adopted wherever appropriate to the development of education and training, occupational standards and qualifications frameworks for those involved with maritime activities.

1.3 This project follows on from the original Maritime Sector Labour Market Assessments, carried out in 2005 and 2007 and aims to inform the development of the sector's Qualification Strategy. It provides more up-to-date data and analysis as well as analysis of the sectors which have joined the MSA in the intervening period.

Methodology

1.4 The evidence in this report comes from several sources including:

- existing research carried out by the MSA partners and other related organisations;

- nationally produced statistics, including the Annual Business Inquiry, Annual Population Survey and National Employer Skills Survey as well as data from the Department for Transport and the Department for Environment, Food and Rural Affairs;

- interviews with informed stakeholders, primarily the leads in each partner organisation.

Structure of the report

1.5 This report has been produced in line with the structure outlined in the UKCESôs guide Preparatory Research to Underpin a Qualifications Strategy, and covers:

- What drives skills demand;

- Current skills needs;

- What lies ahead;

- Geography;

- Conclusions.

1.6 Throughout the document we present analysis of both the maritime sector and individual sub-sectors where appropriate.

2. What drives skills demand

2.1 Before analysing the drivers of skills demand, it is important to define the maritime sector. The sector can be divided into seven main sub-sectors:

- fishing;
- leisure marine (excluding boat building);
- marine search and rescue;
- Merchant Navy;
- ports;
- Royal Navy;
- tugs and workboats.

2.2 Much of the sector operates through a complicated system of sub-contracting arrangements, including owners, operators, management and human resource agencies. Examples of this are:

- owners:
  - UK-based shipping and fishing companies that own or operate ships under either British or foreign flags;
  - Ports, statutory harbour authorities and marina owners. They are generally land-owners with responsibility for the safety of navigation in the areas they cover. In some cases they operate all the port activities;
  - tugowners operate vessels in a variety of port, terminal and coastal towage environments and are directly responsible for their safety, whilst having a close working relationship with other port stakeholders as required by the Port Marine Safety Code guidance;
  - management companies and agents that provide ship and fishing vessel management services for British or foreign companies or owners;
  - yacht owners that rent out their vessels to individuals through charter companies.
- operators including:

- leisure marine companies offering sailing schools on the UK coast, charter yachts and lead flotillas in the UK and abroad, run watersports based holidays and offer sailing or water-sport tuition;
- terminal operators, which operate their own facilities within a port area;
- self-employed fishermen who manage and run fishing vessels;
- ferry companies which generally manage their own shore operations;
- RNLI, MCA and Royal Navy that work in partnership to undertake marine search and rescue operations co-ordinated by MCA. The RNLI and MCA operations rely heavily on volunteers.

• labour suppliers including:
  - shipping manning agents;
  - stevedoring and contract labour suppliers which provide plant and labour to ports and terminal operators upon demand.

Statistical definition of the sector

2.3 The Office for National Statistics (ONS) classifies industries by Standard Industrial Classification (SIC). However, the MSA activities are covered by a wide range of SICs and in many case represent a small part of the SIC coverage. Table 2.1 maps the MSA footprint against the relevant SICs.

Table 2.1: Sector definition by SIC 2003 codes			
SIC Code	**Description**	**Unique to MSA?**	
		Yes	**No**
05.01	Fishing	✓	
61.10	Sea and coastal water transport	✓	
61.20	Inland water transport	✓	
63.11	Cargo handling inc:		
	– Stevedoring	✓	
	– Loading or unloading of goods or passengers luggage		✓
63.22	Other supporting water transport activities (including tugboat activities)	✓	
71.22	Renting of water transport equipment	✓	
63.30/2	Activities of travel organisations inc		✓
	– Flotilla and water-sport beach holiday operators	✓	
71.40/1	Renting of sporting and recreational equipment inc:		✓
	– Renting of pleasure boats and water-sport equipment	✓	
75.22	Defence activities inc:		✓
	– Combat forces of army, navy and air force		✓
80.41	Driving school activities inc:		✓
	– Sailing schools and water-sport training	✓	
92.62/9	Other sporting activities not elsewhere classified inc:		✓
	– Activities of marinas	✓	

2.4 The last five SIC codes listed in table 2.1 are areas where the maritime sector represents a small part of the SIC. We have excluded these from our analysis of turnover and employment for the maritime sector. For these parts of the sector data it is better to look at industry body data such as that from BMF.

Value of the Sector

2.5 The Annual Business Inquiry (ABI) estimates the statistically-defined maritime sector to have turned over £11,147m in 2007, with sea and coastal transport accounting for over 60%. In terms of Gross Value Added (GVA) at basic prices, the maritime sector generates £4,582m, which represents over 0.5% of the total GVA of the UK economy. Sea and coastal transport accounts for nearly half of maritime GVA (47%) and other supporting water transport activities such as ports account for a further 34%.

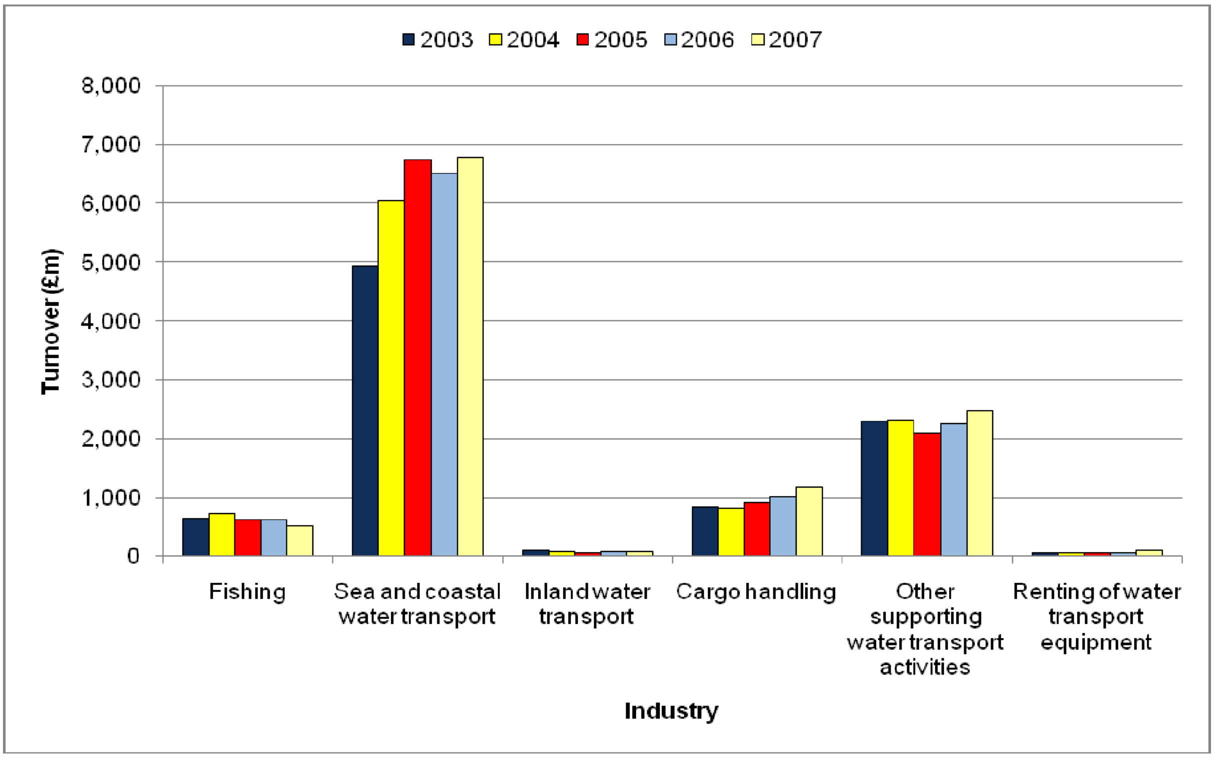
Table 2.2: Turnover and GVA - 2007				
Industry	**Turnover**		**GVA**	
	(£m)	**%**	**(£m)**	**%**
Sea and coastal water transport	6,785	60.9%	2,136	46.6%
Other supporting water transport activities	2,475	22.2%	1,566	34.2%
Cargo handling	1,175	10.5%	580	12.7%
Fishing	523	4.7%	212	4.6%
Renting of water transport equipment	101	0.9%	48	1.0%
Inland water transport	88	0.8%	40	0.9%
Maritime Sector	11,147	100%	4,582	100%
UK Economy	2,780,474		842,680	

Annual Business Inquiry, 2007 (ONS)

2.6 Between 2003 and 2007 the maritime sector's turnover grew by 26%, slightly less than the UK economy (28%). The majority of the growth in the sector was between 2003 and 2004, where, driven by the growth in the sea and coastal water transport (with a 23% increase in turnover), the sector grew by 14%. This compared favourably to the economy as a whole, which grew at 5%. However, in the years since 2004, the growth rate of turnover has been lower in the maritime sector than the UK economy, particularly in 2005-06.

2.7 Figure 2.1 also shows the turnover performance of each sector year on year since 2003. The fishing sector has declined over this period to £523m in 2007 (from £713m in 2004). In general, all of the other sub-sectors have tended to have growth in turnover, although the amount of growth varies.

Figure 2.1: Turnover by sub-sector – 2003-07



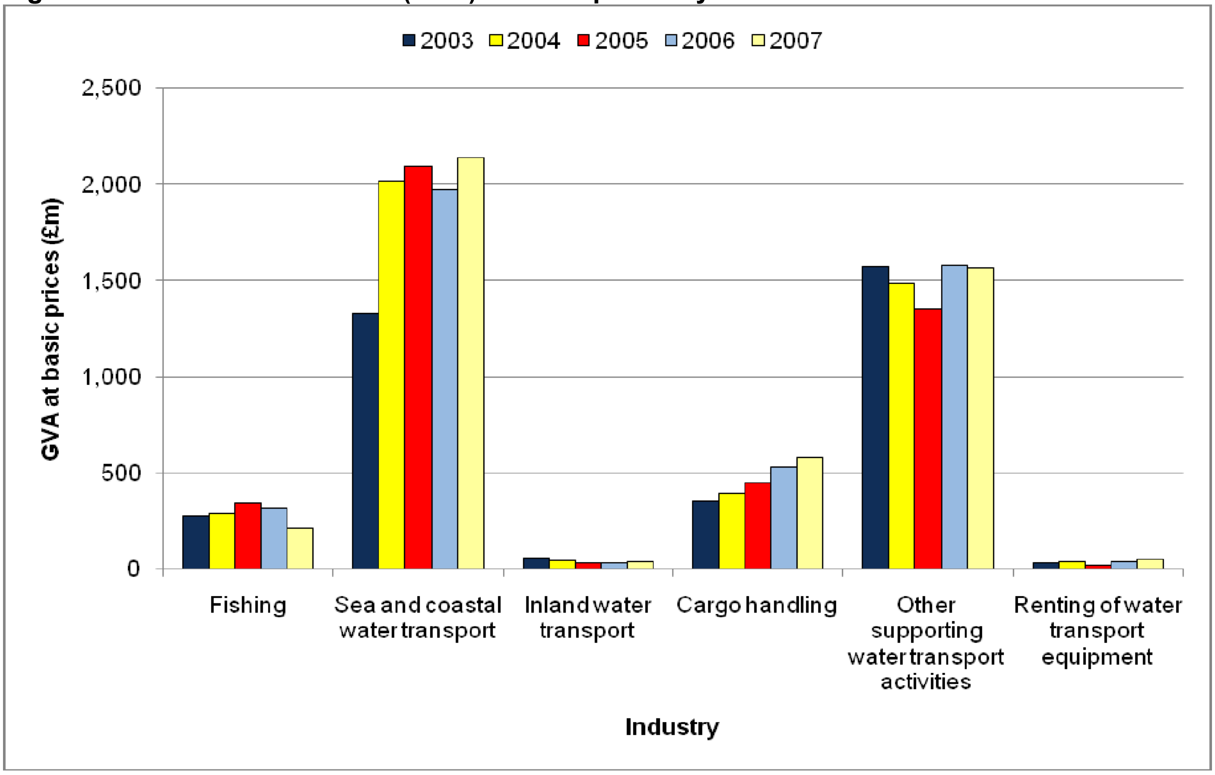
Annual Business Inquiry, 2003-07, ONS

2.8 Gross Value Added (GVA) at basic prices shows a similar pattern. The maritime sector and the UK economy grew at a similar rate (27% and 28% respectively). Again, the sectorȇs growth can be largely attributed to sea and coastal water transport in 2003-04, which supported GVA growth in the maritime sector of 18%, compared to 5% for the economy as a whole. Since 2004, the economy as a whole has had a higher rate of growth each year than the maritime sector.

2.9 Cargo handling and sea and coastal water transport outperformed the sector and the economy as a whole, with increases of 63% and 61% over the period, although the sea and coastal water transport can largely be explained by the large increase from 2003 to 2004.

2.10 In the fishing sub-sector there was a slight decline (mainly from 2005 onwards) over the period. This could be explained by the decline in the size of vessels used, as smaller vessels are out at sea for less time and catch less fish. Inland water transport also showed a decline between 2003 and 2007.

Figure 2.2: Gross Value Added (GVA) at basic prices by sub-sector – 2003-07



Annual Business Inquiry, 2003-07, ONS

2.11 The maritime sub-sectors are important in their own right:

- UK vessels landed 610,000 tonnes of sea fish, with a value of £645m in 2007. This is a 1% decline in quantity, but an increase of 6% in value compared to 2006;
- British shipping contributed just under £3 billion to the UK balance of payments and is the fifth largest service sector earner in terms of exports;
- it is estimated that 95% by volume and 75% by value of the UK's international trade is transported by sea;
- UK ports handled 582m tonnes of freight and there were 67.2m sea passenger journeys in 2007;
- the leisure and small commercial marine industry was worth over £1 billion in 2007-08, and also contributes a tourism-related spend from boating;
- there has been £15-£18m invested annually in the tug sector over the last three years;
- the value of the sector extends into the City of London, as one of the world's leading providers of maritime services.

2.12 It is important to highlight the lag in data availability. The data does not show the impact of the current recession which has hit the whole economy hard. The fact that the recession is global is having a major impact on shipping and ports which rely on global trade. Similarly the recession is likely to impact on the leisure marine industry as consumers cut-back on leisure spending.

2.13 The search and rescue industry is not commercial and its value is better illustrated by the number of lives it saves. In 2005:

- HM Coastguard reports that it rescued 4,790 people[1];
- the RNLI reports that in the UK and the Republic of Ireland its lifeboats launched 8,273 times and rescued 8,104 people[2];
- the RNLI reports that its beach lifeguards rescued 2,333 people.

Competition in the sector

2.14 Much of the maritime sector operates globally and competition will continue to increase despite the current recession. The type of competition will vary between sub-sectors, but in many cases competition is with businesses in other countries rather than others in the UK.

2.15 There will be increasing competition in terms of quality and price from overseas markets caused by the emergence of new competitors. For example even when global trade recovers and increasing volumes of containers pass through UK ports, it is unlikely that UK shipping companies will gain all the benefit, as much of this new business may be taken by companies based in other countries such as China. Ships can operate anywhere in the world and do not necessarily have to be registered in the country where the shipôs owner is based or where it operates. Similarly ships can be managed from anywhere in the world. The location of operations and country of registration are governed by a whole host of factors including global markets and countriesô regulatory and tax regimes.

2.16 There is strong competition on the cross-channel shipping and travel route. The channel tunnel now carries more passengers than ferries from the Thames and Kent ports. However, they are both facing competition from air travel and neither of these has grown consistently over the last ten years (particularly ferry traffic).

[1] Maritime Coastguard Agency (2006), Annual Report and Accounts 2005-2006.
[2] RNLI (2006), 2005 Annual Review.

2.17 In the fishing industry over 80% of the seafood consumed in the UK is imported. UK fishermen are not able to catch enough fish, particularly cod in UK waters to meet demand. As a result the price they receive for their catch can depend on how much other countries catch and export to the UK.

2.18 Competition in the leisure marine industry comes from other sectors which provide leisure activities. This means the demand for the sector is heavily influenced by consumer tastes. Increased wealth from an aging population with increased amounts of leisure time means the demand should increase, however the recession and changes in consumer tastes could reduce the amount of spending in the industry.

Legislation

2.19 The marine sector is one of the most heavily regulated in the UK economy. There has been little substantial change in regulations over the last couple of years, but the recent Marine Bill is likely to have an impact on the sector, particularly fishing, when it is passed.

2.20 Legislation has had a major effect on the tug sub-sector. An EU directive placed a new requirement on Tug operators to hold a Boatmastersôlicence and a Standards of Training, Certification and Watchkeeping (STCW) certificate. However, the industry has found this to be inadequate, and it has therefore been working with the MCA to create a towage endorsement. In addition a recent ruling has allowed the industry to adopt the maritime working time regulations, rather than the more restrictive shore-based ones.

2.21 Legislation also has a major impact on the fishing industry. Every December, EU nations are allocated fishing quotas for the year. This very rarely is increased, and is not at the level which is needed to meet the UK demand for seafood. These quotas are implemented by the Marine and Fisheries Agency. The species which are not covered by EU quotas can also have quotas imposed through the regional Marine and Fisheries Agency, when it feels that a species is being over-fished in its area.

2.22 Inevitably the Royal Navy is influenced by Government policy. Foreign policy can determine the balance of skills needed between combat and the provision of humanitarian aid. In addition the forthcoming Defence Review is likely to have significant implications for manpower and skills needs.

Globalisation

2.23 The current economic situation has had a global effect, and is having a huge impact on the maritime sector. There has been a huge decline in global trade, coupled with higher unemployment and lower levels of consumer spending. The decline in trade has reduced the volume of goods and materials being transported around the world. This has led to a lower number of ships being operated, leading to shipping companies having reduced income. Fewer ships carrying smaller quantities of goods has led to a decline in port trade. It is estimated that ports will take till 2013 to get back to the level of economic performance they were at two years ago. This has also hit tugboat sector income, although employment levels have remained steady as a result of a need to provide sufficient cover in each port.

2.24 In addition to the effect on the shipping and ports sub-sectors, the economic climate is also impacting on the leisure marine sub-sector. As consumer spending has decreased, the leisure marine industry has been affected, as the money spent in the sub-sector is discretionary spending. This means it is the type of spending which is reduced when incomes are reduced. This is likely to have put a brake on recent trends. For example:

- increased wealth and the greater availability of leisure time has resulted in UK residents taking part in boating activities abroad as well as in the UK. Some of this activity results in income to the UK leisure marine industry through UK based specialist tour operators and yacht charters. One marina operator has developed a marina in the Mediterranean to cater for the increased demand from UK customers for berths in Europe. Although the marina is being developed with a European partner it expects some of the jobs to be taken up by British workers.

- increased wealth has also resulted in an increasing market in the chartering of superyachts. A 2002 report by the Society of Maritime Industries found that there were just over 1,600 superyachts worldwide and that the fleet had increased by 90% in the previous ten years. This growth was accompanied by an increase in the size of vessels being built. The number of superyachts was expected to increase by 6% per year over the next ten years. Superyachts are normally owned by individuals, but there is a trend towards greater chartering. The UK industry is in a good position to benefit from managing charters and providing crew as many owners have a preference for British crew.

2.25 The shipping industry is truly global and there is significant competition from competitors in areas like the Far East with lower operating costs. In addition the industry has become vastly more productive with the use of larger and faster ships and with increasing technology reducing the number of crew required. Also, the market concentration in the industry has become greater, and larger companies are applying more pressure for cost reductions.

2.26 The competition in the fishing industry has been caused by the globalisation of the industry. This is driven through market forces, where the fishermen sell their fish where the price is highest, and this is not dependent on it being the country they are from. This is highlighted by the fact that over 80% of the fish consumed in the UK is imported and that much of the fish caught off the south west of England is exported straight to continental Europe, where it gets a better price. However, this is not always viable for UK fishermen, due to the distances between ports and the size of vessel they use (in England particularly there has been a shift to smaller boats capable of day fishing)[3].

2.27 The labour supply in the sector has also become global. In the shipping industry, vessels are multicultural environments often with workers from all over the world onboard. This can lead to reduced cost but operators also need to be aware of communication difficulties and cultural clashes.

2.28 In the fishing industry a deckhand on a fishing vessel is not recognised as a skills shortage profession by the Government, so labour cannot be brought in from outside the EU. However, some workers are brought in on transit visas and work on vessels which return to port every night. The authorities are working hard to stop this, however it is estimated there are currently around 2,000 Filipino workers working in the UK fishing industry.

2.29 Another factor in the globalisation of the sector is that much of the trade is carried out in American dollars, particularly the freight industry. Given that the value of the pound fell dramatically in 2008, and this had an effect on the amount of exports from the UK (declining by 3.5% to 216m tonnes in 2008[4]).

Technology

2.30 Technology plays a crucial role in the maritime sector. With some of the jobs in the sector being some of the most dangerous in the country, technology will always be playing a role. Technology use in recent years has tended to evolve rather than lead to any large scale changes in the sector.

[3] UK Seafish Stats, 2007, p13.
[4] Department for Transport, Provisional port statistics, 2008

2.31 In the ports sub-sector, a new simulator for cranes has been developed. This aides training and assessment. It allows several scenarios and variables to be used (for example bad weather and poor visibility), while being in a safe environment, as ports are recognised as the most dangerous land-based workplaces.

2.32 There have been some recent technological advances in the shipping sub-sector:

- the use of electronic charts on board ships has increased over the past few years;
- the use of Liquefied Natural Gas (LNG) ships has increased. The expansion of this type of operation has been slower than originally anticipated because of concerns about a lack of trained officers to operate these ships, although the sector has taken action to address this.

2.33 The increase in the number of LNG ships and ports coming into service has had a huge impact on the tugboat industry. The larger and more complex ships require four tugboats to bring them into dock. These tugs also need to be more powerful (many up towards 10,000 horsepower) and manoeuvrable than previously, and have to go out of the port to provide an escort service to the ships. Technological step-changes to tugboats have led to new, smaller and more powerful boats, and a reduction in the number of crew needed. However the workforce has had to have extra training, especially as many now tow over the bow instead of the stern.

2.34 The fishing industry has recently developed new equipment which allows fishermen to filter their catch by size or species, as many species swim together, for example cod and haddock. This can increase the catch of the species they are looking for and reduce wastage. This new gear can be expensive, especially for self-employed fishermen.

2.35 The growth of off-shore power generation is creating a new market for tugs and work boats, and potentially another source of income for fishermen, as they support its construction and maintenance. This may lead to new skills needs and the development of new relationships between the maritime sector and the off-shore power generation industry.

Economic structure of the sector

2.36 The ABI estimates that there are 6,435 enterprises in the maritime sector, with 55% of these being in the fishing sub-sector.

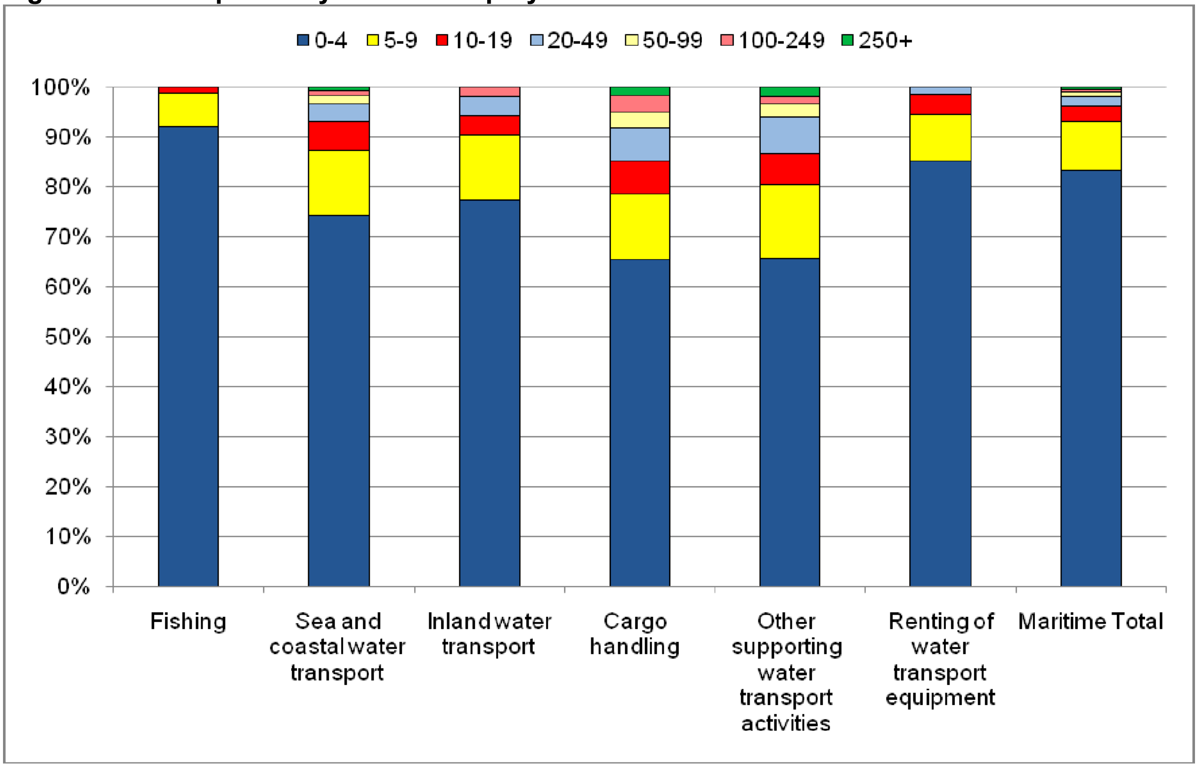
Table 2.3: Number of Enterprises

Industry	Number of Enterprises	%
Fishing	3,520	54.7%
Sea and coastal water transport	1,230	19.1%
Inland water transport	265	4.1%
Cargo handling	305	4.7%
Other supporting water transport activities	745	11.6%
Renting of water transport equipment	370	5.7%
Maritime Sector	6,435	

Annual Business Inquiry, 2007, ONS

2.37 The majority of these enterprises (90%) are workplaces which employ fewer than 10 people. Fishing has the highest proportion of enterprises employing fewer than 10 people (98.9%). Cargo handling has the lowest percentage of enterprises employing fewer than 10 (78.7%).

Figure 2.3: Enterprises by number employed



Annual Business Inquiry, 2007, ONS

2.38 It can be difficult to estimate the number of workplaces in the sector, particular in the areas that are sea-based. Many workplaces are vessels, some of which are UK owned, some UK-managed and some UK parent owned. The UK fleet in 2007 contained:

- 6,763 fishing vessels, with 1,527 over 10 metres (23%)

- 2,105 UK owned vessels over 100 gt, with 71% of these registered in the UK

2.39 There are 52 major ports in the UK, each handling over one million tonnes of traffic. These ports handle 97% of all UK port traffic.

Number of People Employed

2.40 The estimated number of people employed in the sector varies. The Annual Population Survey (APS) estimates 85,550 are employed in the sector.

Table 2.4: The maritime sector workforce

	Total Employed	% of Sector
05.01:Fishing	9,435	11%
61.10:Sea coastal water transport	37,760	44%
61.20:Inland water transport	2,443	3%
63.11:Cargo handling	4,138	5%
63.22:Other water transport activities	29,762	35%
71.22:Water transport eqt rental	2,012	2%
Maritime Sector	85,550	

2.41 However, when each of the representative bodies in the MSA estimates the number of employees in their own sub-sector, the number is a lot higher.

Table 2.5: Employment within the maritime industry

Industry	Number of Employees
Fishing	12,729
Merchant Navy	25,210
Marine Rescue:	
MCA	4,632
RNLI	5,150
Ports	74,000
Leisure Marine	12,716
Royal Navy	34,710
Tugs and work boats	1,600
Maritime Sector	**170,776**

Various sources[5]

[5] Sources: UK sea fisheries statistics 2007, British shipping statistics http://www.british-shipping.org/British%20Shipping/Statistics/#d, Department for Transport, focus on ports, 2006, UK Leisure and Small Commercial Marine Industry, 2008, RNLI factsheet, 2009,MCA annual Report, 2008-09.

2.42 The lower APS estimates for the number of people working in the sector could be for several reasons:

- it is based on a sample of the population and the sample sizes for some of the sub-sectors is small;
- the LFS is a household survey and many people employed in the sector travel for long periods of time either on-board ship or in other countries
- the statistical definition does not cover the MSA footprint comprehensively;
- some of the above estimates contain volunteers.

2.43 The maritime sector workforce has a much lower proportion of female workers than the whole of the UK workforce: 20% compared to 45%. There are also fewer BME[6] workers in the maritime sector than the UK average: 3% compared to 9%. The sub-sectors with the lowest proportion of women are fishing and ports, though in the water transport rental sub-sector 71% of the workforce are women.

2.44 The majority (87%) of the maritime sector workforce is full-time. The percentage of part-time workers in the maritime sector is 13%, compared to 24% in the UK economy as a whole. The water transport rental and inland water transport industries have the highest proportion of part-time workers (39% and 26% respectively), but in other sectors, for example in the Merchant Navy, part-time work is difficult.

2.45 The proportion of self-employed individuals in the maritime sector is the same as the average for all sectors, at 10%. Self-employment is dominant in the fishing industry, with 66% self-employed. In certain sub-sectors it is very difficult for workers to be self-employed, due to the scale of operations.

Table 2.6: Type of employment

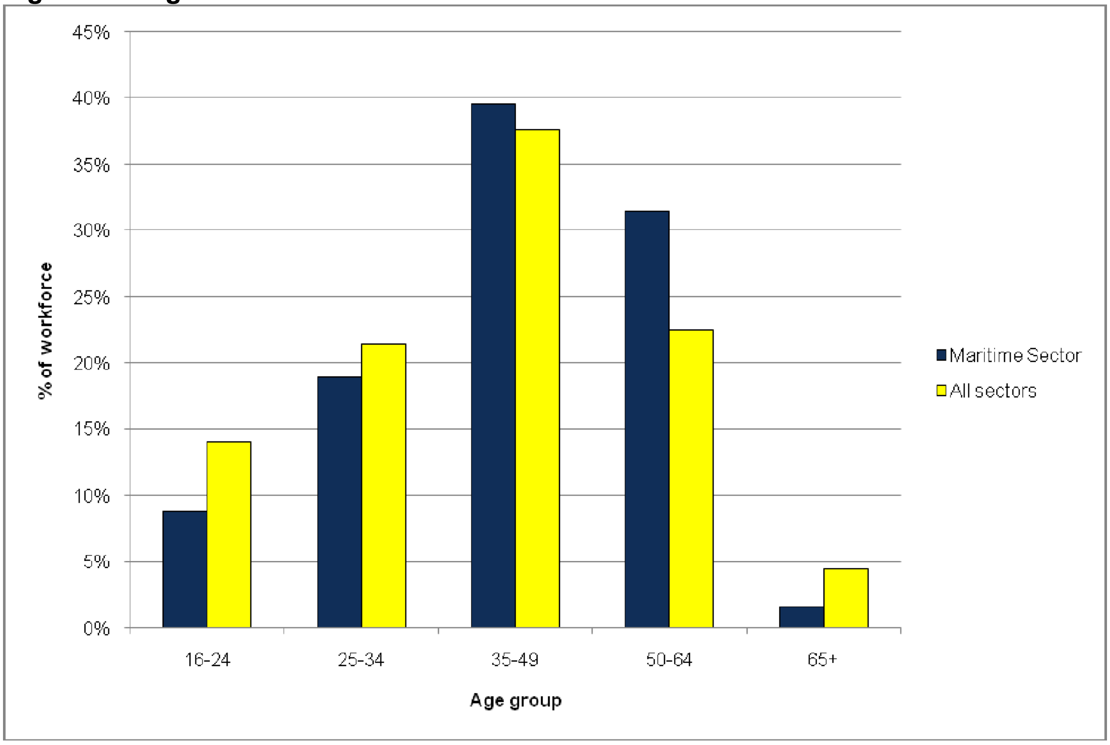
	% Self-employed
05.01:Fishing	66%
61.10:Sea coastal water transport	2%
61.20:Inland water transport	0%
63.11:Cargo handling	0%
63.22:Other water transport activities	6%
71.22:Water transport eqt rental	0%
Maritime Sector	10%

http://www.mcga.gov.uk/c4mca/197-336_mca_ar_loresnav.pdf
http://www.rnli.org.uk/assets/documents/RNLI%20factsheets/RNLI_factsheet09.pdf
http://www.dft.gov.uk/adobepdf/162469/221412/221658/223704/223707/focusonports2006.pdf

[6] Black and Minority Ethnic

2.46 The age profile of the maritime workforce is shown in figure 2.5. This shows that the proportion of young people in the sector is lower than the national average, with only 28% under the age of 34, compared to 35% for the whole of UK workforce. There are no workers in the maritime sector under 18. Correspondingly, there are also proportionally more older workers in the maritime sector. This may in part reflect that a lot of experience is needed to carry out certain roles in the sector, but there is also concern about the lack of young people entering and staying in the sector. There are a number of initiatives in place to try to encourage more young people into the sector.

Figure 2.4: Age distribution of the maritime workforce



Annual Population Survey, 2008

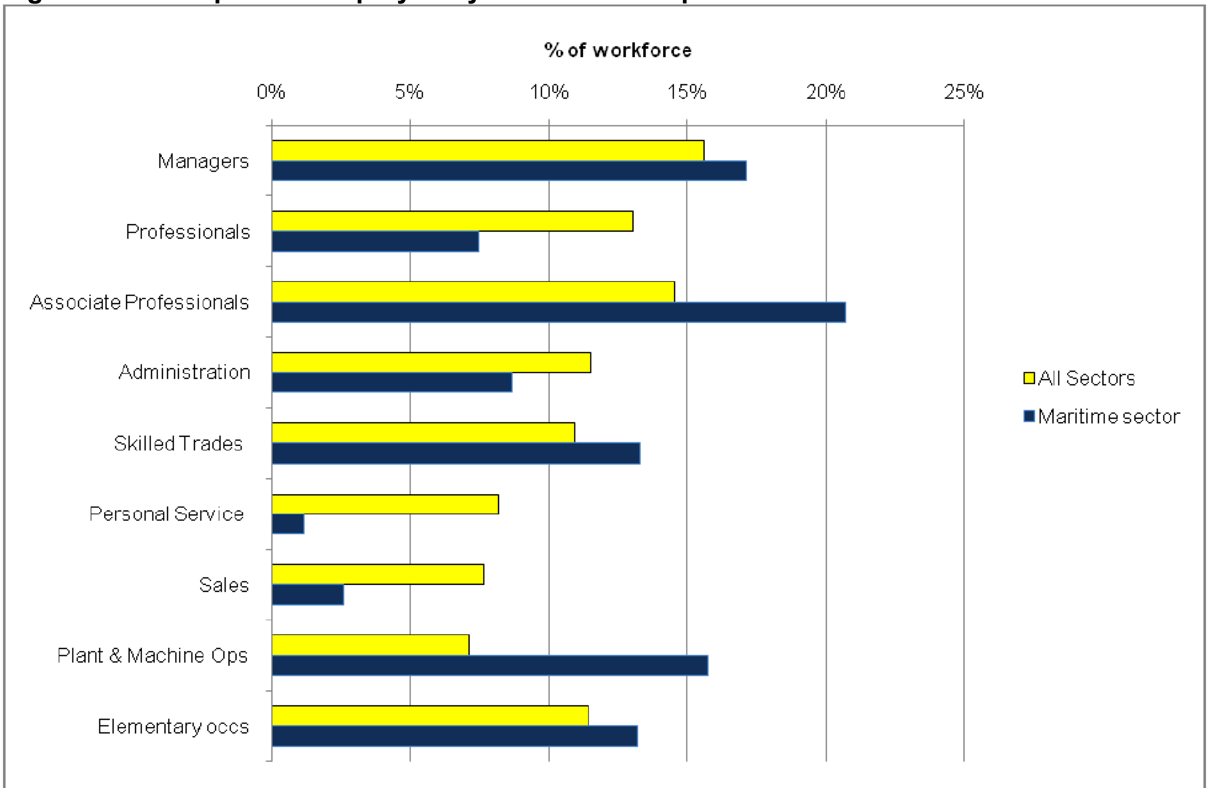
2.47 The most effective initiative in terms of increasing the number of young seafarers has been through the Tonnage Tax. Over the past five years, the number of trainee officers has more than doubled.

3. Current skills needs

3.1 This chapter considers the current skills and qualification levels of the workforce in the maritime sector, the skills gaps and shortages and the training provided by the sector.

Occupations in the Maritime Sector

Figure 3.1: Occupations employed by Standard Occupational Classification



Annual Population Survey, 2008

3.2 Figure 3.1 compares the occupations in the maritime sector to those in the UK economy as a whole. This shows that the maritime sector employs:

- a much smaller proportion of professionals than the UK average;
- many more process, plant and machine operatives (eg ratings and port operatives);
- more skilled trades (eg fishermen) and associate professionals (eg ship officers).

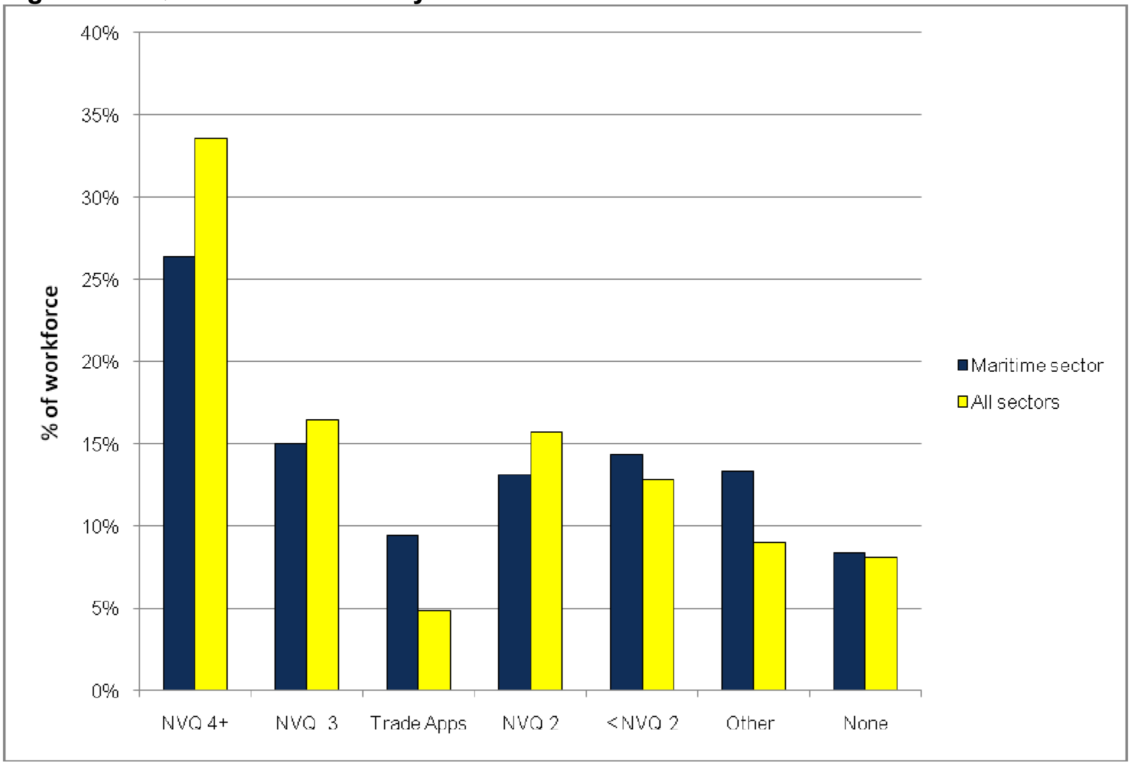
3.3 Some of the occupations are unique to the maritime sector and are shown in table 3.1. These account for a large proportion of the maritime sector workforce.

Table 3.1: Maritime specialist occupations	
Occupation	**Number employed**
Ship and hovercraft officers	16,116
Importers exporters	9,503
Seafarers (merchant navy); barge, lighter and boat operatives	8,015
Stevadores, dockers and slingers	10,908
Fishermen	12,729

Annual Population Survey, 2008, and UK Sea fisheries statistics, DEFRA, 2007

Skills profile of the maritime sector

Figure 3.2: Qualifications held by the maritime workforce



3.4 The current level of qualifications held by people working in the maritime sector is shown in figure 3.2. This shows that compared with the UK average there is:

- a lower proportion of workers with N/SVQ level 4 and equivalent qualifications in the maritime sector;
- a higher proportion of with low level (below N/SVQ level 2) qualifications

3.5 This lack of higher level qualifications could be due to the smaller proportion of professional roles in the sector (see figure 3.1) and that the sector relies more on gaining certificates to practice required by the regulators, many of which are international. Although some are linked to qualifications, most are outside the national qualification frameworks.

3.6 The National Employer Skills Survey (NESS), conducted in 2007 provides some indication of skills gaps and skills shortages in the sector. This survey only covers companies in England. Scotland and Wales undertake similar surveys but the data is not available specifically for the maritime sector. The NESS covered 137 maritime employers.

Vacancies and recruitment

3.7 The 2007 NESS survey shows that:

- the number of establishments with vacancies in maritime was 20%, slightly above the survey average of 18%;
- hard-to-fill vacancies are at the same level as the survey average (7%);
- skills shortage vacancies, defined as hard-to-fill vacancies which are caused by a lack of applicants with the required skills, qualifications, or work experience were slightly above the survey average.

Table 3.2: Number of Vacancies

	Maritime	National
% establishments with any vacancies	20%	18%
% of establishments with any HtFVs	7%	7%
% of establishments with any SSVs	6%	5%

National Employer Skills Survey, 2007

3.8 Some of these vacancies could be due to the shortage of officers, highlighted in the BIMCO/ISF Manpower update, 2005. This reports that there is a global shortage of officers, estimated at 10,000, 2% of the workforce. This is smaller than their estimate in 2000, although they mainly attribute this to better reporting from some countries and an increase in the supply of officers in the Indian sub-continent and the Far East. The report also estimates that it will get worse in the future, with a predicted global shortfall of 27,000 in 2015. This is due to the lack of maritime training and wastage rates. The number and roles of UK seafarers is shown in table 3.3 below:

Table 3.3: Estimated UK Seafarer numbers - 2006	
Role	**Number (assumes retirement age of 62)**
Deck and Engineer Officers	13,570
Other Officers	3,080
Ratings	10,390
Officer Trainees	1,090
Total Active at Sea	28,130

British Chamber of Shipping, 2006

3.9 The global shortage of officers is acknowledged to have eased due to the effects of the global economic climate over the last two years. Many in the maritime sector felt it was reaching a point where some ships may not have been able to sail because of the lack of officers. With a decreasing volume of global trade, the number of ships has declined as has the immediate demand for officers. Nevertheless the age profile of the workforce along with future trends means the shortage is likely to re-emerge when world trade recovers.

3.10 BIMCOÕs figures also suggest that there will be a surplus of ratings, although the majority of the labour supply for this role has moved from traditional maritime countries towards the Far East, Indian sub-continent and Eastern Europe. One reason for this is the cost savings that can be made through employing ratings from these areas compared to ratings from the UK.

3.11 A further problem for the maritime sector is the use of experienced seafarers, as they are in demand for shore-based roles. The competition for ex-seafarers is fierce, and coupled with the fact that the age profile of seafarers is increasing, there is expected to be a lack of supply of ex-seafarers. A 2003, Cardiff University[7] study of the demand for ex-seafarers suggested that that number of shore-based jobs that maritime sector employers would prefer to fill with ex-seafarers would rise by 8% over the next 10 years. This accounts for 7,500 jobs. Unfortunately no further studies have been undertaken to update this research. Table 3.2 shows the types of roles which require ex-seafarers.

[7] Cardiff University (2003) *The UK economy's requirement for people with experience of working at sea*

Table 3.4: Demand for ex-seafarers in maritime shore-based jobs	
Activity	**Roles requiring ex-seafarers**
Port management	• Harbour masters or port managers.
Cargo handling	• Small numbers of ex-seafarers employed as cargo superintendents or in general management roles.
Pilotage	• Former deck officers employed as pilots • Former ratings employed as launch crews.
Pollution control	• Former ratings employed as boat handlers • Former officers as Oil Spill Technicians, Marine and engineering superintendents and technical, sales and commercial managers.
Towage, salvage and dredging companies	• Officers and ratings on tugs and dredgers • Marine and engineer superintendents • Safety officers and salvage masters • Dredging superintendents
On-shore management of ships and crew	• Fleet management roles • Marine or engineering superintendents • Marine safety management • Ship operations managers • Training and personnel management
Education and Training	• Training

Source: The UK economy's requirement for people with experience of working at sea 2003

3.12 In addition ex-seafarers are also recruited into other maritime related jobs, such as maritime lawyers, brokers and insurers in the City of London, maritime accident investigators, regulation and working onboard super-yachts. There are also roles which recruit ex-seafarers that are not in the maritime sector, particularly engineering roles but also fire fighters. The 2003 Cardiff University study estimated that other sectors of the economy would have approximately 9,300 jobs they would prefer to fill with ex-seafarers in following 10 years. This is a rise of 6%. Although there are no more up-to-date figures the study shows the importance for other industries of access to ex-seafarersôskills.

3.13 As in a number of other sectors the maritime sector is concerned about the availability of engineers and has to compete with other sectors for a limited pool of new and experienced engineers. Ports have difficulty recruiting and retaining engineers in particular locations, although this depends on the local labour market, while the fishing industry finds it is not attractive to engineers who can get relatively well paid shore-based jobs. However, informed individuals in the sector have suggested that there is currently no difficulty recruiting engineers. They expect the supply of engineering graduates to be variable. This variability of supply meeting demand is due to the competition for engineers from other sectors for a limited supply of skilled labour.

3.14 The fishing industry is currently struggling to recruit enough young people into the industry to fill the gaps left by those leaving. The issue is related to all roles, although the decline in the number of ships over 16.5m has reduced the need for engineering specific roles. This has led to the large increase in foreign labour in the industry.

3.15 Small businesses in the leisure marine sub-sector are worried that their industry's requirement for a small number of employees in very specialist roles combined with their limited ability to pay higher wage rates is making it difficult for them to recruit and retain staff. This is particularly the case in locations where there is a high local employment rate and competition for staff, for example marinas report increased levels of staff turnover and poaching in the South and South West coast of England.

3.16 There is also a problem with both recruitment and career progression in the Leisure Marine industry. Career progression is not clear in certain jobs in the sector (for example watersports instructor), so retention can be a problem. Other jobs (for example yacht skippers) have no particular career path into them, so recruitment is difficult. This is set against a backdrop of workers in the sector needing a broad range of specialist skills, whilst not commanding high wages from small companies. This means recruitment and retention in the sector is difficult.

3.17 Both the RNLI and HM Coastguard report low staff turnover at approximately 10%. They both report little difficulty recruiting and retaining volunteers. Recruitment of volunteers is often through word of mouth. Where there are difficulties these tend to be:

- in smaller villages where younger people have tended to move away to other areas in order to get better jobs or further their careers;
- in some coastal towns and cities, such as Brighton, where there is greater competition for volunteers from other organisations.

3.18 They also report having more difficulty getting volunteers to cover during the normal working day as most volunteers are at work and increasingly people travel further to their workplace. Both organisations aim to ensure that their volunteers are able to fulfil more than one role to ensure a shortage of one specific role does not prevent a lifeboat from launching or a rescue team from being dispatched. The RNLI report that where lifeboat stations need a larger number of support crew to help launch the boat they sometimes only have the minimum number of people attending, particularly during the working day. However, so far there has always been enough crew to launch a lifeboat when it was needed. Similarly the HM Coastguard reports that it is increasingly deploying two Coastguard Rescue Teams to incidents, in order to ensure there is sufficient number of team members attending.

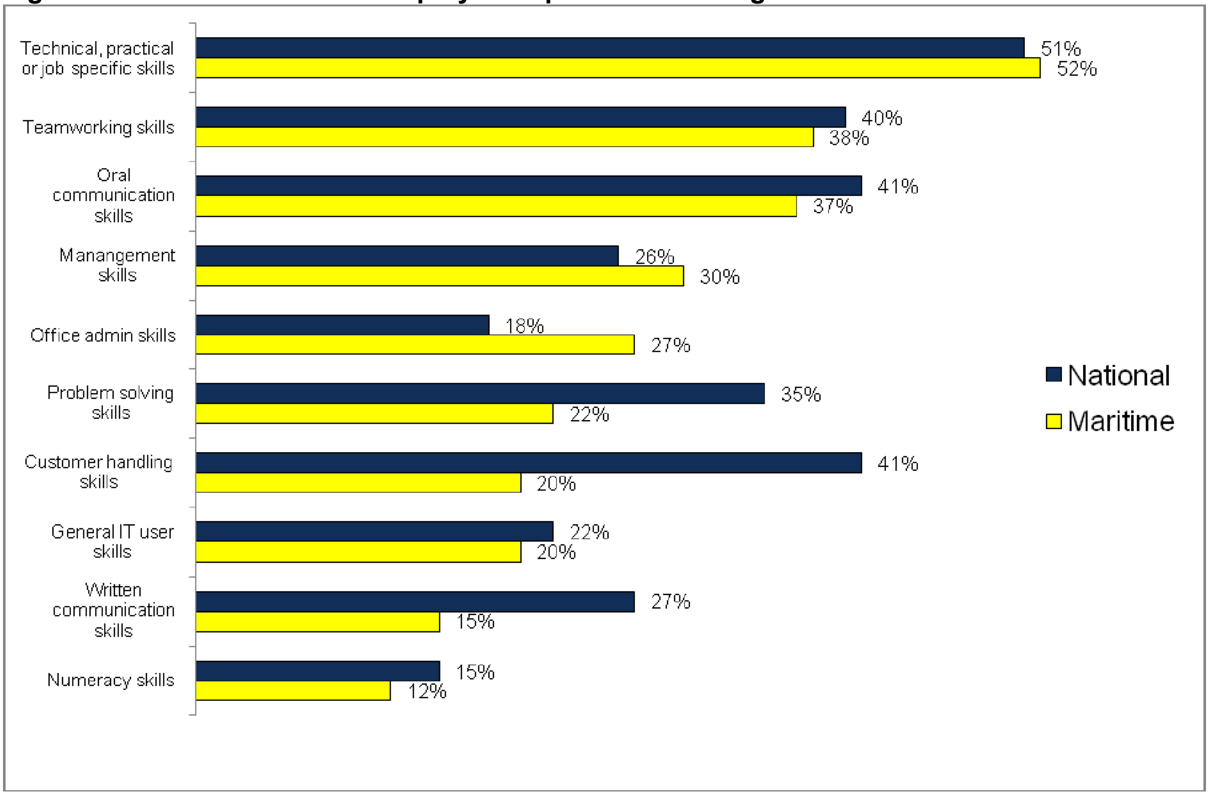
3.19 In the tugboat sub-sector the rate of turnover is small. This is due to it being seen as an attractive industry in the sector, with generous leave and the ability to live at home while working. This has resulted in there being no problems with recruitment in the industry, as they do not need to replace many workers each year.

Skills Gaps

3.20 A skills gap is where an employer is not fully proficient in their role. The NESS found that 13% of maritime companies reported skills gaps, compared to 15% nationally. Over half of those reporting skills gaps (52%) identified gaps in the area of technical, practical or job specific skills. Other major areas of skills gaps were team-working (38%) and oral communication skills (37%). Maritime sector employers were more likely to identify skills gaps in:

- management skills (30%)
- office administration skills (27%). .

Figure 3.3: Main Skills which employers reported as lacking



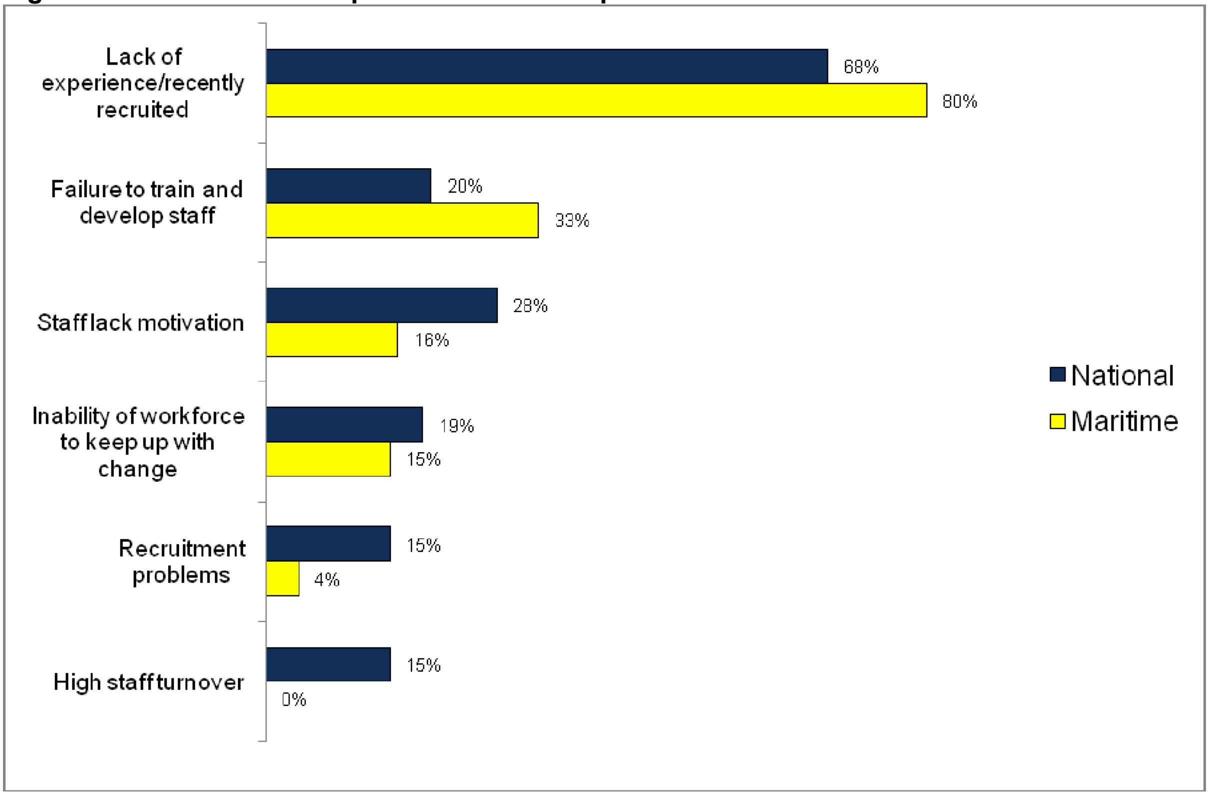
National Employer Skills Survey, 2007

3.21 Previous research carried out by The Mackinnon Partnership also showed managerial skills gaps in the maritime sector. For example the leisure marine sub-sector reported that it needed people with better leadership and management skills, which may help them to increase their retention of staff. This particular skills gap can be explained by the fact that many of the companies in the sector are small, and therefore lack the specialist leadership and management expertise large companies have.

3.22 Figure 3.4 shows that in the maritime sector, more so than nationally, a lack of experience was the main reason for a company reporting a skills gap, with 80% of those with skills gaps reporting this as a cause. The failure to train and develop staff is also more of a problem in the maritime sector than nationally. This is relevant particularly to the leisure marine sub-sector as many people do not see a career in the sector, they work in the sector for a while and then leave. These tend to be young people, having finished college or university, so do not have a lot of experience in the sector.

3.23 There is also a higher than average response of failure to train and develop staff. This is probably more prevalent in some sub-sectors than others. For example, in the fishing industry it is a requirement that everyone does health and safety training. However, they only have to do it once. This means someone who did their training in the early 1990s may now have a skills gap in health and safety.

Figure 3.4: Main reasons reported for Skills Gaps



National Employer Skills Survey, 2007

Training

3.24 The Government's strategy for the maritime sector[8] emphasised the importance of maintaining seafaring skills within the UK economy and as a result 21 out of the 33 action points were aimed at ensuring that the UK maintained a sufficiently large and highly skilled maritime workforce. Part of the UK's response was to link employer training to the tonnage tax.

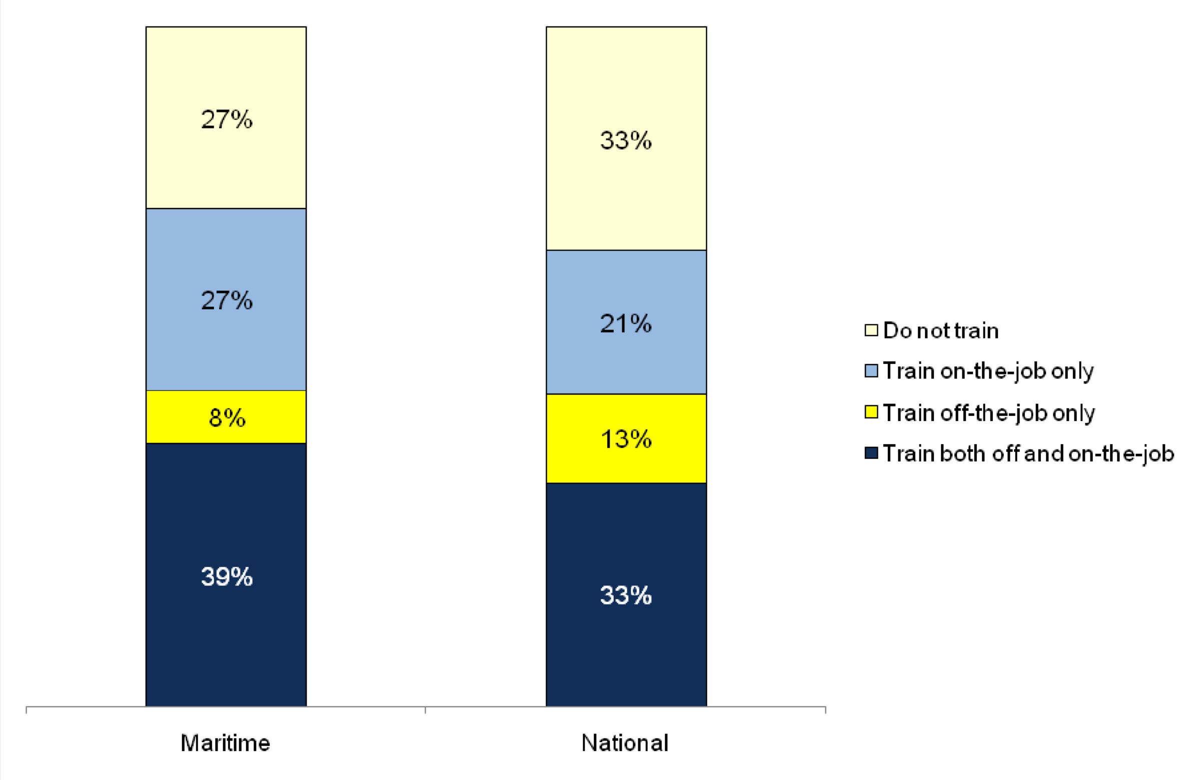
3.25 More broadly the NESS provides an indication of the type of training offered by companies. The survey shows that compared to the survey average maritime sector employers are:

- less likely to offer no training;
- more likely to offer on-the job-training;
- less likely to offer off-the-job training.

3.26 This is likely to reflect the regulatory training requirements and the practical nature of many of the jobs in the sector.

[8] DfT (1998) British Shipping - Charting the New Course

Figure 3.5: Types of training offered by employers



National Employer Skills Survey, 2007

3.27 The maritime sector takes training seriously. For example shipsôofficers train for up to three years before qualifying and ratings train for 6-18 months. In most parts of the sector workers have to train and obtain a certificate or licence to be able to work and these requirements are regularly reviewed. For example the fishing sector is currently introducing a Skippers Licence for those who operate vessels under 16.5m.

3.28 In ports, the training for Apprenticeships currently involves both on-the-job and off-the-job training. Other training in the sector depends on exactly what is being learnt, can include distance learning, days in college and work-based learning.

3.29 The British Tugowners Association is currently working on extra training to go on top of a BoatmastersôLicence called a towing endorsement. This is because they feel the BoatmastersôLicence does not provide adequate skills for a Tug Master. This will involve on-the-job training.

4. What Lies Ahead?

4.1 This section aims to identify skill needs in the sector over the next five to ten years.

Technology

4.2 There are no particular technological advances on the horizon which are set to change the face of the maritime sector. The nature of many of the technology changes in the sector is that they tend to be updates of systems already in place, which are better or more efficient. This means that it takes time for them to be introduced, and often part of the sector (individual ships or ports) will have the new technology whereas others will not.

4.3 The global recession has had a huge impact on the maritime sector, and has also changed the way people are looking at the future. Although it has rendered some previous predictions inaccurate people are now looking forward, with a certain sense of optimism. For example, in the shipping industry some companies have used the declining level of world trade to scrap ships earlier than they would have done; replacing them with the new ships they already had on order. This will reduce the average age of the fleet and mean a higher proportion of the ships have the latest technology on board.

4.4 The leisure marine sub-sector does not anticipate any great technological change on its service side. It is mainly consumer and tourism based and technological changes do not have a big impact on its operations.

4.5 Nevertheless it is important for the sector to keep abreast of technological changes, and review the training provided to ensure the training is up to date with the technology.

Skills Demand

4.6 The demand for skills in the UK maritime sector is changing, partly due to changing regulations and the changing needs of employers.

4.7 In the past, the recruitment of engineers to the maritime sector, and the UK economy as a whole, had been problematic. However, anecdotal evidence suggests that the Government's policy of encouraging young people to study science and engineering is having some impact and that there is currently less problem recruiting engineers. However the situation varies between employers, sub-sectors and geographies. The general feeling is that variability in recruiting engineers will continue to be the case in the future.

4.8 The lack of young seafarers means that the future demand for ex-seafarers, for the various shore-based positions they fill, is likely to outstrip supply. Recent initiatives to increase the number of young people to be trainee officers are promising, but there is still likely to be excess demand for them in the near future. British trained officers are held in high regard around the world and as a result on completion of their qualification trainee officers, have a very high chance of securing a job.

4.9 In the leisure marine sub-sector, skills needs are likely to change due to increased regulation. An example of this is the expected requirement for people to obtain a BoatmastersôLicence in order to take people out on the water. There is also a need for more leadership and management skills in the sector and greater career progression opportunities to improve staff retention.

4.10 In the fishing industry, a new programme for training skippers of vessels under 16.5m is being introduced, and is likely to become mandatory in 2011. This means that workers on smaller ships will also have to be qualified, and show that they have the skills to operate their boat.

4.11 There is also a stricter non-statutory towage endorsement being put in place by the BTA. This will mean that Tug Masters will be more skilled than Boatmasters, but also offers a different career path. It means that people from a Boatmaster background can get into the tugboat industry, and the other qualifications that are in place mean people can progress through that industry to become Tug Masters. Although this endorsement is non-statutory, potential employees will be expected to have the endorsement.

Environmental Change

4.12 The environment, and the Governmentôs legislation relating to it, is likely to have a major impact on parts of the maritime sector in the near future. Although there are currently no new specific regulations, the industry expects the new Marine Bill to impact on future activities in the sector.

4.13 In the shipping industry, some things have started to change already, although this can also be put down to reducing costs. For example, when the price of fuel was high, some ships ran slower than they normally would, to conserve fuel.

4.14 The Marine Bill is likely to have a big impact on the fishing industry. It is likely to lead to the creation of marine protection areas and marine management. These may or may not allow access to fisherman, and at the moment it is unclear if historical access to fishing areas will ensure future access to them. These changes mean that fishermen will need to have a good understanding of environmental issues, and be able to show that they are fishing responsibly. This will include following best or good practice guidelines to prevent overfishing and pollution, and taking steps to minimise their impact. This could include the use of new fishing equipment, which may require training.

4.15 The growth in off-shore energy production such as wind and wave generators also provides a growing market for the sector as it provides support for construction and maintenance. This will impact on skills needs in the tug and work-boat sector, but also lead to new challenges as they work with roles in the energy industry that may have little understanding of the issues of operating equipment at sea. This may in-turn lead to a further drain on the maritime sectors skills base as the energy industry seeks to recruit people with maritime skills.

4.16 In addition the planned growth of the nuclear energy generation industry may impact on the Royal Navy's recruitment and retention of nuclear engineers if they opt to leave and take-up on-shore civilian roles.

Economic Trends

4.17 Given the global recession, many previous short-term predictions for the maritime sector are now inaccurate, although some of the longer-term trends are still valid. For example, port traffic was expected to continue to grow, particularly container traffic, however it is now expected that ports traffic will not get back to pre-recession levels until 2013. However, container traffic is still likely to grow faster than other traffic as the shift of manufacturing industries to the Far East continues.

4.18 A reduction in the quantity of crude oil entering UK ports, due to the pattern of oil production in the North Sea, is also likely to continue over the coming years. There has been a 12% increase (between 1999 and 2006) in the quantity of oil products and LNG travelling to or from UK ports, and this trend is likely to continue as more LNG terminals come on-stream in the next decade, which will also impact on the tugboat industry.

4.19 The participation rate in leisure marine activities has been hit by the economic climate. Participation declined in 2008 following a gentle rise over recent years. However, participation amongst young people has been declining over a longer period[9]. People within the industry are confident that with an economic recovery, the general trend of increasing participation in the sub-sector will return. Reasons for optimism stem from the increasing average age of the UK population and older people, who are more likely to participate in leisure marine activities, are seen to have more leisure time and disposable income.

4.20 A major source of concern for the Royal Navy is Government policy. Following the next general election, there will be a Strategic Defence Review. This will decide how much funding the Navy will receive, which will in turn affect the recruitment policy, technological changes and therefore training in the sub-sector. Over the long-term it might negatively impact on the number of personnel with marine relevant skills leaving the Royal Navy and offering their skills to the civil maritime sector. The use, where possible, of civilian recognised qualifications within the armed forces will make the transition smoother for both individuals leaving the Navy and employers recruiting them.

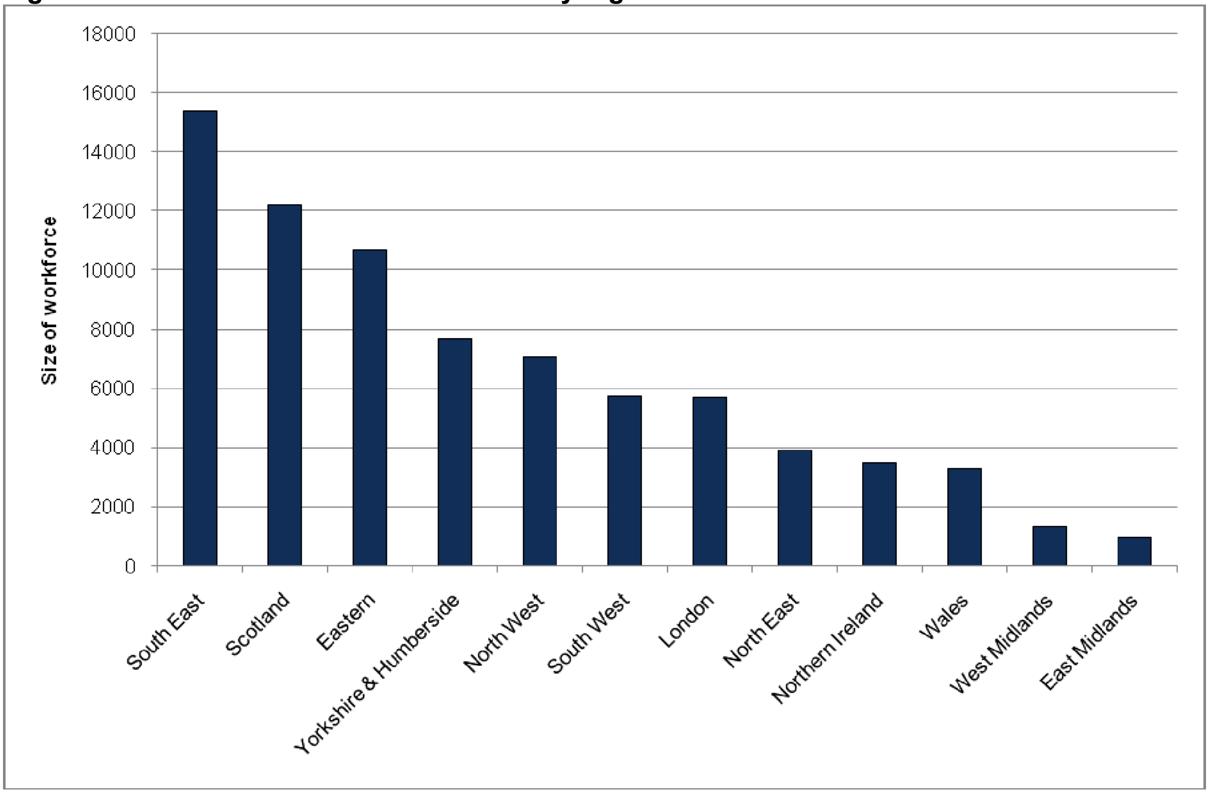
[9] Watersports and Leisure Participation Survey, 2008

5. Geography

5.1 This chapter examines the regions in the United Kingdom where the maritime sector is most important, and why.

5.2 The APS reports that South East England has the largest maritime sector workforce, with Scotland and Eastern England the next largest geographic areas. The East and West Midlands have the smallest maritime workforce, which is to be expected given the limited amount of coastline in the area. It is also worth noting that although Northern Ireland has a low number of people working in the maritime sector, it also has a much smaller population than the other regions.

Figure 5.1: Size of the maritime workforce by region and nation



Annual Population Survey, 2008

5.3 Figure 5.1 shows the distribution of employment in the maritime sector as a whole, but not all of the sub-sectors follow this pattern. In shipping for example, seafarers can live in any region and work on-board a vessel on the other side of the world, whilst those working for travel companies in the leisure marine industry are also often based overseas.

5.4 Table 5.1 shows the location quotients for the maritime sector, which takes into account the total workforce in the area. Despite Northern Ireland having a relatively small maritime workforce, it is an important sector for local employment, whereas a similar sized workforce in the maritime sector in Wales is a less important sector for their workforce.

Table 5.1: Location quotients of the maritime sector

Region	Location Quotient
Scotland	1.6
Northern Ireland	1.5
South East	1.3
Eastern	1.3
Yorkshire & Humberside	1.1
North East	1.1
North West	0.8
South West	0.8
Wales	0.8
London	0.5
West Midlands	0.2
East Midlands	0.2

Annual Population Survey, 2008

5.5 The majority of cargo goes through the 52 main ports in the UK. These are located in almost every region and country in the UK, although none are in the (land-locked) West Midlands. The leading five ports by tonnage in 2007 were:

- Grimsby and Immingham;
- London;
- Tees and Hartlepool;
- Southampton;
- Forth.

5.6 These five are spread through different regions in the country, and with the next two in size, Felixstowe (as the largest container port in the UK) and Bristol (which accounts for 13-14% of the aviation fuel landings), range across almost every region of the UK.

5.7 The tugboat industry also follows this geographical trend, as tugs operate in ports. There are more tugboats and employees in larger ports, where there are bigger and more frequent ships docking.

5.8 The leisure marine industry is mainly focused in the South East and South West of England. Although there are good facilities in other regions (for example marinas in the North East and Yorkshire and Humberside), the majority of the sector is based in the South East and South West. This is because of geographical conditions and consumer tastes, with leisure marine activities being more popular in these regions than they are in the North of England, for example. This could also be affected by the weather, as many leisure marine activities are weather-dependent, so the warmer and more reliable weather conditions in the South of England could also contribute to this.

5.9 As the industry is seasonal, nearly one quarter of the workforce is employed on a temporary basis compared with an average across the whole UK workforce of just 6%.

5.10 The Royal Navy has three main bases in the UK, in Portsmouth (South East), Plymouth (South West) and Faslane (Scotland). This is where the vast majority of Navy personnel are based, and although some are based at other locations, these tend not to be maritime based roles (for example the air support for the Navy).

5.11 The fishing industry, despite representing a small proportion of the UK workforce as a whole, tends to contribute a large amount to the local economies where it is based. The industry has strong roots in the South West of England and the North East of Scotland, where it continues to be an important industry, with 11% based in the South West, and 37% based in Scotland.

5.12 The skills demand for the fishing industry in Scotland is different to that in the rest of the UK. The majority of boats over 16.5m long in the UK are based in Scotland. These vessels need engineers and several crew, and can be out at sea for days at a time, catching large quantities of fish. Smaller boats than this do not need as many crew, or any engineers, and can only go out for the day. This means the skills required for fishermen in Scotland is different to the rest of the UK.

5.13 Despite the importance of the fishing industry in Northern Scotland, there is still a recruitment problem there. There is currently an SVQ in place to help encourage the recruitment of young people and give them the skills to go into the fishing trade. However, only around 20 people per year enrol on the course, which is not enough to replace the people leaving the industry.

6. Conclusions

Introduction

6.1 Throughout this labour market assessment we have sought to provide an overview of issues affecting the maritime sector and its constituent parts. In this section we present the key issues and areas for action by the Maritime Skills Alliance.

Common Themes

6.2 The MSA and partners have already taken a range of actions to address the issues raised in previous Labour Market Assessments (2005 and 2007). However, these are long-term issues and are still relevant. Further work needs to be undertaken to reinforce the actions already taken. There is great variety across the sector in terms of starting points and progress made, but there are clear benefits to building on inter-relationships and reinforcing the transferability of skills across the sector to address these skills issues. The evidence provided here suggests that action in the sector needs to focus on eight areas.

1. Raising management skills

6.3 Many of the industries have identified a need to continue to raise the level of management skills in the workforce, which was also highlighted as a skills gap by NESS in the maritime sector. This is a particular need in the industries which have many small businesses or self-employed workers. There are slight differences in emphasis between industries in other areas:

- skippers in the fishing industry require greater business and financial management skills;
- new port managers need greater commercial awareness in terms of managing the portǒs assets;
- ship officers need skills to deal with increasing amount of information and to deal with the additional ship management functions that are moving onboard ship;
- the towage sector industry is seeking to put more managerial responsibility back on to tugs. This requires Tug Masters and Engineers to have greater management skills;
- leisure marine managers need a better understanding of how to recruit and retain staff.

2. Engineering skills

6.4 As in a number of other sectors the maritime sector is concerned about the availability of engineers and has to compete for a limited pool of new and experienced engineers. The ports industry has difficulty recruiting and retaining engineers in particular locations depending on the local labour market, while the fishing industry finds it is not attractive to engineers who can get relatively well-paid shore-based jobs. This also applies to other sub-sectors in relation to retaining experienced engineers, as many move to shore-based jobs.

3. Raise the sector's image and attract new entrants

6.5 The sector is not attracting the quantity or calibre of new entrants that it requires and this has long-term implications. Although the Merchant Navy has consistently increased the quantity and quality of applicants over the last two years, other parts of the sector have not been so successful. Actions need to move on from generic promotion of the sector to focusing on addressing specific issues. The sector needs to:

- build on activities such as Sea Vision to raise awareness of the sector and its career opportunities amongst young people;
- ensure working practices are as attractive as possible to encourage new recruits and to retain existing workers;
- ensure, that where they do not already exist, there are attractive career paths that provide compatible qualifications that are viable alternatives to the general full-time education route and allow entrance to young people with different academic experiences.

4. Career progression

6.6 There is a need to ensure the sector provides the appropriate opportunities for career progression not only so that it attracts young people as we discuss above, but also so that it retains a workforce that can progress to more senior positions. Whilst some parts of the sector are addressing recruitment difficulties by employing foreign nationals, there is a danger these workers will return to their home nation to take up more senior posts and this will result in a significant gap in the UK senior management workforce.

6.7 New flexibility may be required to try and overcome career bottlenecks in particular parts of the sector. There is also a need to consider how the movement between parts of the maritime sector can be encouraged more easily within the regulatory framework. Action in this area will need to have close involvement of both the Maritime and Coastguard Agency and employers.

5. Ensuring the sector responds to future labour market and skills challenges

6.8 A number of changes are anticipated in the sector and the environment in which it works which will impact on the size and nature of the workforce as well as the skills required. The MSA and partners need to ensure that the skills and learning infrastructure is in a position to respond to challenges and opportunities such as:

- the UK Marine and Coastal Access Bill. The implications of the bill on the skill needs of the sector are still unclear, but the it is likely to impact on the knowledge requirements of those working in the sector;
- the expansion of off-shore renewable energy and the maritime based requirements of this expansion;
- the increased use of Liquefied Natural Gas (LNG) ships and the additional skills required to operate these ships;
- the increase in the number of Superyachts and the requirements to crew these vessels.

6. Strengthening qualification and training provision

6.9 There is a need to strengthen the training and qualification provision throughout the sector, particularly in light of changes in funding arrangements. There is low take-up of qualifications across some parts of the sector and some awarding organisations are re-considering the financial viability of maintaining them. The Qualifications Strategy development process provides an opportunity to make these qualifications more attractive. Some changes have already been put in place, including:

- moving towards a mandatory skipper's licence for all vessels in the fishing sector by 2011 (at present this is voluntary);
- the development of Foundation Degrees and Apprenticeships for different roles in the ports sub-sector, beginning in the 2011 academic year;
- reforms in the HND/HNC courses offered by the MNTB and the introduction of Foundation Degrees;

- establishment of the Maritime Studies Qualification to replace the majority of N/SVQs in the sector which have been less successful.

6.10 Central to the success of any qualification reform will be linking qualifications to the regulatory requirements that already exist. This approach has already been successful within the higher education elements of the Merchant Navy related qualifications.

6.11 The geographically dispersed nature of the sector has led to difficulties in providing economically viable training in some parts of the sector. There is a need to ensure that there is sufficient provision to meet the sector's needs in key geographic areas. As part of this the sector needs to continue to investigate innovative and cost-effective forms of delivery.

7. Addressing language skills needs

6.12 It is essential that there is good communication between people working in often dangerous environments in the sector. With the increasing use of foreign nationals in the fishing and ports industries there is a danger that a lack of English language skills may create hazardous situations or reduce efficiency. Even in the Merchant Navy where many mariners will have passed the Marlins English language test, there is some feedback that this may not be sufficient to meet employers' needs. Therefore there may be an increasing demand from employers and employees for additional English language courses.

8. Addressing the loss of maritime skills

6.13 Many of the previous actions will help to address the specific issues facing the sector of a loss of maritime skills. In addition the maritime sector and others sector's relying on ex-seafarers need to:

- consider whether some shore-based roles can be undertaken by non ex-seafarers (as has been done in the ports industry);

- consider whether some shore-based roles can be changed to require less seafaring experience;

- work in partnership with DfT and others to monitor the impact of the current policies and activities to revive the UK shipping industry on the supply of British seafarers.