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## Mid-Term IAPH Exco Meeting

New Orleans, USA  
April 27-May 1, 1998

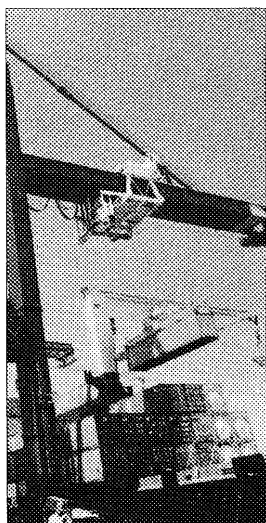


Participants gather for a group photo at the entrance lobby of the Port of New Orleans Administration Building (April 29, 1998)

### Inside:

• Flash News on the Exco Meeting in New Orleans • WTO Trade Facilitation Symposium (Geneva) • Report of LC Scientific Group, 21 meeting (Cape Town) • Science of Alliance 2 : Profit's Return? • Importance of US Port System Highlights • Halifax to Redevelop Pier 21 • Kaohsiung : Recent Construction Projects • Yokohama : Efforts for a User-friendly Port

**JAWAHARLAL NEHRU PORT TRUST**  
**THE "TOTAL SOLUTION GATEWAY"**  
**FOR GLOBAL TRADE**  
**IN THE NEXT MILLENNIUM.**



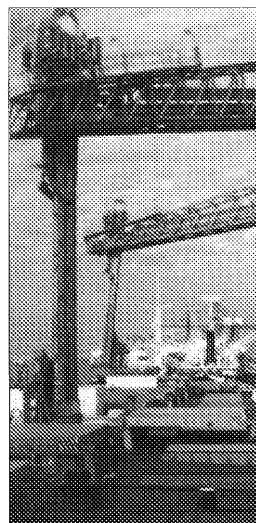
JNPT, India's youngest, most modern port with world class facilities. Spread across 2500 hectares, it has an open-ended development potential that will more than adequately meet the demands of the decades to come..

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 Phone : 091-22-7242322/219/290. Fax : 091-22-7242325/883/642. Tlx : 013-13202 JNPT IN.  
 Internet : <http://www.allindia.com/JNPT>. E-mail : [jawahar@giabm01.vsnl.net.in](mailto:jawahar@giabm01.vsnl.net.in).

## IAPH Officers

### **President:**

Jean Smagghe  
Executive Vice-President  
International Affairs of  
Association of French  
Ports (UPACCIM)  
France

### **First Vice-President:**

Dominic J Taddeo  
President & Chief Executive Officer  
Port of Montreal  
Canada

### **Second Vice-President:**

Akio Someya  
Executive Vice President  
Nagoya Port Authority  
Japan

### **Third Vice-President:**

Pieter Struijs  
Vice Chairman/Executive Director  
Shipping  
Rotterdam Municipal Port Management  
Netherlands

### **Conference Vice-President:**

O C Phang  
General Manager/Chief Executive  
Klang Port Authority  
Malaysia

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## **PSA-NUS ADVANCED PORT MANAGEMENT & OPERATIONS PROGRAMME**

**(21 SEPTEMBER TO 2 OCTOBER 1998)**

**Jointly organised by the PSA Corporation Limited  
and the National University of Singapore (NUS)'s  
Faculty of Business Administration**

### **FOR WHOM**

Senior and middle management officers from:

- Port authorities, terminal operating companies and cargo handling firms.
- Government agencies responsible for port development and management.
- Shipping, inter-modal operations and freight-forwarding companies.

### **OBJECTIVES**

Backed by PSA's extensive experience in port management and operations and NUS' academic excellence, the objectives of the programme are:

- To enhance conceptual understanding of the critical areas of corporate strategy, human resources, operations, finance and technology to effectively manage the multi-disciplinary functions of a modern sea port.
- To provide a forum for the exchange of ideas and experiences on port management and operations with counterparts from the maritime industry.

### **COVERAGE**

- Maritime Transport • Port Organisation • Port Planning • Port Operations Management • Technology Management • Port Equipment Maintenance
- Port Safety and Security • Port Finance • Human Resource Management
- Adventure Learning

### **LECTURERS**

The programme will be conducted by PSA managers and highly qualified lecturers from the Faculty of Business Administration of NUS.

### **VENUE**

PSA Institute, PSA Corporation Ltd, Singapore.

### **FEE**

S\$4,200 (Singapore Dollars) per participant, excluding 3% Goods & Services Tax (GST). The fee covers cost of tuition, materials and daily refreshments.

### **CLOSING DATE OF APPLICATION**

15 August 1998

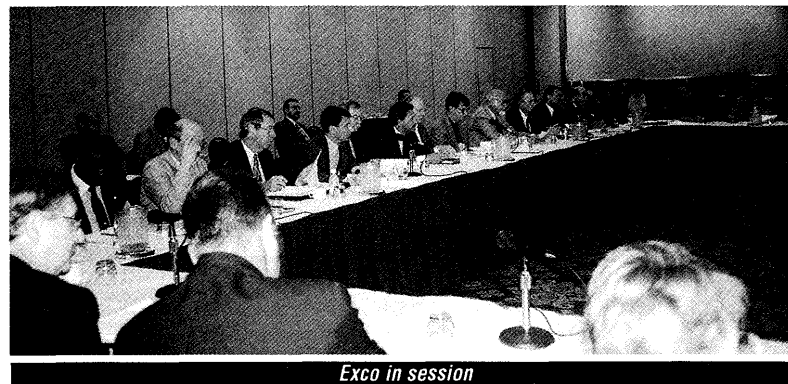
**Chart  
the right  
course  
for your  
career.  
Set your  
sails for  
PSA.**

# IAPH ANNOUNCEMENTS AND NEWS

**T**HE 1998 mid-term meeting of the Executive Committee was held on Thursday and Friday, 30 April and 1 May, in a conference room in the Riverside Hilton Hotel, New Orleans, Louisiana, USA, hosted by the Port of New Orleans at the initiative of Mr. Ron Brinson, President and CEO. It was chaired by President Smagghe and attended by 22 Exco Members (there was six messages of regret, including two last-minute cancellations) as well as Legal Counselors, the Chairs of the Internal and Technical Committees present and the Secretary General. The Port of New Orleans provided valuable support in helping to coordinate the events. The number of participants was reported as 61 without counting 16 guests who accompanied the delegates.

Preceding the Exco meeting, from Monday to Wednesday, 27 to 29 April, the meetings of the three Internal Committees of Membership, Finance and Constitution & By-Laws, of the IAPH 2000 Special Task Force, the IAPH/IMO Interface Group, and of the

## FLASH NEWS ON THE MID-TERM EXCO MEETING IN NEW ORLEANS



*Exco in session*

Technical Committees of the Dredging Task Force, Cargo Operations, Ship Trends, Port Planning & Construction, Port Safety & Environment (jointly with Marine Operations), Trade Policy, Port Communications, Combined Transport & Distribution and Legal Protection, as well as the meeting of the Coordinating

future direction of the Association.

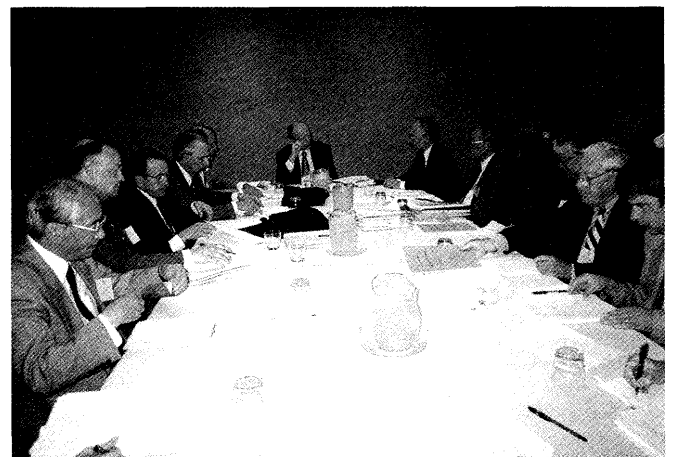
The most extensive focus was on the action programs of IAPH 2000. The IAPH/IMO Interface Group, Technical Committees and Liaison Officers stressed the need for ports to be aware of the various on-going environmental and institutional requirements for the

Vice Presidents were held, both at the Port of New Orleans Administration Building and the Riverside Hilton Hotel. The two guest members attended some of the Technical Committees' meetings. They were Capt. Hans J. Roos, President of the International Association of Harbour Masters, and Capt. M. Pouliot, President of the International Maritime Pilots Association.

The mid-term meeting of the Exco is intended to review and reexamine the activities of the Association since the previous conference, to help enhance preparations for future years and for the next conference. On top of these missions, the 1998 mid-term meeting covered a number of items of vital importance to the



*Dredging Task Force*



*Finance Preview meeting*



sustainable future which have been placed on the agendas of various inter-governmental institutions, certainly inclusive of the IMO.

There will be a few major actions to be mounted soon and reported to the 1999 Conference. One is to draft a comprehensive strategic plan for IAPH with a view to preparing for the on-going and on-coming changes. The next will be an extensive survey of the structure and business areas of the members, with the recognition that the institutional and business surroundings of ports have changed drastically in some cases and substantially in others. The structure of the Technical Committees of IAPH to take account of changes will be reflected in the terms of reference to be submitted to the 1999 Conference.

A very colorful overall program for the 1999 World Ports Conference (21st biennial conference) in Malaysia, from 16 to 21 May, 1999 was introduced by Datin O.C. Phang, Klang Port Authority.



*Special Task Force IAPH 2000*

Though detailed program is yet to be announced in the journal, it will include a keynote address by Dato' Seri Dr. Mahathir Mohamad, Malaysia's Prime Minister at the opening session, Hon. Tung Chee Hwa, Chief Executive, the Hong Kong Special Administrative Region, China, a session devoted to the presentation by the leaders of leading shipping companies and distributors, inclusive of Mr. M. Ikuta of Mitsui OSK of Japan and Mr. William R. Fields of Wal-Mart Stores of the USA.

The conference venue will be The Palace of Golden Houses of the Mines Resort City, located within the hub of the Multimedia Super Corridor. It is 20 minutes from Kuala Lumpur and 25 minutes from Kuala Lumpur International Airport.

Subject to Board approval, the registration fees will be: IAPH Members: RM4,500 (before 31 March 1999), RM5,700 (on or after 31 March 1999); Non IAPH Members: RM5,700 (before 31 March 1999), RM7,000 (on or after 31 March 1999); Additional Accompanying Person(s): RM1,300; Honorary Members: Free Registration (FOC)

(RM: Ringgit Malaysia - US\$1 = RM3.8 as of April 1998)

Conference Chairman: Datin O.C. Phang, General Manager/Chief Executive, Klang Port Authority, and IAPH Conference Vice President

An important item approved by the meeting was a program related to the take-over of IAPH Liaison Officer with



*Port Planning & Construction Committee*



*Ship Trends Committee*



the IMO, based upon the IAPH/BPA Agreement on Representation of 1980. Though any official arrangement is yet to be implemented, the office of the IAPH Liaison Officer with the IMO and the IAPH representative in London, which has been carried by Mr. Alex J. Smith since 1980, will be handed over to Mr. Peter van der Kluit of Rotterdam, on the occasion of the 1999 World Ports Conference.

The Finance Committee observed that the financial situation of IAPH has been steady and recommended a revised budget, which was approved by the Exco meeting.

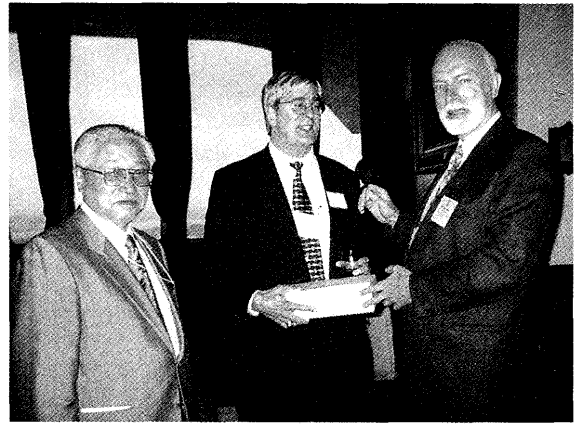
The Membership Committee strongly stressed the need to promote membership as an essential basis of IAPH and urged everyone to give their attention and cooperation to the membership campaign, and further indicated that the matter should also be referred to the action programs overseen by the IAPH 2000 Task Force.

During the mid-term meetings in New Orleans, there was a technical visit to the Port of New Orleans and observation of the waterfront development, widely known as the Riverside Walk. Prior to the tour Mr. Brinson addressed the delegates at the auditori-

um and made presentations on the port activity and its remarkable performance.

One evening, the delegates and their spouses were invited to a reception hosted by Nesser, King, LeBlanc, a law firm, a partner of which Mr. J. LeBlanc is a special advisor to the IAPH Dredging Task Force. The reception was held at the Plimsoll Club located on the top floor of the World Trade Center, New Orleans. On Thursday, 30 April, the participants enjoyed being guests at the reception and dinner held at the "Horizon" restaurant on the top floor of the Hilton Hotel, hosted by the Port of New Orleans. There, President Smagghe officially expressed the appreciation of IAPH to Mr. Brinson and his team for the excellent arrangement which they have made for the IAPH gathering.

It was indeed a very busy time in New Orleans. The Computer Associates, a leading software firm was meeting with 31,000 employees and guests, utilizing four big cruisers berthed on the Mississippi to provide



*Mr. LeBlanc (center) with IAPH President Smagghe (right) and Secretary General Kusaka*

part of the accommodation. Among the list of guests, there were such celebrity names as Mr. John Major and Mr. Bill Gates. Furthermore, the world-famous Jazz Festival of New Orleans was on. On one weekend, it was reported that 72,000 visitors were out on the town in the French Quarter. The IAPH delegates and spouses certainly took back home plenty of good memories of the hospitality extended by Mr. Ron Brinson and his team and, needless to say, of the flavor of the birthplace of Jazz.



*Exco in session*



*President Smagghe (left) and Mr. Brinson at the Port of New Orleans dinner.*



*Port Safety & Environment/Marine Operations*



*Mr. Murchison (center)-toast master*

**L**ADIES and Gentlemen, Dear Friends, "Mes chers amis",

All of us know that there are still many big mysteries on this Earth of ours. One such puzzle which intrigues our scientists is the fact that many species of bird cross the oceans at very precise periods of the year, then settle temporarily in specific areas. The real problem, of course, is that nobody knows which website the birds get their information from!

I imagine that if scientists from another galaxy were to interest themselves in the movements of the port officers of our planet, and assuming they had not taken out subscriptions to "Port and Harbors" journal, they would have the same difficulty in explaining our migrations!

We have a saying in French which goes, "il ne faut pas confondre les enfants du Bon Dieu et les canards sauvages", or, literally, "do not confuse God's children with wild ducks. Obviously, the fact that port officers often meet in very smart places such as New Orleans has no real connection with the changing seasons or migratory instincts, but rather with world port interests – even though birds can be a major environmental concern with regard to the sustainable development of our ports.

I would like to thank all of you, from so many different parts of the world, for being here today in New Orleans. I am particularly pleased to see our distinguished colleagues, I refer, of course, to the members of EXCO and the IAPH Technical Committees, gathered here and properly supported by our ladies fan club. Ladies, thank you. We greatly appreciate your support for IAPH.

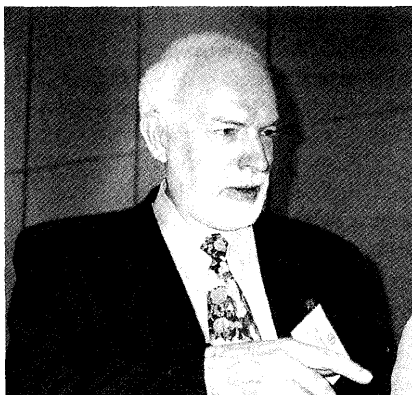
Speaking for all of us I am sure, I would like to express our most sincere thanks to Ron and the Port of New Orleans for the very warm hospitality we have received, and for the quality of the arrangements which have been made to ensure our comfort. In such a favorable environment we just have to do some really good work!

The main objective of IAPH is the improvement of international trade through the enhanced efficiency of ports throughout the world. Our Association should also continue to be the voice of the ports of the world in international bodies such as IMO, UNC-TAD and UNEP.

Of course, everybody knows that we live today in a world ruled by the key word "globalization", and it is no longer realistic for anyone to entertain dreams of autarky. But as a consequence of this, the pressure exerted on ports by ship-owners and shippers is fiercer. At the same time, in order to improve effi-

## Address by Jean Smagghe

IAPH President  
at the Presidential Reception  
1900, Tuesday, April 28 in New Orleans



ciency, the fashion for port restructuring programs has spread around the world like a bush fire.

In the future, these changes may affect the IAPH membership as well as the policy and organization of our Association. It is for this very reason that we have set up the Special Task Force IAPH 2000, which is currently assessing the consequences of these changes on the future of IAPH today.

It is clear that IAPH has to alter its course continuously to adapt to the realities of the port industry, in order to meet the requirements of its members. We must bear in mind that the financial pressure on our ports is increasing steadily, and that every member wishes to get a good return on its IAPH investment.

While a biennial Conference, such as the one in London last year or that scheduled for Kuala Lumpur next year, provides the ideal opportunity for approving resolutions and taking formal decisions, a mid-term Conference is the most suitable occasion for putting forward proposals for the future of the Association which are both innovative and far reaching, while at the same time checking that the work carried out satisfies IAPH members.

I am happy to see that all hands are on deck tonight. The Technical Committees have been meeting during the last two days. This work represents a major part of the true value of our Association, and tonight I would like to take the opportunity to thank every member of the Technical Committees for their important contribution. I want them to know that not only the world's ports but also the relevant international

organizations genuinely need their expertise.

I would also like to express my sincere gratitude to the Chairmen of the Technical Committees, who do such excellent work and give life to our Association by organizing meetings all over the world and, in the last few years, developing the concept of technical seminars backed by IAPH. This is a very positive trend for the future.

Also on deck are the Chairmen of our Internal Committees. They look after the financial, membership and legal aspect of the life of our Association, not forgetting, of course, the Secretary General Mr. Hiroshi Kusaka and his staff. I wish to thank them very much for their dedication.

During the next few days we have many matters to discuss, many decisions to take and many options to select. In a word, we have a lot of work still to complete – a situation the Vice-Presidents won't deny, and I would like to express my appreciation for the tremendous work which all of the Vice-Presidents put in, not forgetting our colleague OC Phang, who has a big burden on her shoulders, organizing the next Conference in Kuala Lumpur. But, and it's very big but, I also know that we will have to struggle resolutely to resist the attraction of this marvelous city of New Orleans.

I think that all of us must feel at home in this city, for two reasons at least:

- firstly, because our hosts have made the best arrangements we could possibly have imagined for our comfort and the efficiency of our work. I wish to thank them again for their generous and kind hospitality,
- and secondly, because New Orleans is a very beautiful city, where each one of us will find something of his or her own culture.

I firmly believe that, when Napoleon Bonaparte decided to sell New Orleans to the United States one hundred and ninety five years ago, he was very well advised – not only because he obtained a very good price, but more than that, because he understood that the future of New Orleans undoubtedly lay in a United States context.

Today, I am very happy that I can still meet French-speaking people in Louisiana. I was nevertheless intrigued to read, on the Port of New Orleans website, the injunction "Laissez le bon temps rouler". Well, we all know what that means: "Let the good times roll", or to follow the neat paraphrase suggested by Dominic Taddeo, "Enjoy yourselves". So be it, that shall be my conclusion today: "Laissez le bon temps rouler"!

Merci tous, vive l'IAPH a votre haute! Thank you.



# List of Participants

Mid-term Executive Committee Meetings  
New Orleans, USA, 27 April - 1 May 1998

## EXCO MEMBERS PRESENT

(\*accompanied by spouse/guest)

### Officers

#### Jean Smagghe\*

IAPH President  
UPACCIM  
Paris, France

#### Dominic J. Taddeo\*

1st Vice President  
Port of Montreal  
Canada

#### Akio Someya

2nd Vice President  
Nagoya Port Authority  
Japan

#### Pieter Struijs\*

3rd Vice President  
Port of Rotterdam  
The Netherlands

#### Datin O.C. Phang\*

Conference Vice President  
Klang Port Authority  
Malaysia

### African/European Region

#### David Jeffery\*

Port of London Authority  
UK

#### Patrick J. Keenan\*

Port of Cork Company  
Ireland

#### S.M.E. Luhigo

Tanzania Harbours Authority  
Tanzania

#### Jean Michel Moulod\*

Port of Abidjan  
Cote D'Ivoire

#### Godfried C.G. van den Heuvel\*

Port of Amsterdam  
The Netherlands

#### Bruno Vergobbi

Port of Dunkirk  
France

### American Region

#### David Bellefontaine

Port of Halifax  
Canada

#### Ron Brinson\*

Port of New Orleans  
USA

#### Errol Bush

Cayman Islands Ports Authority  
Cayman Islands

#### Bernard S. Groseclose, Jr.

South Carolina State Ports Authority  
Charleston, SC, USA

#### Alexander Krygsman\*

Port of Stockton  
Calif., USA

#### H. Thomas Kornegay

Port of Houston  
Texas, USA

#### Charles Rowland\*

Canaveral Port Authority  
Florida, USA

### Asian Region

#### John Hayes

Sydney Ports Corporation  
Australia

#### Satoshi Inoue

Ministry of Transport  
Japan

#### Tu Deming

Shanghai Port Authority  
China

#### Geoff Vazey\*

Ports of Auckland Limited  
Auckland, New Zealand

### IN ATTENDANCE

#### Hugh Welsh\*

Chairman, IAPH Legal Counselors  
Port Authority of NY & NJ  
USA

#### P.J. Falvey

IAPH Legal Counselor  
New York, USA

### Committee Chairmen

#### ● IAPH 2000 Special Task Force

**D. J. Taddeo** (as above)

#### ● IAPH/IMO Interface Group

**P. Struijs** (As above)

#### ● Finance

#### **George Murchison\***

Port of Long Beach  
California, USA

#### ● Membership

**Ron Brinson** (as above)

#### ● Constitution and By-Laws

**Hugh Welsh** (as above)

#### ● Combined Transport and Distribution

#### **Hans-Ludwig Beth\***

Port of Hamburg  
Germany

#### ● Port Safety & Environment (Marine Operations)

#### **Peter van der Kluit**

Port of Rotterdam  
The Netherlands

#### ● Cargo Operations

#### **Don G. Meyer**

Port of Tacoma  
Washington, USA

#### ● Trade Policy

#### **Matt Baratz**

(On behalf of L. Borrone)  
Port Authority of NY & NJ  
USA

#### ● Dredging Task Force

#### **Geraldine Knatz**

Port of Long Beach  
Calif., USA

#### ● Legal Protection

**Bruno Vergobbi** (as above)

#### ● Ship Trends

**J.M. Moulod** (As above)

#### ● IAPH Liaison Officer and Assistant Officer

#### **Alex J. Smith\***

IAPH Liaison Officer with IMO  
IAPH European Representative  
London, UK

**Jose Luis Estrada**  
Assistant Liaison Officer with  
UNCTAD  
Puertos del Estado  
Madrid, Spain

**Joseph G. Cocchiara, Jr.**  
Port of New Orleans  
USA

### Other Delegates

**Nicolas A. Blell**  
Gambia Ports Authority  
Gambia

**BAO, Hanming**  
Shanghai Port Authority  
China

**Yoseph Bassan**  
Port of Ashdod  
Ports and Railways Authority  
Israel

**F. Boland**  
Chairman  
Port of Cork  
Ireland

**R. Ted Bottiger**  
Commissioner  
Port of Tacoma, USA

**Joseph G. Cocchiara, Jr.**  
Port of New Orleans  
USA

**Bernard Coloby\***  
Port of Le Havre  
France

**D.G. Cowie**  
South Port New Zealand Ltd.  
Bluff, New Zealand

**Nouhoum Diop**  
Port of Dakar  
Senegal

**Y. Guillemot**  
Port of Nantes/St. Nazaire  
France

**John Hirst**  
The Association of Australian Ports  
and Marine Authorities (AAPMA)  
Sydney, Australia

**Terumi Iijima**  
Yokkaichi Port Authority  
Yokkaichi, Japan

**R. Jaeger\***  
US Representative of the Port of  
Amsterdam  
USA

**Assemian Kablankan**  
Port of Abidjan  
Cote D'Ivoire (Ivory Coast)

**Y. Kawasaki**  
International Port Cargo Distribution  
Association  
Japan  
Head Office Secretariat

**Joseph E. LeBlanc**  
Nesser, King & LeBlanc  
IAPH Legal Adviser  
New Orleans, USA

**Jean Mongeau**  
Port of Montreal  
Quebec, Canada

**John Morrison**  
Sydney Ports Corporation  
Australia

**Ritsuko Oharu**  
Nagoya Port Authority  
Nagoya, Japan

**Jose Perrot**  
Port of Le Havre  
France

**Andrea Riniker**  
Port of Tacoma  
Washington, USA

**Arie Sachish**  
Ports and Railways Authority  
Israel

**Ron Snodgrass**  
Westgate Transport Ltd  
New Plymouth, New Zealand

### ● Special Guests of Expertise

**Capt. M. Pouliot**  
President  
International Maritime Pilots  
Association  
Canada

**Hans J. Roos**  
International Harbour Masters  
Association  
Germany

### ● IAPH Head Office

**Hiroshi Kusaka**  
Secretary General  
Tokyo, Japan

**R. Kondoh**  
Deputy Secretary General  
Tokyo, Japan

**Kimiko Takeda**  
Tokyo, Japan

**Hiroyuki Nagai**  
Tokyo, Japan

### ● IAPH Foundation

**Konosuke Onso**  
Tokyo, Japan

### ● Port of New Orleans Corporate Communications

**Jim Reese**  
**Paul Dauphin**

### Regrets and last minute cancellations

### ● EXCO Members

**Robert Cooper**  
Immediate Past President  
Ports of Auckland Ltd.  
New Zealand

**A Harbani**  
Indonesia Port Corporation II  
Indonesia

**Goon Kok Loon**  
PSA Corporation  
Singapore

**Lillian Borrone**  
Port Authority of NY & NJ  
USA

**M S Ravenscroft**  
Associated British Ports  
London, UK

**Oliver F.L. Yu**  
Kaohsiung Harbors Bureau  
China

### ● Non-Exco members

**F.J. Gauze**  
Secretary General  
Port Management Association of West & Central  
Africa  
(PMAWCA), Lagos, Nigeria

**Alex Kabuga**  
Kenya Ports Authority and  
Port Management Association of Eastern &  
Southern Africa  
(PMAESA)  
Mombasa, Kenya

**Lanyrod J. Mwangola**  
Kenya Ports Authority  
Mombasa, Kenya

## Bursary Recipient Announced

**M**R. Goon Kook Loon (PSA Corporation), Chairman of the IAPH Committee on Human Resources, has recently approved the following individual as recipient of the IAPH Bursary.

**Mr. Shakeel Goburdhone**, Civil Engineer, **Mauritius Marine Authority** to attend the Port Planning and Operations course at IPER, Le Havre for the period 8-19 June 1998.

# Trade Facilitation Committee-Minutes of the Meeting

## 26 March 1998 at the Port of Le Havre

### Present

**Chairman:** **Emili Arbós**  
Port of Barcelona Authority  
**Santiago Milà**  
Port of Barcelona Authority  
**Paul Scherrer**  
Port of Le Havre  
**José Perrot**  
Port of Le Havre  
**Linda Douet**  
Port of Le Havre  
**Ian Flanders**  
Port of London Authority  
**Assemian Kablankhan**  
Port of Abidjan  
**E.-Mihaita Visoianu**  
Constanza Port Administration  
**Ionica Bucur**  
Constanza Port Administration  
**Peter Burkert**  
DAKOSY (Hamburg)  
**Alan Long**  
Port of Felixstowe



### 1. Agenda & Opening Remarks

The Chairman welcomed everybody to the meeting, and expressed his sincere gratefulness to Mr. Paul Scherrer for his kind invitation to hold our meeting in Le Havre, addressed to us during our last meeting in Barcelona.

The Chairman also thanked Mr. Jose Perrot for attending the meeting, and all Le Havre team for their helpful co-operation in the organisation of the meeting.

Afterwards the Chairman referred to the apologies received for absence to this meeting from almost all the other members of the Committee: Marielle Stum (Inrets), Bruno Carpentier (Port of Marseille), Eric Loui, (Port of Singapore), Rick Pearce (Fraser River Harbour Commission), Hiroshi Koike, (Yokohama), Michael Vassiliades (Cyprus), Claude Mandray (Logistrade-Paris), John K. Hirst (Sydney).

The Chairman also informed that Mr Smagghe, President of IAPH, had been officially invited to attend totally or partially the meeting. Mr. Perrot informed of a telephone call from Mr. Smagghe, apologising for not attending the meeting due to previous commitments.

At this stage, the Chairman gave a warm welcome to the 3 new people joining the Committee. He therefore introduced Mr. Emil-Mihaita Visoianu, new General Manager of the Port of Constanza and Mr. Ionica Bucur, Marketing Manager of the Port of Constanza, expressing the gratitude of all TFC members to Mr. Aurel Carp, former General Manager from the Port of

Constanza for his contribution to TFC ongoing activities and for his attendance to all our previous meetings.

The last person introduced was Mr. Alan Long from the Port of Felixstowe, who will be attending the WCO Electronic Commerce Advisory Group on behalf of the IAPH.

After these presentations, the Chairman sought to obtain agreement from the Committee to the proposed Agenda and the sequence of Agenda Items, suggesting two changes: Agenda Item 7; point 2: "Presentation of EFI" to be done immediately and point 3 presentation of HPS/ADEMAR Informatic System to be done by the end of the meeting.

The agenda was approved in these terms.

Accordingly, Paul Scherrer introduced Mr. Yves Leon who made a presentation of the Electronic Formula Information (EFI).

Mr. Yves Leon provided all TFC members attending the meeting with a full set of information specially prepared for the occasion. The presentation was divided in two parts in accordance with the following topics: EDI and Internet (State of the Art and Prospects), and Dangerous Goods management at the Port of Le Havre (Electronic Forum Interchange).

The first topic was dealt with through four chapters. One included the definitions (EDI context), following with a second chapter on EDI-Internet complementary view. The third one developed the topic Standards and Architectures describing the present and future stan-

dards and E-business and architecture. The final chapter treated the matter of safety and security.

As per the Dangerous Goods management, Yves Leon called for attention to three basic points: better control of the risk; local, national, European regulations; management of the information flow. He also talked about EDI/EFI in the following context: EDI as Electronic Data Interchange between companies, between computers, between applications; and EFI as Electronic Form Interchange from PC applications, with EDIFACT translating runtime and with communications interfaces (X400 or Internet).

Finally, a very interesting practical demonstration was made, concluding with a debate among all the presents.

The Chairman thanked Mr. Leon for his excellent presentation of the subject, and moved to the next point in the Agenda.

### 2. Reports to the Committee

The minutes of the Barcelona TFC meeting were read by Santiago Mila and were adopted with minor amendments suggested by Paul Scherrer.

The Chairman presented his report prepared for the EXCO Meeting that will take place in New Orleans in late April.

In third place, and regarding the Technical Committee's Terms of Reference, the Chairman exposed the action done by TFC Secretariat informing IAPH President, Vice-President and Secretariat about TFC members' concern on the TOR of the new Trade Policy



Committee and a possible overlapping of their future activities with the Trade Facilitation Committee's ongoing activities which are clearly explained in the work programme included in the above-mentioned Chairman's report to the ExCo meeting.

The TFC has not yet received a proper official answer after the information exchanged and the personal meetings held on this matter with the IAPH maximum representatives, in which our clearly stated concern seemed to be shared.

José Perrot then expressed that the IAPH is of course concerned about any overlapping or duplicity between committees' activities and explained that this is one of the main objectives of IAPH Task Force 2000, adding that TFC should not be worried about this matter which will be solved in the very next future, encouraging TFC to go ahead with their ongoing activities.

Ian Flanders said that we should once more and for the last time express our concern, emphasising that our aim is always to collaborate with our colleagues and all other IAPH Technical committees.

Emil-Mihaita Visoianu also supported the idea that was welcomed by the rest of TFC members.

In order to conclude with this subject it was unanimously agreed that TFC Secretariat will send a letter to the IAPH high officers with the following contents:

- TFC has expressed its concern and is sure that Task Force 2000 will take care of this subject and will avoid any overlapping regarding the work programmes.
- In order to help as much as possible to solve the above mentioned problem, TFC has decided to eliminate from its work programme the item "traffic statistics" so that the Trade Policy Committee can take full responsibility on this subject. TFC will contact them and send them all the information about this matter as well as offer its full co-operation for a smooth migration.
- TFC wants to conclude with this debate, as its major concern is to put all the effort in its ongoing activities.
- TFC wants to point out very clearly that it is always open and ready to co-operate with all other IAPH Technical Committees.

*Action: TFC Chairman.*

### 3. Membership of the TFC

The Chairman referred to the presentations made at the beginning of the meeting, and welcomed again the above-mentioned new members of the

Committee.

Regarding the incorporation to the Committee of the Port of Felixtowe, the Chairman informed that he had delivered a letter to Mr. Twedle of the WCO requesting that Mr Long attend the WCO Electronic Commerce Advisory Group on behalf of the Chairman himself, as Liaison Officer between the IAPH and the WCO.

This was considered to be really good news for the Trade Facilitation Committee, because the follow-up of Electronic Commerce developments has been (and it will continue being) a key matter for the TFC, and therefore Alan Long's attendance to this group and his subsequent reporting to the TFC and -by extension- to all IAPH organisation will be highly appreciated.

Then the Chairman informed that during his last meeting with Mr Caselli of the Port of Genoa (Italy) he explained to him the TFC activities, and Mr. Caselli expressed a high interest in them, so Port of Genoa is now on the way to join the IAPH and subsequently the TFC.

### 4. IAPH Information Technology Award

Santiago Mila presented the leaflet produced by the Tokyo Secretariat. Its contents were carefully revised, and a special mention was made to the new category established for non-port organisations, that is, universities, institutes of transport, non-governmental organisations, and any other non-commercial institution dedicated to investigation, study and research in the field of maritime transport and the port industry.

The selection criteria for this second category entries will be as follows: innovation, interest for maritime transport and the port industry, and possible potential for implementation.

It was also agreed that all TFC members will send to the Secretariat a list of

possible candidates for this second category in order to send them the leaflet.

The post of the TFC in the selection committee was entrusted to Assemian Kablankan (Port of Abidjan), who kindly accepted the nomination.

Santiago Mila will deliver to Tokyo Secretariat all TFC members' suggestions in this regard, so that the mailing for both categories can be made as soon as possible.

*Action: TFC Secretariat*

### 5. Information Model

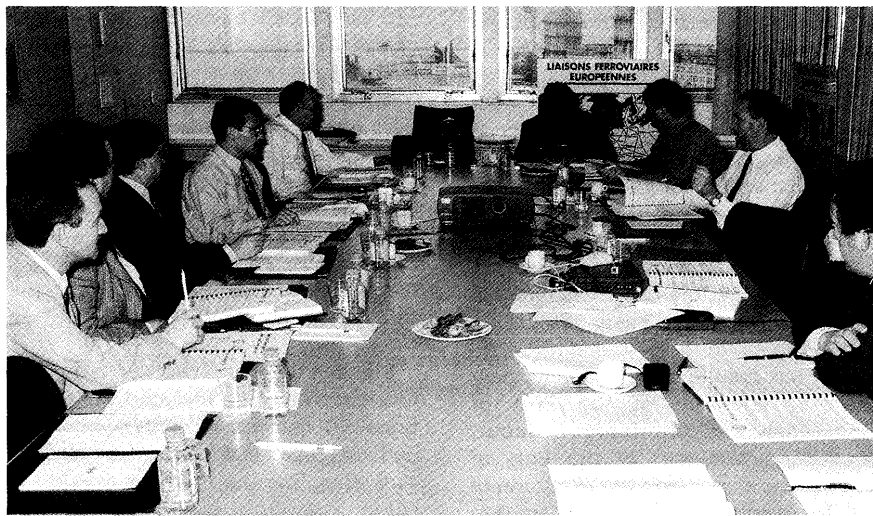
Santiago Mila informed of his contacts with Marielle Stum, as decided in the Barcelona meeting, in order to have a presentation and the results of the questionnaire Cost 330. She said she would be ready to provide TFC with that information as soon as works were finished, expected for late June.

### 6. Traffic Statistics Exchange

The Chairman informed again about the proposal of an IAPH Statistics Service and referred to the current situation about this matter. He then asked for the opinion of the members in the meeting. Paul Scherrer expressed his opinion that this subject would fit better in the activity of the Trade Policy Committee and, in this sense, as TFC main concern is to avoid overlapping, he suggested that this matter be under said Trade Policy Committee work programme.

The suggestion was fully supported by the presents, asking the TFC Secretariat to contact the Trade Policy Committee accordingly, providing them with all the information and work so far carried out by the TFC in this regard, and expressing the TFC's willingness to help and cooperate.

Santiago Milà presented the MARIN-FO Project, led by the U.N. Economic



*Trade Facilitation Committee meets in Le Havre on March 26*

and Social Commission for Asia and the Pacific. He explained that the aim of the project is trying to develop standard uniform MARINFO formats for use in the Internet websites of each national focal point and maritime transport related companies and organisations. In accordance with the agreement previously adopted, this information will be delivered to the Trade Policy Committee so that a due follow-up of the matter can be made.

*Action: TFC Secretariat.*

## 7. Regional and Information Technologies Developments

The Chairman, on behalf of all TFC members attending the meeting, thanked Mr. Michael Vassiliades, Cyprus Port Authority general Manager, and Mr Christodoulou-Papayianni for providing TFC the interesting document on Port Operations System which is included in the dossier.

## 8. New Electronic Commerce Developments

Santiago Mila presented the most relevant news about the Bolero Project, focusing on the Launch Programme under way, a guide for companies interested in participating in the Bolero launch.

In this regard, he informed of the trip made with Mr. Josep Oriol (Information Systems Director of the Port of Barcelona Authority) to meet Bolero management team in London. Also commented was the import/export chain which might be established in Barcelona in close connection with the Bolero launch programme.

Concerning the State of the Art, and as agreed in TFC previous meeting, a document prepared by Santiago Milà and Dae Won Choi, a Senior Korean economist working for the UN in co-operation with the WTO was presented as a synopsis of International Organisations and activities in relation to electronic commerce.

Also in reference to the WTO a brief document was handed to the presents as a summary of the contents of the "Electronic Commerce and the role of the WTO", paper which had just been released a few days before. The summary reflected a proposed definition of Electronic Commerce as "the production, advertising, sale and distribution of products via telecommunication networks", the different stages in the electronic transactions, and the main issues of the matter.

Paul Scherrer mentioned the report prepared by French Administration on electronic commerce pointing out as a substantial matter that encryption had

been legalised under certain circumstances.

The Chairman then asked Paul Scherrer if he could provide the TFC Secretariat with this document, encouraging the rest of TFC members to send all kind of relevant information they could get on this matter.

It was also discussed the problem about the non-existence of a clear definition of Electronic Commerce. TFC will work on this subject and during the next meeting it will try to reach an agreement on a definition.

Afterwards Santiago Mila presented different documents included in the dossier produced by UNCEFACT Electronic Commerce Ad Hoc Group, paying special attention to the SITPRO UK Paper named "Electronic Commerce need for a global facilitation approach".

Concerning the UNCTAD invitation to participate in their meeting to be held in Lyon next November 1998, the TFC proposal is upon the work of the Barcelona IAPH Electronic Commerce Seminar to be held immediately before.

*Action: Secretariat.*

Santiago Mila went on explaining the works on electronic commerce currently carried out by the Paris-based ICC (International Chamber of Commerce), a project relying on three working parties on digital authentication, electronic terms, and electronic trade practices, and defining the electronic trade & settlement complete scheme.

A two-page document was handed to the presents as a complement to the documentation contained in the dossier. The briefing consisted of a quick overview of the Electronic Commerce Project and the GUIDEC, for the presents to have a rough idea about.

Santiago Mila also commented a very interesting document -included in the dossier- that is the report of the Joint Technical Committee of the International Organisation for Standardisation (ISO) and the International Electrotechnical Commission (IEC).

Finally, a diskette with a Simple EDI full report produced by UN/CEFACT was delivered to all TFC members present at the session.

## 9. IAPH Electronic Commerce Seminar

The Chairman informed about the current situation of the works related to the organisation of this seminar. First of all, he informed that the three main topics of the Agenda, as had been suggested during the Barcelona Meeting, had been delivered to many people and organisations involved in electronic commerce in order to get their opinion about them.

The main topics are as follows:

- Electronic Commerce and EDI in the Port Community.
- Electronic Customs Clearance.
- Electronic Commerce and Internet.
- Practical implementations.
- Legal framework and security measures concerning Electronic Commerce.

All the suggestions and opinions received were analysed and will be taken into account when the agenda is definitively closed. Jose Perrot suggested that the target audience for the seminar was defined. It was agreed that the target audience will be mainly composed by Port Authorities, Port Community members like freight forwarders, shipping agents, customs brokers, etc., and of course it will be open to public or private companies involved in the international trade.

It was also fixed that the Seminar will take place in Barcelona the 5th and 6th of November 1998.

The structure of the Seminar will be organised, in principle, in 5 main two-hour sessions. Each session will be presented and moderated by one relevant person introducing three or four speakers who will speak for twenty minutes each. A debate will follow at the end of each session.

It was also discussed the possibility of accepting private presentations during the Seminar, so that different companies could rent a space to show their products.

Everybody agreed that TFC will hold its next meeting in Barcelona one day before the beginning of the Seminar, and that Trade Policy Committee and any other IAPH Technical Committee will be invited to also hold their own meetings there.

Likewise, other International Organisations such as UN/CEFACT, Internet, Chamber of Commerce, UNCTAD, World Customs Organisation, etc. will be invited to the Seminar to present their work on this field.

The next step to be done is that each member of the Committee will make a first proposal about possible speakers and the sub-topic they could talk about. This information will also be sent to Mr. Baratz, Trade Policy Committee co-ordinator, so that it is discussed during its next meeting in New Orleans and we can later have their proposals.

Tokyo Secretariat will also be informed about these discussions and we will treat with them how to handle the budget for the Seminar. It was by all the presents understood that it will be covered by the attendance fees, sponsors, space commercialisation, and also by the IAPH itself.

As none of us can travel to New

Orleans for the IAPH ExCo Meeting, Mr. Kondoh will be asked to take care of informing IAPH executive officers and technical committees about the Seminar dates, its contents and our warm welcome to any suggestions about topics or speakers that in the short term they may propose to us.

*Action: TFC Secretariat*

#### **10. Involvement with other Organisations**

Santiago Mila informed about the reports from different organisations contained in the dossier for the meeting, including the latest document on the revision of the Kyoto Convention (report of the 13th meeting).

He also presented the latest developments at the UN/CEFACT, highlighting the final report of the UN/LOCODE Ad Hoc Working Group, proposing a revised version of UN Recommendation 16: UN/LOCODE-CODE FOR PORTS AND OTHER LOCATIONS, for adoption by CEFACT Plenary.

Santiago Mila also explained that on behalf of the IAPH he was attending the

World Trade Organisation Symposium on Trade Facilitation held in Geneva last 9th-10th March 1998. The objective of the Symposium was to help identify the main areas where traders face obstacles when moving goods across borders, providing a direct interface between the practical level (traders) and the trade policy level. A full report of the Symposium will be delivered to the IAPH Secretariat in Tokyo, and copies of any of the conference are available upon request to Barcelona TFC Secretariat.

*Action: TFC Secretariat.*

#### **11. Work Programme**

The Chairman referred to the Work Programme included in the Chairman report to the ExCo meeting which has already been commented in item 2 of the Agenda.

#### **12. Special Task Force IAPH 2000**

As previously agreed in item 2 of the Agenda, TFC is sure that the Task Force 2000 will take care of the overlapping between Technical Committees Terms of Reference, as well as other very important matters for the future of our organisation. TFC is once more offering its full support and co-operation to the Task Force 2000 Group activities.

#### **13/14. Any other business.**

##### **Arrangement for next meeting**

As previously decided, next meeting will take place in Barcelona on 4th of

November 1998, immediately before the Electronic Commerce Seminar.

The meeting closed at 17:00 pm on 26th of March 1998, and then all TFC members attending the meeting moved to Soget Central Office in order to attend the presentation of Le Havre Port Services.

Mr. Jacques Ritt welcomed all TFC members to Soget Central Office in LeHavre and he made a presentation about Le Havre Port Services (HPS).

First he introduced the company explaining that it had been created in 1983 as a Private Public Company whose shareholders are Professional Associations members of U.N.E.P. They are 30 employees serving 280 customers. Soget S.A. is in charge of Havre Port Services (HPS).

He continued saying that the HPS

Communication Forum offers specific VAN (Value Added Network) services and a single access point for all companies

wishing to dialogue with a member of Le Havre port community. It is a veritable network administrator and a simple gateway accessible by microcomputer, EDI link or via interface with the larger systems.

The Chairman thanked Mr. Jacques Ritt for his presentation and transmitted to all people Mr. Paul Scherrer's invitation to a joint visit tour to the Le Havre Port the following morning at 9:00 am. Just before the visit Mr. Andre Graillot, Le Havre Port Director, will be addressing a few words to all TFC members and will explain the future projects of the Port of Le Havre.

## **WTO Trade Facilitation Symposium**

**Geneva, 9-10 March 1998**

**Report by Santiago Mila**  
IAPH Trade Facilitation Committee  
Vice Chairman, UN CEFACT

**A**N important Symposium on Trade Facilitation was organized by the WTO on 9-10 March in Geneva. Leading corporations and industrial groups presented the practical problems which traders face when moving goods across borders. In addition, a number of non-governmental organizations representing trade and transport explained their role in international trade. The intergovernmental organizations including UN/ECE, UN/ESCAP, UNCTAD, ITC, WCO, IMF, the World Bank and WTO described their activities in the field of facilitating and simplifying trade.

The Symposium referred to the WTO Singapore Ministerial Declaration of 1996 to "undertake exploratory and analytical work drawing on the work of other relevant international organizations, on the simplification of trade procedures in order to assess the scope for WTO rules in this area".

Exploratory work already carried out by WTO included a background paper on work achieved in the area of trade facilitation by other organizations including UN/ECE. The Symposium aimed at providing a deeper understanding of nature of administrative barriers, with the objective of identifying

the main areas where traders face obstacles when moving goods across borders, and also sought to provide an interface between the practical level and the trade policy level.

In addressing the Symposium, the WTO Director-General, Mr. Ruggiero, declared that, as the classical trade barriers -tariffs and quantitative restrictions- had reached the lowest levels ever as a result of the Uruguay Round, attention had turned to the costs resulting from documentation requirements, procedural delays and the lack of transparency and predictability in the application of governments rules and regulations.

Representatives from trade and industry confirmed in their presentations the practical problems encountered by the parties involved in international trade. At the same time, the intergovernmental and non-governmental organizations described their ongoing activities aiming at facilitating international trade transactions.

The WTO concluded by stating that a variety of problems were still to be solved in international trade but that the Symposium had provided a basis for future analytical work on trade facilitation.



## ACTIVITIES REPORT

# London Convention Scientific Group, 21st Meeting

Cape Town, South Africa, April 6-9, 1998

Report of

**Geraldine Knatz, Chairman**

**Richard Peddicord, Scientific Advisor**

Dredging Task Force

International Association of Ports and Harbors

**T**HE twenty-first meeting of the London Convention 1972 Scientific Group (LC/SG21) was held at the University of Cape Town Breakwater Facilities in Cape Town South Africa 6-9 April

1998. The meeting was attended by 39 representatives and alternates from 18 Contracting Parties, 7 observers from 5 non-contracting parties, and 8 observers from 6 non-governmental organizations (NGOs). The NGO representatives included Ms. Geraldine Knatz - Chairman, and Mr. Richard Peddicord-Scientific Advisor, of the International Association of Ports and Harbors (IAPH) Dredging Task Force.

Major agenda items included technical cooperation and development of waste-specific assessment guidance for assessment of wastes on the "reverse list" other than dredged material (for which the Dredged Material Assessment Framework has already been adopted). Several issues potentially important to the future of dredged material management under the Convention were discussed. This report summarizes the actions of LC/SG 21 and their implications for IAPH.

## 1. KEY ISSUE FOR IAPH - Action Lists

LC/SG21 devoted little specific attention to action lists or action levels (e.g., concentrations of chemicals or other indicators used to determine the acceptability of a waste for ocean dumping). The following papers related to action levels were presented and received with some discussion but little controversy:

- "Underlying Principles for Describing National Action Levels" presented by IAPH
- "Application of Biological Assessment Techniques" presented by the Netherlands
- "Comparison of Sediment Toxicity with Predictions Based on Chemical



Geraldine Knatz



Richard Peddicord

Guidelines" presented by the United States

## 2. OTHER ISSUES OF INTEREST

### 2.1 Waste-Specific Guidance

LC/SG 20 recommended the Consultative Meeting adopt waste-

specific assessment guidance on (1) Inert, inorganic material of geological origin, (2) Bulky items primarily comprising iron, steel, concrete and similarly unarmful materials, and (3) Fish waste, or material resulting from industrial fish processing operations. The Consultative Meeting requested the Scientific Group to construct the guidelines in two-column format parallel to earlier drafts so that changes would be apparent. LC/SG21 performed this task and forwarded to the Consultative Meeting for consideration for adoption waste-specific assessment guidance for:

- Inert, inorganic geological material
- Bulky items primarily comprised of iron, steel, etc.
- Fish waste, or materials resulting from industrial fish processing operations

Waste-specific guidance continued for further consideration by LC/SG 22 include:

- Sewage sludge
- Vessels
- Platforms or other man-made structures at sea
- Organic material of natural origin.

### 2.2 Technical Cooperation

IMO/UNEP/IOC, in close collaboration with the Government of South Africa, held a Workshop on Waste Management and Marine Pollution Prevention in Southern and Eastern Africa from 1-4 April in Cape Town. Over thirty delegates from 15 countries participated in the Workshop. This was the first such technical cooperation workshop held under the LC. The extensive feedback from participants will have a major influence on the con-

tent of a similar workshop planned for Asian and Pacific countries in Australia in conjunction with LC/SG 23 in 2000.

### 2.3 Environmental Measurement Techniques Under Development

The United States described research on a biomarker-based screening assay for measuring the concentration of certain organic chemicals in sediments at roughly one-tenth the cost of traditional methods. With further development, this has the potential to become widely used and offer analytical savings to ports and others when analysis for certain compounds is required. However, the process is still developmental, and IAPH should remain alert to any pressures for premature implementation on this new technique.

### 2.4 Dredging Activities

Several organizations made presentations in addition to those mentioned above related to IAPH interests in dredged material management, including:

- United States (Corps of Engineers) - announced the availability of (1) Guidance for subaqueous dredged material capping, and (2) Environmental effects of dredging and disposal literature data base.
- Permanent International Organization of Navigation Congresses (PIANC) - announced the availability of (1) Guidelines on handling and treatment of contaminated dredged material from ports and inland waterways, and (2) Dredged material management guide.
- Central Dredging Association (CEDA) - provided each participant with copies of the third of seven guides on environmental aspects of dredging. This guide, entitled "Investigation, Interpretation and Impact" summarizes pre-dredging characterization of materials and potential placement sites. CEDA also announced the 15th World Dredging Conference to be held in Las Vegas, Nevada, USA, June 28 - July 2, 1998.

## 3. LC/SG FUTURE WORK PROGRAM

Activities on the Work Program for LC/SG 22 of particular interest to IAPH include:

- Waste-specific assessment guidance. As guidance is developed for the remaining categories of waste, it will be important to guard against language or concepts that would be contrary to IAPH interests if interjected into the Dredged Material Assessment Framework in the future.
- Underlying principles for describing

action levels. Action levels will play an important role in dredged material regulation under the LC. If not established on a sound basis and implemented properly, they are likely to be expensive, unnecessarily restrictive and of little environmental benefit. The IAPH Scientific Advisor, Dr. Richard Peddicord, is participating in a by-invitation-only IOC/UNEP/IMO GIPME Workshop on Marine Sediment Quality Guidelines that will complete its work in late 1998. It appears that LC/SG 22 will be asked to endorse the report of this Workshop as the SG guidance on action levels. Therefore, it will be important for IAPH to participate in the completion of this report

- LC Terms of Reference. These are out of date and need to be consistent with the 1996 Protocol. However, consideration of the terms also provides a potential opening to de facto broaden the scope of the Convention.
- Risk as assessment procedures in waste management. Quantitative risk assessment is being touted as a new basis for environmental evaluations. While the approach has merit, it can easily be misused, and distinct advantages for ports over the present approach to environmental assessment have yet to be demonstrated.
- Technical cooperation. This offers IAPH the opportunity to have a positive influence on the attitude of developing countries toward their ports through participation in environmental training activities.

#### **4. FUTURE IAPH ACTIVITIES**

##### **4.1 Waste-Specific Guidance**

As guidance is developed for other listed materials, IAPH should remain vigilant to avoid LC/SG acceptance of language or concepts that could later be leveraged into the dredged material guidance to its detriment.

##### **4.2 Action Levels**

IAPH should continue to see that action level guidance remains flexible, considers bioavailability, allows effects-based evaluations (e.g., direct toxicity tests of the dredged material in question), and provides for management of material to make ocean dumping acceptable. IAPH should participate in completing the report of the IMO/UNEP GIPME Workshop on Marine Sediment Quality Guidelines later this year.

##### **4.3 IAPH Scientific Papers**

IAPH should identify opportunities to maintain its status as a respected contributor to the SG, and to enhance the image of the ports as leaders in environmental protection. The future work pro-

gram provides potential opportunities to submit papers demonstrating port leadership in:

- Impact hypotheses – Description of use of impact hypotheses in dredged material disposal site selection
- Waste management options – description of theory and practice of evaluating dredged material placement options, including beneficial uses, to identify the environmentally preferable alternative consistent with the dredged material assessment guidance
- Use of Geographical Information Systems (GIS) in dredged material management
- Application of quantitative risk assessment in dredged material management

#### **5. CONCLUSIONS**

- IAPH is respected as a valuable con-

tributor to the work of the SG. This status should be carefully maintained because dredged material is by far the largest class of material covered by the LC, and thus will always be a subject of SG interest.

- IAPH should encourage member ports to urge their national delegations to the LC and SG to support IAPH positions, especially on not using action levels on a pass-fail basis, and avoiding port responsibility for upstream control of pollution sources for dredged material.
- Action levels, and perhaps alternative waste management options and impact hypotheses, are the scientific topics with the greatest potential to affect IAPH interests in the near future. IAPH should act to protect the interests of ports as these topics are considered by the LC/SG.

### **SCIENTIFIC GROUP – 21st Meeting 6-9 April, 1998 Agenda Item 3.1**

## **WASTE ASSESSMENT GUIDANCE**

Essential Characteristics of Action Levels

Submitted by the International Association of Ports and Harbors

### **ROLE of the International Association of Ports and Harbors**

The International Association of Ports and Harbors (IAPH) represents the worldwide port industry, with over 400 member ports in 83 nations. Since 1980 IAPH has been an active participant in the work of the London Convention regarding the management of dredged material for the protection of the marine environment.

The ports of the world play a vital role and serve important national, regional and global interests in carrying out waterborne trade and commerce. This intra- and inter-national commerce is essential to the national economies of the port countries, as well as countries that rely on the transportation services they provide. The port operations are not only essential elements of many national economies, but are also a fundamental basis for commercial, legal, and political relationships between states. Port organizations are especially important for many developing countries that rely heavily on marine commerce to sustain their economic growth and development.

Most of the international ports of the

world are located near the sea. They have a universal problem of continuous sediment deposition in waterways, which must be dredged periodically to maintain the water depths required for navigation of the vessels engaged in international trade. The volumes of sediment that must be dredged for each port may range in the hundreds of thousands to millions of cubic meters of sediment annually. The vast majority of this sediments is essentially free of contamination and can be used for a variety of beneficial purposes or can be placed on land or in the ocean without environmental concern.

### **IOC-UNEP-IMO-GIPME Workshop on Marine Sediment Quality Guidelines**

The sponsoring organizations convened a Workshop on Marine Sediment Quality Guidelines at IMO in May of 1997. The purpose was to develop scientifically sound concepts and principles for establishing sediment quality guidelines to distinguish among natural conditions, anthropogenic disturbances and adverse effects for regulatory purposes. The concepts and principles from the Workshop were summarized

for the Scientific Group in LC/SG 20 Working Paper 4. The Workshop participants are now in the process of preparing a final report describing their findings, conclusions and recommendations.

IAPH commends the leaders of IOC, UNEP, IMO and GIPME who recognized the need for such a Workshop and took the initiative to sponsor and organize it. IAPH also wishes to acknowledge the scientists who participated in the Workshop and are preparing the report on the Workshop findings. They are recognized leaders in the various technical fields necessary to properly address a subject as complex as development of scientifically sound marine sediment quality guidelines. IAPH appreciates the time and effort contributed by the individuals who organized and participated in the Workshop, and the support of their governmental, academic and private organizations that makes the work possible.

The findings of the Workshop provide an objective scientific assessment of an important issue before the Scientific Group. The stature of the authors, the importance of the subject, and the timelines of the subject all urge the Scientific Group to seriously consider its findings in reaching decisions on action level guidance.

## Endorsement of Workshop Concepts and Principles

The concepts and principles from the Workshop are consistent with many submissions on marine sediment quality guidelines made to recent Scientific Group meetings by a number of Contracting Parties, Observer States and Non-governmental Organizations. IAPH considers the concepts and principles fundamental to development of scientifically sound and practically implementable sediment quality guidelines, and urges the Scientific Group to incorporate them in its decisions on action levels. Some of the Workshop concepts and principles IAPH considers most important to the development of workable action level guidance include:

- **Present knowledge does not allow development of scientific numerical sediment quality guidelines for global application.** The complexities of physical-chemical-biological interactions in sediment and the interplay with site-specific environmental conditions are insufficiently understood to develop scientifically sound sediment quality action levels applicable world-wide. It may be possible to develop such values for application

within a single watershed or perhaps a regional area with reasonably uniform sediment and environmental characteristics. The Scientific Group guidance should ensure that action levels are developed with a geographic focus consistent with sound science.

- **Globally applicable and useful guidance on sediment management in the absence of sediment quality action levels is available in the WAF and the Dredged Material Guidelines.** The Scientific Group should take every opportunity to encourage widespread use of this guidance in the absence of sediment quality action levels while scientific understanding advances, and in conjunction with action levels as they are developed and implemented.
- **Numerical sediment quality guideline development can be initiated as sufficient scientific knowledge becomes available, but the development process must be flexible enough to accommodate whatever changes in values and implementation procedures may be required as a result of continuing scientific advances.** In a field as young and complex as predicting environmental effects of sediments, a rigid and inflexible system for either developing sediment quality action levels or implementing them in a regulatory program would be most unfortunate. The Scientific Group guidance should ensure flexibility and periodic technical review of the processes for both developing and implementing sediment quality action levels.
- **Numerical sediment quality guidelines should not be rigid standards used as the sole basis for evaluating a sediment.** Numerous assumptions and simplifications are an inescapable part of any effort to express all the relevant physical-chemical-biological interactions in a single numerical value. In addition to scientific considerations, regulators must also consider socio-economic implications of their decisions. Therefore, the Scientific Group guidance should ensure that sediment quality action levels do not become de facto pass/fail standards, but are used on conjunction with other considerations in making regulatory decisions.
- **Sediment quality guidelines must be based on a holistic integration of physical, chemical and biological interactions.** The Scientific Group guidance should ensure that sediment quality action levels are devel-

oped in a way that gives full consideration to the complex interactions of physical, chemical and biological processes in the ocean, rather than only the level of contamination in sediment.

- **Evaluation of potential ecological (as distinct from human health) effects should focus on maintaining populations rather than individual organisms.** Certainly in the case of rare, threatened or endangered species, individual organisms are of concern, since effects on a few individuals might adversely affect the maintenance of local populations of such species. However, for most species this is not the case, and a focus on individual organisms would provide little ecological benefit but could result in unjustifiable social hardships. The Scientific Group guidance should ensure that action levels are developed with a focus on ecological populations so as to prevent harm to both the environment and society.
- **Numerical sediment quality guidelines should be compatible with use in the risk assessment process.** Action levels should be developed in such a way that they can be implemented in consideration of the potential exposure of organisms to sediment-associated contaminants under the conditions at a proposed ocean placement site. Exposure considerations will become increasingly important as the risk assessment process is refined into a practical tool for permit evaluation. The Scientific Group guidance should ensure that sediment quality action levels are developed in a manner consistent with use in the evolving risk assessment process.

## Conclusions

IAPH commends the sponsors and scientists who participated in the IOC-UNEP-IMO-GIPME Workshop on Marine Sediment Quality Guidelines, and urges the Scientific Group to adopt their concepts and principles in developing sediment quality action level guidelines. The development of numerical sediment quality action levels holds promise for regulatory programs, and should be pursued. However, as evident from the Workshop concepts and principles, development or use of such action levels beyond the presently limited scientific knowledge would be unjustified, indefensible, and most unfortunate.



## The Global Alliance Update

**I**N September 1996, a special article entitled "Birth of Global Partnership Era To Transform World Shipping" was featured in this journal by the courtesy of the Shipping and Trade News. Again in this issue, through the special arrangement of Tokyo News Service, the publisher of the Shipping and Trade News, we feature an updated report on the Alliance for the benefit of our readers.

*The IAPH Head Office*

## Obituary

### Mr. J.H.W. Cavey

**T**HE IAPH Head Office has recently learned from Mrs. Eileen M. Cavey that her husband Mr. J.H. W. Cavey, an Honorary Member of IAPH from Ottawa, Canada, passed away on February 25, 1998 after a very short illness.

Mr. Cavey, a member of the National Harbours Board, Canada, played a leading part in the growth and improvement of IAPH in the 60s and 70s. He served the Association as Alternate Director representing Canada, Exco Member, Chairman of the Constitution and By-Laws Committee and as a member of the Ways and Means Committee. In particular, Mr. Cavey led the task of reviewing our Constitution and By-Laws and contributed to their improvements. He participated in eight consecutive conferences of IAPH (1965 in London, 1967 in Tokyo, 1969 in Melbourne, 1971 in Montreal, 1973 in Amsterdam, 1975 in Singapore, 1977 in Houston, 1979 in Deauville) and served on various committees at these conferences.

In 1981 on the occasion of the 12th Conference in Nagoya, he was made an Honorary Member.

IAPH Secretary General Mr. Kusaka sent a letter of condolence to Mrs. Cavey and expressed the deep appreciation of IAPH for the outstanding contribution Mr. Cavey made to the work of IAPH.



## Visitors

**O**N Monday, 6 April, at the IAPH Head Office, **Mr. Coll M. Hunter**, Senior Advisor and ACIS Coordinator of **UNCTAD**, conducted a demonstration of the systems, which is suited to the management of port and/or railway operations in developing countries. Attending the demonstration performed on a laptop PC, were **Mr. S. Sasaki**, a staffer of the International Business Office of the Bureau of Ports and Harbours, Ministry of Transport, **Mr. T. Ikeda**, Director, Social Infrastruc-



*Mr. Hunter demonstrates ACIS systems in the IAPH Office*

ture, Japan International Co-operation Agency (**JICA**), Mr. Ito, Director, Japan Association for the Simplification of Trade Procedures (**JASTPRO**) and **CEFACT Vice Chairman for Asia**, and **Mr. S. Suzuki**, Overseas Coastal Area Development Institute of Japan (**OCDI**). ACIS has been developed by UNCTAD as a viable tool for the management of port and railway operations. Its most significant feature is that it works on a PC basis rather than being linked to a mainframe computer system, and is actually being adopted by numerous railways in eastern and southern Africa. Mr. Hunter in Tokyo in the second week of April.

## Membership Notes:

### New Members

#### Regular Members

##### Xiamen Harbour Bureau [Regular] (China)

Address: 127 Dongdu Road, Harbour Building, 361012 Xiamen

Mailing Addressee: Mr. Huang He Rong  
Chief Executive Officer

Tel: 86-592-6013616

Fax: 86-592-6010034

##### Administracion Portuaria Bonaerense [Regular] (Argentina)

Address: Gilberto Gaggino s/n esquina Italia, (1925) Ensenada, Buenos Aires Province

Mailing Addressee: Ing. Jorge Oscar Ferrario,  
Administrador

Tel: 967-2-202083

Fax: 967-2-213805

#### Associate Member

##### Europe Combined Terminals (ECT) [A-1-1] (Netherlands)

Address: P.O.Box 7400, 3000HK Rotterdam

Mailing Addressee: Mr. Wouter den Dulk  
Chief Executive Officer

Tel: 31-10-491-6336

Fax: 31-10-491-6115

Chief Executive Officer: Mr. Wouter den Dulk  
Director, Corporate Communications:  
Mr. J. M. Dekkers

### Changes

##### Comeroon National Ports Authority [Regular] (Cameroon)

Mailing Addressee: Mr. Alphonse Siyam Siwe  
General Manager

General Manager: Mr. Alphonse Siyam Siwe

Deputy General Manager: Mr. Njoh Nseke

##### Cyprus Ports Authority [Regular] (Cyprus)

Tel: 02-756100

Fax: 02-765420

##### Port of New Orleans [Regular] (U.S.A.)

Board Members:

Chairman: Mr. Alden J. McDonald, Jr.

Vice Chairman: Capt. Mark Delesdernier, Jr.

Secretary/Treasurer: Mr. James M. Baldwin, Jr.

Members: Mr. Michael C. Sport

Mr. Donald "Boysie" Bollinger

Mr. Walter J. Boasso

Mr. Francis E. "Hank" Lauricella

## IMO MEETINGS

# Report on the Marine Environment Protection Committee, 41st session (MEPC 41)

By A. J. Smith, IAPH European Representative

**M**EP C 41 was held at IMO Headquarters, London, UK from 30 March to 3 April 1998, under the chairmanship of Mr Michael Julian (Australia).

The session was attended by delegations from 67 Member States, an associate Member, a UN Specialised Agency, three inter-governmental organisations and 29 non-governmental organisations, including IAPH.

In his opening remarks, the Secretary-General, IMO, stressed that the deliberations of MEPC 41 would place a significant emphasis on the importance of ports in the effective implementation of IMO's commitments to safer seas and cleaner oceans; and so it proved. The key discussion areas were the provision of adequate reception facilities at ports for MARPOL 73/78 wastes from ships; ballast water management; the use of anti-fouling paints; the prevention of air pollution from ships; and work carried out under the Oil Pollution, Response and Cooperation (OPRC) Convention.

## 2 Reception Facilities

It is a fact that IMO continues to receive reports of inadequate reception for ships' wastes notwithstanding the obligation freely undertaken by parties to MARPOL 73/78 to ensure their provision. Even worse, it appears that compliance with the specific measures attaching to Special Area status, leaves much to be desired.

There was no shortage of documentary or verbal input to discussion of the subject. From an IAPH standpoint, I felt it necessary to intervene to draw attention to the importance of keeping matters in perspective. Complaints of inadequacy, or availability for example, were often the result of ship/shore communication problems and the respective priorities of ships and ports as regards their actual operational requirements. Furthermore, the primary responsibility for ensuring compliance lay with Governments whose communications with their respective ports as to specific requirements which need to be put in place, were often dilatory to say the least. IAPH however, continued to be supportive and positive in facilitating the general availability of adequate

reception facilities.

At the behest of the Chairman, the Committee addressed the purported key issues of adequacy and remedial measures to be deployed; national approaches; the reporting process; and dissemination of information on availability of reception facilities.

MEPC 41 agreed that the detail of these matters should be addressed by a Port Waste Reception Facilities Working Group at MEPC 42 (2 to 6 November 1998). In the meantime, a Correspondence Group led by the United Kingdom will prepare a base document for consideration at MEPC 42 on the six tasks set out in the Working Group's terms of reference, as follows:-

- i) review existing definitions of adequacy of port waste reception facilities as stated in IMO publication Comprehensive Manual on Port Reception Facilities or any other publication and receive input from interested parties on the meaning of "adequate";
- ii) define the parameters for reception facilities based on the different types of ships' waste identified in the Annexes to MARPOL 73/78;
- iii) determine a methodology or generic action plan to assist countries to undertake a review of their port waste reception facilities with the objective of:
  - identifying any short fall
  - identifying practical problems ports face in developing or implementing port management strategies
  - identifying problems in relation to receiving, treating, collecting waste from ships including the interface between ships and waste reception facility providers and in disposing of waste.
- iv) develop measures to ensure improved communication between ships, ports and waste reception facility providers;
- v) develop criteria for the use of IMO in determining a list, for circulation, of ports with inadequate or no waste reception facilities;
- vi) develop a generic port waste management plan which could be used by the administration in any country to assist it in providing a nation-

al port waste reception strategy or national plan. This plan may be suitable for assisting ports in obtaining funding for the establishment of adequate port waste reception facilities;

- vii) provide an analysis of successful port waste reception regimes.

It is clearly essential for IAPH to provide a port-related input on these tasks to the Correspondence Group's base document as a matter of urgency.

## 3 Harmful Aquatic Organisms in Ballast Water

It will be recalled from earlier reports that the IMO Assembly, by resolution A868(20), adopted Guidelines for the Control and Management of Ships' Ballast Water for practical implementation by Governments. The Assembly had also asked MEPC to work towards the completion of legally-binding provisions on ballast water management in the form of a new Annex to MARPOL 73/78. Accordingly, therefore, a Ballast Water Working Group, which included IAPH representation, continued its work in these respects during the course of the week.

Draft provisions of the regulations to be included in a new Annex were considered together with a draft Ballast Water Management Code setting out technical requirements and implementation guidance drawing on the provisions of resolution A868(20). It is of particular interest to note in these respects that current thinking has moved towards the view that the general provision of reception facilities for ballast water is an impractical remedial option. It is very probable, however, that provision will need to be made for reception facilities for the environmentally safe disposal of ballast tank sediments.

By the end of the week, it was possible for the Working Group Chairman, Mr Denis Patterson, Australia, to report on a coherent work plan leading to a proposed Conference of Parties to MARPOL 73/78 in November, 2000. In furtherance of its work, the Working Group has also prepared a questionnaire for early circulation to Member States on the requirements which may have to be developed by Governments concerning

ballast water control practices and related matters. It would be helpful in that regard if IAPH would invite members to complete the questionnaire for their respective port areas. The data should then be provided to their respective Governments for possible inclusion in their submissions to IMO. Copies of the data should also be provided to IAPH.

The Working Group's intention is to work to the completion of the draft regulations and Ballast Water Management Code during MEPC 42. Attention will also be given to the development of education and awareness material for use by both seafarers and shore-based personnel of Port State authorities.

The Working Group also evaluated the status of a UNDP/IMO/GEF project to assist developing countries to identify and remove barriers to the effective management and control of ships' ballast water. It will be recalled in that regard that IMO had identified IAPH as a potential sponsor and participant in the project.

A report was provided to the Working Group on project implementation to date, consisting of the collection of data for incorporation in a major US\$3 to 5 million project to be submitted for approval by the GEF Council in October 1998. IAPH's interest in and commitment to the project was reiterated. My understanding is that IAPH will be invited to participate directly on the Project's Steering Committee.

## 4 Anti-fouling Paints for Ships

Mixed views continue to be expressed on the harmful effects of anti-fouling paints for ships with the possible exception of TBT based paints, the use of which could very possibly be the subject of total prohibition by States acting individually or collectively within regions. States in favour of such action would ideally prefer a world-wide ban in an international maritime trading context. Investigations and research into harmful effects will, however, continue.

MEPC 41 concluded that a Working Group should be established at MEPC 42 with the following terms of reference:-

- i) The Guidelines of Application of the Precautionary Approach (resolution MEPC 67(37)) shall apply to the work of the Group.
- ii) Identification of the different legal mechanisms available for effecting a global phase-out of tri-organotin anti-fouling systems on ships.
- iii) Two important issues to be developed for inclusion in the appropriate legal instruments are:-

- a mechanism that allows anti-fouling systems other than tri-organotins to be considered for possible future action; and
- a provision calling upon Parties to continue to promote scientific and technical research on the environmental impacts and efficacy of anti-fouling systems.

- iv) Recommendation to the Committee of what year or time frame is most appropriate for effecting a prohibition of tri-organotin anti-fouling systems in light of the relevant technical, environmental, legal and market factors.
- v) Preparation of a draft legal mechanism to allow action to be taken regarding anti-fouling systems, in particular to global phase-out of tri-organotins as a marine anti-foulant.
- vi) Preparation of a report to MEPC, including the draft legal instrument and a draft schedule for review and adoption of the draft instrument.
- vii) Development of a draft assembly resolution for its 21st session urging IMO Member States to encourage application of less harmful alternatives to tri-organotin anti-fouling systems pending entry into force of a mandatory instrument.

IAPH developed a position on this subject for submission to a previous MEPC meeting. The question now is whether, in the light of the Working Group's terms of reference additional material needs to be prepared as a precursor to active participation in the Working Group at MEPC 42.

## 5 Air Pollution from Ships

Having agreed by Protocol to amend MARPOL 73/78 by adding a new Annex VI on Regulations on the Prevention of Air Pollution from Ships, the Conference of Parties to MARPOL 73/78 held in September 1997 also adopted 8 Conference Resolutions the implementation of which MEPC is obliged to oversee.

The substance of the Conference Resolutions has been reported on previously. Much of their substance is not of direct interest to ports. Some matters, however, do need to be drawn to the attention of IAPH members.

The wishes of North Sea States to establish the North Sea as a sulphur oxide emission control area will be given further consideration at MEPC 43 (28 June to 2 July 1999).

IMO's Design and Equipment Sub-Committee has been tasked to develop guidelines on representative samples of the fuel delivered for use on board ships, as a high priority. That work will have regard to ISO Technical Report

number "ISO TR 13739 Petroleum Products - Methods for specifying practical procedures for the transfer of bunker fuels to ships".

MEPC 42 intends to consider carbon dioxide emissions from the transport sector together with proposals on technical and operational options for emission control.

## 6 OPRC Convention

The standing Working Group on implementation of the Convention and Conference Resolutions was able to prepare a draft Protocol on Preparedness, Response and Cooperation to Pollution Incidents by Hazardous and Noxious Substances, for submission to MEPC 42 and consideration by a Conference in 2000. IAPH has expressed its support of the general intent of the Protocol in a position paper submitted to a previous MEPC meeting.

## 7 Other Matters of Interest to Ports

MEPC 41 gave its support to an International Symposium on Marine Pollution to be held in Monaco from 5 to 9 October 1998. The Symposium is co-sponsored by IMO, UNEP, UNESCO, amongst others, as a contribution to the 1998 International Year of the Ocean.

MEPC 39 had decided that information on North West European Waters met the criteria for designation as a Special Area under Annex 1 of MARPOL 73/78. One of the principal criteria is the provision of adequate reception facilities for oily wastes from ships. All coastal States bordering the Special Area had notified MEPC 41 that reception facilities in each State were adequate and in full conformity with MARPOL requirements. The decision was therefore taken to notify Parties to MARPOL 73/78 on 1 August 1998 that Special Area status would have effect from 1 August 1999.

Information was provided to MEPC 41 by the IMO Secretariat on the IMO/UNDP/GEF Regional Programme for the Prevention and Management of Marine Pollution in the East Asian Seas. A new large scale project has been agreed for the next 5 years supported by the region's States, donors and the private sector.

The Committee's work programme and that of its subsidiary bodies was agreed. It will be closely examined by IAPH's Committees in accordance with their usual practice.

Finally, it was agreed that MEPC 42 would be held from 2 to 6 November 1998, and MEPC 43, tentatively, from 28 June to 2 July 1999.



## Science of Alliance 2 Profit's Return?

**F**OR the world's liner shipping industry, 1998 began with service reorganization on principal trade routes.

Two major alliances made a renewed start, each with a modified membership. They are the new Grand Alliance of Nippon Yusen Kaisha (NYK Line), Hapag-Lloyd A.G., P&O Nedlloyd Container Line (OOCL) and Malaysia International Shipping Corporation Berhad (MISC) and The New World Alliance (TNWA) of Mitsui O.S.K. Lines (MOL), American President Lines (APL) and Hyundai Merchant Marine Co., Ltd.

In addition, Kawasaki Kisen Kaisha ("K" Line), so far operating on the Asia/Europe and transatlantic routes in partnership with China Ocean Shipping (Group) Co. (COSCO), will extend its tie-up with the Chinese carrier to the transpacific route and commence joint service in this trade as well from this month under a space charter arrangement.

Apart from its partnership with COSCO, "K" Line also engages in a similar form of cooperation with Yangming Marine Transport Corp. on three routes – Asia/Europe, transatlantic and transpacific.

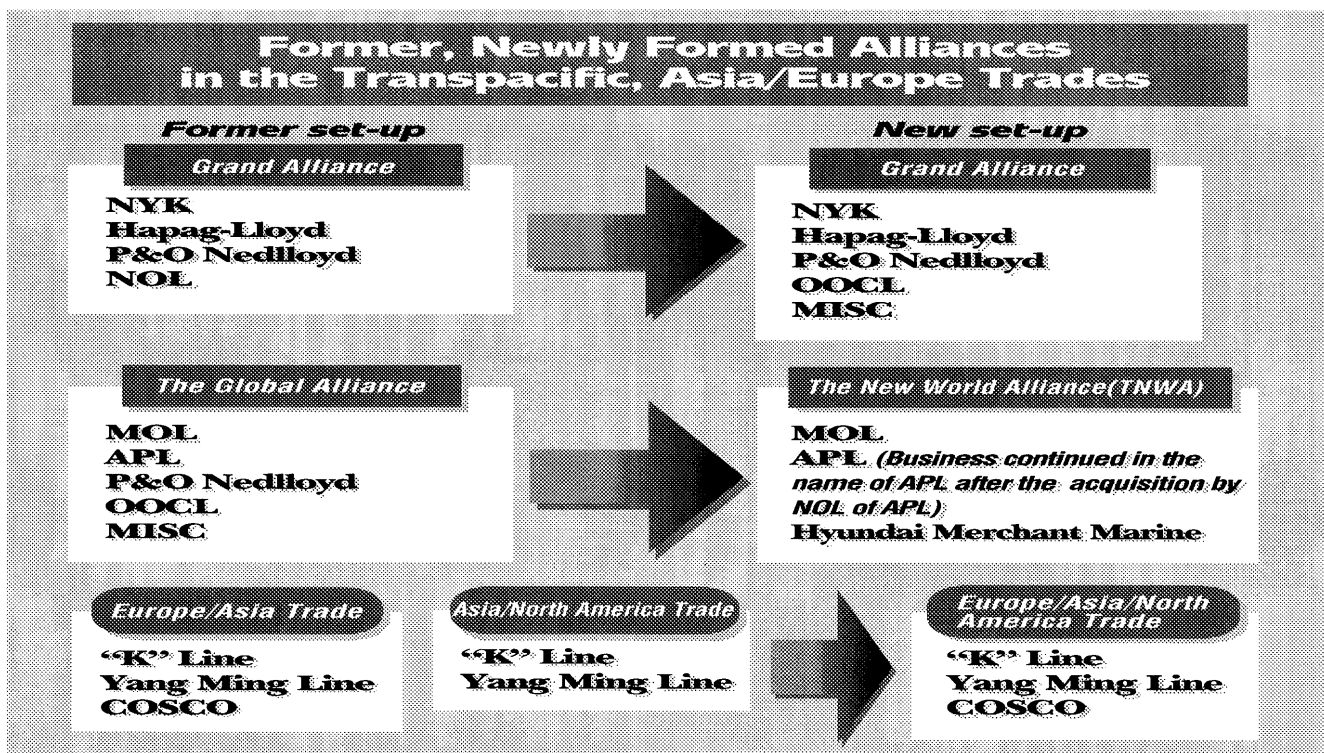
Therefore, the inauguration of its joint service with COSCO on the transpacific route amounts to the realization of a partnership between the Chinese and Taiwanese carriers, COSCO and Yang-ming, which will allow globe-circling operations, with "K" Line acting as the link between them.

Partnerships which stayed outside the latest reorganization drama are also moving toward the revamping of their services. The three-carrier group of Hanjin Shipping Co., Ltd., DSR-Senator Lines GmbH and Cho Yang Shipping Co., Ltd. has expanded the scope of partnership and is increasing its service routes.

The Maersk Line/Sea-Land Service, Inc. grouping is also commissioning newly built vessels and re-examining their service set-up.

Furthermore, carriers operating on their own are also expanding their service networks and enlarging their fleets according to their respective strategies.

A close look at these developments on trunk routes reveals that each alliance and each individual carrier are obviously thinking in terms of global-scale service, rather than service only on particular routes, in planning and implementing route management strategies.



They seem to be laying prime emphasis on how best to ensure efficiency in the flows of container equipment and rationality in route management, without being preoccupied only with a business strategy for market expansion through the enlargement of operational scale.

This, it may be said, reflects the fact that a rate-cutting race on trunk routes, which has lasted for two years now, has greatly detracted from the profitability of all carriers involved, plunging them into a crisis that could even endanger their survival.

The reorganization of consortia on trunk routes carried out two years ago turned out to be untimely and resulted in triggering a rate-cutting race. Since then, freight rates for the transpacific

and Asia/Europe trades have remained at a low level.

Under these circumstances, there has been a series of moves for inter-corporate consolidation as instanced by the merger of P&O Containers Limited and Nedlloyd Lines, the takeover of APL by Neptune Orient Lines (NOL) and Hanjin Shipping's acquisition of an equity share in DSR-Senator. And these moves have brought on an additional round of reorganizations.

The latest regrouping drama coincides with ongoing moves among carriers on all trade routes to join hands for the realization of rate restoration. It is to be hoped that the reorganization effort will bring about a new orderly service regime on each route.

fastest service linking Southeast Asia, Hong Kong and Taiwan with the North American Pacific Southwest (PSW).

The Far East Express (FEX) service (five 4,000-TEU containerships) extends from Hong Kong, Taiwan and Keihin (Tokyo/Yokohama) region ports to PSW and Pacific Northwest (PNW) ports on the eastbound voyage and covers three Japanese ports and Hong Kong on the westbound voyage. It is the fastest service from the Keihin region to the PSW.

The alliance plans to successively replace the present vessels with larger 4,600-TEU containerships.

The Japan China Express (JCX) service (five 2,900-TEU ships) covers Shanghai and Qingdao in China as well as Japan. In particular, it is known for offering the only direct service from Sendai Port (Japan) to the PSW.

The Pacific Northwest Express (PNX) service (14 3,000-TEU vessels) links up with the Asia East Coast Express (AEX) service to the East Coast of North America and together forms a pendulum service on the Asia/West Coast of North America/Asia/Mediterranean/East Coast of North America/Mediterranean/Asia route.

The PNX is the fastest service from Southeast Asia, Hong Kong and Taiwan to the PNW and also includes a call at Colombo. The AEX, for its part, links Asia with the East Coast of North America via Suez and the Mediterranean. Its calls at Mediterranean hub ports enable the acceptance of cargoes between Asia and the Mediterranean and between the Mediterranean and the East Coast of North America.

The Pacific Atlantic Express (PAX) (13 vessels of between 2,800 and 3,000

# Reborn Alliance Looks Just Grand

## Grand Alliance

NYK • Hapag-Lloyd • P&O Nedlloyd • OOCL • MISC

**T**HE five member carriers of the new Grand Alliance have constructed a far-flung service network connecting the Big Three trunk routes – transpacific, Asia/Europe and transatlantic – with a combined fleet of 91 containerships.

Regarding the Asia/North America

route, the Grand Alliance provides five weekly sailings, including a twice-weekly pendulum service that extends to the East Coast of North America and further to Europe and the Mediterranean.

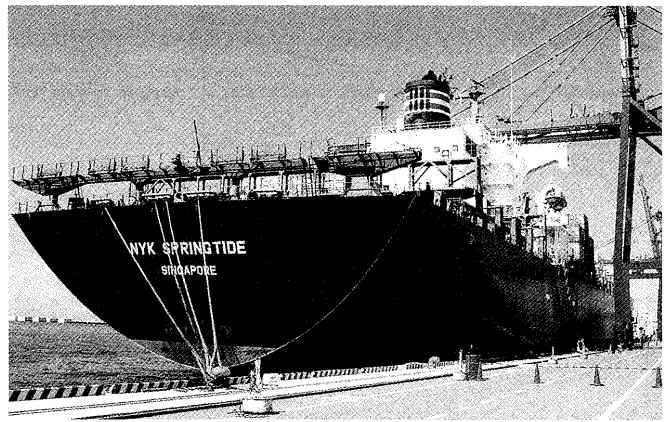
The Super Shuttle Express (SSX) service to the West Coast of North America (six 4,900-TEU containerships) is the

Grand Alliance, North America Routes

SSX (Super Shuttle Express)		FEX (Far East Express)		JCX (Japan China Express)		PAX (Pacific Atlantic Express)		AEX/PNX (Asia East Coast Express/ Pacific Northwest Express)	
Vessels	4,900 TEU x 6	Vessels	4,000 TEU x 5	Vessels	2,900 TEU x 5	Vessels	2,800-3,000 TEU x 13	Vessels	3,000 TEU x 14
Port	Schedule	Port	Schedule	Port	Schedule	Port	Schedule	Port	Schedule
Port Kelang Singapore Yantian Hong Kong	Tue-Tue Wed-Wed Sat-Sun Sun-Mon	Hong Kong Kaohsiung Tokyo	Sat-Mon Mon-Tue Fri-Sat	Shanghai Qingdao Kobe Nagoya Sendai	Sat-Mon Tue-Tue Thu-Fri Fri-Sat Sun-Sun	Kaohsiung Hong Kong Kobe Nagoya Tokyo/Yokohama	Wed-Thu Fri-Sat Tue-Tue Wed-Thu Thu-Fri	Singapore Colombo	Wed-Thu Sun-Tue
Long Beach	Fri-Wed	Los Angeles Vancouver Seattle	Sun-Tue Thu-Fri Fri-Sat	Los Angeles Oakland	Tue-Wed Thu-Fri	Seattle Oakland Los Angeles	Sat-Sat Mon-Tue Wed-Wed	Halifax New York Charleston Norfolk New York Halifax	Fri-Sat Sun-Sun Tue-Tue Wed-Thu Thu-Fri Sat-Sun
Kaohsiung Hong Kong Singapore Port Kelang	Tue-Wed Wed-Thu Sun-Mon Tue-Tue	Tokyo Nagoya Kobe Hong Kong	Mon-Mon Tue-Tue Wed-Wed Sat-Mon	Tokyo Nagoya Kobe Hakata Shanghai	Mon-Tue Tue-Wed Wed-Thu Fri-Fri Sat-Mon	Savannah Norfolk New York Halifax Antwerp Thamesport Bremerhaven Rotterdam	Sat-Sun Mon-Mon Tue-Wed Fri-Fri Thu-Fri Sat-Sat Sun-Mon Tue-Tue	Malta Jeddah Colombo	Mon-Mon Sat-Sat Fri-Sat
						Halifax New York Norfolk Sabannah	Tue-Wed Thu-Sat Sat-Sun Mon-Tue	Singapore Laem Chabang Yantian Hong Kong Kaohsiung	Wed-Wed Fri-Fri Mon-Tue Tue-Tue Wed-Thu
						Los Angeles Oakland	Fri-Sat Sun-Sun	Seattle Vancouver Oakland	Sun-Mon Mon-Tue Thu-Thu
						Tokyo/Yokohama Kobe Kaohsiung	Fri-Fri Sat-Sun Wed-Thu	Kaohsiung Hong Kong Laem Chabang Singapore	Wed-Wed Thu-Fri Mon-Tue Wed-Thu



P&amp;O Nedlloyd's Jervis Bay



NYK Springtide

TEUs) is a pendulum service connecting Asia and northern Europe via the West and East coasts of North America.

Regarding the Europe trade, the Grand Alliance provides a total of six weekly sailings – five loops on the northern European route and one loop on the Mediterranean route.

Loop 1 (eight vessels of between 5,800 and 6,600 TEUs – the largest in the alliance's fleet) offers the fastest super-shuttle service between Japanese ports-Singapore and four major European ports.

Loop 2 (eight 4,500-TEU ships) is a shuttle service between Pusan and northern Europe covering Taiwan, Hong Kong, Singapore and Port Kelang on the Asian side. Its major characteristic is that British ports are visited first on the westbound voyage to Europe.

Loop 3 (eight 4,000-TEU ships) features a call at Qingdao, China, in addition to South Korea, Taiwan, Hong Kong and Singapore. On the westbound voyage, it calls first at ports on the European continent; on the eastbound voyage, direct service is offered from Britain to Asia.

Loop 4 (eight 4,700-TEU vessels) covers Hong Kong, Singapore and China's Shanghai, Ningbo and Shenzhen. Its port rotation also includes Port Kelang and Colombo on the eastbound voyage and Mediterranean hub ports on the westbound voyage.

Loop 5 (eight 3,000-TEU vessels) is a shuttle service between South China and Europe. The westbound voyage covers Colombo and Jeddah, while the eastbound voyage includes calls at Mediterranean hub ports and Jebel Ali as well as Jeddah.

Loop 6, exclusively for service to the Mediterranean, connects Japan, South Korea, Hong Kong, Singapore and Port Kelang with Mediterranean ports. Assigned to this service are eight 3,000-TEU ships, but they will be successively replaced with 3,500-TEU vessels.

## 3 Titans Tie Up Under TNWA

### The New World Alliance

MOL • APL • Hyundai

**T**HE three member carriers of The New World Alliance (TNWA) have deployed a total of 85 container-ships in the transpacific and Asia/Europe trades, providing nine weekly sailings on the transpacific route, including a weekly service to the East Coast of North America, and four weekly sailings to Europe, including a weekly service to the Mediterranean.

As regards the North American service, TNWA at first planned to offer 10 weekly sailings with 58 vessels. However in view of the easing of the supply-demand situation in the North American trade, especially concerning westbound cargo traffic, it decided to start with a scaled-down schedule of nine weekly sailings (eight to the West Coast and one to the East Coast)

with a fleet of 53 containerships.

Ships which have thus become unnecessary for this service will be transferred to the transatlantic route. TNWA members MOL and APL are to start a twice-weekly transatlantic service this month in partnership with Lykes Lines. Therefore, the surplus vessels will be assigned to this service.

Moreover, TNWA is planning to commence a weekly service on the transatlantic route between late 1998 and early 1999.

As regards the route to the West Coast of North America, TNWA provides eight weekly sailings. In view of the rapid growth of the Hong Kong and South China markets, the shortest transit time of 11 days is offered from Yantian to Los

Angeles. From Hong Kong to Los Angeles, the fastest service – with a transit time of 12 days – is provided three times a week.

In addition, from the Southeast Asian hub port of Singapore to Los Angeles, TNWA provides the shortest transit time (13 days) on this route. Furthermore, highly competitive transit times are also



MOL's Alligator Bravery

**Grand Alliance, Europe Routes**

Loop 1		Loop 2		Loop 3		Loop 4		Loop 5		Loop 6 (MED)	
Vessels	5,800-6,600 TEU x 8	Vessels	4,500 TEU x 8	Vessels	4,000 TEU x 8	Vessels	4,700 TEU x 8	Vessels	3,000 TEU x 8	Vessels	3,000 TEU x 8
Port	Schedule	Port	Schedule	Port	Schedule	Port	Schedule	Port	Schedule	Port	Schedule
Kobe/Osaka Nagoya Shimizu Tokyo	Mon-Tue Tue-Wed Wed-Thu Thu-Fri	Pusan Kaohsiung	Fri-Sat Mon-Mon	Qingdao Pusan Kaohsiung	Sat-Sun Mon-Tue Thu-Fri	Shanghai	Thu-Sat	Shekou	Thu-Thu	Kobe Nagoya Yokohama	Tue-Tue Wed-Thu Thu-Fri
Singapore	Thu-Fri	Hong Kong Singapore Port Kelang	Tue-Wed Sat-Sat Sun-Mon	Hong Kong Singapore	Fri-Sat Tue-Wed	Yantian Hong Kong Singapore	Sun-Mon Mon-Tue Fri-Fri	Hong Kong Singapore	Fri-Fri Mon-Tue	Hong Kong Singapore Port Kelang	Mon-Tue Fri-Sat Sat-Sun
Southampton Rotterdam Hamburg Rotterdam Le Havre	Sat-Sun Mon-Mon Tue-Wed Thu-Fri Sat-Sat	Le Havre Southampton Bremerhaven Antwerp	Tue-Wed Wed-Thu Fri-Sat Sun-Mon	Rotterdam Hamburg Southampton	Sat-Sun Mon-Tue Wed-Thu	Malta	Wed-Thu	Rotterdam Hamburg Southampton	Mon-Tue Tue-Wed Thu-Fri	Damietta	Wed-Fri
Singapore	Tue-Wed	Singapore Hong Kong Kaohsiung	Thu-Fri Mon-Mon Tue-Wed	Singapore Hong Kong	Sun-Mon Thu-Thu	Colombo Port Kelang Singapore	Sat-Sun Wed-Thu Fri-Fri	Malta Jeddah Jebel Ali	Wed-Wed Mon-Tue Sun-Sun	La Spezia Barcelona Fos	Sun-Tue Wed-Thu Thu-Fri
Kobe/Osaka	Mon-Tue	Pusan	Fri-Sat	Qingdao	Sat-Sun	Shanghai	Thu-Sat	Singapore Shekou	Sun-Mon Thu-Thu	Damietta	Tue-Tue
										Singapore	Sun-Sun
										Hong Kong	Wed-Thu
										Pusan Kobe	Sun-Mon Tue-Tue

offered on other transpacific routes – 16 days from Laem Chabang, Thailand, to Los Angeles; eight days from Pusan to Los Angeles; and eight days from Tokyo to Seattle.

Concerning the transpacific route to the East Coast of North America, TNWA's weekly East Coast Service (ECS) includes a direct voyage from the Far East-Japan to Manzanillo in Colon, Panama, which is followed by passage through the Panama

Canal and a voyage to the East Coast of North America.

As regards the Asia/Europe route, TNWA provides a total of four weekly sailings – three sailings to northern Europe and one sailing to the Mediterranean. The service to northern Europe features the shortest transit times of 23 days from Tokyo to Rotterdam, 25 days from Tokyo to Hamburg, 15 days from Singapore to Rotterdam and 13 days from Colombo to

Southampton.

Moreover, direct calls at China's Shanghai and Yantian are included, putting TNWA at a great advantage in regard to the Chinese market as well.

In respect to the weekly service to the Mediterranean, Asian countries are connected with Jeddah in the Red Sea, and Port Said, Genoa, Barcelona and Fos in the Mediterranean.

## Plenty of Coverage on Offer From Non-Alliance Carriers

### CMA

**C**OMPAGNIE Maritime d'Affretement (CMA) and Yangming Marine Transport Corp. jointly operate a fixed-day weekly service on the Asia/Mediterranean route with eight containerships.

This service's Asian ports of call include not only Taiwan, Hong Kong and Singapore, but also Port Kelang and Colombo. Moreover, Manila is also covered on the eastbound voyage.

In the Mediterranean, many ports are covered, enabling this service to gain a high reputation for its direct calls at numerous ports in that region. Furthermore, CMA boasts an extensive

feeder network encompassing the entire Mediterranean, including the western Mediterranean and North African ports, with the eastern Mediterranean as the base. The use of this feeder network puts the joint service of CMA and Yangming at a great advantage.

### CMA • Yangming Line

**C**MA also operates service on the Asia/Red Sea-Mediterranean-northern Europe route. In Asia, it is characterized by the wide coverage of Chinese ports, such as Shanghai, Ningbo and Chiwan, in addition to Pusan, Hong Kong

and Singapore.

Ports of call on the westbound voyage to Europe include Jeddah in the Red Sea and Malta in the Mediterranean. On the European side, such ports as Le Havre, Hamburg, Thamesport, Rotterdam and Zeebrugge are covered. The eastbound voyage includes a call at Khor Fakkan in the Middle East.

### Evergreen • LT

**E**VERGREEN Marine Corp. and Lloyd Triestino di Navigazione S.p.A. (LT) jointly operate a fixed-day weekly service on the Mediterranean/Asia/PNW (West Coast of North America) route.

The two carriers have deployed a total of 15 containerships to provide a pendulum service with Asia as its base.

The service rotation is Southeast Asia, the Far East, Japan, the PNW, Japan, the Far East, Southeast Asia, Colombo, the Red Sea, the Mediterranean, the Red Sea and Southeast Asia in that order.

The westbound voyage from the PNW to the Mediterranean includes direct calls at four Japanese ports – not only Tokyo and Osaka, but also Sendai and Hakata – under a policy of taking care of local port cargo as well.

The eastbound voyage from Asia to the PNW and also from the Mediterranean to Asia includes only two Japanese ports of call – Tokyo and Osaka. However, Evergreen has set up a system of feeder transport to and from Shimizu, Nagoya and Hakata in Japan by utilizing its round-the-world service.

## Evergreen

In addition to its joint service with LT, Evergreen provides two loops – east- and westbound – in its round-the-world service, which is a major route for the carrier, and a twice-weekly shuttle service between Taiwan-Hong Kong and the West Coast of North America.

Evergreen's eastbound service on the round-the-world route extends from Asia

to the West Coast of North America, Panama and the East Coast of North America, then to Europe and the Mediterranean, and finally back to Asia.

A total of 12 containerhips are assigned to this service, which features extensive coverage in Japan with calls at five ports – Tokyo, Shimizu, Nagoya, Osaka and Hakata.

The westbound round-the-world service runs from Asia to Europe, then across the Atlantic Ocean to the East Coast of North America, and back to Asia via Panama and the West Coast of North America.

This service, with 10 containerhips, is known for its speed because it limits direct calls to principal ports.

Concerning Evergreen's shuttle service between Taiwan-Hong Kong and the West Coast of North America, one of its two sailings heads from Hong Kong and Taiwan to Los Angeles, Oakland and Tacoma on the eastbound voyage and calls at Tokyo on the eastbound voyage and calls at Tokyo and Osaka on the return voyage; the other sailing extends from Taiwan, Hong Kong and Pusan to Los Angeles and Portland on the eastbound voyage and covers Tokyo,

Shimizu and Nagoya in Japan on the return voyage.

## Hanjin Shipping • DSR-Senator • Cho Yang

HANIJN Shipping Co., Ltd., DSR-Senator Lines GmbH and Cho Yang Shipping Co., Ltd. operate joint services on three trunk routes – Asia/North America, Asia/Europe and transatlantic – with a combined fleet of 59 container-ships.

The three carriers provide seven sailings per week on the North American route and two sailings per week on the European route. In particular, their containerhips are operated with high efficiency through three pendulum-type ship deployment schemes – that is, two loops (PS/PDM-I, -II) linking the West Coast of North America and Europe via Asia and

CMA/Yang Ming Line	
MEX Service	
Vessels	1,980-3,538 TEU x 8
Port	Schedule
Kaohsiung Keelung Hong Kong Singapore Port Kelang Colombo	Fri-Fri Sun-Mon Tue-Wed Sat-Sun Mon-Mon Thu-Thu
Suez Canal Damietta Malta Genoa Valencia Barcelona Fos Genoa Livorno Naples Malta Damietta Suez Canal	Thu-Fri Fri-Sat Sat-Sun Tue-Wed Thu-Fri Fri-Sat Sat-Sun Mon-Mon Tue-Wed Wed-Thu Thu-Fri Fri-Sat Mon-Mon Mon-Tue Tue-Wed
Singapore Manila Kaohsiung	Sun-Mon Wed-Thu Fri-Fri

CMA	
French Asia Line	
Vessels	3,500-4,000 TEU x 9
Port	Schedule
Pusan Shanghai Ningpo Chiwan Hong Kong Singapore	Sat-Sat Mon-Mon Wed-Wed Fri-Fri Fri-Fri Tue-Tue
Jeddah	Wed-Wed
Suez Le Havre Hamburg Thamesport Rotterdam Zeebrugge Malta Suez	Fri-Fri Sun-Sun Mon-Mon Wed-Wed Wed-Wed Thu-Thu Wed-Wed Sat-Sat
Jeddah Khor Fakkan	Mon-Mon Sat-Sat
Singapore Hong Kong Pusan	Sun-Sun Wed-Wed Sat-Sat

Evergreen/LT	
PNW-Far East-Med. Service	
Vessels	2,700-3,000 TEU x 15
Port	Schedule
Singapore Laem Chabang Hong Kong Kaohsiung Osaka Tokyo	Thu-Fri Sun-Mon Fri-Sat Sun-Mon Thu-Fri Sat-Sat
Tacoma Vancouver	Tue-Wed Thu-Fri
Sendai Tokyo Osaka Hakata Kaohsiung Hong Kong Singapore Port Kelang Colombo	Tue-Tue Wed-Thu Fri-Fri Sun-Sun Wed-Thu Fri-Fri Tue-Wed Wed-Thu Sun-Mon
Jeddah	Mon-Wed
Suez Canal	Thu-Fri
Gioia Tauro Genoa Fos Barcelona Valencia Trieste	Mon-Tue Wed-Thu Fri-Fri Sat-Sat Sun-Mon Thu-Sat
Suez Canal	Tue-Wed
Jeddah	Fri-Sat
Singapore Laem Chabang Hong Kong Kaohsiung Osaka Tokyo	Thu-Fri Sun-Mon Fri-Sat Sun-Mon Thu-Fri Sat-Sat

Evergreen			
Round World Eastbound		Round World Westbound	
Vessels	3,400-4,200 TEU x 12	Vessels	4,200 TEU x 10
Port	Schedule	Port	Schedule
Colombo Port Kelang Singapore Kaohsiung Hong Kong Keelung Hakata Pusan Osaka Nagoya Shimizu Tokyo	Thu-Thu Mon-Mon Tue-Wed Sun-Mon Tue-Wed Thu-Fri Sun-Sun Mon-Mon Wed-Wed Thu-Thu Fri-Fri Fri-Sat	Tokyo Osaka Pusan Kaohsiung Hong Kong Singapore Colombo	Tue-Tue Wed-Thu Fri-Sat Mon-Tue Wed-Thu Sun-Sun Wed-Thu
Los Angeles	Wed-Thu	Suez Canal	Thu-Fri
Panama Canal Colon	Wed-Thu Thu-Fri	Rotterdam Hamburg Thamesport Zeebrugge Le Havre	Fri-Fri Sat-Sun Mon-Tue Tue-Wed Wed-Wed
Charleston Baltimore New York	Tue-Tue Wed-Thu Fri-Sat	New York Norfolk Charleston Colon Panama Canal	Wed-Thu Fri-Sat Sun-Sun Wed-Thu Thu-Fri
Le Havre Rotterdam Thamesport Antwerp Hamburg Lisbon Port Said	Sun-Sun Mon-Tue Tue-Wed Wed-Thu Fri-Sat Tue-Wed Mon-Tue	Los Angeles	Thu-Fri
Colombo Port Kelang Singapore Kaohsiung Hong Kong Keelung Hakata Pusan Osaka Nagoya Shimizu Tokyo	Thu-Thu Mon-Mon Tue-Wed Sun-Mon Tue-Wed Thu-Fri Sun-Sun Mon-Mon Wed-Wed Thu-Thu Fri-Fri Fri-Sat	Tokyo Osaka Pusan Kaohsiung Hong Kong Singapore Colombo	Tue-Tue Wed-Thu Fri-Sat Mon-Tue Wed-Thu Sun-Sun Wed-Thu

Taiwan-Hong Kong/USWC		Hong Kong-USWC	
Vessels	5,300 TEU x 5	Vessels	1,810 TEU x 6
Port	Schedule	Port	Schedule
Hong Kong Kaohsiung	Sun-Mon Mon-Tue	Kaohsiung Hong Kong Pusan	Mon-Tue Wed-Wed Sat-Sun
Los Angeles Oakland Tacoma	Sat-Mon Tue-Wed Thu-Sat	Los Angeles Portland	Fri-Sun Tue-Thu
Tokyo Osaka Kaohsiung Hong Kong	Mon-Mon Tue-Wed Fri-Sat Sun-Mon	Tokyo Shimizu Nagoya Kaohsiung Hong Kong Pusan	Tue-Wed Wed-Thu Thu-Fri Mon-Tue Wed-Wed Sat-Sun



Hanjin/DSR-Senator/Cho Yang Line, North America Routes

CAX-I (China-America Express-I)		CAX-II (China-America Express-II)		PS/PDM-I (Pacific Southwest/Pendulum-I)		PS/PDM-II (Pacific Southwest/Pendulum-II)		PNX-I (Pacific Northwest Express-I)	
Vessels	2,700-2,800 TEU x 5	Vessels	2,700 TEU x 6	Vessels	4,500-5,300 TEU x 12	Vessels	4,000-4,500 TEU x 12	Vessels	2,700 TEU x 6
Port	Schedule	Port	Schedule	Port	Schedule	Port	Schedule	Port	Schedule
Shanghai	Sun-Tue	Xingang	Tue-Wed	(Europe)		(Europe)		Singapore	Sun-Tue
Pusan	Wed-Thu	Qingdao	Fri-Sat	Singapore	Sun-Mon	Colombo	Fri-Sat	Hong Kong	Fri-Sat
Long Beach	Mon-Tue	Pusan	Sun-Mon	Hong Kong	Thu-Fri	Port Kelang	Tue-Tue	Osaka	Tue-Tue
Oakland	Wed-Thu	Nagoya	Tue-Wed	Kaohsiung	Sat-Sat	Hong Kong	Sat-Sun	Tokyo	Wed-Wed
Tokyo	Mon-Mon	Long Beach	Sun-Mon	Long Beach	Wed-Sat	Pusan	Tue-Wed	Seattle	Fri-Sun
Osaka	Mon-Tue	Portland	Thu-Thu	Oakland	Sun-Mon	Osaka	Fri-Fri	Vancouver	Sun-Mon
Pusan	Thu-Fri	Yokohama	Tue-Tue	Tokyo	Thu-Thu	Long Beach	Mon-Wed	Tokyo	Thu-Fri
Shanghai	Sun-Tue	Kobe	Wed-Wed	Osaka	Fri-Sat	Oakland	Thu-Fri	Yokohama	Fri-Sat
		Pusan	Fri-Sat	Pusan	Sun-Mon			Osaka	Sat-Sat
		Xingang	Tue-Wed	Hong Kong	Wed-Thu	Kaohsiung	Wed-Thu	Hong Kong	Tue-Wed
				Port Kelang	Sun-Mon	Hong Kong	Fri-Sat	Singapore	Sun-Tue
				Colombo	Wed-Thu	Singapore	Tue-Wed		
				(Europe)		(Europe)			

AWE-PDM (All Water Eastcoast-Pendulum)		PNX-II (Pacific Northwest Express-II)	
Vessels	2,700 TEU x 13	Vessels	2,700 TEU x 5
Port	Schedule	Port	Schedule
Hong Kong	Thu-Fri	Hong Kong	Mon-Tue
Kaohsiung	Sat-Sat	Kaohsiung	Wed-Thu
Pusan	Tue-Wed	Pusan	Sat-Sun
Oakland	Sun-Sun	Seattle	Wed-Thu
Manzanillo	Thu-Thu	Vancouver	Fri-Sat
(Mexico)			
Panama Canal	Tue-Tue	Pusan	Wed-Thu
Manzanillo	Tue-Wed	Keelung	Sat-Sun
(Panama)		Hong Kong	Mon-Tue
Savannah	Sat-Sun		
Norfolk	Mon-Tue		
New York	Wed-Thu		
(Europe)			
New York	Wed-Thu		
Norfolk	Fri-Sat		
Savannah	Sun-Sun		
Manzanillo	Thu-Thu		
(Panama)			
Panama Canal	Fri-Fri		
Manzanillo	Tue-Tue		
(Mexico)			
Long Beach	Fri-Sat		
Yokohama	Thu-Thu		
Kobe	Fri-Fri		
Pusan	Sun-Mon		
Hong Kong	Thu-Fri		

Hanjin/DSR-Senator/Cho Yang Line, Europe Routes

PS/PDM-I (Pacific Southwest/Pendulum-I)		PS/PDM-II (Pacific Southwest/Pendulum-II)	
Vessels	4,500-5,300 TEU x 12	Vessels	4,000-4,500 TEU x 12
Port	Schedule	Port	Schedule
(West Coast of North America)		(West Coast of North America)	
Tokyo	Thu-Thu	Kaohsiung	Wed-Thu
Osaka	Fri-Sat	Hong Kong	Fri-Sat
Pusan	Sun-Mon	Singapore	Tue-Wed
Hong Kong	Wed-Thu		
Port Kelang	Sun-Mon	Suez Canal	Fri-Fri
Colombo	Wed-Thu	Le Havre	Fri-Sat
Suez Canal	Thu-Thu	Rotterdam	Sun-Mon
Rotterdam	Thu-Sat	Hamburg	Tue-Wed
Hamburg	Sat-Mon	Felixstowe	Thu-Fri
Felixstowe	Tue-Tue	Suez Canal	Thu-Fri
Le Havre	Wed-Thu		
Suez Canal	Wed-Thu	Colombo	Fri-Sat
		Port Kelang	Tue-Tue
		Hong Kong	Sat-Sun
		Pusan	Tue-Wed
		Osaka	Fri-Fri
		Tokyo	Sat-Sat
Singapore	Sun-Mon		
Hong Kong	Thu-Fri		
Kaohsiung	Sat-Sat		
(West Coast of North America)		(West Coast of North America)	

one loop (AWE-PDM) connecting Asia and Europe via the West Coast of North America, Latin America and the East Coast of North America.

The PS/PDM-I pendulum service consists of the following stages – first eastbound from Singapore, Hong Kong and Taiwan to the PSW of the West Coast of North America; then westbound to Japan, South Korea and Hong Kong, and further westward to Europe via Port Kelang and Colombo; and lastly, eastbound from Europe to Singapore, Hong Kong and Kaohsiung.

The PS/PDM-II service has the following pendulum route – first, eastbound from Colombo, Port Kelang, Hong Kong, Pusan and Japan to the PSW; then westbound to Kaohsiung, Hong Kong and Singapore and further westward to Europe; and lastly, eastbound from Europe back to Asia.

The AWE-PDM service plies the following route – first eastbound from Asia to Oakland then to Manzanillo of Mexico, Manzanillo of Panama and ports on the East Coast of North America; further eastward across the Atlantic Ocean to

call at northern European ports; then westbound to the East Coast of North America,

Latin America and the West Coast of North America; and lastly, further westward to return to Asia.

In addition, four shuttle sailings a week are operated between Asia and the West Coast of North America.

Moreover, the three carriers provide the China-America Express (CAX) service on two routes between China and the West Coast of North America to connect not only Shanghai, Xingang and Qingdao in China, but also Japan and South Korea with ports on the West Coast of North America. Furthermore, two sailings a week, the PNX-I and PNX-II, are operated between Seattle and Vancouver of the PNW and Asia.

from Japan are carried to Singapore for transshipment to the two carriers' vessels.

For this transport to Singapore, Norasia uses other carriers' vessels, which makes it possible to cover various Japanese ports and thus puts Norasia at a great advantage. Meanwhile, MSC uses vessels of its own service to Australia for transport to Singapore.

Moreover, both Norasia and MSC are strong in the Mediterranean service, each having an extensive feeder network of its own with Piraeus as a hub. Their service thus features transport to all parts of the Mediterranean.

In Asia, direct calls are paid to Shanghai, Qingdao, Xingang, Chiwan and Hong Kong in an effort to establish a firm foothold in the Chinese market.

Norasia • MSC

**N**ORASIA Lines and Mediterranean Shipping Co. S.A. (MSC) presently deploy three and seven containerships, respectively, for a fixed-day, weekly service on the Asia/Mediterranean-northern Europe route.

Although their service includes no direct calls at Japanese ports, cargoes

Sea-Land Service • Maersk

**S**EA-LAND Service, Inc. and Maersk Line formed an "alliance" in 1991 and expanded it on a global scale in 1995, cooperating in ship deployment on trunk lanes around the globe, including the transpacific, Asia/Europe and transatlantic routes.

At present, they together operate a

total of 200 containerships which boast a combined hauling capacity of 450,000 TEUs.

The two carriers currently provide seven sailings a week on the transpacific route and four sailings a week on the Asia/Europe route. However, in February, they announced a plan to revamp their Asia/North America service.

The plan features opening direct service between the Middle East and the West Coast of North America, increasing the frequency of the Hong Kong/Long Beach service to twice a week, starting a direct call at Port Kelang and increasing reefer transport to Asia from the Pacific Southwest (PSW) on the West Coast of North America.

The planned revamping of the two carriers' service is designed to cope with the present economic crisis in Asia and

downward pressure on freight rates in the eastbound trade. The aim is to rebuild an effective ship deployment structure while adjusting and consolidating transpacific services.

Sea-Land Service and Maersk are now working out port rotations, with the details of the revised service schedules yet to be announced.

## Westwood Shipping

**W**ESTWOOD Shipping Lines provides its Japan/North America service on three routes – one route for exports and two routes for imports – with a fleet of seven vessels comprising two 1,681-TEU and five 2,029-TEU ships.

The carrier's service has the following characteristics: (1) Its vessels are equipped with 40-ton cranes to enable

the loading of not only container cargoes but also non-container cargoes, such as project cargoes, and (2) Westwood Shipping, as a niche carrier, provides the broadest port coverage in Japan for the North American trade, ranging from Tomakomai in the north to Hakata in the south.

In the future, the carrier may be fully expected to pay direct calls to China and Japan's local ports on a full scale through the deployment of additional vessels. It is now studying plans for building ships with an eye to the 21st century.

## UASC

**U**NITED Arab Shipping Company (UASC) provides a fixed-day, weekly service from Japan to the Mediterranean and Europe by way of Asia

### Maersk/Sea-Land, North America Routes

TP-1=PEX		TP-2=NAX		TP-3=PAN		TP-5=SCX		TP-6=SZX	
Vessels	2,139 TEU x 5	Vessels	2,686 TEU x 6	Vessels	4,297 TEU x 11	Vessels	2,100-2,800 TEU x 5	Vessels	3,660-4,100 TEU x 14
Port	Schedule	Port	Schedule	Port	Schedule	Port	Schedule	Port	Schedule
Kaohsiung	Sun-Tue	Kaohsiung	Tue-Tue	Hong Kong	Fri-Sun	Singapore	-Fri	Port Kelang	Mon-Tue
Tacoma	Fri-Sun	Naha	Thu-Thu	Kaohsiung	Sun-Mon	Hong Kong	Mon-Tue	Singapore	Tue-Wed
Oakland	Tue-Thu	Shanghai	Sat-Mon	Kobe	Wed-Wed	Kaohsiung	Wed-Wed	Yantian	Sat-Sun
Honolulu	Mon-Tue	Pusan	Tue-Wed	Nagoya	Thu-Thu			Hong Kong	Sun-Mon
Guam	Wed-Thu	Kobe	Thu-Fri	Yokohama	Fri-Fri	Long Beach	Sun-Tue		
Kaohsiung	Sun-Tue	Yokohama	Fri-Sat			Oakland	Wed-Thu	Long Beach	Fri-Mon
		Long Beach	Tue-Wed	Oakland	Sat-Sun			Tacoma	Thu-Fri
		Dutch Harbour	Tue-Wed	Long Beach	Mon-Mon	Singapore	Sun-	Yokohama	Mon-Mon
				Manzanillo	Sun-Mon	(to Mediterranean)		Shimizu	Tue-Tue
		Yokohama	Tue-Wed	Miami	Wed-Wed			Kobe	Wed-Wed
		Nagoya	Thu-Thu	Charleston	Thu-Fri			Kaohsiung	Sat-Sat
		Pusan	Sat-Sun	Norfolk	Sat-Sat			Hong Kong	Sun-Mon
		Kaohsiung	Tue-Tue	New York	Sun-Mon			Yantian	Mon-Tue
		Naha	Thu-Thu	(Europe)				Singapore	Fri-Sat
		Shanghai	Sat-Mon	Halifax	Tue-Wed			Port Kelang	Sat-Sun
				New York	Thu-Fri			Colombo	Wed-Thu
				Norfolk	Fri-Sat			Gioia Tauro	Sat-Sun
				Charleston	Sun-Mon			Algeiras	Mon-Wed
				Miami	Mon-Tue			Halifax	Tue-Tue
				Manzanillo	Thu-Thu			Elizabeth	Thu-Fri
				(Panama)				Norfolk	Sat-Sat
				Long Beach	Wed-Thu			Charleston	Mon-Mon
				Oakland	Fri-Fri			Algeiras	Tue-Tue
				Yokohama	Mon-Tue			Gioia Tauro	Thu-Fri
				Kobe	Tue-Wed			Jeddah	Tue-Wed
				Hong Kong	Fri-Sun			Jebel Ali	Mon-Tue
								Port Kelang	Mon-Tue

### Maersk/Sea-Land, Europe Routes

AE-1=AEX		AE-2=ASX		AE-3=AGX		AE-4/TP-6=SZX	
Vessels	3,460-6,000 TEU x 9	Vessels	2,850-3,660 TEU x 9	Vessels	2,670-3,900 TEU x 8	Vessels	3,660-4,100 TEU x 14
Port	Scheduled	Port	Scheduled	Port	Scheduled	Port	Scheduled
Kobe	Sun-Sun	Hakata	Wed-Thu	Colombo	Fri-Sun	Yokohama	Mon-Mon
Nagoya	Mon-Tue	Pusan	Thu-Sat	Jeddah	Sat-Sun	Shimizu	Tue-Tue
Yokohama	Tue-Thu	Shanghai	Sun-Mon	Naples	Thu-Fri	Kobe	Wed-Wed
Kaohsiung	Sat-Sat	Yantian	Wed-Thu	Algeiras	Sun-Mon	Kaohsiung	Sat-Sat
Hong Kong	Sun-Mon	Hong Kong	Thu-Fri	Felixstowe	Thu-Fri	Hong Kong	Sun-Mon
Singapore	Thu-Fri	Singapore	Mon-Tue	Rotterdam	Fri-Sat	Yantian	Mon-Tue
Algeiras	Thu-Fri	Gioia Tauro	Sun-Mon	Bremerhaven	Sun-Sun	Singapore	Sat-Sat
Southampton	Sun-Mon	Le Havre	Fri-Fri	Le Havre	Mon-Tue	Port Kelang	Sat-Sun
Rotterdam	Mon-Tue	Rotterdam	Sat-Sun			Colombo	Wed-Thu
Bremerhaven	Wed-Thu	Hamburg	Sun-Mon	Algeiras	Thu-Fri	Gioia Tauro	Sat-Sun
Gothenburg	Fri-Sat	Felixstowe	Tue-Tue			Algeiras	Mon-Wed
Rotterdam	Sun-Mon	Rotterdam	Wed-Wed	Jebel Ali	Wed-Thu	(East Coast of North America)	
Southampton	Mon-Tue	Gioia Tauro	Mon-Tue	Jawaharal Nehru	Sun-Wed	Algeiras	Tue-Tue
Algeiras	Thu-Fri	Jeddah	Sun-Sun	Colombo	Fri-Sun	Gioia Tauro	Thu-Fri
Singapore	Sat-Sun	Port Kelang	Tue-Tue			Jeddah	Tue-Wed
Hong Kong	Wed-Wed	Singapore	Tue-Wed			Jebel Ali	Mon-Tue
Kaohsiung	Thu-Fri	Hong Kong	Mon-Mon			Port Kelang	Mon-Tue
Kobe	Sun-Sun	Hakata	Wed-Thu			Singapore	Tue-Wed
						Yantian	Sat-Sun
						Hong Kong	Sun-Mon
						(West Coast of North America)	

### MSC/Norasia Europe Routes

Vessels	2,850-3,400 TEU x 10
Ports	Schedule
Le Havre	Wed-Wed
Antwerp	Thu-Fri
Felixstowe	Fri-Sat
Barcelona	Wed-Thu
Genoa	Thu-Fri
Piraeus	Sun-Mon
Dubai	Tue-Wed
Singapore	Wed-Thu
Hong Kong	Sun-Sun
Shanghai	Wed-Wed
Qingdao	Thu-Fri
Xingang	Sat-Sun
Pusan	Tue-Wed
Hong Kong	Fri-Fri
Chiwan	Sat-Sat
Singapore	Tue-Wed
Colombo	Sat-Sun
Piraeus	Mon-Tue
Genoa	Thu-Fri
Valencia	Sat-Sun
Le Havre	Wed-Wed
Antwerp	Thu-Fri
Felixstowe	Fri-Sat

and the Middle East with a fleet of 13 containerships.

Major ports on the Japan/Asia/-Arabian Sea/Red Sea/Mediterranean/-Europe route for the service are used as hub ports for feeder networks that cover all regions.

The carrier will successively assign a series of new large-sized vessels to this service from March this year to replace the present fleet with 10 high-speed ships. As a result, the average hauling capacity per vessel, now at 2,200 TEUs, will be increased sharply to 3,800 TEUs. Moreover, the maximum speed will be raised to 24 knots.

Therefore, even though the number of vessels will be reduced to 10, the port rotation will remain unchanged, while the transit time will be shortened significantly.

The main features of UASC's service are as follows: (1) in the Mideast Gulf region, vessels plying the Asia/Europe route - not feeder ships - call directly at Dubai and Khor Fakkan, while other local ports are covered by the carrier's own feeder network; (2) it provides the only direct call at Valencia from Japan; and (3) since UASC is an independent carrier, it is capable of coping with dangerous and oversize cargoes with almost no limitations.

The planned upgrading from this spring is likely to further boost demand for the carrier's service.

UASC, Europe Routes	
Asia-Middle East-Europe Service	
Vessels	1,846-3,800 TEU x 13
Port	Schedule
Nagoya	Mon-Mon
Yokohama	Tue-Tue
Kobe	Wed-Thu
Pusan	Fri-Sat
Hakata	Sat-Sat
Kaohsiung	(Bi-weekly)
Hong Kong	Tue-Tue
Singapore	Wed-Thu
Port Kelang	Mon-Mon
Khor Fakkan	Wed-Wed
Dubai	Thu-Thu
Jeddah	Wed-Sat
Gioia Tauro	Thu-Thu
Valencia	Sat-Sun
Rotterdam	Thu-Fri
Hamburg	Sat-Sun
Felixstowe	Mon-Mon
Antwerp	Tue-Tue
Valencia	Sun-Sun
Aqaba	Sat-Sun
Jeddah	Mon-Wed
Dubai	Mon-Tue
Khor Fakkan	Wed-Wed
Port Kelang	Thu-Fri
Singapore	Sat-Sat
Hong Kong	Wed-Thu
Kaohsiung	Tue-Tue
Hakata	Sat-Sat
Pusan	(Bi-weekly)
Kobe	Fri-Sat
Yokohama	Wed-Thu
Nagoya	Tue-Tue

Wilhelmsen	
Far East Panama North America Ro/Ro Service	
Vessels	2,000 TEU x 5, 2,700 TEU x 3, 2,800 TEU x 1
Port	Schedule
Frequency	Every 15 days
Singapore	
Hong Kong	
Ningbo	
Qingdao	
Kobe	
Nagoya	
Yokohama	
Los Angeles	
Colon	
Miami	
Savannah	
Baltimore	
Norfolk	
New York	
New Orleans	
Mobile	

Zim Israel Navigation, Mediterranean Routes	
Mediterranean Service	
Vessels	1,700-1,900 TEU x 9
Port	Schedule
Pusan	Wed-Thu
Qingdao	Sun-Mon
Shanghai	Tue-Wed
Shekou	Fri-Fri
Hong Kong	Sat-Sat
Singapore	Tue-Wed
Colombo	Sun-Mon
Port Said	Thu-Fri
Haifa	Sat-Mon
Alexandria	Tue-Wed
Ravenna	Sat-Sun
Venice	Sun-Mon
Trieste	Mon-Tue
Koper	Tue-Wed

Westwood, North America Routes					
Export Service		Import Service-1		Import Service-2	
Vessels	2,029 TEU x 5, 1,681 TEU x 2	Vessels	2,029 TEU x 4	Vessels	2,029 TEU x 1, 1,681 TEU x 2
Port	Schedule	Port	Schedule	Port	Schedule
Hakata	Wed-Thu	Vancouver	Mon-Mon	Tomakomai	Mon-Mon
Pusan	Fri-Sat	Longview	Sat-Sat	Pusan	Fri-Fri
Osaka	Mon-Mon	Seattle	Mon-Mon		
Nagoya	Tue-Wed			Vancouver	Sun-Sun
Shimizu	Wed-Wed			Seattle	Tue-Tue
Tokyo	Thu-Thu				
Seattle	Wed-Wed	Shimizu	Tue-Tue		
Vancouver	Fri-Sun	Yokohama	Wed-Wed		
		Tokyo	Thu-Thu		
		Osaka	Mon-Mon	Osaka	Mon-Mon
		Hakata	Wed-Wed	Nagoya	Tue-Tue
		Pusan	Fri-Fri		

## Wilhelmsen Lines

**W**ILHELMSSEN Lines operates a twice-monthly service on the route linking Singapore, Hong Kong, Ningbo, Qingdao, Kobe, Nagoya, Yokohama, Los Angeles, Colon, Miami, Savannah, Baltimore, Norfolk, New York, New Orleans and Mobile with nine ro/ro vessels.

The vessels assigned to this service are capable of flexibly coping not only with containers, but also with vehicles and project cargoes.

Extensive feeder networks ensure transport to inland areas as well as the Caribbean and Latin American regions.

## Zim

**Z**IM Israel Navigation Co., Ltd. provides a fixed-day, weekly service on the route linking China, Taiwan, South Korea, Japan, the West Coast of North America, the Caribbean, the East Coast of North America and the Mediterranean.

Since last year, the carrier has assigned a series of eight containership newbuildings to this service as replacements for older tonnage.

The 3,429-TEU *Zim China*, which started to call at Japanese ports in January this year, was the last in this series of new large-sized vessels.

The commissioning of these containerships has boosted Zim's hauling capacity

on the route by about 25 percent. As a result, Zim has begun to call at Shekou in China, which is now growing fast.

Zim's service boasts the following characteristics: (1) its service route covers five major ports - Long Beach, Kingston, Savannah, New York and Halifax; (2) Zim's own feeder network, established in the Caribbean and Latin American regions, makes it possible to provide stable service; and (3) a well-organized service is available on the East Coast of North America, based on many years of experience, while the newly launched service to Shekou in China is being improved to cope with increasing cargo volumes.

Moreover, Zim provides a fixed-day, weekly service to the Mediterranean with 10 vessels. Cargoes from Yokohama, Nagoya, Osaka and Kobe are carried to Pusan by feeder ships for transshipment to vessels bound for the Mediterranean.

Furthermore, feeder services are operated from Haifa in Israel to eastern Mediterranean and Black Sea ports, such as Limassol, Constantza, Istanbul, Izmir, Odessa, Mersin and Salonica. In addition, service to such countries as Austria, Switzerland and Hungary is available via Trieste and Koper.

## Zim Israel Navigation, North America Routes

U.S.A., Carib & Canada Service	
Vessels	3,000 TEU x 7, 3,400 TEU x 8
Port	Schedule
Shekou	Wed-Thu
Hong Kong	Thu-Fri
Keelung	Sat-Sat
Pusan	Mon-Tue
Osaka	Fri-Fri
Yokohama	Sat-Sat
Long Beach	Tue-Wed
Kingston	Thu-Fri
Savannah	Mon-Mon
New York	Wed-Wed
Halifax	Fri-Fri
Barcelona	Sat-Sun
Haifa	Thu-Sat
Piraeus	Mon-Tue
Livorno	Thu-Fri
Barcelona	Sat-Mon
Halifax	Tue-Wed
New York	Fri-Fri
Savannah	Sun-Mon
Kingston	Thu-Fri
Long Beach	Sat-Sun
Shekou	Wed-Thu
Hong Kong	Thu-Fri
Keelung	Sat-Sat
Pusan	Mon-Tue
Osaka	Fri-Fri
Yokohama	Sat-Sat

# WORLD PORT NEWS

## Cardiff 'Waterfront 98'

### For Developers, Operators

**W**ATERFRONT 98 – the 2nd international event for developers and operators of waterfront and marina facilities – will be held at the St David's Hotel and Spa, Cardiff from 20 - 22 October 1998.

Cardiff is enjoying a period of major expansion and revitalisation, which is expected to continue well into the next millennium, and Cardiff Bay Development Corporation (CBDC) is an integral part of this vibrancy. Covering 2,700 acres (one-sixth of the city) the waterfront already comprises a successful combination of commercial, industrial, retail and residential developments – together with the construction of a barrage from Penarth Head to the Queen Alexandra Dock, creating a 500 acre freshwater bay. Cardiff Bay is recognised as being Europe's most exciting waterfront, with 1.5 million admissions to waterfront attractions in 1996. And plans for further development are still underway.

Organised by Baltic Conventions and supported by CBDC, an exciting lineup of international speakers will describe the challenges faced by Cardiff Bay in developing the waterfront, explore the potential for further expansion within Cardiff and the South Wales region and analyse trends for future waterfront developments around the world.

Delegates will have the opportunity to:

- hear how Cardiff Bay Development Corporation set about planning, developing and transforming the waterfront
- examine the challenges involved in integrating a wide mix of industrial, retail, commercial, leisure and housing activities
- learn the secrets of attracting the finance necessary to develop a waterfront and the advantages of public/private sector partnerships
- find out how a successful, maturing waterfront is able to track retail and visitor trends in order to adapt to a changing profile
- see what has been achieved in Cardiff during the guided city site visits and

special interests tours of the surrounding area

- network and find out what further potential exists – both for Cardiff and other waterfronts around the world, large or small

Attendance at this event is essential for property developers, architects, financiers, town and commercial planners, port and local authorities, marine surveyors and engineers, as well as those involved in the development or operation of leisure facilities, retail outlets and housing, construction and industry.

For information on exhibition and sponsorship opportunities or registration details, please contact Helen Coffey at Baltic Conventions:

Tel: +44 181 892 2892

Fax: +44 181 892 6767

email:

baltic.conventions@btinternet.com

## Int'l ECDIS Conference In October in Singapore

**T**HE Conference Organisers, the Maritime and Port Authority of Singapore (MPA) and the United Kingdom Hydrographic Office (UKHO), are convinced that Electronic Chart Display and Information System (ECDIS) will contribute to maritime safety. In 1997, MPA and UKHO embarked on sea demonstrations using ECDIS with official chart data covering shipping routes from Southampton to Singapore to Hong Kong. Feedback from the participating ECDIS equipped vessels has been positive. With this successful demonstration, an International ECDIS conference has been organised to promote ECDIS, with the following conference theme:

### "ECDIS – An Effective Tool For Safe Navigation"

International experts will gather in Singapore for three days (26-28 October 1998) at the Pan Pacific Hotel, Singapore to share their experience on the latest in ECDIS development and its related applications.

The Conference audience is specially targeted at professionals from Shipping Lines, Port Authorities, Maritime Safety Agencies, Research Institutions, Navies and Hydrographic Offices.

For further information, please contact:

International ECDIS Conference  
Manager

C/O SAFE Enterprises Pte Ltd.

3 Lim Teck Kim Road

#02-02 Singapore 088934

Tel: (65) 228 0980/910

Fax: (65) 226 3733

Email: events@cyberway.com.sg

MPA Conference Website:

<http://www.mpa.gov.sg>

Enquiries: iec98@mpa.gov.sg

## Leading Multinationals Vote Confidence in Asia

**R**ESULTS released of a worldwide survey of leading multinational companies find that overall confidence in East and South-East Asia as a destination for foreign direct investment remains unshaken, despite the financial crisis in the region.

One in four of the companies polled said it plans to increase direct investments over the short and medium term, while 62% are continuing with their existing plans. Almost all firms covered by the survey make a positive long-term assessment, taking the view that direct investment prospects are either unchanged (81%) or have improved (13%).

The results are based on replies from 198 firms of 500 polled – an impressive response rate of 40% – in a joint survey by the United Nations Conference on Trade and Development (UNCTAD) and the International Chamber of Commerce (ICC). The survey was conducted in mid-February.

Announcing the outcome of the survey at a news conference on 18 March, UNCTAD Secretary General Rubens Ricupero said: "The results clearly show that multinational corporations are keenly interested in the region for direct investment in the production of goods

and services. This augurs well for recovery in the region."

ICC Secretary General Maria Livanos Cattai said: "This is a resounding vote of confidence in the economic fundamentals of East and South-East Asia and the region's long-term prospects. Business still sees enormous investment opportunities to be derived from the projected growth of Asian markets in the 21st century."

Ms Cattai added: "Foreign direct investment by its nature requires commitment over the long haul. That commitment is fully demonstrated by the results of this survey."

Responses are remarkably consistent, both by main business sectors and also by home regions – Europe, North America, Japan and developing Asia. An overwhelming majority of respondents from each of the regions and the main sectors – primary, manufacturing and services – report that their long-term views remain unchanged.

Among European firms in particular, 34% are actively seeking to increase their operations in Asia. The comparable figures for North America and Japan are 19% each, and 10% for developing Asian countries. Karl P. Sauvnt, senior UNCTAD investment expert, said: "In the short and medium term, lower costs for multinationals in the most affected countries – including the effect of devaluations – create immediate incentives for additional direct investment. They also open up additional export opportunities, helped by the privileged access to the regional and global distribution networks of their parent firms."

Mr Sauvnt added: "Most important, however, is that the principal determinants for direct investment in Asia ensure that long-term prospects for such investment in the region remain excellent."

At the same time, he noted that a contraction in growth would reduce demand in some Asian domestic markets. In the short to medium term, that could slow down inward flows of foreign direct investment for industries oriented to domestic markets.

This is borne out by the UNCTAD/ICC survey, which shows that 12% of all responding companies intend to reduce one or more of their investment projects over the short and medium term. For services companies, which in most cases are heavily dependent on domestic sales, the comparable figure is 18%. Looking at the long term, only 6% of companies indicate that their confidence in FDI profitability in Asia has diminished.

Another finding is that the direct investment intentions of most Asian firms will remain focused in Asia itself. The crisis is likely to restrict the financial ability of some of these companies to invest abroad. Devaluations make it more expensive for firms from the most affected countries to finance their foreign operations.

The survey further showed that – independently of their continuing commitment to Asia – 37% of the firms consulted contemplate increasing direct investments in Latin America. Some 27% look to increased FDI to Central and Eastern Europe, while 18% expect to step up their direct investments in South Asia.

"Emerging markets in general continue to be viewed by large multinationals as good prospects for foreign direct investment. This is in line with a trend that began in the mid-1980s and has led to developing countries now attracting close to 40% of the world's direct investment flows of some \$350 billion," Mr Sauvnt commented.

ICC Secretary General Cattai said that the survey underlined a key distinction between the reactions of direct investors and those of portfolio investors and banks, whose decisions about international financial capital movements have so far been the centre of attention during the Asian crisis.

"Capital investments by portfolio investors focus on shorter term financial gains and tend to be volatile. In contrast, direct investors are mainly concerned with visible economic transactions, such as the establishment or expansion of plants, the operation of internationally integrated production systems, the international transfer of technology, and the distribution of intermediate and final products in world markets," Ms Cattai said.

"Their investments are motivated by strategic interests, such as market access and access to resources of various kinds, and tend to involve long-term relationships," she added.

These features of foreign direct investment underline many of the survey's findings about investors' decisions and expectations. UNCTAD figures show that, while foreign portfolio equity investment and bank lending to the most affected Asian countries reversed direction during the latter half of 1997, flows of foreign direct investment to the region are estimated to remain close to pre-crisis levels.

UNCTAD Secretary General Ricupero pointed out that direct investment flows have a moderating effect on the

volatility of total private capital flows. "In the same way that the debt crisis of the 1980s led governments to appreciate the non-debt creating nature of foreign direct investment, the current crisis may lead them to appreciate the relative stability of FDI flows, apart from the other contributions such investments can make to growth and development," Mr Ricupero said.

*The complete analysis of the survey is contained in a background note which can be obtained from UNCTAD or ICC. The analysis, together with the accompanying press release, is also published on the ICC and UNCTAD web sites: [www.iccwbo.org](http://www.iccwbo.org) and [www.unctad.org](http://www.unctad.org)*

## ECS System for Tracking Container Movements

**W**ITNESS a major breakthrough in the world of technology with the introduction of a revolutionary wireless container tracking and monitoring system. Local electronics firm, P-Serv Technologies Pte Ltd, developed the Electronic Container Seal (ECS) System specifically for port's users aimed at improving the efficiency of port's operations worldwide.

"Our aim is to achieve large-scale operations worldwide through international standardisation of communication protocol," said Mr Paul, General Manager of Electronic Seal Pte Ltd (ESPL). ESPL envision itself as a provider of low-cost electronic tagging and monitoring system.

The ECS System consisting of 3 peripheral's modules – Base Reader (BR), Interfacing Software (IS) and the Handheld Reader (HHR) – is an active wireless transmitter powered by battery and equipped with embedded seal number and feature optional key-in of information.

The system is designed with a Radio Frequency (RF) of 315mhz using the frequency shift key technique (FSK), and an effective communication range of 3 to 5 meters with transmitting power of 1mW or less. The ECS consists of a Radio Frequency Identification (RFID) unit incorporated into the present container seals.

The 'brain' of the entire ECS System is the Integrated Circuit (IC), a transmitter of FSK that can be fitted on all different models of seals, thereby increasing its range of usage. There is a



huge market potential for ECS due to its distinct advantages and wide applications. "The seal can be easily adapted to other applications such as air cargo and luggage tags, further boosting its market potential," said Mr Ronald Teo, PSA's Senior Regional Manager of International Business Division.

The newly developed ECS enables checks to be done electronically on every container with an electronic seal, phasing out the old process whereby checks are carried out manually on randomly selected containers at the gates, thereby ensuring 100% seal checks.

This new technology will save manpower costs, time and improve operational safety as physical checking at port's entrance or exit is eliminated. Security is enhanced, as ECS is tamper-proof and equipped to track container movements and to detect any tamper-

ing thus deterring pilferage. Results of the seal checks are also accurately electronically captured on the PSA computer system, and information received will then be transmitted instantly to port users notifying them of its status.

The ECS is economically priced, of which the cost invested is less than the amount of savings generated from the benefits of using it thus making ECS a viable long-term investment, and only one ECS is required per container. Furthermore, it offers an unprecedented level of security and reliability.

"PSA together with Electronic Seal Pte Ltd is poised to change the entire logistic infrastructure of the nation and is ready to set the pace and changes for the future," said Mr Tan Eow Huang, Director of Electronic Seal Pte Ltd.

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## ISL Shipping Statistics Yearbook 1997

*Editors: Prof. Dr. Manfred Zachcial, Christel Heidehoff; ISSN 0721-3220, 510 pages; Price: DM 330.- plus postage and packing, in case of inland sales plus VAT (MMSt.)*

**W**ITH its extensive coverage on developments and trends in shipping, seaborne trade, commodity markets, freight rates, shipbuilding and port traffic the *ISL Shipping Statistics Yearbook* is a complete statistical reference source to anyone whose business is concerned with shipping. The various statistical tables are supplemented by clear and informative charts. Moreover the latest development trends are summarised in an introductory comment.

The source of reliable insider information is designed particularly to meet the requirements of shipping companies, shipyards, port operators, and brokers. But also banks, consulting companies and research institutes belong to the subscribers of the *ISL Yearbook*.

Features included in the three main sections of the *ISL Shipping Statistics Yearbook 1997* are as follows:

**Shipping Market:** This part of the yearbook focuses on world shipping supply and demand indicators. The supply of shipping services is highlighted by a detailed overview on structural features of the world merchant fleet with a breakdown by ship type. As the trend towards flagging out continues ownership patterns of the world merchant fleet is a focal point for the statistical analysis. This is also true for the fleet profiles of major shipping nations. The demand for shipping services is presented by comprehensive statistics on world trade and seaborne trade development as well as by information on major world commodity markets. Moreover, focus is put on the presentation of long-term time series on freight rates illustrated by a large number of charts.

**Shipbuilding:** World shipbuilding statistics are based on data concerning order activities and output figures. *ISL* analyses not only global long-term

## New Publications

### Lloyd's Ports of the World 1998

*Ed. by Chris Emery. (London: LLP Limited, 1998). 956 pages. Foreword. Indexes. Maps. Price: £210/US\$388. Ordering: LLP Limited, Sheepen Place, Colchester, Essex CO3 3LP, UNITED KINGDOM. Tel 44-1206-772-866. Fax: 44-1206-772-771.*

**T**HE 1998 edition of *Ports of the World* presents detailed descriptions of more than 3,000 active ports worldwide. The directory is divided into eight geographic regions, with ports listed alphabetically by continent and country. Guide cards and tab indexing allow for easy reference.

The individual port descriptions typically include port authority addresses, telephone, fax, and telex numbers; top port officials; detailed facility descriptions; harbor and channel dimensions; tide levels; documentation requirements; holidays and working hours; cargo and vessel traffic; and pertinent port services, such as pilotage, towage, bunkers, ship repairs, and shipping agencies.

Separate sections include a directory to 390 "International Free Trade Zones" and a 64-page "Atlas of World Ports and Shipping Places" featuring maps, cross-referencing to the port entries, and shipping distance tables.

(AAPA Advisory)

### Conference Report: International Symposium on Liner Shipping VI

*Editors: Prof. Dr. Manfred Zachcial, Christel Heidehoff; 304 pages; ISSN 0174-5727; Price: DM 165.- plus postage and packing, in case of inland sales plus VAT (MWSt.)*

**I**NTERNATIONAL Symposium on Liner Shipping VI was an extraordinary event in 1997. The Symposium was organised by the Port of Hamburg in cooperation with the Container Intermodal Institute (New York), Japan Maritime Research Institute (Tokyo), Maritime Institute (Gdansk), and the Institute of Shipping Economics and Logistics (Bremen). The conference has taken place every four years under the direction of Dr. H. L. Beth of the HHVW board (Port of Hamburg Marketing and Public Relations).

In 1997 participants from over 40 nations informed themselves about the present situation and development of liner shipping. On this opportunity, worldwide recognised experts were analysing the latest market trends in view of politics, shipping companies, forwarders and port industry.

The Institute of Shipping Economics and Logistics (ISL) in Bremen has now published the "Conference Report" in its book series representing a documentation of experts' knowledge as well as a precious source of information for maritime economy.

The "Conference Report" can be ordered directly from

Institute of Shipping Economics and

developments in world shipbuilding but presents also detailed information with regard to specific market segments/ship types and major shipbuilding nations. Analytical data is in most cases also provided in cgt related tonnage figures.

**Ports and Sea Canals:** This section contains data of more than 250 ports in 80 countries. The figures inform not only about the ranking of ports in terms of cargo and container traffic, but also about growth patterns of individual ports. Statistical analysis is founded on the ISL Port Data Base. In addition to port data the *Yearbook* also shows the transit traffic of the leading world sea canals.

The *Yearbook* and also the monthly publication *ISL Shipping Statistics and Market Review* can be ordered directly from:

Institute of Shipping Economics and Logistics (ISL)  
Universitätsallee GW1, Block A  
28359 Bremen, Germany  
Tel: +49-421-22096-38  
Fax: +49-421-22096-55  
E-Mail: subscription@isl.org

## International Coal 1997 Edition (1995-1996 Data)

*Edited by Leslie L. Coleman. (Washington, DC: National Mining Association, 1997). 118 pages. Foreword. Tables. Figures. Maps. Appendix. Order from: National Mining Association, 1130 Seventeenth Street, N.W., Washington, D.C. 20036-4677. Tel: (202) 463-2625. Price: \$150; (Foreign Mailings – US\$165; Non-Profit Organizations – \$95).*

**T**HIS annual publication provides comprehensive data on coal and energy trades worldwide and detailed information on coal reserves, production, consumption, and trade for the United States and other major coal producing, exporting, and consuming nations.

A compendium of "World Energy Statistics" is followed by sections devoted to "U.S. Coal in World Trade" and "Coal Statistics for Selected Countries." Other features include representative rail and ocean carrier shipping rates, a general map showing the locations of U.S. and foreign coal handling ports, and individual country maps identifying major coal producing regions, coal handling ports, and con-

necting rail lines.

The appendices examine the European Economic Community's hard coal industry, summarize "air emission limits for large new coal-fired boilers in selected countries," and provide a directory to the officers and members of the Coal Exporters Association of the United States. (AAPA Advisory)

## World Container Terminals: Global Growth and Private Profit

**T**HE global container terminal industry is set for a period of unprecedented expansion, and consequent opportunity for investors and operators. It is forecast that the sector, clearly the most dynamic in the world port industry, needs to provide over 100 million teu of additional annual handling capacity by the year 2005, according to the new Drewry Report *World Container Terminals: Global Growth and Private Profit*.

The forecast growth, which will lead to a 60% increase over current levels of activity, translates into a massive estimated investment requirement of up to \$29bn in the same period. In simple terms it indicates a need for the equivalent of over 200 new container terminals in the next eight years, despite the slower market growth which is anticipated after the Asian financial crisis.

But, in many ways, investment requirements merely represent the tip of the information needs for the container terminal industry at this time. The

key to success – for both existing and emerging terminal operators – will lie in understanding the new financial environment and meeting the competitive challenge. And while terminal operators will need to understand the attitudes and requirements of the financial sector, prospective lenders and investors will need assurance that facilities are, or will be, operated at internationally competitive levels of efficiency and profitability.

The new Drewry report, *World Container Terminals: Global Growth and Private Profit*, brings together a range of analysis on terminal revenues, costs and profitability with a detailed consideration of the commercial, financial and operational requirements for major container port developments. The Report provides a completely new insight into the economics of the container terminal industry which will be of value across the entire spectrum of port authorities, users, operators, financiers and equipment suppliers.

The incessant requirement for additional container port capacity has certainly speeded up the near-global move towards privatisation, which has seen private capital, expertise and management establish a significant and growing presence in the industry. The first international port operators have emerged, including two – Hutchison and P&O Ports – which have taken a possibly decisive lead over other aspirants in building up a network of strategically located terminals, though the newly corporatised PSA shows signs of responding to the challenge.

The competitive pressures in the industry – already intense because of carrier cost cutting imperatives – have been further increased as local markets have been invaded by ultra-efficient private sector stevedores which have set new international benchmarks for operating efficiencies, tariff levels and profitability. The wide variations in regional handling charges not only point up the importance of being competitive within a given port range, but also warns of the dangers for high revenue terminals which may soon find themselves subject to the trend for price convergence under carrier negotiating pressure.

The proven track record of the international operators has attracted a plethora of willing local partners, lenders and equity investors eager to share in the often substantial returns which are being achieved – and which dwarf those obtainable through investment in other sectors of the container industry.

## Forecast Additional Container Port Throughput, by Region to 2005 (Million teu)

Region	Forecast additional annual throughput by 2005
North America	7.8
Western Europe	3.7
Far East	22.4
South East Asia	21.2
Middle East	6.1
South America	9.2
Australasia	1.3
South Asia	4.9
Africa	3.4
Eastern Europe	1.0
Total	101.0

Source: Drewry Shipping Consultants Ltd

Clearly, existing terminal operators need to know the economics of the international majors, and must ensure that they can match the performance – financial and operational – of the global stevedores if they, too, wish to attract new investment funds for expansion.

## Variation in Global Container Handling Charges (45 sample ports)

Price per loaded teu    Percentage of ports

Under \$80	6.8%
\$80-100	11.4%
\$100-120	9.1%
\$120-140	4.5%
\$140-160	6.8%
\$160-180	16.0%
\$180-200	9.1%
\$200-220	18.2%
\$220-240	6.8%
\$240-260	6.8%
\$260+	4.5%

Source: Drewry Shipping Consultants Ltd

Certainly, larger terminals offer scope for substantial scale economies – the new Drewry report *World Container Terminals: Global Growth and Private Profit* assesses the annual operating cost advantage at around \$12 per teu, for instance, for a 600,000 teu per annum facility compared with one a third the size.

*World Container Terminals: Global Growth and Private Profit*, 132pp, is published by Drewry Shipping Consultants Ltd. Individual copies of the Report are priced at UK£750 post-paid to anywhere in the world. For further information regarding *World Container Terminals: Global Growth and Private Profit*, or any enquiries regarding the Report, please contact

Paula Puszet at the address below.

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Internet: www.drewry.co.uk/drewry/

## The Impact of Changes in Ship Design on Transportation Infrastructure and Operations

By the U.S. Department of Transportation, Office of Intermodalism. (Washington, DC: February 1998. 46 pages. Executive Summary. Tables. Figures. Order from: U.S. Department of Transportation, Office of Intermodalism, 400 Seventh Street, SW, Washington, DC 20590. Fax: (202) 366-0263. Limited copies available. No charge.

**T**HIS report focuses on the potential impact of so-called mega-container ships on the U.S. freight transportation network. It is based on input received by the U.S. Department of Transportation from four regional meetings conducted last year on the need to improve infrastructure links to ports to cope with the expected growth in container traffic volume.

For example, the reports finds that:

- Containerized sea trade is growing at annual rates of 9.9% worldwide and 9.5% and 1.5%, respectively, at U.S. and Canadian ports.
- 90% of world liner general cargo trade will be containerized by the year 2010, compared to just 55% at

present.

- Every major container port is projected to double or triple its throughput by 2020.
- In 1990, less than 6% of U.S. containerized cargo was carried on vessels of 4,000 TEUs or more. By 2010, 30% is projected to be handled on ships in the 4,000 to 6,000 TEU class, and more than 9% in those in the 6,000 to 8,000 TEU range.
- Megaships of 4,500+ TEU capacity and/or fully-loaded drafts of 40 to 46 feet cannot be handled at "some major U.S. ports."
- Ships in the 6,000 to 9,000 TEU capacity range will account for about 9.5% of the world containership fleet by 2010.

Based on a survey of technical data, the report identifies these "parameters for an optimized megaship terminal":

- Minimum of 2,500 linear feet of berthing (two megaship berths @ 1,250 feet each).
- Up to 3,000 linear of berthing (three post-Panamax berths @ 1,000 linear feet) to accommodate a mix of vessels.
- 50-foot water depths at berth.
- High berth occupancy rates (with 50% as the target).
- A minimum of three "Beyond Post-Panamax (BPP) cranes (outreach of more than 158 feet) per berth.
- Upgraded wharf load-bearing capacity to support the BPP cranes.
- Up to 75 terminal acres per megaship berth or 50 acres per standard berth (150 acres for 2,500 to 3,000 liner feet of berthing).
- State-of-the-art gate complex and on-dock rail.

Such a terminal could achieve throughput of between 450,000 and 900,000 TEUs annually, "depending on

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operation factors such as storage density, working hours, use of advanced interterminal equipment, intermodal rail utilization and degree of transshipment to/from the terminal."

The report examines the issues of transshipment terminals and especially the capacity of landside rail and truck systems to accommodate the huge vol-

umes of traffic that would be generated by even a single megaship.

It also discusses how various technologies and modified labor practices could improve container terminal productivity, citing as examples the impressive efficiencies already achieved at "the best Asian ports."

from the U.S.

- Cities, states and regions don't rely on only one port for goods and services. The foreign trade activities of each state are supported by a variety of ports. On average, approximately 13 to 15 ports handle 95 percent of each state's import and export tons, import and export value and containers.

- Approximately 16 states trade the most non-containerized commodities measured by tons, using, on average, 27 ports as gateways. Twenty-one states, using 24 ports as gateways, are involved in 95 percent of commodity trade by value. The top five commodity groups based on tons are: crude petroleum, petroleum products, coal and coke, grain, and cement, lime and stone.

- States ranging in number from 14 to 24 are involved with trading in high value commodities and are served by anywhere from 14 to 33 ports. Top commodity groups, as measured by value, include: crude petroleum; consumer goods such as textile furnishings, apparel and clothing accessories, footwear, and scientific equipment; electrical equipment; heavy transportation equipment, and food products.

- The international trade of each state is supported by the U.S. port system as a whole. Coastal states generally rely on their own ports to facilitate their international trade. However, the remaining ports in the system can also contribute a significant amount of trade to these states. Land-locked states are dependent on the port system for efficient international cargo movements.

**Highlights of the "Importance of the U.S. Port System" are excerpted from a report by Michael L. Sclar Associates, Inc. for the U.S. Army Corps of Engineers, Institute for Water Resources (IWR), Water Resources Support Center. Project direction was provided by Phillip J. Thorpe of IWR (tel: 703-428-7074).**

## The Americas

### Halifax to Redevelop Pier 21 Annex Bldg.

**O**N March 27, 1998, the Board of Directors of the Halifax Port Corporation approved a \$1.2 million redevelopment of the Pier 21 Immigration Annex Building on Terminal Road. The purpose of the project is to accommodate present tenants located in Pier 21 – Central Office Bay. These tenants consist of local craftspeople, sculptors, painters and other artisans, collectively organized as the Pier 21 Creative Artisans Association. The project will provide for appropriate tenant accommodations to support the HPC's rental revenue base.

Work will consist of the following:

- upgrading of the building to code specifications
- new windows, doors
- installation of interior partitions, electrical and mechanical upgrades
- exterior cladding
- installation of elevator and stairs.

In making the announcement, David Bellefontaine, President and CEO of the Halifax Port Corporation, stated that the development will dovetail with other changes in the Pier 21 area such as the planned Pier 21 Society Immigration Heritage Centre.

Ken Parsons, an architectural woodworker and Chair of the Pier 21 Creative Artisans Association, stated, "The development will create a long-term home base for many local artists and adds stability to our livelihood. We are most excited to be included in the Corporation's plans."

Merv Russell, Chairman of the Halifax Port Corporation, noted, "We believe that this development, and others

which we are examining in the vicinity, will eventually transform this area of our city, creating a unique environment where our port meets the community." He further noted that the Corporation "is proud of its association with the unique Pier 21 artists' community in Halifax."

Construction is scheduled to begin in June '98 with completion in October '98.

### 'Importance of US Port System' – Highlights

**U**.S. foreign trade equals one-fifth of the U.S. Gross Domestic Product (GDP), U.S. ports annually handle in excess of \$600 billion in international trade.

- Ninety-five percent of foreign trade originates in, or is destined for, approximately two-thirds of the nation and uses U.S. ports as gateways to conduct this trade. Regions that conduct the most international trade with the U.S. include Europe, Central and Latin America, and the Pacific Rim countries including Southeast Asia.

- Thirty-one states are predominately involved in foreign trade flows. Twenty-six states originate or are the destination for 95 percent of national waterborne imports and exports.

- Twenty ports handle most of the containerized cargo in the U.S. A variety of ports handle foreign cargo, but 20 ports handle 95 percent of total containerized cargo imported and exported

### AAPA: Handbook for Environmental Management

**I**N many communities today, U.S. public ports have moved far beyond their traditional role of simply moving cargo and people from water to land modes of transportation. Increasingly, ports are being looked to for economic development and environmental stewardship. Existing environmental management guidelines vary in the types of issues covered and the institutional framework by which those policies

affect the decision-making process.

To address these concerns, AAPA is developing an environmental management handbook (EMH) for ports which will provide port managers a handbook of comprehensive environmental management practices that can be incorporated into their business practices. The EMH will identify the roles and responsibilities of ports, port managers and their employees and tenants as public custodians of natural resources within their jurisdiction. The EMH will serve as a guidance manual for ports wanting to develop or expand their environmental focus.

Specific objectives of the EMH are to: identify key environmental program areas for port operations and management; develop guidelines for best management practices in the key program areas; and develop a framework for consideration of environmental factors in the decision-making process that could be used by ports to serve as a tool to assist them in the outreach to, and education of, the public regarding port environmental practices.

The final document will be available by June 1998. For more information, contact Tom Chase, AAPA's Director of

Environmental Affairs, at (703) 684-5700.

### **New Container Cranes Arrive at Savannah**

**T**HE Port of Savannah has taken delivery of two new post-panamax container cranes. Arriving at the Georgia Ports Authority's (GPA) Garden City Terminal on March 15, 1998, the cranes were manufactured by Kone Crane Corporation of Helsinki, Finland and transported via SCANSOT Shipping Services of Hamburg, Germany. The new cranes feature the speed, height and reach to effectively service the newest generation of container vessels. To be erected on-site at the GPA's 838-acre Garden City Terminal, the cranes have a narrow wheel base to accommodate multiple cranes on a single vessel.

The acquisition of the new electrical-powered cranes enables the GPA to improve efficiency and productivity by increasing the terminal's fleet of container cranes to 13 (11 of which are post-panamax capacity). The addition of

these cranes will offer port users increased flexibility in equipment usage along more than 7,726 ft. (2,354.9 meters) of contiguous berthing, the longest of any facility on the U.S. East Coast.

"These new cranes represent the latest phase of our strategic plan to expand terminal operations," stated GPA Executive Director Doug J. Marchand. "We will soon take delivery of two new rubber-tired gantries and two new toplifts to further enhance the efficiencies of container operations. All of this equipment will be put to productive use this summer when we commence operations at Container Berth 7."

Future expansion plans at Savannah include the development of an on-terminal, 140-acre (56.7 hectare) Intermodal Container Transfer Facility (ICTF) within the next 18 to 24 months. This ICTF, the only one of its kind on the U.S. East Coast, will include almost four miles of total trackage for operation and storage.

An eighth container berth (CB 8) is also planned for development by the GPA at the Port of Savannah by 2001. CB 8 will provide port customers with an additional 83 acres (33.6 hectares) of paved storage and 1,200 feet (365.8

1877

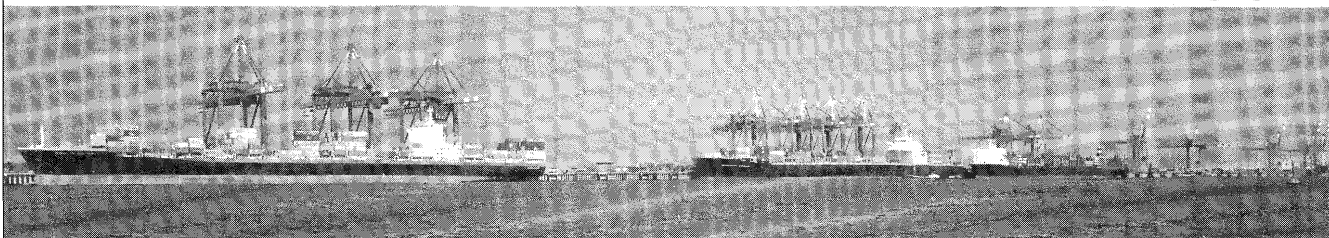
#### **Following a Tradition**

We are proud of our heritage stretching back over 100 years. Moulded in the Hanseatic business tradition, we confidently face the future and embrace its new opportunities. In this spirit - full speed ahead.

#### **Forging Ahead**

Far-sighted pioneers. From 1966 when Bremen handled the first containers to arrive in Germany, to the opening of BLG's new CTIII container terminal in 1997. We have the space, draft and equipment to welcome the latest generation of container ships. As well as the complete range of supporting services you would expect from a dynamic container port.

## **BLG Terminal at the Sea**



Welcome to the longest quay in the world. You can find out more about BLG Container by contacting us:

BLG Container GmbH & Co. · Senator-Borttscheller-Str. 1 · D - 27568 Bremerhaven · Germany  
Phone: 49-471/484 49 73 · Fax: 49-471/484 49 85 · <http://www.blg.de>

**BLG** CONTAINER

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meters) of new berthing.

To complement landside improvements, the Georgia Ports Authority is aggressively pursuing a harbor deepening project to ensure the Port of Savannah's capabilities match the

requirements of the next generation of deep draft vessels. Preliminary plans call for deepening of the Savannah channel from 42 feet (12.8 meters) at mean low water to 46 feet (14 meters) or more.

still expected both in imports (with a growing proportion of finished goods) and exports via the Port of Hamburg.

Although foreign trade with China is still partly dependent on official approval, i.e. with centralized decisions and controls, there are clear signs of moves towards a market economy, for example in linear reductions of import duties. In the fourth quarter of 1997, import duties for about a third of all goods categories were reduced. Average duty fell from 23% to 17% and the highest rates were also cut. Further reductions have been announced.

Trade with China and Hong Kong is one of most important contributory factors to the Port of Hamburg's container turnover. In 1997 Hamburg's container terminals handled around 450,000 TEUs of outgoing and incoming cargoes. In the past five years the volume of cargo handled has increased by 50%. There are direct or indirect sailings from Hamburg to more than 60 ports in China while more than 30 regular services call in at Shanghai and Hong Kong, the main ports for incoming cargoes. Hamburg offers an ideal frequency of sailings to Chinese destinations and a broad range of shipping lines, including several sailing under Chinese flag.

Despite the rising proportion of finished goods and an associated increase in containerization, China is still a growing market for conventional cargoes. This applies, on the one hand, to project shipments for the continuing development of China's economy and on-going process of industrialization, and on the other hand to the steel business. Although steel consumption in Japan is falling, China's is expected to rise to 120 million tonnes a year by 2000, followed by rapid growth in subsequent years. In the dry bulk sector Hamburg only played a significant role in outgoing cargoes (mainly fertilizers).

In the long term, China will remain one of the Port of Hamburg's most important markets. As Dr H L Beth, Chairman of Port of Hamburg Marketing and Public Relations (HHVW) emphasized, that was why it was so important for Hamburg to participate at China Transport '98 with a joint port stand. This event, China's most important transport fair, has just taken place in Beijing. The fair was an opportunity not only for important talks with China's transport and foreign trade companies but also for Hamburg port training institutes and consultancy firms who were particularly interested in making contacts in their specialist markets.

## ***Palm Beach District: Previous Records Broken***

**T**HE Port of Palm Beach District has broken several previous Port records as indicated by results of the first six months of FY '98 versus FY '97. The following are some of the new threshold levels:

	FY '97	FY '98	Variance
Container Tonnages:	443,431s/t	543,160s/t	+22.5%
Total TEUs:	87,222	100,428	+15.14%
Total All Cargo (s/ts):	1,542,409	1,763,986	+14.4%
Total Rail Cars:	1,317	1,427	+8.4%
Vessel Port Calls:	918	1,119	+22%
Rev. Passengers:	120,160	216,702	+80.34%

	FY '98 Budget YTD	FY '98 Actual YTD	
Operating Income	\$3,804,619	\$4,396,019	+15.5%
Operating Expenses	\$2,298,850	\$2,245,662	-0.3%
Net Income	\$574,616	\$1,258,795	+119.1%

These levels of activity are a source of pride to the Board of Commissioners of the Port of Palm Beach District, staff and residents of the Port District. They signal the overall solid position of the Port as the Gateway to the Americas.

## ***Africa/Europe***

### ***2 Antwerp Organizations To Adopt Single Logo***

**I**N the past the Antwerp Port Authority and the Antwerp Port Federation (AGHA) tended to work in parallel, both promoting the port under their own flags. Since the establishment of the Port Promotion Co-ordinating Board, efforts have been combined and interests are promoted after consulting one another.

Consequently a renewal of the company style was obvious. The two organizations have decided to adopt a single logo.

The highly successful logo used by AGHA, known all over the world, has been updated. Although still essentially and recognizably the same, the



revamped logo is the ideal embodiment of Antwerp's dynamism and can-do philosophy; a message it will carry to all corners of the world.



### ***Hamburg: Maritime Trade With China Increasing***

**H**AMBURG not only boasts a long tradition of maritime trade with China but also a current market that is still growing despite the economic crises in Asia. Although the leaps in growth of recent years are not expected now, substantial growth is

## Asia/Oceania

**Kaohsiung: Recent Construction Projects**

**H**ARBOR Vessel Traffic Management System (VTMS)

**Background:** In order to cooperate with the government's promotion of the Asia Pacific Regional Operations Shipping Center and to establish vessel traffic order, the "Kaohsiung Harbor Vessel Traffic Management System" (VTMS) is under preparation for construction.

**Plan Content:** The "Vessel Traffic Management Center" VTC tower on the north side of the second harbor entrance with five radar scanners, a telecommunication system, computers, and control panels, will be able to supervise the vessel movement situation inside and outside harbor and, furthermore, immediately issue an alert if necessary. It will have similar capabilities to an air traffic control tower.

**Service Area:** Taking the central point of the first and the second harbor entrances, the area has a radius of 20 nautical miles (covering the harbor area). Using radar, VHF/DF, CCTV and other equipment, all vessels within the service area can be continuously tracked or searched out. All the collected data will be sent back to the VTC tower for complete analysis, allowing the VTC center operators to immediately understand and deal with traffic conditions.

**Handling Situation:** China Port Consultants Inc. entrusted to conduct VTMS planning and designing, has drawn up mid and final stage reports according to the fixed schedule. The detailed designing is now under way after high level ratification of the reports.

To make the plan more far-reaching, Kaohsiung Harbor Bureau has invited Central Trust Bureau and Sun Yat-sen Scientific Research Institute experts to work with Kaohsiung Harbor Bureau to form an inspection team which will vigorously carry out its duties.

Detailed design work will soon be finished, and in March, 1998 the system facilities will publicly invite tenders. The project is scheduled to finish in June, 2000.

**Expected Beneficial Results:** The operation for vessels entering and leaving will be speeded up, and the port



operation efficiency will be increased.

Traffic safety at sea will be strengthened, and incidents of vessel collision will also be reduced.

There will be effective prevention and control of marine pollution.

**Ship Garbage Collection and Disposal System**

**Background:** Under the provisions of the Protocol of 1978 Relating to the "International Convention for the Prevention of Pollution from Ships 1973" (MARPOL), harbor areas must set up suitable collection and disposal facilities.

This will be handled in accordance with the June 19, 1992 Executive Yuan ratified act, the "Kaohsiung Harbor Pollution Control Scheme".

**Plan Content:** Reclamation of 22.5 hectares of new land from the sea area on the south side of the second harbor entrance near the Taipower Dalin coal-yard.

Installation of a greenification administration center.

Purchase of ship garbage collection barges and an onshore collection system.

Construction of two 75 tons/day garbage incinerators, and oily water separating facilities.

**Handling Situation:** The environmental impact assessment specification was passed after inspection by the Provincial Government Environmental Protection Department on June 24, 1996.

The construction blueprint was passed in principle by Executive Yuan on June 3, 1997.

Should the construction be progressing smoothly, it is scheduled to finish and operate in June, 2001.

**Expected Beneficial Results:** Harbor water quality will improve. It is expected that the present A-C grade quality sea water will be upgraded to above B grade quality.

Other additional benefits: Bilge water

and oily effluent from vessels in the port can be collected and need no longer be dumped into the port; the international profile of Port of Kaohsiung will be increased; international convention provisions can be met.

**Kaohsiung Cement Sil Construction Scheme**

**Background:** Cement is the basic material for all construction.

In recent years the government has been promoting public construction as well as many other kinds of construction schemes including privately operated construction growth. This has enabled local market demand for cement to continually increase.

South-West Taiwan limestone mining has been in a drought for a while. A large proportion of minefields will gradually lose their mining permits.

South-West cement factories will gradually move to the East, so South Taiwan's demand must be satisfied by importing cement. Hence, "East to West cement transportation" has become a firm policy. Only marine transportation is dependable in offering a large supply of cement at reasonable fares. Therefore, all ports on the western coast must provide modern port facilities for cement carriers to berth and transferable work.

**Investment Modes of Construction:** In order to attract private capital into harbor development and encourage private business to operate port facilities, thus reducing government investment costs and increasing operation efficiency, the project has already signed up Taiwan Cement Corporation and 11 other companies to invest in construction.

**Construction Sites and Quantity:** Chongdao Commercial Harbor Area #33 will be equipped with 6 cement silos with a capacity of 90,000 tons.

Chongdao Commercial Harbor Area #44 and #45 will be equipped with 14 cement silos with a capacity of 266,000 tons.

Hsiaogang Commercial Harbor Area #73 will be equipped with 4 cement silos with a capacity of 60,000 tons.

**Cement Silos Specifications and Its Handling Equipment:** Silo diameter is between 14-26m, height is 32-56m.

Totally automatic and watertight conveying equipment is used to prevent contamination.

**Total Investment:** NT\$3 billion.

**Scheduled Completion Date:** June, 2000.

## Old Harbor Area Redevelopment Plan

**Background:** Under the impact of changing times, Kaohsiung Old Harbor Area is unable to keep up with modern demands in terms of port capabilities.

Considering the aging port facilities, the fact that harbor and city mutually benefit from growth, residential recreation needs, the need to cooperate with the multifunctional finance and trade park area opening, and other considerations, Kaohsiung Harbor Bureau is beginning the Old Harbor Area redevelopment plan. It is hoped that the land adjustment and development at the Old

Harbor can help revitalize the area.

This plan will use the harbor area space to the north of the Chienchen River and Basin No. 8, including Chongtao, Lingya, Yenchen, Chijin, and other commercial harbor areas.

**Development Method:** The Old Harbor Area will be open to tourist attractions and commercial business facilities. Then plan follows the "Encouraging Private Participation in Transportation Development Act" to execute lawful encouragement of private participation in investment development.

bers were way beyond expectations and even more remarkable considering there was a freak snow storm on the Sunday! It goes to prove what a massive interest in cruise ships there is among the citizens of Yokohama.

The event was extremely well publicized and covered by the national media including newspaper articles and live television broadcasts. There were even reporters from England to cover the event for British publications.

At the same time as this event, a British Fair was held in Yamashita Park (the area where the three ships were harboured) as part of the year-long Festival UK'98 that is taking place this year in Japan to promote Anglo-Japanese relations. This event showcased British products, music and culture to coincide with the visit of the famous British cruise ships.

Overall it was a spectacular event that gave pleasure to a great number of people and places Yokohama firmly on the map as a major world cruise port of call. We look forward to being able to play host to more and more cruise ships in the near future.

*(Yokohama Port News)*

## QE2, Oriana, Asuka Call at Yokohama

**O**N March 2, three of the world's large cruise ships – the QE2, the Oriana and Asuka – were all present at the port. Asuka arrived on Saturday, February 28, the QE2 on the Sunday and the Oriana on the Monday

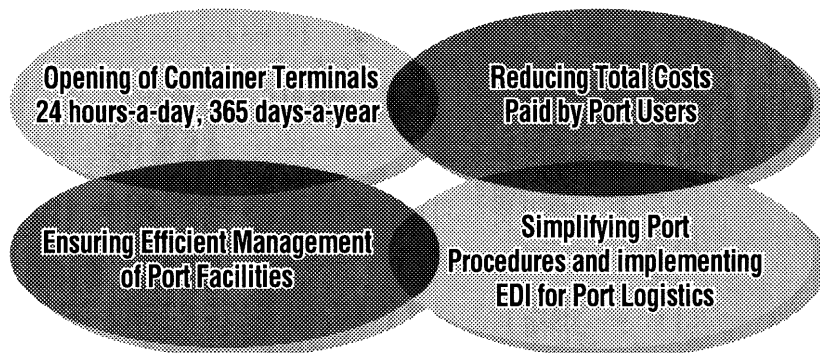
when all three were present. The calling of the three ships at the Port of Yokohama on their respective world cruises proved to be a huge and rare event for the city.

It is estimated that nearly 500,000 people turned out over the three days to watch the ships, and approximately 1.2 billion yen was generated. These num-



*The three ships docked in the Port of Yokohama (From Foreground: Oriana, QE2, Asuka)*

## Yokohama: Efforts for a User-friendly Port



IN June 1997, the 'Creation of a User-Friendly Port' Promotion Committee was organized from 26 groups of the port-related administrative bodies and businesses to examine the above 4 subjects and formulate policies to tackle the problems of offering users high-quality service and reducing total costs. The final report on the present plans and the future proposals was released in March 1998.

### Summary of the Final Report

#### Opening of Container Terminals 24 hours a day, 365 days a year

As for Sunday working which has taken place as a temporary measure after the Great Hanshin/Awaji

Earthquake of 1995, the Committee is going to discuss lengthening working hours.

#### Reducing Total Costs Paid by Port Users

The main port charges are made up

of facility use charges, port entry/exit charges such as pilotage, and handling charges.

With regard to facility use charges, the reduction of leasing fees for future container terminals which are currently under construction, is being discussed. In May 1997, charges for the use of wharves were substantially reduced by changing from a 24 hour system to a 12 hour system. Further, the committee will continue to look at reducing port entry charges and related charges in the future.

With regard to port entry/exit charges, in order to make the standard of operation of tugboats more efficient, there is a plan to reduce costs to users by shortening arrangement time and clarifying a standard number of necessary tugboats. There are also plans to reduce the amount of surcharge pilotage time and the cost of mooring and unmooring service charges.

As for handling charges, discussion will be held with the related industries to move towards improving productivity by work collaboration, thus realizing competitive charges.

#### Ensuring the Efficient Management of Port Facilities

Concerning new container terminals such as Minami Honmoku, efficient arrangements of various facilities for users will be examined. As a measure to maximize utility of existing container terminals, collaborative use by port operators will be discussed.

Furthermore, to promote efficient logistics, traffic access inside the piers will be improved, and a cargo carry-in/out reservation system will be put on trial from the spring of 1998 to reduce vehicles waiting at the container terminal gates.

#### Simplifying Port Procedures and Implementing EDI for Port Logistics

Among the documents that have to be handed in to the related public bodies when vessels enter or exit the port, 5 kinds will be integrated. Also, a meeting consisting of the relevant bodies will be established to examine the further simplification of the necessary procedures.

In order to increase the efficiency and speed of handing in documents to the related public bodies, the number of types of document that can be sent by fax to the Port and Harbor Bureau was increased from 6 to 24 in February 1998. Furthermore, to increase convenience for shipping companies, the number of customs windows which will receive

### Yokohama Int'l Seamen's Centre Under Construction

A new social welfare facility for sailors calling at the Port of Yokohama, tentatively called the Yokohama International Seamen's Centre, will be built in the Shinko District of the Minato Mirai 21 Area.

Construction commenced in December 1997, and is scheduled to fin-

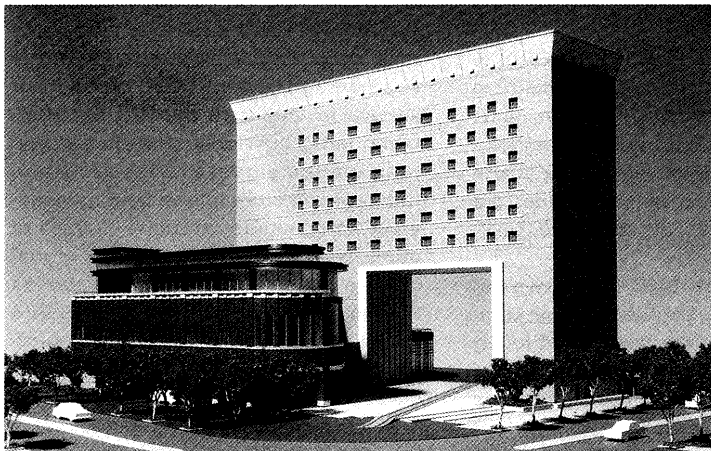
ish in 1999. Many countries are paying much attention to this facility because it will cater for sailors from all over the world. It will offer them various services from accommodation to currency exchange, a base for their activities, and opportunities for exchange with the citizens.

The Port of Yokohama puts much effort into enriching the social welfare of sailors. For example, we are the only

port in Japan to hold International Seamen's Sports Week every summer.

We are hoping that many sailors will visit our new facility and enjoy their time at the Port of Yokohama.

(Yokohama Port News)



The appearance of the projected centre on completion

their port exit reports will be increased. Also, an EDI system of the procedures will be developed quickly to meet the international standard and following the advanced Sea-NACCS (Sea-NIPPON Automated Cargo Clearance System).

These plans, leading the way among ports in Japan, will give an impetus to the attraction of vessels and cargo to the Port of Yokohama. Further, the attraction of a lot of vessels and cargo to the port is expected to promote manufacturing, distribution and logistics activities within the city, increase the population engaged in port-related industries and offer citizens imported goods at cheaper prices. The port will be the creator of economic effects and will contribute to all areas of economic activity in Yokohama.

*(Yokohama Port News)*

## **Singapore: Licences to 2 Tug-operating Firms**

**T**HE Maritime and Port Authority of Singapore (MPA) issued public licences on 27 Feb 98 to Sembawang Marine and Logistics Ltd (SML) and Keppel Smit Towage Pte Ltd for the provision of towage services in the Port. The public licence will be effective on 1 Mar 98 and will be valid for a period of 30 years.

These two companies have fully complied with the requirements set by MPA for the public licence. They will set up a manual tug operational system to service their customers. By 1 Jul 98, they will link up with MPA's computerised tug ordering and coordinating system.

Mr Chen Tze Penn, Director-General of MPA, said at a ceremony to give out the licences that the MPA expects both SML and Keppel Smit to deliver to their customers reliable and value-for-money tug services, thereby sharpening the competitive edge of the Port of Singapore. He added that the MPA will do its part to provide the necessary infrastructure and regulatory environment to enhance Singapore's status as a premier transshipment port.

Mr Er Kwong Wah, Executive Chairman of SML, said, "Over the past 4 years, we have been gearing up towards liberalisation, investing in newer and more powerful tugs. And today, we have a quality fleet which translates into greater operational efficiency and lower operating costs. So,

we are definitely well positioned to give our competitors a run for their money and our customers value for theirs."

Mr Hans Van Rooij, Director, Keppel Smit Towage Pte Ltd, said, "Keppel Smit Towage is proud to be granted the public licence and looks forward to increasing its contribution to enhance Singapore as a megaport in the global market. Our company is gearing up to be a major player. We appreciate the tremendous effort by MPA to level the playing field and to promote competitiveness in the port."

MPA announced the liberalisation of tug services in the port on 26 Aug 97. The liberalisation is being carried out in phases and will provide port users with an alternative to the towage services provided by PSA Corporation Ltd, thereby improving the prospect of better service levels and more competitive rates.

## **S'pore: Electronic Chart For Safe Navigation**

**T**O further enhance navigational safety in Singapore waters, the Maritime and Port Authority of Singapore (MPA) has produced the Singapore Electronic Navigational Chart (Singapore ENC) for commercial use. The Singapore ENC was officially launched at a ceremony on 17 Mar 98 at the Pan Pacific Hotel.

The Singapore ENC is a digital database which contains hydrographic chart information necessary for safe navigation. Singapore is among the first in the world to release for commercial use ENC data that is compliant with the International Hydrographic Organisation S57 Edition 3 Standard.

The Singapore ENC also contains supplementary information not available in paper charts. It is used with the Electronic Chart Display and Information System (ECDIS). ECDIS is approved by the International Maritime Organisation (IMO) as a paper chart equivalent. Therefore, vessels equipped with ECDIS need not carry paper charts for their voyage as required under the Safety of Life at Sea (SOLAS) Convention.

The Singapore ENC is a powerful navigational tool. For the maritime community at large, the benefits of using this electronic tool are many. When interfaced with navigational sensors such as the Differential Global Positioning System (DGPS) and the ECDIS software, it is able to provide:-

- Real-time information on the actual position of a vessel.
- 24-hour operations in all weather conditions, night and day. This would increase a mariner's confidence in navigation, especially in confined waterways such as the Singapore Strait.
- Anti-grounding warnings
- Anti-collision warnings when interfaced with Automatic Radar Plotting Aid (ARPA) radar.
- Capability to carry out route planning, route monitoring and estimated time of arrival (ETA) computation.

All this greatly enhances safety to navigation and therefore helps to protect the marine environment.

The Singapore ENC, which covers our port waters and its approaches, has been tested on board ships plying between Singapore and Southampton and Singapore and Hong Kong under a programme called the Singapore-Hong Kong Admiralty Raster and ENC Demonstration (SHARED). The Programme was jointly undertaken by the MPA and the United Kingdom Hydrographic Office. The SHARED programme has been successfully demonstrated on board container ships and car carriers, and this has led to an extension of the programme to the region. The MPA is now working out the details of the SHARED Extension programme with the participating Hydrographic Offices in the region.

The Singapore ENC is available on CD-ROMs and may be obtained from authorised distributor(s). The ECDIS hardware and software are available commercially.

The MPA is convinced that the Singapore ENC, when used with the ECDIS, is the key to enhancing safe navigation at sea. MPA has already invested about half-a-million dollars in developing the Singapore ENC. It has also set up the supporting infrastructure such as the Differential Global Positioning System (DGPS) broadcast service for use with the ECDIS. DGPS positioning is widely used in navigation, marine surveys, offshore exploration, transportation and fleet management for obtaining positions of ships or other objects at sea. The DGPS signal can be received by ships as far as 200km from Singapore. The DGPS broadcast service is provided free-of-charge to port users on a round-the-clock basis.

In a speech at the launch ceremony of the Singapore ENC, Mr Peter Ho, Chairman, MPA and Permanent



Secretary (Defense Development) MIN-DEF, said, "The Singapore ENC is proof of MPA's commitment to harness the latest technology to promote navigational safety in Singapore's port waters. The MPA is committed to improving its service level by being a leading global player in the use of new technologies and maintaining its competitive edge so as to preserve Singapore's position as the natural port of choice in this part of the world."

## PSA Sets 2 Records In Container Handling

**P**SA Corporation Limited (PSA) has set two records in the area of container handling in the first few months of 1998 – in terms of the number of containers handled in a single month and on a single vessel call.

### New Record for Throughput Handled In a Single Month

In March 98, PSA set a new record for the number of containers handled in a single month. Despite the regional slowdown, PSA handled a record of 1.31 million Twenty-foot Equivalent Units (TEUs), the highest monthly throughput so far since containerisation began in the PSA in 1972. The previous record was established in October 97, when PSA handled 1.27 million TEUs. The record throughput handled last March was 10% higher than the throughput handled in March last year.

The 1.31 million-TEU throughput is attributed to the good growth from West Asia, Oceania and South Asia, as well as the increase in the supply of empty containers from Europe and North America into the Southeast Asia region. The achievement is also a reflection of PSA's continued efforts to improve its container-handling capability amid forecasts of slower container traffic growth. By customising its operations to customers' requirements and by striving always to improve its operational performance, PSA ensures that customers' containers are handled speedily and efficiently, saving time and costs for customers.

### Record Number of Containers Handled During a Single Vessel Call

On 2 April this year, PSA also set another record – this time in terms of the total number of containers handled

during a single vessel call. 5,600 TEUs were loaded/unloaded from the 6,600 TEU *Susan Maersk* at a vessel rate of 125 moves per hour (see Notes). This is the largest number of TEUs ever handled by PSA in a single call. This achievement was made possible by the close cooperation of Maersk and PSA. Over the years PSA has also built up its expertise to handle large container volumes per call and the attendant complexities of transshipment.

"The performance has surpassed our expectations, considering the economic slowdown that has affected the region. 1998 is expected to be a challenging year for PSA Corporation. The first few months' results are positive and encouraging, and we would like to thank our customers for their continued support, without which these achievements would not have been possible. Our customers' confidence and support motivate us to do even better in the months ahead," said Mr Khoo Teng Chye, Group President, PSA Corporation Limited.

#### Notes

1. On average, PSA handles about 2,000 TEUs for a third-generation vessel.
2. PSA's overall annual average container rate for 1997 is 88 moves per hour, which is the fastest in the world.
3. The average turnaround time for a vessel with 1,000 containers at PSA is about 11 hours.

## Management & Operations Programme by PSA, NUS

**T**HIS Programme is jointly organised by PSA Institute, the training arm of PSA Corporation Ltd and National University of Singapore's Faculty of Business Administration.

### PSA Corporation Ltd

After 179 successful years in the port business, PSA Corporation Ltd was formed from the corporatisation of the former Port of Singapore Authority. PSA Corporation is headed by Dr Yeo Ning Hong as Chairman and Mr Khoo Teng Chye as Group President.

PSA Corporation's core business is in container operations. As the world's largest terminal operator, PSA handles about one-tenth of the world's container throughput, or more than 14 million TEUs (Twenty-foot Equivalent Units) a

year. The Port of Singapore, a global port linked by 400 shipping lines to 600 ports worldwide, is the world's busiest port with a combined shipping tonnage of over 700 million gross tons a year.

PSA corporation has built up a strong reputation as one of the world's most efficient container terminal operators. At PSA, a third generation container vessel is serviced at an average vessel rate of 88 containers per hour, the highest in the world. Eighty-two percent of container vessels are berthed on arrival and more than half of all containers are transhipped within three days.

PSA Corporation is actively exploring opportunities for co-operation in various parts of the world to invest in, operate and manage port terminals. PSA aims to be a global company, with plans to invest in international and regional ports, as well as related harbourfront developments. It is also developing its warehousing and logistics business, focusing on the development of a regional logistics network, providing a one-stop service for multi-national companies involved in regional distribution of high value-added products and services.

## National University of Singapore

Since its origin in 1905, NUS has inherited a rich academic tradition from a lineage of distinctive predecessor institutions such as the University of Malaya and the University of Singapore. Today, NUS has eight faculties, four postgraduate schools, six national research centres, numerous faculty-based research centres and more than fifty teaching departments.

The Faculty of Business Administration is known for its leadership in management education and executive training and development. This reputation is based on its long history of excellence in teaching and research as well as its current vitality, creativity and commitment to its mission of improving the practice of management.

Teaching of business administration at the undergraduate level began in 1965. By the early 70's, the Faculty was already offering business programmes at the postgraduate level. The 80's saw the introduction and growth of executive development programmes for middle and senior managers operating in the Asia-Pacific region. Over the last decade, the number of executive development programmes has increased significantly. To date, the Faculty has trained some 7,500 managers from 77 countries. The Faculty offers more than

40 programmes in English and Chinese every year. It has also attracted top business schools around the world to seek strategic alliances with the Faculty to jointly conduct executive programmes.

## FOR WHOM

Senior and middle management officers from:

- Port authorities, terminal operating companies and cargo handling firms.
- Government agencies responsible for port development and management.
- Shipping, inter-modal operations and freight-forwarding companies.

## OBJECTIVES

The objectives of the Programme are:

- To enhance conceptual understanding of the critical areas of corporate strategy, human resources, operations, finance and technology to effectively manage the multi-disciplinary functions of a modern sea-port.
- To provide opportunities to apply port management and operations principles and concepts through case studies and discussions.
- To provide a forum for the exchange of ideas and experiences on port management and operations with counterparts from the maritime industry.

## COVERAGE

### • Maritime Transport

International competition and competitive strategies  
Economics and structure of world maritime trade  
Shipping de-regulations and competition

### • Port Organisation

Role and functions of sea-ports  
Types of port administration  
Port privatisation and impact on organisation and operations

### • Port Planning

Principles of port planning  
Port master planning and preliminary engineering  
Port infrastructure maintenance  
Planning and development of Brani Terminal – case study

### • Port Operations Management

Principles of operations management  
Forecasting and capacity planning  
Design of operations systems  
Inventory management/control scheduling  
Quality management/control  
Container terminal gate system –

case study

### • Technology Management

Management of information and process technology  
Information flows and international standards for electronics documentation systems  
Automation of workflow in port operations  
Portnet (electronic submission of cargo/container documentation) – case study

### • Port Equipment Maintenance

Principles of replacement policies  
Equipment selection and procurement  
Maintenance information system

### • Port Safety and Security

Principles of port safety management  
Principles of port security management  
Use of technology in safety/security management

### • Port Finance

Principles of financial management  
Cost management and accounting  
Budgetary control

### • Human Resource Management

Organisation adaptation and human resource strategies  
Management of industrial relations  
Management of change  
Union-management relations  
Training of personnel

### • Adventure Learning

Communication  
Team-building

## TEACHING METHODS

A variety of teaching methods such as lectures, case studies and small group discussions will be used. The medium of instruction is English. Participants will be expected to be proficient in the language.

Dates: 21 September to 2 October 1998

Venue: PSA Institute, PSA Corporation Ltd

Fee: S\$4,200 (Singapore dollars) per participant. The fee covers cost of tuition, materials, and daily refreshments.

Lecturers: The Programme will be conducted by a team of highly qualified professors/senior lecturers from NUS and senior managers from PSA

Corporation Ltd.

## ADMINISTRATIVE DETAILS

### Application

Applications should include a cheque or bank draft for the total amount of fee in Singapore dollars made payable to "PSA Corporation Ltd". Applications should reach PSA Institute not later than 15 August 1998.

### Accommodation

On request, PSA Institute will assist in booking accommodation for overseas participants at local hotels.

### Visa and Travel Arrangements

Overseas participants will be required to make their own visa and travel arrangements to Singapore. PSA Institute will assist participants in submitting applications to the Singapore Immigration Department for valid passes to stay in Singapore for the duration of the Programme. Overseas participants are advised to take up travel, accident and medical insurance policies to cover them for the duration of their stay in Singapore.

### Refund of Fee

Applicants selected for the Programme and who subsequently withdraw, will be refunded 50% of the fee, if written notice of withdrawal is received by PSA Institute before 31 August 1998. No refund will be made if notice of withdrawal is received after the stipulated date. Applicants who are not selected for the Programme will be refunded the full amount of fee.

### Cancellation

PSA Institute and NUS reserve the right to cancel the Programme in the event of insufficient response or other unforeseen circumstances, without any financial obligation to applicants or their sponsors. Under such circumstances, a full refund of the fee will be made.

## ENQUIRIES

For more information, please contact:  
Training Manager  
PSA Institute  
No. 2, Maritime Square  
Singapore 099255

Tel: (65) 274-7111 Ext 1819, 1822, or 1823

Fax: (65) 276-9450

Internet: hhlee@hq.psa.com.sg.



Since 1955

Join us in IAPH's endeavours to pursue

## **World Peace Through World Trade World Trade Through World Ports**

### **IAPH supports all efforts to prevent illegal trafficking of drugs!**

Drug Trafficking through seaports is a global problem requiring vigilance and the co-operation of the World's Port Communities.

World Ports must accept their responsibility to the World Community by working together to enhance security measures and improve communication of information to fight the illegal movement of drugs through ports.

The *International Association of Ports and Harbors* (IAPH) fully supports the efforts and initiatives of the World Customs Organization (WCO) in their fight against the illegal trafficking of drugs through ports.



IAPH will meet in Kuala Lumpur Malaysia  
from 15 to 21 May, 1999,  
at its 21st World Ports Conference

**Conference Theme: Global Trade Through Port Co-operation**

**Conference Host: The Klang Port Authority**

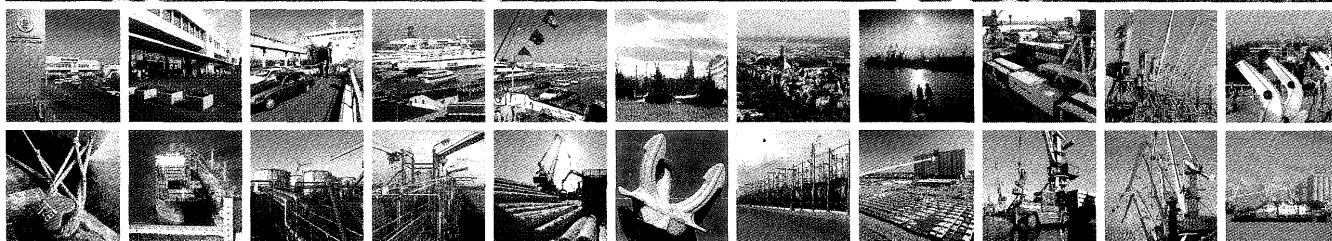
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Telex: 2222516 IAPH J

# PORT OF TALLINN



## GATEWAY BETWEEN EAST AND WEST



**PORT OF TALLINN** – favourably located on the tradeway between east and west, a harbour complex navigable throughout the year with depths down to 17.4 m, able to handle all vessels that can sail to the Baltic Sea through the Straits of Denmark

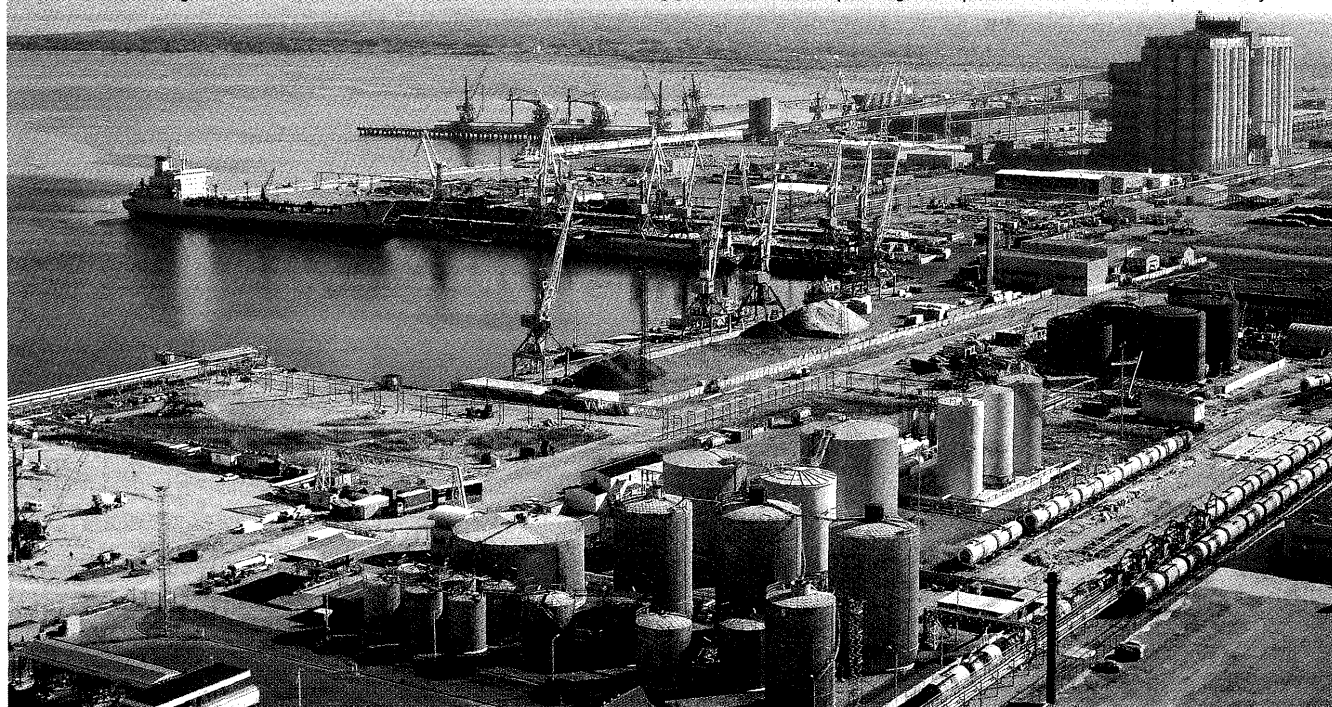
**PORT OF TALLINN** – administers **Old City Harbour**, **Muuga Harbour**, **Paljassaare Harbour** and **Paldiski South Harbour**.

**PORT OF TALLINN** – a gateway for over 4.8 million passengers in 1997. The Old City Harbour with its four passenger terminals is an excellent harbour for both passenger ferry boats, as well as for hydrofoils and catamarans during summer season.



**PORT OF TALLINN** – equipped to handle all types of cargo and commodities. Total annual cargo turnover in 1997 was over 17 million tonnes.

**Muuga Harbour** – the largest and deepest port in Estonia. Excellent inland rail and road connections. Two modern, fully-equipped grain and reefer terminals. The first boasts a 300,000 tonnes silo able to handle 5 million tonnes a year; the second has refrigerated warehouse capacity (+16°C to -22°C) for 5,000 tonnes. Port handles dry bulk and general cargoes, as well as cereals and perishables. Good transshipment facilities for minerals, construction materials, and coal. There are five oil terminals operating in the port, the sixth will be completed this year.



## PORT OF TALLINN – YOUR RELIABLE AND EFFICIENT PARTNER

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