Doing Business in Malaysia:
Maritime Defence and Security;
Marine Related Industries

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Prepared by
Prepared for
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EXECUTIVE SUMMARY

This report has been prepared for the Western Australian Trade Office in Kuala Lumpur to assist Western Australian (WA) companies and government agencies to identify business opportunities in the Malaysian maritime Defence industry and other marine-related industries.

The report provides an overview of the current state of maritime Defence and marine-related industries in Malaysia. For the purpose of this report, the maritime Defence industry includes the Royal Malaysian Navy (RMN), the Malaysian Maritime Enforcement Agency (MMEA), and other maritime enforcement agencies. Marine-related industry refers to the oil and gas, shipping, shipbuilding, ports and harbours, fisheries and aquaculture sectors.

This report is written in two parts. The first part describes important aspects of doing business in Malaysia, including: registration processes, expatriate employment, and business associations. The second part focuses on doing business with the marine sector in Malaysia and includes discussion on the following industries:

- Ports,
- Shipping,
- Shipbuilders and Repairers,
- Fisheries,
- Oil and Gas, and
- Maritime Defence

Each industry is considered from the perspectives of services provision and product sales.

Services

As Malaysia has moved away from an earlier dependence on aid assistance, Government agencies have made provision in their operating budgets for professional consulting assistance. This trend accelerated in the late 1990s as the economy recovered from the Asian economic crisis. Consulting firms are now frequently engaged to assist Government with policy formulation, planning and project management supervision. However, in some respects, Government officials are still feeling their way on how to use consultants, and this can sometimes make for clumsy terms of reference and poor understanding of the linkage between the scope of services and cost.

Training delivery has also become an important service in Malaysia. Human resource capacity building is widely acknowledged as a driving mechanism to create an economy based on technology and knowledge. Opportunities are available in this field with emphasis on personnel development courses to the RMN, MMEA, Marine Police, Marine Department, marine resources management agencies, shipping companies, and ports and harbour management companies and authorities.
Products

The provision of products to the maritime Defence industry and other marine-related industries also presents an opportunity for newcomers to the Malaysian market. However, many Malaysian companies benchmark against international standards and there can be tough competition in certain of these industries, e.g. the oil and gas industry. However, other industries, such as shipbuilding, fisheries and aquaculture, can certainly benefit from new and innovative products. Products that incorporate highly advanced technology are also desirable in sectors such as maritime Defence and enforcement, and oil and gas. However, significant effort is required on aspects such as marketing and promotions in order to capture market share against established competitors.

Entry Requirements

A good knowledge of the entry requirements for the Malaysian market is essential to ensure that informed decisions are made prior to costly expenditure on business development in Malaysia. This report outlines the company registration requirements, and various other registration requirements to engage in business with Government, and to pursue opportunities with Government Linked Companies (GLCs). The report also discusses partnering options to help strengthen the position of WA companies and improve access to relevant sectors.
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PART 1 – DOING BUSINESS IN MALAYSIA

MALAYSIAN BUSINESS ENVIRONMENT

Most business in the maritime Defence sector, and much in other marine-related sectors, is done with Government as the client. This means that companies must learn how to deal with public officials and must be structured correctly to execute Government-related business. Even when business is conducted between private-sector entities, the ultimate client will often still be Government, and certainly a range of permits and licences may apply.

In general, the Malaysian Government welcomes the transfer of technology and direct investment from foreign companies. However, much of the regulatory framework and attitude of Government is directed at ensuring the active participation of Malaysian partner companies. This is an inescapable aspect of doing business in Malaysia, and WA companies are best advised to look for avenues to turn it to advantage rather than attempt to circumvent it.

Liberal Equity Policy

Previously, foreign investors in Malaysia's manufacturing sector could only hold 100% equity in projects that exported at least 80% of their production. However, effective from 17 June 2003, 100% foreign equity holding is allowed for all investments in new business, as well as investments in expansion/diversification projects by existing companies irrespective of their level of exports.

Employment of Expatriates

Foreign companies in the manufacturing sector are allowed to employ expatriates if people with the appropriate skills are not available in Malaysia. A company with foreign paid-up capital of US$2 million and above will be allowed up to 10 expatriate posts, including five permanent posts. Companies with lesser paid-up capital, including Malaysian-owned companies, can also sponsor expatriate staff, but will need to argue a case on why local staff cannot meet the specified requirement. Expatriate work visas will usually be awarded to successful applicants for a duration of up to two years.

Attractive Tax Incentives

Malaysia's company tax rate is attractive at 28% and is applicable to both resident and non-resident companies. Malaysia also offers a wide range of tax incentives for manufacturing projects under the Promotion of Investments Act 1986 and the Income Tax Act 1967. The main incentives are the Pioneer Status, Investment Tax Allowance, Reinvestment Allowance, Incentives for High Technology Industries, Incentives for Strategic Projects and Incentives for the Setting-up of International/Regional Service-based Operations.

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1 Supportive Government Policies, Malaysian Industrial Development Authority (MIDA) web-site http://www.mida.org/
Market Entry Requirements

In order to sell products or provide services as a company operating in Malaysia, there are a number of registration requirements to fulfil. Some of these, such as registration of a local company, will be familiar to Australians; however, others will no doubt be unfamiliar, e.g. ‘bumiputera’ status.

Nevertheless, these details are important because they hold the key to access business that is reserved for certain Malaysian companies. If structured wisely, WA companies can participate broadly in Government business as an accepted ‘Malaysian’ entity.

A) Provision of Services and/or Products to the Malaysian Government

To be able to offer services and products to the Malaysian Government, all firms, both foreign and local must be appropriately incorporated and registered with the Malaysian Government. In certain circumstances, a firm may also register as a bumiputera company, which allows it to participate in government tenders. The process of incorporation and registration is detailed below.

Process of Registration with the Government: Company Incorporation

To be a supplier of services and/or products to the Malaysian Government for any sector, including maritime Defence and marine-related areas, a business agent must first be appropriately registered with the Companies Commission of Malaysia (CCM) to form a Sendirian Berhad (Private Limited) entity. An application must be made to the Companies Division of the Companies Commission of Malaysia enquiring whether the proposed name for the company is available. If the Malaysian company is to use the same name as an Australian parent, a letter of authorisation to use that name may be required. Also, if the word ‘Australian’ is included in the name, a letter of authorisation to that effect may be required from the Australian High Commissioner to Malaysia. Once the name is approved a three-month period of reservation is given. Each name application will cost RM30.00.
For registration of a company, fees range according to nominal share capital, e.g.:

<table>
<thead>
<tr>
<th>Share Capital</th>
<th>Company Registration Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not exceeding RM100,000</td>
<td>RM1,000</td>
</tr>
<tr>
<td>Exceeds RM500,000 but does not exceed RM1 million</td>
<td>RM5,000</td>
</tr>
<tr>
<td>Exceeds RM5 million but does not exceed RM10 million</td>
<td>RM10,000</td>
</tr>
<tr>
<td>Exceeds RM50 million but does not exceed RM100 million</td>
<td>RM50,000</td>
</tr>
<tr>
<td>Exceeding RM100 million requires</td>
<td>RM70,000</td>
</tr>
</tbody>
</table>

Table 1: Company registration fees according to share capital

Sourced from Suruhanjaya Syarikat Malaysia (SSM) [http://www.ssm.gov.my/](http://www.ssm.gov.my/)

The promoter or agent must lodge the Memorandum & Articles of Association, Statutory Declaration of Compliance and Statutory Declaration together with relevant fees with the Companies Commission of Malaysia (CCM) within the three-month reservation period. Once registered, the company would then need to identify the focus of its business and take steps to appoint directors.

**Registration with Ministry of Finance**

To provide any type of service and / or product to the Government, a company must first register as a supplier of goods / products, or as a consultant for services, with the Ministry of Finance (MoF). This can be done through the E-Perolehan or E-Procurement service that is available on the MoF web-site [http://www.eperolehan.com.my](http://www.eperolehan.com.my). An approval or rejection note of application is then given to the company within 2-4 weeks from the date of submission. A rejection statement will be accompanied with reasons for the rejection. Companies can then reapply after fulfilling the requirements of MoF.

Note: Applications made electronically must be supported by hard copy.

Once a company is registered as an approved supplier and / or consultant with the Ministry of Finance, a certificate will be issued formally to enable the company to participate in selected Government contracts.

**Bumiputera Registration with Ministry of Finance (MoF)**

The MoF have an entirely separate registration process for bumiputera status for companies. The word ‘bumiputera’ is generally used in Malaysia to embrace ethnic Malays as well as other indigenous ethnic groups. Chinese and Indian Malaysians are not bumiputera.

In order to be awarded ‘bumiputera status’ a company should aim for a minimum of 70% of voting shares to be held by bumiputera entities. However, such companies will also need to demonstrate that a majority of Directors are bumi, and that the most senior members of
management (i.e. Chairman, Chief Executive, etc.) are bumi. All signatories on cheque-books must also be bumiputera, and bumiputera people should make up most of the staff.

Bumiputera registration is available only for suppliers of goods. Consulting companies cannot register as a bumiputera company.

Registration as a bumiputera company, allows a firm to apply for those Government project tenders that restrict participation only to bumiputera-registered companies. Many Government tenders are restricted to bumi companies. Consequently, non-bumi companies will often bid through a bumi partner, although some companies choose to restructure in order to qualify as bumiputera in their own right.

Most government-linked companies (GLCs) and government-owned companies, like PETRONAS, require their suppliers and consultants to have a minimum bumiputera participation of 100% at the equity, Board of Directors and management levels. However, only 70% at the employment level i.e. 70% of the overall staff composition must be bumiputera.

Therefore companies that intend offering products and services to the Malaysian Government should consider registering with the Ministry of Finance as a bumiputera supplier of goods, to gain the greatest opportunities. There are a number of strategies that can be employed to lower risk, maintain control and capture wealth as an Australian subsidiary with bumiputera status. However, these strategies are beyond the scope of this report and should be explored with advice from appropriate Malaysian-based professionals.

**Registration as a Foreign Entity**

Firms can register with CCM as a wholly-owned foreign entity. This means that the board of directors, shareholders, management and staff of these firms are entirely made up of foreigners or expatriates.

Such arrangements allow foreigners to retain full control of decision making and strategies for the local market. Firms opt to register as foreign entities for various reasons. Some firms register as 100% foreign entity because of company policy concerning business strategy, equity, control of information and other reasons, which may not always be in the best interest of the local Malaysian firm.

Companies that register as a fully foreign-controlled entity will be able to offer products and services to private-sector companies. However, foreign firms have to think creatively for a way to deliver services or products to the Malaysian Government if they wish to do so. Most foreign firms act as a sub-contractor to a bumiputera company to supply their expertise to the Malaysian government.

**B) Provision of Services and/or Products to the Malaysian Private Sector**

Doing business with Malaysian private sector companies is more straightforward than with the Government. Companies that wish to supply products and services solely to the private sector need not structure themselves to qualify as a bumiputera company. However, if there
is no impediment to such a structure being adopted, the preferred option should probably be to register as a bumiputera company. Notably, some bumi prime contractors can be instructed as a condition of contract, that sub-contractors must also be bumiputera.

In addition to registering as either a bumi or JV partner, firms can increase market presence through linkages with professional bodies. Registering with the respective bodies strengthens credentials within the country, and allows firms to draw upon the experience of more established firms and access a ready network of specialists.

The following are some examples of organisations that are either government, professional, regulatory or industry groups. These are organisations that may especially be able to assist new–entry foreign companies in their quest to capture market share in the maritime Defence industry and other marine-related industries:

**Board of Engineers Malaysia (BEM)**

The Board of Engineers Malaysia is established for the purpose of regulating the professional conduct and practice of registered engineers so as to safeguard the safety and interest of the public. There are a few types of BEM registrations:

- Graduate Engineers,
- Professional Engineers, and
- Bodies Corporate.

BEM falls within the ambit of responsibility of the Minister of Works. The Minister may suspend the operation of the Registration of Engineers Act 1967 in any part of Malaysia by notification in the gazette. The appointment of the Board Members and the Registrar within BEM is made by the Minister.

Foreign engineering consultants must register with the Board of Engineers Malaysia (BEM) as a professional engineer. However, they must first ensure that the BEM’s requirements for this registration have been fulfilled (please refer to [http://www.bem.org.my/](http://www.bem.org.my/) for more information). Please note that this requirement applies also to marine engineers and coastal engineers.

Foreign engineering consultancy firms that would like to carry out business in Malaysia must register with BEM under the bodies corporate registration. All engineering consultancy companies in Malaysia must register with BEM if they desire to undertake work in the country.

**Malaysian Defence Industry Council (MDIC)**

Another independent body that might assist new maritime Defence companies in working with the other entities in the Defence industry is the Malaysian Defence Industry Council (MDIC). MDIC is an independent body that aims to undertake a structured development of the local

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Defence industry based on the articulated objectives of Government. It is also a forum that is used to discuss common problems encountered by Defence companies in the Industry.

MDIC also assists in the promotion of products and services for Malaysian Defence industry companies. Among the functions of MDIC are:

- Disseminate information to Defence companies regarding offsets and transfer of technology.
- Facilitate the dissemination of information relating to export opportunities and assist Defence companies in accessing foreign markets.
- Assist and coordinate representation of Defence companies at relevant overseas trade shows, promotions and marketing activities.
- To act as a clearinghouse for the exchange of information and to organise seminars on Defence industry related issues.
- Develop and build upon working relationships with appropriate foreign Defence industry organisations.

However, Australian companies would do well to remember that committee members of the Council are also active in business, and may well be from a competitor's firm.

**Malaysian Industrial Development Authority (MIDA)**

The Malaysian Industrial Development Authority (MIDA) is the Malaysian Government's principal agency for the promotion and co-ordination of industrial development in Malaysia. MIDA can assist new-entry foreign companies to establish their business in Malaysia, and is the first point of contact for investors who intend to set up manufacturing and related services projects in Malaysia.

MIDA's functions are as follows:

- to promote foreign and local investment in the manufacturing and related services sectors;
- to undertake planning for industrial development;
- to recommend to the Minister of International Trade and Industry policies and strategies on industrial promotion and development;
- to evaluate applications for:
  - incentives provided under the Promotion of Investments Act 1986 for promoted manufacturing activities, tourism, R&D, training institutions and software development;
  - manufacturing licences under the Industrial Coordination Act 1975 and the Petroleum Development Act 1974;
  - expatriate posts required by manufacturing projects; and
  - tariff protection/duty exemption for raw materials, components and machinery.
- to facilitate new and existing companies in the implementation and operation of
their projects, and offer assistance through direct consultation and co-operation with the relevant authorities at both the Federal and State levels;

- to facilitate the exchange of information and co-ordination among institutions engaged in or connected with industrial development;
- to enhance MIDA’s role of providing assistance to investors, senior representatives from key agencies are stationed in MIDA. These include officials from the Ministry of Finance, the Ministry of Human Resources, the Immigration Department, the Royal Customs and Excise Department, the Department of Environment and the Department of Occupational Safety and Health.
Association of Marine Industries of Malaysia (AMIM)

The Association of Marine Industries of Malaysia (AMIM) was established on 14 March, 1984 and was initially known as Association of Shipbuilders and Repairers of Malaysia (ASROM).

Some of the primary objectives of AMIM are:
- To protect, safeguard, preserve and strive for the interest of its members to meet the growing demands of the industry and the aspiration of Malaysia to be a Maritime Nation;
- To develop and improve standards and technology by establishing standards that conform with the global benchmark and applying them to Malaysian Shipbuilding, Ship repair and general Marine industries;
- To act as a means of communication and a forum for its members to interact, contribute and consolidate their ideas and experience to improve the industry; and
- To act as a source of reference for Marine industries of Malaysia by providing an information kiosk, directory and other services to promote and introduce the activities of its members.

Malaysia-Australia Business Council (MABC)

The Malaysia Australia Business Council (MABC) is a private, non profit organisation that was established early in 1986 to provide a forum for discussion and an exchange of views on business conditions and issues, both domestic and international, affecting Malaysian and Australian companies and personnel.

Objectives of the MABC
i. To promote and foster close relations between Malaysia and Australia, in particular mutual understanding, goodwill, harmony and fraternity amongst the business communities of both countries.

ii. To provide a forum for meeting people involved or interested in enhancing trade and investment flows between Malaysia and Australia, in order to exchange ideas, experience, and information, develop contacts, and facilitate interaction.

iii. To identify, encourage and inform members (and other interested parties) of appropriate sources of information relating to trade and investment opportunities, practices and regulations, in Malaysia and Australia.

iv. To support Malaysian business interests in Australia, and Australian business interests in Malaysia, by providing information, advice and where necessary, a vehicle for representation/submission to appropriate bodies/parties.

v. To liaise and cooperate with organisations in Malaysia and Australia with aims similar to those of the Council.

3 Association of Marine Industries of Malaysia; Background http://www.amim.net/ami_bg.htm
**Membership Categories**

**Corporate**: Open to companies or firms with Australian interests; or which are interested in developing trade or commercial interests in Australia; or who are engaged in the promotion of Australian products or services in Malaysia. The entrance fee is RM800.00 and the annual subscription is RM800.00.

**Individual**: Open to businesspersons, being citizens of Australia, residing in Malaysia and who are engaged in business or a profession; or citizens of Malaysia who represent Australian companies in Malaysia or who have substantial interest in trading with Australia; or business persons who either individually or in association with a corporate entity are prominent investors in Australia. Entrance fee is RM200.00 and Annual subscription is RM200.00.

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PART 2 – DOING BUSINESS WITH THE MARINE SECTOR

Malaysia has a long coastline and large maritime estate in comparison with overall landmass. Indeed, East and West Malaysia are separated by an expanse of ocean. The Malaysian flag-shipping fleet is substantial and, as an export-oriented economy, shipping is a strategic activity. Consequently, Malaysia maintains a professional Navy that achieves impressive levels of operational performance. However, such is not equally the case for other maritime enforcement bodies. Accordingly, the Malaysian Government has decided to establish a new coastguard that will commence operations at the end of 2005. In general, the need for new technology, including vessels and human resource capacity building in support of Malaysian maritime Defence and security presents many opportunities for relevant WA companies.

Moreover, other marine-related industries are developing consistently with the advance of Malaysia towards developed country status. This section of the report summarises maritime Defence and marine-industry trends, and explores possible business opportunities that might be of interest to WA firms.
PORTS INDUSTRY

Provision of Services

Prior to the Port Privatisation Act 1990, Malaysian ports were managed and operated by the government. Post-implementation of the Act, the government role has become focused as a regulatory body, and private operators manage the commercial operations of ports. Table 2 illustrates the structure of the port industry in Malaysia.

Table 2: Malaysian Ports Structure

<table>
<thead>
<tr>
<th>FEDERAL PORTS</th>
<th>Privatised Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bintulu Port Authority</td>
<td>Bintulu Port Sdn Bhd (M)</td>
</tr>
<tr>
<td>Johor Port Authority</td>
<td>Port of Tanjung Pelepas(M)</td>
</tr>
<tr>
<td></td>
<td>Johor Port Berhad(M)</td>
</tr>
<tr>
<td></td>
<td>Tanjung Langsat Port Sdn Bhd</td>
</tr>
<tr>
<td>Kemaman Port Authority</td>
<td>PETRONAS</td>
</tr>
<tr>
<td></td>
<td>Kuantan Port Consortium Sdn Bhd</td>
</tr>
<tr>
<td>Kuantan Port Authority</td>
<td>Kuantan Port Consortium Sdn Bhd(M)</td>
</tr>
<tr>
<td>Penang Port Authority</td>
<td>Penang Port Sdn Bhd(M)</td>
</tr>
<tr>
<td></td>
<td>Langkawi Port Sdn Bhd</td>
</tr>
<tr>
<td></td>
<td>Kedah Cement Jetty Sdn Bhd</td>
</tr>
<tr>
<td>Port Klang Authority</td>
<td>Northport (Malaysia) Bhd (M)</td>
</tr>
<tr>
<td></td>
<td>Kelang Multi Terminal Sdn Bhd (Westport) (M)</td>
</tr>
<tr>
<td></td>
<td>Malacca Port</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STATE PORTS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Marine Department</td>
<td>Lumut Maritime Terminal Sdn Bhd(M)</td>
</tr>
<tr>
<td></td>
<td>Kertih Port Sdn Bhd</td>
</tr>
<tr>
<td></td>
<td>Labuan Port (not privatised)</td>
</tr>
<tr>
<td></td>
<td>Sg Udang Port Sdn Bhd</td>
</tr>
<tr>
<td>Miri Port Authority</td>
<td>(Not privatised)</td>
</tr>
<tr>
<td>Kuching Port Authority</td>
<td>(Not privatised)</td>
</tr>
<tr>
<td>Rajang Port Authority</td>
<td>(Not privatised)</td>
</tr>
<tr>
<td>Sabah Ports Authority</td>
<td>Sabah Port Sdn Bhd</td>
</tr>
</tbody>
</table>


Note: (M) – Member of the Federation of Malaysian Port Operating Companies

Private ports in Malaysia are represented by the Federation of Malaysian Port Operating Companies. The Federation addresses issues of interest and concern on behalf of its member ports.

The focus of port development has been on the designation of Port Klang as a National Load Centre in 1992. Cargoes from other ports in the national port system are encouraged to feed into Port Klang.
Current Development

In the 8th Malaysia Plan, the Government allocated RM3.04billion for ports development. The stated objectives of the plan are to focus on improved handling capacity, upgrade equipment and facilities, as well as to enhance efficiency and productivity of port and port-related services.

The Government encourages a supply-driven policy to attract shipping lines to call directly at local ports. The total container handling capacity amongst major ports in Malaysia is in excess of 15 million TEUs (Twenty-foot Equivalent Units) against a present demand of 9 million TEUs.\(^5\) Table 3 details port capacity and cargo handled in Malaysia from 2000 to 2005. The figures in Table 3 indicate a substantial increase in containerised cargo of 116% from year 2000 to 2003. This increase is due partly to greater container throughput in the Port of Tanjung Pelepas.

<table>
<thead>
<tr>
<th>Table 3: Port Capacity and Cargo Handled in Malaysia (2000-2005)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Port Capacity (million tonnes)</td>
</tr>
<tr>
<td>Number of berths</td>
</tr>
<tr>
<td>Number of cranes</td>
</tr>
<tr>
<td>Number of Ship calls</td>
</tr>
<tr>
<td>Volume of cargo handled (million tonnes)</td>
</tr>
<tr>
<td>General</td>
</tr>
<tr>
<td>Liquid Bulk</td>
</tr>
<tr>
<td>Dry Bulk</td>
</tr>
<tr>
<td>Container</td>
</tr>
<tr>
<td>Containerised cargo (million TEUs)</td>
</tr>
</tbody>
</table>


In addition, the Eighth Malaysia Plan reflects a desire to promote further the utilisation of Port Klang and Port of Tanjung Pelepas. A graphic representation of the growth in container throughput for Port Klang and the Port of Tanjung Pelepas is shown at Figure 1. The main contributor for the increase of container throughputs at Port Klang and Port of Tanjung Pelepas within the year 2000 to 2004 was a change in cargo composition, from handling bulk cargoes to containers.

\(^5\) Malaysian Maritime Yearbook 2005/2006, p45
All major ports are engaged in capacity expansion and various development projects to meet the demand for sea-borne trade. **Table 4** highlights some of Malaysia’s port development projects.

**Table 4: Malaysian Port Development**

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port Klang (mill)</td>
<td>3.21</td>
<td>3.76</td>
<td>4.53</td>
<td>4.84</td>
<td>5.20</td>
</tr>
<tr>
<td>Port of Tg Pelepas (mill)</td>
<td>0.42</td>
<td>2.05</td>
<td>2.66</td>
<td>3.49</td>
<td>4.02</td>
</tr>
</tbody>
</table>

**Northport, Port Klang**

Construction of Phase II - Container Terminal 3 (CT3). The new terminal will add 178 metres to the total container berth quayline of 2.9 kms with 4.0 million TEUs capacity. To support the container handling operation at CT3, there will be five (5) super post-panamax shore-side gantry cranes. In addition, Northport is developing eight (8) hectares of back-up area for container storage and to increase its total ground slots (TGS) by 1,400 TEUs. Phase II of CT3 and the new yard were expected to be ready for commercial operation by first quarter of 2005.

**Westport, Port Klang**

An additional 600-metre container terminal is being developed. The new terminal will raise the total berth length at Westport to 2.6 km by 2005.

**Penang Port**

Under the North Butterworth Container Terminal (NBCT) Phase IIIB Expansion project, NBCT will be able to handle 1 million TEUs per annum.

**Port of Tanjung Pelepas**

An additional 2.16km container berth is being developed under a Phase II development project.

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**Figure 1: Container throughputs in Port Klang and Port of Tanjung Pelepas**

Source: Various sources

<table>
<thead>
<tr>
<th>Year</th>
<th>Port Klang (mill)</th>
<th>Port of Tg Pelepas (mill)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>3.21</td>
<td>0.42</td>
</tr>
<tr>
<td>2001</td>
<td>3.76</td>
<td>2.05</td>
</tr>
<tr>
<td>2002</td>
<td>4.53</td>
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<td>4.84</td>
<td>3.49</td>
</tr>
<tr>
<td>2004</td>
<td>5.20</td>
<td>4.02</td>
</tr>
</tbody>
</table>

Source: Various sources
Table 4: Malaysian Port Development (Continued)

<table>
<thead>
<tr>
<th>Location</th>
<th>Development Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sabah Ports</td>
<td>A dedicated Container Terminal is being developed at Sepanggar Bay. The terminal with 40,000 TEUs capacity will be ready for operation in 2006 and will eventually handle Kota Kinabalu Container Terminal traffic. The Container Terminal will also be developed as a hub for The Brunei Darussalam-Indonesia-Malaysia-Philippines - East Asean Growth Area (BIMP-EAGA) region.</td>
</tr>
<tr>
<td>Bintulu Port</td>
<td>A new 1,000m general cargo berth is being developed at the second inner harbour basin.</td>
</tr>
<tr>
<td>Kuantan Port</td>
<td>A dedicated 400 metre Container Terminal has been developed and plans are on the drawing board to expand container, cruise and liquid chemical berths.</td>
</tr>
</tbody>
</table>


Human Resource Issues

A Federal Government supply-driven port development policy has enabled Malaysian ports to cater to bigger ships, especially containerships (e.g. Post-Panamax containerships), which require improved port infrastructure and facilities such as the provision of deeper port channels, longer berths, and higher and longer outreach cranes. In addition, local ports are now able to handle a higher volume of cargo for re-shipment to third countries as transhipment ports.

Consequently, port operators require qualified employees to operate new equipment and capable employees to manage the operations of the port. Westport (Port Klang) serves as a good example of the human-resource needs of Malaysian ports. Based on a study conducted by the Maritime Institute of Malaysia (MIMA) in 1998, Westport has had challenges recruiting an adequate number of skilled crane operators, prime movers (hauliers) and tugboat pilots to ensure that the Port meets international standards for the provision of port services. Westport has taken steps to meet personnel needs through in-house training, for example it has invested in a crane simulator to train operators prior to ground job training. Westport has also relied up on foreign employees for specialist positions, port / container operations and manual labour. In order to reduce the number of foreign employees, Westport has recruited young Malaysian graduates as management trainees to undergo an on-the-job training process internally or to enrol at the Maritime Academy of Malaysia (ALAM).

Opportunities

WA training institutions and companies with suitable capabilities could certainly offer Malaysian port operators training in the following fields:

- crane and hoisting equipment operator,
- marine pilotage,
- stevedoring,
- marine operations, and other specialised ports and harbours training.
Provision of Products / Equipment

As discussed earlier in this section, previously, Malaysian ports were managed and operated by the Government. Increasingly, ports are being privatised and the commercial operations of these ports are undertaken wholly by private entities. The privatisation of port operations has enabled companies that offer port equipment and products such as cranes and cargo handling equipment, warehousing equipment, dredging equipment & services, haulage and trucking services and other specialised ports and harbour products the opportunity of a larger market base.

Through privatisation, Malaysia has been able to entice more carriers to its ports and has marketed the country’s ports as a cheaper option. In recent years, more carriers have chosen to use Malaysian ports as their hub. Ports like Port of Tanjung Pelepas (PTP) and Port Klang are gaining significant transhipment traffic.

The Government’s supply-driven policy to attract shipping lines to call on local ports appears to have been successful and a rise in containerised cargo of 116% was experienced from year 2000 to 2003. This increase is due partly to greater container throughput in the Port of Tanjung Pelepas, as well as Port Klang.

Another interesting development is that the Kemaman Port (oil and gas supply base on the East Coast of Peninsular Malaysia) will be fully privatised by mid-2005. Hence, the possibility for companies to offer products and services to improve efficiency of the port is high. Again, a bumiputera company structure may be required to take advantage of such opportunities.

Opportunities

Companies that produce port equipment may consider offering Malaysian ports the following:

- Cargo handling equipments,
- Maritime structures,
- Comprehensive ports and cargo management and monitoring information system,
- Vessel traffic management,
- Vessel surveillance,
- Information system,
- Security surveillance, and
- Dredging services and equipment.

Maritime Civil Engineering

There are several large maritime civil engineering companies from Europe and Australia, which are involved in the design, construction and delivery of, specialized port structures in Malaysia. There are also local companies, like Ranhill and Muhibbah Engineering that have such expertise and have a considerable track record in maritime civil engineering providing their services to local ports. Unless companies can offer niche maritime civil engineering expertise that is not currently available, it may be difficult to offer non-differential services to local ports and their supporting industries.
Dredging Services

Dredging services and equipment supply can be considered fully-catered to by established companies in Malaysia. Therefore, opportunities in this area are limited.

Cargo Handling Equipment

Large cargo handling equipment such as rubber-tyred gantry (RTG) cranes are provided by foreign companies such as IMPSA Port Systems. IMPSA has received in total 26 units of RTG orders since entering the ports and harbour market in 2003, with 15 for Port of Tanjung Pelepas. Companies may consider agency-based opportunities with already established companies like IMPSA, or if superior marketing channels are available for products that are superior in technology and competitively priced, direct competition with more established companies.

Information Systems

WA companies may also offer maritime carriage monitoring solutions for containers, and information systems solutions for cargo management. A one-stop centre concept offering a range of cargo, warehouse and storage management, resource management, container terminal management, ship management and other systems may well be attractive to local ports.

Security Surveillance

Another opportunity would appear to be in the area of security surveillance equipment to help fulfil the International Ship and Port Facility Security (ISPS) code requirement. Companies that have this expertise may identify the needs, and approach the relevant port authorities and managers to demonstrate the capabilities of their equipment. However, the ISPS Code has attracted quite a lot of attention to this field of business, and Australian companies can expect to encounter competition from European and American technologies.
SHIPPING INDUSTRY

Ship-owners

Malaysia’s economic trade is powered by sea borne transportation. For at least the last 30 years, the Malaysian Government has supported the expansion of national shipping capacity, as evident by the creation and continued encouragement of the Malaysia International Shipping Corporation Bhd (MISC) since 1968. Although the Malaysian merchant fleet has grown over the years, much of the demand for shipping services is still met by foreign shipping lines.

Currently, there are more than 100 foreign and local shipping lines calling at Malaysian ports to provide a worldwide network of services. Of these, there are 63 foreign shipping lines calling at local ports, which have a link to about 200 ports worldwide.

The Malaysian Ship-owners’ Association (MASA) aims to promote and protect the interest of Malaysian ship-owners, and to represent members of the association in dealings with the Government and its agencies on matters of relevant interest. MASA members account for two-thirds of the country’s merchant fleet tonnage. Table 5 illustrates the growth of the MASA members’ fleet.

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Ships</th>
<th>GRT (million)</th>
<th>DWT (million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>227</td>
<td>2.2</td>
<td>3.3</td>
</tr>
<tr>
<td>1997</td>
<td>262</td>
<td>2.8</td>
<td>4.0</td>
</tr>
<tr>
<td>1998</td>
<td>299</td>
<td>4.0</td>
<td>5.7</td>
</tr>
<tr>
<td>1999</td>
<td>297</td>
<td>4.3</td>
<td>6.2</td>
</tr>
<tr>
<td>2000</td>
<td>321</td>
<td>4.4</td>
<td>6.3</td>
</tr>
<tr>
<td>2001</td>
<td>405</td>
<td>4.5</td>
<td>6.3</td>
</tr>
<tr>
<td>2002</td>
<td>451</td>
<td>4.7</td>
<td>6.5</td>
</tr>
<tr>
<td>2003</td>
<td>549</td>
<td>6.7</td>
<td>10.1</td>
</tr>
</tbody>
</table>

Source: Malaysian Shipowners’ Association

Current Development

The Malaysian International Shipping Corporation (MISC) – a subsidiary of PETRONAS – is the largest single owner of LNG tankers in the world. The principal business of MISC consists of ship-ownership, ship management and other related logistics and maritime transportation services. Table 6 (overleaf) provides a breakdown of the types of vessel owned by MISC and the number of new-buildings ordered until 2008.
Table 6: MISC Fleet as at 1 April 2005

<table>
<thead>
<tr>
<th>Type of Vessels</th>
<th>Current Fleet</th>
<th>New Buildings (2005 – 2008)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNG tankers</td>
<td>18</td>
<td>11</td>
</tr>
<tr>
<td>Petroleum tankers</td>
<td>51</td>
<td>7</td>
</tr>
<tr>
<td>Chemical tankers</td>
<td>13</td>
<td>-</td>
</tr>
<tr>
<td>Containership</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Bulk Carriers</td>
<td>4</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: http://www.misc.com.my

In addition to MISC, other large Malaysian shipping companies include: Malaysian Bulk Carriers Bhd, Wawasan Shipping Sdn Bhd, Konsortium Perkapalan Berhad, Kontena Nasional, Maersk Malaysia Sdn Bhd and Halim Mazmin Bhd.

Malaysian domestic shipping is regulated by a cabotage policy that was implemented on 1st January 1980. The Policy reserves the national trade in domestic waters to Malaysian-owned companies and Malaysian flagged ships. Implementation of the Policy has required amendments to the Merchant Shipping Act 1952 (MSO 1952) to provide for the establishment of the Domestic Shipping Licensing Board (DSLB) to regulate and control the issuance of ship licenses for companies engaged in domestic shipping between ports in Malaysia.

However, in 1994, the Malaysian Government allowed foreign ships to carry cargo between specified ports (local ports) but only as part of an international leg. For example, cargo from Penang Port may be shipped to Port Klang by a foreign flag-ship provided that the final destination of the cargo is not Port Klang but a foreign port. This relaxation of the cabotage policy was made to foster the development of Port Klang as the National Load Centre.

The Malaysian Government has also introduced a range of fiscal and financial measures to encourage the development of Malaysian fleet (please refer to Table 7).
Table 7: Fiscal and Financial Incentives for the Development of Malaysian Merchant Fleet

<table>
<thead>
<tr>
<th>Incentive Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blanket Tax Exemption</td>
<td>Provision of blanket tax exemption to Malaysian shipping companies on shipping incomes earned from operating national flag vessels. Any dividend paid out of such an exempt account is also tax exempt.</td>
</tr>
<tr>
<td>Fiscal Incentives</td>
<td>Accelerated depreciation allowance on ships is allowed with an initial first year capital allowance of 20% and a further 6 to 10%.</td>
</tr>
<tr>
<td>Income Tax Exemption</td>
<td>Exemption from income tax for Malaysian crew serving onboard Malaysian flag vessels.</td>
</tr>
<tr>
<td>Import Duty Exemption</td>
<td>Exemption of import duty on vessels above 4,000 GRT. (An import duty is imposed on vessels more than 26 GRT but less than 400 GRT and 30% on vessels less than 26 GRT).</td>
</tr>
<tr>
<td>Bank Support</td>
<td>Creation of Bank Industri dan Teknologi with a view to provide funds for the maritime sector.</td>
</tr>
<tr>
<td>Shipping Fund</td>
<td>Creation of Shipping Fund to finance acquisition of ships as well as venture capital for equity participation in local companies.</td>
</tr>
</tbody>
</table>


Provision of services

In 2001, the Maritime Institute of Malaysia (MIMA) conducted a study on the human resource requirements of Malaysian seafarers. The study concluded that Malaysia relies on the services of foreign seafarers to fulfil approximately 44% of the manning requirements for Malaysian registered vessels.

Some factors that inhibit growth in the supply of Malaysian seafarers are: a decline in sponsorship for cadets; limited berths for training; and difficulty in obtaining employment on ships. The difficulty to secure berths for training poses an obstacle particularly for non-ship-owning sponsors and self-sponsored trainees. Those unable to obtain a berth for training at sea are unable to continue their certification process.

In 2004, MIMA conducted another study as a follow up to that conducted in 2001. A total of 49 Malaysian shipping companies participated in the survey, which represents 70% of total GRT recorded in the Malaysian registry. The findings of the second study largely reconfirmed those of the former, with no trend of improvement or deterioration of employment for Malaysian seafarers evident.
Table 8: Distribution of seafarers involved in the Malaysian Maritime Institute survey 2004

<table>
<thead>
<tr>
<th>Rank</th>
<th>Malaysian</th>
<th>Foreigners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deck Officers</td>
<td>757</td>
<td>863</td>
</tr>
<tr>
<td>Engineers</td>
<td>1,002</td>
<td>916</td>
</tr>
<tr>
<td>Other officers</td>
<td>508</td>
<td>420</td>
</tr>
<tr>
<td>Deck Crew</td>
<td>1,267</td>
<td>1,083</td>
</tr>
<tr>
<td>Engine Crew</td>
<td>778</td>
<td>1,010</td>
</tr>
<tr>
<td>Other crew</td>
<td>582</td>
<td>3,569</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td><strong>4,894</strong></td>
<td><strong>7,861</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12,755</strong></td>
<td></td>
</tr>
</tbody>
</table>


Table 8 illustrates the distribution of seafarers in accordance to duty. The ratio between Malaysian and foreign seafarers is (1:1.5). Foreign seafarers include those from: America, Lithuania, Yugoslavia, and more recently from China, India, Indonesia and Philippines.

The Malaysian Shipping Ordinance (MSO) 1952 states that 75% of the crew on Malaysian ships should be Malaysian citizens but there are several Malaysian-registered ships reportedly employing a crew consisting of 100% foreigners.

Other issues that have reportedly caused seafarers to leave their jobs were relatively low wages, a lack of training, and insufficient shore-leave. Captain Sapuan Sarpan, the President of the Malaysian Maritime Association has stated that local seafarers are not paid in accordance with the salary scale and training for seafarers because to do so would be expensive. Low wage rates do not attract people to pursue a career as a seafarer. A deck cadet can start with a basic monthly income of only RM370 and receive RM600 after two (2) years. Engine cadets with diplomas earn between RM500 and RM600. In comparison, a diploma graduate in land-based business could earn between RM1300 to RM1500 per month.

The Malaysian International Shipping Corporation Berhad (MISC) does invest in the training of seafarers for its vessels, but has difficulty in recruiting capable Malaysian crews. MISC also grapples with a steady loss of trained personnel to alternative land-based employment. These factors lead ship-owners to employ certified foreigners to make up for crew shortages. By doing so, they are able to avoid the cost of training local seafarers and, at the same time can hire the required manpower at lower costs than they would incur by hiring Malaysians.

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6 Saithuruka, K., Raw deal for Malaysian seamen, TheStar, 21st February 2005
7 Ibid
Opportunities

The opportunity for provision of seafarer training and certification courses is clearly evident. However, supply of suitable training services would need to be supported by a promotion effort by private ship-operators and the Government to ensure that seamen are paid commensurate salaries, sufficient leave, and other benefits to overcome the recruiting problems of local Malaysian seafarers.

Provision of products/equipment

Malaysia International Shipping Corporation Berhad (MISC) is the leading international shipping line of Malaysia. As mentioned earlier in this report, MISC’s largest shareholder is PETRONAS, with 62.44% equity. MISC is listed on the Main Board of the Kuala Lumpur Stock Exchange.

In the liquid bulk trade, MISC is the largest carrier of vegetable oils from South East Asia, including palm oil from Malaysia, which is the major component in this trade. MISC has five (5) main services: shipping, investment and holdings, shipping agencies, haulage and trucking & warehousing. In shipping services, MISC has six (6) business units; i.e. liner and logistics services, bulk shipping business unit, chemical tanker business unit, petroleum shipping business unit, LNG services and fleet management services.

A corporate restructuring exercise was undertaken in 1995, under which all non-shipping activities were grouped under a subsidiary company, MISC Enterprises Holdings Sdn. Bhd. (MEH), while the core shipping business remained under MISC Berhad.

Agencies

MISC Agencies Sdn Bhd (MISA) was incorporated in 1975 and has shipping agency houses with branches at all main ports in Malaysia. MISA is the shipping agent for MISC and other ship-owners from Japan, South Korea, Argentina, Canada and Singapore. As the agent, MISA markets the space and handles vessels in port belonging to the principals. MISA has also on-line computer facilities, which are linked to ports and Customs authorities and agents of MISC worldwide.

Haulage

MISC Haulage Services was set up in March 1991 primarily to provide haulage services for the container trade. MHS now commands 23% of the haulage market in Port Klang, 14% in Penang and 22% in Johor.
Trucking and Warehousing

MISC Trucking & Warehousing (MTW) commenced operations in 1992 at a warehouse complex in Port Klang. It offers cargo handling, storage, consolidation, distribution and other warehouse-related services. MTW provides complete door-to-door cargo transportation and will eventually have its first project in Port Klang to offer multiple warehouses customised for various specifications. Collection centres and interchanges are in the process of being strategically located throughout Malaysia.

In addition to MISC, other Malaysian shipping companies include: Malaysian Bulk Carriers Bhd, Wawasan Shipping Sdn Bhd, Sutrajaya Shipping Sdn Bhd and Halim Mazmin Bhd.

Opportunities

The following products and services are reflected in contracts that have been approved recently by MISC:

- Mooring system for a floating storage offloading unit (FSO) – contracted to SUBSEA 1 – contract value RM27 million or US$7 million;
- Memorandum of Understanding (MoU) with Brazilian based Single Buoy Moorings Inc (SBM) and Norwegian based Bergesen Worldwide Limited (BWW) to cooperate and explore opportunities in the supply, operation and maintenance of liquefied petroleum gas (LPG); Floating production storage and floating (FPSO); and floating production units (FPU).

Another service that has been provided to Malaysia Bulk Carriers is:


One aspect of services that could be provided to shipping companies in Malaysia is in the form of ship leasing. The concept of leasing vessels to clients, such as those in the oil and gas industry, is becoming increasingly attractive in Malaysia. There are requirements for supply and support vessels in the petroleum sector, and leasing of vessels is the industry norm for that sector. Appropriate WA companies may wish to explore the expansion of this concept to other fleet operators in Malaysia.
SHIPBUILDERS AND REPAIRERS

Provision of services

The shipbuilding industry is highly competitive in nature. As at 2005, there are six large shipyards with shipbuilding / repairing capabilities in Malaysia. They are: Malaysia Marine and Heavy Engineering (MMHE) (formerly known as Malaysia Shipyard & Engineering or MSE), Penang Shipbuilding Corporation (PSC)-Naval Dockyard, Sabah Shipyard, Ramunia Shipyard, Sasacom, and Muhibbah Marine Engineering. However, of these, Sabah Shipyard and PSC are known to have experienced severe financial crisis from which neither has yet recovered. There are also more than 70 smaller shipyards in operation that build fishing boats, small ferries, tugboats, barges, offshore petroleum workboats and crew boats, navigation buoy tenders and patrol boats for the domestic market.

In 2004, six shipbuilding investment projects were approved by the Malaysian Industrial Development Authority (MIDA), with investments totalling RM63.4million. Three projects were for shipbuilding and repairing facilities (RM36.9mill), two projects related to the manufacture of water jet propulsion systems (RM15.4mill) and one project for the manufacture of a hovercraft (RM10.1mill).

The larger Malaysian shipyards like MMHE have a capacity to build vessels up to 30,000 DWT and repair vessels of up to 400,000 DWT; however, in general, Malaysian shipbuilding is focused on smaller vessels. With very few notable exceptions, the standard of quality control, occupational health and safety, engineering and manufacturing processes in the small Malaysian shipyards is low.

Malaysia Marine and Heavy Engineering (MMHE)

MMHE was incorporated in 1973 and privatised in 1991 with 65% of the equity held by the Malaysian International Shipping Corporation (MISC). Within a 123 hectare area in Pasir Gudang, in the southern-most state of Johor, its core activities include marine repair, marine construction, oil / gas offshore and onshore fabrication, and shipbuilding and conversion. The company employs a permanent staff of 1,440 people. MMHE has a human resource policy and, as at 1998, all of MMHE’s skilled and un-skilled workers were Malaysians. However, within the professional categories (i.e. mechanical, civil engineering and naval architecture), MMHE has had to recruit foreign expertise to fill positions (2.8% of total employees). Foreign expertise at MISC comes from various countries, including the Philippines, India, United Kingdom, the United States (for oil and gas structures) and Japan (on an advisory level in ship repair). MMHE spends approximately RM800,000 to RM900,000 annually on training in shipyard and management skills. However, MMHE has difficulty retaining employees, especially professional engineers, due to a high demand and better incentives in other industries.

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8 Human Resource Development and Requirements in the Maritime Sector, Malaysia, 1998, Maritime Institute of Malaysia, p.15-
Sabah Shipyard

Sabah Shipyard Sdn Bhd (SASHIP), a wholly owned subsidiary of Saship Holdings Berhad listed on the Kuala Lumpur Stock Exchange (Bursa Malaysia Berhad), is a Malaysian engineering and construction company with core businesses of shipbuilding, offshore oil and gas fabrication, ship repair and power barge construction.

Since its establishment in 1972, the company grew from being a builder of small fishing boats to being an international competitor in the construction of sophisticated ships for the shipping and logistics industry, offshore platforms for the oil and gas industry, and barge-mounted power plants for the energy industry. Its broad range of services included engineering, project management, construction, maintenance and repair. However, Sabah Shipyard downsized considerably in the late 1990s.

Sabah Shipyard operates a spacious, modern and well-equipped shipyard located on Labuan Island off the west coast of Sabah, Malaysia's eastern state in the northern part of Borneo\(^9\). Once again, however, the present state of repair for the shipyard facilities is much lower than ideal.

Sabah Shipyard used to employ about 3,000 people during its boom times. However, due to internal financial problems, the company has since been reduced to only about 170 people. Currently, this shipyard only undertakes small vessel maintenance and repair works.

Small shipyards

Smaller shipyards are highly fragmented in nature with no clear, common policy to guide development. Limited in capacity, these shipyards are restricted to building simple, small vessels. Unlike the bigger shipyards, these yards remain labour intensive and rely on low technology. The smaller shipyards are generally unable to retain employees due to an inability to offer attractive employment terms or to improve work conditions. The workforce at such shipyards is often contract-based catering to irregular projects of limited duration. Often, smaller yards rely on foreign workers who are also transient. There is very little commitment to training or human resource development by the smaller Malaysian shipyards.

In general, training of workers at shipyards will depend on whether the company is a big or small company. As discussed earlier, most large shipyards in Malaysia have corporate human resource policy, which addresses training and development. However, small shipyards more often than not, do not offer any training to staff. Generally, the management of small companies do not consider human resource development as an important aspect of company success.

Opportunities

Presently, there are two main fields in Malaysian shipyards that may provide business opportunities for WA companies, namely: ship design and marine engineering. For example, Malaysian shipyards do not have commercial, large-vessel design capability. Most designs that are used for manufacture of ships in Malaysia are outsourced from foreign companies. This presents an opportunity for any WA companies with ship design capabilities to market their expertise to local shipyards.

Ship design companies might promote total ship design, basic and transitional design, project design and initial engineering, detailed design and production information capabilities to local shipyards for specific build requirements that can usually be identified in a timely manner through in-country business development efforts.

Although the shipbuilding industry in Malaysia is presently small, clients are becoming increasingly demanding in terms of quality, superior design, timely delivery and cost-effectiveness. Therefore, new companies with a clear business strategy for the market should be able to access information required to identify vessel requirements for traditional local clients such as: the Royal Malaysian Navy; maritime enforcement agencies including the Marine Police, Marine Department, and Customs and Excise Department; PETRONAS and its subsidiaries, as well as production sharing partners like Shell, Murphy Oil and Esso; and the Department of Fisheries. If such companies are focused on quality, and can assist local yards through build supervision to achieve the required quality standards, there would appear to be scope for successful business in this sector.

Provision of products / equipment

The larger Malaysian shipyards like MMHE, PSC-Naval Dockyard, and Muhibbah Marine Engineering are companies to which suppliers of shipbuilding and repair items may consider offering their products. Companies that offer products such as ship design software, abrasives, electric welders, air couplers, precision tools, bore-welding machines, degreasers, valves, hand tools, solvents and other products might benefit by offering these products to the local shipyards.

Opportunities

In general, the Malaysian shipbuilding industry faces a reduced demand for new build ships. Part of the reason is an over-reliance on Malaysian Government projects, which are short-term. Hence, once the last vessel is delivered there is no continuity of business due to the lack of clear direction for value creation, as well as business and brand development. Local shipyards are generally under-capitalized, employ low technology, observe low standards of quality control, and Occupational Health Safety (OHS) standards, possess no proven channels to international markets nor brand name, and their product quality is generally low.
However, local shipyards might also be an attractive acquisition target for companies with a good mix of available funds and business strategy for a turn-around at cheap cost. Certainly, the opportunity for value-creation is potentially significant big and can be undertaken with a good local partner over the long-term. However, a company may consider acting unilaterally to buy poorly managed companies. This will give the acquiring Australian company a ready bumiputera-licensed shipyard for marketing directly to the Government\textsuperscript{10}. Such a yard would also create a foothold in AFTA and the Muslim market. Note, that Malaysia is currently the chairman of the Organisation of Islamic Countries (OIC), and as such has potential advantageous access to Islamic markets.

A WA ship designing company may also opt to license the construction of its designs under royalty arrangements, as well as support the construction through provision of cut and pre-formed panels and other equipment.

Interestingly, an aggressive new workboat builder in Malaysia, NVG Tech Sdn Bhd, has used variations of this business model, in association with Australian boat builders and others, to build its brand name and market share.

\textsuperscript{10} If the bumiputera status of the acquisition target is to be maintained, the deal would have to be structured with the cooperation of a friendly, trustworthy bumiputera partner.
FISHERIES INDUSTRY

Provision of services

The fisheries sector plays a significant role in the national economy. Apart from contributing to the national Gross Domestic Product (GDP), it is also a source of employment, employing some 110,000 people in 2003\(^\text{11}\) and a source of protein supply for the rural population. The fisheries sector has two main sub-sectors, namely marine capture fisheries and aquaculture, which generated RM5.369 billion of value in 2000, as per Table 9.

Table 9: Value of Fish Production in Malaysia 1985-2000 (RM Million)

<table>
<thead>
<tr>
<th>Year</th>
<th>1985</th>
<th>1995</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inshore Fisheries</td>
<td>n/a</td>
<td>2429.9</td>
<td>3,887.0</td>
</tr>
<tr>
<td>Deep-Sea Fisheries</td>
<td>n/a</td>
<td>281.0</td>
<td>512.2</td>
</tr>
<tr>
<td>Aquaculture</td>
<td>n/a</td>
<td>392.7</td>
<td>970.3</td>
</tr>
<tr>
<td>Total</td>
<td>1,201</td>
<td>3103.6</td>
<td>5369.5</td>
</tr>
</tbody>
</table>

Source: Malaysian Fisheries Directory 2002

Marine Capture Fisheries

Marine capture fisheries can be categorized into two areas, namely coastal fisheries, and deep-sea fisheries.

- Coastal fisheries are where fishing vessels operate within 30 nautical miles from the coastline. Fishing vessels range from the traditional type to commercial vessels of less than 70 GRT.
- Deep-sea fishing vessels operate beyond 30 nautical miles from the shoreline. The fishing vessels are fairly large, 70 GRT and above. Basically, commercial gears such as trawls, purse seines and hook-and-line are used.

Table 10 highlights statistics on the numbers of fishermen and vessels between year 2002 and 2003. An increase in the number of deep-sea fishermen indicates the interest and trend for deep-sea fishing activities, which are generally more profitable than coastal fisheries. This interest is evidenced in the relative increase of fish landing values indicated in Table 11.

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\(^{11}\) Source Ministry of Agriculture and Agro-Based Industries – Fisheries Report 2003
Table 10: Malaysian Fisheries Statistics for year 2002 and 2003

<table>
<thead>
<tr>
<th>Year</th>
<th>2002</th>
<th>2003</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Fishermen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coastal Fisheries</td>
<td>73,426</td>
<td>73,534</td>
<td>111</td>
</tr>
<tr>
<td>Deep-Sea Fisheries</td>
<td>11,700</td>
<td>12,255</td>
<td>555</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>85,123</strong></td>
<td><strong>85,789</strong></td>
<td><strong>666</strong></td>
</tr>
</tbody>
</table>

| Number of Vessels |       |      |            |
| Coastal Fisheries | 31,090 | 31,137 | 47 |
| Deep-Sea Fisheries | 780 | 817 | 37 |
| **Total**          | **31,870** | **31,954** | **84** |


Table 11 illustrates the total quantity of fish landings and their value. There has been a significant increase in value of deep-sea fish landings of RM22.6mill against a rise in number of only 37 additional boats.

Table 11: Total Fish Landings and Value for year 2002 and 2003

<table>
<thead>
<tr>
<th>Year</th>
<th>Coastal Fisheries</th>
<th>Deep-Sea Fishing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quantity</td>
<td>Value (RM Billion)</td>
</tr>
<tr>
<td>2002</td>
<td>1,125,445</td>
<td>3.725</td>
</tr>
<tr>
<td>2003</td>
<td>1,143,493</td>
<td>3.782</td>
</tr>
</tbody>
</table>

Aquaculture

Of the two sectors, aquaculture has the smallest number of workers, but is probably the most diverse in terms of skill requirements, production and processing methodologies. Table 12 illustrates the variety of the aquaculture workforce and its relative size in terms of area usage, production and workers.

Table 12: Estimated No. Of Aquaculture Industry Workers (Excluding Hatcheries)

<table>
<thead>
<tr>
<th>System</th>
<th>Total Area</th>
<th>Scale</th>
<th>Production 2003 (tonnes)</th>
<th>Unit Area/Worker</th>
<th>Scale</th>
<th>No. of Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshwater pond</td>
<td>4,821</td>
<td>ha</td>
<td>35679</td>
<td>0.5</td>
<td>ha</td>
<td>9,642</td>
</tr>
<tr>
<td>Freshwater cages</td>
<td>238,704</td>
<td>m2</td>
<td>5896</td>
<td>300</td>
<td>m2</td>
<td>477</td>
</tr>
<tr>
<td>Ex-mining</td>
<td>2,352</td>
<td>ha</td>
<td>n/a</td>
<td>10</td>
<td>ha</td>
<td>235</td>
</tr>
<tr>
<td>Tank</td>
<td>86,511</td>
<td>m2</td>
<td>n/a</td>
<td>250</td>
<td>m2</td>
<td>346</td>
</tr>
<tr>
<td>Pen</td>
<td>85</td>
<td>ha</td>
<td>n/a</td>
<td>0.2</td>
<td>ha</td>
<td>425</td>
</tr>
<tr>
<td>Cockle</td>
<td>7,449</td>
<td>ha</td>
<td>71,067</td>
<td>5</td>
<td>ha</td>
<td>1,490</td>
</tr>
<tr>
<td>Shrimp</td>
<td>7,011</td>
<td>ha</td>
<td>29,309</td>
<td>1</td>
<td>ha</td>
<td>7,011</td>
</tr>
<tr>
<td>Marine cages</td>
<td>980714</td>
<td>m2</td>
<td>41,000</td>
<td>2000</td>
<td>m2</td>
<td>490</td>
</tr>
<tr>
<td>Mussel</td>
<td>109,817</td>
<td>m2</td>
<td>n/a</td>
<td>500</td>
<td>m2</td>
<td>220</td>
</tr>
<tr>
<td>Oyster</td>
<td>103,212</td>
<td>m2</td>
<td>n/a</td>
<td>500</td>
<td>m2</td>
<td>206</td>
</tr>
<tr>
<td>Seaweed</td>
<td>1,206</td>
<td>ha</td>
<td>9,800</td>
<td>2</td>
<td>ha</td>
<td>603</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
<td><strong>21,145</strong></td>
</tr>
</tbody>
</table>

Fisheries Development

The demand for fish is expected to increase as a result of population growth, health consciousness and an expanding downstream industry. It has been estimated that the country has a potential resource base of about 160,000 sq. km. According to the Third National Agricultural Plan (NAP III) the total demand for fish in the year 2010 will be 1,591 million metric tonnes based on a per capita consumption of 60 kg. The NAP3 predicts the overall value of the fisheries sector will have reached some RM2,900 million by 2010, having grown at a rate of 3.1 percent per annum since 1995.12

The fisheries industry is a major contributor to the Malaysian agricultural sector which is targeted for development under Government policy. One objective of the policy is to change Malaysia to a net exporter rather than importer of fish, and to maximise national income.

12 Ibid, p.12
The NAP III policy, if fully implemented, has the potential to transform the Malaysian fisheries industry and boost output significantly. However, to achieve such a significant transformation will require major investments by both Government and the private sector in capital, and technology, which to-date has not occurred.

In the medium term, it is anticipated that the fisheries industry will continue to grow at its previous rate of approximately 3.1 percent / annum. Table 13 shows the potential growth in workforce in this area. Based on historical training demands, some technology improvements, and perhaps minor investment of capital, primarily by private sector entrepreneurs, demand will occur for fisheries skills training, in both the marine capture and aquaculture sectors.

Table 13: Fisheries Sector Workforce Demand to 2010 (6% Annual Growth)

<table>
<thead>
<tr>
<th>Year</th>
<th>Freshwater Fish Hatchery</th>
<th>Freshwater Prawn Hatchery</th>
<th>Marine Fish Hatchery</th>
<th>Shrimp Hatchery</th>
<th>Aquarium</th>
<th>Shrimp Workforce</th>
<th>Cockle Workforce</th>
<th>Marine Cage</th>
<th>Freshwater Pond</th>
<th>Freshwater Cage</th>
<th>Total</th>
<th>Annual Increase</th>
<th>Annual Increase Less 40% Foreign Labour</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>300</td>
<td>54</td>
<td>50</td>
<td>408</td>
<td>800</td>
<td>7011</td>
<td>1490</td>
<td>490</td>
<td>9646</td>
<td>477</td>
<td>15453</td>
<td>36180</td>
<td>0</td>
</tr>
<tr>
<td>2004</td>
<td>318</td>
<td>57</td>
<td>53</td>
<td>432</td>
<td>848</td>
<td>7432</td>
<td>1579</td>
<td>520</td>
<td>10225</td>
<td>506</td>
<td>16381</td>
<td>38351</td>
<td>2171</td>
</tr>
<tr>
<td>2005</td>
<td>320</td>
<td>58</td>
<td>53</td>
<td>434</td>
<td>852</td>
<td>7469</td>
<td>1587</td>
<td>522</td>
<td>10276</td>
<td>509</td>
<td>16462</td>
<td>38542</td>
<td>2236</td>
</tr>
<tr>
<td>2006</td>
<td>321</td>
<td>58</td>
<td>54</td>
<td>437</td>
<td>857</td>
<td>7506</td>
<td>1595</td>
<td>525</td>
<td>10327</td>
<td>511</td>
<td>16545</td>
<td>38735</td>
<td>2303</td>
</tr>
<tr>
<td>2007</td>
<td>323</td>
<td>58</td>
<td>54</td>
<td>439</td>
<td>861</td>
<td>7544</td>
<td>1603</td>
<td>528</td>
<td>10379</td>
<td>514</td>
<td>16627</td>
<td>38929</td>
<td>2372</td>
</tr>
<tr>
<td>2008</td>
<td>324</td>
<td>58</td>
<td>54</td>
<td>441</td>
<td>865</td>
<td>7581</td>
<td>1611</td>
<td>530</td>
<td>10431</td>
<td>516</td>
<td>16711</td>
<td>39123</td>
<td>2443</td>
</tr>
<tr>
<td>2009</td>
<td>326</td>
<td>59</td>
<td>54</td>
<td>443</td>
<td>869</td>
<td>7619</td>
<td>1619</td>
<td>533</td>
<td>10483</td>
<td>519</td>
<td>16794</td>
<td>39319</td>
<td>2517</td>
</tr>
<tr>
<td>2010</td>
<td>328</td>
<td>59</td>
<td>55</td>
<td>445</td>
<td>874</td>
<td>7657</td>
<td>1627</td>
<td>536</td>
<td>10535</td>
<td>521</td>
<td>16878</td>
<td>39516</td>
<td>2592</td>
</tr>
<tr>
<td>Overall Increase</td>
<td>28</td>
<td>5</td>
<td>5</td>
<td>38</td>
<td>74</td>
<td>646</td>
<td>137</td>
<td>45</td>
<td>889</td>
<td>44</td>
<td>1425</td>
<td>3336</td>
<td>2592</td>
</tr>
</tbody>
</table>

Acknowledging the importance of the fisheries industry to the nation, the Ministry of Agriculture and Agro-Based Industries (MoA) have moved ahead with the establishment of the School of Fisheries under the College of Agriculture Malaysia. The MoA have commissioned a study for a conceptual master plan for the fisheries school. The MoA would like to see those members of the workforce trained at the fisheries school to be given the necessary technical, as well as specialist academic training to produce graduates with entrepreneurial skills to start and run their own fisheries-based business. This is consistent with the Government's aspiration of creating a more knowledgeable workforce, including in the fisheries industry.
In the year 2000, the Malaysian fisheries industry produced about RM5.4 billion worth of fish from a combination of inshore fisheries production of RM3.887 billion, deep-sea fishery of 512.2 million and aquaculture production of RM970.3 million\(^{13}\). As mentioned earlier, it is evident that the fisheries sector plays a significant role in the national economy.

The National Agriculture Policy III (NAP III) was initiated in 1996 to cover the period from 1998-2010 and seeks to provide a gradual but effective transformation of the agriculture and forestry sectors for the next millennium. The main objective of NAP III is to maximize farm income through optimal utilization of resources in the sector. In accordance with NAP III, the Government of Malaysia has embarked on development of the fishing industry, so that it will be fully commercialized, with emphasis on deep-sea fishing and aquaculture. The exploitation of the fisheries resources in the offshore areas will be increased to the optimum, sustainable level. Aquaculture will be aggressively developed to supplement production from capture fisheries, as well as to cater to exports\(^{14}\).

The two main government agencies involved in the development of the fishing industry are the Department of Fisheries (DoF) and the Fisheries Development Authority of Malaysia (FDAM) of the Ministry of Agriculture and Agro-based Industries Malaysia. DoF is responsible for the overall management and administration of the fisheries and related matters, including - for the time being - the management of marine parks and marine reserves. It also undertakes research and provides technical support by providing training and extension services to the marine and freshwater fisheries industry. On the other hand, FDAM is a statutory body established in 1971 with the objective of upgrading the socio-economic status of the fisheries community, and in particular to enhance their income and marketing aspects of the industry. This body has the power to regulate fish marketing in Malaysia.

The Government of Malaysia recognizes the important contribution that the fisheries industry makes to the economy, and has continually urged the private sector to assist in advancing the fisheries sector through: training of the fisheries workforce, increased investment in technologies for efficient methods of capturing and farming of fish, and various other initiatives to improve the overall state of the fisheries sector. Recent themes, which have been promoted to the private sector are the use of biotechnology to improve fisheries production in general; and specifically, the use of proven technologies that can be adapted to local conditions to benefit any of the many stages of fish production in the aquaculture sector (i.e. human resource training, hatcheries, mono-sex technology, aqua feeds, disease control, post-harvest handling and other technologies).

\(^{13}\) Figures obtained from Malaysia Fisheries Directory 2002, published by Asia Medline (M) Sdn Bhd in cooperation with the Department of Fisheries, 2002

However, a point to be remembered is that the aquaculture industry is decentralized and will a lot of consolidated effort will be needed to bring together the different elements of the industry i.e. the Government, research and development, training, farm-operators, equipment suppliers, banks and other funding sources, post-harvest entities, and marketing specialists, etc. Environmental standards in the industry are generally low and poorly enforced. There is little regulative enforcement, and no discharge monitoring of aquaculture farms undertaken either by the Department of Fisheries or Department of Environment as there is no requirement to do so under the Environmental Quality Act 1974.

These circumstances appear to present opportunities for specialists in the above-mentioned fields to market products as listed below to the Malaysian fisheries and aquaculture market.

**Opportunities**

Private companies may be able to offer the following products to the Malaysian fisheries and aquaculture industry:

- Advanced feeds;
- Disease control;
- Aquaculture systems (recycling-based);
- Advanced post-harvest technologies;
- Aquaculture equipment;
- Innovative fishing equipment (better net technology, vessel design, fish detection equipment – sonar, fish storage technology, etc.);
- Water recycling technology and water quality equipment;
- Superior performance products (triploid prawns, oysters and fish i.e. marine animals that have three sets of chromosomes which causes them to be unable to reproduce).

Due to the low and simple technology used by Malaysian aquaculture farms, companies with the relevant advanced products and technologies should be able to offer their products to the local aquaculture industry providing that a case can be made for enhanced productivity and therefore return on investment. WA companies might offer not only better products but also better value-added components and attentive service which will create a preference for the company and help to build brand loyalty in the local fisheries industry.
MARITIME DEFENCE

The Malaysian maritime Defence industry refers to those companies that provide services and/or products to elements of the Malaysian naval and maritime Defence organisation. These elements include the Royal Malaysian Navy (RMN), Marine Police, Royal Malaysian Customs and the Malaysian Maritime Enforcement Agency (MMEA).

Royal Malaysian Navy

RMN has become more progressive in recent years, undertaking programs to focus on the war-fighting aspects of the organisation. RMN senior officers have shown interest in outsourcing of training services and non-core activities within the organisation.

Recent Senior-Officer Promotions

There have been a series of promotions within the RMN in the first half of 2005. Former RMN Chief, Admiral Dato' Sri Mohd Anwar Bin Hj. Mohd Nor has been promoted to become the Chief of the Malaysian Armed Forces. As a result of this, the former Deputy Chief of Navy, Admiral Datuk Ilyas bin Haji Din has been promoted to become the new Chief of RMN. Whilst the former Fleet Commander, Vice Admiral Dato' Ramlan Bin Mohamed Ali has been promoted to become the new Deputy Chief of Navy. Furthermore, there is a new Chief of Staff of the Armed Forces, with Rear Admiral Dato' Mat Rabi Bin Abu Samah taking over this post.

The promotions of RMN senior officers into such strategically significant positions within the Malaysian Armed Forces (MAF) shows that the Ministry of Defence (MinDef) has confidence in the leadership of the RMN to drive the development of the MAF for, at least, the next 3-4 years.

Related Issues

Sovereignty assertion issues have reappeared in Malaysia in recent months. There has been tension with Indonesia over disputed maritime territory near Sulawesi, which is reported to have oil and gas reserves, and the long-standing disagreement with Brunei over the extent of EEZ claims by both countries.

There are also piracy and smuggling issues in Malaysian waters. The Straits of Malacca, for example, is an active area for piracy and smuggling (diesel and contraband goods). International concerns over potential terrorist attacks in the area have also encouraged Malaysia to re-assess maritime security arrangements for the Straits.

In East Malaysia, several reports of armed attack against ships in the Sulu Sea have resulted in the kidnap of crew members. Such incidences of kidnap have also occurred throughout the Malacca Straits.
Concerns over maritime security were an impetus for the establishment of a new maritime enforcement agency (MMEA); however, the scale of the problem and the highly negative reports that such incidents receive in the international media suggest that Navy will continue to support enforcement efforts. Nevertheless, RMN Senior Command are committed to a new focus on the further development of war fighting skills. The imminent arrival of new Scorpene submarines has further helped to focus RMN decision-makers on questions of force capability and development.

Provision of Services

RMN has not yet made budgetary provision for the engagement of private-sector consultants to assist with policy, planning or project management. Although original equipment manufacturers (OEM) do offer such services pro bono as part of their product promotion strategy, the RMN is very careful not to compromise national security through excessive release of information to foreigners. Therefore, at this stage, the most productive area for service provision probably remains in the area of training.

The concept of a broad Defence community consisting of uniformed personnel, civilian public servants and private-sector companies, all working together under the umbrella of a common policy framework to provide integrated Defence capability, is not well developed in Malaysia. Therefore, maritime Defence training must focus on uniformed personnel of the Royal Malaysian Navy (RMN).

Outsourcing of Training Services

Although the RMN has traditionally relied upon in-house training and training at foreign military schools, there is growing interest in the concept of outsourced naval training. For some years, the RMN has engaged individual instructors, usually former naval officers or university lecturers, to teach at Navy schools and Defence Colleges. However, early in the 8th Malaysia Plan (2001-2005), the Directorate of Navy Training began investigation of a more comprehensive outsourcing of training. Discussions were held with local and British interests on the possibility of contracting-out the Support Wing of the Navy Training School at K.D. Pelandok. However, as at 2005, no tender for such a contract has been held, and informed sources suggest that Navy has moved instead towards a series of much smaller contracts for component activities currently undertaken by the Support Wing (e.g. NBCD facility maintenance; publication of training materials; computer-based classroom maintenance, etc).

Submarine Training

A contract was awarded to private companies for some submarine-related training, which is to be conducted in substantial part in France. Other specialist training, especially simulator-based training is provided by private companies.
**Tactical Data Link (TDL)**

Within the Malaysian Armed Forces, the RMN is the primary driver in updating the Tactical Data Link Communications Strategy (TDL). Air Force is also interested in this program which is offered through the Armed Forces Communications and Electronics Division (or KomLek) headed by Admiral Amdan Kurish, RMN. KomLek has expressed interest in engaging private experts to undertake training on TDL for Armed Forces officers, especially for those at higher ranks. There may also be scope to assist KomLek and RMN with consulting advice in this complex area. Australian companies can expect competition for any such business, especially from British and American companies.

**Outsourced Vessel Services**

The RMN has decided to outsource tug-boat services to a private-sector provider. The existing RMN-owned tug-boats are aged and will be sold. A tender for outsourced harbour vessel services is expected later this year. The tender will likely contain reference to some other vessel services as well in a bundled-service contract. Such other services are expected to include a requirement for general purpose workboats.

### Table 14: Royal Malaysian Navy (RMN) Current Fleet

<table>
<thead>
<tr>
<th>NO</th>
<th>TYPE</th>
<th>NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SKN 21 FRIGATE</td>
<td>KD HANG TUAH (76)</td>
</tr>
<tr>
<td>2</td>
<td>SKN 22 CORVETTE</td>
<td>KD KASTURI (25)</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>KD LEKIR (26)</td>
</tr>
<tr>
<td>4</td>
<td>SKN 23 FRIGATE</td>
<td>KD JEBAT (29)</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>KD LEKIU (30)</td>
</tr>
<tr>
<td>6</td>
<td>SKN 24 CORVETTE</td>
<td>KD LAKSAMANA MUHAMAD AMIN (136)</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>KD LAKSAMANA TUN PUSMAH (137)</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>KD LAKSAMANA TUN JAMIL (135)</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>KD LAKSAMANA HANG NADIM (134)</td>
</tr>
<tr>
<td>10</td>
<td>SKN 26 MCMV</td>
<td>KD KINABALU (14)</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>KD MAHAMIRU (11)</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>KD JERAI (12)</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>KD LEDANG (13)</td>
</tr>
<tr>
<td>14</td>
<td>SKN 31 MPCSS</td>
<td>KD SRI INDERASAKTI (1503)</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>KD MAHAWANGSA (1504)</td>
</tr>
<tr>
<td>16</td>
<td>SKN 32 SEALIFT</td>
<td>KD INDERAPUTRA (1505)</td>
</tr>
<tr>
<td>17</td>
<td>SKN 36 HYDRO</td>
<td>KD MUTIARA (151)</td>
</tr>
<tr>
<td>18</td>
<td></td>
<td>KD PERANTAU</td>
</tr>
<tr>
<td>19</td>
<td>FAST TROOP VESSEL (FTV)</td>
<td>KD SRI TIGA (331)</td>
</tr>
<tr>
<td>20</td>
<td></td>
<td>KD SRI GAYA (332)</td>
</tr>
<tr>
<td>21</td>
<td>KLD TUNAS SAMUDERA</td>
<td>KAPAL LAYAR DIRAJA TUNAS SAMUDERA (A13)</td>
</tr>
<tr>
<td>22</td>
<td>DIVING BOAT</td>
<td>KTD PENYU (4)</td>
</tr>
<tr>
<td>23</td>
<td>TUG BOATS</td>
<td>KTD KEPAH (8)</td>
</tr>
<tr>
<td>24</td>
<td></td>
<td>KTD SOTONG (6)</td>
</tr>
<tr>
<td>25</td>
<td></td>
<td>BT TUNDA SATU</td>
</tr>
</tbody>
</table>

Marine Police

The Royal Malaysian Marine Police (RMP) was formed on 1 September 1947. The RMP is a marine enforcement division within the Royal Malaysian Police force. The RMP owns and operates its own vessels, which are mainly used for enforcement within the Malaysian territorial sea i.e. 12 nautical miles from the low-water mark. However, a common observation of Navy officers is that the RMP are primarily policemen and not seafarers. Consequently, RMP are reputed to stay close to shore and concentrate on efforts within the first three miles from the low-water mark.

Table 15: Marine Police Vessels

<table>
<thead>
<tr>
<th>Classes of Boats</th>
<th>Length / Tonnage (metres / tonnes)</th>
<th>Speed / Endurance (Knots/hours)</th>
<th>Range (nautical miles)</th>
<th>No. of units</th>
<th>Year of Manufacture</th>
</tr>
</thead>
<tbody>
<tr>
<td>PZ</td>
<td>38.5/230</td>
<td>15/80</td>
<td>1,200</td>
<td>15</td>
<td>1980/83</td>
</tr>
<tr>
<td>PX (Steel)</td>
<td>29/113</td>
<td>24/50</td>
<td>1,200</td>
<td>11</td>
<td>1981</td>
</tr>
<tr>
<td>PX (Wooden)</td>
<td>28/65</td>
<td>15/60</td>
<td>900</td>
<td>21</td>
<td>1972-73</td>
</tr>
<tr>
<td>PA</td>
<td>22.5m</td>
<td>42</td>
<td>N/A</td>
<td>15 (jet)</td>
<td>2002/2003</td>
</tr>
<tr>
<td>PA</td>
<td>20/15</td>
<td>N/A</td>
<td>N/A</td>
<td>21 (prop)</td>
<td>1989/1993</td>
</tr>
<tr>
<td>PC</td>
<td>11/20</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSC</td>
<td>6.5/2.5</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PGR</td>
<td>7/2.0</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The RMP’s main tasks are to ensure the security of the territorial sea from smuggling of goods, piracy, and crime-at-sea activities. To enable the RMP to carry out these tasks, the Malaysian Government has provided the following boats as shown in Table 15:

Interestingly, the larger of these vessels are old and do not enjoy good rates of serviceability. With the formation of the MMEA, the PZ and PX class boats are expected to be transferred to the coastguard, leaving RMP with smaller vessels for near-shore and inland-waters patrol. At this stage, the future role of RMP is unclear. Recently, there has been discussion in industry of a possible program to re-equip RMP with vessels of around 30m in length. Should such a program eventuate, it would open questions on the relationship between RMP and the new MMEA.

In general, the type of service that might be offered most productively to the Marine Police would probably be in the provision of law and enforcement training courses. The RMP has sent students to participate in Law of the Sea training at the Maritime Institute of Malaysia (MIMA); however, MIMA has only conducted two such courses in the last 7 years.
Royal Malaysian Customs (Marine Division)

The Marine Division of the Royal Malaysian Customs is responsible for prevention of tax evasion through direct and technical smuggling and entries of prohibited goods that are often detrimental to the economic, social and political interests of Malaysia.

There is possibly little opportunity to engage in service business with the Marine Division of Customs.

Malaysian Maritime Enforcement Agency (MMEA)

In early 2005, a new Malaysian coastguard, called the Malaysian Maritime Enforcement Agency (MMEA), held tender evaluation exercises to select private training providers for: Induction Training, Seafarer Familiarisation Training, and Law & Enforcement Training. The results of the tender exercise are yet to be announced but training is expected to commence in mid-2005. The tender documents called for participating companies to train approximately 2,000 personnel in 9 courses over a two year period; however, the documents recognised that the MMEA will eventually grow to approximately 5,000 people. This suggests that further opportunities to bid for training contracts with the MMEA are likely. Equally, the MMEA has demonstrated its willingness to use external training providers, and this might be beneficial for WA companies offering training in specialist, niche skill areas.

At this early stage of development, the MMEA is constrained in budget allocation and has shown no appetite for private-sector consulting advice.

Provision of products / equipment

Royal Malaysian Navy

Somewhat paradoxically, in spite of keen sensitivity to the question of ‘national security’ and the requirements for bumi-status companies, the Malaysian maritime Defence industry is generally more open for participation by small foreign companies than is the Australian Defence industry. Although, as with Australia, the Malaysian maritime Defence industry tends to be dominated by large international companies like Thales, BAE, and Lockheed Martin etc, these very large Defence companies do not have a standing primary-contract role with the Malaysian Ministry of Defence (MInDef) as they often do with the Australian Defence industry.

For high value contracts, the large Defence companies normally lobby at the highest levels of Government to help secure the contract. Business opportunities with RMN for large projects are few and infrequent. Also the larger the project, the more important political influence becomes in determining the outcome of the selection process. For these reasons, small and medium-sized WA companies would do well to identify strong Malaysian partners for Defence business.
Submarines

The purchase of 2 Scorpene submarines from France at the cost of RM3.4 billion is a major Defence investment by Malaysia. As a result of the submarine procurement, French companies are seen to be very active in pursuit of various anticipated submarine support programs and services.

Nevertheless, construction of a new submarine support base at Sepanggar Bay could give rise to opportunities for companies offering specialist engineering design and construction skills, security equipment, and other electronic equipment. As the RMN submarine squadron matures, there will no doubt be a desire to lessen dependence on France and establish a more independent force. Therefore, WA companies that have services or products of relevance to submarine operations, and who are prepared to engage with RMN over an extended period, could well eventually capture a lucrative share of submarine-related business.

Frigate Program

A frigate program for the RMN may be implemented in the Ninth Malaysia Plan (RMK 9). The British are said to be the preferred supplier of these vessels.

Related to the frigate vessel project is a potential for re-development of Sabah Shipyard. Sabah Shipyard used to be a large shipyard with a workforce of over 3,000 personnel. Since 1972, the company grew from being a builder of small fishing boats to an international heavy construction company capable of building sophisticated ships for the transport and logistics industry, offshore platforms for the oil and gas industry, and barge-mounted power plants for the energy industry. The company ran into financial problems in the late ‘90s and had to lay-off many of its employees. It now employs less than 200 staff, and activities at the shipyard are limited to minor ship-repair and maintenance work.

The Government recently announced a take-over of Sabah Shipyard by a consortium of government-linked companies (GLC) to turn-around the company. The frigate project could perhaps be the project that may be used to spur growth at this ailing shipyard. However, difficulties encountered on the build program for six new offshore patrol vessels (OPV) at Lumut may well impact on the budget allocation for new frigates. Essentially, the Government has already dispersed most of the RM5 billion in funds allocated for the six new OPV but has not taken delivery of any vessels. There may be a requirement for supplementary funding to complete the project and this could disrupt other programs.
Other Programs

In the longer-term, the 9th Malaysia Plan (RMK 9), which begins in January 2006, is expected to stipulate requirements for:

- Dedicated training ship (built to civilian class but looking like a warship);
- Multiple Role Support Ship(s) (7,000 – 8,000 tonnes) with amphibious capabilities (possibly 2 units);
- Submarine rescue vessel (possibly under long-term charter); and
- New diving tender ship (possibly coming for tender as a chartered requirement in late 2005).

There remain other opportunities in the short-term in small Defence projects as follows:

- potential outsourcing of elements of the Navy support wing at K.D. Pelandok and other naval training facilities; and

Marine Police

Recently, the RMP have been widely rumoured to be poised to undertake a new patrol boat replacement program. The driver for such a program is said to be the imminent transfer of approximately fifteen Marine Police vessels to the MMEA. Several companies have already begun to search actively for an appropriate vessel design, and at least one company has submitted a proposal to provide the RMP with new boats.

Royal Malaysian Customs (Marine Division)

The primary function of the Royal Malaysian Customs Marine Division is to ensure that smuggling activities within the Malaysian territorial sea are reduced. The Customs Marine Division has approximately thirty vessels, ten of which are thirteen years or older and nineteen of which are only two years old.

The Royal Malaysian Customs is also required to hand-over five of its larger boats to the MMEA. There will be no replacement program for these larger boats. However, many of the smaller boats currently in service were delivered in the mid-1990s. In 2007, up to 15 units of 17m vessels and a smaller number of 11m vessels may be purchased by the Royal Malaysian Customs. Importantly, these vessels will be required to achieve a top speed in excess of 50 knots.

Malaysian Maritime Enforcement Agency (MMEA)

A small group called a ‘Nucleus Team’ currently manages the MMEA. This team is made up of seconded RMN officers and senior-officers, as well as civilians, largely to staff the MMEA administration department. As such, the framework of the MMEA is essentially being developed by RMN officers.
At present, the MMEA is focused on addressing tangible issues such as the refurbishment of inherited vessels, recruitment and training of staff, procurement of uniforms and the acquisition of marine surveillance equipment prior to the targeted start date of operations in November 2005. A tender for the refurbishment and upgrading of mostly old, inherited vessels from other enforcement agencies, including the RMN, the Marine Police, Royal Malaysian Customs, Marine Department and Department of Fisheries is scheduled to take place in the second half of 2005.

In the first half of the 2005, the Agency called for tenders for clothing apparel, induction training, seafarer familiarisation training, law & enforcement training, sea surveillance equipment and software updates, and the provision of rigid hull inflatable boats (RHIBs).

Many local and international Defence companies and shipyards have been tracking the development of the MMEA over the last few years. With the passing of the MMEA Bill in the Parliament in 2004, many more companies have started to approach the Agency.

If WA companies are to be effective in selling products to the MMEA, they will need to ensure that they offer advanced technology that will be of immediate, demonstrable benefit to enforcement operations or cost reduction.
OIL & GAS INDUSTRY

The oil and gas industry in Malaysia is dominated by PETRONAS, short for Petroliam Nasional Berhad. PETRONAS is Malaysia's national petroleum corporation established on 17 August 1974. Wholly-owned by the Government, the corporation is vested with the entire oil and gas resources in Malaysia and is entrusted with the responsibility of developing and adding value to these resources.

PETRONAS is engaged in a wide spectrum of petroleum activities, including upstream exploration and production of oil and gas, to downstream oil refining; marketing and distribution of petroleum products; trading; gas processing and liquefaction; gas transmission pipeline network operations; marketing of liquefied natural gas; petrochemical manufacturing and marketing; shipping; automotive engineering; and property investment.

PETRONAS actively undertakes exploration, development and production of crude oil and natural gas both at home and abroad. In Malaysia, these activities are undertaken and managed through Production Sharing Contracts (PSC) with a number of international oil and gas companies as well as with a subsidiary, PETRONAS Carigali Sdn Bhd. The current focus of development is on the various oil and gas fields offshore Peninsular as well as East Malaysia. Currently PETRONAS has 37 producing oil fields and several others under development. These oil fields produce five high quality blends of crude: Tapis, Labuan, Miri, Bintulu and Dulang. Out of 214 gas fields discovered, 11 are producing with several more under development.

PETRONAS has embarked on several gas processing, transmission, development and utilisation projects in Peninsular Malaysia, Sabah and Sarawak. These projects include the liquefied natural gas (LNG) plants in Bintulu (Sarawak), the Peninsular Gas Utilisation Project (PGU) in Peninsular Malaysia, gas supply to the western coast of Sabah and other gas-based projects. To further promote the use of gas, PETRONAS are implementing projects involving the supply of chilled water for air-conditioning using natural gas as the main fuel for the generation and as fuel for vehicle.

PETRONAS offers the following products:

- Crude Oil Products

As at May 2005, PETRONAS has 51 producing oil fields in Malaysia. These oil fields produce five blends of crude: Tapis, Labuan, Miri, Bintulu and Dulang.

- Crude Oil Assays

The Crude Assay Database contains comprehensive information on Malaysian Crude Oil & Condensates, and Foreign Equity Crude Oil Crude Assays based on analysis conducted by accredited laboratories. Periodically, PETRONAS updates these crude assay data to ensure that information on each crude assay is reflective of the latest crude quality.
The crude assays data are grouped according to Malaysian Crude Oil, Malaysian Condensates and Foreign Equity Crude Oil, and listed alphabetically by crude name as follows:

- **Petroleum Products** - PETRONAS produces fuels and lubricants for the automotive, aviation, gas and industrial needs.

- **Petrochemical Products**

- **PETRONAS** petrochemical products including basic & intermediate chemicals, fertiliser & agrochemicals and polymers.

PETRONAS also offers Shipping and Maritime Services.

**Registration and License Application**

Doing business with PETRONAS requires the potential supplier of products and / or services i.e. the contracting entity with PETRONAS, to be registered as a supplier with PETRONAS. A company that is interested to work with PETRONAS is required to make either a ‘licensing’ or ‘registration’ application. The applicant must determine whether they would like to provide services/products to the upstream, downstream and maritime sectors, and which Joint-Agreement Contractor, Fabrication Contractor and / or subsidiary of PETRONAS will be the main client.

As mentioned in the ‘Bumiputera Registration with Ministry of Finance’ section of this report, PETRONAS requires companies that wish to provide services / products to have a minimum bumiputera participation of 100% of voting equity, Board of Directors and management levels. However, only 70% of staff composition need be bumiputera.

As such, foreign companies that wish to apply for a license and registration with PETRONAS must either appoint a local company as their exclusive agent, or incorporate a company registered in Malaysia that fully satisfies the general conditions for licensing and registration with PETRONAS.

Two tender processes are normally observed for projects offered by PETRONAS to registered and licensed companies. The first is a closed tender process where only companies that are registered in the appropriate category with PETRONAS will be invited to bid. The other process is an open tender advertised in major Malaysian newspapers, which allows any PETRONAS registered company that is interested to put in a bid.
Vendor Development Programme

PETRONAS also has a Vendor Development Programme (VDP), which is a programme aimed at providing a wider distribution of economic benefits to bumiputera entrepreneurs in the oil and gas industry. Most Government corporations offer VDP to promote bumiputera participation and capacity building. Government corporations like Tenaga Nasional Berhad (energy), Telekom Malaysia Berhad (telecommunications) and Pos Malaysia (postal service) offer various VDPs to enable bumiputera companies to participate in the supply of products and/or services.

The PETRONAS VDP enables bumiputera entrepreneurs with oil and gas capabilities and suitable product range to be one of a pool of companies from which PETRONAS can draw expertise. In turn PETRONAS provides an opportunity for these companies to build capacity and know-how in the oil and gas industry.

PETRONAS Subsidiaries

The following are two of the relevant PETRONAS subsidiary companies to which companies may like to consider marketing their services.

Malaysia International Shipping Corporation (MISC) Berhad

PETRONAS is the main shareholder of Malaysia International Shipping Corporation Berhad (MISC) with 62.4% ownership. MISC is the national shipping line of Malaysia and is rated among the top five in the world. It is listed on the Main Board of the Kuala Lumpur Stock Exchange. The principal business of MISC is providing maritime transportation and logistics services.

MISN Enterprises Holdings Sdn Bhd

MISC Enterprises Holdings Sdn. Bhd. (MEH) is the wholly-owned subsidiary company of MISC, which focuses on non-shipping business. MISC’s non-shipping services under MEH are haulage, trucking and warehousing, and shipping agencies.

PETRONAS Research & Scientific Services Sdn Bhd (PRSS)

PRSS is a PETRONAS subsidiary that undertakes much of the Group’s research and development activities, and integrated technology development programmes. The company executes business-driven R&D projects, and provides value-added technical consultancy and laboratory services. PRSS is particularly important to any company wishing to provide environmental services to PETRONAS because such services are, in the first instance, always awarded to PRSS. PRSS may elect to engage a consultant to conduct the actual study, but does not always do so.
PRSS's principal activities are research, technology development and technical services in:

- Geo-science
- Petroleum Engineering
- Facilities Engineering
- Process Technology
- Petroleum Products
- Environment Management
- Laboratory Services
- Data Management

**Provision of services**

**Off-shore Oil and Gas Engineering Services**

All of Malaysia’s oil and gas reserves are located off-shore. This has given rise to a marine petroleum upstream industry that employs a large number of engineers and technicians. The main employer of petroleum engineers is PETRONAS, although foreign production sharing partners, e.g. Shell, Murphy Oil, also employ Malaysians. Some higher-end specialist engineering services are provided by expatriate engineers. However, most Malaysian petroleum engineers are trained by PETRONAS, and PETRONAS has created its own university (Universiti Teknologi Petronas [UPT]) to ensure adequate supply of trained graduates. The UTP program is well supported by engineering programs at non-private universities, including UTM and Universiti Utara Malaysia (UUM). There may be scope to train specialists in niche areas of the offshore petroleum industry.

**Provision of Products / Equipment**

Many local companies have been given licenses and registrations with PETRONAS. If they are appropriately structured and registered, companies with oil and gas related technology, services, and products can enter into contracts with PETRONAS and its subsidiaries. The areas of business opportunity for such companies may lie in exploration, development and production of crude oil and natural gas, which is the core business of PETRONAS.

Companies with relevant products for the upstream oil and gas industry such as fittings, manifolds, filters, hoses, gauges, transducers, regulators, valves, tubing and tools and accessories can offer their products to PETRONAS.

PETRONAS seeks joint venture partners that possess the appropriate technology, financing capability, and marketing and distribution expertise. Oil and gas companies are in search of equipment and machinery namely for: construction services, DCS / Instrumentation, Engineering services, Fabricated equipment, Installation services, machinery, pumps and valves as well as experienced, specialist consultancy know how.

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15. Market Watch Malaysia 2005, Jenn Liew, Senior Officer, Market & Investment Promotion, Malaysian- German Chamber of
The oil and gas sector in Malaysia is highly competitive. There are many companies involved in providing services and products to PETRONAS and its subsidiaries, and most of them have been doing so for many years.

CONSULTING INDUSTRY

Although only bumiputera companies can provide consulting services to Government, some of these services can be offered to private sector also. The areas in which consultancy can occur are:

- Environmental consulting;
- Aquaculture consulting;
- Vessel design services (including both naval architecture and marine engineering);
- Government ICZM and oceans policy and administration;
- Marine and maritime law and arbitration;
- Maritime transport economics consulting;
- Coastal and ports engineering.

Of these services, with the exception of services that are sub-specialisations of broader professions, such as engineering, most are provided by a small number of specialists in a loosely organised marine industry.

Environmental consulting

Environmental consultants come from a range of disciplines and typically include: fish biologists, coastal flora and fauna specialists; sea grass and coral specialists, socio-economists, turtle and reptile specialists, bird specialists and the like. These consultants are complemented by relevant engineers and legal or policy experts.

Private Environmental Consulting

In the main, environmental consultants are engaged by private-sector developers as seldom as possible, and generally only to satisfy a regulatory requirement. The Environment Quality Act 1974 requires that an Environmental Impact Assessment (EIA) be prepared for certain development projects. Projects that require an EIA are rarely totally marine-based in nature, although sea-bed mining and dredge disposal are two marine activities that could require an EIA. Coastal activities that involve the clearing of mangroves, clearing of coastal forest, or land reclamation require an EIA only if the total land area concerned is greater than 50ha. This is a sizeable area and therefore most aquaculture clearing activities, which are small enterprises, are not subjected to EIA. When EIA consulting is required, consultants are often reluctant to be critical of any proposal lodged, as developers will often withhold or delay payment. Accordingly, the demand for marine environmental consultants for EIA work is not significant.

Government Consulting

A further avenue of work for marine environmental consultants is Government. The relevant departments are: The Department of Environment (DOE), Department of Fisheries (DoF), Public Works Department, the Department of Irrigation and Drainage (DID) and the Economic Planning Unit (EPU). The nature of these projects is usually advice on aspects of coastal area management or policy formulation. Such projects tend to be infrequent, but recently the DID announced its intention to undertake Integrated Shoreline Management Planning (ISMP) for the entire Malaysian coastline. This initiative may give rise to additional marine consulting business, but notably, DID tend to favour engineering companies for such projects. Of course, engineering companies do not usually have expertise in areas such as law, ecosystem evaluation and management, resource economics, socio-economics, institutional analysis, or public policy. Therefore, the ISMP initiative will have flow-on effect for marine consulting demand. However, the extent and nature of any such impact will depend upon the rate of ISMP progression and extent to which the work is shared amongst industry.

Many marine environmental consultants work primarily as lecturers and researchers at universities. The total number of active marine environmental consultants in Malaysia probably numbers well under 100 people. A further factor that has seemed to weaken the demand for marine environmental consultants has been the market-distorting activities of NGO groups who have been known to provide environmental consulting services to the Government pro bono.

Aquaculture Consulting and Disease Diagnostics

Most aquaculture ventures in Malaysia are small holdings that are run by family interests. They have few workers and limited infrastructure. Malaysian shrimp aquaculture farms are located in mangrove areas, and finfish in freshwater and brackish water areas. There are a few specialists actively working independently to provide this industry with consulting services. These individuals usually either work on behalf of technology companies, feed or disease-control product companies, or are former members of the Department of Fisheries. There are few such consultants, and in spite of the considerable earnings that some shrimp farms have experienced, their industry is not very lucrative.

Vessel Design Services

With the exception of Malaysian Marine and Heavy Engineering (MMHE) and Penang Shipbuilding Corporation (PSC) Bhd, Malaysian shipyards are small to medium enterprises. They usually build imported designs and have not invested in developing a standing range of products or brand name. Generally, only simple workboats have been exported, mostly from small shipyards in East Malaysia.
In 2002, PETRONAS, one of the few major users of design services, decided to develop an in-house naval architect capability to assist with procurement and other projects. This decision was reflected also in a similar move by the PETRONAS-subsidiary, Malaysian International Shipping Corporation (MISC) Bhd. The decision to use in-house naval architects by PETRONAS and MISC reduces the demand in Malaysia for consultant naval architects and independent design houses.

**Government ICZM and Oceans Policy Consulting**

Throughout the 1990s, Malaysia has grappled with the task of developing a national Integrated Coastal Zone Management (ICZM) Policy. Despite substantial aid assistance from the Danish Government, little progress was made. In 2004, a draft ICZM policy was completed by the Universiti Putra Malaysia (UPM), but a lack of capacity in Government appears to continue to hinder progress on implementation. The tsunami which occurred on 26 December 2004 has raised awareness about the need for effective coastal zone management and this may encourage progress.

The draft NICZM Policy calls for the formulation of ICZM Strategies at the State level, and for town and country planning to extend to the maritime space as far as the edge of State coastal jurisdiction. If these recommendations are adopted, there will be an increased demand for relevant policy, legal, planning and institutional consultants. At present, there are very few practicing consultants in this field in Malaysia, and almost all of them are university based.

**Marine and Maritime Law and Arbitration**

The marine and maritime law consulting sectors consists of two main areas: Those dealing with International Law of the Sea and those dealing with maritime law.

There are very few consulting or legal firms in Malaysia with in-house expertise in public international law of the sea. Although the Maritime Institute of Malaysia (MIMA) has undertaken consulting and research work in this area in the past, the relevant staff members have since left that organisation.

The Attorney General's Department has demonstrated little expertise in the field of public international oceans law. However, the Ministry of Foreign Affairs has had opportunities to strengthen skills in maritime international law through participation in the International Court of Justice case concerning Ligitan and Sipadan Islands, and negotiation with Singapore arising from an International Tribunal of the Law of the Sea (ITLOS) judgement on straits navigation between the two countries. The only other Government bodies with interest in public international law as it relates to the marine sphere are the Prime Minister’s Department (National Security Division) and the Ministry of Transport with respect to IMO international instruments.
In comparison, there are more consultants with expertise in maritime law, which concerns aspects of shipping law, maritime commerce and insurance law, and the law of salvage. However, the number of firms offering such services is still quite limited with only a handful dominating the sector. Malaysia has no Admiralty Court and maritime cases for arbitration are typically heard in Singapore or London.

**Maritime Transport Economics**

With a national emphasis on the growth of ports, and a restructuring of maritime transport based on hub and feeder ports, there has been some demand for maritime transport analysis expertise. The clients have mostly been the port authorities, but the Ministry of Transport has also commissioned independent studies. The port authorities have used the findings of such analysis including some scenario modelling to assist with planning port expansion and infrastructure development. Government has drawn upon such expert reports to assist with policy formulation.

Generally, there is insufficient work for maritime transport economists anywhere in the world to rely purely on domestic work, and most market their services internationally. Consequently, some Malaysian studies have been undertaken by overseas consultants. Malaysian consulting firms have also survived by broadening their specialist field to include non-maritime transport economics, principally encompassing road traffic studies.

**Marine Tourism Planning and Management**

Although the field of marine tourism planning and management is well-understood and reasonably robust in advanced countries such as Australia and the USA, such is not the case in Malaysia. Government statistics do not recognise marine tourism as a discrete sector, and there is no office or section in the Ministry of Tourism dedicated to marine tourism planning, management or promotion.

The management of marine parks (MPA) in Malaysia is also in a state of partial disarray at present as responsibility is in the process of hand over from the DoF to the Ministry of Natural Resources and Environment (MNRE). Therefore, marine tourism in MPA proceeds largely in the absence of any program of control. No Malaysian university offers a degree program in marine tourism. These circumstances possibly create an opportunity for appropriately skilled Australian consultants to provide services to assist the Ministry of Tourism and Ministry of Natural Resources and the Environment in establishing capacity and capability in these sectors.
Coastal and Ports Engineering

The primary clients for coastal engineering services in Malaysia are the Department of Irrigation and Drainage (DID) (coastal section) and private developers who wish to undertake reclamation works. Other users include ports authorities and off-shore petroleum companies. There are only a few coastal engineering firms in Malaysia. Some represent overseas parents, especially Danish and English firms, and others are business extensions of dredge operating companies. In the main, the standard of coastal engineering advice in Malaysia has been poor with over emphasis on the use of a simplistic 2-dimensional computer modelling from Denmark and the use of hard-engineering structures. There is only one functional three-dimensional flume tank in Malaysia, and it is used mostly for university research. Malaysian developers and design engineers have not demonstrated a sophisticated understanding of the linkage between comprehensive modelling, and project cost savings. Consequently, few developers or other project proponents appreciate the value to be enjoyed from investment in coastal engineering research. The association of some coastal engineering firms with dredging and maritime structure companies also opens the possibility of advice that is skewed by vested interest in winning particular types of future business. Hence, Malaysian coastal engineers have shown pre-disposition to use hard engineering solutions, e.g. rock walls, rather than soft engineering techniques, e.g. artificial beaches, constructed wetlands, etc.

A number of large consulting engineering companies offer expertise in maritime structure civil engineering, several of which are brand operations for overseas companies. Primarily, they have designed and managed projects associated with new port development and expansion, e.g. wharves, jetties, breakwaters etc. There are limited opportunities for such projects in Malaysia. Those companies that have secured contracts for major developments, such as the Port Klang and Port of Tanjung Pelepas (PTP) expansions, have done well. Others have diversified into other areas of engineering consulting with projects ranging from buildings and dams, to roads and highways. As Malaysia moves to restructure its economy away from reliance on the construction sector to increase emphasis on agriculture, there is unlikely to be much new demand for civil engineers specialising on maritime structures (with the possible exception of petroleum structural specialists).
CONCLUSION

The Malaysian maritime Defence and marine-related industries offer many potentially worthwhile opportunities for companies with relevant expertise in training and consulting services, research and development, innovative products and technology. However, most of the industry sectors discussed in this report traditionally have depended on Government support and funding either for projects or grants and subsidies. Therefore, WA companies that decide to pursue business in the Malaysian market will need to become knowledgeable of Government policy, guidelines and rules for participation in public-sector business. They will also need to understand the positive-discrimination program in place for bumiputera Malaysians and learn how to meet their goals within the context of that program.

There are certainly opportunities in the training and human resource development sector in marine-related industries. However, the challenge will be to respond appropriately to policy change in the shipping, fisheries, ports and harbours, and shipbuilding industries as Government moves to make these industries more attractive employment prospects for Malaysians. The Malaysian Government drive for enhanced training and human resources development will facilitate opportunities for niche training institutions, and companies with human-resource capacity building expertise, to make an impact in the marketplace.

In the area of marine-related industries consulting services, there are limited projects but many competitors who are generally small companies, academics and university business arms, and NGOs. Clients are generally derived from Government departments with only a few private firms that have marine projects requiring EIA studies to be undertaken. Opportunities in the consulting field are limited. Companies tend to rely on previous clients for repeat business, or spin-off from previous projects.

Biotechnology, specifically marine-biotech and related new technologies that can improve aquaculture and wild catch fisheries production and processing are, and will continue to be high on the priority list for investment in Malaysia. Companies offering innovative technologies relating to hatchery systems, production, disease control, post-harvest handling, fisheries equipment and aquaculture systems have an opportunity either to sell their products or license their use in Malaysia.

The maritime Defence industry potentially provides significant project opportunities, ranging from small scale projects, such as diving support boats and diving tender vessel charter, to large-scale projects like: a new training ship, submarine research vessel, and multiple role support ship. However, the majority of these projects remain at very early stage and will only be funded in the next Five Year Plan. Budget allocation for RMK 9 (Ninth Malaysia Plan) will mostly be for operational expenses and little is expected for new procurement. However, budget constraints may well also prove to be an impetus for the RMN and other agencies to look for different ways to meet operational needs that can also save money. As a result, private-sector training and outsourcing of support services may well provide good scope for new business.
The oil and gas industry is a lucrative business in Malaysia; however, it is a well established industry with significant barriers to entry. Joint venture and smart partnerships with established local companies may offer the easiest scope for entry into this market.

The Malaysian maritime Defence and marine-related industries markets are diverse and complex. They offer many potential opportunities for foreign companies. However, pursuing these opportunities requires commitment, patience, thorough planning and a deep understanding of the market dynamics. The Malaysian business environment challenges Australian companies at many levels, including: culture, differing expectations with regard to due process and standards, differing understandings on the role of government, unclear public policy goals that seem to depart from Government rhetoric, and many more. This is not a market to be addressed in a half-hearted manner with any expectation of windfall returns. However, those companies that choose to make the commitment and that display the correct qualities, will potentially gain significant benefit from the challenging yet rewarding journey.
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