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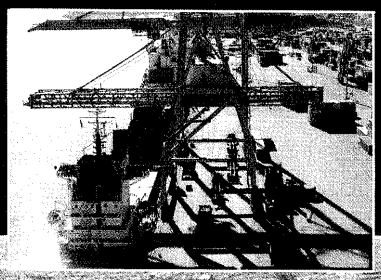
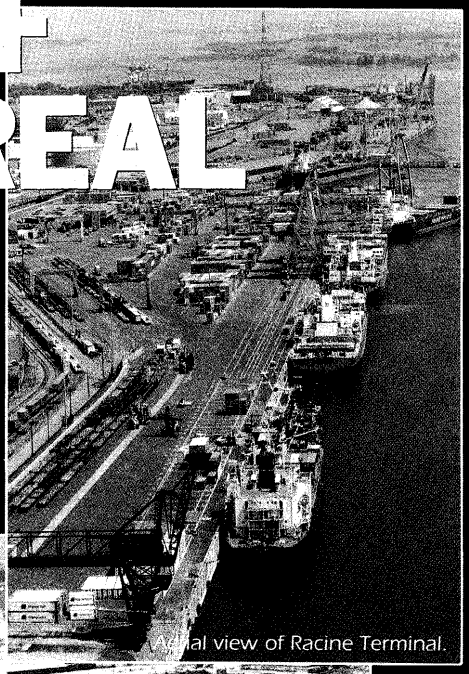
IAPH 20TH CONFERENCE LONDON 1997
31 May – 6 June

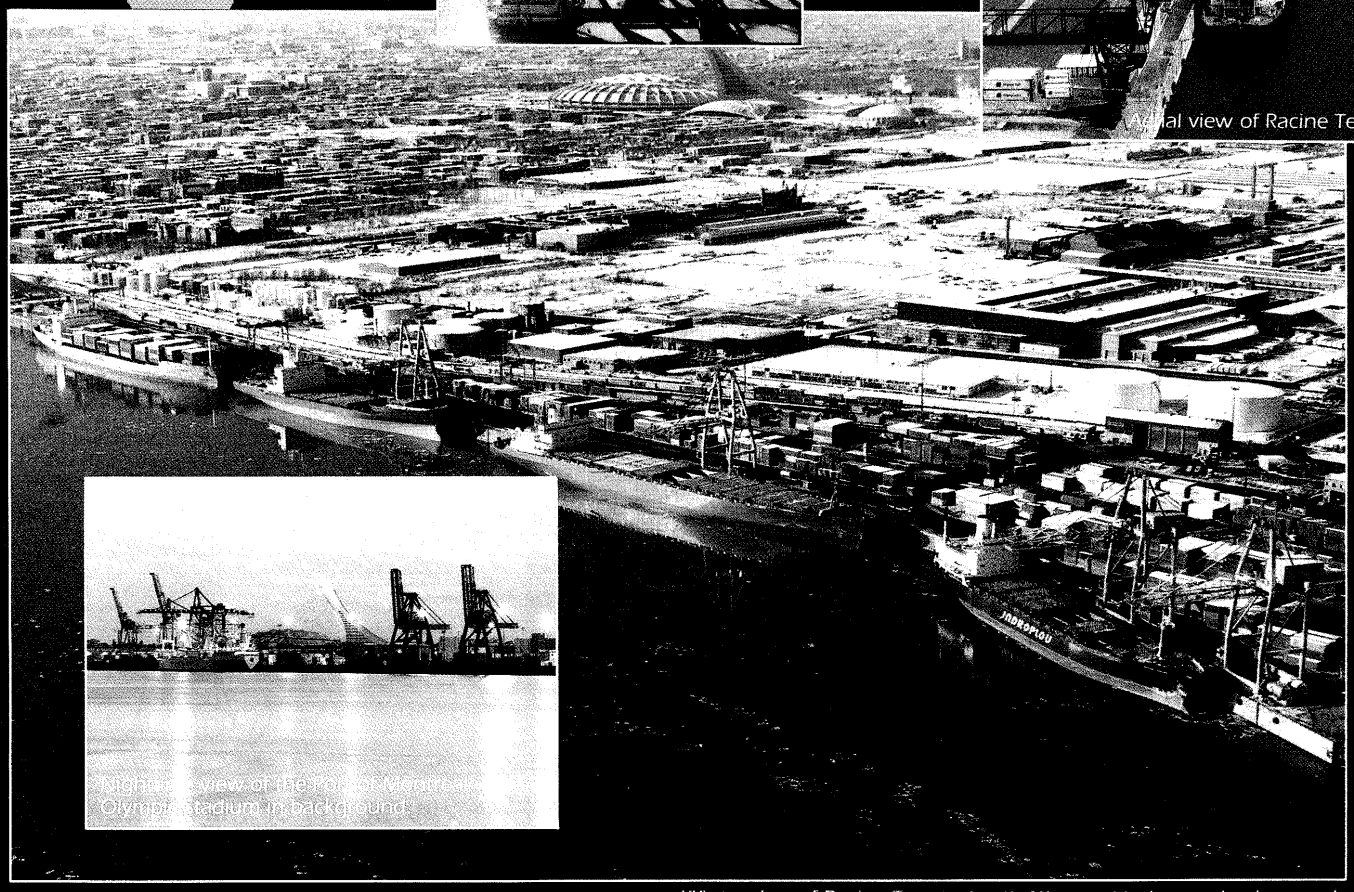
## PORT OF MONTREAL



Maisonneuve Terminal, operated by Termont Terminal Inc.



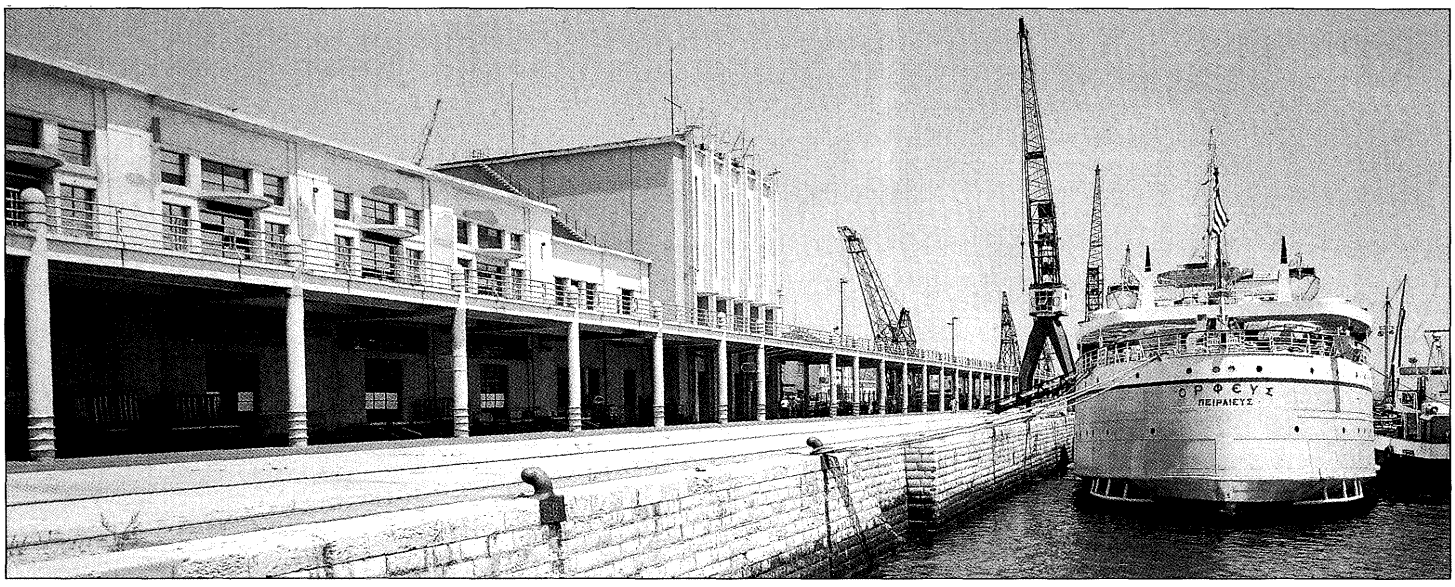
Aerial view of Racine Terminal.



Winter shot of Racine Terminal with Olympic Stadium in background.



Night time view of the Port of Montreal with Olympic Stadium in background.



The main passenger terminal in Lisbon (Rocha do Conde de Óbidos)

# IMPROVEMENT IN THE COMPETITIVITY AND EFFICIENCY OF THE PORT OF LISBON

Third passenger terminal will be here, just in the City Center

A more rational use of the existing equipment and certain building, to say nothing of improving the road and rail approaches to the Port of Lisbon (which are expected to cost some Esc.: 15 000 000 000$00) will make the port more attractive commercially, thus paving the way for additional recourse to its services and, consequently, the offer of more competitive charges for international sea-going traffic.

A new passenger terminal is due to operate throughout 1995 at Santa Apolónia facilities, while the existing Santa Apolónia Container Terminal (TCSA) is to 18 ha (app.) with a 1,300 m long wharf and draught of 8,5 m (app.)

We are adapting an existing warehouse at Jardim do Tabaco to become the third passenger terminal in Lisbon, besides Rocha and Alcântara.

Rocha is the existing main terminal, Alcântara has mixed functions and is used solely when Rocha is fully occupied and there are extra vessels in the port or if some vessels have a deeper draught.

Jardim do Tabaco will provide a new terminal, 10 minutes away from the airport and in the city center, in the vicinity of the most typical quarter in town - Alfama - which was a former Moorish area, near Lisbon's castle.

**AUTHORITY OF THE PORT OF LISBON**

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# Ports & Harbors

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● Bulk Cargo Facilities ● Fresh Water Supply



IAPH
20TH CONFERENCE
LONDON 1997
31 May - 6 June

# IAPH will meet in London from 31 May to 6 June, 1997 At its 20th World Ports Conference

Conference Host: THE PORT OF LONDON AUTHORITY
Conference Theme: MARITIME HERITAGE — MARITIME FUTURE

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# IAPH ANNOUNCEMENTS AND NEWS

## Interim report on ballast water survey

*Following the Seattle Conference, IAPH conducted a survey of member ports for information on the transportation of ballast water. The questionnaire was circulated to IAPH members from the Tokyo Head Office on July 5, 1995. Captain Ian Baird, Port Hedland, sponsor of the survey and draftee of the questionnaire, has produced a brief report on the survey results as of August 30, 1995. We reproduce below his interim report.*

## Ballast Water

**Report by Ian Baird**
Port Hedland Port Authority
Western Australia
(August 30, 1995)

To date, there have been 60 respondents.

Summarising the pertinent questions, as we thought, there is considerable lack of knowledge regarding ballast, and as we expected, there is a lack of record of quantities of ballast moved.

Of 60 respondents, 26 responded with ballast figures, totaling: 131 million tonnes discharged, and 9.3 million tonnes loaded.

**Question 4.** Is your Flag State involved in ballast water management?
**Answers:** Yes = 17 No = 38 Don't know = 5

**Question 5.** Are you aware of any unwanted organisms which have been introduced into your port waters in recent years?
**Answers:** Yes = 7 No = 40 Don't know = 13

**Question 6.** What is the status of ballast water management practices to miminise the transaction of marine organisms at your Port?
**Answers:**
.1 None in Place = 39
.2 Being introduced = 5
.3 IMO Guidelines in place = 10
.4 Other = 6

**Question 7.** Are you aware of any research which is taking place in testing or control of micro organisms in ballast water?
**Answers:** Yes = 10 No = 50

## More Dues Units for New Term Reported

To arrive at the basis of membership dues to be paid by each Regular Member, and in accordance with the requirement of the By-Laws Sec. 5, a survey of each Regular Member is conducted by the Head Office in each odd numbered year - i.e., in each conference year. This year's survey asking all Regular Members to file their updated number of membership dues units for the years 1996 and 1997, was sent out from the Tokyo Head Office on June 30, 1995.

By August 31, approximately 45% of the Regular Members had returned their completed forms to the Secretary General, informing him of the updated numbers of dues units to be subscribed by them for the next two years.

Although full members still have one month to complete their filling, the Secretariat has been encouraged at the results of the survey, according to which the following members have reported an increased number of dues units for the next term (over the number subscibed in the previous term):

| | |
|---|---|
| **African/European Region** | |
| Cyprus Ports Authority, Cyprus | 4 (3) |
| Port of Le Havre, France | 6 (5) |
| Port of Hamburg, Germany | 7 (6) |
| Ghana Ports and Harbours Authority, Ghana | 3 (2) |
| Cork Harbour Commissioners, Ireland | 3 (2) |
| Port of Felixtowe Limited, U. K. | 6 (5) |
| **American Region** | |
| Fraser River Harbour Commission, Canada | 4 (2) |
| Port of Halifax, Canada | 4 (3) |
| Port of Montreal, Canada | 5 (4) |
| Canaveral Port Authority, U.S.A. | 2 (1) |
| Massachusetts Port Authority, U.S.A. | 3 (2) |
| Port Authority of New York & New Jersey, U.S.A. | 6 (5) |
| Port of Seattle, U.S.A. | 5 (4) |
| **Asian Region** | |
| Port Headland Port Authority, Australia | 5 (4) |
| Keelung Port Authority, China | 6 (5) |
| Nanjing Port Authority, China | 5 (4) |
| Zhanjian Port Authority, China | 4 (3) |
| Pusan East Container Terminal Co., Ltd., Korea | 6 (5) |
| Kuching Port Authority, Malaysia | 3 (2) |
| Penang Port SDN. BHD, Malaysia | 5 (3) |
| Philippine Ports Authority, Philippines | 4 (3) |
| Port Authority of Thailand, Thailand | 6 (5) |
| Saigon Port Authority, Viet Nam | 4 (3) |

Secretary General Kusaka urges the members who have not yet returned the completed forms of notification to the Head Office to do so as soon as possible, but in any event not later than the closing date set for September 30, 1995.

## New DTF Chair MacDonald Reports on LC1972 Scientific Group 18th Meeting

Mr. Anthony B. MacDonald, who serves as Acting Chairman of the IAPH Dredging Task Force, has recently sent the Tokyo Head Office a report of his attendance at the 18th Meeting of the Scientific Group of the London Convention 1972 which recently met at the headquarters of IMO in London from 10 to 14 July 1995. The IAPH delegation to the meeting consisted of Mr. MacDonald, Dr. Richard K. Peddicord, Technical Advisor, and Mr. Joseph E. LeBlanc, Jr., Legal Adviser. Mr. MacDonald's report is introduced later in this issue.

# Report by Bursary Recipient

### Attendance at the Seminar on Port Finance IPER ( Institut Portuaire du Havre) Le Havre, 6 - 16 June 1995

**By Jules Nestly Durosier**
**Port-au-Prince, Haiti**

*(The following is a summary of the report which was originally in French and translated into English by courtesy of the Port of Le Havre Authority).*

## Seaborne trade in small- and medium-sized ports

A major objective of the Port Manager is to maximize traffic. Fulfilling this objective is made difficult by the nature and diversity of the factors determining this traffic. Both exogenous (external) parameters derived from overall trends in the world economy and a series of endogenous (internal) parameters derived from the performance of cargo-handling operations are involved.

**1 – Exogenous parameters**

The growth of world economy and development of international commercial exchange constitute the overall framework and essential reference for an increase in the seaborne trade of ports. To understand this process, we need to remind ourselves that the port is a service sector institution, and more precisely, a distribution facility. Thus it is dependent on: (a) the volume of production and, more specifically, on seaborne trade with other regions; (b) GDP growth; (c) the condition of road and rail connections linking the port with the centres of immediate and final consumption; (d) geographical location (i.e. ports located on natural shipping routes, at the entrance or exit to great industrial zones and areas of extracton are more favoured than those which are landlocked or of low accessibility); (e) the size of the regional economy; (f) international commercial agreements; (g) regional or international crises which alter the distribution of port trade (e.g., the economic embargo imposed on Haiti in 1991 reduced the international trade of the Port-au-Prince by 50 per cent); and (h) the availability of air transport.

**2 – Endogenous Factors**

Endogenous factors are undoubtedly the most interesting because they can be altered. These include: (a) improvement of the capacity of port installations; (b) port management (including labour regulations); and (c) the establishment of appropriate tariffs (e.g. Singapore)

Being aware of these various endogenous and exogenous factors is not enough to maximize one's traffic. Real control of these variables is dependent on being able to assess and weight them correctly, and to integrate them into good forecasting methods. Both overestimation and underestimation can have disastrous consequences for ports.

# Combined Committee To Meet in Amsterdam

According to Mr. Wennergren of Göteborg, Chairman of the IAPH Committee on Combined Transport and Distribution, the Committee plans to hold a meeting in Amsterdam on 17 and 18 October 1995. The Committee also plans to hold a meeting in connection with the 1996 mid-term Exco in Indonesia.

# Membership Notes:

## New Member

### Regular Member

**Port Autonome de Lome** [Regular] (Togo)

| | |
|---|---|
| Address: | B.P. 1225, Lome |
| Mailing Addresses: | Mr. Messan Agbeyome Kodjo<br>Director General |
| Tel: | 228 27 4742 |
| Fax: | 228 27 26 27/27 08 18 |
| Director General: | Mr. Messan Agbeyome Kodjo |

# Trade Facilitation Committee in Paris

Recently Mr. David Jeffery (Port of London Authority), Chairman of the IAPH Trade Facilitation Committee, has provided the Tokyo Secretariat with a number of reports which were presented at the Trade Facilitation Committee held in Paris in March this year. Out of six reports received from London, we introduce the first three papers in this issue and we plan to include the remaining items in the next issue.

1. Regional Developments in Australia – Tradegate
   by John Hirst, Executive Director, AAPMA
2. Regional Development in North America – NAFTA Customs Prototype
   by Hassan Ansary*, Executive Vice President, Canada Ports Corporation (retired in August 1995)
3. a) Regional EDI Development – Singapore
   b) Customs Procedures in Relation to Trade Facilitation
   by Eric Lui, Deputy Director, Information System Division, Port of Singapore Authority
4. EDI Developments in the Port of Barcelona
   by Josep Oriol, the Port of Barcelona
5. a) Trade Facilitation and b) EDI from Cyprus
   by Joseph Bayada, General Manager, Cyprus Ports Authority
6. Trade Facilitation through EDI
   by Paul Scherrer, Development Manager, Port of Le Havre

# IAPH Trade Facilition Committee Meeting in Paris, 14 March 1995

## Regional Developments in Australia–Tradegate


### By John Hirst

**Executive Director, The Association of Australian Ports and Marine Authorities Incorprated (AAPMA)**


Tradegate Australia Limited was formed in 1989 to establish community based electronic commerce processes. Tradegate's mission is 'to improve the efficiency and speed of moving goods through the trading chain by the widespread introduction to the Australian Trading Community of a comprehensive range of Electronic Commerce Services'.

Membership of Tradegate includes: Customs, Ports, Airlines, Shipping Lines, Customs Brokers, Truck Companies, Freight Forwarders, Railways, Federal Government, etc.

Australia's international trading process is estimated to involve at least 50,000 organizations with about 100 million documents handled each year. There are currently about 1.9 million import consignments with 900 thousand export consignments. Of these, approximately 54% are for air cargo with the balance for sea cargo.

As part of its facilitation role, Tradegate has entered into a contract with AT & T for the supply of a communications network and associated services. As at August 1994, approximately 16 million electronic messages per annum were being processed through the various systems under Tradegate.

One of Tradegate's current initiatives in 'Electra' which is a strategy to accelerate the rate of implementation of electronic commerce in the transport industry. The areas being addressed under this strategy include:-

- Facilitation and research activities
- EDI message development and implementation
- Education, awareness and training
- Value added service development

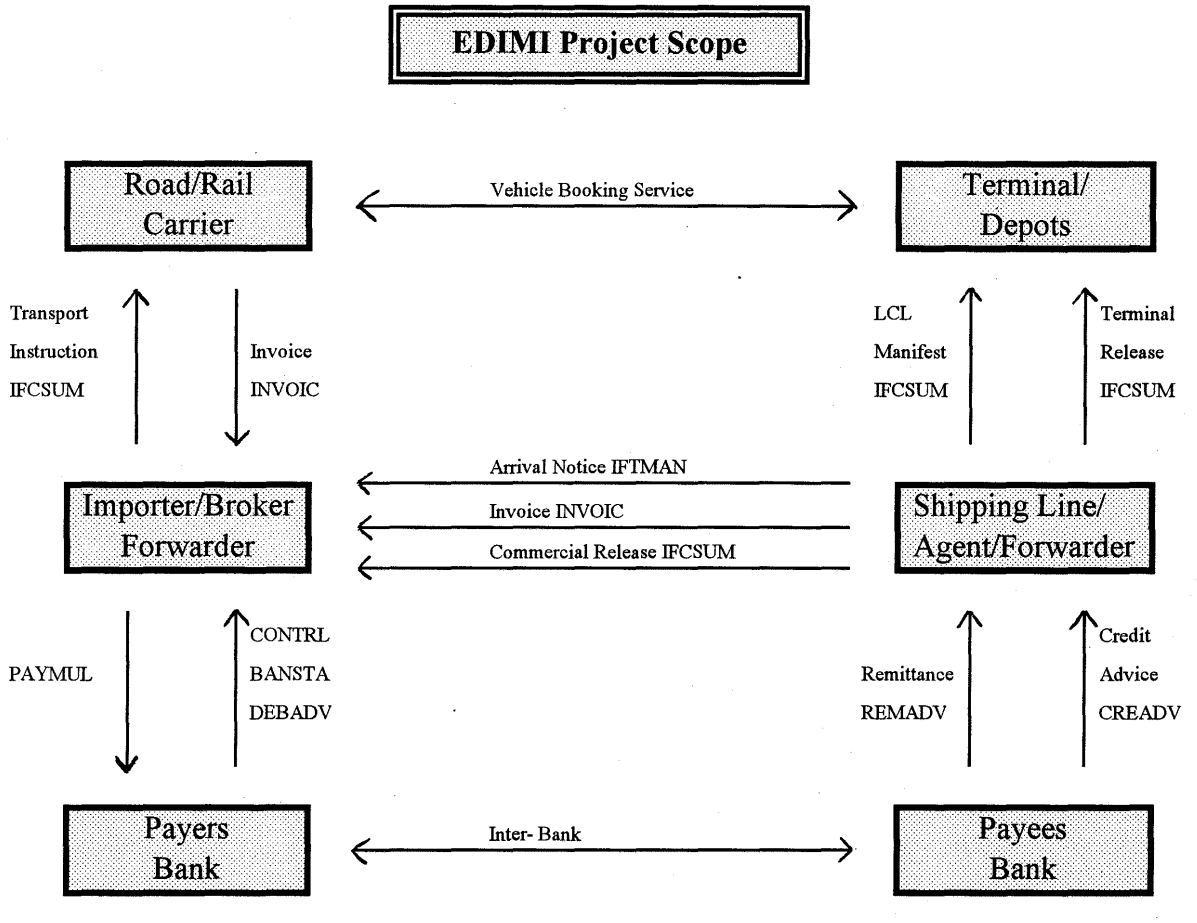
Under the Electra banner are several specific projects, examples of which are:

### EDI for Maritime Imports (EDIMI)
### EDI for Maritime Exports (EXTEDI)

These are community projects, jointly sponsored by the Australian Department of Transport, Electronic Commerce Australia (formerly the EDI Council of Australia) and Tradegate.

The aim and overall principles behind the EDIMI and EXTEDI projects are set out in the attached information sheets.

EDIMI has now reached the point where specific EDIFACT messages have been selected and their implementation guidelines



endorsed for pilot trials. The messages include Arrival Notice, import Delivery Order, Transport Delivery Instruction, LCI Manifest, Terminal Commercial Release, etc. At the end of 1994, seventeen companies had volunteered to trial messages as part of the EDIMI project.

The following diagram shown the scope of the EDIMI project.

EXTEDI is also progressing well with about 45 different organizations involved. Data elements and draft guidelines have been prepared for the Booking Message, Booking Confirmation, Forwarding Instructions, Sea Waybill, Export Receival Advice etc. It is anticipated that the implementation guidelines will be made available shortly to software suppliers to enable them to create the necessary software modules for the industry.

## Air Import/Export Process (AIREDI)

This project has been set up to undertake the work necessary to enable Air Freight Forwarders and Customs Brokers in Australia and New Zealand to exchange EDI electronic messages for air freight traffic across the Tasman.

Message implementation guidelines have been prepared for the House Air Waybill, Manifest and Commercial Invoice. Once fully approved, these guidelines will be issued to software houses to produce the message generation and receipt software. Trials will then commence in a live environment with 12 companies (forming 6 trading pairs in Australia and New Zealand) having indicated their willingness to participate.

## Asian Regional EDI Project

Tradegate has been developing technical and commercial relationships with community based EDI services in Singapore and Korea with the aim of establishing interconnecting EDI services across international boundaries.

Discussions have commenced on the development of commercial processes that can beneficially use the new linkage. One such process is linked to the potential exchange of BAYPLAN information for container ships for which internationally agreed standard EDI messages have already been developed and are in limited use. It is considered that use of this system could be both efficient and cost effective for shipping companies as well as ports.

# EDIMI - EDI for Maritime Imports

*(A community project sponsored by DOT, Tradegate and EDICA)*

## Information Sheet

EDIMI is a trade/transport community project sponsored jointly by the Department of Transport, Tradegate Australia and the EDI Council of Australia. It follows on from some initial pioneering work carried out by Tradegate through the Electra strategy and the Australian Chamber of Shipping in producing the Trading Up EDI strategy document.

The aim of the project is to make available the necessary information and development to allow shipping lines, freight forwarders, brokers, importers, transport operators, terminals and depots to exchange electronic messages in a standard form.

This requires agreement within the maritime trade/transport community on the implementation guidelines of the UN/EDIFACT standard messages to be used for the commercial clearance and delivery of maritime imports, and the payment of freight and other charges.

EDIMI will involve software houses and networks, providing them with the information necessary to build the relevant message routines into the software used by the maritime import community.

In addition to the overall benefit of accelerating the implementation of EDI within the trade/transport community, achievement of the project will ultimately result in a number of significant benefits for all sectors, for example:

- The publication of community agreed message standards and an implementation guideline document which will allow all parties to use EDI messages in a common, consistent manner.
- Through a pilot trial process, all potential users will be able to clearly understand how to implement the maritime import EDI process and what benefits will occur.
- Software developers and network providers will be able to gear their product offerings to agreed standards with confidence.
- The project will demonstrate the use of non-negotiable shipping documents (Sea Way Bills) in the process of clearing import consignments.

Once the EDIMI process has been implemented, specific benefits can be expected within community sectors, for example:

- Importers and customs brokers: will eliminate the current practice of physically presenting documents and payments for import consignments to the transport provider (shipping line or forwarder).
- Shipping line and freight forwarder: will eliminate the need to physically accept, process and action documents/payments form importers or customs brokers.
- Banks: will eliminate manual cheque processing and clearance processes.
- Terminals/Depots: will eliminate the need to accept and process manual commercial clearance documentation.
- Road and Rail Transport Operators: will eliminate the need to receive commercial clearance documentation for subsequent presentation to terminal as a basis for collecting goods.
- In all sectors it will speed up the entire clearance process:
  - eliminate/reduce clerical errors
  - reduce back office overheads
  - have better knowledge of cargo status

Two experienced industry consultants, Frank Assenza and Phillip Walsh, have been retained to work on the EDIMI project to ensure that the messages and their implementation guidelines comply with industry operational and commercial requirements.

Once the technical work has been completed by the end October, the project will be seeking shipping lines, forwarders, brokers, importers, transport operators, terminals and depots to trial the new electronic commerce procedures.

If you have any questions about EDIMI, contact the project manager Andrew Robertson at Tradegate on (02) 262 5900. Frank and Phillip are also available to give you any information that you may need to become part of this important initiative. Simply call Frank on (02) 299 3972 or Phillip on (03) 0800 1970.

# EXTEDI - EDI for Maritime Exports

*(A community project sponsored by DOT, Tradegate and EDICA)*

## Information Sheet

The EXTEDI project has started! The aim of the project is to enable the use of electronic commerce in the operational and commercial activities associated with exporting goods from Australia by sea and to enable the use of EDI (in UN/EDIFACT form) in the activities that take place among the exporters, shipping lines, freight forwarders and customs brokers, the terminals and depots

and road and rail transport. When completed EXTEDI will complement the EXIT 1 and 2 systems for the supply of export information to Customs.

The main benefits for the trading community from the project include the publication of a properly agreed massaging strategy plus the associated formatting and implementation guidelines. These can then be used by all parties involved in export trade as the basis for their electronic commerce systems and communications.

More specific benefits will be:

● For the exporter, customs broker and freight forwarder

- elimination of the paper "Forwarding Instruction" to the shipping line or freight forwarder which will reduce handling costs and transcription errors.

● For the shipping line and freight forwarder

- elimination of the need to key manual forwarding instructions into PC applications which will eliminate a source of transcription errors and facilitate the quick, accurate and automatic production of Bills of Lading or Waybills.

● For the terminal operator

- ability to receive the "Export Receival Advice" in electronic form which can be generated from earlier electronic processing and enable direct input into the Terminal Control Systems.
- a standard basis for the receipt and creation of electronic Bay Plans, Loading Reports and gate operations.

● For the road or rail transport operator

- ability to receive Consignment Notes electronically which will also reduce handling costs, avoid transcription errors and increase speed of processing.

The project will involve consultation with interested organizations from all groups affected. Software Houses Will be included so that they will be provided with the information necessary for them to build the relevant message routines into their software. Organizations which are potential users of the messages who are interested in being involved are invited to be members of the EXTEDI User Groups which will be meeting in Sydney and Melbourne commencing late November.

Once the technical work has been completed, Tradegate will be looking for trading partners to take part in a pilot project to trial the messages.

EXTEDI is a joint initiative of Tradegate and the Department of Transport with full support from EDICA. It will build on the work of other projects, including the EDIMI (EDI for Maritime Imports) Projects. The EXTEDI project will be managed by Tradegate. Julie Cameron and Peter Jeacle have been retained by Tradegate to work on this project to ensure that the messages and the implementation of these messages will comply with industry operational and commercial standards.

If you have any questions about this project, would like to be involved as a member of the EXTEDI User Group, or would like further information, please contract Andrew Robertson or Julie Cameron at Tradegate on (02) 262 5900 an Barry Keogh on (03) 866 8833.

# Regional Developments in North America – NAFTA Customs Prototype


## by Hassan Ansary

**Executive Vice President of the Canada Ports Corporation**


The vision involves the creation of a standardized system of Customs operations, built on a foundation of common data elements, documents and processes. In today's system, several different documents are required by each Customs administration for each commercial shipment crossing North America. Each country has different processes for cargo reporting, in transit movements, release of goods and entry. The vision would eliminate the duplication of documents, create a standard electronic message to represent the transaction, ensure that all interested parties can communicate with each other electronically, and streamline Customs processes to the greatest extent possible.

In order to test this concept, the three Customs administrations are considering the development of a small working prototype. It would probably operate at two sites on the Canada/US border and three sites on the US/Mexican border with a limited number of companies and limited volumes. Its application would be limited to rail and highway modes. The prototype would probably run in parallel with existing Customs systems (i.e. data would be transmitted in existing format and in the new format).

The three administrations have conducted meetings with the trade community to determine the level of interest. The response has been positive and the project appears to be feasible. As a result of these meetings, four committees have been established and charged with the task of making recommendations to the trilateral working group.

# Report on Regional EDI Development – Singapore Dec 94 till Date


## by Eric Lui

**Deputy Director, Information Systems Division**
**Port of Singapore Authority**


## 1. UN/EDIFACT EDI Message Development

The Asia EDIFACT Board at its last meeting held in November 1994, has elected PSA as the chairman of the Transport Working Group for 1995 and 1996.

The Asia Transport Working Group (AS TWG) has 10 member countries namely China, Chinese Taipei, Hong Kong, India, Japan, Korea, Malaysia, Philippines, Singapore and Thailand. The role of the AS TWG is to develop and promulgate standard EDIFACT messages for use in all the major transport sectors in Asia. Besides co-ordinating the EDI requirements in the Asia region, the AS TWG also meet with counterparts in other regions such as the Shipplanning Message Development Group (SMDG), a Pan European UN/EDIFACT User Group, to harmonize the requirements of specific EDI messages from the various region.

For the next 2 years, the AS TWG will concentrate on the major EDI messages for sea transport. These would cover:

i) messages between shipping line and marine terminal operator;

ii) messages between trucking company and marine terminal operator,

iii) messages between trucking company/shipping line and inland container depot;

iv) messages between port and port;

v) messages between ship and port authority/terminal operator; and

vi) messages between shipping line and shipper/cargo consolidator.

The details of the messages to be developed are given in Appendix A.

Besides leading the EDI message development in the Asia region, PSA will also assist the IMO in migrating their EDIMAR messages (a set of standard messages for the clearance of a vessel) to UN/EDIFACT standards.

## 2. EDI link with Other Ports

PSA has recently established an EDI link with the port of Belawan for the exchange of ship's arrival and container loading information. To facilitate this establishment, PSA has undertaken the develpment of the Container Handling Information System for Belawan which includes the following modules:

Vessel Information Database
Import and Export Container Documentation
Loading and Discharging of Containers
Yard Inventory Management
Gate Operations
Management Report and Billing Information

This computer system can be extended to other ports to speed up their computerisation programme and the establishment of interport EDI links.

***Appendix A***

**List of UN/EDIFACT Messages to Be Developed Under AS TWG 1995 - 1996 Workplan**

| Messages | Description |
|---|---|
| MOVINS | Stowage Instructions |
| IFTDGN | Dangerous Goods Declaration Singapore (PSA) |
| CALINF | Vessel Call Information Singapore (PSA) |
| VESDEP | Vessel Departure Report |
| IFCSUM | Cargo Manifest |
| BAPLIE | Bayplan |
| CODECO | Container Gate-in/Gate-out Report |
| COPARN | Container Arrival Announcement Report |
| TANSTA | Tank Status |
| PAXLST | Passenger List |
| IFTMAN | Arrival Notice |
| IFTMBF | Booking Confirmation |
| TPFREP | Terminal Performance Report |

# Report on Customs Procedures in Relation to Trade Facilitation


## by Eric Lui

**Deputy Director, Information Systems Division**
**Port of Singapore Authority**


The TradeNet System in Singapore was launched in 1989. To date, TradeNet has enabled more than 20 government bodies like the Customs & Excise and Trade Development Board (TDB) to exchange international trade documents rapidly - resutling in $1 billion savings annually and drastic reduction in paper work and processing time.

More than 95% of the trade declarations are now processed through TradeNet. Through this EDI system, companies and agencies here can submit their trade declarations and obtain the approval (permits/licences) directly from their computers in about 15 minutes to half an hour. This once took 3 days.

Besides facilitating trade through shortening the documentation processing time, an EDI link was also established between PSA and the Customs & Excise Department to pre-clear the Import containers. Container import status submitted by the shipping lines to PSA via PORTNET are transmitted to the Customs' system for pre-clearance before ship's arrival. As a result, Customs check-point clearance is cut down by more than 80%.

In 1994, the Customs & Excise department had also implemented a bar-code clearance system whereby scanners were installed at the Customs checkpoints for scanning the cargo permits directly into the clearance system. With real time information retrieval and updating of cargo status, goods cleared at a much faster speed.

The Customs & Excise department is also linked-up with the local banks through the TradeNet system. The EDI link has made the payment of duties and Goods & Services Taxes much easier.

# David Jeffery Resumes TFC Chairmanship

At the 19th Conference in Seattle in June it was announced that Mr. Hassan Ansary of Canada Ports Corporation had ben appointed to take over from Mr David Jeffery as Chairman of the Trade Facilitation Committee (TFC). The purpose of this change was to let Mr. Jeffery concentrate on his new mission as the host for the London Conference in 1997.

However, Mr. Ansary left the Canadian Ports Corporation due to what he explained as circumstances entirely beyond his control in mid-August, and thus submitted his resignation from the chairmanship of the Trade Facilitation Committee to Mr. Cooper, the President of IAPH.

Under the circumstances, Mr, David Jeffey, has agreed to resume as Chairman pro-tem, until such time as a new Chairman is appointed by the President. President Cooper welcomed Mr. Jeffery's offer and promised that a more permanent replacement would be considered by the officers concerned.

In his letter to the IAPH officers dated 23 August 1995. Mr. Jeffery says, "In order to ensure that the momentum of the committee is maintained I am planning to hold a meeting in London at the end of October, The likely date is 30 October which is immediately prior to the 'Electronic Commerce '95 exhibition and seminars" to be held at the Barbican Centre, London, from 31st Octoer to 2nd November 1995."

# IAPH Literature Updated

The IAPH Head Office has recently published a revised version of the Constitution and By-Laws to accommodate the revisions resulting from the Seattle/Tacoma Conference. Furthermore, an updated version of the brochure "Outline of IAPH" has been published by the Head Office for use as promotional material. The new editions of the publications, with each format being changed from the previous pocket size to A4 size, were sent to IAPH members from the Tokyo Secretariat in late August.

# Indonesia to Finalize 1996 Exco Planning

The Secretary General has recently received a letter from Mr. Soentro, Director General of Sea Communication, Ministry of Communications, Indonesia, our host for next year's IAPH mid-term Exco, via Mr. Sudjanadi, an IAPH Exco member from Jakarta, informing him that the mid-term Exco meeting in Bali and the technical tour to port of Tanjung Priok, Jakarta, will be held at the end of April 1996. The exact dates and venue will be confirmed by the host in due course.

*Sudjanadi, Sea Communication, Indonesia*

Mr. Sujanadi indicated that the preparation work is underway on the initiative of the Director General of Sea Communication in close cooperation with the Board of Directors of the Indonesia Port Corporation I (Belawan), II (Tanjung Priok), III (Tanjung Perak) and IV (Ujung Pandang).

# *Indonesia*

*(From the publication "INDONESIA - TRAVEL PLANNER 95/96" by courtesy of the Embassy of Indonesia in Tokyo)*

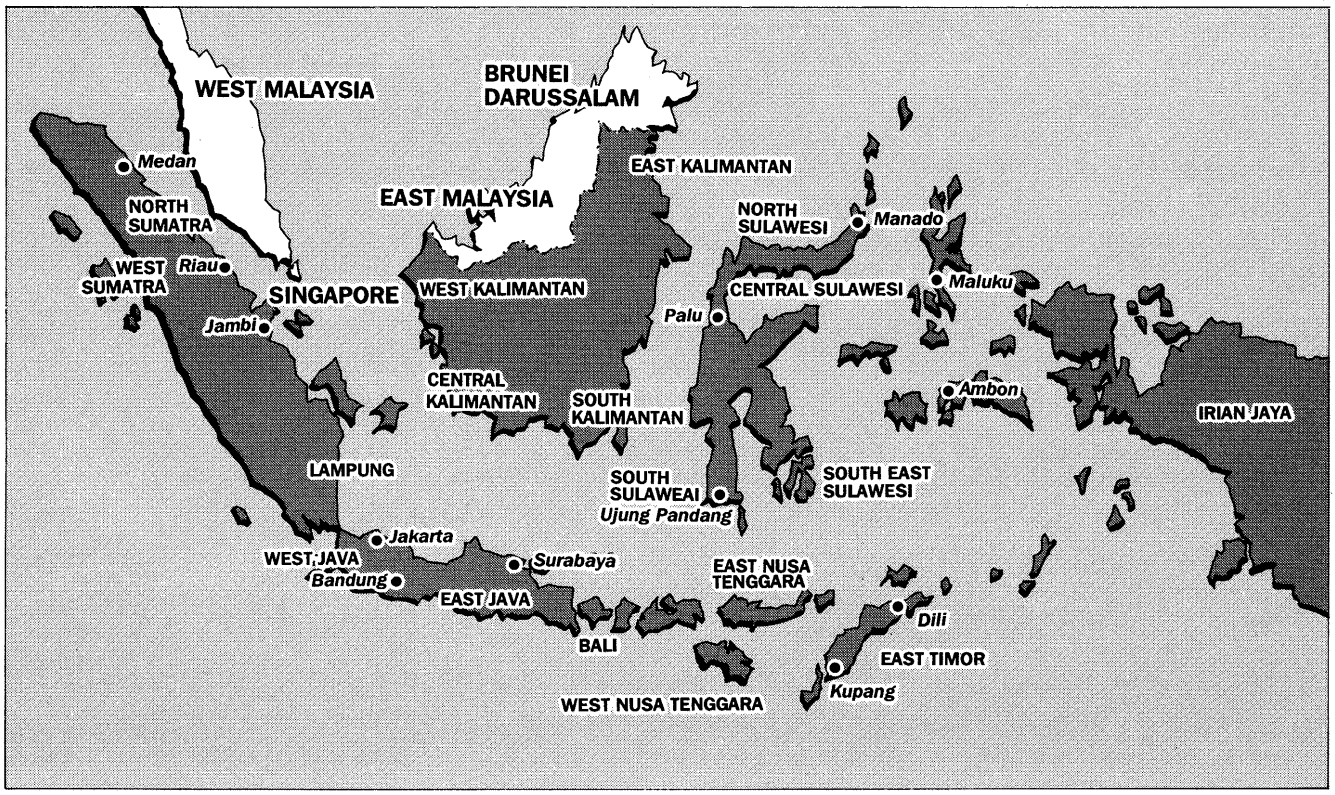
## General Information

The name Indonesia has its roots in two Greek words: "Indos" meaning Indian and "Nesos" which means islands. It is an appropriate description of the archipelago as there are estimated to be a total of 17,508 islands, of which only about 6,000 are inhabited, stretching for 5,150 km between the Australian and Asian continental mainlands and dividing the Pacific and Indian Oceans at the Equator.

Five main islands and 30 smaller archipelagoes are home to the majority of the population. The main islands are Sumatra (473,606 sq.km), Kalimantan (539,460 sq.km), Sulawesi (189,216 sq. km), Irian Jaya (421,981 sq.km), and last but not least Java (132,187 sq.km), home to 70 percent of the country's population. Indonesia shares Irian Jaya with Papua New Guinea and two thirds of the island of Kalimantan with Malaysia and Borneo.

The islands and people of Indonesia constitute the fourth most populated nation in the world. As a democratic republic, Indonesia is divided into 27 provinces and special territories and classified geographically into four groups. First are the Greater Sundas, made up of the larger islands of Sumatra, Java, Kalimantan and Sulawesi.

Second are the Lesser Sundas, consisting of smaller islands from Bali eastward to Timor. Third is Maluku which includes all the islands between Irian Jaya and Sulawesi. The fourth and final



group is Irian Jaya in the extreme eastern part of the country.

## The Capital

The nation's capital, Jakarta, has a fascinating and significant history. It started as a small harbour town called Sunda Kelapa, but its founding dates back to the year 157 when it was named Jayakarta by Fatahillah of the neighbouring Sultanate of Banten. The name Jayakarta means City of Great Victory but this was later changed to Batavia under the Dutch. Now as Jakarta, the centre of government, business and industry, it spreads over an area of more than 650 sq.km (410 sq miles) and has a population of over eight million people. It is also designated as a special territory, (Daerah Khusus Ibukota-DKI), which means that is administered by a governor and enjoys the same status of a province.

Jakarta is the main gateway to Indonesia. It is a contrast of modern western architecture and traditional Indonesian culture. Its rapid growth into a metropolitan city reflects the economic, political, social and industrial development of the nation. In recent years, Jakarta has expanded its facilities for visitors with multi-star luxury hotels, fine restaurants, exciting nightlife and modern shopping centres as well as tourist attractions such as Taman Mini Indonesia Indah (Beautiful Indonesia in Miniature Park), restored colonial period buildings, marine resorts in the Bay of Jakarta, and an extensive beach recreation complex.

## Climate

Indonesia's climate is definitely tropical. There is no Autumn or Winter and distinctive "dry" and "wet" seasons share the year. The East Monsoon, from June to September, brings dry weather while the West Monsoon, from December to March is moisture-laden, bringing rain. The transitional period between these two seasons is interspersed by the occasional heavy rain shower, but even in the midst of the West Monsoon season, temperatures range from 21 degrees (70 V) to 33 degrees celcious (90 V) except at higher altitudes which can be much cooler.

Heaviest rainfalls are usually recorded in December and January and humidity is generally between 75% and 100%.

## Livelihood

Although the industrial sector of the economy is gradually gaining importance as a result of conscientious government policies, Indonesia is still predominantly agrarian.

Major agricultural products for domestic consumption and export include rice, corn, cassava, soybeans, timber, rubber, palm-oil and various spices for which it has for centuries been famed. Indonesian agronomists, in cooperation with the International Rice Institute based in the Philippines, are continuously developing new rice varieties suitable for growing under particular conditions prevailing in the various regions of Indonesia. The government has since 1968 been actively involved in providing guidance to peasants under the BIMAS mass guidance programme, with considerable results.

Similar progress has been made in the field of fishery. Shrimp has become a major foreign exchange earner. To support the growing shrimp culture, a Shrimp Research Centre has been set


*Container Terminal of Tanjung Priok Port*

up in Jepara (Central Java) with UNDP assistance. Under government guidance, fish production in the Indonesian waters is estimated to have increased at a rate of 5.4% annually. Snail production is also growing as an export item to countries in Europe where it is considered a delicacy, like in France, Estates play an important role within the context of agricultural development, as their total area covers approximately 6.6 million hectares of which 83.7% are smallholders. Tabacco planting has been intensified in several areas, the largest estates being in East Java where they cover a total area of 1,000 hectares. Tea is continuously being cultivated. The rejuvenation of coconut plantations proceeds in order to regain Indonesia's prominent pre World War II position in the export of this crop. Rejuvenating rubber estates the majority of which are located in Sumatra, is also being encouraged.

Development in the field of palm-oil has resulted in a steady increase in output, i.e. around 15% annually. Indonesia's first cotton growing company was set up in 1978 in South Sulawesi to answer Indonesia's present need for around 350,000 bales annually for its growing textile industry.

## Economy

The country is rich in natural resources. While 90% of the population is engaged in agriculture, oil and gas contribute 70% of total export earnings and 60% of the government revenues.

However, fluctuations in world prices of traditional export commodities have led to a change in recent years in the structure of the economy. Tourism is gaining a more important sector as a foreign exchange earner. To production and growth in the industry, the government has formulated new policies and improved facilities. Significant progress has been made in communications and transportation and since 1976, Indonesia has had its own communications satelite system which has enabled rapid expansion of telephone, television and broadcast facilities to all 27 provinces.

Air and sea ports are being extended to cater to the growing traffic on both domestic and international sectors of passengers as well as freight.

Besides oil and liquefied natural gas (LNG), forestry products, rubber, coffee, tea, tin, nickel, coper, palm products and fish make important contributions to export earinings. In recent years a number of steps have been taken to promote and stimulate non-oil exports which include handicrafts, textiles, precious metals, tea, tabacco, cement, fertilizers as well as manufactured goods.

To meet domestic needs, Indonesian plants assemble various types of automobiles, trucks, buses and motor-cycles under licence from foreign manufacturers. Also pruduced are electronic equipment and electrical appliances.

The aviation industry has been growing and the state owned Indonesian Aircraft Industry (IPTN) produces two types of fixed wing aircraft and helicopters. New production lines are coming onstream as well its Universal Maintenance Centre for the overhaul of aircraft engines. The aircraft are for domestic use as well as for export. In the agriculutural sector, Indonesia has become self sufficient in rice and does not need to import this staple food as it had for years.

Indonesia maintains a liberal foreign exchange system and has


few restrictions on transfers abroad, and in general freely allows conversions to and from foreign currencies.

Bank Indonesia, the Central Bank, maintains the stability of the Indnesian Rupiah and reviews the exchange rate in terms of other currencies on a daily basis. The Rupiah is linked to basket of currencies of Indonesia's major trading partners. The unitary exchange rate allows for fluctuation. With the objective of a more equitable distribution of development gains, the government gives high priority to expansion in the less developed regions of the country and the creation of employment opportunities for the country's growing labour force. To attract foreign capital, certain incentives are provided and several sectors are open to foreign investment.

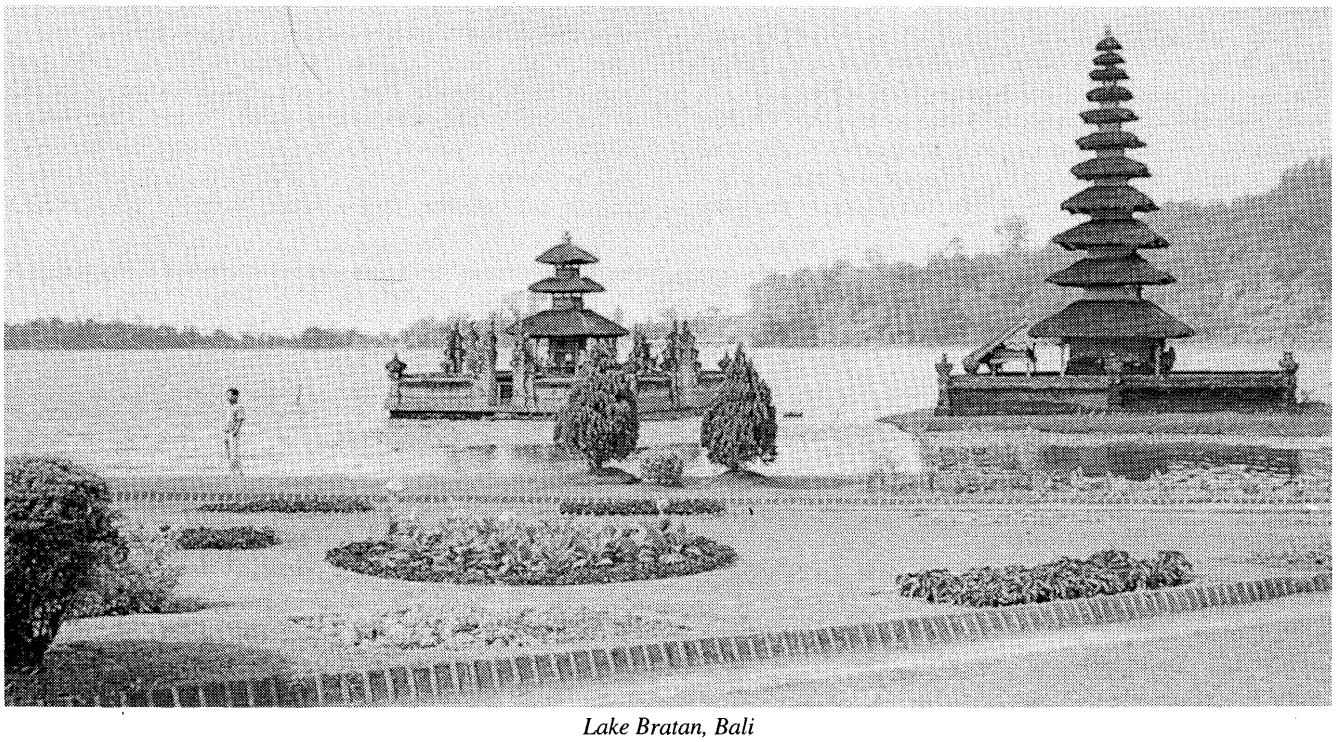
## Bali

A friendly and remarkably artistic people, living amid breathtaking panoramas, have created a dynamic society with unique arts and cermonies, making Bali an island almost unreal in today's hectic and changing world. Terraced ricefields dominate the landscape, with rivers and small irrigation streams disecting a luscious green landscape, filling the air with the enchanting sounds of running water.

Bali is divided by a string of impressive and authoritative volcanoes running almost through the center of the island. Mountains and particularly volcanoes are believed to be the home of the gods. Shrouded in mystery and magic, they stretch skywards in majestic splendour. Bali's main volcano is the still active and sometimes explosive Gunung Agung, which is considered sacred among local people as it is believed to be the center of the universe. Not just a few visitors leave with the same belief.

The ancient kingdoms of the "Rajas" and princes of Bali were dismantled by colonial governments in the early part of this century, but many of their royal descendants still own traditional palaces and are very much respected as partrons of the arts. Art and culture are strongly bounded to Bali's unique form of Hinduism called "Hindu Darma". Classical dance dramas for example, are based on the old Hindu epics of the Ramayana and the Mahabarata, but contain an element of local folklore, perculiar to the island. The very soul of Bali is rooted in religion and is expressed in art forms that have been passionately preserved over the centuries. It seems that almost every person is an artist, spending free time applying skills and images which have been passed down from generation to generation and grasped from a very young age. Whether expressed through beautiful and intricate paintings and dances, extraordinary carvings, superb weaving or even in decorations made for myriad shrines which can be found in public areas, on roads, in paddy fields or in homes; the island is alive with art.

The Balinese have been more exposed to international tourists and generally speak more English than people in other parts of the Indonesian archipelago. They have managed to preserve their culture despite overwhelming foreign influences brought to the region by an ever increasing number of tourists. Bali's international airport, Ngurah Rai, is in the south of the island and is served by numerous international airlines and charters. In order to keep up with the growing number of visitors and the need for their comfort, more hotels have been built, ranging from small bungalow types for budget travellers to the luxurious Nusa Dua tourist resort area, near the airport, on the southern tip of the island. Water sports have naturally gained in popularity and Bali offers superb surfing, windsurfing, sailing, scuba diving and white water rafting.



*Lake Bratan, Bali*

# The IPD Fund: Contribution Report

***Your contribution to IAPH's International Port development Fund will give additional opportunities for training to personnel from developing ports!***

***Join our endeavours in aiding developing ports through the training of their staff under the IAPH Bursary Scheme!***

IAPH, among its wide-ranging activities undertaken by the various committees and experts, has devoted so much time and effort to aiding developing ports through training, education and technical assistance. Under the IAPH Bursary Scheme which is administered by the IAPH Committee on Human Resources, about 120 selected people from IAPH member ports in developing countries have received assistance for training at advanced IAPH member ports and training institutions. This program is funded by voluntary contributions of the member organaizations and individuals. We assure you that any contributions you might be able to make to the IPD Fund will play a significant role in sustaining this important project of IAPH.

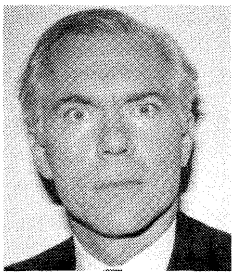
We thank you for the contributions from the organizations and individuals whose names are listed in the box, with the amount donated. We look forward to the support of as many people as possible in coming up with voluntary contributions to the Fund so as to achieve the targeted amount of US$70,000.

## Contributions to The Special Fund Since June 1992 (As of September 10, 1995)

| Contributors (in alphabetical order) Paid: | Amount (US$) |
|---|---|
| ABP (Associated British Ports), U.K. | 3,000 |
| Abu Dhabi Seaport Authority (Mina Zayed) | 3,000 |
| Akatsuka, Dr Yuzo, Univ, of Saitama, Japan | 230 |
| Akiyama, Mr Toru, IAPH Secretary General Emeritus, Japan | 1,000 |
| Auckland, Ports of, Limited, New Zealand | 500 |
| Barcelona, Puerto Autonomo de, Spain | 1,000 |
| Bintulu Port SDN BHD, Malaysia | 200 |
| Cameroon National Ports Authority, Camero | 480 |
| Cayman Islands Port Authority of, the Cayman Islands | 250 |
| Clydeport Ltd., U.K. | 1,000 |
| Constanta Port Administration, Romania | 250 |
| Copenhagen Authority, Port of, Denmark | 1,000 |
| Cotonou, Port Autonome de, Benin | 100 |
| Cyprus Ports Authority, Cyprus | 1,000 |
| Delfziji/eemshaven, Port Authority of, the Netherlands | 350 |
| de Vos, Dr. Fred, IAPH Life Supporting Member, Cabada | 500 |
| Dubai Ports Authority, U.A.E. | 500 |
| Dundee Port Authority, U.K. | 250 |
| Empresa Nacional de Administracao dos Portos, E.P., Cabo Verde | 250 |
| Fiji, Ports Authority of,Fiji | 100 |
| Fraser River Habour Commission, Canada | 250 |
| Fremantle Port Authority, Australia | 250 |
| Gambia Ports Authority, the Gambia | 250 |
| Ghana Ports and Harbors Authority, Ghana | 250 |
| Hakata, Port of, (Fukuoka City) Japan | 1,705 |
| Halifax, Port of, Canada | 250 |
| Helsingborg, Port of, Sweden | 500 |
| Hiroshima Prefecture, Japan | 523 |
| Irish Port Authorities Association, Ireland | 1,000 |
| Japan Academic Society for Port Affairs, the, Japan | 267 |
| Japan Cargo Handling Mechanization Association, Japan | 259 |
| Japan Port and Harbor Association, the, Japan | 493 |
| Japanese Shipowners' Association, the, Japan | 516 |
| Johor Port Sdn. Bhd., Malaysia | 500 |
| Kawasaki, City of, Japan | 1,702 |
| Klang Port Authority, Malaysia | 200 |
| Kobe, Port of, Japan | 3,665 |
| Kobe Port Terminal Corporation, Japan | 924 |
| Korea Container Terminal Authority, Korea | 100 |
| KSC (Kuwait Oil Company), Kuwait | 1,000 |
| Kudo, Dr. Kazuo, Tokyo Denki University, Japan | 4,000 |
| London Authority, Port of, U.K. | 500 |
| Maldives Ports Authority, Maldives | 100 |
| Marine and Harbours Agency of the Department of Transport South Australia, Australia | 150 |
| Marine Department, Hong Kong | 500 |
| Maritime Services Board of New South Wales, Australia | 367 |
| Mauritius Marine Authority, Mauritius | 200 |
| Melbourne Authority, Por of, Australia | 1,000 |
| Miri Port Authority, Malaysia | 100 |
| Montreal. Port of, Canada | 500 |
| Nagoya Container Berth Co., Ltd., Japan | 518 |
| Nagoya Port Authority, Japan | 3,564 |
| Nanaimo Harbour Commission, Canada | 250 |
| Naouerm Oirt if, Limited, New Zealand | 100 |
| New York & New Jersey, Port Authority of U.S.A. | 1,000 |
| Niigata, Port of, (Niigata Prefecture), Japan | 860 |
| Okubo, Mr Kiichi, Japan | 274 |
| Osaka, City of, Japan | 3,185 |
| Osaka Port Terminal Development Corp., Japan | 570 |
| Pacific Consutants International, Japan | 243 |
| Penta Ocean Construction Co., Ltd., Japan | 500 |
| Point Lisas Industrial Port Development Co., Ltd., Trinidad | 100 |
| *Primer Concurso Internacional de Memorias Portuarias: Carlos Armero Sisto, Anuario de Puertos: Buenos Aires, Argentina | 300 |
| Public Port Corporation I, Indonesia | 180 |
| Pusan East Container Terminal Co., Ltd., Korea | 200 |
| Qubec, Port of, Canada | 250 |
| Shipping Guides Limited, U.K. | 500 |
| Solomon Islands Ports Authority, Solomon Island | 100 |
| South Carolina State Ports Authority, U.S.A. | 1,000 |
| Tauranga, Port of, New Zealand | 500 |
| Toyama Prefecture, Japan | 254 |
| UPA CCIM (French Ports Association), France | 1,905 |
| Vancouver, Port of Canada | 500 |
| Yamaguchi Prefecture, Japan | 32 |
| Total: | US$54,159 |

**1st International Contest of Port Annual Reports sponsored by the Yearbook of the Port of Buenos Aires (Editor, Mr Carlos Armero Sisto)*

# LC 1972 Scientific Group – 18th Meeting IMO Headquarters - London, England
## 10-14 July 1995



**Report of**
**Anthony B. MacDonald,**
**IAPH Observer**

The 18th Meeting of the Scientific Group of the London Convention 1972 was held at the headquarters of the International Maritime Organization, 4 Albert Embankment, London SE1, England, on 10-14 July 1995. The Meeting was attended by representatives from 20 Contracting Parties, one associate member of IMO, two observer states, the UNEP representative to the Basel Convention, and seven non-governmental organizations. I attended the Meeting as the IAPH observer and was accompanied by Richard K. Peddicord, Technical Advisor, and Joseph E. LeBlanc, Jr., Legal Advisor. The following is a summary of the actions taken at the Meeting on agenda items of concern to IAPH.

### 1. Agenda Item 2 – Scientific and Technical Advice on Proposed Amendments to the London Convention 1972.

The Third Meeting of the LC 1972 Amendment Group (24-28 April 1995) requested the Scientific Group (LC/AM 3/7, 2.4) to undertake the following tasks as a matter of priority in conjunction with the proposed adoption of a "reverse listing" approach to sea disposal and the incorporation of the Waste Assessment Framework (WAF) into this approach:

(a) Re-edit the WAF to incorporate the reverse listing approach rather than the prohibition approach currently embodied in Annexes 1 and 2 to the Convention; and

(b) Prepare recommendations for the consideration of the substances listed in Annexes 1 and 2 to the Convention in the WAF.

The Chairman of the Scientific Group (John Campbell of the United Kingdom) reminded the Meeting that this would be the last opportunity for the Scientific Group to have technical input into the amendment proposals. He urged cooperation and compromise on the part of all delegations in order to make as much progress as possible. The principal work of the Meeting was devoted to a consideration of the instructions received from the Amendment Group, with particular reference to the inclusion of the WAF in some form as an Annex to the amended Convention. Germany proposed an edited version of the WAF (LC/SG 18/2/1) for adoption as an Annex, and the Chairman presented a somewhat shorter version which included new language (LC/SG 18/2/3). A working paper on this issue was also circulated by Canada.

The Chairman attempted to focus the debate on his version of a WAF Annex and proposed new "box titles" in the WAF schematic which he felt would more accurately reflect the way the WAF is applied in practice. There was strong resistance to this approach from Germany and other delegations, who felt that attempts to draft new language at this late stage of the amendment process was unrealistic. These delegations pointed out that it had taken 7 2/1 years and eight meetings of the Scientifc Group and an ad hoc intersessional group to agree upon the language in the WAF. In their view, the best chance of reaching agreement on a WAF Annex was to work with the agreed text. After considerable debate, the Meeting decided to review the existing WAF paragraph-by-paragraph and to identify each provision as "annex material" or "guidelines material". The provisions identified as "annex material" were then organized in the form of a draft WAF Annex for consideration by working groups, with the WAF in its entirety being retained as guidance.

Three Working Groups were established: (1) Working Group 1 to consider the WAF provisions dealing with waste audits and waste management; (2) Working Group 2 to address the WAF provisions relating to the "Action List" and the handling of Annexes 1 and 2 in the context of a reverse list aproach; and (3) Working Group 3 to review the WAF provisions regarding impact hypothesis, reporting, and monitoring. IAPH actively participated in Working Groups 1 and 2. The outcome of the Working Groups, and the decisions taken in the plenary consideration of these issues, is set forth below.

**(a) Working Group 1 –** At previous meetings, IAPH has pointed out that the waste audit requirement contained in the WAF relates to industrial waste and does not apply to dredged material. IAPH has directed its efforts toward preventing any interpretation or extension of this audit requirement to impose responsibilities upon ports for controlling or preventing upstream sources of pollution of marine sediments. IAPH identified two key paragraphs of the WAF on this issue that needed to be included in the WAF Annex, *i.e.* paragraph 5.2.8 recognizing that national authorities have responsibility for controlling upstream sources of pollution, and paragraph 5.2.11 providing that until upstream sources are controlled, the problem of contaminated dredged material can be handled through the use of waste management techniques. IAPH opposed the efforts of some delegations to exclude these paragraphs from the WAF Annex and limit them to the WAF guidance.

**(b) Working Group 2 –** The debate concerning the WAF Action List and the treatment of substances in Annexes 1 and 2 was particularly intense. The proposed reverse listing approach prohibits the sea disposal of all "wastes" and "materials" unless they are included on a reverse list for which sea disposal may be an acceptable option. The approach does not deal with "substances" such as those listed in Annexes 1 and 2. The reverse list prohibition for "waste" and "materials" would logically be included in the "Prohibition Box" of the WAF. Some delegations also wanted to include the existing prohibitions applicable to Annex 1 and Annex 2 "substances" in the Prohibition Box, *i.e.*, Annex 1

and Annex 2 substances would be prohibited from disposal unless they were found to be present in trace amounts or were rapidly rendered harmless after disposal. This was supported by Germany, the Netherlands, the Nordic countries, and Greenpeace.

Other delegations strongly disagreed. In their view, whether "substances" (including Annex 1 and 2 substances) may be disposed at sea should be determined through assessment under the Action List criteria and the other provisions of the WAF. This approach recognizes that the Annex 1 and 2 prohibitions are not absolute and that the "trace contaminants" and "rapidly rendered harmless" determinations already involve an assessment procedure similar to that used with the Action List. If the outcome of the assessment is that the substances should not be dumped, the prohibition from sea disposal would result from assessment under the Action List criteria and not through a categorical Prohibition Box. This approach was supported by the United States, the U.K., Canada, and IAPH. All delegations agreed that use of the WAF in a reverse listing approach should be as stringent as the current prohibition approach under the existing Convention.

The issue was resolved in the Working Group by agreement to address "substances" in the Action List, with a provision that the "Upper Level" criteria above which dumping would be prohibited should be at least as stringent as the current Annexes 1 and 2 *i.e.,* to avoid acute or chronic effects on human health or on sensitive marine organisms representative of the marine ecosystem. A number of delegations wanted to list all Annex 1 and 2 substances for priority consideration in establishing Action Levels. Other delegations felt that a more generic list of priority substances should be used that would encompass the substances listed in Annexes 1 and 2. The latter approach was followed by providing that, in selecting substances for consideration on the Action List, priority should be given to toxic, persistent, and bioaccumulative substances, with examples given of metals, organohalogens, petroleum hydrocarbons, and pesticides. The Netherlands and Japan expressed continued reservation as to whether this approach was as stringent as the existing Annexes. A number of delegations also expressed the view that priority consideration for the Action List would not necessarily require a finding of all three characteristics of toxicity, persistence, and bioaccumulative potential, but might be warranted where only two characteristics are shown.

In connection with the establishment of an Upper Level above which substances should not be dumped. IAPH supported the inclusion of a provision recognizing that such substances might still be made acceptable for dumping through the use of management techniques or processes. In the case of dredged material, this would include the use of capping and other methods of disposal. These provisions are contained in the WAF and should be included in the WAF Annex to assure their full consideration.

**(c) Adoption of a Draft WAF Annex –** After debate upon the reports of the three working groups, the meeting agreed upon a draft WAF Annex for submission to the Eighteenth Consultative Meeting in December 1995. This was done with recognition that the WAF Annex was not in a form for adoption and required further editing. The Secretariat was directed to (i) include an introductory paragraph; (ii) insert the new "box titles" recommended by the Chairman of the Scientific Group in appropriate places; (iii) make conforming changes and transitional additions so the WAF Annex reads more logically; and (iv) include a clause that Contracting Parties should take full account of the WAF in its entirety as guidance. All parties were asked to carefully review the WAF Annex and the editorial work of the Secretariat for further discussion at the consultative meeting in December. Because significant editing is still required, the Meeting appreciated that a final text would have to be prepared with the assistance of legal experts.

## 2. Agenda Item 3 – The Dredged Material Assessment Framework.

This agenda item involved a consideration of the DMAF developed by the Ad Hoc Group of Experts on Dredged Material at the intersessional meeting sponsored by IAPH in Los Angeles, California from 23-27 January 1995 (LC/SG 18/3, Annex 2). Because of the urgency of the amendment issues, it was anticipated there would be little discussion of the DMAF and that its use could be recommended to the Consultative Meeting without extensive debate. Most Contracting Parties had little comment. Gemany recommended three changes in the DMAF, one of which was accepted and two of which were withdrawn. The Netherlands and South Africa expressed concern that the DMAF lacked sufficient detail to serve as a useful tool, particularly for developing countries, but did not seek to delay approval of the guidelines. Nevertheless, there was an interest in a paragraph-by-pragraph review of the guidelines during the plenary session and a working group was appointed to address certain issues that arose during those discussions. After minor revisions recommended by the working group, the Meeting approved the DMAF with recommendation to the Consultative Meeting for its use in assessing and managing dredged material.

During the course of the discussions, the Netherlands sought clarification as to the relationship between the DMAF, the WAF, and the WAF Annex. The Chairman explained that the WAF Annex would have binding effect, with guidance for the application for the WAF Annex to be found in the existing WAF, which contains reference to the DMAF in the special case of dredged material. The DMAF would not replace the WAF, but would be used as a complement in providing special guidance for the management of dredge material.

## 3. Amendment Issues to Be Addressed at LC 18.

The 18th Consultative Meeting is envisioned as the final substantive meeting for the amendment process. According to the schedule adopted by Contracting Parties, final agreement upon the text of amendments is to be achieved at this meeting. The language is then to be reviewed at a linguists/jurists meeting during 12-16 February 1996 to satisfy legal requirements in the various languages, with final adoption of the amendments at the two week Diplomatic Conference scheduled for 4-15 November 1996. There will be no further meetings of the Amendment Group, nor will amendment proposals be open to further consideration by the Scientific Group during the intersessional period next year.

The following amendment issues remain to be resolved and are of major concern to IAPH:

**(a) The WAF Annex –** The final version of the WAF Annex, with the editorial changes and revisions by the Secretariat, must be carefully reviewed to assure that port interests are adequately protected and to determine whether additional changes or revisions should be proposed at the consultative meeting. IAPH must be prepared to resist any effort to delete provisions relating to dredged material or to relegate these provisions to the WAF guidance. IAPH must continue to support inclusion of specific provisions in the WAF Annex recognizing the responsibility of national authorities to control upstream sources of pollution and that waste management techniques such as capping can be used when contaminated sediments may exceed upper action levels.

**(b) The Precautionary Approach –** IAPH must continue to insist upon a statement of the "precautionary approach" that would require preventive measures when sea disposal is "likely to" have adverse effects rather than when such disposal "may" have such effects. This is, perhaps, the most important issue for IAPH in the amendment process. The precautionary approach

*(Continued on Page 17)*

# OPEN FORUM

# THE ENVIRONMENTAL FUTURE OF AUSTRALIAN PORTS

*Paper presented to the 7th Sister Ports* Conference held in Osaka on May 11, 1995*

**By John B King**
Chief Executive
Port of Melbourne Authority

## Introduction

The remaining five years of this century will, I believe see most ports spending more time and resources on environmental management.

There are three main issues that Melbourne and other major Australian ports are currently addressing: Oil Pollution response, the introduction of exotic organisms by ship's ballast water and the environmental impacts of dredging.

## 1. Oil Pollution

Oil Pollution is of course an international problem that all port and marine authorities are having to handle. Different countries have differing strategies for dealing with oil pollution combat arrangements: in England and I understand Japan it is controlled on a national basis. In Australia, because of our very extensive coastline and individual State's interest in protecting their own coastal environment, it is controlled at a regional level whilst the Commonwealth Government provides support and co-ordination when necessary. The Commonwealth is also a major provider of capital combat equipment to the ports which is funded through a national environmental levy on all shipping arriving in Australia.

The last two years has seen a substantial increase in the profile of the nation's oil pollution response capability. A review into contingency arrangements has resulted in the recognition of the need to ensure a more co-operative approach between States the Commonwealth and overseas response agencies. Equally important is the closer relationship that now exists between government and the Australian oil industry on oil pollution preparedness.

The repercussions of Exxon Valdez and other major recent spills has highlighted the need for a joint approach to combat response to ensure the best possible outcome.

The oil industry in Australian ports now accepts the responsibility for keeping equipment and trained personnel for dealing with a 10 tonne oil spill at an oil terminal.

Under the National Plan co-operative contingency arrangemments Australia has sufficient stockpile of equipment and dispersants to deal with a spill of up to 10,000 tonnes. In Melbourne we are fortunate to have on our doorstep additionl resources in the form the Australian oil industry national stockpile of pollution response equipment (Australian Marine Oil Spill Centre – Geelong).

Ironically, as will be the experience of most other ports, it is seldom the tanker that is the cause of minor spills to which the ports must respond. It is the relatively small spills from bunkering and internal fuel oil tank transfer operations that ports have to deal with on a day to day basis. We continue to hope that the inevitable big spills will keep away from our shores.

## 2. Ballast Water

As a major exporter of bulk commodities Australia is a major importer of foreign ballast water.

The consequences of this is that a large number of exotic and noxious organisms are daily entering our port and adjacent waters and threatening the viability of our expanding aquaculture industry.

There is of course concern that ships taking-on ballast in our ports are likewise relocating some of our unwelcome species into foreign ports. The issue is also one in such that there is concern that the translocation of species by ballast water from one Australian port to another may also upset ecological balances.

There are at least 14 established noxious species considered to have arrived in Australia via ballast water including fish, crustaceans molluses, worms, seaweed and toxic dinoflagelates.

Of particular concern to our State of Victoria are the consequences of "blooms" of toxic dinoflagelate algae in our waters which may result in paralytic shellfish poisoning when consumed by humans which can ultimately result in death.

Australia has been very pro-active in addressing its concerns in internationl forums. In the International Maritime Organisation it has been accepted to be such a serious issue that there is general agreement that an additional annex to MARPOL, Annex VI will be required to put in place the essential controls, both in necessary changes to ship construction required for ballast water treatment, strategy as well as management controls to minimise translocation. Australia now has in place a Ballast Water Strategy that amongst other provisions requires foreign ships wishing to discharge ballast in Australian ports to exchange ballast mid-ocean to minimise the risk of introducing toxic species. The port's role in future ballast water management controls are going to be pivotal in the implementation of this strategy.

Effective monitoring implementaion and controls will be dependent on a co-operative Federal/State approach by Health, Environment, and Port portfolios. The Port of Melbourne is currently involved in a program to establish baseline data on volumes

**(Osaka's sister ports are San Francisco, Melbourne, Le Havre, Shanghai, Valparaiso, Pusan and Saigon)*

and sources of ballast water carried between ports and to determine the toxic species that have particular adverse affects on our port water.

### 3. Dredging

Australia's 3 major river ports Melbourne, Newcastle and Brisbane are in need of regular maintenance dredging to keep channels, docks and berths clear of sediment build-up. We are, as a fairely young industrialised nation, fortunate not to have suffered the experiences of some major older northern hemisphere river ports in terms of the high levels of contaminated industrial effluent that enter river waters and end up contaminating the river sediments. It is the case that many of these ports now have to pump all dredge spoil ashore for dewatering and treatment prior to use as landfill.

Melbourne suffers the consequences of in-appropriate upstream catchment management that in turn raises the level of contamination of the sediments that we ultimately have to clear by dredging.

In Melbourne we own a 3000 $m^3$ capacity trailer suction dredge that is used to clear a 250,000 $m^3$ annual accumulation of sediment requiring maintenance dredging budget of some 53M. At this stage we are fortunate that under current environmental standards our river sediment is marginally acceptable for offshore disposal and we are able to dump the spoil within Port Phillip Bay some 15 km from the river entrance.

It is possible that a change in attitude to Bay dumping by environment agencies or more stringent specifications for acceptable levels of spoil contamination will force the port to look at other options – either on shore disposal or deep sea dumping. Both options will place a considerable financial impact on the ports dredging budget by up to 3 times current cost.

We do not share the benefits enjoyed by many other maritime nations where dredging and disposal costs are met by non port authority agencies. In Melbourne the costs are met by the Port of Melbourne Authority and recovered from the shipowner by way of tonnage charge.

In an endeavour to ensure that Australian ports' concerns are addressed prior to the development of dredging environmental codes or regulations the Association of Australian Ports and Marine Authorities and its members have been active in lobbying Federal and State agencies who are tasked with their preparation.

This is not an issue of the ports wanting to avoid their dredging environmental responsibilities – we are keen to play our part – however there is increasing concern that we may be faced with a regulatory regime with an unsustainable or uncertain scientific base that may place a considerable and unnecessary financial impost on the running of a commercial port.

### Summary

The Association of Australian Ports and Marine Authorities recognises the need for its members to keep abreast of the environmental issues impacting upon port operations and to improve their environmental management and practices.

The Association has recently published Environmental Guidelines for Australian Ports which are to be used as guiding principles for port authorities and will also assist to demonstrate that ports as a group and individually are taking environmental issues seriously.

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# LC 1972 Scientific Group–

*(Continued from Page 15)*

will dictate how all other provisions of the Convention and its Annexes are applied, including the WAF Annex, the WAF guidelines, and the DMAF. It is imperative that the "likey to" standard be adopted.

**(c) The Polluter Pays Principle –** IAPH must continue its efforts to assure that any statement of the "polluter pays" principle is clear that it applies only to "primary polluters" and would not impose costs upon ports for controlling or eliminating upstream sources of pollution.

**(d) Rejection of the word "eliminate" –** IAPH must continue to oppose amending the Convention to require the "elimination" of pollution because of the concern – already expressed by many delegations – that this would go beyond pollution "prevention" and include "remediation."

### 4. Additional Issues to Be Addressed at LC 18.

**(a) The DMAF –** IAPH must express support for the recommendation of the Scientific Group for the adoption of the DMAF for application to the sea disposal of dredged material.

**(b) The IAEA De Minimus Report –** After years of consideration, the International Atomic Energy Association (IAEA) has finally issued its report on de minimus levels of radioactivity that should be excluded or exempt from regulation under the Convention ("The Concept of De Minimus for Radioactive Substances Under the London Convention 1972", IAEA (1995)). Under Annex 1(6) and Annex 2(D) of the Convention, the IAEA is specified as the competent international body to advise Contracting Parties as to the treatment of radioactive material arising under the Convention. Consideration of this report is included on the agenda for LC 18. The report is favorable to port interests in recognizing that low levels of radioactivity, both naturally and from anthroprogenic sources, should not be a basis for prohibiting sea disposal. This is important in preserving the sea disposal option for marine sediments that may contain such low levels of radioactivity. We understand that opposition has been expressed by a number of delegations to the conclusions set forth in this report. IAPH must be prepared to express support for the IAEA position when this issue is discussed at LC 18.

### 5. Conclusion

IAPH has worked throughout the amendment process to assure that the provisions of the amended Convention adequately recognize the needs of IAPH ports. Every effort will be made at the 18th Consultative Meeting in December 1995 to resolve the amendment issues described above. It is essential that IAPH actively participate in this effort and continue to assert the IAPH position to assure that, when final decisions are made, port interests are fully protected.

Anthony B. MacDonald
Chairman (Interim)
IAPH Dredging Task Force

Date: July 21, 1995

## Worldtech '95 Thailand Exploring Opportunities

November 4 - December 16, 1995.

At Technopolis of Suranaree University of Technology in Nakhon Ratchasima, Thailand

### Objectives

1. To promote and increase the development of agricultural, industrial and environmental technology in Thailand and in the region.
2. To promote trade and technological opportunities among participants through mutual exchange of information.
3. To offer an opportunity for academic and scientific forum where researchers, scientists and educators can discuss on global and local issues of common interest.
4. To strenghten relationships between Thailand and other nations.

### Organizer

The Royal Thai Government through the office of the Prime Minister and Ministry of University Affairs.

For more information, please contact:

WORLDTECH '95 Thailand
Management Office
128 Phaya Thai Plaza Bldg. 8th Floor
Phaya Thai Road, Bangkok 10400, Thailand.
Tel. (662) 216-5750-1, 216-5780-2
Fax. (662) 216-5752

## 8th Int'l Symposium on Vessel Traffic Services

April 15 to 20, 1996 at Doelen Congress Centre, Rotterdam, The Netherlands.

Organized by the Rotterdam Municipal Port Management and under the supervision of an International Commitee, this symposium is a must for all those involved in vessel traffic services or related activities.

### Symposium Theme

The theme "Vessel Traffic Services as a Tool of Msnagement" offers the basis for interesting papers and fruitful debate. The keynote addresses are in the highly capable hands of Mr. Willam O'Neil, Secretary - General of the IMO (International Maritime Organization) and Dr. Jan van Tiel, Director General of Shipping and Maritime Affairs, the Netherlands.

### Symposium Scope

*VTS and Economics
*VTS and Logistics
*VTS and Environment
*VTS and Safety
*VTS and Technology.

In five sessions these sub-themes will be addressed in detail. The preliminary programme of the sessions is as follows:

1. Lessons to be learned, jurisprudence
2. International developments
3. Assessment of VTS
4. Training and simulation
5. Research and development

For further information, please contact:
Symposium secretariat
International symposium on Vessel Traffic Services
P.O. Box 330
3130 AH VLAARDINGEN
THE NETHERLANDS

## INTERTANKO Video: Tankers' Essential Role

The International Association of Independent Tanker Owners – INTERTANKO has recently released a new video describing the essential role the tanker industry plays in transporting the oil which meets 40% of global energy demand.

INTERTANKO is an Association representing the large majority of independently owned tankers who together have invested hundreds of millions of dollars for the promotion of safer and cleaner seas. Today, 99.9% of all oil transported by sea arrives at its destination safely. INTERTANKO's goal is 100% and efforts continue daily ashore and at sea to reach that target.

The INTERTANKO video captures the working world of today's modern tankers as they ply the seas fuelling each of our lives. It details the committed professionalism of the people and companies as they serve the industrial engine and calls for those who have not or have just begun to match the independent tanker owner's commitment to safer and cleaner seas, to join in creating a better future.

For further information, please contact:
Kristian Fuglesang, INTERTANKO
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Fax: 47 22 56 32 22

## New Publications

### Market Prospects for European Containerisation; trade, port and shipping prospects to 2005

Rapid changes are underway in the European container industry. At the centre of these events will be both market and technical developments. The new study from OSC* provides a detailed analysis of the recent structural development of European container trade demand and projects growth for the period to 2005. The implications for container port demand and shipping operations are considered in detail on a regional basis.

In the case of demand the sheer pace of increase in flows of containerised goods will have far-reaching implications for the port and shipping sectors. In the established markets, investment must accelerate to accommodate these increases. There is, however, a danger that supply and demand will be miss-matched. The risk of over- investment – especially in the port sector – is profound. The study considers underlying demand growth and assesses the real level of required port/terminal capacity and shipping investment to handle demand in the established markets.

In addition, the fragmentation of eastern Europe now allows detailed projections to be developed of containerised cargo demand on a national and regional basis. These developments will provide a further layer of demand growth in an

already very dynamic trade sector.

The shift in favour of larger vessels in the trans-oceanic trades will have far-reaching effects on the structure of port demand. The concentration of vessel calls in fewer ports and the increased utilisation of transshipment and feeder operations is evaluated in detail. The relative efficiency of major northern and southern ports is considered and the implications for port deployment identified.

**European Container Overview**

* European forecasts are largely built upon the established relationship between economic (GDP) growth and trade, and the further relationship between trade levels and containerised traffic flows. Although destined to form a diminishing part of world container activity in proportional terms these is still forecast to be an increase of 98 per cent in demand in absolute terms over the period for European trade, container volumes rising from the present 30.28m TEU to 43.01m TEU in 2000, and to 59.95m TEU by 2005.

* These figures are derived through the general performance of the regional economies as well as the resultant likely development of the two primary trades serving the European markets – transatlantic and Far East-Europe. OECD Europe is one of three primary trading blocs, North America and Japan/South East Asia being the other two. All are increasingly inter- linked. It is forecast that economic development in North America will remain positive, although with reduced rates than recently recorded, and that Far East development will be more positive, especially considering the additional development of east Asia.

* Both the North Continent and UK/Ireland port sectors have seen some decline in their market share since 1980, but still account for a respective 41.5 per cent and 17.7 per cent of the European container market. Both the East Mediterranean/Black Sea and West Mediterranean sectors have, however, marginally increased their market share.

* All trade types – inter-European, feeder, and deepsea – have increased with the rise in throughput. However, since 1980 inter-European trade has fallen from around 25.1 per cent of total port demand to 23.2 per cent in 1994. By contrast, feeder operations have increased at a greater pace – by 201 per cent to 6.35m TEU by 1994, a near doubling of market share from 12.3 per cent to 21 per cent. This traffic has developed with the rise in deepsea throughput.

* Among the twelve members of the 1994 European Union demand expansion has been steady – it reached 25.2m TEU in 1994, a 144 per cent increase over 1980. By contrast, the demand profile of eastern Europe peaked at 0.63m TEU in 1988, a 170 per cent increase from 1980 (from a very low base) and then collapsed to 0.38m TEU in 1993. Individual markets have increased containerised trade since but for the region as a whole recovery has yet to get a grip.

* Whilst growth rates for the general European region have now returned to some of the most positive witnessed over the study period there are several counter-trend developments, the resolution of which will effect the overall pace of demand. The Scandinavia/Baltic region suffered heavily with the economic problems of the former COMECON nations of the region. Countries of the Former Soviet Union have seen drops in economic capacity of between 55 and 28 per cent since 1988; of the other former COMECON nations – where reform was more readily accepted and adopted – the drops have been less dramatic. Development of the East European nations is likely to be fractured and is loaded with the proviso of continued reform.

* But contraction of these economies now seems at an end and stabilisation now characterises development. Albeit that development will vary considerably across the countries, it is expected to be positive overall and in the medium and longer term trading potential should increase considerably.

* Both transatlantic and Far East trades

**Table 1** **European Container Throughputs by Region and Market Share Development 1980/94**

| | 1980 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **'000 TEUs** | | | | | | | | | | | |
| North Continent | 5137.1 | 7301.6 | 7546.9 | 7938.9 | 8776.6 | 9483.2 | 9825.2 | 10478.5 | 11059.4 | 11491.7 | 12555.6 |
| Scandinavia/ Baltic | 975.6 | 1475.2 | 1571.8 | 1760.6 | 1940.3 | 1897.2 | 1845.7 | 1822.9 | 1899.4 | 2035.1 | 2247.0 |
| UK/Ireland | 2264.3 | 3101.2 | 3272.0 | 3547.7 | 3915.7 | 3993.9 | 4228.8 | 4443.0 | 4778.9 | 4867.4 | 5355.2 |
| Atlantic | 481.3 | 878.1 | 904.4 | 1069.5 | 1154.5 | 1191.9 | 1223.0 | 1299.9 | 1428.2 | 1432.1 | 1489.3 |
| West Mediterranean | 1778.4 | 2881.0 | 2873.6 | 2979.7 | 3136.6 | 3260.3 | 3648.7 | 3956.8 | 4095.0 | 4474.4 | 5218.1 |
| East Med./ Black Sea | 844.5 | 1521.3 | 1589.9 | 1721.7 | 1978.7 | 2168.5 | 2478.2 | 2641.7 | 2974.1 | 3278.6 | 3413.6 |
| Total | 11481.2 | 17158.4 | 17758.6 | 19018.1 | 20902.4 | 21995.0 | 23249.6 | 24642.8 | 26235.0 | 27579.3 | 30278.8 |

Source: Ocean Shipping Consultants Ltd.

**Table 2** **Forecast European Container Port Demand by Region to 2005**

–thousand TEUs

| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2005 |
|---|---|---|---|---|---|---|---|---|
| North Continent | 12555.6 | 13188.0 | 13852.6 | 14803.4 | 15819.7 | 16796.3 | 17958.0 | 25156.5 |
| Scandinavia/Baltic | 2247.0 | 2422.6 | 2611.8 | 2816.4 | 3059.7 | 3343.1 | 3647.1 | 5674.8 |
| UK/Ireland | 5355.2 | 5480.5 | 5601.2 | 5968.5 | 6358.6 | 6663.3 | 7103.7 | 10062.3 |
| Atlantic | 1489.3 | 1566.7 | 1648.4 | 1734.5 | 1825.4 | 1921.3 | 2022.5 | 2657.5 |
| West Mediterranean | 5218.1 | 5534.7 | 5872.3 | 6232.6 | 6617.1 | 7027.5 | 7465.7 | 9822.1 |
| East Med./Black Sea | 3413.6 | 3571.5 | 3759.9 | 3991.4 | 4239.5 | 4517.8 | 4817.7 | 6608.5 |
| Total | 30278.8 | 31764.0 | 33346.2 | 35546.8 | 37920.0 | 40269.3 | 43014.7 | 59981.7 |

Source: Ocean Shipping Consultants

**Table 3** **North Continent – Container Port Demand 1980/94**

– thousand TEUs

| | 1980 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Germany – W | 1493.1 | 2151.7 | 2254.1 | 2503.3 | 2753.6 | 2941.4 | 3141.1 | 3474.2 | 3595.7 | 3857.0 | 4245.0 |
| Netherlands | 2055.9 | 2769.2 | 2972.8 | 2918.0 | 3382.7 | 3725.7 | 3761.2 | 3842.7 | 4194.6 | 4243.7 | 4480.0 |
| Belgium | 915.2 | 1470.8 | 1520.6 | 1640.2 | 1670.6 | 1756.8 | 1901.1 | 2073.8 | 2383.4 | 2339.6 | 2804.7 |
| France – N | 672.9 | 909.9 | 799.4 | 877.4 | 969.7 | 1059.3 | 1021.8 | 1087.8 | 885.7 | 1051.4 | 1025.9 |
| Total | 5137.1 | 7301.6 | 7546.9 | 7938.9 | 8776.6 | 9483.2 | 9825.2 | 10478.5 | 11059.4 | 11491.7 | 12555.6 |

Source: Ocean Shipping Consultants Ltd.

**Table 4**

**Forecast Regional Container Port Supply/Demand Development to 2000**

– thousand TEUs and percentage

| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|---|
| **France – North** | | | | | | | |
| Demand | 1025.9 | 1041.9 | 1038.9 | 1051.0 | 1059.9 | 1125.3 | 1131.4 |
| Capacity | 1600.0 | 1600.0 | 1600.0 | 1900.0 | 2400.0 | 2400.0 | 2400.0 |
| Uitlisation – % | 64.1 | 65.1 | 64.9 | 55.3 | 44.1 | 46.9 | 47.1 |
| **Belgium** | | | | | | | |
| Demand | 2804.7 | 2954.1 | 3130.7 | 3360.4 | 3606.9 | 3829.6 | 4130.3 |
| Capacity | 3050.0 | 3550.0 | 3550.0 | 4450.0 | 4800.0 | 5050.0 | 5050.0 |
| Utilisation– % | 92.0 | 83.2 | 88.2 | 75.5 | 75.1 | 75.8 | 81.8 |
| **Netherlands** | | | | | | | |
| Demand | 4480.0 | 4721.3 | 4973.1 | 5329.2 | 5695.1 | 6046.7 | 6464.9 |
| Capacity | 4820.0 | 4820.0 | 5320.0 | 5320.0 | 5320.0 | 5820.0 | 6320.0 |
| Utilisation – % | 92.9 | 98.0 | 93.5 | 100.2 | 107.1 | 103.9 | 102.3 |
| **Germany – West** | | | | | | | |
| Demand | 4245.0 | 4470.7 | 4709.9 | 5062.8 | 5457.8 | 5794.7 | 6231.4 |
| Capacity | 4200.0 | 4200.0 | 4500.0 | 4650.0 | 5300.0 | 5300.0 | 5300.0 |
| Utilisation – % | 101.1 | 106.4 | 104.7 | 108.9 | 103.0 | 109.3 | 117.6 |
| **Total North Continent** | | | | | | | |
| Demand | 12555.6 | 13188.0 | 13852.6 | 14803.4 | 15819.7 | 16796.3 | 17958.0 |
| Capacity | 14770.0 | 15320.0 | 16170.0 | 17250.0 | 19070.0 | 19820.0 | 20320.0 |
| Utilisation – % | 85.0 | 86.1 | 85.7 | 85.8 | 83.0 | 84.7 | 88.4 |

Source: Ocean Shipping Consultants Ltd.

have recorded sustained increases and, although more restricted than other deepsea trades, this is to continue in the case of the former with volumes increasing by 56 per cent (east and west) to 4.64m TEU by 2000, and with a further rise of 30.5 per cent between 2000 and 2005 to over 6.06m TEU. For the Europe-Far East, despite the structural imbalance, the trade is forecast to increase at a greater rate – by some 71.1 per cent to 2000 (to 7.11m TEU), and by a subsequent 40 per cent to 9.97m TEU by 2005.

* The structure of this overall container flow is, however, in the process of some change. This directly relates to the economic implications of hub-and-spoke operations. Largely through the introduction of large container vessels pressure for the retionalisation of calls to the region is intensifying. Calls are being concentrated on fewer ports, Europe effectively singularised and port markets redefined in terms of covering feeder networks.

* The development of the short-sea trade between European markets is primarily focused on the trade between UK/Ireland and the North Continent, although the Atlantic-North Continent trades have developed strongly, as have the Scandinavia/Baltic trades (to the North continent).

* Feeder operations are more concentrated, especially in the North Continent-Scandinavia/Baltic market, and have been particularly developed in the western Mediterranean.

* Deepsea container flows will still form the greatest sector of throughput, but by 1996 feeder traffic is forecast to outstrip inter-European trade for the first time. In 1194 inter-European container throughput had a European port market share of 23.2 per cent, feeder 21.0 per cent, and deepsea 55.8 per cent. To 2000 growth rates of 4.04 per cent for inter-European trade, of 7.71 per cent for feeder, and of 6.20 per cent for deepsea will lead to changes in market share; a fall for inter-European to 20.6 per cent, and rises for feeder and deepsea traffic, to 22.9 per cent and 56.4 per cent respectively. This market share increase will be maintained to 2005 for the feeder sector. It is forecast that inter-European trade will recover a measure of market share, and that deepsea throughput will proportionally moderate.

### North Continent Containerisation 1980/2005

* The North Continent – the port range of northern France, Germany, Belgium and the Netherlands (Le Havre-Hamburg) – is the centre of European container demand and in many senses the region's hub. Development of volumes has closely followed that of Europe as a whole, with significant boosts to demand through the opening up eastern and central Europe (it is still the preferred entrepot over southern Europe), and more recent upturn in demand in the Scandinavia/Baltic markets.

* Since 1980 North Continent port throughput has increased from 5.14m TEU to 12.56m TEU or 144 per cent. The rate of development since 1986 has been 6.2 per cent per annum. This amounts to a current 41.5 per cent of all European throughput. Western German and Dutch port throughput account for around 70 per cent of this North Continental total, although the Netherlands has seen market share fall from around 40.0 per cent in 1980 to 35.7 per cent in 1994. By contrast, western German market share has risen with the expansion of its hinterland (and mostly through Hamburg), from 29.1 per cent to 33.8 per cent. With the establishment of extra capacity at Antwerp and Zeebrugge from 1990 market share of Belgian ports has increased – to 22.3 per cent in 1994. French port throughput (pre-

dominantly that of Le Havre) has suffered through labour disputes and consequent diversion of traffic; market share has declined from 13.1 per cent in 1980 to 8.2 per cent in 1994.

* Deepsea container traffic accounted for 71.4 per cent of total North Continental throughput in 1994. This share has fallen slightly over the period but should be seen in the light of the strong increase in feeder throughput, which has risen from 8.9 per cent of volume in 1985 to 13.1 per cent in 1994, a 150 per cent increase in absolute terms. For the more recent past these operations have been dominated by increased feeder operations into the Scandinavia/Baltic region, mostly through German ports.

* Within the North Continent-Europe trade flows feeder traffic is focused on the UK/Ireland markets and on Scandinavia/Baltic. Under the pressure of modern liner economics deepsea calls into the Baltic are falling, giving great impetus to feeder operations especially, as recently demand from the former COMECON nations has increased.

* Inter-European traffic to/from the North Continent range has progressed at a much slower pace due to the established nature of containers on the trade. Flows to the Atlantic region have recorded the greatest increase with the integration of the Iberian economies within the EU. In general development will more strictly follow economic development and be modified by the impact of the Channel Tunnel.

* Deepsea flows to the North Continent have increasingly come to be dominated by Far East trade, which now accounts for 36.7 per cent of all North Continent container flows. Characteristically the trade wrestles with the number of empty containers on the east-bound route, but is nevertheless prime for the introduction of larger container vessels. The impetus for increase in both deepsea and feeder links is to be maintained.

* In total, it is anticipated that North Continent demand will increase by some 43 per cent between 1994/2000 to reach a total of around 17.96m TEU at the end of the decade. A further growth of around 40.1 per cent is anticipated for the period between 2000/2005.

Inter-European trade is due some dislocation due to the introduction of the Channel Tunnel but it is anticipated that the effect of the Tunnel will be absorbed by 1997 and renewed growth result. Both feeder and Far East trade is due the greatest increase over the forecast periods.

**Table 5** **Regional Container Gantry Requipments to 2005**

– numberof container gantry cranes

| | 1995/1996 | 1997/1998 | 1999/2000 | 2001/2005 |
|---|---|---|---|---|
| North Continent | 20 | 30 | 33 | 109 |
| Scandinavia/Baltic | 8 | 9 | 12 | 43 |
| UK/Ireland | 4 | 13 | 13 | 50 |
| Atlantic | 3 | 4 | 4 | 13 |
| West Mediterranean | 12 | 13 | 15 | 42 |
| E. Mediterranean/Black Sea | 6 | 9 | 11 | 33 |
| Total | 53 | 78 | 88 | 290 |

Source: Ocean Shipping Consultants Ltd.

**Table 6** **Regional Container Berth Requirements to 2005**

– kilometres of dedicated container beths

| | 1995/1996 | 1997/1998 | 1999/2000 | 2001/2005 |
|---|---|---|---|---|
| **North Continent** | | | | |
| Indicated requirement | 3.25 | 10.00 | 11.00 | 37.00 |
| Net additional requirement | 0.25 | 2.75 | 8.50 | 28.50 |
| **Scandinavia/Baltic** | | | | |
| Indicated requirement | 5.25 | 6.25 | 8.25 | 28.75 |
| Net additional requirement | 2.25 | 4.75 | 5.75 | 28.25 |
| **UK/Ireland** | | | | |
| Indicated requirement | – | 2.25 | 2.25 | 9.25 |
| Net additional requirement | – | – | – | 8.75 |
| **Atlantic** | | | | |
| Indicated requirement | 1.50 | 1.75 | 2.00 | 6.50 |
| Net additional requirement | 0.50 | – | 0.25 | 4.75 |
| **West Mediterranean** | | | | |
| Indicated requirement | 3.25 | 3.75 | 4.25 | 11.75 |
| Net additional requirement | – | – | 0.75 | 10.75 |
| **East Med./Black Sea** | | | | |
| Indicated requirement | 2.00 | 2.50 | 3.25 | 9.50 |
| Net additional requirement | – | – | – | 8.75 |
| **Total Europe** | | | | |
| Indicated requirement | 15.25 | 26.50 | 31.00 | 102.75 |
| Net additional requirement | 3.00 | 7.50 | 15.25 | 89.75 |

– over and above committed investment programmes
Source: Ocean Shipping Consultants Ltd.

* As these throughputs translate to national prospects within the North Continental range it is forecast that the greatest demand increase will be seen at the German ports, boosted by increased Scandinavian/Baltic demand and better intermodal links. Dutch throughput will remain the highest, however, whilst French throughput is to remain effected by the heritage of labour discontent.

* Assuming that in the current context design capacity is the same as economic capacity current regional container port capacity equates to 14.77m TEU and it is anticipated that capacity will increase by some 37.6 per cent by 2000 to reach 20.32m TEU. When matched to projected throughput is forecast that utilisation rates are to fall marginally over the next few years, a decline that will be arrested by 1999. Current utilisation rates are to remain in the region of 85 per cent before this rise at the end of the period.

* Individual prospects per country differ, however. For French ports utilisation is due a fall to well below 50 per cent by

1997 and this will be maintained at least until 2000. The rate of expansion of facilities in Belgium will also see utilisation fall from the current level of 92 per cent to around 75 per cent, and this as early as 1997. Congestion and increasing relative inefficiencies are the likely result of the delays in the Maasvlakte programme for the Netherlands, however, and utilisation rates are likely to top 100 per cent in 1997, with slow easing of the situation over the remainder of the period. If anything the high demand at German ports will see an even higher utilisation rate of 117 per cent develop by the end of the decade. Against a background of high demand delays in authorisation of the Altenwerder terminals are likely to see much congestion and increased pressure on prices.

* Whilst for the region as a whole there is forecast a maintenance of current utilisation rates at around 85 per cent, the diversity of individual national rates will probably result in some diversion of traffic to the west of the port range. Further to this, the improving southern European ports are also likely to benefit, particularly as much of the demand forecast is traced to the Far East trades.

**Containerisation Investment Needs to 2005**

* Required port investment is quantified in terms of: total number of required gantry cranes and requirement for dedicated container berths.

* Of the 219 container gantry cranes required by 2000 in the overall European region the great majority (83) are necessary for the North Continent region. By the same point some 30/40 cgcs will be required for the Scandinavia/Baltic, UK/Ireland and West Mediterranean sub-regions. The demand for gantries is estimated to increase in the final period to 2005 when an extra 290 units are forecast to be required. Forecast gantry demand for the European region as a whole is based upon a regional assessment of productivity levels (which are forecast to maintain current disparities) mapped upon forecast demand.

* With regard to committed and anticipated development of dedicated container berths, it is forecast that in the short term, planned additions will be almost sufficient to meet prospective demand. By 2000 there is forecast a need for another 25.75km of berth, and between 2001/2005 a further 89.75km of berths will be needed.

* Relations between planned port investment and actual requirements indicate that in the short term there is to be a balance for the North Continent before a demand for 11.5km emerges over the 1994/2000 period, and a further demand for 28.5km over 2001/2005. Similarly high demand forecasts for port container facilities in the Scandinavia sector partly reflect the low productivity levels at which the region's ports currently operate and which therefore colour projections of future need. In general, however, there is forecast to be a sharpening of requirements in the post-2000 period.

* The effects of anticipated demand growth on deployed slot capacity are anticipated to be a 43 per cent increase over the 1994/2000 period, from 21.82m TEU to 31.18m TEU, and for a similar rise in percentage terms between 2001/2005 to 43.51m TEU. Growth is likely to be strong on the North American trades and very dynamic on those to/from the Far East.

* Inter-regional shipping capacity, rising from 11.73m TEU in 1994 to 14.56m TEU in 2000, and to 20.89m TEU in 2005, is thus to see market share fall from 53.8 per cent in 1994, to 46.7 per cent by 2000, before registering an upturn to 48.0 per cent by 2005. Far East trades to/from Europe are forecast to see wholesale increases in market share, rising form the current 26 per cent (5.67m TEU) to 31.1 per cent (9.7m TEU) in 2000. Improvement on this proportion is likely to be only marginal in the remaining period to 2005, when 13.6m TEU is forecast. North American demand is forecast to increase market share to 22.2 per cent (6.91m TEU) by 2000, before trailing off in the period to 2005 to 20.7 per cent (9.0m TEU).

*Market Prospects for European Containerisation: trade, port and shipping prospects to 2005 is published on 7th July 1995.*

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## Middle East and Indian Sub-continent Containerisation to 2005

The past few years have witnessed a transformation in the prospects for containerisation in the major Middle East and South Asian markets. On the one hand, sustained economic growth and significant levels of port investment have been noted in the Arabian Gulf region during and following the Gulf War. Indeed, a period of regional stagnation has been replaced by sustained demand growth and a rapid integration of container distribution into the major Europe-Far East trades. In addition, there has been a rapid acceleration in the pace of inter-area demand growth over the period as feeder and transshipment has rapidly increased.

These trends are now well established. However, recent developments have also focused on the process of transformation of the Indian and other regional economies. The opening-up of the Indian economy from bureaucratic central planning and regulation has seen the pace of exports increase very rapidly and the underlying volume of containerised goods demand has progressed sharply. This has been further boosted by the continuing conversion of conventional general cargo volumes to containerisation as belated investment is applied.

The actual durability of this trend and the implications for regional trade growth is analysed in great detail in a new study from OSC*.

The increasing integration of regional services focusing on transshipment from Gulf ports and from Sri Lanka and Singapore is a major trend and this will have far-reaching implications for the structure of regional trades.

**Port Demand Development and Forecasts**

* Of the world port demand of 126.68m TEU the Middle East region accounted for 5.19m TEU (4.1 per cent) in 1994, the Indian Sub-Continent region 2.92m TEU (2.3 per cent). The Middle East region experienced a fall to around 3 per cent in market share in the late 1980s, but has since recovered to an historical high. The Indian Sub-Continent has progressively increased its share of world container trade across the entirety of the period – see Table 1.

* Within the regional aggregate the Red Sea region has accounted for a falling proportion of container trade – from 22.5 per cent in 1986 to 14.4 per cent in 1994,

**Table1 Middle East and Indian Sub-Continent Container Throughputs in the World Context 1980/94**

– million TEUs

| | 1980 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Middle East* | 1.38 | 2.32 | 2.31 | 2.36 | 2.48 | 2.70 | 2.90 | 3.71 | 4.37 | 4.77 | 5.19 |
| *– percent* | 3.8 | 4.0 | 3.8 | 3.2 | 3.1 | 3.2 | 3.0 | 3.8 | 4.0 | 4.1 | 4.1 |
| *Indian SC* | 0.26 | 0.92 | 1.08 | 1.27 | 1.50 | 1.61 | 1.83 | 1.97 | 2.13 | 2.55 | 2.92 |
| *– percent* | 0.7 | 1.6 | 1.8 | 1.7 | 1.9 | 1.9 | 1.9 | 2.0 | 1.9 | 2.2 | 2.3 |
| Euorpe | 11.49 | 17.16 | 17.76 | 19.01 | 20.90 | 22.00 | 23.25 | 24.64 | 26.24 | 25.58 | 30.28 |
| North America | 9.92 | 12.51 | 13.37 | 14.17 | 14.92 | 16.05 | 16.53 | 16.93 | 17.86 | 18.88 | 20.39 |
| E & SE Asia | 9.09 | 17.50 | 19.16 | 22.31 | 25.43 | 28.27 | 31.52 | 36.32 | 41.56 | 46.70 | 51.37 |
| Other | 4.33 | 7.80 | 7.34 | 14.56 | 14.39 | 14.63 | 19.23 | 14.68 | 17.09 | 15.72 | 16.53 |
| Total | 36.47 | 58.21 | 61.02 | 73.68 | 79.62 | 85.26 | 95.26 | 98.25 | 109.25 | 116.20 | 126.68 |

Source: Ocean Shipping Consultants Ltd.

**Table 2 Forecast Container Port Demand by Region to 2005**

– thousand TEUs

| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2005 |
|---|---|---|---|---|---|---|---|---|
| **Case I** | | | | | | | | |
| Red Sea | 1168.5 | 1193.9 | 1246.1 | 1328.2 | 1413.0 | 1498.4 | 1588.6 | 2135.2 |
| Arabain Gulf | 4021.7 | 4324.8 | 4661.2 | 5058.2 | 5472.6 | 5907.1 | 6354.8 | 9026.8 |
| Indian Sub-Continent | 2918.6 | 3306.8 | 3671.6 | 4068.6 | 4484.3 | 4924.5 | 5384.0 | 8223.4 |
| Total | 8108.8 | 8825.5 | 9578.9 | 10455.0 | 11369.9 | 12330.0 | 13327.4 | 19385.4 |
| **Case II** | | | | | | | | |
| Red Sea | 1168.5 | 1193.9 | 1246.1 | 1297.8 | 1352.1 | 1406.9 | 1464.4 | 1782.6 |
| Arabian Gulf | 4021.7 | 4324.8 | 4661.2 | 4917.3 | 5186.7 | 5466.0 | 5720.4 | 7248.6 |
| Indian Sub-Continent | 2918.6 | 3306.8 | 3671.6 | 4002.7 | 4348.8 | 4709.4 | 5085.9 | 7244.6 |
| Total | 8108.8 | 8825.5 | 9578.9 | 10217.8 | 10887.6 | 11582.3 | 12270.7 | 16275.8 |

Source: Ocean Shipping Consultants Ltd.

although the Red Sea's trade has increased in absolute terms from 0.764m TEU in 1986 to 1.169m TEU in 1994. Initial strong growth recorded at Jeddah has subsequently fallen away as alternative Red Sea ports have emerged against a background of limited local demand.

* The Arab Gulf region has recorded a reciprocal rise, from a low of 43 per cent in 1988, to 49.6 per cent (5.02m TEU) in 1994, slightly down on the early 1990s level. Local demand has responded to several primary factors – oil price and revenues, and to war and broader political issues.

* The Indian Sub-Continent has accounted for between a 31/37 per cent market share across the period. Demand stood at 2.92m TEU in 1994.

* As a whole, the collective region has become less susceptible to economic swings of the OECD, inter-regional investment is increasing, and exports are rising. These factors should enable the increasing average GDP to foster greater trade levels.

* Total regional import and export container flows amounted to 0.916m TEU in 1994, up 31 per cent on 1990. Both imports and exports on routes to Europe have generally fallen – at least as proportion of total. In overall terms loaded imports outnumber loaded export containers threefold.

* Transshipment port demand equated 3.618m TEU in 1993 (around 50 per cent of regional port demand – up on the 37.9 per cent (1.27m TEU) of 1986), of which the Gulf/Red Sea accounted for 1.733mTEU and the Indian Sub-Continent 1.885m TEU. Transshipment movements have increased sharply of late in line with patterns that emerged during the Gulf War. The Indian Sub-Continent has experienced roughly the same level of transshipment levels across the period, accounting 79.2 per cent of total sub-regional demand.

* The World Economy is set for steady, if modest, growth, with an easing of protectionist measures in the light of the GATT. Two economic Cases have been derived for the regions included in order that the potential great difference in prospects can be more adequately represented. Both Cases are unitary to 1996; beyond, Case I assumes OECD growth, a recovery in the Japanese economy, weaker protectionist measures (free movement of capital and goods), that Indian Sub-Continent liberalisation continues, and that political stability gains a foothold in the Middle East. Case II envisages more hesitant general economic growth, less OECD growth in particular, and a rise in the level of protectionism in the world economy. The liberalisation process of India is less developed and there is lower oil price over time for the collective Middle East.

* For the major transshipment ports of the Arabian Gulf the forecast elasticity GDP/container port handling ratio is 1:2.8 over the forecast period. There is a potential growth in the volume of direct (as opposed to transshipped) traffic for the Indian Sub-Continent. The relevant elasticity here is of the order of 1:2.3.

* Forecast port demand is therefore – under Case I – an overall rise of 64.5 per cent in the period 1994 to 2000 (to 13.3m TEU), with a subsequent rise of 45.5 per cent to 19.4m TEU in 2005. Under Case II growth of 51.3 per cent to 12.3m TEU by 2000, and a further rise of 33 per cent to 16.27m TEU by 2005 is forecast – see Tabel 2.

**Arabian Gulf Containerisation**

* Port demand in the Arab Gulf ports rose hesitantly over the 1986/89 period. Since 1989 a rise of 201 per cent has been recorded to 4.02m TEU in 1994. Within this total the UAE accounts for 81.8 per cent, having risen from 59.4 per cent over the study period. The eastern Saudi Arabian ports have seen a fall in market share as transshipment operations favouring the southern Gulf have taken hold; the ports accounted for 14.4 per cent of port demand in 1987, reduced to 7.6 per cent in 1994. Of the UAE total Dubai (of which Port Rashid) accounts for the largest sector at around 58 per cent of the UAE total. Fujairah – of which some 70/80 per cent is transshipment traffic – and Khor Fakkan reinforce the position of the UAE.

* With regard to the structure of the container trades it is apparent that, in terms of

**Table3 Forecast Arabian Gulf Container Port Capacity to 2005**

– '000 TEUs per annum

| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2005 |
|---|---|---|---|---|---|---|---|---|
| Oman | 165.0 | 315.0 | 315.0 | 315.0 | 315.0 | 315.0 | 315.0 | 315.0 |
| U.A.E. | 4520.0 | 4820.0 | 5220.0 | 5520.0 | 5720.0 | 5720.0 | 5720.0 | 6520.0 |
| Qatar | 80.0 | 80.0 | 430.0 | 430.0 | 430.0 | 430.0 | 430.0 | 430.0 |
| Saudi Arabia (E) | 725.0 | 725.0 | 725.0 | 725.0 | 725.0 | 725.0 | 725.0 | 725.0 |
| Bahrain | 125.0 | 125.0 | 125.0 | 125.0 | 125.0 | 125.0 | 125.0 | 475.0 |
| Kuwait | 250.0 | 250.0 | 250.0 | 250.0 | 650.0 | 650.0 | 650.0 | 650.0 |
| Iran | 150.0 | 150.0 | 150.0 | 150.0 | 150.0 | 150.0 | 150.0 | 150.0 |
| Total | 6015.0 | 6465.0 | 7215.0 | 7515.0 | 8115.0 | 8115.0 | 8115.0 | 9265.0 |

**Table4 Forecast Arabian gulf Container Port Utilisation Rates to 2005**

– percent of economic capacity

| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2005 |
|---|---|---|---|---|---|---|---|---|
| **Oman** | | | | | | | | |
| Case I | 58.1 | 32.9 | 35.9 | 38.9 | 42.1 | 45.4 | 48.9 | 67.8 |
| Case II | 58.1 | 32.9 | 35.9 | 38.4 | 41.0 | 43.7 | 46.7 | 62.0 |
| **U.A.E.** | | | | | | | | |
| Case I | 72.7 | 70.9 | 72.0 | 74.1 | 77.6 | 84.0 | 90.6 | 114.4 |
| Case II | 72.7 | 70.9 | 72.0 | 71.9 | 73.3 | 77.1 | 81.1 | 90.7 |
| **Qatar** | | | | | | | | |
| Case I | 52.3 | 54.4 | 57.5 | 11.3 | 12.0 | 12.7 | 13.4 | 18.5 |
| Case II | 52.3 | 54.4 | 57.5 | 11.1 | 11.5 | 11.9 | 12.4 | 14.8 |
| **Saudi Arabia (E)** | | | | | | | | |
| Case I | 42.1 | 42.5 | 44.0 | 46.8 | 49.6 | 52.5 | 55.5 | 73.9 |
| Case II | 42.1 | 42.5 | 44.0 | 45.6 | 47.3 | 49.0 | 50.7 | 60.4 |
| **Bahrain** | | | | | | | | |
| Case I | 26.0 | 80.0 | 87.5 | 95.4 | 101.4 | 107.3 | 113.4 | 44.4 |
| Case II | 26.0 | 80.0 | 87.5 | 94.3 | 101.0 | 104.3 | 109.8 | 38.0 |
| **Kuwait** | | | | | | | | |
| Case I | 57.8 | 72.0 | 78.5 | 84.9 | 35.3 | 38.2 | 41.2 | 51.4 |
| Case II | 57.8 | 72.0 | 78.5 | 81.7 | 33.4 | 34.5 | 35.8 | 44.8 |
| **Iran** | | | | | | | | |
| Case I | 76.1 | 78.4 | 80.2 | 85.1 | 89.2 | 93.3 | 97.6 | 130.2 |
| Case II | 76.1 | 78.4 | 80.2 | 84.7 | 87.9 | 91.1 | 94.4 | 122.2 |
| **Arabian Gulf** | | | | | | | | |
| Case I | 66.9 | 66.9 | 67.9 | 67.3 | 67.4 | 72.8 | 78.3 | 97.4 |
| Case II | 66.9 | 66.9 | 67.9 | 65.9 | 63.9 | 67.4 | 70.5 | 78.2 |

Source: Ocean Shipping Consultants Ltd.

loaded containers, the current balance indicates a ratio of 1:9 in favour of imports. In this there has not been much historical variation and it points to the nature of the economies of the region – oil-financed imports of manufactured goods. As such, re-positioning of empty containers as a result of imbalance is a major consideration in the trades' structure.

* Europe accounts for some 60.4 per cent of regional (Middle East) imports. Far East imports are growing at the greatest rate. There are limited North American trade flows, a little above the level of the 1980s. It is forecast that the essentials of this profile will not alter, although there is likely to be a measure of increase in exports, with the Far East likely to increase its share of imports into the region.

* Transshipment volumes have increased – proportionally from 18 per cent (0.418m TEU) in 1986 to 36.7 per cent (1.907m TEU) in 1994. This strengthening of transshipment demand is forecast to continue.

* Forecast port demand to 2005 for the Arabian Gulf refion under Case I conditions is for an increase by 58 per cent over the period to 2000 (6.354m TEU), with an increase of 42 per cent to 9.027m TEU to 2005. The UAE is to dominate this prospective throughput rise. Under Case II conditions a rise of 42.2 per cent to 5.720m TEU (2000), and a rise of 26.7 per cent to 7.249m TEU to 2005 is forecast.

* Similar projections have been developed for the Red Sea and Indian Sub-Continent markets.

**Port Status Analysis by Region and Development to 2005**

* Indicated port plans suggest that overall regional port capacity is set to rise from the current 11.3m TEU per annum to well over 16.0m TEU by 2000, a 42 per cent increase. From the current perspective, a further rise of 16 per cent to 18.6m TEU per annum can be expected by 2005. Within this, the market share of the Gulf ports is due some decline from the current 53.3 per cent to 50.5 per cent in 2000. A parallel rise from 27 per cent to 35.4 per cent is expected for the Indian Sub-Continent region. A sharper fall in Red Sea market share is forecast with this dropping to 14.1 per cent from 18.4 per cent by 2000.

* Utilisation rates in the Gulf sector are forecast to develop at a better rate with a general rise from the current 66.9 per cent to 78.3 per cent in 2000 under Case I, and to 70.5 per cent under Case II. Albeit more speculative, rates nearing 100 par cent under Case I are forecast for 2005. Some initial hesitancy is forecast over the near term as massive capacity additions are opened for business. However, utilisation rates for the UAE are due particular development – to an expected 90.6 per cent in 2000 under Case I, a more modest 81.1 per cent under Case II. Both Bahrain and Iran are forecast to see much improved rates to 2000, and beyond. Indeed, from a low of 26.0 per cent recorded in 1994, Bahrain is forecast sharp rises in utilisation – to over 113 per cent by 2000 under Case I (110 per cent in Case II). Steadier development to around 98 per cent from the present 76 per

**Table 5 Regional Container Gantry Requirements to 2005 – Case I & II**

– number of container gantry cranes

| | 1995/1996 | 1997/1998 | 1999/2000 | 2001/2005 |
|---|---|---|---|---|
| **Red Sea** | | | | |
| Case 1 | 1 | – | 2 | 5 |
| Case 2 | 1 | – | 1 | 3 |
| **Arab Gulf** | | | | |
| Case 1 | 6 | 15 | 16 | 45 |
| Case 2 | 6 | 10 | 9 | 24 |
| **Indian Sub-Continent** | | | | |
| Case 1 | 10 | 10 | 16 | 52 |
| Case 2 | 10 | 7 | 13 | 39 |

Source: OceanShipping Consultants Ltd.

**Table 6 Regional Container Berth Requirements to 2005 – Cases I & II**

– kilometres of dedicated container berths

| | 1995/1996 | 1997/1998 | 1999/2000 | 2001/2005 |
|---|---|---|---|---|
| **Arab Gulf – Case I** | | | | |
| Indicated requirement | 1.827 | 2.318 | 2.521 | 7.634 |
| Committeed investment | 1.100 | 1.540 | – | 1.600 |
| Net additional requirement | 0.727 | 0.778 | 2.521 | 6.034 |
| **Arab Gulf – Case II** | | | | |
| Indicated requirement | 1.827 | 1.501 | 1.525 | 4.366 |
| Committed investment | 1.100 | 1.540 | – | 1.600 |
| Net additional requirement | 0.727 | – | 1.486 | 2.766 |
| **Indian Sub-Continent – Case I** | | | | |
| Indicated requirement | 1.883 | 2.032 | 2.249 | 7.099 |
| Committed investment | 0.500 | 1,400 | 0.750 | 0.900 |
| Net additional requirement | 1.383 | 0.632 | 1.499 | 6.199 |
| **Indian Sub-Continent – Case II** | | | | |
| Indicated requirement | 1.883 | 1.693 | 1.843 | 5.397 |
| Committed investment | 0.500 | 1.400 | 0.750 | 0.900 |
| Net additional requirement | 1.383 | 0.293 | 1.093 | 4.497 |

Source: Ocean Shipping Consultants Ltd.

cent is forecast for Iran under Case I. Largely through high levels of capacity addition other regional ports are to see drops in utilisation and then, in most cases, slow recovery over the study period.

### Containerisation Investment Needs to 2005

* In terms of the required investment – which is based upon the typical regional productivity of container berths and container cranes, matched to forecast demand – under both Cases additional demand in all regions is considerable.

* Aggregated container gantry crane demand for all study regions under Case I conditions amounts to 17 in the 1995/96 period, 25 between 1997/1998, 34 over 1999/2000, and a further 102 over the 2001/2005 study period.

* Under the stronger economic conditions of Case I it is forecast that mere eight container gantry cranes will be required in the Red Sea region across the whole period. This falls to five overall for Case II.

* For the both the Middle East Gulf sector and the Indian Sub-Continent Case I demand forecasts result in a projected need for approximately the same number of container agntry cranes to 2000 – 37 for the former, 36 for the latter. Given the relatively under-developed nature of port facilities in the Indian Sub-Continent intial demand in the period is dominated by this region.

* Under Case II conditions for the same period a disparity emerges, with 25 required in the Arabian Gulf and up to 30 for the Indian Sub-Continent. The disparity widens in both Cases in the 2000/2005 period.

* A similar analysis has ben developed with regard to additional investment in dedicated container berths. Like the assessment for crane demand, indicated requirements have been contrasted with committed and estimated investments in order to define the required level of construction over and above that which is already scheduled. Once again regional defferences have been factored into the analyses by a consideration of different regional average levels of berth productivity in the period since 1989.

* The general pattern noted with regard to container gantry craneage is once again reflected from this perspective. That is, very little additional capacity will be required in the Red Sea ports although for the balance of the refion very heavy investment needs are indicated.

* In total it is forecast that under Case I conditions a further 29.9km of dedicated container berthage will be required under optimum regional utilisation rates. When known and anticipated investments are netted out of the equation this indicates a further of 21.8km. In the short term the market is fairly well balanced, although it is clear that towards the end of the study period considerable further investment will be required if port capacity is not to constrain demand. Once again, by far the greater part of additional demand is focused on the Indian Sub-Continent region and it is clear that investment availability will generate significant port shortfalls over the period.

* This pattern is repeated under Case II conditions, although the shortfall forecast is considerably less pronounced.

* It is apparent from these projections that considerable further investment will be required for the region. The robustness of the trade projections utilised in this study further underline the emerging danger of port capacity constraints.

* *"Middle East and Indian Sub-Contlnent Containerisation to 2005" was published on 7th July 1995.*

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Soft Cover

## The Americas

### General Cargo Volumes Up 31% at Halifax

General cargo volumes at the Port of Halifax soared by 31% during the first half of 1995. All types of general cargo, including containerized, breakbulk, and roll on/roll off cargo showed large increases.

The Port of Halifax has several new and expanded liner services which account for much of the growth. These include: the PAX service operated by Hapag Lloyd, Neptune Orient Lines, and NYK Line; an outbound service initiated by Hoegh Line; and a new feeder service to Boston by St. Pierre Ro-Ro.

Some of the tremendous growth is accounted for by the Port's longstanding customers, many of which have added new vessels, increasing capacity and frequency. A minority portion of the 31% increase can be attributed to traffic diverted to Halifax during a labour dispute in Montreal.

Cargo destined for and originating in the US Midwest has also been a highlight of the first half of 1995. The Halifax Port Corporation's V.P. of Marketing, Patricia McDermott, says that: "Spurred by labour incentives and the opening of CN's St. Clair Tunnel, the volume of container cargo moving between the Midwest and Halifax has more than tripled in the first few months of this year."

### Canaveral Port Authority Gives Away Plants

The Canaveral Port Authority recently distributed 30,000 bitter panicum and 35,000 sea oat plants for protection and enhancement of Brevard County's beachside sand dunes.

The plants were purchased form the U.S. Army Corps of Engineers who had contracted for 175,000 plants for a project subsequently delayed by another federal agency. Having to get rid of or have the plants die, the Corps sold them at a fraction of their cost to various agencies including the port authority.

Averaging one and a half feet tall, the salt tolerant plants delivered to the port were given to neighboring cities and the public free of charge. The port authority planned to give the plants away on June 10, 11 and 12. However, the project proved so popular, all the plants were gone within the first two and one half hours.

Neighboring city officials, beach front residents and beachside businesses needed little urging to take the plants and prevent erosion. Subsequently, they will also need to water them daily until the plants are established.

Lorraine Guise, the port's environmental coordinator, who organized the event, commented: "We were positive we could give all the plants away, although we thought it would take us the entire three days to do it. To have given them away in the first two and a half hours was beyond our wildest dreams and is a real credit to the beachside residents. If presented with this opportunity in the future, the port will definitely do it again."

### U.S. Cargo '95: Liner Trades Impressive

A Booming liner market and a positive performance by import/export cargo overall characterize the U.S. port traffic picture during first quarter 1995.

Total U.S. waterborne foreign trade for January-March, as reported by the Bureau of Census, amounted to 258.6 million short tons (a nine percent gain over 1994) with a value of $151.6 billon (+17.6 percent).

The data further show gains in both volume and value for exports and a jump in dollar value and a slight drop in tonnage for imports. Tables 1 and 2 give the details.

**1. US Waterborne Foreign Trade**
First Quarter 1995
(Short Tons, 000s)

| | Volume | vs1994 | vs 1993 |
|---|---|---|---|
| Exports | 108,322 | 26.26% | 4.52% |
| Imports | 150,310 | -0.79% | 11.93% |
| Total | 258,641 | 8.99% | 8.70% |

*Source : U.S. Bureau of Census, U.S. Waterborne Exports and General Imports January-March 1995*

**2. US Waterborne Foreign Trade**
First Quarter 1995
(Millions of U.S. Dollars)

| | Value | vs1994 | vs 1993 |
|---|---|---|---|
| Exports | $56,118 | 27.08% | 23.00% |
| Imports | $95,453 | 12.65% | 25.07% |
| Total | $151,571 | 17.59% | 24.30% |

*Source : U.S. Bureau of Census, U.S. Waterborne Exports and General Imports January-March 1995*

For the liner trades, the results were even more imporessive – double-digit growth across the board, nationally and for every port range. A comparative surmmary is provided by Table 3.

**3. US Waterborne Foreign Trade**
First Quarter 1995
(Short Tons, 000s)

| | Volume | vs1994 | vs 1993 |
|---|---|---|---|
| Exports | 20,249 | 37.98% | 30.69% |
| Imports | 16,481 | 20.17% | 35.18% |
| Total | 36,731 | 29.38% | 32.67% |

*Source : U.S. Bureau of Census, U.S. Waterborne Exports and General Imports January-March 1995*

Though proportionally small in tonnage terms, the liner trades, as Table 4 illustrates, account for nearly 75 percent of U.S. waterborne foreign trade by value, much more so than the high volume, low value tramp and tanker trades where bulk cargos such as petroleum, ore, coal and grain predominate.

**4. US Waterborne Foreign Trade Shares**
by Shipping Sector
First Quarter 1995

| | Value | Share | Volume | Share |
|---|---|---|---|---|
| Liner | $110,909 | 73.20% | 36,733 | 14.20% |
| Tanker | $15,124 | 9.98% | 113,881 | 44.03% |
| Tramp | $25,480 | 16.82% | 108,030 | 41.77% |
| Total | $151,512 | 100.00% | 258,643 | 100.00% |

*Source : U.S. Bureau of Census, U.S. Waterborne Exports and General Imports January-March 1995*

*(AAPA Advisory)*

## Port of Corpus Christi Drives Area Economy

The Port of Corpus Christi is the primary driver of the Coastal Bend's economy according to a recent report on the port's economic impact on Nueces and San Patricio counties. The study, which was conducted by Martin O'Connell Associates, a Pennsylvania-based consulting firm, found that almost 10,000 jobs are directly generated by marine cargo activity at the nation's seventh largest port.

"We have known for some time that the port was one of the leading generators of jobs in the Coastal Bend area," says John P. LaRue, executive director of the Port of Corpus Christi. "What this study shows is just ecactly how many jobs we're talking about. The beauty of this particular study is that no multiplier has been applied to the numbers. These are actual jobs that can be backed up with the survey data. This data should help us tremendously in our future strategic planning efforts."

The study found that more than 31,000 jobs were in some way related to seaport activity. In addition to the 9,640 direct jobs, 8,238 jobs were induced by port activity and 13,048 jobs were indirectly related to port activity.

In addition to jobs, the study found that port activity generated more than $1.1 billion in personal income. Of that total, $544.5 million is direct personal income. "This indicator is unique to Corpus Christi," says John Martin of Martin O'Connell who has also conducted studies for the Port of Houston and other ports. "In other ports that we have studied, the annual wage is in the $30,000 - $40,000 range. In Corpus Christi, it's about $56,000 per job. Obviously, higher salaries mean more re-spending. The more people make, the more they spend in goods and services."

"We discovered that Corpus Christi is a very local port. Many ports around the country function as transshipment points. While they employ many people, cargo passes through the port quickly. However, at the Port of Corpus Christi, most of the cargo, such as crude oil and chemicals, stays here and is transformed into higher-value products. This transformation means port businesses need to buy many items from outside venders." According to LaRue, port industries have traditionally been very strict in their policies about buying locally whenever possible. Martin says that Houston is the only other U.S. port whose economic impact is close to Corpus Christi and their port industries do not have a strong buy-local philosophy.

The study also identified the residence location of the 9,640 employees of the direct jobs. 55.3 percent lived in Corpus Christi, 19.4 percent lived in San Patricio county, 12.8 percent lived in other parts of Nueces county and 12.5 percent in other parts of the state.

Other findings: Port related activities generate $1 billion in business revenue, $66.3 million in state and local taxes and $18 million in U.S. Customs revenue.

During the course of the study, Martin's firm conducted interviews with 100 local firms, who Martin praised for their openness and cooperative attitude. Cooperation was very high in the maritime community. This goes a long way in insuring the credibility of the study. Martin has studied more than 70 public and private terminals in the United States and Canada.

The study also tracked direct jobs by job category, the largest, with 7,453 jobs being shippers/consignees. Martin confirmed that these jobs for the most part were port user company employees (petroleum and chemical refiners). Marine construction at 675 jobs and trucking interests at 418 jobs also accounted for a large number of the direct jobs.

Additional data backed up those findings. By commodity, the largest number of dirct jobs, 6,355, were petroleum, chemical or petrochemical-related. However, as Martin interestingly points out, breakbulk commodities generate the highest number of jobs per 1,000 tons of cargo. Breakbulk cargo such as steel, forest products, project cargo, machinery, cotton and fruit generate 2.36 jobs per 1,000 tons as opposed to .81 jobs for chemicals, .25 jobs for petrochemicals and .05 jobs for petroleum. Bagged grain ($39/ton), containerized cargo ($30/ton) and breakbulk cargo ($26/ton) also generate the highest direct revenue per ton.

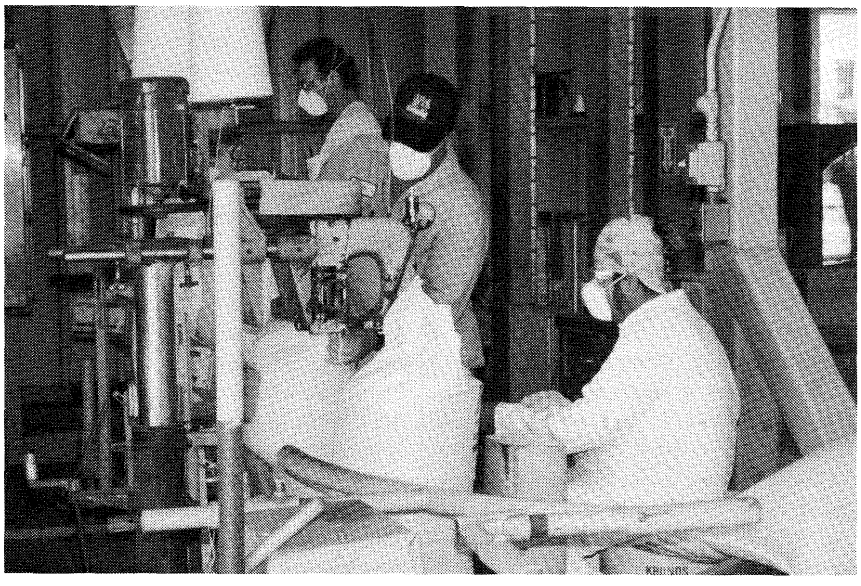
Port officials have recently began targeting breakbulk cargoes such as steel, project cargo, machinery, cotton and fruit as a part of a continued diversification effort designed to utilize the port's general cargo terminals. Over the past 10 years, the port has invested $38.6 million in general cargo capital improvements, including $21 million for multi-purpose dock, mobile crawler crane and a new 65,000 sq. ft. warehouse at the Southside General Cargo Terminal. The port also invested $8 million for a warehouse and dock expansion, apron expansion and RO/RO ramp at the Northside General Cargo Terminal. In addition to the induced job model, the study also developed an operational model that will allow port staff to track and analyze the economic impact of cargo flows and capotal construction projects.

## Treated Seed Through Corpus Christi to Spain

Workers at the Port of Corpus Christi's Grain Transfer Facility bag specially treated wheat for export to Barcelona, Spain. The 2,200 short tons of wheat were treated with specialized disease and pest control chemicals at the facility's seed treating unit. The wheat will be used soley for planting. The seed treating unit went on line in 1989 when the market for treated seed was at a peak. The facility boasts a bagging capacity of 6,300 bags or 320 metric tons per eight-hour shift and has the capability to treat wheat, sorghum, rice, barley and soybeans.

According to Jerry Cotter, the port's director of operations, all seed requires a certain extent of treating. "This facility is unique in that it is the only one of its kind on the Gulf. It affords our customers opportunities for cost effective shipments through the Gulf utilizing favorable rail rates and other determining factors."

The Port of Corpus Christi shipped a record 77.6 million tons of cargo in 1994. It is the nation's seventh largest port in terms of total tonnage and the third largest in import tonnage.



## Long Beach Commission Elects New President

*Roy E. Hearrean, president of the Long Beach Board of Harbor Commissioners.*

TheLongBeach Board of Harbor Commissioners has elected Roy E. Hearrean as board president for the 1995-'96 fiscal year.

In accepting the presidency, Hearrean said, "During the coming year, I will be working with all the commissioners to ensure the port will either begin, continue or complete a number of projects that will benefit and assist our customers."

These projects include breaking ground on a new 170-acre container terminal for Hanjin Shipping Co., which will have at least six container cranes and the port's fifth on-dock rail facility. The terminal is set to open in 1997.

The commission sets policy for the Port of Long Beach, which also is the Harbor Department for the City of Long Beach.

## Long Beach '94-'95: Strong Performance

Spurred by strong export growth, larger vessels in the transPacific trade and continued robust shipments with China and Southeast Asia, the Port of Long Beach recorded another banner fiscal year in 1994-95, with a 17.3% increase in container trade.

Between July 1, 1994 and June 30, 1995, the port moved a whopping 2,739,516 TEUs, compared to 2,335,292 TEUs during the same period the previous year. The surge in container trade during 1994 propelled Long Beach to become the number-one container port in the U.S.

During fiscal year 1994-95, containerized exports from Long Beach jumped by 30%. The total number of export boxes grew to 939,647 TEUs, compared to 721,611 TEUs the previous year.

Although the number of containerized imports lagged behind exports, imports of containerized products still recorded an impressive doulbe-digit gain. Containerized imports jumped by 14.8% during fiscal year 1994-95 with cargo moves numbering 1,334,349 TEUs, compared to 1,161,652 TEUs the previous year.

The port's director of Trade and Maritime Services, Don Wylie, is optimistic for an equally strong performance at the end of the calendear year. "Container trade increased nearly 20% each month during the last fiscal year, and now with the holiday rush before us, Long Beach is positioning itself to maintain the lead among all U.S. container ports," Wylie said.

Meanwhile overall tonnage, which includes containers as well as bulk and breakbulk products, increased by a total of 7.7%. Again, exports recorded the most growth: Outbound tonnage leaped by 15.4% during fiscal year 1994-95 to 29,893,968 metric revenue tons (MRTs = 1,000 kilograms or one cubic meter). Inbound tonnage rose by 4.2% to 59,889,432 MRTs.

Wylie said the busy export push was due to several factors, including the low value of the U.S. dollar compared to that of the Japanese yen. "U.S.products are more competitive in the Japanese market, partly explaining the increase of exports from Long Beach," Wylie said.

Wylie also pointed to continued strength in trade with China and Southeast Asia and a busy agricultural season as reasons for the increases in exports. He also mentioned that ships with the capacity to haul 4,000 TEUs are still impacting the number of containers being moved across Long Beach wharves.

Africa/Europe

## Antwerp Port: Fastest Growing Container Port

After six months the figures are obvious: container traffic in the port of Antwerp increased 9.45%. With this result Antwerp is growing faster than the other important European container ports like Rotterdam, Hamburg and Bremen.

After the record results of 1994, mar-

itime traffic in the port of Antwerp increased from 55.6 to 55.9 million tonnes. The number of ships that called at the port decreased with 77 units to 7,790. The overall GT figure however went up from 80.8 to 84.5 million GT.

The traffic increase is mainly due to a favourable development of the unloadings of general cargo (+18.4%) and dry bulk cargo (+5.5%). The unloadings of liquid bulk decreased with 11.5% to 13.2 million tonnes. This is caused by an important cut back in the supply of crude oil and petroleum products. This trend was already noticed during the first quarter and can also be seen in other ports in the range.

The overall general cargo traffic amounted to 26.5 million tonnes (1.5 million tonnes or 5.8% more than in the first half of 1994). Dry bulk traffic rose by 3.4% to 16.1 million tonnes, an increase brought about by a considerable increase in the loadings of ores (7.7 million tonnes – +7.4%) and of solid combustibles (4.3 million tonnes – +13%).

Container traffic increased 9.45%. Antwerp handled 1,180,879 boxes during first half of this year. This represents an increase with over 100,000 units. Loadings and unloadings are almost equally represented with 581,600 and 599,279 TEU.

## For Environmentally Friendly Operations

Ports and shipping have become increasingly subject to environmental pressures; the well-being of the world's oceans and coastal areas is steadily improving due to the implementation of many new special regulations governing such factors as waste disposal.

The Port of Helsinki aims to assist its shipping clients in improving their awareness of specific topics that have proven relevants to Helsinki's particular geographical circumstances and environmental conditions. The most important subjects have been compiled in a book, which may be ordered over the telephone from the following number:17 33 31.

## Port 2000 Project: Creation of New Terminal

The Board of Directors gave consideration to the new "Port 2000" project intended essentially for the reception of 5th-generation container-carriers with capacity exceeding a level equivalent to 5,000 20' containers. The final stage of "Port 2000", to be located to the south of the current port area, could lead to the development during the next century of 12 kilometeres of wharves and pier areas. The first step in this process would involve the creation of a terminal with two wharf-side handling facilities.

Consequently, the Board of Directors of the Le Havre Port Authority has requested that consideration be given to this project by the Minister for National Planning, for National Infranstructures and Transport, such consideration enabling the commencement of the various studies required by regulations and including most notably consultation of the various bodies concerned, the project impact study, the public enquire and the Grand Maritime Commission, in addition to changes to the defined perimeter of the port area.

## Hamburg: Growth Rate Highest in North Sea

This year Hamburg has actually managed to better the outstanding figures recorded in the first half of 1994. From January - June 1995 total turnover rose by 6.3% to 35.7 m t. That means the Port of Hamburg has the highest growth rate of any of its competitors in the North Sea range.

Bulk cargo turnover rose by 7.7%, general cargo by 5%. The good figures were achieved despite a sharp fall in incoming liquid cargoes (down 10.3%) thanks to a considerable rise in the volume of suction cargo (up 20%) and grab cargo handled (up 21.6%). For the first time since 1991 bulk increased faster than general cargo–further proof of the Port of Hamburg's universal character.

In the first half of this year general cargo turnover rose by 5% to reach 18 m t. Of this total 14.5 m t were accounted for by containerized cargoes (up 6.2% on the same period last year) and 3.5 m t by conventional and ro-ro cargoes (up 0.3%). The containerization rate in the Port of Hamburg has now exceeded 80%. In all 1.4 m TEUs were handled in the first six months of 1995 (up 6.7%). Of this sum 1.19 m TEUs were accounted for by loaded containers (up 7.1%).

High growth rates in container traffic were also evident on the North America (East Coast) routes (up over 30%), South America (East Coast) and South Africa – both over 20%. On the North American routes Evergreen's use of larger ships with higher cargo-carrying capacities had a very positive impact. South American traffic profited from the continuing foreign-trade boom in Brazil and Argentina. Huge increases in South African imports are responsible for the growth on these routes.

Hamburg's Economics Minister Prof. Rittershaus had the follwing to say about these results: "The Port of Hamburg continues to enjoy an upswing. The Senate (Ed. government) of the Free and Hanseatic City of Hamburg will safeguard the competitiveness of this important sector of the economy – despite the City's budget problems-with maintenance work and an investment programme totalling some DM 235 million for port-extension measures and improvements to the infrastructure." Hamburg's private port operators, who are responsible for so-called "superstructure" investment, are investing around DM 200 million in expanding their facilities, optimizing logistics systems, data processing, etc.

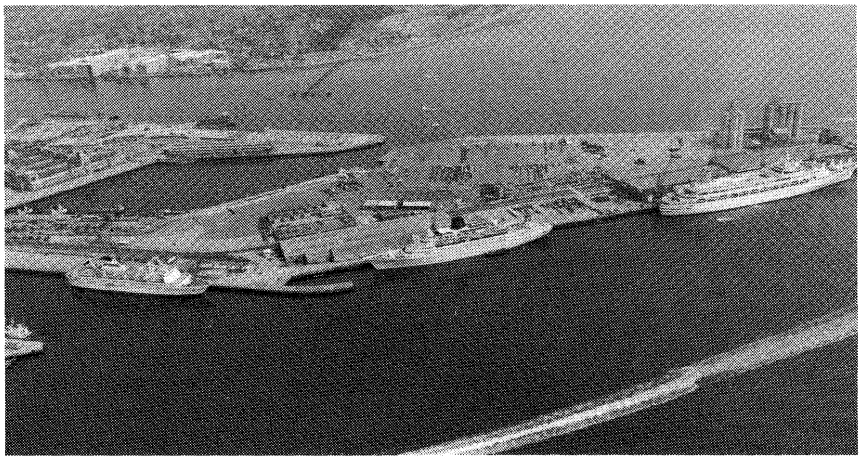
### Forecast

As Dr. Beth, Chairman of the Board of Port of Hamburg Marketing and Public Relations (HHVW) pointed out, "the slowdown in the German economy and the slackening off of foreign trade are having an initial effect on the Port's turnover. In particular, the growth in container traffic was slightly lower in the second quarter than in the first. Though exports on most trade routes have been slightly affected, imports continue to do well. All in all, the growth rates in trunover achieved in 1994 will not be equalled this year. But by the turn of the millennium Hamburg's container turnover will have reached its forecast total of over 4 m t."

## High Level Kept in Rotterdam Throughput

In the first six months of 1995, throughput in the port of Rotterdam increased to 146.8 million tonnes, a rise of 0.3% in comparison with the same period last year. This comfortably surpasses the high level in the first half of 1994. In the second quarter throughput rose by as much as 1.2% in comparison with the previous year, achieving a total of 75.0 million tonnes. Major growth sectors in the first half-year were roll on/roll off (+8.4%) and the container sector (+8.6%), other dry bulk cargo (including minerals and fertilisers, +15.3%) and other liquid bulk cargo

## *Southampton: 5 Cruise Vessels in One Weekend*



*Associated British Ports' (ABP) Port of Southampton handled five luxury cruise vessels in one weekend (19/20 August). Phpto shows three of the vessels berthed at the Port of Southampton's Eastern Dock. The vessels are (l-r): Kazakstan II, Vistafjord and Canberra. In the foreground is a high-speed Southamption to Isle of Wight ferry, a Red Jet, belonging to ABP's shipping subsidiary, Red Funnel.*

Andrew Kent, Southampton Port Manager, said:

"Southampton is the only UK port with two first-class cruise terminals; this allows us to simultaneously handle this large number of ships and passengers. ABP is committed to providing top-quality facilities for cruise passengers and has invested haeavily in upgranding both of the port's cruise terminals last year to continue to meet the passengers' needs."

The five cruise ships left Southampton for destinations including the United States, Guernsey and the Greek Islands. The Port of Southampton has 110 cruise calls scheduled for 1995.

(mainly bulk chemicals, +8.9%). The situation was less positive in the throughtput of crude oil (-3.5%), oil products (-16.9%) and other general cargo (including fruit, paper, iron and steel products, -4.3%).

### General cargo

With an increase of 2 million tonnes to a total of 26.3 million tonnes (2.4 mln TEUs), the container sector had a handsome share in the successful half-year figures. The strongest rise was in imports (12.8%), partly as result of the current good export position enjoyed by the United States due to the low dollar. Exports rose by 5.2%. The container sector has been the most structural growth sector in the last two decades: in comparison with 1975, the quantity of containerised cargo has increased five-fold.

### Dry bulk

With the exception of agribulk, all dry bulk sectors showed an upturn in the first half-year of 1995. Coal imports rose by 5.3% to 8.2 millon tonnes as a result of the increase in demand from German power stations. At just 0.6 million tonnes, exports were 37% lower than in the first half-year of 1994, because England is importing less coal via continental seaports.

### Liquid bulk

In the first six months crude oil throughput was 3.5% below the level of last year. This was largely the result of the poor first quarter. The second quarter showed a rise of 1.4%. At 47.6 million tonnes, oil throughput in the first half of 1995 was nevertheless still slightly above the average of the last five years.

## Asia/Oceania

## Quality Assurance at Port of Gladstone

A Quality Assurance system is presently being developed for the handling of bulk cargoes at Auckland Point. This system is additional to the Quality Assurance Certification already applying to the Authority's handling of coal at the RG Tanna Coal Terminal.

The Auckland Point quality system will focus on the cleaning of common conveyor belts which are utilised during shiploading of woodchip, calcite, magnesite and grain cargoes. It is vital to avoid product contamination during handling of different products.

A number of vessels have been loaded at Auckland Point over the past months, enabling testing of the quality procedures to ensure their adequacy.

The Authority is committed to providing customers with a service second to none. The development of a Quality System for Auckland Point operations further reinforces this policy. *(Port-Talk)*

## Safety of Shipping Enhanced by New VTS

The efficiency and safety of Gladstone's shipping has been enhanced by the introduction of a state-of-the-art vessel tracking system (VTS). The new system was installed in February this year, following pressure on the old system VHF port control due to an increase in number and size of vessels using the Port.

Gladstone Port Authority Chaiman, Leo Zussino said the system would have great benefit to the port and the shipping community. The Authority will contribute annually towards the equipments ongoing operation.

A radar system supported by solar panels has been assembled on an island at the entrance to the harbour to detect, track and monitor vessels within a 40 nautical mile radius. This information will be transmitted via microwave link to a computer in the Habour Master's Office. The system will operate in conjunction with marine band VHF radio and closed circuit television.

The VTS is operated 24 hours daily, every day by Department of Transport shipping officers. This continuity of operation will assist in marine search and rescues, allowing authorities to accurately pinpoint vessels in distress. Also, the ability to trace pilot helicopter and pilot vessel movements will increase the safety of marine pilot transfers. *(Port-Talk)*

## Port Kembla Toward Commercial Maturity

Greater efficiency, increased benefits for industry and maximising public assets are the goals of the newly declared Port Kembla Port Corporation (PKPC).

The Port Corporation will be required to manage the commercial Port land and also

continue to manage the "hands-on" functions in the Port in the area of maritime safety.

PKPC Acting Chief Executive, Mr. Chris Drinkwater, welcomed the move to corporatisation, saying he looked forward to a bright, profitable future for the Corporation, the Port and its customers.

The Government is confident the Port Corporation at Port Kembla has achieved the required level of commercial maturity to complete the successful changeover to corporate status.

The Minister for Small Business and Regional Development, Minister for Ports, and Assistant Minister for State Development, the Honourable Carl Scully, said the Government saw corporatisation as a means of achieving greater efficiency in the public sector without resorting to privatisation.

The Port Corportation now has the freedom to be independent of centralised decision making. It is hoped this initiative will translate into new and increased benefits for industories, particularly the agricultural and mineral sectors while introducing new commercial disciplines and management accountabilities.

The Corporation has a charter to operate as efficiently as comparable businesses, to maximise the State's investment in the Corporation and to promote trade through its facilities. *(Harbourline)*

## Port of Auckland Posts Record Profit

The Chairman of Ports of Auckland Limited, Sir Richard Carter, announced that in its second year as a public listed Company, Ports of Auckland Limited has achieved a record tax paid profit $41.995 million.

This represents an increase of 33% on last year's figure.

The Company's financial year ended on 30 June.

Total revenue for the year was $139.398 million, an 11.4% increase on the previous year.

Earnings per share amounted to 21.1 cents and net asset backing per share was $1.58.

Chairman of Directors, Sir Richard Carter, said, "The Directors have recommended a final dividend of 6 cents per share giving a fully imputed total dividend for the year of 11 cents. This compares with the previous year's dividend of 10 cents."

Dividend payments for the year amounted to $19.876 millions.

In recording that at balance date the Company had no debt, Sir Richard recalled that a year ago he predicted that debt would increase to about $21 million to cover planned capital expenditure. However, in the course of sound trading the Company has been able to finance that expenditure from cashflow. Net cashflows generated by the Company from operating activities amounted to $44.739 million.

Sir Richard said, "The Company's result reflected a strengthened economy, further gains in operational efficiency, the winning of increased market share in the all-important container sector, and the continuing success of the sales programme of the new 255 berth extension at Westhaven Marina."

Sir Richard referred to the Company attaining excellent credit ratings from Standard and Poor's. These were AA- for long term domestic papers and A1+ for short term. Only the second New Zealand listed company to achieve such ratings.

Sir Richard added that since balance date Ports of Auckland Limited had negotiated a NZ$120 million commercial paper programme backed by a $100 million standby facility with Westpac Capital Markets.

Proceeds of this would be used for general corporate funding requirements including upgrading of port facilities and equipment.

The Company has also reviewed its financial structure aimed at providing a prudent commercial base for future years. A key element to the balance sheet at financial year's end was the high ratio of shareholders funds to total assets, 88% in fact. The number of issued and paid up shares at 198.7 million was high.

"A target ratio of 65% of shareholders funds to total assets seemed more appropriate", said Sir Richard, "and approval would be sought at the next Annual General Meeting to cancel one in three shares with a payment of some $66.3 million."

Sir Richard said decision making on a major review of port property holdings was completed subsequent to balance date. The review indentified assets not central to the Company's ongoing business strategies and an information memorandum is being prepared to advise on the disposal of these assets, which are mainly in and around the Viaduct Basin.

"Given the location of port facilities, it is inevitable the Company will have a part to play in preparations for the America's Cup defence in the year 2000," said Sir Richard. "Discussions have been held already to narrow down the wide range of options considered in initial scoping work. The main parties concerned will need further discussions to focus on such issues as preferred location, funding and timing." He said Auckland and nation-wide co-operation and support would be needed to ensure New Zealand stages an America's Cup defence that fully capitalised on the opportunities presented.

Ports of Auckland Limited's Chief Executive, Robert Cooper, said a busy year saw total cargo volumes up 10.5% from 8.7 milion tonnes in the previous year to a record 9.6 million. This volume is up by two-thirds compared to the 5.8 million tonnes in 1988 when the Company was formed.

Mr. Cooper said the year under review saw 380,964 containers handled by the Company, a 12% increase. Container throughput had more than doubled since 1988. The Company now handles over two-thirds of the North Island's container business and more than half of that for the whole of New Zealand.

Satisfactory trends had also been maintained in other categories of cargo business. Total ship calls were at 2045 and there was significant increase to 37 passenger cruise liner calls in the year under review.

Mr Cooper said during the financial year the Company commissioned seven new units of cargo handling plant which will add to the port's capacity. Two new container handling gantry cranes have been ordered, and together with a retrofit of an older crane, these will significantly boost port productivity.

The Company's other port, Onehunga, continued to operate successfully. A weekly Rool-On Rool-Off coastal service linking Onehunga to the South Island was well established.

The Company was positive about the future, planning major projects to improve road and rail access, an intensive programme to increase cargo storage and stacking capacity, and even higher levels of information technology applications planned to speed the efficient flow of cargo.

## Singapore Sees Strong Midyear Performance

For the first six months of this year, the Port of Singapore handled 5.7 million TEUs of containers, a growth of 17% over last year's figure of 4.9 million TEUs for the same period. "Based on our current

growth, PSA is confident of reaching 12 million TEUs this year", announced Mr David Lim, PSA's Chief Executive Officer.

During the period, total cargo increased by 7% to reach 149.3 million freight tonnes, of which 50% were in containers. Mineral oil accounted for 42% while the rest comprised conventional and other bulk cargo.

South East Asia which accounted for 36% of the total general cargo throughput saw a higher than average increase of 19% when compared to last year's performance. North East Asia continued to be the second largest market at 22% testifying to the robust traffic within the Asia Pacific Rim. This is followed by the European Union at 16%. Both South Asia and North America's market share stood at 6.5%. The African market, albeit small, also performed well.

Singapore's shipping tonnage increased by 5% to reach 348 million gross tons. About 39 % of the 50,799 vessel arrivals were for cargo operations. The remaining vessels called at Singapore for bunkers, supplies and repairs. 28% of vessels arriving at the Port of Singapore called for two or more purposes.

Singapore remains the top bunkering port with 8.9 million tonnes of bunkers lifted.

## PSA Awards Contracts For Container Terminal

PSA has awarded two contracts worth S$152 million for the supply of 16 units of overhead bridge cranes (OHBCs) and the construction of the foundation and supporting structures for these cranes. These cranes will be used at the new container termial currently under construcion at Pasir Panjang.

The Keppel Mitsui consortium comprising Keppel Integrated Engineering Limited (KIE)'s wholly owned subsidiary, Keppel Engineering Pte Ltd (Keppel Engineering) and Mitsui Engineering and Shipbuilding Co Limited (MES) clinched the main contract of S$95 million to design, build, deliver, install, test and commission the OHBC system and integrate it with the Remote Crane Operation Centre in PSA through a computerised system.

In addition to this main contract, Keppel Engineering, MES and Hock Lian Seng Engineering Pte Ltd have been awarded a S$57.5 million contract for the foundation works and building of superstructures and ancillary structures supporting the OHBCs for three stacking blocks. These companies are also the nominated subcontractors for Keppel Mitsui consortiun for the foundation works and superstructure for another two blocks costing S$36 million.

The OHBC is a sophisticated system incorporation some of the latest technology. Unmanned, each crane will have the automatic crane control system (ACCS) which comprises the automatic position indication system (APIS), automatic travet control system (ATCS), stack profile scanning system (SPSS) and the automatic fine alignment system (AFAS).

The OHBC will be installed with a computerised crane management system which provides diagnostic and status monitoring functions for the maintenance and repair of cranes.

Each OHBC, with a span of 43.6 metres, will traverse on beams supported by 28 metre high columns. It will have a lifting capacity of 40 tonnes, a travelling speed of 120 metres per minute along the beams, and a hoisting speed of up to 130 metres per minute. The OHBC will be able to stack containers nine high and 10 rows across with three traffic lanes in the middle. The cranes are powered by a 6.6 kV AC supply making it more environmentally friendly as compared to diesel powered cranes. The cranes will be delivered in batches between end 1996 and April 1997.

## PSA Signs MOU for First Port Venture in China

The Port of Singapore Authority (PSA) signed a Memorandum of Understanding for its first port venture in China with the Port of Dalian Authority (PDA). The MOU was signed on 7 August in Dalian, China, between Mr Goon Kok Loon, PSA's Deputy Chief Executive Officer (International), and Mr Yuan Fu Xiu, PDA's Director. Mr David Lim, PSA's Chief Executive Officer, Party Secretary Yu Xue Xiang of Dalian and Mayor Bo Xi Lai withnessed the signing.

A detailed feasibility study will be undertaken now. A report of the study will be submitted to the Dalian Municipal Government and the relevant authorities of China's Central Government for approval. Upon approval, PSA will jointly develop, manage and operate Dayaowan Container Terminal in Dalian with the Port of Dalian Authority.

A preliminary study by PSA showed this particular container terminal to have specific adventages – freeze-free and silt-free harbours backed by good infrastructure. Dayaowan Container Termial is 50 km away by road from Dalian City, and its berths are capable of handling third-generation container ships.

Said Mr Lim, "PSA has consolidated a strong home base over the years, and this proposed joint venture will be a timely opportunity for PSA to invest overseas and participate in China's economic development.

"This proposed investment is in line with PSA's drive to become an important international player in port and logistics operations. Through strategic partnerships, we can enhance the service level to our customers both in Singpore and elsewhere."

The Chinese economy is projected to grow at 8-10 percent annually over the next five years. Also container traffic is expected to increase with the robust economic activity in Northeast China.

Mr Ng Chee Keong, PSA's Director of Operations, said, "Dalian has well-developed sea, land and air transpot networks that can provide reliable distribution of cargo passing through the port. Another advantage is its Economic and Technological Development Zone, which is among the largest in China, with 1,000 foreign and 6,000 local firms.

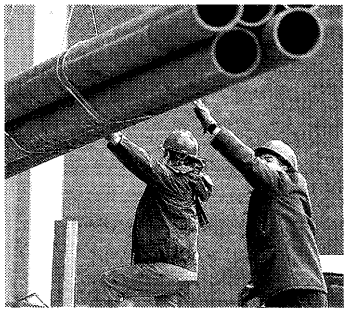
"With these strong linkages and the economic activity of the hinterland, we believe Dalian has the potential to be a premier port."

Besides China, the PSA, in its regionalisation effort, has an interest in venturing into India, West Asian and Southeast Asian countries. Mr Goon said PSA may invest in port development opportunities in one or more of theses countries within the next year or two.

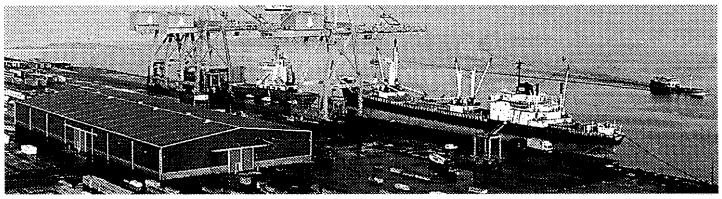
"In the long term, we want to have an investment portfolio, and we will be looking for sound opportunities and strategic partners with whom we can share a common vision," added Mr Goon.

This port venture with DPA will be PSA's first major international port investment, although it already has considerable experience in port consultancy and development through its subsidiaries and associated companies. SPECS Consultants, one of PSA's subsidiaries, was the consultant for the first phase of the Dayaowan Port devlopment. MAP Services, another wholly owned subsidiary, also has been providing port consultancy to China as well as in Indonesia and Italy.

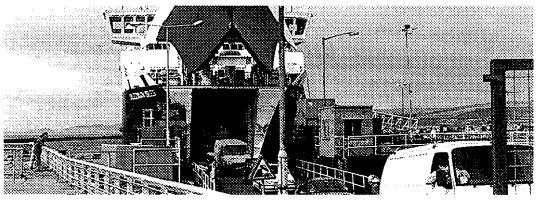
# At Glasgow we've got the quay...



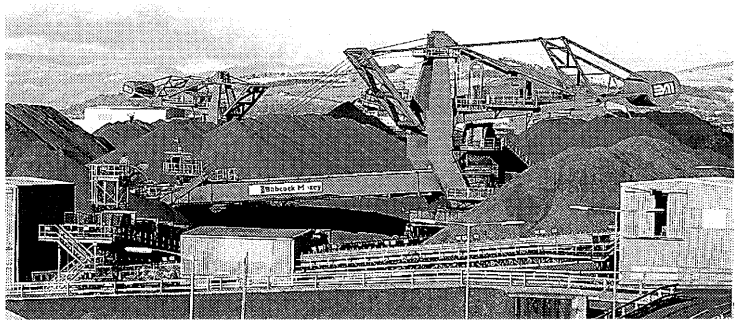
# At Greenock we've got it covered...



# At Ardrossan we've got it all tied up...



# At Hunterston we'll even move mountains.



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# ABIDJAN PORT AUTHORITY

## A REFERENCE IN AFRICA

### LARGE TRADING PORT

The largest reception capacity on the West African Coast.
- With its 28 berths, the Abidjan Port can receive simultaneously sixty ships in commercial operations.
- 1000 ha of water reach entirely marked out with beacons.
- Over 10.500.000 tons of cargo traffic per year.

### TRANSIT PORT

- with 1154 km of railway
- About 1000 km of tarred roads
- the Port of Abidjan which endeavours to afford the best services, handles annually 500.000 to 600.000 tonnes of goods for the Sahelian Countries.

### BIG CONTAINER AND TRANSHIPMENT PORT

A Modern Container Terminal with four berths stretching over a linear quay distance of 800 m
- Two gantry cranes
- 25 ha of completely paved earth platforms
- Computerized management of the Container Terminal
- Modern yard cranes and efficient port operators.
- Over 200 000 T EU of containerized traffic is handled annually through the Abidjan Port.

### FIRST TUNA PORT IN AFRICA

with 1050 m long quay, fully equipped with quay-side amenties (water, electricity, gazoil)
A market area of 6.400 m2 for auction sales. Cold stores with storing capacity of over 42 000 tons. Sea products processing and canning units . The Port of Abidjan is today the first Tuna Port in Africa.

**Abidjan Port Authority BP V 85 Tel:24 - 26 - 40 / 24- 08 - 66 / 24 -23 -71 Fax:24 23 28 DGPAA : Télex:42 318**

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