

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT
Geneva

REVIEW OF MARITIME TRANSPORT, 2003

Chapter 5.



UNITED NATIONS
New York and Geneva, 2003

NOTE

The *Review of Maritime Transport* is a recurrent publication prepared by the UNCTAD secretariat since 1968 with the aim of fostering the transparency of maritime markets and analysing relevant developments. Any factual or editorial corrections that may prove necessary based on comments made by Governments would be reflected in a corrigendum to be issued subsequently.

*

* *

Symbols of United Nations documents are composed of capital letters combined with figures. Use of such a symbol indicates a reference to a United Nations document.

*

* *

The designations employed and the presentation of the material in this publication do not imply an expression of opinion by the Secretariat of the United Nations concerning the legal status of any country, territory, city or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

*

* *

Material in this publication may be freely quoted or reprinted, but acknowledgement is requested, with reference to the document number (see below). A copy of the publication containing the quotation or reprint should be sent to the UNCTAD secretariat at: Palais des Nations, CH – 1211 GENEVA 10, Switzerland.

UNCTAD/RMT/2003

UNITED NATIONS PUBLICATION

Sales No. E.03.II.D.10

ISBN 92-1-112582-0

ISSN 0566-7682

Chapter 5

PORT DEVELOPMENT

This chapter covers container port throughput for developing countries, improving port performance, institutional changes in ports and security measures in ports.

A. CONTAINER PORT TRAFFIC

Table 42 gives the latest available figures on reported world container port traffic in developing countries and territories for the period 1999 to 2001. The world growth rate for container port throughput (number of movements measured in TEUs) increased by 2.2 per cent in 2001. This was only one-sixth of the growth of the previous year, which stood at 18.7 per cent, and reflects the slowdown in liner traffic during 2001. The throughput for 2001 reached 236.7 million TEU, an annual increase of 5 million TEU from the level of 231.7 million TEU reached in 2000.

The rate of growth for developing countries and territories was 2.7 per cent, with a throughput of 96.6 million TEU, which corresponds to 40.8 per cent of world total throughput. The rate of growth was considerably lower than that reached in 2000 – 14.6 per cent – when developing countries' throughput was 94.1 million TEU. Countries with double-digit growth in 2001 and 2000 were Malaysia, Oman, Jamaica, the Islamic Republic of Iran, Peru, Yemen, Djibouti and Sudan – a total of eight countries, less than half the number recorded for the years 2000 and 1999. The growth rate in developing countries is uneven from year to year, owing sometimes to strong fluctuations in trade and sometimes to improved reporting of data or lack of data for some years.

Preliminary figures for 2002 are available for the leading 20 ports of the world handling containers and are indicated in table 43. There were 10 ports of developing countries and territories and socialist countries of Asia

in the list, with the remaining 10 located in market-economy countries. Of the latter, there were six in Europe, three in the United States and one in Japan. Hong Kong (China) maintained its leadership with a 4 per cent increase, followed by Singapore, which recorded an even stronger 9.1 per cent increase. Mainland Chinese ports recorded rapid growth: Qingdao moved from nineteenth to fifteenth place with a 17.4 per cent increase, while Shanghai recorded a remarkable 36 per cent increase and displaced Kaoshiung from fourth place. Shenzhen recorded an outstanding 49.8 per cent increase to jump two places above Rotterdam and Los Angeles. There were also other movements in the ranking: Gioia Tauro and Antwerp moved up by three and one place respectively; Bremerhaven, Manila and Tokyo slipped down by one place each; and Felixstowe just managed to stay in the ranking after dropping four places. Overall traffic in these top-twenty ports increased by 13.3 per cent, much higher than the 2.2 per cent recorded for all world ports, and confirmed the trend towards traffic concentration. The top 20 ports for 2002 recorded a total of 127 million TEU, which is equivalent to 53.6 per cent of the world throughput (48.4 per cent in 2001).

B. IMPROVING PORT PERFORMANCE

During 2002, China's top 10 container ports recorded an impressive 35 per cent increase in traffic to 30.3 million TEU. Shanghai recorded 8.61 million TEU, for the first time overtaking Kaohsiung (Taiwan Province of China), which recorded 8.49 million TEU. Hong Kong (China) again took the top place among container ports worldwide, reaching 18.6 million TEU.

Table 42

Container port traffic of 51 developing countries and territories in 2001, 2000 and 1999
(TEUs)

Country or territory	TEUs 2001	TEUs 2000	TEUs 1999	% change 2001/2000	% change 2000/1999
Hong Kong, China	17 900 000	18 100 000	16 210 762	-1.1	11.7
Singapore	15 520 000	17 040 000	15 944 793	-8.9	6.9
Republic of Korea	9 887 576	9 030 174	7 014 245	9.5	28.7
Malaysia	6 224 833	4 642 428	3 941 777	34.1	17.8
United Arab Emirates	5 081 964	5 055 801	4 930 299	0.5	2.5
Indonesia	3 492 153	3 797 948	2 660 439	-8.1	42.8
Thailand	3 381 619	3 178 779	2 892 216	6.4	9.9
Philippines	3 090 952	3 031 548	2 813 099	2.0	7.8
Brazil	2 616 075	2 413 098	2 022 842	8.4	19.3
India	2 591 071	2 450 656	1 954 025	5.7	25.4
Panama	2 170 526	2 369 681	1 649 512	-8.4	43.7
Sri Lanka	1 726 605	1 732 855	1 704 389	-0.4	1.7
Egypt	1 708 990	1 625 601	1 520 523	5.1	6.9
Saudi Arabia	1 677 413	1 502 893	1 448 338	11.6	3.8
Mexico	1 358 175	1 315 701	1 083 887	3.2	21.4
Oman	1 325 493	1 161 549	773 806	14.1	50.1
Viet Nam	1 290 555	1 189 796	n.a.	8.5	n.a.
Chile	1 209 101	1 253 131	743 364	-3.5	68.6
Malta	1 205 764	1 082 235	1 091 364	11.4	-0.8
Argentina	1 058 009	1 144 834	1 021 973	-7.6	12.0
Venezuela	924 642	674 558	654 148	37.1	3.1
Jamaica	888 941	765 977	689 677	16.1	11.1
Bahamas	860 000	572 224	543 993	50.3	5.2
Iran, Islamic Rep. of	601 552	415 382	320 622	44.8	29.6
Costa Rica	563 825	573 502	590 000	-1.7	-2.8
Côte d'Ivoire	543 846	434 422	463 835	25.2	-6.3
Peru	537 554	460 631	376 045	16.7	22.5
Colombia	531 262	791 588	413 935	-32.9	91.2
Guatemala	527 960	495 809	151 493	6.5	227.3
Bangladesh	486 289	456 007	392 137	6.6	16.3
Dominican Republic	466 000	566 479	n.a.	-17.7	n.a.
Ecuador	414 355	414 104	378 000	0.1	9.6
Honduras	406 359	392 837	n.a.	3.4	n.a.
Yemen	377 708	248 177	121 563	52.2	104.2
Trinidad and Tobago	352 758	282 487	298 553	24.9	-5.4
Morocco	346 724	328 808	322 968	5.4	1.8
Algeria	311 111	267 530	270 742	16.3	-1.2
Uruguay	301 641	287 298	250 227	5.0	14.8

Table 42 (continued)

Country or territory	TEUs 2001	TEUs 2000	TEUs 1999	% change 2001/2000	% change 2000/1999
Cuba	258 264	185 055	n.a.	39.6	n.a.
Cyprus	235 100	257 020	239 077	-8.5	7.5
Kuwait	195 973	185 904	173 383	5.4	7.2
Djibouti	190 971	157 990	128 791	20.9	22.7
Pakistan	170 000	159 919	696 649	6.3	-77.0
Mauritius	161 574	157 420	144 269	2.6	9.1
Reunion	159 006	154 394	146 172	3.0	5.6
Guam	140 158	132 689	145 191	5.6	-8.6
Martinique	140 034	140 062	141 700	0.0	-1.2
Senegal	136 076	133 325	148 740	2.1	-10.4
Tanzania	135 632	133 660	106 304	1.5	25.7
Sudan	120 701	94 182	82 244	28.2	14.5
Mozambique	100 307	91 345	82 570	9.8	10.6
Total	96 103 197	93 529 493	79 894 681	2.8	17.1
Other reported^a	524 656	549 744	2 234 691	-4.6	-75.4
Total reported^b	96 627 853	94 079 237	82 129 372	2.7	14.6
World total	236 698 406	231 689 448	195 261 458	2.2	18.7

Source: Derived from information contained in *Containerisation International Yearbook 2003* and from information obtained by the UNCTAD secretariat directly from terminal operators and port authorities.

^a Comprises developing countries and territories where less than 95,000 TEUs per year were reported or where a substantial lack of data was noted.

^b Certain ports did not respond to the background survey. While they were not among the largest ports, total omissions may be estimated at 5 to 10 per cent.

Outstanding peak productivity was announced by the port of Tanjung Pelepas (Malaysia), which, using five post-Panamax cranes on the *Carsten Maersk*, shifted 185 containers per hour in June 2002. Average crane productivity in Shanghai terminals was around 28 moves per hour.

The second Chinese container port, Shenzhen, located close to Hong Kong (China), recorded 7.6 million TEU in 2002, a 50 per cent increase from the previous year's traffic. This substantial increase in traffic led to congestion in some of its nine port areas – in Yantian, delays of up to 24 hours for containerships were reported in October. By the end of the year, HPH was given authorization to invest \$737 million in the third phase of Yantian to increase capacity to 2.4 million TEU.

Concern in Hong Kong (China) about slower growth rates compared with cheaper Chinese mainland ports

focused authorities' attention on improving road connections with the hinterland. Accordingly, the number of border crossings was increased, and continuous opening of these crossing started. A similar problem of road delays and congestion was apparent in the four feeder terminals around Ho Chi Minh City (Viet Nam), which handled about 1 million TEU in 2001. Some users resorted to the use of barges along the Saigon River to reach the terminals.

Terminal efficiency in serving road transport also deteriorated in two other ports. The vehicle appointment scheme implemented at the beginning of 2002 in the port of Southampton did not perform as planned, and by November, labour shortages, berthing delays due to bad weather and road congestion resulted in delays of up to four hours in collecting containers from the terminal. Some road hauliers therefore decided to impose surcharges of \$40 per vehicle, against the

Table 43

Top 20 container terminals and their throughput, 2002 and 2001
(Millions of TEUs and percentage change)

Port	TEUs 2002	TEUs 2001	TEUs 2000	2002/2001	2001/2000
Hong Kong, China	18.61	17.90	18.10	3.97	-1.10
Singapore	16.94	15.52	17.04	9.15	-8.92
Busan	9.33	8.07	7.54	15.61	7.03
Shanghai	8.62	6.34	5.61	35.96	13.01
Kaoshiung	8.49	7.54	7.43	12.60	1.48
Shenzhen	7.61	5.08	3.99	49.80	27.32
Rotterdam	6.52	6.10	6.28	6.89	-2.87
Los Angeles	6.11	5.18	4.88	17.95	6.15
Hamburg	5.37	4.69	4.25	14.50	10.35
Antwerp	4.78	4.22	4.01	13.27	5.24
Long Beach	4.52	4.46	4.60	1.35	-3.04
Port Klang	4.53	3.76	3.21	20.48	17.13
Dubai	4.19	3.50	3.06	19.71	14.38
New York	3.75	3.32	3.00	12.95	10.67
Qingdao	3.10	2.64	2.12	17.42	24.53
Bremenhaven	3.03	2.90	2.71	4.48	7.01
Gioia Tauro	2.99	2.49	2.65	20.08	-6.04
Manila	2.87	2.80	2.87	2.50	-2.44
Tokyo	2.83	2.77	2.96	2.17	-6.42
Felixstowe	2.80	2.80	2.80	0.00	0.00
Total top 20	126.99	112.08	109.11	13.30	2.72

Source: *Containerisation International*, March 2003, and *Port Development International*, April 2003.

recommendation of their association. In the same month, truckers experiencing average delays of two hours in New York container terminals asked the Federal Maritime Commission to investigate unreasonable practices of three container terminal operators in the port.

Port efficiency was also hampered by extreme weather. In early December, liner carriers calling at St. Petersburg complained and asked for priority use of ice-breakers to access the port because up to five days were needed instead of 10 hours. By mid-January 2003, about 40 vessels, including bulk carriers, were trapped by ice, and Russian authorities shifted one diesel ice-breaker from Murmansk. The European Bank for Reconstruction and Developments lent \$5.4 million to install a maritime navigation system to reduce the risk of ship collision in accessing the Russian ports of St. Petersburg and Primorsrk.

Some recently built facilities started to secure customers. In November, Zarate Container Terminal located in the industrial belt of Buenos Aires gained a service to Northern Europe run by CSAV and others. The intention of NYK to purchase the Ceres Paragon Terminal in Amsterdam for the original developers was also reported. The terminal has not been used since it was completed.

In March 2002, Dubai Port Authority started construction of phase I of the Port of Jebel Ali expansion, which will raise port capacity from the present 4 million to 5.7 million TEU. The investment of \$237 million includes dredging the access channel to a depth of 17 meters, widening it to 325 meters and constructing five additional berths equipped with 14 post-Panamax gantry cranes. Across the Strait of Hormuz, the Islamic Republic of Iran announced investment of \$313 million in several ports which will upgrade facilities in

Bandar Abbas to 2.6 million TEU capacity. The port is already connected by weekly container block trains to Tashkent (Uzbekistan) in Central Asia. The expansion of this port is part of the development of the Shahid Rajaee Special Economic Zone for which BOT industrial schemes are contemplated. Further east along the coast, in Pakistan, finance for the construction of Gwadar port, was secured from China. The first disbursement of \$58 million was made, and the port will also serve Central Asian States, notably Afghanistan.

SAGT, the private container terminal operator in Colombo and subsidiary of P&O Ports, commissioned 650 meters of new berth equipped with six quay gantry container cranes capable of working containers 18 rows across. The upgrading of this port was completed with the dredging of the basin to 14 metres and the opening of a second entrance with 10.5 metre draft for feeder vessels. Moreover, SAGT and JCT, the public-sector container terminal operators in the port, have agreed to joint rebates for customers to attract traffic.

The commissioning of major facilities on the US West Coast in 2002 illustrates the close and important relationship between harbour, transport and environmental developments. In April, Terminal 18 opened in the port of Seattle, which now occupies 78 hectares, double its original size, with on-dock facilities for handling up to four double stack trains. About \$300 million was invested to raise the capacity of this terminal to 2.5 million TEU. The project included the removal of considerable amounts of contaminated soil left by heavily polluting industries located on the site for decades and the construction of a 0.6 hectare public shore line access park at a cost of \$15.7 million. The terminal is now operating under lease by SSA in partnership with Matson.

In the port of Oakland, the 200 hectare facility transferred from the US Navy to the port authority some years ago was completed with the opening to the public of two environmental projects: the 14.8 hectare Middle Harbor Shoreline Park and the 76 hectare shallow-water wildlife habitat. The three harbour projects opened two years before were Berths 55-56 (48 ha.) leased to Hanjin; Berths 57-59 (60 hectares) leased to SSA; and the Joint Intermodal Rail Terminal (52 hectares) operated by Burlington Northern and Santa Fe Railroad and the port authority. The \$44 million environmental projects were completed by the port authority working in close

coordination with the community and environmental bodies, which were critical of multimillion harbour developments close to run-down neighbourhoods.

In the port of Long Beach, the first phase of the 150-hectare Pier T development undertaken by Hanjin Shipping Co. was commissioned. Twelve of the largest quayside container cranes, able to work across 22 container rows, operate in this terminal. In April 2002, the \$2.4 billion Alameda Corridor was completed. The corridor managed by Alameda Corridor Transportation Authority segregates rail traffic and reduces from 3 hours to 45 minutes the travel time between the ports of Long Beach and Los Angeles and the transcontinental interchange railroad yards. The first phase of the almost 200 hectare Pier 400, leased to Maersk Sealand, opened in the port of Los Angeles late in the year. This project, like others undertaken by this port in recent years, benefited from environmental credits gained from the \$55 million Batiquitos Lagoon mitigation project late in the 1990s.

In late April, construction work resumed on the Deurganck Dock (left bank of the port of Antwerp), which will provide up to five kilometres of container berths and reduce saturation of existing facilities. The work had been suspended for a year after litigation was started by villagers of Doel because some planning application procedures had been overlooked. The regional government issued new permits, including three environmental ones aimed at controlling floods in three villages and complementing the protection on the Scheldt basin from storm surges that occur when certain wind and tide conditions prevail.

The highest annual increase in port traffic in North West Europe, 5.7 per cent, was recorded in Hamburg, whose total traffic reached 97.6 million tons in 2002. In November, container capacity in this port expanded by 1.1 million TEU when the automated fourth container terminal opened in Altenwerder. Three-quarters of the \$650 million investment was made by HHLA, Hamburg's largest container terminal operator, with the balance made up by Hapag Lloyd. For the expansion of container facilities in the neighbouring port of Bremerhaven, whose traffic remained almost static at 46.2 million tons, the states of Lower Saxony and Bremen decided to invest \$437 million in infrastructure at Wilhelmshaven, with the \$300 million superstructure to be covered by the future operator.

Traffic growth in the largest European port of Rotterdam increased by 2.3 per cent in 2002 to 321.9 million tons, with container traffic increasing by 7 per cent to 6.5 million TEU. In early 2002, the three new container cranes to be used on the southern side of the Delta Terminal were commissioned. The cranes are 120 metres high and each weighs 1,500 tons. They have an outreach of 67.5 metres, making them suitable for loading and unloading ships 22 containers wide. The lifting height is 40 metres, with a maximum lifting capacity of 77 tons. In September, the major tug companies announced tariff increases due to the EC ruling declaring that government subsidies given to these companies for having national crews were against the guidelines for state aid.

Elsewhere, Dole opened a \$30 million banana terminal in the port of Guayaquil (Ecuador) to handle about a third of banana exports and thus avoid the congestion that prevails in the port.

C. INSTITUTIONAL CHANGE

PSA Corp, the operator of the port of Singapore, announced an annual throughput of 24.5 million TEU for 2002. Traffic increased by 8 per cent to 16.8 million TEU in the home port in spite of losing two large customers, Maersk Sealand and Evergreen, and by 115 per cent in its overseas terminals. Following a downgrade in credit rating by Moody's Investors Service, PSA announced that it was divesting non-core businesses (i.e. airport handling, cruises, etc.) worth \$104 million and continuing its expansion abroad: it opened its fourth terminal in China, at Fuzhou, and its IT subsidiary will develop a port community system for six South African ports for about \$8 million.

Negotiations between companies leading towards mergers or acquisitions in the ports field continued throughout the year. Egis Ports, part of the French construction group Egis, with a controlling interest in major operators in Marseille (MGM — Manutention Generale Mediterranean — and Eurofos) and half of the shares of GMP (Générale de Manutention Portuaire), one of the three big operators in Le Havre, France, was approached by P&O Ports which wants to reinforce its presence in Western Europe. Conship, an Italian sea-carrier, expressed interest in taking over the under-used Cagliari Container Terminal for overflow operations of its terminals in La Spezia and Gioia Tauro.

Concession of terminals faced difficulties in some ports. In Mumbai (India), P&O Ports sought to overcome the

ban imposed by the port authority that precludes the company from tendering for the new container terminals on the grounds that the same operator cannot run two terminals in the same port. The Minister of Transport of Thailand explained to workers that the corporatization of Thailand Port Authority was necessary to raise efficiency and not to sell shares to foreigners.

In ports of the European Union, a series of stoppages were conducted in mid-January 2003 to protest against the Directive on Market Access to Port Services, which among other points and under certain circumstances would allow self-handling of cargo in ports by crew members. The arrest by the German police of 10 Polish crane-drivers engaged as crew members in Bremerhaven seemed to justify labour concerns.

The operation of concessions has not always been smooth. In Montevideo (Uruguay), a local operator wanted to prevent the container terminal operator, TCP, from using public berths for overspill operations and asked the port authority for authorization to install its own cranes in those public berths. TCP retorted that its contract allowed the use of public berths for overspill operations and that a minimum of 250,000 TEU must be handled at the TCP terminal before additional cranes were to be installed in the port. In India, officials in the Ministry of Shipping were assessing ways to renegotiate the five-year old Nhava Sheva contract of P&O Ports in Mumbai on the grounds that royalty payments were heavily backloaded. In August, the Panamanian Supreme Court ruled in favour of the request of the subsidiary of HPH for a reduction of \$22 million per year in concession fees. HPH had suggested that otherwise they would stop investments in Cristobal and Balboa. Other operators asked for matching measures, while yet others claimed the ruling was unconstitutional.

Replacing failed concessionaires is lengthy and complex. In July, two years after ICTSI left its contract in the port of Rosario (Argentina), a consortium headed by the port of Tarragona (Spain) signed a 30-year concession to operate this port sited on the Parana river. The annual concession fee will be \$1.8 million, with \$6 million investment during the first year. In December, Beirut finally appointed a team of consultants to chart the path for privatization after the failed contract of April 2001 with Dubai Port Authority. The 20-year old concession ended prematurely six months after the concessionaire pulled out claiming miscalculated start-up costs and traffic volumes.

Labour relations are a crucial element in the port sector and can have a profound impact. When the labour contract between the Pacific Maritime Association (PMA), the representative of the employers for US West Coast ports, and the International Longshore and Warehouse Union (ILWU), the workers' representative for those ports, expired on 30 June 2002, a new one was still being worked on. Negotiations continued during the summer, and when productivity in some of the ports started to falter, PMA decided to declare a lock-out of the 10,500 strong labour force, with 29 ports stopping activities by end September. The closure lasted for 11 days, and ports reopened after a Federal court injunction was issued on the grounds of a threat to the national economy and security.

The impact of the closure on the economy was estimated at \$1 billion per day, and by the end of October there was a backlog of 200 vessels, with congestion also spreading to neighbouring countries' ports, such as Vancouver. Sailing schedules were in disarray, and the lack of empties in Far East ports affected most shipping lines, as one box in two returns empty from the United States. Cosco, the largest Chinese carrier, estimated its losses at between \$10 and 15 million. The Department of Justice found credible evidence that both the PMA and ILWU were partly responsible for the drop in productivity. Containers had been discharged at the first available port instead of proceeding to their destination, and the lack of equipment and congestion was compounded by strict adherence to safe working practices. Anxious shippers seeking speedy delivered of their containers asked for a temporary waiver of the Jones Act to allow non-US-flagged vessels to move freight between US ports but this was flatly denied.

The crux of the labour dispute was the introduction of information technology that directly threatened the jobs of about 400 clerks. The six-year deal reached on 23 November included the introduction of optical scanners, remote cameras and geopositioning satellites for tracking cargo and equipment in the terminals, with the union maintaining jurisdiction over all these jobs; a pay rise of 11 per cent; and a pension increase of 60 per cent.

D. SECURITY MEASURES IN PORTS

During the year the United States Customs Service agreed with a number of major trade partners on the implementation of two security schemes: the Container

Security Initiative (CSI) and the Customs-Trade Partnership Against Terrorism (C-TPAT). CSI goals are to establish criteria for identifying high-risk containers, to pre-screen containers before they are shipped to the United States, to use non-intrusive technology to pre-screen high-risk containers, and to develop smart and secure containers.

Over the year several countries signed bilateral agreements for the CSI, starting with the ports of Halifax, Vancouver and Montreal in March; Singapore, Rotterdam, Antwerp and Le Havre in June; Bremerhaven and Hamburg in August; Hong Kong (China), Yokohama, Tokyo, Nagoya and Kobe in September; Genoa and La Spezia in November; and Felixstowe in December. Some ports in mainland China agreed to implement CSI in October. Early in 2003, more ports joined CSI: Barcelona, Valencia, Marseille, Goia Tauro and Swedish and other British ports. The Malaysian ports of Klang and Tanjung Pelepas will also join. CSI bilateral agreements reached by five European countries (Belgium, France, Germany, Italy and the Netherlands) with ports having large shares of US-bound trade were questioned by the European Commission on grounds of distortions of the European Union competition rules, and administrative proceedings were started to assess the validity of such agreements. France explained that its agreement was conducted within the terms of a previous Customs cooperation agreement for exchanging information and personnel. Later on, the United Kingdom and Spain continued with similar agreements, and the European Commission sought authorization to negotiate a European-wide CSI agreement.

Some radical departures from established practices have resulted from this scheme. Customs checks of high-risk United States containerized imports are made with the collaboration of United States Customs officers before containers are loaded into US bound vessels. To identify these containers, carriers or NVOCCs must submit a cargo declaration for each container 24 hours before it is loaded and thus stop their shipment to allow for inspection. The requirement for the advanced cargo declaration caused considerable alarm in the shipping community, and a six-month exemption was granted for containers carried on-deck with perishable cargo. Fears were expressed that the 60-day transition period that ended 2 February 2003 could be insufficient. However most lines were able to comply with this requirement. Some containers were left behind in some European and

Asian ports, notably Hong Kong (China), where the practice of receiving boxes close to vessel departure affected about 10 per cent of American-bound traffic, or about 100 boxes per day.

Moreover, as the need to conduct in-depth risk analysis for containerized imports relies on the availability of detailed information, the long-standing practice of stating container contents as “freight all kinds” and “said to contain” was no longer to be accepted. This triggered a complaint from the British International Forwarders’ Association, whose membership felt it was being held jointly responsible with the shipper in case of incident. Also, the requirement to disclose full details of clients allowed sea-carriers to approach them directly and could, therefore, lead to loss of customers for forwarders.

C-TPAT establishes partnerships with importers, carriers, brokers, warehouse operators, and manufactures to improve container security along the entire supply chain. Controls by recognized parties to the scheme start where goods originate and continue without interruption along the transport chain up to the point of destination. Recognized trading partners will perform security self-assessment controls in accordance with prescribed guidelines. The benefits of the scheme include a reduced number of inspections and “fast lane” cargo clearance. One of these partnerships is the Smart and Secure Tradelanes (SST), whereby three of the largest terminal operating companies, Hutchison Port Holdings (HPH), PSA Corporation Ltd. and P&O Ports, are setting up an automatic tracking system for containers entering US ports that involves tagging containers electronically. With the support of the United States Government, these companies are running a pilot scheme for container shipments between Singapore, Hong Kong (China) and Seattle/Tacoma. After more than 100 containers used the electronic seal containing full details of the box content, it was pointed out that the main challenge ahead was developing a low-cost intelligent electronic seal for large-scale use.

In June 2002, the Customs Co-operation Council adopted a resolution on Security and Facilitation of the International Supply Chain, whereby it is resolved to re-examine the WCO Data Model to include a standardized set of data elements to identify high-risk goods, to elaborate guidelines to assist in the advance electronic transmission of Customs data and develop cooperative arrangements between parties willing to

increase supply chain security, and to establish a data bank on advanced technology and techniques that enhance supply chain security and facilitation.

In November 2002, the United States Congress enacted the “Maritime Transportation Security Act 2002”, Law No 107-295. This Act, originally presented to amend the Merchant Marine Act of 1936, ensures greater security for United States seaports and other related facilities. The Department of Transportation was charged with estimating the costs of a number of measures such as port and vessels security plans, background checks for port workers, identity cards for seafarers, enhanced security container seals, automatic identification systems and maritime intelligence for vessels. The \$6 billion funding allocation for United States Coast Guard reflects its increased responsibilities. The law establishes that vessels and cargoes coming from foreign ports that do not have efficient antiterrorist measures may be subject to special regulations to enter US territory, including the possibility of denial of access.

In the same month, the Department of Homeland Security was established, and security of commercial ports will be a core federal concern. This Department now embraces, amongst others, the United States Coast Guard, which reports directly to the Secretary of the Department; the Customs Service, previously under the Treasury; large parts of the Immigration and Naturalization Service, previously under the Justice Department; and the Animal and Plant Health Inspection Service, previously under the Agriculture Department.

The cost implications of the new security measures being implemented started to raise concerns. The AAPA, the body grouping the United States ports, requested appropriate levels of funding from federal funds in accordance with the estimates produced by the US Coast Guard of annual expenditures — about \$1 billion for the first year and half a billion per year afterwards. Also, calls were made for IMO to set up technical assistance programmes to enhance port security in ports of developing countries. The damage to trade of a terrorist attack could be substantial. The potential cost of a “dirty bomb scare” for the United States was estimated at \$58 billion in a two-day war game played by 70 participants from federal and state departments and agencies. In the simulation, all US ports were closed for eight days and the backlog generated was cleared in three months.

The Conference of Contracting Governments to the International Convention for the Safety of Life at Sea (SOLAS 1974) was held in London from 9 to 13 December 2002 under the aegis of IMO. The aim was to incorporate in the Convention a series of measures to strengthen maritime security and prevent and suppress terrorist acts against shipping and to complete the preparatory work accomplished during the year by the IMO Maritime Safety Committee. Accordingly, Chapter XI of SOLAS dealing with "Special measures to enhance maritime safety" was renumbered as XI-1 and existing regulations were modified so that vessels must have identification numbers permanently marked on their hulls and be issued with Continuous Synopsis Records by the flag State so that an on-board record of the ship is available. A new Chapter XI-2 dealing with "Special measures to enhance maritime security" was added to the Convention. Regulation XI-2/3 of this new chapter contains the International Ship and Port Facilities Security Code (ISPS Code) with two parts: Part A is compulsory, while Part B provides guidelines on how to comply with these mandatory requirements; however, US regulations will make this part mandatory as well. Other regulations of this new chapter deal with the role of the Master in relation to the security of his vessel, provision of a ship security alert system, government responsibility for ensuring that port security facility assessments are executed in conformity with the ISPS Code, controls of vessels in ports, etc.

The ISPS Code takes the view that the security of vessels and port facilities is a risk management activity and provides a standardized and consistent framework for evaluation of risks so that the appropriate measures are

taken. Three levels of security, from 1 to 3, were established, with 3 being the highest threat. Accordingly, shipping companies will designate a Company Security Officer and, for each vessel, a Ship Security Officer. Ship Security Plans need to be prepared, submitted for approval by the administration of the flag State and carried on board. These plans should indicate the operational and physical measures for the ship to operate at security level 1, the intensified measures to operate at security level 2 and the capacity required to follow instructions corresponding to security level 3. Similarly, Governments will conduct a security assessment of port facilities in which critical port assets and infrastructures and the threats to them are identified so that security measures are prioritized. Weaknesses in physical security, structural integrity and other areas (i.e. communications, utilities, etc.) that may be a likely target are also identified. Port Facility Security Officers will be appointed, and Port Facility Security Plans will be prepared for those port facilities identified in the assessment. The Plan will contain the operational and physical security measures to be taken to ensure that the facility normally operates at security level 1, can operate at security level 2 when instructed, and is able to respond to instructions that may be issued at security level 3. Among the resolutions adopted by the Conference, it is stated that amendments to the SOLAS Convention will be deemed accepted on 1 January 2004, and the ISPS Code will enter into force on 1 July 2004. However, the Code could be rejected if, before 1 January 2004, one-third of Contracting Governments or 50 per cent of the gross tonnage of the world merchant fleet have presented objections to the amendments.

