

remuneration, factors militating against the employment of any particular seafarers, turnover and retention.

- (b) The availability of training, standards of training and certification, access to training, support being provided by governments and the private sector, facilities and assistance for training to higher professional levels, acceptance of certificates by other countries and national employers.
- (c) The global situation regarding supply and demand, including future requirements, the position of Asian and Pacific seafarers within this scenario, and the potential for expansion of employment for seafarers from this region. Impact on world trade if there are insufficient qualified seafarers available to man ships.

The value to national economies of having their nationals employed as seafarers, both in terms of employment and foreign exchange earnings. The potential for increasing this value.

- (e) Employment in shore-based maritime industries - ship management and operation, agency, superintendency, maritime administration, port and terminal management and operations, pilotage, surveying. Availability of qualified nationals to fill these positions, training and incentives available, likely impact if demand exceeds supply.
- (f) A summary of the overall situation with recommendations for future policies and action for governments and ship owners/operators. Due consideration should be given to the current and potential employment of women in maritime industries.

2. SEAFARING AND NATIONAL DEVELOPMENT

Most countries maintain a policy of either strictly national seafarers on national ships. This is clearly not possible for those countries that are short of national seafarers to crew all the ships on the registry. In order to meet this goal, each country has been obliged to establish maritime training institutions to nurture a pool of locally trained seafarers. While it is quite feasible to acquire a large shipping fleet (whether registered locally or under foreign flag) without having to maintain a commensurate body of national seafarers, there are cogent additional reasons for having a strong core of national maritime manpower. The arguments are as follows:

A national shipping fleet needs to be manned by seafarers that are loyal to the company as well as to its flag. For the company it is a matter of efficiency when management and labour can work harmoniously together and national rather than foreign crews are more likely to achieve it. For the nation, it is related to the question of national security when the availability of a significant

shipping fleet manned by nationals will be needed in times of international conflict.

- (b) The above concern is particularly valid when one considers the operation of domestic shipping for river, coastal and inter-island trades and passenger shipping within the country. This is especially important in the case of large archipelagic nations such as Indonesia, the Philippines and the Pacific island states as well as island nations and countries with long coastlines. Strict adherence to cabotage is still pursued in most of the countries in the Asia-Pacific region. Naval personnel including the marine police or coastguard personnel are often trained in separate institutions may well be considered part of the larger body of seafarers which is clearly regarded as an indispensable manpower resource for any maritime nation. Often trained naval personnel may be transferred to commercial shipping as in the case of Thailand. This aspect, however, falls outside of the scope of this study as are fishermen which are seafarers in their own right.
- (c) Seafarers are required not only to man domestic shipping but also harbour craft, port and river pilots as well as a range of commercial marine related services which must be manned by trained seafarers. These include personnel in government transport ministries, marine departments and agencies, port operations^{6/} and management; rescue vessels; marine surveyors (for classification societies, marine insurance and finance), cargo surveyors, shipbuilding and repair, shipping companies, cargo agents and freight forwarding, shipmanagement and crewing companies, salvage companies, shipbroking and chartering, ship chandling, offshore oil exploration and production, seabed cable laying craft, and instructors and trainers in maritime training institutions. A thorough-going study would necessarily involve estimations of the number of seafarers employed in such services. It has been estimated that some 20 per cent of the labour force in Hong Kong is directly or indirectly employed in the shipping, ports and marine-related activities out of which a significant proportion would be trained seafarers.
- (d) It is not uncommon to encounter many ex-seafarers after undergoing additional professional/academic training entering into professions such as maritime law and arbitration; marine insurance and finance; ship chartering and broking, maritime research and education, journalist, consultancy services, etc. concerned with shipping. While professionals in these services need have no prior formal training as seafarers, those with sea-going experience are likely to have an edge over others without any experience serving onboard vessels. These professionals provide services that can earn high revenue and profits. Their services broaden and give greater depth to the shipping industry. They

6. Such services include harbour pilots, ship inspectors, controller of ship movements within port limits and congested waterways, crews on bunker boats, and oil spill control and fire fighting ships.

are particularly valued because of their close links with trade and the promotion of export-oriented manufacturing industries.

- (e) Seafarers possess professional, technical and practical training and education which render them amenable to taking on certain alternative employment. Apart from those service mentioned above for both navigating marine officers as well as ordinary seamen, marine engineers for example can easily take up work as engineers looking after electric power generators, and hotel and plant engineers or supervisors. While radio officers have now largely been rendered redundant, the need for the so-called electro-technical officers has become essential for the highly automated ships of today. After retraining, they are then easily absorbed in the booming telecommunications industry. Clearly ships' cooks have no problem entering into the hotel catering and restaurant industry and starting up their own food outlets. For the ordinary seamen with skills as machinists, carpenters, painters etc. their employment depends greatly on the employment situation of their respective countries. Their transition to land-based employment may be assisted by additional training and upgrading of skills.
- (f) Passenger shipping remains an important part of domestic transport between islands, and along coasts and along rivers. Inter-island shipping is particularly important for archipelagic and island nations. There are many large navigable waterways within the region and large amounts of cargo and numbers of passengers are transported along such major rivers as the Ganges, Brahmaputra, Yangtse, Pearl, Chao Phraya, Mekhong, Salween and the Red River. Maritime personnel manning the numerous small craft plying these waters perform an immensely important task in the national economy.

2.1 New opportunities for employment of trained seafarers

In addition to normal passenger shipping, there has been rapid growth in the cruise industry in the Asia-Pacific region which is fast developing into a new leisure industry for the region. Both Singapore and Malaysia have built modern passenger terminals to cater to these cruise vessels. The demand for seafarers manning these ships is very considerable. Additional safety is required for these ships which carry a larger complement of senior officers than cargo ships.

There has also been rapid growth of ferry services including those capable of carrying motor vehicles. The development of the Singapore-Johor-Riau growth triangle as well as other similar developments elsewhere in the region has brought about investments across sea boundaries requiring ferries and shipping services. There is a particularly active network of ferry services between Singapore and the surrounding islands of Riau and also with terminals in Johor and Sumatra. Most of the seafarers are Indonesians.

Port State control aims at eventually inspecting 50 per cent of ships calling at ports within the region. With several hundred ships calling daily at the major ports of the Asia-Pacific States, the need for more ship inspectors to carry out port state control is great. It will also be necessary to train these inspectors requiring additional training facilities in all of the maritime states in the region.

Ports in the Asia-Pacific region have been growing very rapidly. More than half of the largest 20 container ports around the world are located in the Asia-Pacific region. There has been increased need for harbour pilots in all of the larger ports. The waters around and within the larger ports such as Hong Kong and Singapore are becoming highly congested requiring more pilot boats as well as other harbour craft to ensure safety of navigation, fire-fighting, oil spill control as well as to help carry out customs and immigration and marine police functions. Ports also employ hydrographers to undertake marine surveys and to produce charts for navigation and other purposes.

2.2 Contribution of trained seafarers employed in shore positions

The shipping industry of any country needs a large corps of trained and experienced maritime personnel to fill a range of port and marine related jobs. These are essential personnel to operate seaports, terminals, shipyards, undertake administration of maritime matters, manage shipping and related companies which together form the larger community of the shipping industry of the countries concerned. There is also a great need for trained instructors, educators, and researchers in the maritime field.

Inspection of ships carried out by port inspectors that go on ships to check on equipment and qualifications of seafarers to ensure that they comply with international and national legislation have been given greater emphasis in recent decades. With the signing of the Memorandum of Understanding on Port State Control in 1994 for countries in the Asia-Pacific region, additional need for inspectors will also be required. In the Marine Department, Singapore, there are 18 trained maritime officers that undertake the work of surveyors ship registration. They can be assigned to undertake survey of ships under the Port State Control agreement. With 276 ship arrivals (1994) daily, the task of even carrying out the minimum of ship inspections is enormous and clearly more inspectors will be required. There are three marine officers employed as surveyors by the Port of Singapore Authority to carry inspection of passenger ships. Such trained marine personnel are needed to help run ports and maritime administration in all ports in the region.

In addition to the increased need for ship surveyors to carry out classification work and the annual inspections for the additional ships in operation, there is also the anticipated implementation of the International Ship management (ISM) first on a national basis before it becomes mandatory. The Code requires manuals to be prepared for each vessel and it appears that very few in the region have the experience and knowledge to write them. There is a similar need for shipping companies wishing to qualify for ISO 9002 quality standards requiring the expertise of those with an intimate knowledge of the operation and management of ships. This will require not only trained officers but also

individuals who have the literary skills to write the manuals. There will be a need for many competent people to meet the 1998 dateline for the ISM Code.

Trained seafarers are also needed to fill management positions and superintendencies in shipping companies and shipyards if countries are to aspire toward developing their trade and maritime industry. Assuming an average of one superintendent for every five ships, the number required for Singapore alone would be around 250 and for the region, a total of 5,572 would be required (based on 1994 figures). Indications of their contribution are given in the professional associations of charterers, shipmanagement, master mariners, marine engineers, marine architects, marine industry, freight forwarders, etc. Many ex-mariners also fill the ranks of maritime lawyers, ship financing positions in banks and marine insurance companies. Mention should also be made of the seafarers' unions that help to protect, promote, train, and provide welfare services to their members. There is also a small but important group of officials in international and regional maritime organisations that are drawn from experienced seafarers.

While the contributions, in monetary terms, of seafarers currently employed can be estimated, one can only guess the contribution, directly and indirectly, of seafarers that have left the sea and have taken up shore-based maritime-related positions. Countries that aspire to become 'maritime nations' are appreciative of the need to train and to support a core of national seafarers to man their ships and in time to filter to the broader shipping industry to help manage shipping and related businesses. The idea of maritime security and defence is often tied up with this concept of a maritime nation.

2.3 Direct financial benefits of employment on foreign vessels

There are considerable direct financial benefits arising from seafarers, particularly those from developing countries, being employed on foreign-owned ships. It forms part of the employment of overseas workers for developing countries with the aim to find employment for otherwise unemployed labour and to generate income and much needed foreign exchange. Countries such as China and the Philippines require that a proportion of the wages paid to their seafarers employed on foreign-owned ships be repatriated. Overseas employment of Korean seafarers generated \$308.79 million for the first 8 months of 1987 and totalled \$430 million for the year 1986.^{7/} As the Korean economy grew, wage levels rose rapidly and as the differential between wages paid to seafarers and land-based workers narrowed, the attraction of going to sea falls away. This has been the experience of all of the NIEs and all of these countries are faced with declining recruits to the maritime training institutions and falling number of national seafarers.

For developing countries with low income levels, wages earned as seafarers employed on foreign-owned ships can be as much as ten to a hundred times compared with the income of wage-earners employed in their home countries. Filipino seafarers and overseas contract workers contribute around US\$3 billion (75.6 billion pesos) a year

7. Korea Maritime News, 15 Oct 1987, pp. 8-9.

to the Philippine economy (Chong, 1995). The steady flow of foreign exchange brought into the country has no doubt helped to tide the economy over depressed conditions in the 1980s. In the case of Samoa, total earnings by seafarers serving on foreign-owned vessels come to approximately US\$690,000 (1.7 million Samoan tala) per annum at present. This is a considerable income for small villages engaged in primarily subsistence farming and fishing.

2.4 Promotion of seafaring

Most countries maintain a policy of restricting to employing national seafarers on national ships with provisions for exemptions when there are insufficient crews to man the ships. On the matter, Commonwealth countries adopt a mutual recognition of the certificates of competency obtained within member countries. Thus, the United Kingdom of Great Britain and Northern Ireland and Australia have been able to attract candidates from other Commonwealth countries. By the same token it will be possible for member countries with good quality maritime training programmes to do likewise. Due to the shortage of seafarers, Hong Kong has a system of validating the certificates of countries supplying seafarers to their ship operators. Singapore has promulgated a General Exemption Order allowing any holder of a certificate issued by the competent authority of his own country to sail on a Singapore registered vessel. As part of the package offered to owners registering their ships in Singapore, a refund of 50 per cent of the annual tonnage tax is payable for foreign-going ships whose manning complement consists of at least 25 per cent of Singaporean crew (Say, 1981). Many countries exempt earnings of seafarers employed on foreign-going and foreign-owned ships from income tax as an incentive for them.

The most positive way to promote seafaring is by establishing institutions to train seafarers and to incorporate it into the education system of the country as a whole. Examples and details are given in the case of Japan by Sazutami (1983), Indonesia by Sabaroedin & Goenawan (1989) and the Philippines by Mier (1989). These institutions then become the source of generating streams of recruits into the seafaring industry to fill the ranks of the men who man the ships and help run shipping and related enterprises. One indication of the strength of seafarers is the membership of seafarers' unions and associations. In Singapore, the Society of Naval Architects & Marine Engineers, Singapore, has a membership of over 900. They are employed mainly in the shipyards, shipping and shipmanagement companies, classification societies, marine consultancy and services firms, and maritime training institutions. The Singapore Nautical Institute has a membership of some 350 and they are engaged in shipping and shipmanagement companies, ship chartering and broking, cargo agency and freight forwarding companies, government service, the Port of Singapore Authority, training institutions, and some go on to become lawyers and arbitrators. The Chartered Institute of Transport, Singapore, has some 700 members and about half of them are the marine transport sector. These organisations continue to foster and enliven the stock of ex-seafarers that continue to contribute to the nation's shipping industry. It should be noted that these institutions are affiliated with the Commonwealth countries and have their headquarters in the United Kingdom.