

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT  
Geneva

***REVIEW OF MARITIME  
TRANSPORT  
2007***

*Report by the UNCTAD secretariat*

**UNITED NATIONS  
New York and Geneva, 2007**

## Chapter 7

# REVIEW OF REGIONAL DEVELOPMENTS:

## ASIA

*This chapter reviews and analyses global intraregional maritime trade in Asia since 2004. It also covers the demographic background of the region, containerized trade, Asian terminal operators and P&I Clubs, and includes a focus report on port developments in Viet Nam. The region's merchandise exports grew at an impressive 18 per cent whilst imports increased by 11 per cent. Developing economies in Asia grew by around 7.6 per cent in 2006. Developing countries in the region continued to add to their already sizeable foreign exchange reserves, reaching an unprecedented sum of \$2.5 trillion. Global terminal operators headquartered in Asia have a throughput of over 220 million TEUs and about half of the world's total throughput of containers. Of the world's fleet of vessels above 100 GT, 21 per cent are registered in Asia.*

### A. ECONOMIC BACKGROUND

The combined countries of Asia are home to some 4 billion people, or two thirds of the world's population. Developing countries in Asia grew at around 7.6 per cent in 2006; the average from 1995 to 2005 was around 4.7 per cent (see table 51). Despite high and unstable oil prices in 2006, inflation in those countries was kept under control at around 4.3 per cent, as in the previous year. Developing countries in the region continued to add to their already sizeable foreign exchange reserves, reaching the unprecedented sum of \$2.5 trillion, of which China held \$1 trillion at the end of 2006. The region's exports grew at an impressive 17 per cent, benefiting from strong global demand. Table 51 shows the annual growth rates of GDP for selected countries in the region. At one extreme, Azerbaijan, aided by the export of oil, recorded the highest percentage growth rate of 31 per cent. At the other extreme Timor-Leste experienced a negative growth rate of -1.6 per cent.

Strong economic growth continued in South and South-West Asia, with industry and services as the major contributors. India's economy in 2006, spurred by increases in services and accelerating industrial production, is estimated to have grown by 9.2 per cent. The Islamic Republic of Iran, the only net exporter of oil in the subregion, grew by 5.3 per cent. In China growth is expected to reach 9.9 per cent in 2007, less than the 10.7 per cent growth in 2006. The Russian Federation is projected to grow by 6.4 per cent in 2007.

As a result of rising oil imports, current account balances dwindled across the region to equal their 2004 levels despite having made significant gains in 2005 (see table 52). At one end Maldives recorded a deficit of 36.2 per cent of GDP whilst at the other end Singapore recorded a surplus of 25.9 per cent. Substantial exports in many countries offset the effects of rising oil prices.

Merchandise exports from Asia grew on average over 13.3 per cent whilst imports increased by 11 per cent

Table 51

## Real GDP growth rates of selected Asian economies, 2005–2007

(Percentages)

|  | 1994–<br>1995 | 1995–<br>1996 | 1996–<br>1997 | 1997–<br>1998 | 1998–<br>1999 | 1999–<br>2000 | 2000–<br>2001 | 2001–<br>2002 | 2002–<br>2003 | 2003–<br>2004 | 2004–<br>2005 | 2005–<br>2006 |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| <b>Developing economies:</b>                       |               |               |               |               |               |               |               |               |               |               |               |               |
| <b>Asia</b>  | 7.5           | 7.3           | 5.5           | 1.7           | 5.4           | 6.6           | 3.7           | 6.0           | 6.6           | 7.6           | 7.0           | 7.6           |
| <b>Eastern Asia</b>                                | 9.0           | 8.0           | 7.1           | 2.5           | 7.5           | 8.0           | 5.0           | 7.4           | 7.0           | 8.2           | 7.4           | 8.4           |
| <b>China</b>                                       | 10.9          | 10.0          | 9.3           | 7.8           | 7.6           | 8.4           | 8.3           | 9.1           | 10.0          | 10.1          | 9.9           | 10.7          |
| <b>Democratic People's<br/>  Republic of Korea</b> | -4.1          | -3.6          | -6.3          | -1.1          | 6.2           | 1.3           | 3.7           | 1.2           | 1.8           | 0.0           | 0.9           | 0.9           |
| <b>Hong Kong (China)</b>                           | 3.9           | 4.2           | 5.1           | -5.5          | 4.0           | 10.0          | 0.6           | 1.8           | 3.1           | 8.2           | 4.6           | 6.8           |
| <b>Macao (China)</b>                               | 3.3           | -0.4          | -0.3          | -4.6          | -2.4          | 5.7           | 2.9           | 10.1          | 14.2          | 28.6          | 2.5           | 2.5           |
| <b>Mongolia</b>                                    | 6.3           | 2.4           | 4.0           | 3.5           | 3.2           | 1.1           | 1.0           | 4.0           | 5.6           | 10.7          | 7.0           | 8.4           |
| <b>Republic of Korea</b>                           | 9.2           | 7.0           | 4.7           | -6.9          | 9.5           | 8.5           | 3.8           | 7.0           | 3.1           | 4.7           | 4.0           | 5.0           |
| <b>Taiwan Province<br/>  of China</b>              | 6.4           | 6.1           | 6.4           | 4.5           | 5.7           | 5.8           | -2.2          | 4.2           | 3.4           | 6.1           | 3.8           | 4.6           |
| <b>South Asia</b>                                  | 6.2           | 6.4           | 3.5           | 5.3           | 5.9           | 4.1           | 4.7           | 4.8           | 8.0           | 6.8           | 7.9           | 8.1           |
| <b>Afghanistan</b>                                 | 5.0           | 9.0           | 10.1          | 11.9          | -5.9          | -33.6         | -9.4          | 29.7          | 18.6          | 8.0           | 13.8          | 8.0           |
| <b>Bangladesh</b>                                  | 4.6           | 5.4           | 5.2           | 4.9           | 5.9           | 5.3           | 4.4           | 5.3           | 6.3           | 5.4           | 5.5           | 6.7           |
| <b>Bhutan</b>                                      | 7.3           | 5.8           | 4.2           | 5.8           | 7.8           | 9.5           | 8.6           | 7.1           | 6.8           | 8.7           | 8.8           | 13.7          |
| <b>India</b>                                       | 7.6           | 7.4           | 4.5           | 6.0           | 7.1           | 3.9           | 5.1           | 4.1           | 8.6           | 7.1           | 8.7           | 9.2           |
| <b>Iran (Islamic<br/>  Republic of)</b>            | 2.9           | 6.2           | -0.5          | 3.7           | 2.7           | 5.9           | 5.4           | 7.8           | 8.0           | 6.5           | 5.9           | 5.3           |
| <b>Maldives</b>                                    | 7.1           | 8.8           | 11.5          | 9.3           | 7.8           | 4.4           | 3.3           | 6.1           | 9.2           | 9.6           | -0.2          | 16.1          |
| <b>Nepal</b>                                       | 3.5           | 5.3           | 5.3           | 2.9           | 4.5           | 6.1           | 5.6           | -0.6          | 3.4           | 3.4           | 2.5           | 1.9           |
| <b>Pakistan</b>                                    | 4.8           | 1.0           | 2.6           | 3.7           | 4.3           | 2.7           | 1.9           | 3.2           | 5.0           | 6.4           | 7.8           | 6.2           |
| <b>Sri Lanka</b>                                   | 5.5           | 3.8           | 6.4           | 4.7           | 4.3           | 6.0           | -1.4          | 4.0           | 5.9           | 5.4           | 6.2           | 7.5           |
| <b>Turkey</b>                                      | 7.2           | 7.0           | 7.5           | 3.1           | -4.7          | 7.4           | -7.5          | 7.9           | 5.8           | 8.9           | 7.4           | 5.5           |
| <b>South-East Asia</b>                             | 8.3           | 7.4           | 4.1           | -8.3          | 3.8           | 6.3           | 2.2           | 4.8           | 5.4           | 6.2           | 5.4           | 5.9           |
| <b>Brunei Darussalam</b>                           | 3.0           | 1.0           | 3.6           | -4.0          | 2.6           | 2.8           | 3.0           | 2.8           | 3.8           | 1.7           | 3.0           | 3.8           |
| <b>Cambodia</b>                                    | 5.9           | 4.6           | 5.7           | 5.0           | 12.6          | 8.4           | 5.5           | 5.2           | 7.0           | 7.7           | 7.0           | 9.5           |
| <b>Indonesia</b>                                   | 8.2           | 7.8           | 4.7           | -13.1         | 0.8           | 4.9           | 3.8           | 4.4           | 4.7           | 5.1           | 5.6           | 5.5           |
| <b>Lao People's<br/>  Dem. Rep.</b>                | 7.5           | 6.9           | 6.9           | 4.0           | 7.3           | 5.8           | 5.8           | 5.9           | 5.8           | 6.9           | 7.3           | 7.6           |
| <b>Malaysia</b>                                    | 9.8           | 10.0          | 7.3           | -7.4          | 6.1           | 8.9           | 0.3           | 4.4           | 5.4           | 7.1           | 5.3           | 5.9           |
| <b>Myanmar</b>                                     | 6.9           | 6.4           | 5.7           | 5.8           | 10.9          | 13.7          | 11.3          | 12.0          | 13.8          | 5.0           | 4.5           | 7.0           |
| <b>Philippines</b>                                 | 4.7           | 5.8           | 5.2           | -0.6          | 3.4           | 4.7           | 3.0           | 4.4           | 4.5           | 6.0           | 5.1           | 5.4           |
| <b>Singapore</b>                                   | 8.0           | 8.2           | 8.3           | -1.4          | 7.2           | 10.0          | -2.3          | 4.0           | 2.9           | 8.7           | 6.4           | 7.9           |
| <b>Thailand</b>                                    | 9.2           | 5.9           | -1.4          | -10.5         | 4.4           | 4.8           | 2.2           | 5.3           | 7.0           | 6.2           | 4.5           | 5.0           |
| <b>Timor-Leste</b>                                 | 9.5           | 10.8          | 4.1           | -2.1          | -35.5         | 13.7          | 16.5          | -6.7          | -6.2          | 1.8           | 3.2           | -1.6          |
| <b>Viet Nam</b>                                    | 9.5           | 9.3           | 8.2           | 5.8           | 4.8           | 6.8           | 6.9           | 7.1           | 7.3           | 7.8           | 8.4           | 8.2           |

Table 51 (continued)

|                                      | 1994–<br>1995 | 1995–<br>1996 | 1996–<br>1997 | 1997–<br>1998 | 1998–<br>1999 | 1999–<br>2000 | 2000–<br>2001 | 2001–<br>2002 | 2002–<br>2003 | 2003–<br>2004 | 2004–<br>2005 | 2005–<br>2006 |
|--------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| <b>Economies in transition: Asia</b> | -5.5          | 1.7           | 3.9           | 2.1           | 4.3           | 7.1           | 9.0           | 7.3           | 8.1           | 8.7           | 9.4           | 11.5          |
| <b>Armenia</b>                       | 6.9           | 5.9           | 3.3           | 7.3           | 3.3           | 5.9           | 9.6           | 13.2          | 14.0          | 10.1          | 13.9          | 13.4          |
| <b>Azerbaijan</b>                    | -11.8         | 1.3           | 15.8          | 10.0          | 7.4           | 11.1          | 9.9           | 10.6          | 11.2          | 10.2          | 24.3          | 31.0          |
| <b>Georgia</b>                       | 2.6           | 10.5          | 10.5          | 3.1           | 2.9           | 1.8           | 4.8           | 5.5           | 11.1          | 6.3           | 9.3           | 9.0           |
| <b>Kazakhstan</b>                    | -8.2          | 0.5           | 1.7           | -1.9          | 2.7           | 9.8           | 13.5          | 9.8           | 9.3           | 9.6           | 9.4           | 10.6          |
| <b>Kyrgyzstan</b>                    | -5.4          | 7.1           | 9.9           | 2.1           | 3.7           | 5.4           | 5.3           | 0.0           | 7.0           | 7.0           | -0.6          | 2.7           |
| <b>Russian Federation</b>            | -4.1          | -3.6          | 1.4           | -5.3          | 6.4           | 10.0          | 5.1           | 4.7           | 7.3           | 7.1           | 6.4           | 6.7           |
| <b>Tajikistan</b>                    | -12.5         | -16.7         | 1.7           | 5.3           | 3.7           | 8.3           | 10.2          | 9.5           | 10.2          | 10.6          | 7.5           | 7.0           |
| <b>Turkmenistan</b>                  | -7.2          | 6.7           | -11.4         | 7.1           | 16.5          | 5.5           | 4.3           | 0.3           | 3.3           | 5.0           | 9.6           | 9.0           |
| <b>Uzbekistan</b>                    | -0.9          | 1.7           | 5.2           | 4.4           | 4.4           | 4.0           | 4.3           | 4.2           | 4.5           | 7.7           | 5.0           | 7.2           |

Source: UNCTAD secretariat.

(see table 53). Azerbaijan recorded the highest growth in exports with an average of 35.2 per cent, followed by Kazakhstan (25.2), Viet Nam (21.4), Cambodia (21.2) and China (19.6). Merchandise imports were the strongest in Tajikistan, at 21.3 per cent closely, followed by China (19.7), Georgia (19.6), Afghanistan (19.3) and India (18.2). Overall, these high growth rates showed the dynamism of trade in Asia.

#### *Demographic background*

Asia's demographic developments varied according to country, although they showed similar upward trends. Average fertility rates amounted to 6 children born per mother in the period 1950–1955 and declined to 2.4 in 2000–2005. This means that in some countries, particularly those in North and North-East Asia, where in 1970 the percentage of the population in the workforce was 57 per cent of the population, by 2010 that percentage will have risen to 72 per cent. With more workers paying into the economy and fewer dependants to support, there could be a significant advantage to be gained in productivity, provided that these workers are properly utilized. The North and Central Asia workforce is estimated to peak in 2010 followed by a sharp decline; the South-East and South-West workforce should peak around in 2025, while the South Asia workforce should reach a long plateau.

## **B. CONTAINERIZATION**

### *Direction of containerized trade*

The Far Eastern Freight Conference (FEFC), a group of 16 shipping lines with approximately two-thirds container vessel capacity on the Asia/Europe route, reported an increase in bi-directional volumes of traffic in 2007. It reported that westbound container trade volumes had totalled 731,360 in January 2007, increasing by 16.4 per cent over the same period the previous year. For February the same route showed a 50 per cent increase in trade volumes over the previous year, totalling 697,910 TEUs. In March the trade volume stood at 684,550 TEUs, increasing by 3.4 per cent over the same period in 2006. For the first quarter of 2007, 2.12 million TEUs were shipped westbound — 1.4 million destined for Northern Europe and about 724,890 for the Mediterranean. Trade destined for Northern Europe grew by 49.1 per cent year on year in February, while volumes destined for the Mediterranean grew by 52.1 per cent over 2006. These increases in the demand for goods from Asia led in July 2007 to the FEFC announcing a \$300 rise in the cost of freight per TEU for goods from Asia destined for Europe. This represents a 19 per cent increase on the first quarter's average price of \$1,550, the largest single quarterly price increase in the previous decade. However, this should also be compared with

Table 52

**Current account balances of selected Asian economies, 1995–2006**  
(Percentage of GDP)

|                                  | 1995  | 1996  | 1997  | 1998  | 1999  | 2000  | 2001 | 2002  | 2003  | 2004  | 2005  | 2006  |
|----------------------------------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|
| Armenia                          | -17.0 | -18.2 | -18.7 | -22.1 | -16.6 | -14.6 | -9.4 | -6.2  | -6.7  | -4.5  | -3.9  | -5.6  |
| Azerbaijan                       | -16.6 | -29.3 | -23.1 | -30.7 | -13.1 | -3.2  | -0.9 | -12.3 | -27.8 | -30.4 | 1.3   | 11.2  |
| Bangladesh                       | -1.8  | -3.2  | -1.3  | -11.7 | -1.1  | -1.0  | -2.5 | 0.3   | 0.3   | 0.3   | -0.9  | 0.9   |
| Bhutan                           | -11.6 | -11.9 | -7.6  | 10.6  | 2.2   | 5.4   | -5.4 | -8.9  | -10.7 | -7.6  | -22.0 | -15.1 |
| Brunei Darussalam                | 46.6  | 41.9  | 56.0  | ..    | ..    | ..    | 69.7 | 59.3  | 68.5  | 68.7  | 68.4  | ..    |
| Cambodia                         | -3.2  | -3.1  | 0.6   | -5.8  | -5.1  | -2.8  | -1.1 | -1.5  | -3.7  | -2.3  | -4.3  | -5.5  |
| China                            | 0.2   | 0.9   | 4.1   | 3.3   | 2.1   | 1.9   | 1.5  | 2.7   | 3.1   | 3.5   | 7.2   | 7.1   |
| Georgia                          | -19.1 | -18.7 | -14.4 | -7.6  | -7.1  | -8.8  | -6.5 | -6.5  | -9.4  | -8.3  | -11.7 | -10.0 |
| Hong Kong (China)                | ..    | ..    | -4.5  | 1.5   | 6.4   | 4.1   | 5.9  | 7.6   | 10.4  | 9.5   | 11.1  | 10.1  |
| India                            | -1.7  | -1.2  | -1.4  | -1.0  | -1.0  | -0.6  | 0.7  | 1.3   | 2.4   | -0.8  | -1.1  | -1.6  |
| Indonesia                        | -3.2  | -3.4  | -2.4  | 4.3   | 4.1   | 4.8   | 4.2  | 3.9   | 3.4   | 0.6   | 0.3   | 0.8   |
| Iran (Islamic Republic of)       | 3.9   | 1.4   | -     | 1.1   | 12.0  | 17.5  | 7.1  | 3.1   | 0.6   | 0.9   | 7.5   | 7.4   |
| Kazakhstan                       | -1.2  | -3.7  | -3.8  | -5.8  | -1.0  | 2.0   | -6.3 | -4.2  | -0.9  | 1.1   | -0.9  | 0.2   |
| Kyrgyzstan                       | -15.7 | -23.3 | -7.8  | -25.1 | -20.2 | -9.1  | -3.7 | -5.0  | -5.2  | -4.6  | -8.4  | -12.8 |
| Lao People's Democratic Republic | -19.5 | -18.5 | -17.5 | -11.7 | -8.3  | -0.5  | -4.7 | 0.3   | -2.0  | -7.7  | -6.7  | -10.0 |
| Malaysia                         | -9.8  | -4.4  | -5.9  | 13.2  | 15.9  | 9.4   | 8.3  | 8.4   | 12.8  | 12.6  | 15.7  | 13.2  |
| Maldives                         | -4.6  | -1.6  | -6.8  | -4.1  | -13.4 | -8.2  | -9.4 | -5.6  | -4.5  | -15.8 | -33.6 | -36.2 |
| Mongolia                         | -6.8  | -5.8  | -5.5  | -7.8  | -6.7  | -5.7  | -7.6 | -9.6  | -7.5  | 3.9   | 5.5   | ..    |
| Myanmar                          | -0.2  | -0.2  | 0.0   | -     | 0.2   | -0.1  | -0.1 | 0.0   | 0.0   | 0.0   | 0.0   | 0.1   |
| Nepal                            | -8.1  | -8.7  | -8.0  | -1.5  | 0.1   | 4.5   | 4.9  | 4.3   | 2.6   | 2.9   | 2.2   | 2.4   |
| Pakistan                         | -3.7  | -7.4  | -6.0  | -2.9  | -3.1  | -0.3  | 0.5  | 3.7   | 4.9   | 1.9   | -1.4  | -3.9  |
| Philippines                      | -4.4  | -4.8  | -5.3  | 2.4   | 9.5   | 8.2   | 1.9  | 5.5   | 4.4   | 2.4   | 2.5   | 2.4   |
| Republic of Korea                | -1.7  | -4.1  | -1.6  | 11.7  | 5.5   | 2.4   | 1.7  | 1.0   | 2.0   | 4.1   | 2.1   | 0.4   |
| Russian Federation               | 2.2   | 2.8   | 0.0   | 0.1   | 12.6  | 18.0  | 11.1 | 8.4   | 8.2   | 9.9   | 10.9  | 10.0  |
| Singapore                        | 17.5  | 15.0  | 15.6  | 22.3  | 17.4  | 11.6  | 13.7 | 13.4  | 24.1  | 24.5  | 28.5  | 25.9  |
| Sri Lanka                        | -6.1  | -4.9  | -2.6  | -1.4  | -3.6  | -6.5  | -1.4 | -1.4  | -0.4  | -3.2  | -2.8  | -5.3  |
| Tajikistan                       | -16.9 | -7.2  | -5.4  | -9.1  | -3.1  | -6.8  | -6.7 | -1.4  | -0.3  | -2.7  | -0.8  | 2.6   |
| Thailand                         | -7.9  | -7.9  | -2.1  | 12.8  | 10.2  | 7.6   | 5.4  | 5.5   | 5.6   | 4.2   | -2.1  | 1.2   |
| Timor-Leste                      | ..    | ..    | ..    | -     | 5.4   | 2.2   | 11.7 | 12.5  | 7.6   | 5.1   | 35.1  | ..    |
| Turkey                           | -1.4  | -1.3  | -1.4  | 1.0   | -0.7  | -4.9  | 2.3  | -0.8  | -3.4  | -5.2  | -6.4  | -7.9  |
| Turkmenistan                     | 0.2   | 0.1   | -21.6 | -34.5 | -20.5 | 6.4   | 0.2  | 1.7   | 0.7   | -4.4  | 1.9   | 2.6   |
| Uzbekistan                       | -0.2  | -7.0  | -3.9  | -0.6  | -0.8  | 1.6   | -1.0 | 1.2   | 8.7   | 9.7   | 11.6  | 10.7  |
| Viet Nam                         | -9.0  | -8.2  | -5.7  | -3.9  | 4.1   | 3.6   | 2.1  | -1.7  | -4.7  | -2.0  | 0.4   | 0.9   |

Source: UNESCAP, *Economic and Social Survey of Asia and the Pacific 2007*, appendix table 6.

Table 53

## Asian growth rates for merchandise trade

(Percentages)

| Developing ESCAP economies                | Exports           |                   |                   | Arithmetic<br>average<br>1997–2006 | Imports           |                    |                    | Arithmetic<br>average<br>1997–2006 |
|---|-------------------|-------------------|-------------------|------------------------------------|-------------------|--------------------|--------------------|------------------------------------|
|   | 2004              | 2005              | 2006              |                                    | 2004              | 2005               | 2006               |                                    |
| Afghanistan <sup>a</sup>                  | -13.3             | -2.6              | 7.9               | 13.9                               | 2.3               | 9.0                | 10.1               | 19.3                               |
| Armenia                                   | 6.0               | 36.2              | -1.1 <sup>b</sup> | 15.1                               | 5.8               | 33.2               | 19.7 <sup>b</sup>  | 11.3                               |
| Azerbaijan                                | 42.6              | 104.4             | 94.1 <sup>b</sup> | 35.2                               | 31.5              | 21.4               | 17.2 <sup>b</sup>  | 15.8                               |
| Bangladesh <sup>c</sup>                   | 16.1              | 13.8              | 21.6              | 10.9                               | 12.9              | 20.6               | 12.2               | 8.1                                |
| Bhutan <sup>c</sup>                       | 39.7              | 18.0              | 25.3 <sup>d</sup> | 12.5                               | 29.2              | 67.6               | 18.0 <sup>d</sup>  | 17.3                               |
| Brunei Darussalam                         | 2.0               | 26.6              | 18.0 <sup>e</sup> | 8.8                                | 22.4              | 0.3                | 25.5 <sup>e</sup>  | -2.6                               |
| Cambodia                                  | 24.1              | 12.4 <sup>d</sup> | 22.2 <sup>f</sup> | 21.2                               | 22.5 <sup>g</sup> | 20.2 <sup>dg</sup> | 22.1 <sup>ag</sup> | 15.7                               |
| China                                     | 35.4              | 28.4              | 27.2              | 19.6                               | 36.0              | 17.6               | 20.0               | 19.7                               |
| Georgia                                   | 31.4              | 34.8              | 20.7 <sup>b</sup> | 19.3                               | 36.7              | 33.8               | 56.3 <sup>b</sup>  | 19.6                               |
| Hong Kong (China)                         | 15.9              | 11.6              | 9.7               | 6.7                                | 16.9              | 10.5               | 11.6               | 5.8                                |
| India <sup>c</sup>                        | 28.5              | 23.4              | 30.0 <sup>f</sup> | 15.3                               | 48.6              | 32.0               | 31.5 <sup>f</sup>  | 18.2                               |
| Indonesia                                 | 12.6              | 20.1              | 16.2 <sup>f</sup> | 7.7                                | 28.0 <sup>g</sup> | 26.2 <sup>g</sup>  | 15.6 <sup>fg</sup> | 7.1                                |
| Iran (Islamic Republic of) <sup>c</sup>   | 29.0              | 36.9              | 38.0 <sup>h</sup> | 15.8                               | 29.2 <sup>g</sup> | 7.3 <sup>g</sup>   | 30.6 <sup>gh</sup> | 14.5                               |
| Kazakhstan                                | 55.7              | 37.4              | 39.0 <sup>b</sup> | 25.2                               | 44.6              | 30.1               | 32.0 <sup>b</sup>  | 15.0                               |
| Kyrgyzstan                                | 24.2              | 33.3              | 16.3 <sup>b</sup> | 11.7                               | 24.9              | 98.7               | 47.0 <sup>b</sup>  | 17.8                               |
| Lao People's Democratic Republic          | 8.3               | 52.2              | 29.5 <sup>d</sup> | 9.8                                | 54.2              | 23.8               | 36.1 <sup>d</sup>  | 7.7                                |
| Macao (China)                             | 9.0               | -12.0             | 3.0               | 2.9                                | 26.3              | 12.5               | 16.3               | 8.9                                |
| Malaysia                                  | 20.8              | 11.0              | 13.4 <sup>i</sup> | 9.6                                | 26.4              | 8.5                | 14.1 <sup>i</sup>  | 6.4                                |
| Maldives                                  | 19.1              | -10.7             | 39.7 <sup>d</sup> | 10.4                               | 36.3              | 16.1               | 26.5 <sup>d</sup>  | 12.7                               |
| Mongolia                                  | 41.2              | 22.4              | 43.6              | 15.8                               | 27.5              | 16.0               | 25.7               | 13.0                               |
| Myanmar                                   | 14.1              | 14.5              | 9.4 <sup>e</sup>  | 12.3                               | 7.1               | 1.5                | 11.9 <sup>e</sup>  | 4.5                                |
| Nepal <sup>c</sup>                        | 8.9               | 14.8              | -1.1 <sup>d</sup> | 6.9                                | 10.6              | 15.6               | 11.2 <sup>d</sup>  | 6.1                                |
| Pakistan <sup>c</sup>                     | 10.3              | 16.9              | 14.3              | 8.0                                | 27.6              | 32.1               | 38.8               | 10.6                               |
| Philippines                               | 9.5               | 4.0               | 15.5 <sup>i</sup> | 11.7                               | 8.8 <sup>g</sup>  | 7.7 <sup>g</sup>   | 9.0 <sup>bg</sup>  | 5.2                                |
| Republic of Korea                         | 31.0              | 12.0              | 14.4              | 11.4                               | 25.5              | 16.4               | 18.4               | 9.7                                |
| Russian Federation                        | 34.8              | 32.9              | 28.7 <sup>b</sup> | 15.0                               | 28.0              | 28.7               | 36.2 <sup>b</sup>  | 11.9                               |
| Singapore                                 | 24.2              | 15.7              | 21.2 <sup>b</sup> | 10.1                               | 27.4              | 15.3               | 21.6 <sup>b</sup>  | 7.7                                |
| Sri Lanka                                 | 12.2              | 10.2              | 9.1 <sup>f</sup>  | 7.0                                | 19.9              | 10.8               | 18.9 <sup>f</sup>  | 7.5                                |
| Tajikistan                                | 14.8              | 15.9              | 55.8 <sup>b</sup> | 12.7                               | 56.1              | 97.0               | 28.9 <sup>b</sup>  | 21.3                               |
| Thailand                                  | 20.6              | 14.9              | 16.8 <sup>i</sup> | 9.6                                | 25.7              | 25.9               | 7.1 <sup>i</sup>   | 7.9                                |
| Timor-Leste                               | 14.3 <sup>d</sup> | 25.0 <sup>f</sup> | 0.0 <sup>f</sup>  | 14.3                               | -8.6 <sup>d</sup> | 5.9 <sup>f</sup>   | 1.9 <sup>f</sup>   | -1.1                               |
| Turkey                                    | 33.7              | 16.3              | 13.4 <sup>b</sup> | 14.0                               | 40.7              | 19.7               | 17.8 <sup>b</sup>  | 14.2                               |
| Turkmenistan                              | 6.6               | 27.6              | 9.6 <sup>d</sup>  | 16.3                               | 32.2              | 9.6                | 5.3 <sup>d</sup>   | 15.8                               |
| Uzbekistan                                | 32.4              | 14.9              | 11.8 <sup>d</sup> | 8.2                                | 27.2              | 13.1               | 15.3 <sup>d</sup>  | 0.5                                |
| Viet Nam                                  | 31.4              | 22.4              | 21.9 <sup>d</sup> | 21.4                               | 26.7              | 15.7               | 20.1 <sup>d</sup>  | 15.4                               |
| <b>Arithmetic average of 35 countries</b> | <b>21.3</b>       | <b>21.6</b>       | <b>21.6</b>       | <b>13.3</b>                        | <b>26.2</b>       | <b>23.4</b>        | <b>21.4</b>        | <b>11.1</b>                        |

Source: Adapted by UNCTAD from UNESCAP, *Economic and Social Survey of Asia and the Pacific 2007*, appendix tables 8 and 9.

<sup>a</sup> All figures are estimates, except for 2006 data, which are projections. Figures exclude opium and flows associated with US Army activities and those of most international security assistance force.

<sup>b</sup> Refers to first 9 months of 2006.

<sup>c</sup> Fiscal year data.

<sup>d</sup> Estimate.

<sup>e</sup> Refers to first 3 months of 2006.

<sup>f</sup> Projection.

<sup>g</sup> f.o.b. value.

<sup>h</sup> Refers to first 6 months of 2006.

<sup>i</sup> Refers to first 10 months of 2006.

the 15 per cent reduction in rates for the first quarter of 2006.

On the eastbound route, FEFC volumes reached 272,941 TEUs in January 2007, up 21.7 per cent on the previous year. By the end of the first quarter of 2007, eastbound trade from Europe to Asia was up by 9.6 per cent over the previous year to 815,173 TEUs. Trade volume from North Europe to Asia improved by 7 per cent to 661,569 TEUs.

Total Asia to United States trade volumes reached 1.1 million TEUs in February, up 19.5 per cent on the same period for 2006. Volumes from China to the United States reached 771,849 TEUs in February 2007, up by 31.6 per cent. Trade from Viet Nam to the United States grew by 49 per cent in February over the same period in 2006 to reach 28,431 TEUs. Asian exports to the United States have been slightly declining, with the exception of Chinese exports to the United States, while intraregional trade has been increasing.<sup>84</sup> Annual Asia–United States trans-Pacific containerized growth in trade slowed down in recent years from 17.3 per cent growth in 2004 to 14.1 per cent in 2005, and down to 10.8 per cent in 2006. At the same time the freight rate

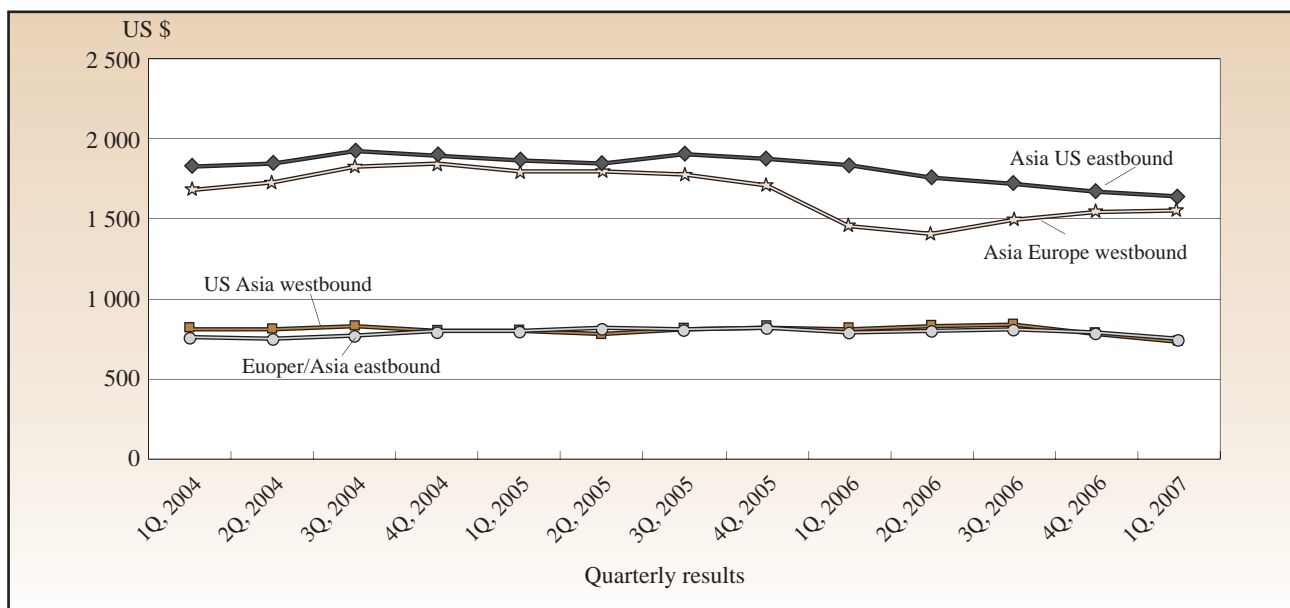
between Asia and the United States has been declining from its peak of \$2,203 reached in the third quarter of 1999 to \$1,643 for the first quarter of 2007. Container traffic for Asian hub ports is largely dependent on intraregional trade, with more than half of all traffic within the ports of Busan, Hong Kong (China) and Yokohama catering for the region. Between 2001 and 2005 a sample of 60 major Asian ports from across the region grew on average by 10 per cent a year.

Intra-Asia trade volumes from Japan to China totalled 74,122 TEUs in April 2007, down by 5.7 per cent compared with the same period in 2006. Volumes from China to Japan also dropped in April, by 1.3 per cent for the same period in 2006, to 191,012 TEUs.

Figure 16 shows the trend in freight rates to and from Asia for the period from 2004 to 2007. During this period freight rates generally remained constant except on the Asia to Europe route, which experienced a 15 per cent reduction in the first quarter of 2006. The rates for cargo from Europe and the United States to Asia over the period from 2004 to 2007 have remained largely parallel to each other. Freight rates for cargo from Europe to Asia varied between 51 per cent and 58 per

Figure 16

Freight rates to and from Asia, 2004–2007



Source: [www.ci-online.co.uk](http://www.ci-online.co.uk).



cent of the cost of shipping goods in the opposite direction. Freight rates from the United States to Asia varied slightly more, between 43 per cent and 58 per cent of the cost of moving goods in the opposite direction.

#### *Container port traffic*

The top 50 Asian container ports by TEU throughput can be seen in table 54. They are similar to those of the world top container ports because of the high volume of containerized goods exported from the region. The best performers in 2006 over 2005 were the ports of Yantai with a 112 per cent increase, followed by Yingkou with 59 per cent and Guangzhou with 40 per cent. On average, mainland Chinese ports grew by 35 per cent in 2006 against about 29 per cent in 2005 over the previous year.

Ports in other developing countries which made double-digit gains include Colombo (up 25 per cent), Jawaharlal (23 per cent), Gwangyang (22 per cent), Ambarli (21 per cent), Incheon and Ho Chi Minh (19 per cent), Dubai (17 per cent), Tanjung Pelepas (14 per cent), Port Klang (14 per cent), Chittagong (12 per cent), Laem Chabang (11 per cent), and Karachi and Bangkok (10 per cent).

Table 55 shows container port traffic for 25 selected Asian countries. The average growth rate for ports in those countries was 11.6 per cent, similar to the 11.4 per cent for the period from 2004 to 2005. China represents the country with the largest TEU throughput, with around 81 million. This is up 23 per cent on the previous year, which was also up by a similar level of 22 per cent over 2004.

Table 54  
Container port traffic for the leading 50 Asian ports, 2004, 2005 and 2006  
(TEUs)

| Port name                        | Country/territory        | 2004       | 2005       | 2006 <sup>a</sup> |
|----------------------------------|--------------------------|------------|------------|-------------------|
| <b>Singapore</b>                 | Singapore                | 21 329 100 | 23 192 200 | 24 796 000        |
| <b>Hong Kong</b>                 | Hong Kong (China)        | 21 984 000 | 22 427 000 | 23 539 000        |
| <b>Shanghai</b>                  | China                    | 14 557 200 | 18 084 000 | 21 710 000        |
| <b>Shenzhen</b>                  | China                    | 13 655 500 | 16 197 173 | 18 468 900        |
| <b>Busan</b>                     | Republic of Korea        | 11 491 968 | 11 843 151 | 12 030 000        |
| <b>Kaohsiung</b>                 | Taiwan Province of China | 9 714 115  | 9 471 056  | 9 774 670         |
| <b>Dubai</b>                     | United Arab Emirates     | 6 428 883  | 7 619 219  | 8 923 465         |
| <b>Qingdao</b>                   | China                    | 5 139 700  | 6 307 000  | 7 702 000         |
| <b>Ningbo</b>                    | China                    | 4 005 500  | 5 208 000  | 7 068 000         |
| <b>Guangzhou</b>                 | China                    | 3 304 000  | 4 685 000  | 6 600 000         |
| <b>Port Klang</b>                | Malaysia                 | 5 243 593  | 5 543 527  | 6 326 000         |
| <b>Tianjin</b>                   | China                    | 3 814 000  | 4 801 000  | 5 900 000         |
| <b>Tanjung Pelepas</b>           | Malaysia                 | 4 020 421  | 4 177 121  | 4 770 000         |
| <b>Laem Chabang</b>              | Thailand                 | 3 529 000  | 3 765 967  | 4 215 817         |
| <b>Xiamen</b>                    | China                    | 2 871 700  | 3 342 300  | 4 018 700         |
| <b>Tokyo</b>                     | Japan                    | 3 358 257  | 3 597 588  | 3 695 892         |
| <b>Tanjung Priok</b>             | Indonesia                | 3 170 000  | 3 281 580  | 3 347 000         |
| <b>Jawaharlal Nehru</b>          | India                    | 2 371 338  | 2 666 703  | 3 298 328         |
| <b>Dalian</b>                    | China                    | 2 211 200  | 2 655 000  | 3 212 000         |
| <b>Yokohama</b>                  | Japan                    | 2 717 631  | 2 873 277  | 3 199 882         |
| <b>Colombo</b>                   | Sri Lanka                | 2 220 525  | 2 455 297  | 3 079 132         |
| <b>Jeddah</b>                    | Saudi Arabia             | 2 425 930  | 2 835 539  | 2 963 548         |
| <b>Nagoya</b>                    | Japan                    | 2 303 541  | 2 491 198  | 2 751 677         |
| <b>Manila</b>                    | Philippines              | 2 696 878  | 2 625 000  | 2 638 471         |
| <b>Ho Chi Minh City (Saigon)</b> | Viet Nam                 | 1 868 000  | 2 122 000  | 2 532 000         |



Table 54 (continued)

| Port name                     | Country/territory          | 2004      | 2005      | 2006 <sup>a</sup> |
|-------------------------------|----------------------------|-----------|-----------|-------------------|
| <b>Kobe</b>                   | Japan                      | 2 176 830 | 2 262 066 | 2 413 000         |
| <b>Salalah</b>                | Oman                       | 2 228 546 | 2 491 741 | 2 390 000         |
| <b>Osaka</b>                  | Japan                      | 1 725 565 | 2 094 277 | 2 231 630         |
| <b>Keelung</b>                | Taiwan Province of China   | 2 070 192 | 2 091 458 | 2 123 000         |
| <b>Tanjung Perak/Surabaya</b> | Indonesia                  | 1 667 868 | 1 850 000 | 1 943 000         |
| <b>Gwangyang</b>              | Republic of Korea          | 1 321 862 | 1 441 261 | 1 760 000         |
| <b>Khor Fakkan</b>            | United Arab Emirates       | 1 819 431 | 1 929 729 | 1 730 758         |
| <b>Bangkok</b>                | Thailand                   | 1 318 000 | 1 349 246 | 1 485 328         |
| <b>Ambarli</b>                | Turkey                     | 1 078 406 | 1 185 768 | 1 445 000         |
| <b>Shahid Rajaei</b>          | Iran (Islamic Republic of) | 1 142 659 | 1 292 962 | 1 408 067         |
| <b>Incheon</b>                | Republic of Korea          | 934 941   | 1 153 465 | 1 380 000         |
| <b>Lianyungang</b>            | China                      | 502 300   | 1 005 300 | 1 302 300         |
| <b>Taichung</b>               | Taiwan Province of China   | 1 245 185 | 1 228 915 | 1 204 200         |
| <b>Zhongshan</b>              | China                      | 921 500   | 1 075 900 | 1 173 400         |
| <b>Yantai</b>                 | China                      | 290 000   | 551 000   | 1 169 000         |
| <b>Karachi</b>                | Pakistan                   | 911 933   | 1 024 000 | 1 127 456         |
| <b>Fuzhou</b>                 | China                      | 707 900   | 750 000   | 1 030 000         |
| <b>Yingkou</b>                | China                      | 1 040 438 | 633 600   | 1 010 000         |
| <b>Dammam</b>                 | Saudi Arabia               | 743 457   | 894 809   | 941 828           |
| <b>Chittagong</b>             | Bangladesh                 | 688 771   | 783 353   | 882 411           |
| <b>Pasir Gudang</b>           | Malaysia                   | 805 689   | 836 754   | 880 611           |
| <b>Penang</b>                 | Malaysia                   | 772 024   | 795 289   | 849 730           |
| <b>Izmir</b>                  | Turkey                     | 804 563   | 784 377   | 847 926           |
| <b>Chennai</b>                | India                      | 617 000   | 735 000   | 797 832           |
| <b>Hakata</b>                 | Japan                      | 611 184   | 666 846   | 710 000           |

Source: Derived from information contained in *Containerisation International Yearbook 2007*, from various Dynamar B.V. publications and from information obtained by the UNCTAD secretariat directly from terminal and port authorities.

<sup>a</sup> Whilst every effort is made to obtain up-to-date data, figures for 2006 are in some cases estimated. Certain ports did not respond to the background survey.

#### *Asian container terminal operators*

Global terminal operators headquartered in Asia include Cosco Pacific, DP World, Evergreen, Hanjing, Hutchison Port Holdings (HPH), ICTSI, NYK/Ceres and PSA International. Together they have a throughput of over 220 million TEUs and around half of the world's total throughput of containers. Another terminal operator located in Asia, but not with a global port portfolio, is the China Merchants Holdings International (CMHI), which has interests in port operations in Hong Kong (China),

Ningbo, Qingdao, Shenzhen, Shanghai, Tianjin and along the Yangtze River Delta and the Bohai Economic Rim. In early 2007 CMHI bought from DP World its terminal interest in Shenzhen. CHMI also has a 30 per cent share in Shanghai International Port Group (SIPG), which built and operates the Yangshan deepwater port in Shanghai and has a stake terminal operations in the port of Zeebrugge. More recently, CMHI has branched out overseas with an investment in Ben Dinh Sao Mai port in southern Viet Nam.

Table 55

**Container port traffic for 25 Asian countries, 2004, 2005 and 2006**  
(TEUs)

| Country/territory                 | 2004        | 2005        | Preliminary figures for 2006 <sup>a</sup> | Percentage change 2004–2005 | Percentage change 2005–2006 |
|-----------------------------------|-------------|-------------|---|-----------------------------|-----------------------------|
| <b>China</b>                      | 54 517 667  | 66 520 473  | 81 927 000                                | 22.02                       | 23.16                       |
| <b>Singapore</b>                  | 21 329 100  | 23 192 200  | 24 796 000                                | 8.74                        | 6.92                        |
| <b>Hong Kong (China)</b>          | 21 984 000  | 22 427 000  | 23 539 000                                | 2.02                        | 4.96                        |
| <b>Japan</b>                      | 13 930 340  | 14 903 311  | 16 126 573                                | 6.98                        | 8.21                        |
| <b>Republic of Korea</b>          | 14 028 256  | 14 753 613  | 15 521 072                                | 5.17                        | 5.20                        |
| <b>Malaysia</b>                   | 11 249 482  | 11 762 654  | 13 295 393                                | 4.56                        | 13.03                       |
| <b>Taiwan Province of China</b>   | 13 029 492  | 12 791 429  | 13 101 870                                | -1.83                       | 2.43                        |
| <b>United Arab Emirates</b>       | 8 432 503   | 9 777 118   | 10 936 305                                | 15.95                       | 11.86                       |
| <b>Thailand</b>                   | 4 847 000   | 5 115 213   | 5 701 145                                 | 5.53                        | 11.45                       |
| <b>India</b>                      | 4 228 111   | 4 721 321   | 5 625 268                                 | 11.67                       | 19.15                       |
| <b>Indonesia</b>                  | 5 111 899   | 5 413 654   | 5 599 500                                 | 5.90                        | 3.43                        |
| <b>Saudi Arabia</b>               | 3 169 387   | 3 730 348   | 3 905 376                                 | 17.70                       | 4.69                        |
| <b>Philippines</b>                | 3 255 851   | 3 167 486   | 3 556 195                                 | -2.71                       | 12.27                       |
| <b>Turkey</b>                     | 2 732 950   | 2 907 063   | 3 336 742                                 | 6.37                        | 14.78                       |
| <b>Sri Lanka</b>                  | 2 220 525   | 2 455 297   | 3 079 132                                 | 10.57                       | 25.41                       |
| <b>Oman</b>                       | 2 515 546   | 2 727 341   | 2 543 284                                 | 8.42                        | -6.75                       |
| <b>Viet Nam</b>                   | 1 868 000   | 2 122 000   | 2 532 000                                 | 13.60                       | 19.32                       |
| <b>Pakistan</b>                   | 1 405 306   | 1 564 827   | 1 760 956                                 | 11.35                       | 12.53                       |
| <b>Iran (Islamic Republic of)</b> | 1 177 265   | 1 325 643   | 1 528 518                                 | 12.60                       | 15.30                       |
| <b>Bangladesh</b>                 | 688 771     | 783 353     | 882 411                                   | 13.73                       | 12.65                       |
| <b>Kuwait</b>                     | 379 596     | 673 472     | 750 000                                   | 77.42                       | 11.36                       |
| <b>Lebanon</b>                    | 389 876     | 464 976     | 594 601                                   | 19.26                       | 27.88                       |
| <b>Yemen</b>                      | 491 171     | 508 085     | 590 981                                   | 3.44                        | 16.32                       |
| <b>Jordan</b>                     | 358 723     | 392 177     | 430 000                                   | 9.33                        | 9.64                        |
| <b>Cambodia</b>                   | 213 916     | 211 141     | 221 490                                   | -1.30                       | 4.90                        |
|                                   | 193 554 733 | 214 411 195 | 241 880 812                               | 11.46                       | 11.60                       |

Source: Derived from information contained in *Containerisation International Yearbook 2007*, from various Dynamar B.V. publications and from information obtained by the UNCTAD secretariat directly from terminal and port authorities.

<sup>a</sup> Whilst every effort is made to obtain up-to-date data, figures for 2006 are in some cases estimated. Certain ports did not respond to the background survey. Negative or low growth may be attributable to the fact that country totals can sometimes mask the fact that individual port data may have been omitted.

There are signs of a trend towards greater consolidation within global terminal operations following the maturity of the market after the growth in tenders for terminal concessions in the 1980s/1990s. However, notwithstanding this, the market is still quite fragmented with many smaller players, usually related to liner shipping companies. In the last couple of years there has been a movement towards the purchase of ports by

private equity funds, which has resulted in the subsequent delisting of ports from the world's stock exchanges. For instance, P&O Ports was bought by the Dubai Government's wholly owned subsidiary DP World. The United Kingdom's Associated British Ports was bought by Admiral Acquisitions, a private equity firm. The same country's MDHC was bought by Peel Holdings, a private company (now 49 per cent owned by Deutsche Bank).

Orient Overseas Container Line, the Hong Kong (China) listed liner shipping company, sold its entire terminal operations (excluding Long Beach and Kaohsiung) to Ontario Teachers' Pension Plan Board (OTPPB) in 2006. Other non-listed port-owning companies include PSA International in Asia, Eurograte, Hamburger Hafen und Logistik AG (HHLA), Mediterranean Shipping Company (MSC) and Terminal de Contenidors de Barcelona (TCB) in Europe, and Stevedoring Services of America (SSA) in North America.

Ports still listed on the Asian stock markets include CHMI, Cosco Pacific and HPH (through its parent company Hutchison Whampoa), which are all listed in Hong Kong (China). ICTSI is listed in Manila, Hanjin in Seoul (although Macquarie Bank has a 40 per cent share of the terminal business), APL in Singapore (through its parent company NOL), Evergreen listed in Taiwan Province of China, and NYK in Tokyo.

The cost of purchasing terminals has risen in recent years. When DP World purchased CSX Terminal in 2005 the price/earnings (p/e) ratio was 14; when Admiral Acquisitions bought Associated British Ports the p/e ratio was 15; and when Deutsche Bank bought a share in Peel ports the p/e ratio was 16. However, when DP World purchased P&O Ports, less than a year after the purchase of CSX Terminals, the p/e ratio had risen to 19 times. The p/e ratio of Forth Ports in the United Kingdom, the last remaining UK port company still listed on the stock exchange, was around 20 in the middle of 2007. At the same time ICTSI was at 25 and CMHI at 36. The higher ratio for CMHI reflects the sentiment that investors have for the Chinese port sector, a business in which CMHI has approximately a 35 per cent stake. Ports are increasingly attracting the interest of investors, and so for developing countries the main issue is no longer how to finance new infrastructure projects but which partner to choose.

#### *Container manufacturing*

Container manufacturing is still dominated by China's two largest box producers, China International Marine

Containers (CIMC) and Singamas, which between them control more than 90 per cent of the market. CIMC has an annual capacity capable of producing 2 million TEUs per annum and Singamas a capacity of 1.25 million TEUs. Other container manufacturers include CXIC Group (China, with Israel's Zim holding a 25 per cent stake), Jindo Corp and Hyundai Mobis (both from the Republic of Korea). Further details can be found in chapter 5.

### **C. ASIAN FLEET DEVELOPMENT**

#### *Asian merchant fleet*

Table 56 shows the make-up of the Asian fleet by flag of registration and type of vessel. By far the largest registries are those of Hong Kong (China) and Singapore, each with around 32 million GT registered. Next is mainland China with 23 million GT, the Republic of Korea with 10 million, India with 8 million, Malaysia with 6 million, followed by Indonesia, the Islamic Republic of Iran and the Philippines with around 5 million each. Around one quarter of the world's bulk carriers fly an Asian flag, as well as one in four general cargo vessels. Approximately 21 per cent of the world's fleet of vessels above 100 GT is registered in Asia.

Table 57 shows a breakdown in the growth of the merchant fleet for 37 selected Asian countries. Jordan experienced the largest increase in its merchant fleet with an impressive 145 per cent; in actual vessel numbers the fleet increased by 325 vessels. Kazakhstan recorded a 70 per cent increase, although this is equivalent to just 33 extra vessels. Viet Nam recorded a respectable 27 per cent increase and Indonesia and Oman 20 per cent each. Countries which also recorded double-digit growth were Qatar (17), the Republic of Korea (15), Turkmenistan (15) and Malaysia (11). The age distribution of the Asian merchant fleet can be seen in table 58. Qatar had one of the youngest national fleets with an average age of 8 years, largely attributable to its young fleet of oil tankers and LNG (liquid natural gas) carriers (see chapter 1).

Table 56  
Asian merchant fleet, by flag of registration and type of ship <sup>a</sup>  
(Gross tonnage)

| Flag                                   | Bulk carriers      | Container ships    | General cargo     | Oil tankers        | Other types       | Grand total        |
|--|--------------------|--------------------|-------------------|--------------------|-------------------|--------------------|
| Azerbaijan                             |                    |                    | 99 247            | 226 453            | 367 191           | 692 891            |
| Bahrain                                | 58 148             | 96 308             | 2 847             | 81 314             | 89 733            | 328 350            |
| Bangladesh                             | 51 632             | 45 193             | 255 697           | 58 805             | 33 033            | 444 360            |
| Brunei Darussalam                      |                    |                    | 1 667             | 1 066              | 475 742           | 478 475            |
| Cambodia                               | 452 600            | 38 479             | 1 290 451         | 79 943             | 89 909            | 1 951 382          |
| China                                  | 9 227 147          | 3 246 674          | 4 808 133         | 4 575 902          | 1 630 571         | 23 488 427         |
| Democratic People's Republic of Korea  | 160 551            | 17 436             | 725 968           | 60 046             | 88 625            | 1 052 626          |
| Georgia                                | 390 319            | 17 298             | 497 585           | 107 301            | 116 808           | 1 129 311          |
| Hong Kong (China)                      | 17 909 201         | 5 069 200          | 2 037 974         | 7 190 661          | 477 816           | 32 684 852         |
| India                                  | 2 099 520          | 126 538            | 258 364           | 4 883 338          | 1 013 425         | 8 381 185          |
| Indonesia                              | 485 630            | 349 412            | 1 993 281         | 1 288 170          | 1 170 655         | 5 287 148          |
| Iran (Islamic Republic of)             | 993 343            | 275 113            | 508 893           | 3 266 402          | 163 525           | 5 207 276          |
| Iraq                                   |                    |                    | 40 380            | 30 308             | 71 537            | 142 225            |
| Jordan                                 | 32 182             | 26 318             | 112 843           | 138 967            | 76 009            | 386 319            |
| Kazakhstan                             |                    |                    | 2 804             | 36 663             | 25 465            | 64 932             |
| Kuwait                                 | 53 793             | 214 436            | 98 283            | 1 525 861          | 264 463           | 2 156 836          |
| Lao People's Democratic Republic       |                    |                    | 2 853             |                    |                   | 2 853              |
| Lebanon                                | 50 328             |                    | 96 214            | 842                | 9 573             | 156 957            |
| Macao (China)                          |                    |                    |                   |                    | 2 321             | 2 321              |
| Malaysia                               | 343 041            | 689 664            | 517 308           | 2 511 211          | 2 327 776         | 6 389 000          |
| Maldives                               |                    |                    | 82 237            | 8 126              | 9 568             | 99 931             |
| Mongolia                               | 137 144            |                    | 247 732           | 25 364             | 16 912            | 427 152            |
| Myanmar                                | 208 206            |                    | 156 740           | 2 935              | 29 382            | 397 263            |
| Oman                                   |                    |                    | 1 585             | 412                | 18 336            | 20 333             |
| Pakistan                               | 36 098             | 18 012             | 129 768           | 214 822            | 15 920            | 414 620            |
| Philippines                            | 2 459 287          | 165 744            | 1 373 766         | 403 210            | 669 997           | 5 072 004          |
| Qatar                                  | 15 071             | 184 168            | 39 176            | 327 918            | 85 947            | 652 280            |
| Republic of Korea                      | 5 845 155          | 1 224 068          | 1 142 086         | 1 275 509          | 990 300           | 10 477 118         |
| Saudi Arabia                           |                    | 149 368            | 304 335           | 424 182            | 143 960           | 1 021 845          |
| Singapore                              | 6 492 161          | 4 639 269          | 3 058 171         | 16 119 713         | 1 864 608         | 32 173 922         |
| Sri Lanka                              | 7 170              | 24 531             | 113 995           | 8 467              | 19 921            | 174 084            |
| Syrian Arab Republic                   | 45 042             | 7 572              | 331 699           | 1 461              | 2 907             | 388 681            |
| Taiwan Province of China               | 1 198 656          | 475 449            | 112 344           | 821 129            | 178 133           | 2 785 711          |
| Thailand                               | 918 540            | 258 839            | 1 143 269         | 370 270            | 191 785           | 2 882 703          |
| Turkey                                 | 2 101 113          | 253 873            | 1 312 381         | 859 520            | 321 952           | 4 848 839          |
| Turkmenistan                           | 2 613              |                    | 16 966            | 6 156              | 27 680            | 53 415             |
| United Arab Emirates                   | 86 531             | 214 436            | 94 902            | 293 913            | 180 544           | 870 326            |
| Viet Nam                               | 267 291            | 71 260             | 1 152 869         | 370 803            | 191 590           | 2 053 813          |
| Yemen                                  |                    |                    | 5 461             | 10 710             | 12 998            | 29 169             |
| Subtotal                               | 52 127 513         | 17 898 658         | 24 170 274        | 47 607 873         | 13 466 617        | 155 270 935        |
| Unknown                                | 667 015            | 43 233             | 1 322 496         | 509 128            | 1 457 687         | 3 999 559          |
| <b>Grand total of world fleet</b>      | <b>204 552 682</b> | <b>110 686 630</b> | <b>98 213 506</b> | <b>213 748 432</b> | <b>93 587 606</b> | <b>720 788 856</b> |
| <b>Asian percentage of world fleet</b> | <b>25.48%</b>      | <b>16.17%</b>      | <b>24.61%</b>     | <b>22.27%</b>      | <b>14.39%</b>     | <b>21.54%</b>      |

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

<sup>a</sup> Cargo-carrying vessels of 100 GT and above.

Table 57

Merchant fleet, by flag of registration, for 37 selected Asian countries/territories <sup>a</sup>*(In thousands of dwt) <sup>b</sup>*

|  | 1 January<br>2005 | 1 January<br>2006 | 1 January<br>2007 | Percentage<br>change<br>2005–2006 | Percentage<br>change<br>2006–2007 |
|--|-------------------|-------------------|-------------------|-----------------------------------|-----------------------------------|
| Azerbaijan                             | 551               | 568               | 602               | 3                                 | 6                                 |
| Bahrain                                | 380               | 396               | 410               | 4                                 | 4                                 |
| Bangladesh                             | 626               | 664               | 618               | 6                                 | -7                                |
| Brunei                                 | 422               | 421               | 421               | 0                                 | 0                                 |
| Cambodia                               | -                 | -                 | 2 700             | -                                 | -                                 |
| China                                  | 29 793            | 32 774            | 34 924            | 10                                | 7                                 |
| Democratic People's Republic of Korea  | 1 531             | 1 733             | 1 419             | 13                                | -18                               |
| Georgia                                | 1 340             | 1 502             | 1 605             | 12                                | 7                                 |
| Hong Kong (China)                      | 43 957            | 50 443            | 54 341            | 15                                | 8                                 |
| India                                  | 12 347            | 13 295            | 14 190            | 8                                 | 7                                 |
| Indonesia                              | 5 038             | 5 308             | 6 392             | 5                                 | 20                                |
| Iran (Islamic Republic of)             | 9 115             | 9 009             | 8 953             | -1                                | -1                                |
| Iraq                                   | 210               | 175               | 176               | -17                               | 0                                 |
| Japan                                  | 16 013            | 15 100            | 15 083            | -6                                | 0                                 |
| Jordan                                 | 211               | 225               | 550               | 7                                 | 145                               |
| Kazakhstan                             | 20                | 47                | 80                | 135                               | 70                                |
| Kuwait                                 | 3 811             | 3 706             | 3 442             | -3                                | -7                                |
| Lao People's Democratic Republic       | -                 | -                 | 5                 | -                                 | -                                 |
| Macao (China)                          | -                 | -                 | 2                 | -                                 | -                                 |
| Malaysia                               | 8 708             | 7 755             | 8 571             | -11                               | 11                                |
| Mongolia                               | -                 | -                 | 629               | -                                 | -                                 |
| Myanmar                                | 656               | 645               | 574               | -2                                | -11                               |
| Oman                                   | 10                | 11                | 13                | 10                                | 20                                |
| Pakistan                               | 472               | 652               | 673               | 38                                | 3                                 |
| Philippines                            | 7 008             | 7 129             | 6 704             | 2                                 | -6                                |
| Qatar                                  | 793               | 795               | 933               | 0                                 | 17                                |
| Republic of Korea                      | 12 017            | 14 347            | 16 540            | 19                                | 15                                |
| Saudi Arabia                           | 2 581             | 1 278             | 1 229             | -50                               | -4                                |
| Seychelles                             | 70                | 136               | 145               | 94                                | 7                                 |
| Singapore                              | 40 943            | 48 562            | 51 043            | 19                                | 5                                 |
| Sri Lanka                              | 196               | 222               | 224               | 13                                | 1                                 |
| Taiwan Province of China               | -                 | -                 | 4 398             | -                                 | -                                 |
| Thailand                               | 4 383             | 4 591             | 4 320             | 5                                 | -6                                |
| Turkey                                 | 7 048             | 7 621             | 7 223             | 8                                 | -5                                |
| Turkmenistan                           | 36                | 42                | 48                | 17                                | 15                                |
| Viet Nam                               | 2 127             | 2 479             | 3 144             | 17                                | 27                                |
| Yemen                                  | -                 | -                 | 26                | -                                 | -                                 |
| <b>World dwt total</b>                 | <b>895 843</b>    | <b>959 964</b>    | <b>1 042 351</b>  | <b>7</b>                          | <b>9</b>                          |
| <b>Asian dwt</b>                       | <b>212 413</b>    | <b>231 631</b>    | <b>252 361</b>    | <b>9</b>                          | <b>9</b>                          |
| <b>Asian market share of world dwt</b> | <b>23.71%</b>     | <b>24.13%</b>     | <b>24.21%</b>     | <b>0.42</b>                       | <b>0.08</b>                       |

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

<sup>a</sup> Cargo-carrying vessels of 100 GT and above.

<sup>b</sup> Figures rounded to the nearest 000.

Table 58

Age distribution of the merchant fleet <sup>a</sup> for 34 selected Asian countries

| Country/territory or grouping                | Type           | 0–4 years | 5–9 years | 10–14 years | 15–19 years | 20 years and over | Average age <sup>b</sup> |
|--|----------------|-----------|-----------|-------------|-------------|-------------------|--------------------------|
| <b>World fleet</b>                           | Bulk carriers  | 21.6      | 19.0      | 19.1        | 9.0         | 31.3              | 12.9                     |
|  | Containerships | 34.7      | 25.7      | 18.6        | 8.0         | 13.0              | 9.1                      |
|  | General cargo  | 10.1      | 12.6      | 10.9        | 9.6         | 56.8              | 17.4                     |
|  | Oil tankers    | 30.3      | 25.0      | 16.4        | 14.6        | 13.6              | 10.0                     |
|  | Other types    | 19.6      | 14.4      | 10.7        | 9.1         | 46.3              | 15.1                     |
|  | All            | 25.1      | 21.0      | 16.7        | 10.9        | 26.2              | 12.0                     |
| <b>Bahrain</b>                               | Bulk carriers  | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|  | Containerships | 0.0       | 100.0     | 0.0         | 0.0         | 0.0               | 7.0                      |
|  | General cargo  | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|  | Oil tankers    | 0.0       | 99.5      | 0.0         | 0.0         | 0.5               | 7.1                      |
|  | Other types    | 36.0      | 14.3      | 6.4         | 3.1         | 40.2              | 12.5                     |
|  | All            | 5.9       | 64.0      | 1.0         | 0.5         | 28.6              | 11.5                     |
| <b>Bangladesh</b>                            | Bulk carriers  | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|  | Containerships | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|  | General cargo  | 0.0       | 0.1       | 0.0         | 14.0        | 85.9              | 22.6                     |
|  | Oil tankers    | 0.0       | 0.0       | 0.0         | 5.6         | 94.4              | 23.1                     |
|  | Other types    | 0.9       | 4.6       | 1.1         | 31.2        | 62.3              | 20.4                     |
|  | All            | 0.0       | 0.2       | 0.0         | 9.9         | 89.8              | 22.8                     |
| <b>Brunei Darussalam</b>                     | General cargo  | 0.0       | 0.0       | 53.0        | 0.0         | 47.0              | 17.4                     |
|  | Oil tankers    | 0.0       | 48.1      | 0.0         | 51.9        | 0.0               | 12.2                     |
|  | Other types    | 0.0       | 17.4      | 0.3         | 0.1         | 82.2              | 20.6                     |
|  | All            | 0.0       | 17.4      | 0.5         | 0.2         | 81.9              | 20.6                     |
| <b>Cambodia</b>                              | Bulk carriers  | 0.0       | 0.0       | 0.9         | 1.1         | 98.1              | 23.3                     |
|  | Containerships | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|  | General cargo  | 6.6       | 0.3       | 0.9         | 3.4         | 88.9              | 21.7                     |
|  | Oil tankers    | 0.0       | 0.0       | 5.3         | 2.2         | 92.5              | 22.7                     |
|  | Other types    | 0.0       | 0.0       | 4.3         | 8.2         | 87.5              | 22.5                     |
|  | All            | 4.2       | 0.2       | 1.1         | 2.8         | 91.7              | 22.3                     |
| <b>China</b>                                 | Bulk carriers  | 10.1      | 7.5       | 9.8         | 14.8        | 57.8              | 18.0                     |
|  | Containerships | 48.8      | 3.3       | 16.8        | 8.5         | 22.6              | 10.0                     |
|  | General cargo  | 2.4       | 6.3       | 3.9         | 6.2         | 81.1              | 21.1                     |
|  | Oil tankers    | 39.8      | 8.2       | 15.0        | 7.0         | 30.1              | 11.4                     |
|  | Other types    | 15.2      | 8.3       | 10.7        | 9.2         | 56.6              | 17.0                     |
|  | All            | 19.7      | 7.0       | 10.7        | 10.6        | 52.0              | 16.2                     |
| <b>Democratic People's Republic of Korea</b> | Bulk carriers  | 0.0       | 0.0       | 0.0         | 0.4         | 99.6              | 23.5                     |
|  | Containerships | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|  | General cargo  | 1.1       | 0.3       | 0.7         | 2.0         | 95.9              | 23.0                     |
|  | Oil tankers    | 0.0       | 0.7       | 1.1         | 5.2         | 93.0              | 22.9                     |
|  | Other types    | 0.0       | 0.0       | 3.5         | 6.9         | 89.6              | 22.6                     |
|  | All            | 0.8       | 0.2       | 0.7         | 2.1         | 96.2              | 23.1                     |
| <b>Hong Kong (China)</b>                     | Bulk carriers  | 30.5      | 23.1      | 19.5        | 9.0         | 18.0              | 10.3                     |
|  | Containerships | 46.9      | 17.3      | 18.0        | 6.2         | 11.6              | 8.1                      |
|  | General cargo  | 16.9      | 16.2      | 27.8        | 13.2        | 25.8              | 13.1                     |
|  | Oil tankers    | 35.2      | 17.3      | 23.3        | 23.5        | 0.7               | 8.9                      |
|  | Other types    | 61.1      | 2.1       | 20.0        | 2.6         | 14.1              | 7.5                      |
|  | All            | 33.0      | 20.5      | 20.7        | 12.3        | 13.6              | 9.8                      |



Table 58 (continued)

| Country/territory or grouping           | Type           | 0–4 years | 5–9 years | 10–14 years | 15–19 years | 20 years and over | Average age <sup>b</sup> |
|---|----------------|-----------|-----------|-------------|-------------|-------------------|--------------------------|
| <b>India</b>                            | Bulk carriers  | 1.6       | 7.9       | 15.2        | 5.3         | 70.0              | 19.8                     |
|   | Containerships | 0.0       | 0.0       | 52.0        | 25.1        | 23.0              | 15.9                     |
|   | General cargo  | 5.9       | 12.6      | 18.8        | 17.1        | 45.7              | 16.9                     |
|   | Oil tankers    | 31.6      | 8.4       | 15.6        | 15.5        | 28.9              | 12.5                     |
|   | Other types    | 3.3       | 5.8       | 1.1         | 26.3        | 63.5              | 20.0                     |
|   | All            | 20.5      | 8.0       | 14.7        | 14.0        | 42.8              | 15.2                     |
| <b>Indonesia</b>                        | Bulk carriers  | 3.5       | 0.0       | 8.8         | 11.8        | 75.9              | 21.0                     |
|   | Containerships | 2.8       | 22.4      | 4.2         | 5.6         | 65.0              | 18.3                     |
|   | General cargo  | 2.5       | 0.7       | 4.5         | 4.7         | 87.6              | 22.0                     |
|   | Oil tankers    | 2.4       | 2.2       | 12.3        | 3.5         | 79.5              | 21.0                     |
|   | Other types    | 4.2       | 5.0       | 14.6        | 11.7        | 64.5              | 19.3                     |
|   | All            | 2.8       | 3.1       | 8.3         | 5.8         | 80.1              | 21.1                     |
| <b>Iran (Islamic Republic of)</b>       | Bulk carriers  | 0.0       | 21.2      | 0.0         | 0.1         | 78.7              | 20.0                     |
|   | Containerships | 60.5      | 36.1      | 2.8         | 0.0         | 0.5               | 4.2                      |
|   | General cargo  | 1.8       | 37.3      | 15.0        | 4.4         | 41.6              | 15.0                     |
|   | Oil tankers    | 36.5      | 36.3      | 24.7        | 0.0         | 2.5               | 6.8                      |
|   | Other types    | 1.9       | 0.5       | 2.7         | 4.0         | 90.8              | 22.4                     |
|   | All            | 27.1      | 32.8      | 18.0        | 0.4         | 21.6              | 10.1                     |
| <b>Iraq</b>                             | General cargo  | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|   | Oil tankers    | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|   | Other types    | 0.0       | 0.6       | 4.9         | 0.0         | 94.5              | 22.8                     |
|   | All            | 0.0       | 0.2       | 1.9         | 0.0         | 97.8              | 23.2                     |
| <b>Jordan</b>                           | Bulk carriers  | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|   | Containerships | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|   | General cargo  | 0.0       | 0.0       | 0.0         | 24.9        | 75.1              | 21.9                     |
|   | Oil tankers    | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|   | Other types    | 1.3       | 0.0       | 0.0         | 1.2         | 97.5              | 23.2                     |
|   | All            | 0.0       | 0.0       | 0.0         | 6.6         | 93.3              | 23.1                     |
| <b>Kuwait</b>                           | Bulk carriers  | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|   | Containerships | 0.0       | 44.0      | 0.0         | 0.0         | 56.0              | 16.2                     |
|   | General cargo  | 0.4       | 0.0       | 0.5         | 0.0         | 99.1              | 23.4                     |
|   | Oil tankers    | 15.2      | 22.4      | 0.0         | 54.9        | 7.5               | 13.0                     |
|   | Other types    | 0.7       | 0.8       | 38.1        | 0.3         | 60.0              | 18.8                     |
|   | All            | 12.4      | 21.0      | 2.9         | 44.3        | 19.5              | 14.2                     |
| <b>Lao People's Democratic Republic</b> | General cargo  | 0.0       | 0.0       | 66.6        | 0.0         | 33.4              | 15.8                     |
|   | All            | 0.0       | 0.0       | 66.6        | 0.0         | 33.4              | 15.8                     |
| <b>Lebanon</b>                          | Bulk carriers  | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|   | General cargo  | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|   | Oil tankers    | 0.0       | 0.0       | 53.7        | 0.0         | 46.3              | 17.3                     |
|   | Other types    | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|   | All            | 0.0       | 0.0       | 0.4         | 0.0         | 99.6              | 23.5                     |
| <b>Macao (China )</b>                   | Other types    | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|   | All            | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
| <b>Malaysia</b>                         | Bulk carriers  | 14.7      | 32.6      | 25.5        | 6.8         | 20.4              | 11.6                     |
|   | Containerships | 14.1      | 30.0      | 18.8        | 19.0        | 18.0              | 12.1                     |
|   | General cargo  | 3.8       | 3.1       | 11.4        | 6.4         | 75.4              | 20.5                     |
|   | Oil tankers    | 41.6      | 22.1      | 9.9         | 14.7        | 11.6              | 8.8                      |
|   | Other types    | 28.7      | 11.0      | 20.7        | 3.4         | 36.1              | 12.9                     |
|   | All            | 31.0      | 19.4      | 14.8        | 11.0        | 23.8              | 11.2                     |



Table 58 (continued)

| Country/territory or grouping | Type           | 0–4 years | 5–9 years | 10–14 years | 15–19 years | 20 years and over | Average age <sup>b</sup> |
|-------------------------------|----------------|-----------|-----------|-------------|-------------|-------------------|--------------------------|
| <b>Maldives</b>               | General cargo  | 0.0       | 0.0       | 0.1         | 1.3         | 98.6              | 23.4                     |
|                               | Oil tankers    | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|                               | Other types    | 0.0       | 1.1       | 0.3         | 0.0         | 98.6              | 23.3                     |
|                               | All            | 0.0       | 0.0       | 0.1         | 1.1         | 98.8              | 23.4                     |
| <b>Myanmar</b>                | Bulk carriers  | 0.0       | 60.7      | 13.7        | 19.0        | 6.6               | 10.7                     |
|                               | General cargo  | 0.7       | 12.4      | 16.4        | 17.4        | 53.0              | 18.3                     |
|                               | Oil tankers    | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|                               | Other types    | 0.0       | 38.1      | 0.0         | 25.5        | 36.5              | 15.6                     |
|                               | All            | 0.2       | 43.4      | 14.2        | 18.5        | 23.7              | 13.5                     |
| <b>Oman</b>                   | General cargo  | 0.0       | 38.1      | 0.0         | 0.0         | 61.9              | 17.2                     |
|                               | Other types    | 6.5       | 14.2      | 15.2        | 2.8         | 61.3              | 17.8                     |
|                               | All            | 5.7       | 17.2      | 13.3        | 2.4         | 61.4              | 17.8                     |
| <b>Pakistan</b>               | Bulk carriers  | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|                               | Containerships | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|                               | General cargo  | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|                               | Oil tankers    | 0.0       | 0.0       | 0.1         | 0.2         | 99.7              | 23.5                     |
|                               | Other types    | 6.8       | 18.3      | 0.0         | 0.0         | 75.0              | 19.0                     |
|                               | All            | 0.1       | 0.4       | 0.0         | 0.1         | 99.3              | 23.4                     |
| <b>Philippines</b>            | Bulk carriers  | 15.4      | 32.1      | 25.2        | 5.1         | 22.2              | 11.7                     |
|                               | Containerships | 0.0       | 0.0       | 95.2        | 0.0         | 4.8               | 12.6                     |
|                               | General cargo  | 2.7       | 4.8       | 10.7        | 7.2         | 74.6              | 20.4                     |
|                               | Oil tankers    | 49.1      | 3.1       | 10.9        | 5.6         | 31.2              | 10.8                     |
|                               | Other types    | 36.6      | 2.7       | 0.1         | 5.5         | 55.1              | 14.8                     |
|                               | All            | 15.8      | 20.7      | 20.9        | 5.5         | 37.0              | 13.9                     |
| <b>Qatar</b>                  | Bulk carriers  | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|                               | Containerships | 9.0       | 55.7      | 0.0         | 0.0         | 35.3              | 12.4                     |
|                               | General cargo  | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|                               | Oil tankers    | 73.6      | 0.0       | 26.3        | 0.0         | 0.1               | 4.6                      |
|                               | Other types    | 71.0      | 8.5       | 0.0         | 0.0         | 20.5              | 6.8                      |
|                               | All            | 53.6      | 12.7      | 16.4        | 0.0         | 17.3              | 8.0                      |
| <b>Republic of Korea</b>      | Bulk carriers  | 0.9       | 2.2       | 29.3        | 40.2        | 27.4              | 17.0                     |
|                               | Containerships | 4.5       | 9.5       | 63.2        | 6.9         | 15.9              | 13.2                     |
|                               | General cargo  | 2.3       | 1.8       | 13.7        | 31.9        | 50.3              | 19.1                     |
|                               | Oil tankers    | 8.9       | 11.1      | 52.9        | 7.6         | 19.5              | 13.2                     |
|                               | Other types    | 3.6       | 3.1       | 8.8         | 25.5        | 59.0              | 19.5                     |
|                               | All            | 2.5       | 4.0       | 33.0        | 31.6        | 28.9              | 16.5                     |
| <b>Saudi Arabia</b>           | Containerships | 0.0       | 64.1      | 0.0         | 0.0         | 35.9              | 12.9                     |
|                               | General cargo  | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|                               | Oil tankers    | 17.0      | 0.0       | 0.0         | 0.5         | 82.5              | 19.8                     |
|                               | Other types    | 3.0       | 35.0      | 7.4         | 1.1         | 53.6              | 16.2                     |
|                               | All            | 7.5       | 15.5      | 1.6         | 0.4         | 75.0              | 19.1                     |
| <b>Singapore</b>              | Bulk carriers  | 26.5      | 22.1      | 28.2        | 16.5        | 6.7               | 9.8                      |
|                               | Containerships | 22.0      | 27.9      | 29.2        | 11.0        | 9.8               | 10.1                     |
|                               | General cargo  | 20.6      | 14.4      | 14.7        | 3.7         | 46.7              | 14.8                     |
|                               | Oil tankers    | 20.2      | 14.9      | 18.0        | 30.3        | 16.7              | 12.7                     |
|                               | Other types    | 32.5      | 15.3      | 9.6         | 8.5         | 34.2              | 12.3                     |
|                               | All            | 22.5      | 18.0      | 21.1        | 22.5        | 15.9              | 11.8                     |

Table 58 (continued)

| Country/territory or grouping   | Type           | 0–4 years | 5–9 years | 10–14 years | 15–19 years | 20 years and over | Average age <sup>b</sup> |
|---------------------------------|----------------|-----------|-----------|-------------|-------------|-------------------|--------------------------|
| <b>Sri Lanka</b>                | Bulk carriers  | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|                                 | Containerships | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|                                 | General cargo  | 0.0       | 0.0       | 0.0         | 11.4        | 88.6              | 22.8                     |
|                                 | Oil tankers    | 0.0       | 0.0       | 0.0         | 9.2         | 90.8              | 22.9                     |
|                                 | Other types    | 5.4       | 20.9      | 2.0         | 11.3        | 60.4              | 17.9                     |
|                                 | All            | 0.4       | 1.4       | 0.1         | 9.0         | 89.1              | 22.6                     |
| <b>Syrian Arab Republic</b>     | Bulk carriers  | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|                                 | Containerships | 0.0       | 0.0       | 0.0         | 100.0       | 0.0               | 17.0                     |
|                                 | General cargo  | 2.5       | 0.1       | 1.8         | 2.8         | 92.8              | 22.5                     |
|                                 | Oil tankers    | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|                                 | Other types    | 13.6      | 0.0       | 0.0         | 0.0         | 86.4              | 20.6                     |
|                                 | All            | 2.2       | 0.1       | 1.5         | 3.9         | 92.3              | 22.6                     |
| <b>Taiwan Province of China</b> | Bulk carriers  | 0.6       | 43.0      | 34.7        | 4.7         | 16.9              | 12.0                     |
|                                 | Containerships | 3.8       | 15.8      | 19.1        | 22.8        | 38.4              | 16.4                     |
|                                 | General cargo  | 0.0       | 5.6       | 0.8         | 8.6         | 85.0              | 21.9                     |
|                                 | Oil tankers    | 0.0       | 0.5       | 20.2        | 61.7        | 17.6              | 17.1                     |
|                                 | Other types    | 0.4       | 0.7       | 9.7         | 62.6        | 26.6              | 18.1                     |
|                                 | All            | 0.8       | 23.9      | 26.3        | 26.3        | 22.7              | 14.6                     |
| <b>Thailand</b>                 | Bulk carriers  | 0.0       | 8.3       | 21.9        | 6.6         | 63.2              | 19.2                     |
|                                 | Containerships | 35.8      | 9.4       | 41.8        | 4.4         | 8.6               | 9.2                      |
|                                 | General cargo  | 0.3       | 5.9       | 11.0        | 7.4         | 75.3              | 20.7                     |
|                                 | Oil tankers    | 1.5       | 0.0       | 2.9         | 13.7        | 81.9              | 21.9                     |
|                                 | Other types    | 0.8       | 2.3       | 5.7         | 7.7         | 83.5              | 21.8                     |
|                                 | All            | 3.3       | 6.0       | 15.9        | 7.8         | 67.0              | 19.5                     |
| <b>Turkey</b>                   | Bulk carriers  | 10.8      | 15.4      | 5.8         | 0.0         | 68.0              | 18.0                     |
|                                 | Containerships | 40.4      | 32.0      | 3.9         | 3.1         | 20.6              | 8.9                      |
|                                 | General cargo  | 10.9      | 8.8       | 7.1         | 8.3         | 64.9              | 18.4                     |
|                                 | Oil tankers    | 45.3      | 35.8      | 0.5         | 0.5         | 17.9              | 7.8                      |
|                                 | Other types    | 10.9      | 3.4       | 4.9         | 11.6        | 69.1              | 19.3                     |
|                                 | All            | 19.1      | 18.3      | 4.9         | 2.5         | 55.2              | 15.6                     |
| <b>United Arab Emirates</b>     | Bulk carriers  | 37.9      | 38.0      | 12.9        | 10.8        | 0.5               | 6.9                      |
|                                 | Containerships | 0.0       | 44.0      | 0.0         | 0.0         | 56.0              | 16.2                     |
|                                 | General cargo  | 6.1       | 2.9       | 12.6        | 2.1         | 76.3              | 20.1                     |
|                                 | Oil tankers    | 21.6      | 9.8       | 7.3         | 3.4         | 58.0              | 16.2                     |
|                                 | Other types    | 7.5       | 7.3       | 3.5         | 11.5        | 70.2              | 19.5                     |
|                                 | All            | 15.9      | 19.3      | 6.5         | 4.6         | 53.7              | 15.9                     |
| <b>Viet Nam</b>                 | Bulk carriers  | 0.0       | 4.2       | 20.7        | 23.7        | 51.4              | 18.9                     |
|                                 | Containerships | 31.3      | 11.4      | 17.0        | 0.0         | 40.3              | 12.9                     |
|                                 | General cargo  | 33.5      | 7.4       | 8.6         | 13.9        | 36.6              | 13.2                     |
|                                 | Oil tankers    | 19.5      | 7.2       | 37.6        | 15.5        | 20.3              | 12.8                     |
|                                 | Other types    | 1.4       | 6.6       | 3.1         | 5.6         | 83.2              | 21.4                     |
|                                 | All            | 23.8      | 7.0       | 15.7        | 14.6        | 38.9              | 14.5                     |
| <b>Yemen</b>                    | General cargo  | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|                                 | Oil tankers    | 0.0       | 0.0       | 0.0         | 0.0         | 100.0             | 23.5                     |
|                                 | Other types    | 0.0       | 3.0       | 19.6        | 18.8        | 58.6              | 19.5                     |
|                                 | All            | 0.0       | 0.7       | 4.8         | 4.6         | 90.0              | 22.5                     |

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

<sup>a</sup> Vessels of 100 GT and above.

<sup>b</sup> To estimate the average age, it has been assumed that the ages of vessels are distributed evenly between the lower and upper limits of each age group. For the 20-years-and-over age group, the mid-point has been assumed to be 23.5 years.

## D. COUNTRY FOCUS

Box 2 contains a detailed account of recent and ongoing port developments in Viet Nam, which recently acceded to the WTO.

## E. OTHER DEVELOPMENTS

### *Quayside crane manufacturing*

Shanghai's Zhenhua Port Machinery Co. Ltd (ZPMC) has a 70 per cent share of the international port machinery market, a market which it has been leading since 1999. It employs some 30,000 people, and its output has been growing on an average of more than 50 per cent from 2001 to 2006; its output in 2006 was worth \$2.2 billion. In 2006 the company delivered 240 quayside cranes, plus 450 rubber-tyred gantry cranes.

### *Classification societies*

There are more than 50 classification societies worldwide; in Asia the largest classification societies include the Korean Register of Shipping with around 2,100 ships weighing some 25 million GT; Nippon Kaiji Kyokai or ClassNK with around 6,600 ships of 147 million GT; and the China Classification Society with around 1,700 vessels of around 18.5 million GT.

Membership of some registers is dominated by their own national tonnage — for example, the Indian Register of Shipping consists of 95 per cent Indian members.

### *Protection and Indemnity Clubs*

The international group of P&I (protection and indemnity) Clubs represents some 90 per cent of ocean-going world tonnage. There is only one Asian P&I Club — the Japan P&I Club. Outside the group there are a number of smaller niche clubs catering for national shipowners, such as the China P&I Club. However, the Britannia Club, based in London, has in effect become an Asian P&I Club, with more than 50 per cent of its membership from Asia. The American Club, based in New York, has approximately 27 per cent of its membership from Asia, whilst the SKULD P&I Club, based in Oslo, also has a significant Asian membership with 22 per cent from China alone. Most P&I Clubs have offices within the region targeted at servicing the growing Asian fleet. P&I premiums for 2006 saw a continuing trend of general rate increases ranging from zero to 12.5 per cent. However, on average shipowners experienced general rate increases of 7.11 per cent. One club reduced its deferred calls, as a result of which there was a reduction over the preceding year of minus 2.5 per cent. The general rate increase for 2007 was between 2.5 and 10 per cent, with an average of 6.65 per cent.

## Box 2

**Country focus: Viet Nam's port development programme**

Viet Nam is bounded by China to the north, the South China Sea to the east, and the Lao People's Democratic Republic and Cambodia to the west. The country's 64 provinces are centrally governed through the capital city, Hanoi, located in the north and served by the port of Hai Phong. Viet Nam's largest city, Ho Chi Minh City, formerly known as Saigon, is located in the south. The language most commonly spoken by its 85 million population is Vietnamese (86 per cent), while the remaining 14 per cent belong to 53 different ethnic groups. Viet Nam is a major exporter of rice and other agricultural products, including coffee and rubber. Fishing has also increased in importance over the last few years.

Viet Nam has approximately 114 seaports stretched along its 3,260 km long coastline, governed by its 23 port authorities. However, most of these ports tend to be in shallow water, of limited capacity and with poor hinterland connections. In a recent study of homogeneous cargo being shipped from various Asian ports to United States West Coast ports,<sup>a</sup> Viet Nam was 16 per cent more expensive than Shanghai, Ningbo or Shenzhen and 28 per cent more expensive than Hong Kong (China). This can be directly attributable to Viet Nam's lack of deepwater berthing facilities, which makes it necessary to trans-ship goods via a hub port. Currently, the largest container vessels calling at Viet Nam are around 1,500 TEUs or 25,000 GT. Although container trade has been growing on average by 19 per cent over the last decade, more growth could be expected if there were more deepwater ports catering to larger vessels. Viet Nam National Shipping lines (Vinalines) is the largest national carrier with 104 ships, of around 1.2 million tons, which in 2006 transported 20.2 million tons of cargo. In 2006 Viet Nam handled 2.8 million TEUs; more than 70 per cent of this trade was handled by ports located near Ho Chi Minh City.

**Northern Viet Nam**

In Hai Phong in 2004 work began on the second phase expansion plan to extend the container berth from 150 to 500 m to accommodate 50,000 tonne vessels and 500,000 TEUs annually. Elsewhere in Hai Phong the Dinh Vu Port, located next to Dinh Vu Industrial Zone, can handle ships of up to 30,000 dwt in size and 14 million tonnes of cargo annually. With a natural depth of 8.7 m this will be deepened to 10.2 m with dredging. In May 2007 work also began on a LPG storage depot.

In 2007 Cai Lan deepwater port in Quang Ninh Province, east of Hai Phong and bordering the Chinese province of Guangxi, completed its first phase of expansion. With a depth of 13 m the port can service ships of 30–40,000 dwt, and by 2010 it will increase its capacity to 16–17 million tonnes of cargo. Work has still to be carried out to connect the port to national road and rail systems. The container terminals will be developed and will be operated through a joint venture with Quang Ninh Port, SSA Marine and Vinalines.

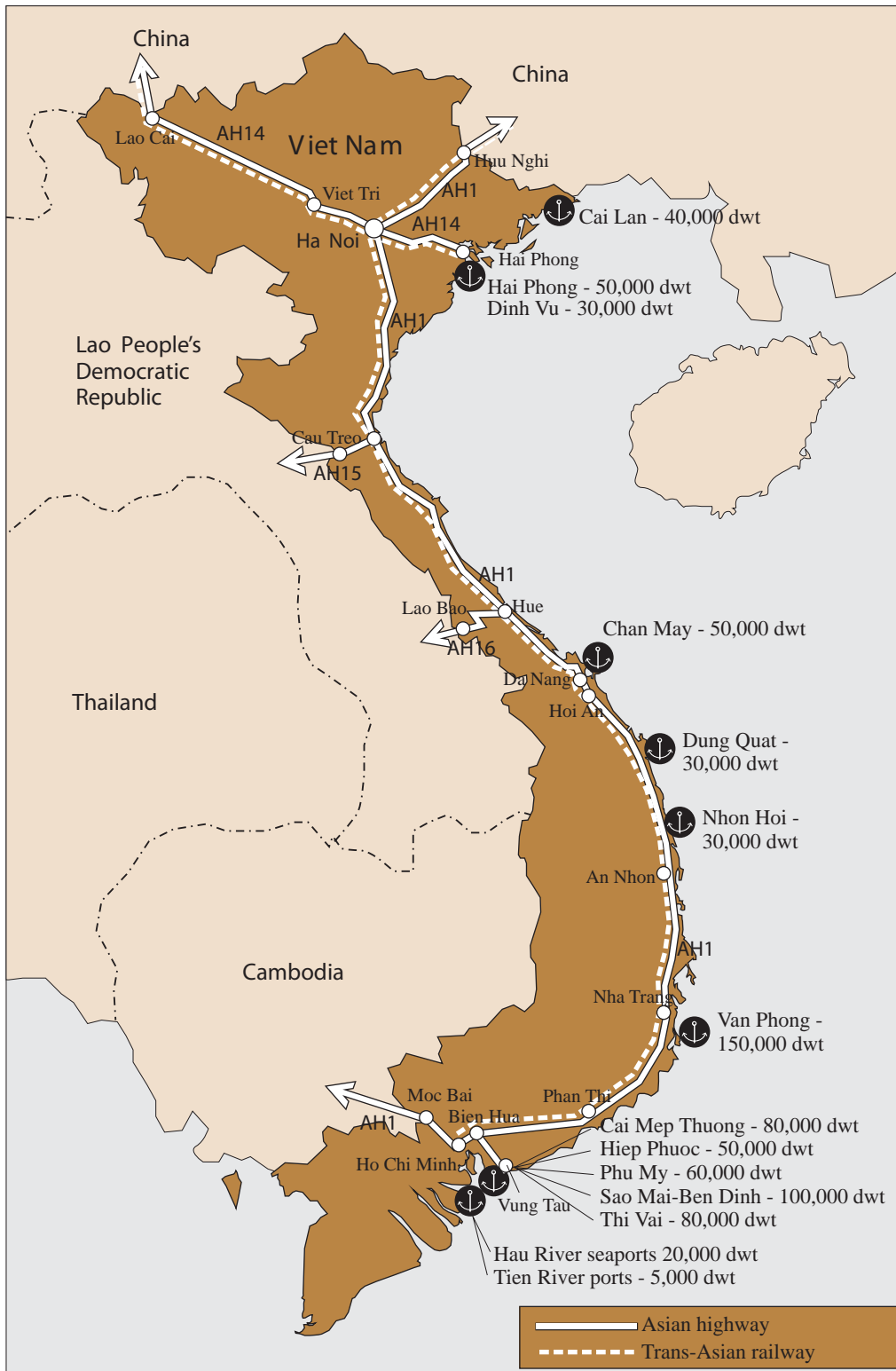
In 2015 the \$1.6 billion Lach Huyen deepwater port project at Do Son, 22 km from Haiphong, is expected to become operational and capable of receiving vessels of 60–80,000 dwt. The port capacity will be around 5,060 million tonnes of cargo.

**Central Viet Nam**

Chan May deepwater port in Thua Thien-Hue Province became operational in 2003; situated next to Chan May Commercial Economic Zone, it is 55 kilometres south of Hue City, 45 kilometres north of Da Nang, near Asian Highway No 1 and the North–South railway system. The East–West Economic Corridor (EWEC) along Asian Highway No. 16 links the central region of Viet Nam, to the Lao People's Democratic Republic, Thailand and Myanmar. The port currently has a 130 m berth capable of handling vessels of 50,000 dwt. By 2010 Chan May is expected to handle 2.7 to 3.1 million tonnes of cargo a year.

Figure 17

Map of Viet Nam



Source: UNCTAD secretariat.

Note: Estimated handling capacity along side of berth in dwt.

Construction has begun at Dung Quat deepwater seaport in Quang Ngai Province to build a second berth capable of handling vessels of up to 50,000-dwt, with \$21.7 million having been invested. The first Vietnamese private company, Gemadept-Dung Quat International Port Joint Stock Company, started work on a \$36.9 million project at Dung Quat Port. The one-year Phase One, costing \$25.3 million, began construction in July 2006. Upon completion it will be able to handle vessels of up to 30,000 dwt. Located next to the Dung Quat Economic Zone the port (company) Vinashin is building a 100,000 dwt shipyard in the region.

Ky Ha Port has been enlarged to cater for ships of 10,000 dwt and additional plans have been made to dredge the area to provide an alongside berth depth of 8.2 m. This too forms part of the overall infrastructure project for the Dung Quat Economic Zone.

Nhon Hoi Port in Binh Dinh Province is expected to have a capacity of 2 million tons per year by 2010, rising to 10 million by 2020. Ships of 30,000 dwt will be able to access the port. Like most other Vietnamese ports, it will be accompanied by an economic zone.

Approval was given in May 2006 to construct a transshipment port at the existing military port in Van Phong, in Khanh Hoa Province. Known as Van Phong International Transshipment Port, it is situated in the most easterly point of Viet Nam just 130km from international lanes. The approach channel is between 400 m and 6 km wide with a depth of 22 m. The bay has an area of approximately 43,500 ha, with depths ranging from 14 to 41 m; it can receive vessels of up to 350,000 dwt. It is already used as a ship-to-ship transshipment point for oil tankers in excess of 100,000 dwt. Phase one will cover 50 ha, comprising two berths totalling 700 m, and be capable of handling vessels up to 6,000 TEUs. Phase two, from 2010–2015, will cover 120 ha, with a total quay length of 1,700–2,300 m. This will be followed by a third and final phase of 400 ha (2015–2020) and 4,500–5,700 m quay length. The first stage of two berths is scheduled for completion in 2010 at an estimated cost of \$183 million.

### **Southern Viet Nam**

Saigon Port has entered into a number of joint ventures to establish container terminals in Ba Ria-Vung Tau Province to the south-east of Ho Chi Minh City.

Saigon Port Company and APM Terminals (owning 49 per cent) agreed to build a new container terminal with a draft of 14 m at Cai Mep Thuong, 15 miles south of Ho Chi Minh City and situated amongst eight industrial parks, at a cost of \$186 million. It is located upstream of the Cai Mep international container terminal (which is a joint venture with SSA Marine). Total quay length will be 600 m with a capacity of 1.0 million TEUs and vessels of 80,000 dwt. Construction of the first quay of 300 m started in early 2007 and should be completed by the end of the year. Phase two, construction of the second terminal, should be completed in 2010.

Saigon Port Company and PSA International (owning 49 per cent) are to build Thi Vai Port in Ba Ria-Vung Tau Province, downstream from Thi Vai International General Port, and the Hiep Phuoc project in Ho Chi Minh City planned to start operation by 2010. Phase I of the project will cost \$165 million with Phase II costing a further \$137 million and be completed by 2017. The total project will consist of four berths with an annual capacity of 1.5 million TEUs, handling vessels of up to 80,000 dwt.

Saigon Port Company and SSA Marine (owning 49 per cent) are to construct the SP-SSA International Container Terminal (SSIT), situated at Cai Mep. The \$160 million project will comprise two berths totalling 600 m. Annual throughput will be around 1.35 million TEUs and the terminal is expected to be operational by 2009.

Hutchison Port Holdings (HPH) and Saigon Investment Construction & Commerce Company Ltd (SICC) have signed a 50-year concession to jointly convert the existing greenfield site in Ba Ria Vung Tau province in Viet Nam into a new container terminal. The Cai Mep and Thi Vai area of Ba Ria Vung Tau Province is an area designated to be a deepsea port under the Vietnamese Government's Detailed Master Plan. The new terminal is expected to become operational in 2011 and will have a quay length of 730 m, with a depth alongside of 14 m, a total yard area of 33 ha and 1.1 million TEU capacity.



Tan Thuan Industrial Promotion Company and DP World (owning 80 per cent) are in a joint venture to build, equip and operate a new \$230 million development at Hiep Phuoc (SPCT). The new container terminal is situated on a greenfield site along the western shore of the Soa Rap river in Hiep Phuoc Industrial Park. The new terminal, Saigon Premier Container Terminal (SPCT), should be operational in the second half of 2008. Once completed, it will have four berths totalling 950 m with an annual capacity of 1.5 million TEU.

Phu My General Port situated on the Thi Vai River, a natural channel permitting vessels of up to 80,000 dwt, will also be home to a 33.7 ha industrial park. The port itself will be able to handle vessels of up to 60,000 dwt. A 730 m long quay, a CFS and other storage facilities will be provided at a cost of \$191.7 million.

The Sao Mai-Ben Dinh Port and Petrol Service Complex located in Ba Ria-Vung Tau Province is a Vietnamese joint venture between Vinalines and PetroVietnam (Vietnam Oil and Gas Corporation) and will include oil and gas supply, a petroleum depot, shipyard(s), oil platform assembly facilities and container handling services. The port will have an annual capacity of 50 million tons and be able to handle ships of up to 100,000 dwt. China Merchants Holdings (International) has an interest in the six new container berths.

A number of projects are planned along the Mekong River. The Tien River Seaports (Cao Lanh-Sa Dec, My Tho, Vinh Thai and Ham Luong) are to cater for vessels up to 5,000 dwt. The Hau River Seaports (Can Tho, Hoang Dieu, Cai Cui, Tra Noc, My Thoi, Dai Ngai and Tra Cu) are to cater for vessels up to 20,000 dwt.

Along the Ca Mau peninsula, the Con Dao port complex is planned for construction between 2010 and 2020. A commercial port will be developed at Ben Dam Bay.

## Conclusion

Port development in Viet Nam is being given high priority by the Government, with numerous projects either proposed or initiated. Foreign expertise provided by global terminal operators is limited to a handful of projects in the south. Connecting road and rail infrastructure from the port to the hinterland is still a concern, and the use of economic zones may be a useful initial step in order to attract foreign direct investment. Port growth will, however, in the short term be dependent on import/export cargo, which should grow following Viet Nam's accession to the WTO. Likewise, the completion of the EWEC may benefit the port of Da Nang. Transshipment cargo will not be significant until Van Phong port in central Viet Nam becomes operational in 2010.

*Source:* Derived from *Emerging Maritime Nations Report: Vietnam*, Dynamar B.V. (2007), and various other sources obtained by the UNCTAD secretariat.

<sup>a</sup> See C.W. Runckel. (2006), Ports in Viet Nam stunting amid economic development, [www.business-in-asia.com/ports-in-vietnam.html](http://www.business-in-asia.com/ports-in-vietnam.html), accessed on 16 August 2007.

## Endnotes

<sup>84</sup> In 2004 intraregional trade in Asia accounted for 29.5 per cent of global trade, whereas intraregional European trade accounted for 8 per cent.



