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## **Ports Harbors**

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## Invitation to The International Association of Ports and Harbors (IAPH)

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



IAPH is a worldwide Association of port authorities with members representing more than 80 countries throughout the world. IAPH occupies a unique position in world commerce. IAPH members are committed to the exchange of ideas and technical knowledge on issues of concern to people working in ports and related industries through their participation in the committee activities or numerous international forums. IAPH aims at the enhancement of the overall efficiency of port management and the protection of port interests.



The official journal of IAPH, "Ports & Harbors" provides a forum for ports to exchange ideas, opinions and information. Published ten times a year as a magazine by ports, about ports and for ports, "Ports & Harbors" includes inside reports before they become news to the rest of the world. This insiders' magazine is indispensable for port officials who make decisions that affect their industry. If your business requires you to talk to the people building and guiding activity at today's ports, you should be advertising in this journal.





The next World Ports Conference of IAPH, under the theme "The Challenges of Ports", is scheduled for the first week of May, 1991, with Spain's Public Works Ministry acting as the host. This will take place on a large, well-equipped cruise ship. By the end of the conference week,

participants will have debated many of the key issues facing ports in the 1990s and at the same time have experienced some of the most attractive islands in the Mediterranean plus the largest industrial harbors, Barcelona and Valencia. IAPH welcomes all who are interested to join this "Ports Summit" Conference in May, 1991.

For further information about the Conference, membership, publications and the work of IAPH, please contact:

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## IAPH ANNOUNCEMENTS AND NEWS

### IAPH Top Officers Meet in Rotterdam

The IAPH Head Office has recently learned from Mr. John Mather (Managing Director, Clyde Port Authority), First Vice-President of IAPH, that he met President McJunkin in Rotterdam, where they spent a considerable time together talking about IAPH affairs. In his letter of September 11, 1990, Mr. Mather enclosed a picture showing him with President McJunkin (right), taken when the two officers were together in Rotterdam. Mr. Mather, following this visit to Rotterdam, travelled to Vancouver, Canada, where he was able to spend time with Captain Norman Stark, Deputy Port Manager and Chief Operating Officer of the Port of Vancouver.

## IAPH Submits a Position Paper to 13th LDC Meeting

Mr. Herbert R. Haar, Jr. (Special Assistant to the President, Board of Commissioners of the Port of New Orleans), Chairman of the IAPH Dredging Task Force, has sent the IAPH Secretary General a copy of the paper which

he submitted to the 13th Consultative Meeting of Contracting Parties to the London Dumping Convention (29 October -2November 1990 in London) on behalf of IAPH.

In his letter dated September 14, 1990 addressed to Dr. Manfred K. Nauke, Head, Marine Science Section, the IMO's Marine Environment Division, Chairman Haar confirmed that the IAPH delegation to the 13th



Mr. Herbert R. Haar

LDC Meeting will be headed by Mr. Haar himself; Mr. Dwayne G. Lee, Deputy Executive Director of Development at the Port of Los Angeles, who will be Mr. Haar's successor in May 1991 as the IAPH observer to the London Dumping Convention; and Mr. Joseph E. LeBlanc, Jr., legal counsel.

The IAPH paper submitted to the 13th Meeting is reproduced later in this issue (see pages 12-13).



#### **IPD Fund: Contribution Report**

#### Contributions to the Special Fund For the Term of 1990 to 1991 (As of October 10, 1990)

Contributors An	nount Paid:			
Paid	(US\$)			
Port of Copenhagen Authority, Denma	rk 1,000			
Stockton Port District, U.S.A.	500			
Public Port Corporation I, Indonesia	150			
Nanaimo Harbour Commission, Canad	a 200			
South Carolina State Ports Authority,				
U.S.A.	1,000			
Port of Redwood City, U.S.A.	200			
Vancouver Port Corporation, Canada	1,000			
Puerto Autonomo de Valencia, Spain	1,000			
Port of Quebec, Canada	250			
Public Port Corporation II, Indonesia	300			
Port Authority of the Cayman Islands,				
West Indies	100			
Port of Melbourne Authority, Australia	a 250			
Port Authority of Thailand, Thailand	100			
Port of Palm Beach, U.S.A.	250			
Associated British Ports, U.K.	3,000			
Fraser River Harbour Commission, Ca	nada 250			
Marine Department, Hong Kong	500			
Bintul Port Authority, Malaysia	200			
Japan Port & Harbor Association, Japa	un 400			
Port Authority of New York &				
New Jersey, U.S.A.	1,000			
Nagoya Container Berth Co. Ltd., Japa	an 554			
Japan Cargo Handling Mechanization				
Assoc., Japan	280			
Port of Montreal, Canada	500			
Port of Tauranga, New Zealand	500			
Osaka Prefecture, Japan	585			
Total	US\$14,069			
Pledged				
Ghana Ports & Harbours Authority, G	hana 250			
Empresa Nacional de Puertos S.A., Per	u 100			
Total	US\$350			
Grand Total	US\$14,419			

## **IAPH Marks 35th Anniversary**



- Journey from Hollywood to Barcelona -

IAPH was born in Hollywood, California, 35 years ago. It was on November 7, 1955 that our organization was officially established at a meeting held at the Hollywood Roosevelt Hotel, which was already famous as "The Home of the Stars". IAPH members, especially movie funs, may be interested to know that the organization's birthplace was the famous "Blossom Room", the site of the first Academy Awards presentations. According to a brochure IAPH recently received from Elizabeth Caragay, the hotel's Senior Sales Manager, the Roosevelt Hotel used to be a haven for writers such as Hemingway and Fitzgerald, and was a favorite romantic rendezvous for Clark Gable and Carole Lombard and for many other notable stars. The picture on the bottom of the front cover was also received from the hotel.

Starting with this gorgeous historical hotel in Hollywood, IAPH conferences have been held at various hotels or conference halls throughout the world. The second conference was held in Mexico city in 1959, the third in New Orleans in 1962 and the fourth in London in 1965. Since the 5th Conference held in Tokyo in 1967, the gathering has been a biennial event, the respective locations being Melbourne (1969), Montreal (1971), Amsterdam/Rotterdam (1973), Singapore (1975), Houston (1977), Deauville/Le Havre (1979), Nagoya (1981), Vancouver (1983), Hamburg (1985), Seoul (1987) and Miami (1989). The next two conferences are scheduled for May 1991 in Barcelona and 1993 in Sydney.

At off-conference years, the Executive Committee meetings have been held at the following cities: Honolulu (1960), Taipei (1962), San Francisco (1964), Los Angeles (1966), New Orleans (1968), Singapore (1970), Lisbon (1972), Auckland (1974), Curacao (1976), Mombasa (1978), Gold Coast/Brisbane (1980), Aruba (1982), Glasgow (1984), Auckland (1986), Abidjan (1988) and Fremantle (1990).

On other occasions, IAPH officers and the Technical and Internal Committees have met from time to time at various places around the world, mostly at the respective chairmen's ports. Kobe, Amsterdam, Rotterdam, London, Barcelona, San Juan, Honolulu, Long Beach, Le Havre, Cork, Bordeaux, Paris, New York and Tokyo are the places where our officers or committees have met.

During the past 35 years there have been significant changes and developments in the international political and economic scene, affecting not only our port communities

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but also all other aspects of human activities. In particular, the changes which have occurred within the past year in Eastern Europe have been far more momentous and drastic than anyone could have anticipated, while their implications on various aspects of our business and personal arrangements remain uncertain.

As an example of such changes as they affect IAPH, in the new edition of the Membership Directory the Port of Rostock is listed together with the Ports of Hamburg and Bremerhaven in the section for the unified Germany. Many more changes await us in the years ahead — changes which no doubt will involve all of us at IAPH.

President McJunkin in his opening address to a recent meeting said that the history of IAPH has been woven by all the dedicated members who have participated in the challenging work which the Association has constantly tackled for the collective interests of world ports.

What IAPH members have been able to achieve in the past 35 years by working closely together will certainly be valuable assets for the future course of our Association as we strive to continue pursuing the dream of our founding father articulated 35 years ago: World Peace Through World Trade, World Trade Through World Ports.

As an overview of the topics which IAPH has discussed at past conferences, the major themes covered in the presentations in the form of working sessions, panel discussions or open symposia are listed below, reflecting the issues the world ports have faced at various times over the past 35 years.

(By Kimiko Takeda)

#### Major Topics Covered at IAPH Conferences

#### 1st in Los Angeles – November 7-10, 1955

Panel Discussions:

- 1) Trends in world trade
- 2) Suggested simplification of U.S. tariffs and Customs relations to international trade
- 3) Financing port construction, improvements and maintenance

Paper Presentations:

- 1) Minimum requirements of a port to attract world shipping (Los Angeles)
- 2) Public works expenditures and port and harbor facilities in Japan (MOT, Japan)

#### 2nd in Mexico City June 22-25, 1959

Keynote address:

- 1) On outstanding features of Mexican foreign trade (Ministry of Industry and Commerce, Mexico)
- 2) Shipping and ports (Ministry of Maritime Affairs, Mexico)

Paper Presentations:

- 1) Reasonable and proper harbor dues and port charges (Keelung)
- 2) Levying of port entry dues (Dokai, Japan)
- 3) On reasonable harbor or tonnage dues, marine terminal charges, etc. (Kobe)
- 4) Promotion of container system (Keelung)
- 5) On advanced utilization of containers to speed up cargo handling in ports (Japan Port and Harbor Association)
- 6) Containerization for speedy cargo handling (Kobe)
- How to effect the quick turnaround of vessels (Keelung)
   Congestion of export cargoes and ocean-going vessels in the principal ports in Japan (Nagoya)
- 9) Financial resources for port facilities (Kobe)
- 10) Labor administration of harbor workers (Kobe)
- 11) The case for document simplification in world shipping (San Francisco)

#### 3rd in New Orleans — May 1-4, 1963

Luncheon/Dinner Sessions:

- 1) Trade, the secret weapon of the free world (ICC)
- 2) Financing port development in developing countries (Export-Import Bank, Washington)
- 3) Planning criteria for marine terminals (New York)
- 4) Trends in bulk port development (Soros Associates, U.S.A.)
- 5) Port facilities for containerized cargo (New Orleans)
- 6) Development of Europoort (Rotterdam)
- World trade opportunities Latin America in an expanding world trade (Inter-American Development Bank)
- 8) The Trade Expansion Act of 1962 (Member, U.S. House of Representative)
- 9) American business in a world context (Caterpillar Tractor Co)

**Technical Sessions:** 

- 1) International Traffic in Radioactive Materials (U.S. Atomic Energy Commission)
- 2) Use of Shore-Based Radar for Harbor Traffic Control (Decca Radar, Inc.)
- 3) Steps in port taken against arrival of nuclear-powered ships (Kobe)

- The outline of the steps taken in the various ports of the U.S.A. to observe for the entrance of nuclear ship Savannah (The States Marine Line)
- 5) Economics of operating harbor radar control in Long Beach

#### Panel Discussion:

- 1) Port development in the U.S.A.
- 2) Port of London
- 3) Development of Japanese ports and harbors
- 4) Development plan for Tokyo Port

#### 4th in London - May 10-14, 1965

Paper presentations:

- 1) Development of regions to bring prosperity to ports (Kobe)
- 2) Port management (London)
- 3) The relative merits of private, state and civic ownership of ports (NHB, Canada)
- 4) The role of the port authority in the changing pattern of cargo movement on the Australian coast (Melbourne)
- 5) A port's foreign representative what is his field? (New York)
- 6) Relationship between all those engaged in a port and their employers (Peninsular and Oriental Steam Navigation Company)
- 7) What does the user expect from a port authority? (Peninsular and Oriental Steam Navigation Company)
- 8) The constitution and functions of the National Ports Council (U.K.)
- 9) The ports, small ports what are their respective roles? (Gothenburg)
- 10) The economic importance of a free port (Hamburg)

#### 5th in Tokyo - May 8-13, 1967

Panel Discussion on Containerization Problems:

- 1) The role of the government in port development (MOT, Japan)
- 2) Problems in the development of ports in the ECAFE countries (International Bank for Reconstruction and Development)
- 3) Impact on port development of modern trends in ship design (Rotterdam)
- 4) The function of public relations in port development (Milwaukee)
- 5) Development of ports and the role of the World Trade Center (Member of the House of Representatives, U.S.A.)
- 6) The future of tankers (B.P. Tanker Co., Ltd.)

10-minute speeches:

- 1) Local harbor commissioners for harbor administration (Marine Works Department of Transport, Canada)
- 2) A brief report on ports of Taiwan (Kaohsiung)

- 3) Program of the port development of Peru
- 4) The impact of some IMCO proposals on port economy (Antwerp)
- 5) Managing a group of ports (B.T.D.B., U.K.)
- 6) On the relationship between port management and in-port transport companies at Kobe
- 7) Management and supervisory training in the port industry (N.P.C., U.K.)
- 8) New regulations of dock-workers in the Argentine Republic
- 9) Port Labor Problems (Auckland)
- 10) Container research and planning for trans-Pacific services (Seattle)
- 11) The importance of consolidated cargo to a universal port and vice versa as shown by Hamburg as an example (Hamburg)
- 12) Containerization (Japan Container Association)
- 13) Port development and containerization (Mersey Docks and Harbour Board, U.K.)
- 14) The impact of containerization on the world's ports ("Distribution Age", U.S.A.)
- 15) Port labor and ship turn-round (ECAFE)
- 16) Cargo handling by the rolling methods (Whangarei)
- 17) Facilities for international organization co-operation in ports and harbors (Technical Adviser, United Nations)
- 18) The Port of Colombo and its role among the ports of the East (Colombo)

#### 6th in Melbourne – March 3-8, 1969

Panel Discussion on port administration and responsibility:

- 1) The role of the United Nations as related to worldwide transportation problems (United Nations Development Programme)
- 2) Tonnage measurement (Maritime Safety Committee, IMCO)
- 3) Relative merits of unitized and containerized cargoes (Department of National Development, Sydney)
- 4) Japan's harbour development policy to cope with the revolution in maritime transportation (Keihin (Tokyo Bay) Port Development Authority)
- 5) The impact of mineral development on the growth of Australian ports (The Broken Hill Proprietary Co., Ltd. Australia)
- 6) The economic impact of ports on the regions they serve and the role of industrial development (Antwerp)

#### Minor Papers:

- 1) New wharves and a floating city (Kobe)
- 2) The liability of carriers in cargo transportation (Northland Harbour Board, New Zealand)
- 3) The seaports of the future (B.T.D.B., U.K.)
- 4) The administrative organization of port authorities of France (Marseilles)
- 5) The ports, motive elements of the economy (Dunkerque)
- 6) Port Politics (Administrator-General of Ports, Argentina)
- 7) Containerization, the dream and reality ("Distribution Age", U.S.A.)
- 8) The advantages in international trade of vehicular deck

ships in the Australian concept (Australian National Line)

- Containerized shipping facilities: past, present and future (Ewin, Campbell & Gottliev, Engineers, New Orleans)
- 10) The advantages of a seaport located far inland (Hamburg)

#### 7th in Montreal - June 6-12, 1971

Panel Discussions:

- 1) Computers and the Port
- 2) Containerization

Paper presentations:

- 1) The role of ports and harbors in national economic planning (MOT, Japan)
- 2) Activities of the inter-governmental maritime consultative organization of interests to ports (MOT, Canada)
- 3) Customs and door-to-door transport (Bureau of Customs, Washington, D.C.)
- 4) Financial policies for ports (B.T.D.B., U.K.)
- 5) Abandonment of old installations in urban centers and development of new facilities outside of urban centers to meet the container challenge (Oakland)

Minor papers:

- 1) UNCTAD research in the field of ports (UNCTAD)
- 2) Trends and implications of container shipping (The University of Wisconsin-Milwaukee)
- 3) A few principles to apply and mistakes to avoid in preparation of port tariffs (MOT, Canada)
- 4) World ports what priority? (Maryland)
- 5) The simplification of port charges (Marine and Harbors, South Australia)
- 6) Is Cooperation between ports possible? (Antwerp)
- 7) The modern challenge to port management (University of Milwaukee)
- 8) Methodology of studies of cargo handling in ports (Bureau Central d'Etudes pour le Equipment d'Outre-Mer, Paris)
- 9) International cooperation in port policing (NHB, Canada)

#### 8th in Amsterdam/ Rotterdam — May 6-12, 1973



Working Sessions:

- 1) The functions of port undertakings
- 2) Preventive measures against air and water pollution in port areas
- 3) Problems of developing ports and their solutions
- 4) Coordination in planning and links between ports and the hinterlands to facilitate movement of international transportation
- 5) Potential of cargo distribution by barge carriers

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Theme: Towards greater international port cooperation

Working Sessions:

- 1) Port co-operation om the promotion of international trade, transport and shipping
- 2) Port co-operation towards greater efficiency in management and the development of facilities
- 3) Port co-operation in preventing and combating water pollution and crime in harbours
- 4) Port co-operation towards revenue evaluation



Theme: World ports role in economic development

Working Sessions:

- 1) Problems of port congestion
- 2) The port of the future, new technology, facilities and problems
- 3) Port Contribution to international trade and development
- 4) Environmental problems of ports

#### Open Symposia:

- 1) Committee on containerization, barge Carriers and Ro/Ro vessels
- 2) Committee on large ships
- 3) Committee on international port development

Luncheon Sessions:

- 1) World energy supply (Houston Natural Gas Corporation)
- 2) Symbolization that man's seemingly impossible dreams can become limitless reality (Eugene Cernan, Astronaut)
- Highlights of the domestic and foreign waterborne commerce of the U.S.A., with particular emphasis on the respective roles of the Federal Government, port Authorities and private industry (Department of Army, Washington, D.C.)

#### 11th in Deauville (Le Havre) — May 12-19, 1979

Theme: World Ports of the Future

Working Sessions:

- Future of world ports Keynote speech by Wassily Leontief (Nobel Prize Winner)
- 2) Committee on international port development
- 3) Committee on large ships
- 4) Committee on containerization, barge carriers and Ro-Ro vessels

5) Committee on community relations

#### Open Symposia

- 1) Legal protection of navigable waterways
- 2) Trade facilitation

#### 12th in Nagoya - May 23-30, 1981



Theme: Port contribution to human prosperity

Working Sessions:

- 1) International port cooperation (World Bank)
- 2) Ports' roles in regional development (MOT, Japan)

#### Open Symposia:

- 1) Committee on international port development
- 2) Containerization, barge carriers and Ro-Ro vessels
- 3) Legal protection of port interests
- 4) Community relations
- 5) Trade facilitation

Paper Presentation:

- 1) Legal rights and duties of the port authority in relation to the customers (Gothenburg University)
- 2) A case study of the need for the establishment of a port authority (Fiji)
- 3) A broad-based impact analysis of a port using an interregional input-output system and a logit model of interregional trade patterns (Nagoya)

#### 13th in Vancouver – June 4-11, 1983



Theme: Ports and their communications

Working Sessions:

- 1) Safe handling & transportation of hazardous materials
- 2) Automated data processing and communications between ports and their users
- 3) Contingency planning to combat international threats and disorder (IAASP/IAPH joint session)

Panel Discussion:

- 1) Expansion of Robert Bank Coal Port
- 2) Port management

Luncheon Sessions:

- 1) Port autonomy: Ports Canada's cornerstone (Canada Ports Corporation)
- 2) The importance of Canadian West Coast ports to Alberta (Government of Alberta, Canada)
- 3) Trade and the world economy (University of British Columbia, Canada)
- 4) Transportation system in British Columbia (Minister of Transportation and Highways, Government of British Columbia, Canada)



10th I.A.P.H. Confe

#### 14th in Hamburg - May 4-10, 1985

Theme: Communication through ports

Working Sessions:

- 1) The requirements of ports in developing countries
- 2) The role of communication in ports
- 3) Free ports: Preconditions, Systems, Importance
- 4) Men in ports aims, training, working and labour requirements

Luncheon Sessions:

- The ports of Lower Saxony your competent partner in international commerce (Minister of Economic Affairs and Transport, Federal German State of Niedersachsen)
- 2) Philips vessel traffic management systems (Philips/ Hollandse Signaalapparaten B.V., Division Projects Department)
- 3) The future of ports and shipping at the border of a divided Europe (Deutsche Bank AG)
- 4) The Baltic as a centre for trade and traffic (Minister of Economic Affairs and Transport, Federal German State of Schleswig-Holstein)
- 5) Mercedes Benz a reliable partner worldwide (Daimler Benz)

#### 15th in Seoul — April 25-May 1, 1987



Theme: Ports looking into the 21st century

Keynote Speech by H.E. Lamine Fadika, Marine Minister of the Ivory Coast

Working Sessions:

- 1) Management and finance in ports today's issues (Melbourne)
- 2) On operation, labour and logistics (Oakland)
- 3) An informatics network for ports worldwide (Lloyd's of London Press Ltd.)
- 4) Competition and coordination among ports (Antwerp)
- 5) Community affairs, preservation of the environment (Montreal)

#### on Korean Port Development:

- 1) Future of Korean port development (KMPA)
- 2) The development of the Korean merchant fleet and its prospects (KMPA)
- 3) Towards better management of the ports in Korea (Chung Ang University) on International Port Development:
- 1) Regional port development co-operation (ESCAP)
- 2) Development and effectiveness of regional port cooperation in Africa (Port Management Association of West and Central Africa)

- on World Business Perspectives:
- 1) ICC (International Chamber of Commerce)
- 2) ICS (International Chamber of Shipping)
- 3) FIATA (International Federation of Freight Forwarders Association)





Theme: Ports – The intercontinental connection

Working Sessions

- 1) What do communities expect from ports? (Netherlands Minister of Transport)
- 2) The difficult road towards a common European seaports policy (Antwerp)
- 3) Operational review of Mediterranean ports (Ministry of Public Works, Spain)
- 4) Regional & inter-port cooperation (Abidjan)

Technical Committee Activities:

- 1) Cargo Handling Operations (Auckland)
- 2) Port Safety, Environment and Construction (Le Havre)
- 3) Trade Facilitation (Antwerp)
- 4) International Port Development (Rotterdam)
- 5) Legal Protection of Port Interests (Cork)
- 6) Public Affairs (Dublin)

Canada and the Americas:

- 1) The Panama Canal (Panama Canal Commission)
- 2) Latin American trade overview (Southeast Bank, Florida)
- 3) The Canadian port overview (Ports Canada)
- 4) The new U.S. Port director (AAPA)

Asia and the Pacific:

- 1) Japanese ports and an overview on trade and transport (Kobe)
- 2) Port of Hong Kong: current situation and future prospects (Hong Kong)
- 3) Korean port overview (Korea Maritime Institute)
- 4) Malaysian port overview (Kelang)
- 5) New Zealand port overview (Taranaki)
- 6) Impact of Australian waterfront development on ports (Geelong)

#### Communications:

- 1) Customs and trade facilitation in an electronic age (CCC Secretary General)
- 2) Presentation of electronic terminal operations systems (Singapore)
- 3) Demonstration of ship to shore communications capability (INMARSAT, London)

#### Critical Issues:

- 1) Impact of ship design (Le Havre)
- 2) Impact of strategic planning on ports (South Carolina)
- Impact of intermodalism on ports (CSX-Sealand, Baltimore)
- 4) Optic fiber use in port maintenance (Siemens AG and Coast Engineering and Manufacturing Company)

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The Head Office Secretariat in Tokyo and the Organizing Committee in Madrid have been constantly communicating with each other, mostly by fax. Thus the two sides can easily exchange questions and answers as to the matters requiring quick clarification concerning the preparations for the forthcoming Conference. Dr. Juan-Aracil's recent communications include the following news:

#### 139 Cabins reserved

As of September 30, 1990, 139 cabins — mostly the luxury double rooms — have been reserved in the cruise ship "Eugenio Costa", on which the 17th World Ports Conference will be held during the period May 5 - 11, 1991.

#### A 17th Conference poster distributed

A poster for the 17th World Ports Conference of IAPH has recently been completed by the design office in Valencia, which is headed by Mr. Javier Mariscal, famous as the designer of "COBI", a mascot for the Barcelona Olympic Games in 1992. The Organizing Committee in Madrid has pleasure in distributing a copy of the poster to all IAPH members, enclosed with this issue of "Ports and Harbors", and requests all the recipients to display the poster in a conspicious place in their organizations.

#### Dr. Juan-Aracil experiences weekend cruise on "EUGENIO COSTA"

"I spent last weekend on board the Eugenio Costa, from Barcelona to Genova, checking "on site" and, with 1,000 passengers, all aspects of the running of the ship. I had meetings on board with the shipowner, the ship's Captain and other important staff to check and assure myself of the arrangements for a successful Conference. I must say I am very happy about this visit. We will have superb service and all the little details to ensure smooth running are in place."

#### On tipping for the ship crews

The Organizing Committee will be able to announce how to tip the ship's crews in due course. At the moment, however, it considers the best way to handle this matter will be to adhere to traditional practice, which Dr. Juan-Aracil explains as follows:

"When I was on board at the beginning of September, my findings were as follows: On the last day of the cruise, the crew give an envelope to every passenger to be filled with a voluntary tip freely decided by the giver. This is announced in the ship's brochure which is distributed every day to each passenger. Someone told me that the habit is to give \$5 per day per passenger, as a tip for all the crew members. In the case of the IAPH Conference, this amount will be \$30 per passenger. But of course, this is on a voluntary basis and the participants can act as they wish."

#### Clothing

The Organizing Committee's next Bulletin will include detailed information on suitable clothing for the receptions during the Conference. Nevertheless, at the moment the Committee's ideas on this subject are as follows:

"We will have at least three Gala Dinners on board; a Welcome Dinner, the Captain's Dinner and a Farewell Dinner. On such occasions, evening dresses for ladies and dark suits (at a minimum) for gentlemen will be required. We will need informal clothing for the mornings and afernoons and formal dark suits and evening dresses for the evening functions.

#### **Visitors to Head Office**

On September 17 - Mr. Norman Matthews, Secretary General, IALA, Paris

On September 26 – Capt. Lim Tech Hoe, Controller (Port Marine Safety), and Mr. Chan Keng Nee, Assistant Controller, Port Masters's Department, Port of Singapore Authority

#### **Membership** Notes:

#### **New Member**

#### **Temporary Member**

Junta de los Puertos del Estado en Santa Cruz de Tenerife (Canary Islands) Address: Av. Francisco la Roche 49, 38071 Santa Cruz de Tenerife Tel: 922 27-78-50, 922 27-79-50 Fax: 922 27-12-25 (Mr. Miguel Pintor, Port Director) THIRTEENTH CONSULTATIVE MEETING OF CONTRACTING PARTIES TO THE CONVENTION ON THE PREVENTION OF MARINE POLLUTION BY DUMPING OF WASTES AND OTHER MATTER 29 October – 2 November 1990 Agenda Item 3

## **Consideration of the Report of the Scientific Group on Dumping**

Matters related to the disposal at sea of dredged material

Submitted by

#### The International Association of Ports and Harbors (IAPH)

#### By Herbert R. Haar, Jr. Chairman, IAPH Dredging Task Force

#### 1. Introduction

1.1 The Internatitonal Association of Ports and Harbors (IAPH) appreciates the invitation extended to it to attend this Thirteenth Consultative Meeting of Contracting Parties to the London Dumping Convention as an observer to participate in the discussion of matters relating to the disposal of dredged material at sea. A number of items will be addressed at the Meeting which are of interest to IAPH member ports. IAPH welcomes the opportunity to present its views to Contracting Parties on these issues of port concern.

## 2. Agenda Item 3 – Consideration of the Report of the Scientific Group on Dumping (LDC/SG 13/14)

2.1 At its Thirteenth Meeting held on 23-27 April 1990, the Scientific Group considered the report of the third meeting of the ad hoc Group of Experts on the Annexes to the London Dumping Convention (LDC/SG 13/2), with particular reference to the draft New Assessment Procedure (NAP) prepared by the Working Group (LDC/SG 13/2, annex 3). The Scientific Group found that the NAP represented significant progress in developing alternative procedures for the classification and assessment of wastes to be dumped at sea and invited Contracting Parties to review the content of the NAP and to advise the Secretariat whether the procedures constitute an improvement on the current approaches in the annexes. The draft NAP will also be forwarded to the Thirteenth Meeting for general review and comment and for consideration of a proposal that Contracting Parties implement the procedure on a trial basis.

2.2 IAPH wishes to express its support for the new approaches being developed by the Working Group. The draft NAP places special emphasis on the considerations set forth in Annex III, which are fundamental to the assessment of proposals to dispose of wastes at sea. The use of Annex III, in conjunction with the Guidelines for the Application of the Annexes to the Disposal of Dredged Material (Resolution LDC.23 (10)), forms a key component for appli-

cation of the draft NAP to dredging situations. This recognizes the unique characteristics of the sediment matrix and provides a sound basis for assessing the impacts from disposal at sea. IAPH also supports the proposal of the Scientific Group that Contracting Parties consider the implementation of the NAP on a trial basis. This will allow a further opportunity to assess its effectiveness when applied to proposals for the disposal of dredged material at sea.

The Scientific Group also discussed the technical and scientific considerations and their application in connection with the role of the precautionary approach under the Convention. (LDC/SG 13-14, para.8). The Group noted that the precautionary principle has become a very important consideration for the interpretation and implementation of the Convention, but has not yet been defined by the Consultative Meeting for purposes of the Convention. Different views were expressed by various delegations as to whether this principle requires the phasing out of all ocean dumping through avoidance and reduction strategies or would allow dumping decisions to be made on the basis of risk assessment procedures and testing and monitoring protocols. Although no agreement on a definition could be reached, it was concluded by the Scientific Group that the draft NAP contains technical components of a precautionary approach which may form the basis for a future approach.

2.4 In IAPH's view, use of the draft NAP, in conjunction with Annex III and the Special Guidelines for Dredged Material, is fully consistent with the precautionary principle. These technical protocols were adopted as a means of assuring that the disposal of dredged material at sea can be carried out safely and without harm to the marine environment. Where it can be shown that dredged material can be safely disposed at sea, the precautionary approach should not prohibit such disposal. IAPH continues to believe that the sea disposal option must be given equal consideration in a holistic wastes management strategy which would allow disposal at sea where this will result in the least detriment to man's environment. Because the sea disposal option is of such vital importance to the continued operation of many IAPH ports and to the national and international interests that they serve, it is essential that it remain a viable disposal method where it can be carried out safely.

2.5 The Scientific Group also agreed that any framework or definition for use of the precautionary principle should be based on a sound technical foundation. The adoption of the Special Guidelines for Dredged Material at the Tenth Meeting was based upon such a technical foundation and reflected the finding of the Scientific Group and the Consultative Meeting that the use of these guidelines in assessing the suitability of dredged material for disposal at sea was consistent with the underlying purposes and principles of the Convention. Where the disposal of dredged material at sea can be shown to satisfy the requirements of the draft NAP, after consideration of Annex III and the Special Guidelines, there is no technical or scientific basis for prohibiting the disposal.

2.6 At the Scientific Group meeting, IAPH also expressed its concern about the view of one delegation that ports should

have responsibility for eliminating upstream sources of pollution before being granted a permit for sea disposal of dredged material. IAPH expressed its opposition to such a requirement because ports are rarely in a position to exercise management or operational control over separate and independent sources of pollution and cannot impose legal or regulatory requirements of this nature. However, where, uniquely, a port might be in a position to influence upstream activities and developments whether or not these lie in a state other than that of the port in question, IAPH would encourage such ports to exercise such influence, and would, through its member ports, further encourage national governments to increase their efforts to eliminate polluted discharges into waterways and oceans.

#### 3. Conclusion

3.1 The IAPH invites Contracting Parties to take note of the views expressed above in their deliberations under these agenda items.

### International Maritime Pilots' Association Biennial Congress

#### By Edgar Eden, Secretary General International Maritime Pilots' Association (IMPA)

The 10th Biennial Congress of the International Maritime Pilots' Association (IMPA) was hosted by the Israeli Maritime Pilots.

The Congress, which was held from 21 to 26 may 1990, was attended by more than 200 Delegates and Observers from Member Countries in addition to representatives from international organisations, government officials and guests.

The Minister of Transport officially opened the 10th Biennial Congress on behalf of the Israeli Government.

The Congress Sessions dealt with a host of technical issues:- Studies on Manoeuvrability Standards from the Viewpoint of Marine Pilots; An Overview by IMPA of Pilots' Participation in VTS (A paper to be submitted by IMPA at the 7th International Symposium on Vessel Traffic Services in 1992); IMPA Shipmasters' Guide to Pilot Transfer by Helicopter; Development of Retrieval Systems for Man Overboard; IMPA Poster on Required Arrangements for Pilots; Collision Regulations for Deep Draft Vessels and Use of Inshore Traffic Zones; IMPA Papers to IMO on Amendments to SOLAS Pilot Ladder Regulations; IMPA Joint Participation in papers to IMO on Guidelines on Recruitment, Qualifications and Training of VTS Operators; VTS Functions-Sub Division for Communication Purposes; VTS Co-ordination between Adjacent VTS; Requirements for Ship Identifications, Polling, Tracking and Automatic Report Systems to Operate in Conjunction with VTS; The World VTS Guide; Consequences of Fatigue and the Human Factor Reports; Format and Content of the Pilot Card and the Wheelhouse Poster; the ICS/IMPA Symposium on Helicopter Operations to be held in London on 16 October 1990; Survival in Cold Water as it affects training; and the excellent training facilities at the World Maritime University for which IMPA has responded to the second appeal by way of a further contribution.



The Israeli Minister of Transport, sitting, and Captain Jim Varney, then IMPA President for the 10th Congress, standing.

The following Of	ficers were elected:-
President	Captain Michel Pouliot (Canada)
Senior Vice-President	Captain Pat Neely Jr. (U S A )
Vice-President	Captain Anthony Boddy (U K )
Vice-President	Captain J F C Kluwen (The Netherlands)
Vice-President	Captain Paul Lopinot (France)
Vice-President	Captain Martin Price (Australia)
Vice-President	Captain Yasu Yamazaki (Japan)

Congress accepted the invitations from the Spanish Delegation to host the IMPA 1992 Congress in Spain and from the Canadian Delegation to host the 1994 IMPA Congress in Vancouver, Canada.

Congress welcomed most warmly many goodwill messages, especially that from IAPH, with whom IMPA has a close rapport in the field of technical activities.

## **OPEN FORUM**

## Structural Changes in International Trade and Transport Markets: The Importance of Logistics



#### By Hans J. Peters Principal, Trade and Maritime Industries

The World Bank, U.S.A.

Presented at the 2nd KMI International Symposium on the Public Sector's Role in Logistics for the 21st Century, 2-7 July 1990, Seoul, Korea, hosted by Korea Maritime Institute and sponsored by Ministry of Transportation, Korea Maritime and Port Administration

#### Introduction

International seatrade has fluctuated greatly because of expansions and contractions in the global economy. Developments in commodity markets have been equally unsteady, presenting serious and often intractable problems for the trade and economic development of countries. Because of the difficulties of efficiently adjusting to changing trade environments, many governments have introduced measures to protect their trade markets. But these protectionist measures usually incur large economic and financial costs and reduce competitiveness. Added to these complexities are the changing practices in the distribution of traded commodities. For example, inventory control has become important in reducing final product costs. The corresponding requirements for adjustments in the global logistics network have spread from the industrial countries to their trading partners in the developing world.

These developments — together with the excessive overbuilding in the shipping industry and the unprecedented advances in cargo packaging, handling, and transport technologies — have resulted in a major rationalizing and restructuring of the maritime sector. Restructuring has also meant that many ports have lost traditional patronage, as carriers concentrated on fewer trade routes to exploit the scale economies of newer vessels. Facing declining market shares for their national flag carriers and reduced cargo flows through many of their ports, governments have resorted to protectionist measures to maintain the industry's viability. In many cases, however, such maritime nationalism has merely hurt seatrade.

With international commodity markets now so closely integrated, exporters have to respond to the special re-

Mr. Hans J. Peters

quirements of their trading partners. The once-stable supply relationships for individual commodities can no longer be taken for granted. Modern technologies and global information networks enable traders to scan the world market for required goods in an instant. Such developments have increased competitive pressures among countries and industries. Customers have become more and more demanding, not only for price and quality but also for speedy and reliable product delivery. Developing countries are thus confronted with the need to adjust to the trade management practices of their partner countries and, by implication, to the practices in the internal transport industry. The commercial success of any export industry in a developing country now depends on the ability to tie effectively into international trade networks.

Given these developments, developing countries have stringent requirements to remain competitive in traditional export commodities and - more important - to succeed in diversifying exports and promoting domestic industries. Since most trade flows between developing and industrial countries are on the seas, shipping and ports are particularly important. If the distribution network for traded commodities is to function effectively, state-of-the-art infrastructure and technology are essential. But it is equally important to have a regulatory environment conducive to stimulating improved performance. Ports have to reassess their roles and functions, and national flag carriers must determine whether they can maintain their viability in competition with international rivals. It is likely that the insights from such market analyses will conflict with national policies for the sector.

These circumstances make it extremely difficult for developing country governments to ensure the efficient conduct of trade while providing shipping and port services. Maritime nationalism is part of this debate, and it impedes required system adjustments. Its economic and social costs are usually very high.

### International developments in seatrade and maritime transport

#### Trade

The seaborne proportion of world trade has held fairly steady at 20 percent to 25 percent of total shipments, rising from about a billion metric tons (MTs) in 1960 to 3.25 MTs in 1974. The steep increases came to an end with the oil crisis of 1974, but shipping recovered to reach a peak of almost four billion MTs in 1979. With the onset of a worldwide recession, the expansion ended in the face of declining exports and imports in most, if not all economies. Shipping markets benefited from the strong upturn in trade in 1984, and after a pause in 1985, resumed their climb in 1986.

Almost all traded commodities reveal highly erratic trends over the last 15 to 20 years. Generally, in the face of falling demand for oil and declining primary commodity prices, most OPEC and non oil-producing developing countries have severely curtailed imports — a situation likely to persist for some time. In the Organization for Economic Cooperation and Development (OECD) countries, differences in economic performance, erratic fluctuations in exchange rates, and changing patterns of competitive advantage in major commodity trades make seaborne trade flows volatile. And the newly industrializing countries, particularly in Asia, have started to penetrate aggressively almost all export markets with a growing variety of manufactured goods. These developments are changing the structure, level, and direction of international seaborne trade.

Deteriorating trade balances and uncompetitive domestic industries have prompted an increasing number of governments to protect local markets against imports from other countries. Import quotas are established and bilateral trade volumes are fixed on the basis of reciprocal agreements. And several regional groups of countries form more or less protected markets through multilateral conventions. Trade among such countries is thereby facilitated, but commercial interaction between these groups and the outside world is usually constrained. For developing countries that try to reduce their dependence on a few primary commodities for export earnings and attempt to diversify into manufactures and other processed commodities, these constraints on market access impede trade expansion and national development.

The provision of shipping and port services is another form of protectionism. Officials in many countries are anxious to solve shipping problems associated with high and fluctuating freight rates, control by conferences, and the loss of foreign exchange to foreign-owned shipping lines. Conferences in ocean transport are cartels established by shipping companies which set freight rates and regulate the provision of services. In many parts of the world maritime nationalism has become more or less pervasive and is sustaining two important trends - the rapid expansion of national shipping capacity, and the actions to control the movement of national cargoes not only in national bottoms but also through national ports. As a general observation, protectionist measures in shipping usually carry a substantial element of avoidable costs, which under most circumstances increase the costs of traded commodities and undermines their competitiveness. To overcome this disadvantage, many governments subsidize shipping and ports. A recent estimate by the General Agreement on Tariffs and Trade (GATT) suggests that protectionist policies in the United States currently cost about \$3 billion a year when subsidies, regulatory measures, and compliance costs are taken into account. The costs for Europe are similar.

#### Shipping

Although global seaborne trade grew only 30 percent between 1970 and 1986, the size of the world merchant fleet almost doubled, rising from 340 million dead weight tons (DWT) to 650 million DWT. This unprecedented growth can largely be explained by surprisingly optimistic reactions in the shipping industry (international bankers talk about a casino mentality) to what appear in hindsight to have been only short-lived trade expansions. Visions of a trade bonanza in oil in the early 1970s – and in other commodities in later years - encouraged shipowners to enlarge their fleets and induced banks to compete with each other to finance shipbuilding. The capacity of these massive fleets today exceeds market demand in all commodities by substantial margins. As a result, freight rate have declined substantially: the 1986 international dry and liquid cargo freight rate indices were 26 percent and 30 percent, respectively, below 1980 levels. Owing to these circumstances, there has been a considerable deterioration in the financial performance of the international shipping industry, whose collective debt to commercial banks approaches \$80 billion.

The depressed market for shipping services and the resultant overcapacity have caused the prices of new ships, called newbuildings, and second-hand ships to decline an average of 40 percent between 1980 and 1986. A major contributing factor is that global shipbuilding capacity exceeds true demand by about 40 percent. As a result governments that invested heavily in shipyard development are offering ship financing packages at very attractive terms, which further entices many carriers, especially in developing countries, to invest in additional tonnage.

Ownerships of the world's merchant fleet remains heavily concentrated in the OECD countries (42 percent). About 30 percent of the fleet sails under flags of convenience. The developing countries own almost 20 percent of the world fleet; most of it registered in the Far East. About 8 percent of the world fleet is owned and registered in socialist countries. The shipping industry in most regions is in the process of containing the detrimental effects of overcapacity through scrapping older ships, service mergers, and the introduction of more cost-effective technologies. Some of these observations apply particularly to the bulk sector, where operators have resorted in growing numbers to scrapping of older tonnage and acquisition of more modern purpose-built second-hand tonnage, resulting in significant increases in scrapping and second-hand prices for bulk carriers since the corresponding fleet had started to contract. However, there remain many instances in which individual governments encourage fleet expansions through subsidy schemes for newbuildings and arrangements aimed at protecting the market share of national fleets. A closer look at these practices reveals the inevitable presence of high economic and financial costs, and bankruptcies in the shipping industry abound. In the struggle for survival, shipowners are often willing to carry cargo that covers no more than the variable cost.

Declining freight rates, fierce competition, and overcapacity have forced shipping companies to look for every possible means to reduce the costs of transporting cargo. Consequently, the maritime industry has undergone unprecedented changes over the last 15 years — in ship, cargo handling, and communication technologies, in the organization and structure of shipping services, in the integration of sea and land transport, and in the role of ports.

Advances in ship design and shipbuilding arrangements are geared to reduce the costs of newbuildings and operations. During the last three decades, the size and carrying capacity of liquid and dry bulk carriers has increased more than 10 times. Major changes in general cargo management spurred the emergence of container ships with ever-increasing dimensions and carrying capacities. Developments in engine design and reductions in crew and maintenance costs have contributed to greater efficiency and cost-effectiveness, lowering ship operating costs substantially. For instance, the 20-foot equivalent unit (TEU)-mile operating cost of cellular container ships built in 1982 and 1986 differs by 40 percent. But the daily fixed costs of modern ships are much higher than those of earlier generation vessels. These developments have resulted in major changes in the behavior of shipping companies.

Ships designed and built for highly efficient operations with significant daily cost structures depend critically on the timely availability of cargo and on fast loading and unloading in ports. These requirements have led to the development of increasingly effective cargo-handling technologies. Fleet deployment and cargo flow management have benefited from substantial efficiency gains as a result of increasingly sophisticated electronic data interchange (EDI) networks in use in the international transport and freightforwarding industries. But imbalances in cargo flow among different countries and widespread port performance problems, particularly in developing countries, are major impediments for many shipping lines. These problems adversely affect capacity utilization and financial performance, but most importantly raise the costs of seaborne trade. In 1986 the shipping proportion of import trade in cost, insurance, and freight (cif) terms was 4.5 percent on average for industrial countries and almost 10 percent on average for developing countries. In several developing countries, particularly in Africa, a share as high as 20 percent was observed. These percentages would be considerably higher if one added the costs of inefficient cargo management in many developing country ports.

An added dimension to seaborne trade logistics management is the increasing importance of cargo delivery standards. Shippers - that is, cargo owners and their contracted agents - have become much more discriminating in their demands for ocean carriage. In fact, shippers in growing numbers dictate the packaging, routing, and transport arrangements. The need to price export commodities competitively has led industries in the OECD countries and in several developing economies to streamline inventory management and control. Reducing stocks of inputs to production has allowed major cost cuts, but it requires highly dependable deliveries. Similar changes in distribution management of marketed commodities are taking hold in different production sectors. To reduce the costs of inventories, importers favor arrangements that supply the required goods "just in time," that is, within a short time span before the anticipated use in production or sales. In all this, transport becomes more and more an integral part of production and marketing strategies in industry and trade. It is clear that selecting least-cost transport options is no longer a sure recipe for optimal distribution of commodities, as such options often imply increased inventories and higher-than-necessary costs, jeopardizing sales.

Expanding international EDI networks play a major role in these changing requirements. Figure 1 illustrates the potential trade-offs between transportation, storage, and communications costs. The commercial success of export and import markets is increasingly dependent on reliable and cost-effective trade logistics management arrangements. Clearly, the changing logistics management strategies rep-

#### Figure 1 The choice among logistics options



resent the biggest challenge to ocean shipping and will determine the fortunes of individual carriers.

The highly competitive international shipping industry has reduced costs and improved services to its customers through cargo unitization, restructuring of shipping services, and multimodal transport arrangements. Although the basic operating cost parameters in the provision of shipping services are essentially the same for all trade routes, the actual freight rates for container shipping vary considerably in different market segments as a result of the influence of conference cartels and other forms of monopolistic behavior.

The push to introduce cargo unitization resulted from the increasing cost of labor and the slow rate of break-bulk cargo handling. Today, almost 70 percent of general cargo is moved in containers, and more and more bulk trades are containerized. These circumstances have led to the development of increasingly efficient container ships or combination vessels, which can carry different cargoes in different forms of packaging at the same time. Obviously, such combination ships add measurably to an operator's flexibility in adjusting to different markets and trade routes. While the penetration of containerized trades has reached saturation levels in most industrial countries, containerization in most developing countries continues very rapidly.

The need to overcome the problems associated with imbalances in cargo flows, minimize empty backhauls, and maximize capacity utilization has induced structural and organizational changes in shipping, such as round-the-world services. These services are provided by high capacity dedicated containerships that limit their calls to regional load centers connecting with a system of local feeder services. These developments will influence long-term trends at individual ports, and are certain to affect local shipping and international liner conferences. The restructuring has prompted an increase in the size of newbuildings. For instance, in the trans-Pacific market, the average containership expanded from 1,200 TEUs in 1982 to 2,800 TEUs in 1986. While that market has become a trendsetter for the maritime industries, it is expected that similar trends will be initiated in other segments of the world market. The ultimate impact of round-the-world services will reflect the success of this approach to liner shipping and of the lines concerned. The more immediate impact will be increased uncertainty and instability at those ports not emerging as load centers for a major trade. This may put a damper on

port expansion projects while port authorities seek to establish their positions in a new equilibrium and await further overall growth in container traffic.

The container simplified intermodal transfers and allowed a rapid development of door-to-door services. This shift was matched by a loosening of the legal and commercial environments that had previously treated the different legs in the movement of cargo as separate entities. With the growing volume of container trades and greater demand for speed and tight scheduling, it has become increasingly necessary for the road, rail, and water transport systems to be physically and operationally linked. Reacting to these changing requirements, key international ocean carriers have realigned their service provisions substantially. Most of the effective realignments took place outside conference settings. These carriers (particularly American and Far Eastern) have undergone a transformation from providing ocean transport to proving integrated door-to-door - or multimodal transport services. In the context of such services, the sea transport link represents only a portion of the total costs. Imaginative management, aggressive marketing, and superior service have enabled these carriers to control increasingly larger market shares, resulting in a trend toward oligopoly in many market segments. In Pacific trade the market share of the top 10 carriers (in terms of vessel capacity controlled) has increased from 58 percent in 1982 to 71 percent in 1986. Trends toward larger vessels and growing structural links with the container transport network have accentuated the demands on ports. In turn, port authorities are beginning to appreciate their strategic role in the complex, dynamic, and capital-intensive sea transport industry.

#### Ports

The importance of seaborne trade to national economies cannot be overstated, and many governments offer financial assistance to port development, directly or indirectly. It is also common for port authorities to be closely linked with local government structures. The employment and income-generating capacity of ports is fully appreciated at all levels of government, to the extent that port development projects have formed an integral part of important regional development schemes in many parts of the world. This wider economic imperative, probably more than normal commercial practice, makes interport competition so vigorous in many areas of the world and among neighboring ports in the same country. Progressively, hinterlands have lost their strict definition. For many cargoes a growing choice of ports is possible – even across frontiers – as a result of continuing spatial and service changes in economic activities and land transport systems. In addition, the proximity of many ports makes them direct competitors along the various trade routes.

One way in which ports attempt to stay one step ahead of the competition is by modernizing and expanding their facilities. An awareness of trends in carrier strategies and ship and cargo handling technologies is required to enable port managers to make demand-responsive and cost-effective decisions on investments and operating arrangements. The implications of changing service arrangements derived from such carrier strategies, and the technology developments for individual ports are usually profound. The availability of funds at less than market rates or as public expenditure has enabled or encouraged very large projects to go ahead under a different sort of economic and commercial scrutiny than would apply to private sector projects of the same magnitude. This situation is a sore point with ports that receive no subsidies. At the same time, ports faced with the possibility of losing financial support argue that assistance is critical in the present period of modernization and expansion if they are to maintain their market share. With large and rapid increases in port capacity, the need for individual ports to retain or increase their market share is critical to their continued viability, although the administrative and financial structure of some ports allows them to record operating losses for many consecutive years. The unpredictability of trade flows and the ability of ship operators to change port calls easily only adds to the pressure on port authorities. Trade volumes and mixes through individual ports are in constant flux — compounding the problems for port planners.

The relative position among ports is also changing. While there are dominant ports in some regions of the world, others are making rapid gains, and some once-dominant ports are losing their traditional customers. This means that port administrators must constantly devise strategies to adjust to the changing environment and devote many of their energies to marketing. Such campaigns are directed more toward shippers than ship operators, at least in the general cargo sector, as the choice of port calls in large multimodal transport networks is now more at the discretion of the shipper than the individual operator. The campaigns have also become more public and possibly more bitter, as trade gains at one port will more often than not be made at the expense of another port in the region — or even in the same country.

The factors in interport competition are numerous often going well beyond the obvious elements of location, facilities, seaward and landside access, efficiency, and charges to include inland transport costs and government policies for port development and transport. Increasingly, a principal criterion for shippers and their contracted carriers is the ship turnaround time, given the high daily cost of these ships, instead of the port charge. Other factors undoubtedly enter the equation, particularly the extent to which a port is effectively tied in to land distribution systems. But in many regions cargo handling performance is not a major concern. Intense competition has ensured equally efficient handling, with modern equipment at very competitive prices at all the major regional ports. The intense competition generates a steady stream of aggressive port tariff packages and complaints of unfair competition - including accusations of undercutting port charges through currency fluctuations and preferential government assistance through, say, interest-free loans. The result is that shippers and ship operators are generally receiving extremely good value for their payments to ports, while the ports in turn are often hard-pressed to maintain their financial position, particularly in times of considerable capital expenditures and trade uncertainties.

A degree of excess capacity in world ports can be considered advantageous because it gives shippers more flexibility and allows ports to absorb rapid changes in cargo volumes and types. Easy flows of international trade are thus assured, but there are fears that available and planned port capacity is in many instances excessive. A common argument for capacity expansion is that ship operators will not rely on a port that does not progress in tandem with a carrier's own development for container trades are booming, matched by the emphasis on marketing by port authorities. The development of modern container berths and terminals is very capital-intensive, and there are high stakes riding on the ability of individual ports to attract trade — and in the longer term on overall growth in containerized cargo volumes. But ports depend increasingly on the health of the shipping industry they serve. The shipping sector is overbuilt and likely to be unstable. The immediate prospects for individual ports will therefore be closely linked to the fortunes of their major customers, and there is a real prospect that some ports will become financial drains rather than economic generators.

#### Trade logistics, shipping, and ports in developing countries

#### **Logistics Organization**

Export trade in most developing countries has been limited to a few primary and agricultural commodities, essentially reflecting the economic policies of colonial administrations. In fact, much of the transport infrastructure in many developing countries - and often domestic regulations governing the provision of trade-related transport services - still reflects those trade management practices. But many countries have experienced significant fluctuations in global demand for their traditional exports, often accompanied by falling prices. For this reason, a key element of most developing countries' trade strategy is the need to diversify their exports. Such strategies normally encourage the establishment of various categories of manufacturing industries. The products of these young industries are partly aimed at reducing import requirements, but are also selectively destined for major overseas markets as potential foreign exchange earners.

Many developing countries have achieved self-sufficiency in domestic consumption demand, particularly for cement, fertilizers, and steel. The corresponding local industries have matured and search for ways to sell excess production. Riding high on their success in meeting domestic needs, industry managers are taking a close look at international markets to justify further plant expansion. International customers have become increasingly demanding, however, not only vis-a-vis price and quality but also with regard to speedy and reliable product delivery. Trade promotion in developing countries is therefore critically dependent on effective distribution of export commodities. An opportunity and challenge at the same time for developing countries is the tendency within the industrial sectors in Western economies and Japan to reduce in-house production of components for various marketed products. The trend among manufacturers in these industrial economies is to relocate the production of components to countries with lower labor costs and other conditions of comparative advantage, such as reduced overhead costs and local currencies that are pegged to the U.S. dollar. But the location decisions are largely influenced by logistics considerations. Since the cost of distribution logistics often range between 30 percent and 50 percent of the market prices of a traded product, there is an understandable urge to reduce these costs. The answer usually points to reducing inventories. To take advantage of these trends, developing countries again face the need to improve delivery arrangements, in this case for such components which they intend to produce domestically.

International commodity markets have become closely integrated, which means that these countries have to be very responsive to the special requirements of their foreign trading partners. EDI systems have enabled international traders and industry to scan the markets for required goods, whether primary, semifinished, or final. The stable supply relationships for individual commodities between developing countries and their trade partners in industrial economies have largely ceased to exist. Much trading is on a spot basis. These developments have increased the competitive pressures among countries and industries. A producer of, say, chocolate, is not concerned about where he buys cocoa beans, but is very interested in getting them at the lowest possible cost. A key answer to this concern usually rests with logistics. Developing countries thus confront the fact that any trading nation in today's market is forced to adjust to the trade management practices of its partner countries, and by implication to the practices in the international transport industry. In other words, the commercial success of any export-oriented industry in a developing country depends more and more on its ability to tie effectively into the emerging international trade logistics service networks.

Given these international developments, developing countries face stringent requirements if they are to remain competitive in their traditional export commodities, and more importantly, if they are to succeed in diversifying exports and promoting domestic industries. At the same time, these countries have to make substantial adjustments to their trade management practices to hold down logistics cost-driven inflation in their domestic trades. Much can be gained from improving the provision of transport services for locally traded commodities. If the physical distribution network for traded commodities is to function efficiently, facilities must respond to technology changes and be effectively managed. Equally important, the regulatory environment must be conducive to stimulating improved systems performance.

In developing countries the regulatory and institutional environment has tended to impede trade development. Protectionist attitudes continue to prevail. The pervasive maritime nationalism is a costly proposition, reducing the international competitiveness of exports and inflating the cost of imports.

#### The provision of shipping services

Between 1980 and 1986 the world merchant fleet began to contract. Several shipowners made strategic withdrawals from mainstream shipping and show little predilection for buying back into the market, even at depressed rates. Equity has been drained from the industry by many years of operating losses and the prolonged dramatic fall in the market worth of assets, compared with their cost of acquisition. Most of the traditional participants are therefore existing on external financing of one kind or another. They often do not have the ability to stand back and examine the shipping markets objectively. Such an ability can only be based on substantial liquid resources that permit investment and disinvestment decisions to be derived from a cool market assessment rather than from the pressing need to generate some cash flow. This state of affairs characterizes the shipping industry in many developing countries.

Developing economies' fleets have steadily increased over the last 15 years from 20 million DWT in 1970 to almost 130 million DWT in 1986. Asia recorded the most vigorous growth, particularly South Korea, Taiwan, Hong Kong, and Singapore, whose carriers have displayed a remarkable ability to establish a niche and progressively penetrate key shipping markets. Today, many of these carriers are among the premier providers of global maritime transport services. They own and operate state-of-the-art equipment and qualify as pioneers of highly efficient service arrangements, such as the round-the-world services. In almost complete contrast, the shipping industry in many other developing countries remains in a permanent crisis. Due to their relatively low volume of trade and their limited competitiveness in the international shipping market, these fleets commonly are poorly used, and their financial performance is dismal.

One reason the developing countries moved so aggressively into the shipping markets was their concern about invisible trade. The contention was — and largely still is — that substantial and avoidable payments in scarce foreign exchange were going to foreign carriers and their insurers. Officials decided the solution was to acquire their own tonnage. In some cases the decision was also influenced by strategic considerations. Often, easy export credit financing was available from foreign shipyards, further encouraging such decisions.

The success of Asian newly industrializing countries in the maritime industry can be attributed to the fact that, first, corporate management was able to operate without government interference. And second, these countries developed service arrangements outside the bounds of liner conferences. The few other cases of success reflected situations in which the sheer volume of national cargo was enough to generate the relatively high tonnage required to operate domestic fleets, such as in China and Brazil. Some countries with large trade volumes, like Indonesia, have failed in their attempts to expand the utilization of nationally owned tonnage. The reasons for these failures were manifold, with excessive state intervention being the most critical. While the potential exists for integrating the shipping lines of neighboring developing countries into joint sailing schedules to improve capacity utilization, the continuing antipathy among governments in some regions has stalled such possible arrangements. For example, neither Indian nor Pakistani ships call at the other country's ports.

Meanwhile, the big European carriers, U.S. operators, and Far Eastern shipping companies continue to develop service networks independent of developing country companies, although links do exist in the feeder sector. These service networks are usually very responsive to shipper demands, providing reliable and high quality transport and delivery. Consequently, these large carriers with modern equipment and fully coordinated through-transport arrangements dominate many market segments.

The high level of investment required in terms of ships, equipment, and cargo management systems makes ocean shipping an increasingly capital-intensive business. This puts many developing countries in a dilemma. Cheap labor tends to be available but capital is not. Since the financial returns on liner shipping in the 1980s are hardly a major attraction, opting out altogether and leaving sea transport to cargo-hungry foreign carriers is a viable option. But questions of national interest, or security, usually preclude this approach. As a result, the carriers of developing countries are pitched into the international ocean transport market with its high cost of entry whether they like it or not. Their stance in this market, however, remains intrinsically fragile.

Because of this situation, the governments of fleetowning developing countries have instituted regulations geared toward maintaining, if not improving, their national flag carriers' market share. In many respects, the Liner Code sponsored by the United Nations Conference on Trade and Development (UNCTAD), which ensures a 40-percent share of traded commodities to be carried by developing country operators, has encouraged such regulatory moves. Typical protectionist arrangements for national flag carriers in developing countries include cargo reservation, preferential port charges, prohibitions against transshipment, and conference monopolies that exclude outsiders. To enforce these provisions, developing country governments in growing numbers are establishing freight bureaus in the countries of their trading partners. All cargo destined for a country has to be registered in such a bureau, which then allocates consignments to national flag carriers on a preferential basis. Since these carriers are usually not well managed and seldom have modern vessels at their disposal, their service costs are high and reliability is poor.

These circumstances have a dampening effect on developing countries' trade performance. Potential international trade partners with their increasingly sophisticated production and distribution logistics arrangements shy away from commerce with countries that regulate sea transport for commodities. To contain such market reactions, developing countries' governments generally resort to subsidizing their national flag carriers so they can underbid the more efficient international competition. What they normally do not realize is that freight rates have lost much importance for shippers in light of speedy and reliable delivery requirements. In any case, the implied economic and financial costs are substantial for those developing countries that are determined to remain involved in ocean carriage.

#### Port management and development

Ports in most developing countries have a long history. Originally established for commercial, strategic, regional, and even social welfare considerations, they have been compelled to adjust to remain viable. With no major development in the organization of shipping over long periods, the few changes that took place were primarily in the land surrounding the ports. But such changes did not pose significant threats to individual ports, which in general could always count on fairly stable demand for their services.

In the postwar years, however, shippers turned to their transport operators with more and more stringent demands for cost-effective services. The transport operators, in turn, scambled to address changing demand patterns. In the wake of these developments, substantial adjustments have been taking place in the structure and organization of land and sea transport. As a result, many ports lost the spatial hegemony they had always taken for granted. The loss of dominance over a once-traditional hinterland and the ongoing restructuring in the ocean carriage of traded commodities have had detrimental effects on traffic flows and revenues in many ports. On the other hand, some developing country ports have experienced unprecedented growth rates because of their favorable location along key trade routes in specific geographic areas – and because officials pursued the right strategies for managing and developing facilities. In short, there has been a fundamental transformation of the port systems' map in many regions.

The resulting shock to ports in developing countries has been severe, and because the restructuring came about so quickly and the adjustment burden continues, these ports are still trying to sort out what happened and why. What makes this process so difficult is the fact that even the luckier ports that initially registered increases in traffic growth often had to accept subsequent and unforeseen declines. The analysis of this decline shows the fallacy of assuming that container traffic will grow incessantly (figure 2). The explanation has to be sought in the dynamic factors that keep international trade and related transport service industries changing their organization and networks in the constant search for logistics cost reductions.

In many instances, developing country ports have lost out because of their costly and unreliable service, and because of inadequate links with inland distribution systems. When through-transport operations are hardly possible, modern ships with high daily cost structures have declined to call. None of the major carriers will risk the delays and costs that are normal at many of these government-owned ports.

Governments of developing countries have become quite sensitive to this issue as they recognize the detrimental effects on trade performance and port use. But instead of taking necessary corrective measures aimed at adjusting their port systems to changing user demands, they have emphasized maintaining the status quo. In fact, in many instances scarce public resources are poured into port development schemes in the vague hope that the expanded and better equipped ports will regain lost traffic. The point is, however, that modernized port facilities are only part of the solution. Inland distribution networks have to be improved and well integrated with ports at the same time. But most important, the organization and management of port operation and cargo handling services must be streamlined, the principal criterion for winning the confidence of potential port users whose sole interest is low service costs (and reliability). A prerequisite for such arrangements is autonomy for port managers under a liberal regulatory environment. In most developing countries, the absence of such an environment is at the core of port problems.

#### The adjustment process

The prerequisite for initiating effective system adjustments is convincing governments that efficient ports and shipping services are important to the competitive position of a country's exports and to the domestic price of imports. The next step is to understand the objectives and strategies of a nation's actual and potential trade partners — and the role of the international transport service industries that cater to their needs. In many situations the insights gained from such market analyses will conflict with government goals for fleet maintenance, port development, and employment generation. But here is where hard choices have to be made between the objectives for economic and social development. What is considered best for a country's maritime transport system and its labor force is not necessarily ideal for the nation's exporters and importers.

Other critical factors come into play in this difficult process. One is that international ocean transport is essentially free of regulation. Shipping by the more aggressive ocean carriers points to the inescapable fact that the traditional protective umbrella of liner conferences is likely to collapse before long. Under deregulation, free competition will set the rules. The resulting benefits for trade are probably going to be substantial, but in the shipping industry only the fittest will survive. In addition, competition between carriers from different countries — and between ports — is often heavily distorted through access to low interest capital and other substantial subsidies available to carriers and ports in some countries. All these circumstances make it extremely difficult for a developing country government to ensure the

#### Figure 2 Container port traffic growth



Note: Sample is 50 developing country ports.

efficient conduct of trade while trying to preserve the national goal of providing shipping and port services.

What are the basic ingredients of commonly required maritime transport system adjustments in developing countries for improving seatrade performance?

- Integrated and coordinated sea and land transport infrastructure and services.
- Integrated and standardized cargo handling facilities and equipment.
- Streamlined communication networks for organizing cargo flows and transport service arrangements.
- Coordinated administration and management of all services involved in controlling and handling the flow of traded commodities.
- Harmonized trade and transport service documentation.
- Clarity of liability responsibilities.

For sea transport, there are various options for maintaining the participation of national interests without causing undue stress in the local economy. Bareboat chartering limits doubtful capital outlays in the uncertain shipping market. With the likely continuation of overtonnage in different segments of the international shipping industry, this proposition has gained a special attraction. In addition, national flag carriers of developing countries would be well advised to investigate every opportunity for joint services with the more experienced and better established international carriers. In particular, there is the wide open area of feeder services, which has become so important in the context of emerging load centers and the resultant hub-spoke shipping arrangements. With their local and regional market knowledge, developing country shipping interests are especially well suited to be feeder operators. Should the decision remain to go it alone, much imagination and management talent will be required to establish a market niche. The choice of cost-effective equipment and establishment of required service and operations support networks will be very costly.

The situation with ports is more difficult, given their immovability. Clearly, each port has to assess its future role and function in the changing trade and transport environments. Based on such assessments, strategies have to be elaborated concerning its management organization and development. Employment issues are likely to loom large. Labor-intensive options are practicable only where they do not interfere with the user requirements of efficient cargo packaging, handling, and fast ship turnaround. There is not much hope that ports will be able to sustain their traditionally large workforce and remain competitive. And there is the requirement that managers look beyond the perimeters of their ports to arrange for effective inland integration with the surface networks. This need is possibly the most difficult task as required changes are generally outside the management control of port administrations. For ports that stand to lose their traditional role as multipurpose facilities, there are ways to specialize in the handling of individual commodities or services.

There seems to be a growing interest in privatization as a means of either developing and operating new port infrastructure, or of achieving greater productivity than is possible under current arrangements in existing ports. In most of Asia, for example, private operation of port facilities is seen as a necessary and desirable alternative after a long period of state domination and control. Hong Kong, Malaysia, Taiwan, and Thailand have achieved substantial port efficiency gains through privatization. If privatization means greater efficiency and productivity, a privately operated facility is likely to prove more attractive than one bogged down in red tape. And if privatization involves large, highly integrated corporate structures, large firms, or multi-nationals, a facility will probably be developed with strong links to efficient shipping networks. Privatization may thus offer the opportunity to develop new and efficient terminals that could change the pattern and structure of existing cargo and ship movements.

The efficiency of shipping and port services in meeting demands of trade and industry depends on the conduct of customs clearance services, freight forwarding, harmonized documentation, and effective cargo insurance. Developing countries generally underestimate the importance of facilitating trade, and much corrective action has to go into streamlining these arrangements.

#### **Future directions**

#### Conclusions

The experience of the World Bank's operations supporting seatrade and maritime infrastructure reflects difficulties in grasping the consequences of the changing environments in which developing countries' seatrade, shipping, and ports have to perform. This is not surprising because everyone involved in these activities - producers, traders, shippers, transport service managers, port administrators, and governments - finds it increasingly difficult to adjust in a demand-responsive, cost-effective manner. Investments are sometimes too early, sometimes too late, and often in excess of what is really needed. Most cumbersome is the right choice of technology and of managerial and operational arrangements. There simply are too many factors at play in shaping the demand for and the supply of seatrade distribution services. Any trade or industry manager will admit to devoting more resources to market analyses and to developing responsive trade logistics management strategies. Preparing their technical staff to deal with these requirements is of vital importance.

What is true for the actors on the scene is true for the Bank. Sector support operations have been formulated with a generally narrow focus on the immediate problems of port systems management. The small number of lending operations in support of shipping in developing countries have contributed little to the Bank's ability to address the problems of maritime transport in a rapidly changing environment. Since these matters are of such vital importance for developing countries, the question is: How can the World Bank Group improve its ability to advise borrowing countries on the right course of action?

Looking at the common problems in international seatrade and maritime transport circles, the following issues can be singled out:

- Forecasting developments in commodity and related seatrade markets.
- Watching and interpreting trends in physical distribution management practices of trade and industry.
- Keeping up with advances in trade related transport technologies and their effect on cargo management.
- Assessing the causes and effects of restructuring in international shipping including multimodal through-transport service arrangements.
- Understanding the problems and the impacts of changes introduced in the general area of trade facilitation (such as document harmonization, insurance and liability, credit arrangements, and customs involvement).
- Developing an appreciation of the effects of protectionist policies and international conventions on the conduct of seatrade.

Each of the foregoing issues is likely to entail a considerable scope for investigation of the actual and potential future interactions between trade and transport markets, between commodity suppliers and producers, and between shippers and consignees — all of which are becoming more complex and more sophisticated. Importantly, there can be little distinction between the associated system adjustment needs confronting the industrial and developing countries. At best, one can argue about the degree and phasing in either case. The results of such investigations should provide basic indications as to how and how much to adjust developing country seaborne trade and maritime transport regulations, legislative and institutional frameworks, and shipping and port infrastructure systems in the light of market changes.

#### Strategic research

Much of the concern about the effects of changing international trade and transport markets on shipping and ports in developing countries is shared by a variety of public and private sector institutions. These institutions are involved, either by mandate or because of particular interest, in analyzing the implications of such market changes for developing countries. A wealth of data and background information is thus available, if fragmented and dispersed. Obviously, the nature and extent of available analyses and data often reflect the interest and political attitudes of those who commissioned such work. Given the volatile trends in commodity markets and the rapid changes in the international transport and freight forwarding industries, findings often lose relevance and accuracy in a short time. Accordingly, there is a need for periodic updates and sometimes for expansion of the original investigations.

In response to the generally perceived need for strategic guidelines and identified analytical weaknesses, the Bank has initiated a research program to address seaborne trade and related maritime transport sector issues. This research will draw substantially on work in the United Nations regional commissions, UNCTAD, GATT, the European (Continued on Page 22)

### **International Maritime Information** NEVVS

**DEVELOPMENT AND** IMPROVEMENT **OF PORTS** 

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#### **Maintenance of Port Equipment**

Report by the UNCTAD Secretariat

#### (Extracts in part from the UNCTAD document: TD/B/C.4/AC.7/9)

#### I. Introduction

1. In the majority of ports in developing countries one of the most difficult management problems continues to be the maintenance of port equipment. In spite of substantial aid programmes, in which the provision of equipment and spares has often been accompanied by advice on maintenance techniques, there are still many ports where the availability and condition of equipment is poor.

2. For this reason the Ad hoc Inter-

governmental Group of Port Experts at its session held in Geneva from 25 February to 5 March 1986, recommended that the UNCTAD secretariat conduct research and studies in the field of "Maintenance of port equipment". The Committee on Shipping, in its resolution 60 (XII), paragraph 8, requested the secretariat to adapt its work in the light of the Ad hoc Group's recommendation.

3. The Committee on Shipping, in its resolution 61 (XIII), invited UNC-TAD to convene an Ad hoc Intergovernmental Group of Port Experts to review the practical problems which arise in respect of the development, improvement and operation of ports, and, in the light of this review, to examine the three highest priority studies requested at the first session of the Group, among which the third one is:

• maintenance of port equipment and to propose follow-up action appropriate for local, national and intergovernmental consideration.

4. UNCTAD's research was carried

out in collaboration with the Infrastructure and Urban Development Department of the World Bank and the United Kingdom Department of Trade and Industry, as described below. The research soon established that the problem is at its most acute in general cargo operations, particularly for container handling, where efficient maintenance of port equipment, allied to sound equipment procurement policy, is central to port efficiency. Accordingly, this report, while discussing general principles which apply to all classes of port operation, concentrates on the handling of general cargo (in which freight container play an increasingly important part).

5. A survey of the problem was conducted by a team financed by the United Kingdom Department of Trade and Industry. The team visited seven European ports, and nine ports in developing countries, including visits to Colombian ports financed by the World Bank. They prepared a report which reviewed port maintenance practices and management and which has served

#### Importance of Logistics—

#### (Continued from Page 21)

Economic Commission (EEC), the OECD, and the International Chamber of Commerce. Several research institutes are providing contributions, and - very importantly - a few international transport operators, trading houses, and treight forwarders have assisted. It is expected that a major proportion of the required background investigations will materialize through appropriately oriented country economic and transport sector work. Relevant components of sector lending operations will provide feedback to the research efforts.

This research is part of a more global effort to assess the changing practices in trade and industry concerning production logistics and distribution management. These efforts include market analyses, technical assessments, procedural overviews, and developing country investigations. The last are case studies that will focus on trends and issues in selected economies. The findings under the different research tasks will form the basis for strategy papers on the identified issues in trade and transport markets. Concerning seaborne trade and maritime transport, the research addresses the issues of load centering and feeder ports, development and management strategies for port systems and individual ports, centralized versus decentralized port ad-

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ministration arrangements, comparison of options regarding public or private port operations, and related financial policies. In shipping, the focus is on questions relating to the role and function of national flag carriers, development and management strategies for feeder services, and coastal and inter-island shipping. Importantly, the associated implications for adjustments in regulatory and institutional regimes are also analyzed.

#### The Bank's economic and sector work

Assessments should be made of existing institutional, regulatory, and procedural impediments to trade development. For internal trade, economic work should assess the relationship between emerging regional development patterns (population distribution and development of key economic activities, like industry and agriculture) and the changing demand for and supply of essential commodities. It is also important to determine the likely effects of increasing domestic production of specific commodities on future import requirements.

Realistic assessments of international and domestic commodity markets are essential for projecting trade flows in regional and country-specific settings. Given the potentially high economic and financial costs for many developing countries of maintaining deep sea line-haul ports and national flag carriers, the need to assess the correas the basis for much of the further work.

6. The World Bank then commissioned a firm of United States consultants to prepare a technical paper on "The management of port equipment maintenance" which built on the United Kingdom team's work and incorporated experience in maintenance of equipment worldwide, in many different industrial sectors.

7. UNCTAD also made use of the United Kingdom team's review by commissioning them to prepare training materials for a senior-level policy seminar in the "Improving Port Performance" series, financed by the Swedish International Development Authority (SIDA). This seminar was run for the first time in Jamaica in November 1989, with the participation of the World Bank.

8. The problem of maintenance had meanwhile been approached at the level of maintenance manager and workshop supervisor, through training courses prepared within UNCTAD's TRAIN-MAR Programme. A French-language course was prepared by collaboration between the Tunisian and Moroccan TRAINMAR Centres. The TRAIN-MAR Centre in Mexico adapted the course to the needs of the Latin America region, and a further version was prepared in English for Asian delivery. All three courses have been regularly delivered.

9. Maintenance questions featured largely in a video film self-study package entitled "Operating and maintenance features of containerhandling systems", which was produced on the initiative of UNCTAD and the World Bank.

10. Maintenance has also been treated in the UNCTAD/IAPH series of monographs on port management, notably in Monograph No. 3 - "Steps to effective maintenance", and Monograph No. 8 - "Economic approach to equipment selection and replacement". These followed UNC-TAD-financed studies of specific technical questions by experts from the Federal Republic of Germany and Belgium.

11. Finally, direct elements of UNCTAD's technical assistance programme for maintenance improvement should be noted. For example, in UNDP funded project for the Côte d'Ivoire, a computer-based equipment maintenance system was introduced.

12. All the above work programme, particularly the World Bank technical paper, has been taken into account by the UNCTAD secretariat in the preparation of this report.

#### **IV. Implementation Strategies**

85. Before recommending priorities for maintenance improvement strate-

gies, a word of caution must be given on the question of implementation. Port equipment maintenance cannot be treated in isolation. It is closely related to the cargo-handling operation, depends directly upon procurement policies, and must be harmonized with other services such as accounting and information management. Therefore, proposals which entail substantial changes in the whole of the maintenance function of a port (which can include complex stock control systems, re-structured departmental management, sophisticated cost control procedures, strict preventive maintenance programmes, new workshop documentation, etc.) are not likely to be successful unless they are part of an overall re-organization of the port. Such major management decisions will normally have been preceded by a comprehensive analysis of all the port functions, and the relations between them and the maintenance function.1

86. By contrast, proposals to improve the maintenance function independently will usually be too demanding unless they are confined to one or two key issues. Port managers who have

1. An example of such comprehensive re-structuring in Morocco is described in the 1989 UNCTAD report "Port administration and organization — a noteworthy experiment in Morocco" (UNCTAD/ SHIP/627)

sponding consequences for individual borrowing countries is obvious. These consequences include the performance of invisible trade and the subsidy requirements of national support schemes for ports and shipping. The Bank's country economic work should establish a macroeconomic framework that will govern the development and management of national ports and flag carriers. The effects of these policies have to be measured against country economic management and performance. It is very likely that such efforts will demonstrate the need for substantial changes in maritime sector strategies in many borrowing countries.

Transport sector work related to national port and shipping industries needs to start with overall assessment of current and future trade flows. An important input to transport sector work will be assessing the economic as well as financial costs and benefits of national port and shipping policies. Within the broad macroeconomic frameworks, transport sector work should focus on possible measures to enhance the efficiency of maritime transport systems in serving actual and projected trade flows. Corresponding analyses should cover system development planning, system management, system regulations. and system financing.

System development planning has to incorporate necessary adjustments in the role of national ports and flag carriers in their interplay with other regional ports and international shipping. The emerging trends of load centering and complementary feeder ports and shipping services will be an essential element of such planning. Multimodal transport development and the special requirements for national sea and land transport networks and services need to be considered. Possible measures for improving system management will have to take account of the implied requirements of selected system development strategies. In many cases, efforts to improve system management will have to dwell on the decentralization and privatization of port administrations and shipping services. At the same time, there is an increasing need to address the other elements of trade logistics management, such as freight forwarding, customs services, insurance, and credit facilities.

The most critical gap to be filled is in impact analyses of the prevailing regulatory regimes that govern the provision of maritime infrastructure and shipping services. More than inefficient institutional and procedural practices, rigid and obsolete regulations frequently impede desirable system adjustments and necessary reforms. Similarly, progress in multimodal transport arrangements is generally constrained. Finally, system planning, management, and financing should be closely integrated. System financing is heavily influenced by the strategies selected but also determines the thrust of such strategies. The essential elements of this financing are pricing for port and shipping services, cost recovery, depreciation policies, and subsidy schemes. found it difficult to solve the existing maintenance problem are unlikely to be able to cope with more than one or two radical changes at the same time without the participation of all heads of department.

87. In view of their widely differing needs, as mentioned in paragraph 22, it may be necessary to use simple solutions in some ports, and more advanced solutions in others. The sophisticated remedies which are sometimes advocated can be inappropriate and to some extent self-defeating. The idea that a bad maintenance function can be cured simply by introducing computers for the whole function is particularly suspect. Computers can be introduced more successfully and with minimum disruption when the underlying systems are already well-defined and implemented manually.

88. In many cases the strategy more likely to succeed is to put aside complicated systems, concentrate only on two or three key issues, and introduce well-disciplined but straightforward measures.

#### **V. Recommendations**

89. Bearing in mind the above general reservations,

A. It is recommended that senior port managers and officials from government controlling agencies should be more informed, sensitized and trained on the importance of the port equipment maintenance function and in the application of a range of modern equipment management techniques to ports.

B. It is recommended that port equipment aid programmes should be framed as a package which, in the initial loan provisions, includes:

(a) either funding for all the spares to be replaced in accordance with the manual for periods of some years (e.g. four years) to be dispatched at six monthly intervals, plus maintaining an escrow account in the name of the port and the manufacturer for an agreed sum; or a commitment by the manufacturer that all the necessary spare parts will be available in the store of the local agent over the life of the equipment;

(b) training by the equipment manufacturers of the initial es-

tablishment of technicians needed to maintain the equipment, and follow-up training of replacement technicians to be organized by the recipient port over the equipment's life. The *Ad hoc* Group may wish to consider the desirability of donor and recipient governments participating in a Group session to agree guidelines for port equipment aid programmes.

C. It is recommended that manufacturers of port equipment should adopt special maintenance technique standards in equipment supplied to developing countries. These standards should include case of repair under difficult conditions, greater replaceability and interchangeability of sub-assemblies, enhanced documentation, and more detailed spares scales for tropical and humid climates.

The *Ad hoc* Group may wish to consider the desirability of representatives of manufacturing countries and of ports in developing countries participating in a Group session to agree on guidelines for manufacturers.

D. It is recommended that government agencies which are responsible for supervising ports in developing countries should exert greater control over bilateral aid projects involving the supply of port equipment. This control should be aimed at, *inter alia*, reducing the number of different makes of any class of equipment to the minimum.

The Ad hoc Group may wish to consider ways of implementing short policy seminars, for appropriate high-level officials, on such maintenance-related issues. The Ad hoc Group may wish to consider ways of funding the widespread delivery of UNCTAD's Policy Seminar IPP3 on Equipment Management (developed within the "Improving Port Performance" programme).

E. It is recommended that ports make greater use of the possibilities for co-operation with other ports in their region in the solution of their maintenance problems (spares procurement, training, specialist trouble-shooting, etc.). They should also pursue more vigorously the co-operation with ports in developed countries that the *Ad hoc* Group has previously endorsed, and include in this a specific maintenance support element, in which the local donor agency should be included.

The *Ad hoc* Group may wish to consider ways of strengthening this South-South and North-South co-operation.

F. It is recommended that in view of the need to develop a sound training policy, and to strengthen in-house training, ports in developing countries should join the TRAIN-MAR network, participate in the training of trainers, and make full use of national and international training programmes developed by all co-operating agencies.

#### DEVELOPMENT AND IMPROVEMENT OF PORTS

#### Guidelines for Port Managers on the Use of Computers

Report by the UNCTAD Secretariat

(Extracts in part from the UNCTAD document: TD/B/C.4/AC.7/11)

#### I. Introduction

1. This report has been prepared following the recommendation of the Ad hoc Intergovernmental Group of Port Experts to prepare a study on data processing in the domain of port operations and documentation, which was agreed to by the Committee of Shipping at its twelfth session in section II of resolution 60 (XII). The purpose of this publication is to advise senior and especially middle port managers in developing countries on how to make the best use of modern information technology. However, this subject, which is of key importance for the development and operation of modern ports is complex. It is planned therefore to supplement this report by another giving a more detailed description of systems which can be implemented in ports in developing countries.

2. Innovations in technology are changing the economics of processing storage and distribution of information. Over the last 20 years or so the cost of computer power has been reduced by a factor of about 10,000 and the cost of producing software has been reduced about 100 times over the same period. These innovations have also changed the organizational structure of data processing with computing capacity being decentralized throughout the firm. In the past there was only a small group of specialists who dealt with data processing but now a growing number of staff are using personal computers or terminals linked to larger computer systems in their daily work. A recent survey on computer software noted that while there were 35,000 to 40,000 IBM mainframe computers, there were over 10 million IBM and IBM-compatible personal computers in the world. Managers need to understand what the technology can do for them and how it can be used, rather than understanding the technology itself.

3. Information technology is now becoming an essential part of the global economy which depends for its functioning on the rapid and accurate transfer and processing of enormous volumes of data. The rapid movement of large volumes of cargo through modern ports depends on the timely processing and communication of a correspondingly large quantity of information. The proper management of systems which process this information and communicate it to those who manage port operations is vital for efficient transport. The rapid development of computers and telecommunications and the fusion of the two technologies has made possible the development of systems that can provide information to the business manager which is more complete, more timely, and more accurate than was possible with the previous manual or mechanized systems.

4. Proper use of modern information systems confers competitive advantages on their users. Almost any business, and certainly most ports, can benefit from the better control which can be exerted with modern information systems. Although some "high-tech" systems have received much publicity it should not be forgotten that quite modest, inexpensive and simple systems can provide considerable benefits.

5. The integration of telecommunications with computers has affected shipping and freight forwarding more than port management, which tends to be mainly concerned with loading and discharging operations within the port rather than the transport of cargo over long distances. However, the provision of a good telecommunications facility in the immediate vicinity of the port area is an important factor for the effective planning of ship working and cargo dispatch, thus making the port more competitive.

6. While the place of the port in maritime cargo transport is clear, it is not so obvious what role the port should now play in the processing and transmission of information related to cargo and shipping. This topic is complex and depends on national policy as well as international arrangements. Besides those firms directly involved in the movement of the cargo, other organizations, such as customs and banks, participate in the transmission of information. Port managers need to consider their relations with all other users of this information to ensure both that they get the information that they need and also that the port occupies an appropriate place in the processing and transmission of information related to the cargo that it handles.

7. This could extend in some cases to providing a central data bank for use by the other organizations involved, including shipping agents, road haulage and railways. Some ports in developed countries have developed data, bases in response to competition as a means of improving service to clients. Ports in developing countries which often enjoy a monopoly position do not have the same incentive. However, they should be aware that their country is developing in a global competitive environment, where any reduction in logistics costs may reduce import prices or open up new markets for exports. In addition, those ports which hope to become a hub or transshipment port may seek to develop such facilities as part of their package and to assure high levels of service on their terminal. This topic is not treated further here beyond saying that in port information processing stems, use of national and international standards should be made

whenever possible to ease the connection of the port system to the other system when required.

Developments in computer equipment (hardware) have resulted in a large selection of computers with different capacities for different applications. This hardware may be classified by function and processing power into three main groups: microcomputers (single-user, frequently called personal computers), minicomputers (tens of users) and mainframe computers (hundreds of users and high capacity). Nowadays, for most commercial applications, including those in ports, microcomputers and minicomputers offer sufficient capacity. There computers can also be linked together in a network using a communication package which gives the ability to share and exchange information. Access to the computer system is mainly via terminals with a keyboard and a screen. The range of costs for this equipment varies from a couple of thousand dollars to a couple of hundreds of thousand dollars. This selection allows organizations to start out small and subsequently upgrade the system through the purchase of additional equipment.

9. The processing capabilities of individual microcomputers continues to increase considerably. Microcomputers, especially with word processing and software packages, can be an initial low-cost investment in those ports having little or no experience with computerization. Initially they can be used to support the work of individuals within the organization. As computing needs grow, individual micros can be linked into a network giving the possibility to exchange and share information. Finally this network of micros can be integrated into a mini or mainframe computer system when data files or processing needs grow. The provision of microcomputers to those most likely to use them is one way to develop a visible corps of computer-literate professionals, making subsequent implementation of larger computer systems easier.

10. It is not widely appreciated that purchasing hardware is not the main problem in applying computer technology to information systems; rather the problems are those of acquiring adequate software (programs) with a good human interface and of organizing

the whole information system. Many plans and policies continue to be formulated in terms of the hardware, with the software being regarded as an adjunct. Far more attention should be paid to the software. There is a large selection of various types of software available on the market offered by both computer manufacturers and independent suppliers. The software can be classified into general purpose packages, system software and application systems. General purpose packages include word processors, spread sheets, simple databases and communication programs. These packages are very popular on microcomputers, are user-friendly and are rapidly implemented. System software is normally supplied by the computer manufacturer and consists of different types of operating systems which are the interface between hardware and other software used on a particular computer and sophisticated software package like programming languages, complex data bases and communication packages which are used by professional staff to develop application packages. Application systems include individual computerized systems like invoicing, payroll and container control. These systems are developed using the database package and/or by writing programs in one of the programming languages.

11. Another crucial area to consider when analysing the computerization of information systems is the environment. This includes such factors as reliability of power supply, quality of telecommunication services, availability of hardware and software maintenance and availability of systems analysts, programmers and other skilled staff. Lack of properly trained and experienced computer specialists has been one of the most serious barriers to the adoption of modern information technology, mainly because production of software for computers has been labour intensive and because, in the past, technical knowledge was essential to make effective use of computers. There are signs that this situation is improving, both because the hardware is so cheap that efficient use of hardware by the software is no longer always a prime consideration and also because recent developments are making software production less costly and the software more "friendly" to use.

12. As a result of the enormous increase in power and equally enormous reduction in cost of computer equipment in the last few years, there has been a vast increase in the capacity to store, process and transmit information, although the ability to make good use of the hardware has not always kept up. Proper selection of computer systems taking into consideration environment, software and hardware will assure the effective development of computerized systems within the port. This choice of both hardware and software allow organizations to start out small and then grow. The development of information technology now allows managers to make more effective use of their information resources than ever before.

#### **VI.** Conclusions

95. Port managers who are not already using computers as an aid to managing their business should consider doing so. There are several reasons for considering this matter now: other ports in the world have been using computers for many years with benefit; the cost of using computers continues to fall so that the net benefit tends to increase; many of a port's customers, particularly shipping companies, are using computers so that information which previously required expensive manual processing is now available for direct input to port computer systems (for controlling operations, invoicing, etc.); less and less technical knowledge and experience are required to make use of computers, particularly microcomputers, so that the port manager using computers is less dependent on scarce technical skills. Also, the provision of a good telecommunications facility in the immediate vicinity of the port area which will allow the linking of computers is an important factor for the effective planning of ship working and cargo dispatch, thus making the port more competitive.

96. Port organizations already using computers should review the possibilities of developing new applications and of improving old ones. This report gives a conceptional overview of a selection of computer information systems in use in many ports in the world which could form the basis of such a review. The possibility of using microcomputers should also be considered in view of their advantages, such as low cost of both hardware and software, user friendliness, reliability, standardization of hardware and software and the ability to site them in user's departments.

97. Port managers should review the role that their port should play in the processing and transmission of information related to cargo and shipping. Expert advice may be needed for this review because the topic is complex and depends on national policy as well as international agreements. Other organizations (customs, freight forwarders, banks) are involved besides those involved in the physical movement of the cargo. Port managers need to consider their relationships with all other users of this information to ensure both that they get all the information that they need and also that the port occupies an appropriate place in the processing and transmission of information related to the cargo that it handles. This could extend in some cases to providing a central databank for use by other organizations involved, including ships agents, road haulage and railways. The port is the focal point for the physical handling and checking of cargo and is the logical focal point for centralizing information as well.

98. Implementation of computer systems is inevitable and thus a development plan for long-term management information needs should be drawn up by the port organization. The plan should specify centralized control for the purchase of hardware and software to ensure compatibility. This will facilitate the exchange of information, initially via diskettes and eventually via networks.

99. The development of computerized information systems is a task in which both the technician and the manger must participate: managers need specialist advice which should be obtained from an expert, either an external consultant or a suitable trained and experienced local specialist. It is essential to proceed with discipline, much in the manner described in this report. Finally, the development of computerized systems gives an opportunity to review and revise organizational structure and existing information systems, which alone can often lead to substantial savings in time, effort and money.

#### **Restoring Environment**

#### **World Standards Day**

International Standards can and must play a vital role in helping to restore the environment, said the Presidents of ISO and IEC in their World Standards Day message. "Survival itself is at stake," they stressed.

The two Presidents called on member countries around the world to intensify their efforts to ensure our common heritage. While a lack of technological foresight has in part contributed to the destruction of the ecosystem, it is technology itself that can now help save this endangered planet, they added. International Standards provide technical tools with which to monitor and improve the state of the environment.

ISO President, Mr. Roy A. Phillips, and IEC President, Mr. Richard E. Brett, noted that ISO and IEC are organizations which rely on the scientific method of inquiry in setting standards, and bring together scientists, producers, users and governments. They provide perhaps the international forum best placed to help find solutions to technical problems that bear on the environment.

"Without standard testing methods, the environmental map of the world would be chequered with contradictions," they said. "But pollution and destruction of the ecosystem know no national borders. Because ISO and IEC aim at world standardization, the work of progressively introducing practical means for monitoring the state of the environment is one of the most effective ways of overcoming what is perhaps the most urgent task of all times."

The Presidents pointed out that the saga of deforestation, nuclear contamination and global warming is being described as the result of a lack of foresight in technological planning. "But let us not forget that it is technology which in the long run will give our children and their offspring a world fit to live in. And this technology is at the heart of the world standardization effort," they said.

Both organizations have established an extensive programme of activities which aim to establish base lines for measuring progress and monitoring compliance with regulations designed to control and improve the quality of the environment. Many of the hundreds of working technical bodies deal with topics concerned in some way with environmentalism. For example, technical committees specifically work on air, water and soil quality, acoustics, mechanical vibration and shock, and ergonomics. An ISO/IEC ad hoc Group on Long-Range Planning has identified environment and safety as a priority issue for standardization.

World Standards Day is celebrated around the world each year on 14 October in all the ISO/IEC member countries, with the theme of "The Environment" chosen for 1990. This day is an annual focal point for paying tribute to the collaborative effort made by thousands of experts who prepare technical agreements that are known as standards.

This year's theme reflects the challenge of the 1990s in bringing about environmentally sustainable growth. ISO and IEC, together with a number of other international organizations, are already helping to spread the benefits of scientific advances and technological progress while concentrating on those aspects of environmental problems in which the International Standards movement can make a valid contribution. International Standards, which are voluntary and reached by consensus, provide a common technological basis that can help with the work of harmonizing the environmental regulations of different governments.

#### British Ports Federation: 1992 – SEMINAR

#### 7th December 1990 - London

The target date for the completion of the Single European Market is now less than two and a half years away. Since the Federation last held a seminar on this subject the Commission has made considerable progress with its Single Market Programme. Furthermore, two significant developments have taken place: the Commission has produced its action programme for the Single Market in the social sphere and the political map of Europe has started to change drastically following events in Eastern Europe. The end of 1990 is a good time for all those in ports and shipping industries to take stock of the Single European Market and assess the implications for future plans.

This seminar will provide an overview of the progress that has been made, and that which remains to be achieved, of the specific measures which will effect the trading, shipping and port industries. A key factor in this area will be the new customs arrangements which are now starting to take shape after two years of bargaining at the political level within the community.

The seminar will also seek to draw out from a variety of speakers how the main players in the transport and distribution sectors are already starting to take decisions which will shape the European Market for the latter part of the century. The effects of the Channel Tunnel, British Rail's international services, the development of "just-in-time" and overnight distribution services, the influence of road haulage cabotage and other significant issues will all be addressed by distinguished speakers.

The European Commission has also started to publish its intentions in the social field. It has recently published draft directives relating to a-typical workers (for example part time and seasonal workers) and for shift and night workers. These measures will have a particular interest to the ports industry in view of its traditional reliance on flexible working patterns to meet the needs of the physical operating conditions of ports and the commercial demands of the trading environment.

To reflect the European perspective within which British Ports must now develop, the seminar will provide a range of views on the responses to the single market which ports on the continent as well as those in the UK are considering and already starting to implement.

The seminar will provide a timely opportunity for senior executives in the port and trading industries to consider what practical steps they can now start taking to meet the challenge of the Single European Market.

For further information, please contact:

British Ports Federation Victoria House Vernon Place London WCIB4LL Tel: 071-242 1200 Telex: 295741 Fax: 071-405 1069

#### Double-Stack Container Systems: Implications for U.S. Railroads and Ports

Federal Railroad Administration, Maritime Administration, U.S. Department of Transportation

(This document is available for purchase from the National Technical Information Service, Springfield, VA 22161)

#### (ABSTRACT)

Double-stack container systems have grown rapidly since their introduction as an inland extension of international service, and are on the verge of large-scale domestic containerization. This Federal Railroad Administration/Maritime Administration study was performed by Manalytics, Inc., and subcontractors ALK Associates, Transportation Research and Marketing, and TF Transportation Consultants. The study describes double-stack systems, determines their potential for domestic container transportation, and identifies their implications for railroads, ports, and ocean carriers.

As of 1989, double-stack container service was available in some form on most major rail routes, and most major hub cities. The fleet of double-stack cars has increased rapidly, and now accounts for about 25 percent of total intermodal capacity.

Cost and service criteria were derived to determine where double-stacks could compete with trucks. Double-stack cost advantages are in the line-haul. Costcompetitive double-stack hauls must be long enough for line-haul savings to outweigh terminal and drayage costs, which trucks do not incur, and still offer the lower rates that customers expect. Using an engineered cost methodology and favorable assumptions, the study found that double-stack services could compete with trucks on movements of 725 miles or more, with drayage of up to 30 miles on each end.

To offer competitive transit times, double-stacks must have a long enough haul to overcome a terminal and drayage handicap of six hours or more. Comparing truck and double-stack trip profiles suggests that the haul must be at least 540 miles, so the 725-mile cost criterion is the binding constraint.

To offer competitive service frequency, the double-stack route must have enough volume for six-day-perweek service at major hubs, and fiveday-per-week service at intermediate points.

The study applies these criteria to 1987 rail and truck data to identify a core network of truck-competitive double-stack routes, and truck flows that could potentially be diverted. The core network includes much of the existing intermodal traffic, but some significant flows would remain in trailers or convert to double-stack for other reasons. The study also applied growth factors to estimate potential year 2000 flows.

The hypothetical 1987 double-stack network would include about 5.9 million container movements, of which 1.2 million were already in containers, 1.1 million were in trailers, 0.4 million were in boxcars, and 3.2 million were in trucks. About 264,000 new domestic containers, 132,000 chassis, and 5,300 double-stack cars would be needed. Most intermodal terminals have adequate capacity, but some investment would be required for expansion of smaller facilities. There will also be a significant cost for improved clearances on some routes. The railroads may incur only part of this capital cost: most equipment is supplied by Trailer Train, ocean carrier affiliates, or leasing companies, and some nonrail participants have financed terminals or clearance improvements.

For domestic double-stack services to prosper in competition with trucks, railroads may have to take unaccustomed steps into marketing and customer service, or become strictly line-haul carriers and rely on others for the remaining service functions. For ports and ocean carriers, the implication are mixed. Ports must accommodate international double-stack growth, but will be only indirectly affected by domestic containerization. The North American intermodal affiliates of ocean carriers will retain their leadership role in domestic containerization, while the ocean carriers themselves concentrate on international movements and markets.

The advent of double-stack container systems has dramatically altered intermodal transportation. New firms have entered, existing firms have new roles, and new alliances have formed. A distinct intermodal industry is emerging. To realize the full potential of domestic double-stack container systems requires that the intermodal industry must face several challenges that can be summed up as one: provide and market a reliable, high-quality, door-to-door service. If the intermodal industry can do so, double-stack container systems can compete successfully with trucks and sustain a much larger traffic volume and market share than intermodal transportation has vet achieved.



The Proceedings of International Seminar on the Environmental Aspects of Dredging Activities, Nantes, November 27 - December 1, 1989

Organized by the State Department of Environment and the State Department for the Sea

And co-sponsored by the Oslo Commission, the International Maritime Organization, the Intergovernmental Oceanographic Commission, the International Council for the Exploration of the Sea, the Coordinating Unit for Mediterranean Action Plan and the major international harbor associations (I.A.P.H. and P.I.A.N.C.),

The International Seminar on: "Environmental Aspects of Dredging Activities"

held in NANTES (France), gathered over 200 participants from 19 countries (Africa, Americas, Europe). Experts from ministerial agencies, port authorities as well as from research laboratories in Universities and Institutes specialized in marine environment, were given the mission to draft technical recommendations to improve the regulation and management of dredging operations, designed to limit the environmental impact of dredge spoil dumping.

The Seminar, chaired by Dr. Rick BOELENS (Ireland), reviewed the most recent scientific knowledge relative to:

- hydrodynamic behavior of dumped sediments,

- fate of the polluting load (heavy

metals, organochlorides, bacteria) associated to certain dredged sediments,

— methods for assessing physical and biological impact, including such impact prediction tools as mathematical, physical, physico-chemical and biological models, developed from complex laws intended to describe the fundamental mechanisms involved in a coastal environment.

One of the objectives in the Seminar was to take into account all newly-acquired knowledge in order to improve the regulations on management of dredge spoil dumping, established by the International Conventions (Oslo Convention for Northern Europe -London Convention on a world scale). The experience gained during the development of major dump sites, whether land-based, in estuaries or in open seas, provided additional food for thought to the consideration of the issue. In the case of estuarine dump sites, the Loire Estuary was selected as a reference of a site development (construction of the Bilho Island) which ultimately proved to have beneficial results both on the hydrodynamics of the estuary as well as for the protection of ecologically significant areas, whether on land (protection of migrating avifauna) or at sea (protection of mollusk beds). The solution implemented for highly contaminated sediments in the Port of Rotterdam was also presented (construction of a land-based dump site for 1.5 million m<sup>3</sup> of sludge).

By the end of the Seminar, the participants had agreed that:

- dredging operations in access channels to ports, along with maintenance of harbor areas are and will remain an economic necessity:

- the major portion of materials dredged during maintenance or deepening of channels does not raise any environmental problems due to their low pollutant load;

- sediments originating from confined areas exposed to industrial discharges, representing a small portion of dredged materials (a few % in most cases), must receive special attention.

Finally, the participants drafted fifteen conclusions and recommendations addressed to managers and scientists in charge of impact assessment.

The Symposium Proceedings, gath-

ering the complete presentations made by participants, together with summaries of the posters displayed, session reports and conclusions of the Seminar, are published in French and English. They may be purchased for a price of 200 FF (shipping cost not included) by ordering at the address below:

Service Etudes Des Eaux

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44031 Nantes Cedex 04 France

#### **IMO's Publications**

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#### Harbour Tugs, Types and Assisting Methods

By Capt. Henk Hensen MNI, published in July 1990 by All Marine, Rotterdam and Microvisuals, Vlaardingen, The Netherlands.

This book is written from the daily practice of manoeuvring with sea-going

vessels when assisted by harbour tugs from which the advantages and disadvantages of the different types of tugs emerge. Up to now not much practical information on this subject is available, as such this book is the first one giving more insight in the main types of harbour tugs and their differences in affectivity for various methods of tug assistance.

Moreover, it gives an idea about the external forces of wind and current to compensated by the tugs.

For everyone involved with the manoeuvring of ships assisted by tugboats, such as pilots, tugboat captains, tugs companies and harbour authorities, it is of the utmost importance to know about the possibilities and the limitations of the tugs used, especially during marginal circumstances.

The book can be ordered at All Marine P.O. Box 23219 3001 KE Rotterdam Tel: 010 4367636 Fax: 010 4362271 At the price of £16 or US\$26, excl. postage.

The Americas

#### Halifax: 48 Footers May Become Dominant

Charting the North American trend, Mr. Les Richards, President of Winlie Containers (Canada), predicts that "within 10 years all containers will be 48 footers," and Winlie Containers plan to be in on the ground floor with their newly designed 48-ft steel container.

Mr. Richards says the prototype was successfully tested this spring and the first order of 10 has been delivered to Atlantic Searoute Ltd (ASL) for their weekly service between Halifax and Newfoundland.

Following the pattern of the "North American Domestic Container," the new unit is 48-ft. long, 8'6" wide and 9'6" high with a cubic capacity of 3,500 cu. ft. Designed by Mr. Richards specifically for use in Canada, the container has a significantly higher maximum gross weight than normal I.S.O. requirements of 67,000 lbs - being rated at 82,000 lbs. giving a payload of 71,000 lbs. at three high stacking.

Although one can't be sure of all developments currently going on in the container business across Canada, Mr. Richards felt that Winlie may be the first in Canada to build a 48-ft steel domestic container. (*Port of Halifax*)

#### CN to Improve Corridor For Double-stack Trains

For the Port of Halifax, the CN rail link between Halifax and the industrial heartland of Toronto and environs is a vital corridor for cargo carried by shipping lines that call the port.

Quite naturally, the recent announcement by Canadian National Railway that they are planning to spend \$1.3 million to increase overhead clearances of selected locations between Moncton, New Brunswick, and Toronto to permit the carriage of double-stack containers, was welcome news to both carriers calling Halifax and officials here.

The problem with overhead bridge heights between Halifax and Moncton will be addressed by undercutting the railbed instead of raising bridges. CN officials say there are five bridges which impede double-stack container clearance from Moncton through to Toronto.

In late winter, CN Rail took possession of 100 - 5 Pak Articulated Intermodal cars, 40 of which were built in CN's yard in Transcona, Manitoba. The other 60 were built by Trenton Works Lavalin Inc. of Trenton, Nova Scotia.

Each of the cars measures 315-feet long and consists of 5 well type platforms that are permanently connected but articulated. The platform well is 49 ft. 3 in. between bulkheads and can carry containers from 20 ft. to 49 ft. long by 8 ft. to 8 ft. 6 in. wide in single or double-stack configuration.

These cars will also carry trailers measuring 27 ft. to 53 ft. and one platform in each 5 Pak has a double hitch system for two 31 ft. trailers back to back.

Load limit per well is 90,000 lbs. and each well features four twist locks, used to secure containers to the well structure. These twist locks will conveniently fold down out of the way when piggyback trailers are being loaded. (Port of Halifax)

#### The Working River — North Fraser Harbour

The North Fraser Harbour Commission recently published two attractive and highly informative brochures.

"The Working River" is a general publication which gives people general background information about the Commission and the North Fraser.

The second brochure, "North Fraser Harbour Industry and Recreation Guide" is meant for use by the people who use the riverbanks for recreational purposes — for walking, running, bike-riding, etc.

Since its inception in 1913, the North Fraser Harbour Commission has played an active role in the development of the North Arm of the Fraser River. It is a "working river". Commerce and industry were the major shorefront residents even prior to the establishment of the Commission.

Over the years, the river has seen many changes, but remains a working river even today — tugboats pulling barges and log rafts continue to ply the river. Yet it is a river that continues to undergo change as industry slowly begins to move from the waterfront to be replaced in some areas by residential and commercial development.

The North Fraser has been a major link to the forest industry in B.C. for decades, having served as a home to lumber mills and as a transportation route to mills farther up the river. Over 30 per cent of the logs cut on the west coast enter the North Fraser.

It has seen the development of an active support base of marine services and shipbuilding. It has been a major temporary storage area for log rafts which feed the Fraser River mills.

It also is a major habitat for many waterfowl — the Great Blue Heron can be seen regularly along the river, along with a host of other birds. The river is home for many species of fish. The world's largest run of salmon use it as one of their routes to home rivers and to the sea. Eel grass — an important component of the ecological system that supports these waterfowl and fish can be seen waving along the shallows in many parts of the river.

The North Fraser is viewed briefly

by the thousands of commuters and tourists who cross it every day, yet very little is known about it. There is a certain anonymity of the little river that works quietly away while major cities like Vancouver, Richmond, Burnaby and New Westminster loom over it.

People who live near the river see its character firsthand, as do the anglers who use the fishing bars along the river. Even the recreational boaters who use the river see this character and the changes occurring along the river — it never seems to be the same from one year to the next.

Industry and commerce along the river account for thousands of jobs. And during the past decade, we have seen residential development begin to displace some industries along the river. More parks and public access points have been created on the riverbanks. There is a curious, inexplicable pull — attraction — of people to water — to see it, to view it, to experience its quiet and natural solitude, and watch the boats go by.

The North Fraser Harbour Commission is responsible for the administration of marine traffic on the North and Middle Arms of the Fraser River. In keeping with this, it is responsible for patrolling the river to ensure that marine transport regulations are being observed. It is also responsible for the management of land areas under its administration — primarily along the tidal areas along the riverbanks.

Three Commissioners are appointed by the Federal Government, and two are appointed by unanimous agreement among the Councils of the City of Vancouver and the Municipalities of Richmond and Burnaby.

The Commission itself has 14 employees and operates as an autonomous and financially self-supporting body, reporting directly to the Federal Minister of Transport.

#### Multiple-use River

The Commission recognizes the importance of the North Fraser to the industries it supports and also to those people who use the river as a recreation area. It is not a single-use river. It is a river undergoing change, not only in the vessels that ply the river, but also in the make-up of developments along the river banks.

The marinas along the river are home

to hundreds of pleasure craft. Many commercial fishermen moor their vessels along the river. Tugboats pull log rafts and barges up and down the river.

Hikers, bike-riders and picnickers regularly use areas of the riverbanks. Boat-building and marine maintenance facilities also have a presence along the river, not to mention the many sawmill operations that line it as well.

Part of the changing river includes the new residential developments particularly on the Vancouver side of the river — which are taking place now. The future development plans of the communities along the river factor greatly into how the river will be used in the future.

Combined with these users are the natural ones — the birds and the fish that use the river as key habitats for their existence.

It is a river which is a transportation route, a natural habitat, a supplier of jobs and a recreation area. The challenge is to ensure that any change to the river will be one of balance in the light of competing interests and values.

The North Fraser was, and is, a major

transportation link. It is home to the forest and construction supply industry. It is a storage area for logs that supply sawmills along the river. It is very much a working river.

Tugboats tow log rafts, woodchip barges and aggregate barges on the river, supplying the raw material for sawmills, for paper manufacture, for the making of concrete and other uses. Even the sand that is dredged from the river is used — as a foundation for construction in the communities of Richmond, Vancouver and Burnaby.

The material shipped through the river finds its way to points throughout the province and the world as finished lumber, paper products and construction materials.

It is a shallow draught river that does not allow oceangoing ships to travel on it as the main arm of the river does. Hundreds of recreational boaters call the North Fraser home, mooring their pleasure craft at the several marinas along the river.

The Commission's key commitment to transportation on the river is to maintain a safe river and to keep it navigable.

#### **Environmental Values**

The Commission's commitment to the environmental values of the North Fraser is well-documented. It is an active member of the Fraser River Estuary Management Program whose aim is to ensure that any developments along the river take into account the need for environmental preservation and enhancement in concert with the need for sustainable development.

The Commission's most recent initiative was the establishment of the North Fraser Harbour Environmental Management Plan in coordination with the Federal Department of Fisheries and Oceans. This plan has created guidelines for development along the shores of the North Fraser where any development using any shoreline land must replace the natural area elsewhere along the river. The Bridgepoint Market preserved an area adjacent to its development and put up the capital to restore a critical natural area farther east on the North Fraser on Mitchell Island.



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#### Port of Charleston

Ryuzo Nakada • Director - Japan Toranomon TBL Building, Suite 902 19-9, 1-chome, Toranomon Minato-ku, Tokyo 105 • Japan Telephone: 03-591-1604/5 • FAX: 03-591-0757 As part of the Environmental Management Plan, an inventory of shoreline was classified according to biophysical measurements to ensure that the river would at the very least maintain its status as an important natural habitat.

The Commission works closely with the Federal Department of fisheries and Oceans, Environment Canada and the Provincial Ministry of Environment in maintaining a natural environment along the river.

The North Fraser is a natural resource that belongs to the public. The Commission has recognized the importance and need for public access to the river. It continues to work with the neighboring municipalities in the establishment of river park areas and trails.

As new land developments occur along the river, increasing efforts are being made to ensure that public access points form a part of them. This is being seen along the north side of the river in new condominium developments along Southeast Marine Drive.

Hundreds of joggers, cyclists, picnickers, hikers and walkers use the trails, parks and access points along the North Arm each week. There always are people on the dyke trail and park area on the south shore of the Middle Arm in Richmond during daylight. McDonald Beach on Sea Island, north of Vancouver International Airport is especially busy each weekend with picnickers and sports fishermen launching their boats. And more areas are likely to be developed.

The Commission has developed a Port Map which outlines the public access areas, boat launching points, fishing bars and industrial features of the river.

The North Fraser has been an active part of the Lower Mainland's economic development. While it cannot take direct credit for the thousands of jobs industry and commerce along the river provide, it can take credit for being the critical transportation link for these businesses — the reason for their locating on the North Fraser.

On average, the river now handles over 13 million tonnes of inward and outward bound cargo, comprising logs, lumber, wood by-products, iron, steel and general freight.

The river serves as a storage point or transportation route for nearly a

third of all logs cut along B.C.'s coast.

The North Fraser will continue to be a working river. It will continue to be a natural habitat for fish and birds, and it will remain an important marine transportation link.

The concept of a multiple use river is not new and will continue. Recognizing that the river's tenants may change over time, we are committed to ensuring that we keep in step with these changes and the corresponding new demands and needs which will accompany them.

We are equally committed to ensuring that future developments along the river will be one in keeping with the ever-important environmental values.

Involvement in the Fraser River Estuary Management Program will remain a key commitment of ours in that it is the single, most productive organization addressing the need to coordinate the varying jurisdictions which impact on the river and its environment.

We feel the commitment to continuing working relationships with the neighboring communities and stakeholder groups with an interest in the North Fraser must remain. Changes along the river will need productive dialogue if all interests are to be served.

#### PCAPA Adopts Tough Antidrug Resolution

The drug trafficking problem received a good deal of attention at the Annual Convention of the Pacific Coast Association of Port Authorities (PCAPA) in Richmond, British Columbia. The convention program featured a session arranged by PCAPA's Drugs on the Dock Committee at which U.S. and Canadian law enforcement officials discussed the movement of illegal drugs through air and sea ports.

Later in the Convention, the PCAPA delegates approved a tough resolution, which, among other things, appeals to national drug enforcement agencies to institute an active program of sharing confiscated drug moneys and property from drug smugglers apprehended at member ports. PCAPA also declared its support for national legislation that would link federal support, services and funds provided to all ports with the establishment and maintenance by member ports of an active drug detection, training, and awareness program.

#### Pacific Coast Association Of Port Authorities Drug Policy

WHEREAS, smuggling of illegal drugs is a growing problem at air and maritime ports; and

WHEREAS, this illicit drug traffic has severe negative impacts on our society; and

WHEREAS, detection of illegal drug traffic at air and maritime ports is a difficult task and often depends on the alertness and reporting of port workers and management; and

WHEREAS, Pacific Coast Association of Port Authorities, PCAPA, has established a Drugs on the Docks Committee to evaluate this problem and recommend action to the full membership, and

WHEREAS, the Drugs on the Docks Committee has met on various occasions with leading drug enforcement agencies and evaluated various proposals to reduce the movement of illegal drugs through PCAPA members' air and maritime ports;

NOW, THEREFORE, be it known that the Pacific Coast Association of Port Authorities hereby advocates a firm program to reduce drug smuggling through members' air and maritime ports, and further states its strong support of our respective national agencies and of programs aimed at reducing said drug smuggling.

FURTHER, Pacific Coast Association of Port Authorities recommends and encourages each member port to design and implement an awareness program in conjunction with relevant agencies to help detect illegal drug smuggling through members' air and maritime ports; and

Pacific Coast Association of Port Authorities recommends that each member submit a written report during the annual meeting roll-call indicating the previous year's drug awareness activity; and further,

Pacific Coast Association of Port

Authorities appeals to national drug enforcement agencies to assist member ports in establishing an international model of port and government cooperation in drug interdiction; and further,

Pacific Coast Association of Port Authorities appeals to national drug enforcement agencies to institute an active program (including legislation, if necessary) of sharing confiscated drug moneys and property from reported drug smugglers at members' ports.

Pacific Coast Association of Port Authorities declares a policy of support for national legislation that links Federal support, services and moneys provided to all ports with the establishment and maintenance by member ports of an active drug detection, training and awareness program.

(AAPA Advisory)

#### Mariner: New On-Line Tariff System for K-Line

San Francisco database and software systems developer Mariner Systems, Inc. has been awarded a contract form K-Line America to design a sophisticated new on-line tariff application for quoting and rating cargo.

K-Line America, exclusive U.S. agents for Kawasaki Kisen Kaisha Line, Ltd. (K-Line), will use the system to electronically access real-time tariff information via a structured database system.

The ability to extract specific relational data by date, commodity, origin and destination or key word allows for more extensive analysis of tariff data than is now possible in a traditional text format. This type of application is made possible by Mariner technology which integrates tariff information into a shipping line's overall automation system.

#### Los Angeles Seminar On Hazardous Materials

Shippers that move hazardous materials are faced with increasing legal complexities and increasing amounts of it to move. More than 300 representatives of area shipping companies attended a week-long seminar (8/13-17) at WORLDPORT LA to train shippers in the legal methods of packing hazardous cargo and the proper documentation necessary for transport. Often the transporters are cited for problems with cargo that was packed in other locations. The seminar showed shippers how to identify cargo that was poorly packed and how to avoid costly delays and legal problems through proper packaging.

The seminar was sponsored by WORLDPORT LA, Southern Pacific Transportation Company, the U.S. Coast Guard, California Highway Patrol and the Port of Long Beach. This successful outreach program was part of an ongoing effort to continue the improvements in safe cargo handling.

#### Gov. Welcomes 1st Ship To Seagirt Terminal

Seagirt, the Port of Baltimore's state-of-the-art marine terminal, welcomed its first ship on September 11 -- Mediterranean Shipping Company's

#### M/V Rafaela S.

"This is an historic day for the Port of Baltimore," Governor William Donald Schaefer said. "The first ship into Seagirt marks the beginning of a new, exciting era for the port. Seagirt holds the key to a bright future for maritime business in Maryland."

A shipside ceremony was held to commemorate the first vessel to load and unload through the 265-acre. showpiece of high-technology cargo handling. The terminal is highlighted by modern dual-hoist cranes and a 14-lane computerized entrance gate.

The terms of the Mediterranean Shipping Company (MSC) contract call for movement of between 17,000 and 20,000 loaded containers annually. The M/V Rafaela S. is 600 feet long and weighs 22,000 DWT. The September 11 call is part of MSC's weekly service.

Mediterranean Shipping Company was founded by Captain Gianluigi Aponte with one vessel 20 years ago. Today, the company has full-container ships plus six time-charter vessels which cover worldwide trade routes.

Seagirt is a \$250 million complex,



**FIRST AT CARGO DOCK ONE** — The United States Coast Guard Cutter *Valiant* became the first vessel to dock at the Port of Corpus Christi's Cargo Dock One since the facility opened in mid June. While in port, the cutter was open for public tours and also hosted the traditional "Ancient Mariner" relief ceremony on board the vessel. The Cargo Dock One/Open Pavilion is designed to serve as a berthing area for visiting vessels and provide a place for the public to observe shipping activity in the port's Inner Harbor. It is also available for special events and may be utilized as a cruise ship berth in the future.

the most modern container terminal on the East Coast. It was financed by the Maryland Transportation Authority (MTA), which owns the terminal. The MTA leases it to the Maryland Port Administration.

"Seagirt stands as a monument to what can be accomplished through inter-agency cooperation," said Secretary of Transportation Richard H. Trainor, who also serves as chairman of the Maryland Port Commission. "The Maryland Port Administration and the Maryland Transportation Authority worked closely to successfully bring to fruition this worthwhile project, and it will mean tremendous economic benefits to the region."

Seagirt consists of three berths and seven container cranes. The terminal is capable of handling more than 150,000 containers annually and will increase the port's container capacity by 50 cercent. The Intermodal Container Transfer Facility (ICTF), an on-dock rail terminal, stands adjacent to Seagirt, eliminating the number of moves a container has to make, thus speeding up delivery and decreasing costs.

While the cranes use the latest technology, those who will operate them are vital to the success of the terminal. Members of the International Longhsoremen's Association (ILA) operate the port's cranes and assisted in the design of the controls and selected a seat especially designed to reduce fatigue.

"The Port of Baltimore owes a great deal to the hundreds of Maryland Port Administration employees and others in the port community who have contributed to the development of Seagirt," said Maryland Port Administration Executive Director Brendan O'Malley. "We solicited help from many different segments of the port, and we have developed a facility that will keep the Port of Baltimore on the cutting edge of the maritime industry into the next century."

The Seagirt cranes stand 20 stories high, with dimensions that allow them to handle post-Panamax size vessels, the largest container vessels in the world. Three of the cranes contain dual-hoist systems capable of handling two containers at once. These cranes can lift up to 55 containers an hour more than twice the number moved by conventional cranes.

The computerized cranes have a number of other impressive features. The crane's computer memory can store the dimensions of the ships worked so that when the vessels next call the port they can be processed more quickly. The cranes have a 100-foot span at ground level, a space which can accommodate seven lanes of truck traffic. The cranes can be operated in both manual and semiautomated modes, providing for maximum productivity and flexibility.

The Maryland Port Commission established the Maryland International Terminals (MIT), a nonprofit subsidiary of the MPA, to operate Seagirt. Mr. Michael Angelos was named by the Maryland Port Commission to manage MIT.

"Seagirt is one of the best maritime facilities in the entire world," Mr. Angelos said. "From its original conception 10 years ago, Seagirt was designed with the expedition of the cargo flow in and out of the terminal in mind. We developed this facility with an understanding of our customers' needs and wants. We have created exactly what they need — a fast, efficient and cost-effective service."

#### N. C. Traffic League Holds Annual Meeting

#### By Susan N. Borden

The North Carolina Traffic League (N.C.T.L.) held its 59th annual meeting at the Holiday Inn in Wrightsville Beach, N.C.

Guest speakers at the meeting were Mr. Mark Stewart, Director of Safety, Carolina Freight Carriers, who spoke on "Compliance with Regulations on Substance Abuse by Motor Carriers and Employee Assistance Programs," Mr. Arthur Dougherty, Import Specialist, U.S. Customs Service, who spoke on "U.S. Customs Role in Import/Export - Detection/Suppression of Illegal Drug Activities," and Mr. James J. Scott, Jr., Executive Director, North Carolina State Ports Authority who discussed the improvements at the North Carolina Ports and how those improvements were aimed at assisting the members of the traffic league in making their companies more competitive.

Mr. Scott said that the 900-foot dock extension in Wilmington will be completed by the end of June, and two new container cranes have been added in hopes of attracting more cargo and container line service to the port. He added that the reconstruction of Berth 1 at the Port of Morehead City is scheduled for completion June, 1990. This new dock will allow the port to serve additional bulk vessels. The Morehead City Export Terminal Co. had converted the coal export facility to a wood chip export facility during the past year. This new business supplies wood chips to customers in Europe and the Far East. He thanked members of the Traffic League for using the intermodal terminals for their cargo movements and encouraged them to look to those facilities in order to increase their profits and competitiveness.

The N.C.T.L. is a voluntary, nonprofit organization which consists of approximately 60 members. It was started in 1929 when a meeting was called by Governor O. Max Gardner, for the purpose of securing and maintaining fair and equitable rates for transportation services, stimulating public interest in transportation questions, and promoting better relations between shippers and carriers in matters of mutual interest. From its inception, it was determined that the League would perform services to the shippers in North Carolina that were statewide in character, not individual nature, and which could not be well performed by the individual traffic representative.

The result of this action is that shippers have been saving thousands of dollars.

The League works closely with the N.C. Utilities Commission which has jurisdiction over public utilities in North Carolina and is also the political body whose duty is, by law, one of looking after interstate matters before the Interstate Commerce Commission which may or will affect the interest of the state. (North Carolina Cargo)

#### Port of Oakland: 65% of Work Force Minorities

Sixty-five percent of the Port of Oakland's work force are minorities, according to Ms. Cheryl Perry-League, manager of the Port's Equal Opportunity department.

This represents a 1.5 percent increase over the 1988/89 fiscal year figure and it means minority representation among the Port's 615 employees is exactly equal to the percentage of minorities in the Oakland population.

"This is an outstanding achievement," said Ms. Carole Ward-Allen, president of the Oakland Board of Port Commissioners and the first Black female to head the powerful policy-making board. "But there is still room for improvement. For example, only 35 percent of our employees are women, and yet they constitute 46.6 percent of the Oakland labor pool."

The Port's minority jobholders exceed the ratio for the city work force by 4.8 percent. Some 43 percent of the Port's employees live in Oakland.

The Port is vigorously pursuing its affirmative action goal through its hiring and promotion policies. For example, of 52 promotions that were recorded last year, 69 percent were among minorities and 44 percent among women. Among the major new minority held positions are those of director of governmental and public affairs, port accounting manager, manager of airport properties, and port principal engineer. Additionally, Ms. Perry-League reported, 71 percent of the new employees are minorities and 54 percent are women.

The Port let some \$20,748,862 in public works contracts last year, including \$6,029,369 for minority contractors. This is 29.0 percent of the total or 3.0 percent ahead of the Port's 26 percent goal for minority contractors.

Major minority firms doing business with the Port include Seaworks, which had a \$1,549,656 contract to repair Berths 35 and 36 after the earthquake; Ramlor construction, \$410,000 for building repair, and PED-B, \$75,000 for electrical work.

Of \$5,881,537 in supplies, \$1,442,211 or 25.0 percent, was purchased from minority business enterprises, including a \$1 million airport security contract with Cal State Patrol; \$550,000 from Nashional Office Furniture and \$350,000 from Intarch for furniture in the Port's new headquarters building.

During this period, the Board of Port Commissioners awarded \$7,793,434 in consultant contracts. Of this amount \$2,048,950 was awarded to minority and women consultants for 26% of the total dollar amount.

Port tenants have a minority work force of 44 percent and 25 percent of the tenants' employees are women.

#### Portland Designated As "Easy Entry Port"

The Port of Portland is the only container port in the Pacific Northwest nominated as an "easy entry port" in the US/Soviet bilateral maritime agreement signed recently.

Forty-two ports in the U.S. and forty-two in the Soviet Union were opened up to national flag vessels from the other country with two working days' advance notice. Entry into all other ports will require seven days' request to enter.

It is believed this will expand grain traffic on the Columbia River and could vastly increase import/export container and general cargo shipments between Portland, the Soviet Union and Asian ports. (Soundings)

#### Funding for Columbia River Channel Study

Both the U.S. Senate Appropriations Committee and a House Appropriations sub-committee have approved a \$1.2 million request to fund the federal portion of a feasibility study for the deepening of the Columbia River navigational channel from 40 to 45 feet.

The \$1.2 million represents the federal half of the estimated cost of the study with the remaining half to be split between the states of Oregon and Washington.

Seven Oregon and Washington deep-water ports are sponsoring this project which is midway through the first phase of study by the U.S. Army Corps of Engineers. (Soundings)

#### First to Focus on Intermodal Rail Yards

Many West Coast ports are focusing on new on-dock intermodal rail yards, but the Port of Portland got there first. Its first on-dock facility was built in 1974. That was followed by the Terminal 6 intermodal rail yard, completed in 1987, which can now handle 33 double-stack cars.

At the beginning of this year, the Port of Portland Commission approved a contract for the design of Phase II for the Terminal 6 intermodal rail yard. The cost for the project will be \$4.5 million and should be finished by September. This is the third expansion in the past five years and it is well needed. Since completion of the first phase, container volume by rail has grown from 8,200 to 45,700 containers a year. By 1991, intermodal volume is expected to grow by 116 percent to 98,800 containers per year.

The phase II expansion will give Terminal 6 the capacity to handle two double-stack unit trains simultaneously for a total of over fifty double-stack rail cars. A new run-around track to avoid switching conflicts between the intermodal yard and other rail operations at Terminal 6 is also being planned. (Portside)

#### Seattle: Financial Picture Shows Positive Trends

The Port of Seattle's 1990 mid-year financial and operational indicators show favorable performance levels, with overall port revenues increasing 16 percent over the first half of 1989.

"These results demonstrate the good relationship the port has with its customers," said Port of Seattle Chief Executive Officer Zeger J.J. van Asch van Wijck. "I expect that this will be a record year on many fronts."

Marine Division revenues show a dramatic increase of 12 percent over last year, attributable in large part to lease and tariff increases at several container terminals, additional barges, increased auto, motor home, and truck volumes, and increased activity at the northwest dock at Fishermen's Terminal. Total TEU's are up six percent from last year, and in June of this year, the Port enjoyed an all-time record of 97,711 containers through the Seattle harbor.

The Marine Division will also welcome Blue Star Line Ltd., Columbus Line, Inc., and Associated Container Transportation (A.C.T./PACE) who have chosen the Port of Seattle as their new port of call.

Seattle-Tacoma International Airport, the 22nd largest in the country in passenger traffic, and the 14th largest

in the country in cargo volume, continues to post impressive numbers. International passenger traffic was up 21 percent and domestic traffic was up nearly six percent compared to the first six months of 1989.

The year-to-date passenger total of 7.3 million is up more than seven percent over the same period last year.

Air cargo volume was 150,090 metric tons through June, up more than six percent compared to this time last year. Sea-Tac also showed a sizable increase in non-aeronautical monies (e.g., concessions, parking, and leased space).

#### Women Employees Honored at Los Angeles

Three WORLDPORT LA employees were recently honored by the City of Los Angeles' Commission on the Status of Women for their outstanding achievement in nontraditional workplaces after Los Angeles Mayor Tom Bradley proclaimed August 26, 1990, as Women's Equality Day in the city.

Ms. Angela Rivera Birkenbach, Assistant Chief Wharfinger and past recipient of the Port of Los Angeles Service Award, was awarded for her outstanding contributions to the Port. Ms. Joannie Mukai was honored as the first woman to promote to Assistant Director of Port Construction and Maintenance. And Ms. Stacey Jones, Civil Engineering Associate, was recognized as the first woman to enter the Port's Student Engineer Program. Ms. Birkenbach and Ms. Jones are residents of San Pedro, and Ms. Mukai lives in Los Angeles.

Women's Equality Day is celebrated every August in recognition of the 19th Amendment to the U.S. Constitution, giving women the right to vote. This year, certificates of commendation were presented to women from 35 City of Los Angeles departments, bureaus and agencies.

## WORLDPORT LA: New Container Records

WORLDPORT LA, the nation's leading cargo gateway for container traffic, handled 2.1 million TEUs in fiscal year 1989-90, the best performance in Port history.

Featuring eight state-of-the-art

container terminals and 34 high-performance cranes, the Port's fiscal total represents a 13.9% increase over the 1.85 million TEUs moved in the previous fiscal year.

WORLDPORT LA in fiscal 1989-90 also recorded an unprecedented one million TEUs in import traffic alone, signifying a 14% boost over the 894,467 TEUs moved in fiscal 1988-89. Meeting American consumer demand for valuable international goods, the Port efficiently handled thousands of commodities from major U.S. trading partners such as Japan, Taiwan, Hong Kong, Indonesia and Malaysia.

Confirming the continuing success of its service-oriented, domestic and international marketing programs, the Port also set a new record for containerized export traffic, handling 611,948 TEUs in fiscal year 1989-90 as compared to 581,423 TEUs in the previous fiscal year. Cargo is transported from WORLDPORT LA by ocean carriers serving major international marketplaces in Asia, Australia, Africa, North America, South America and Europe.

The Port's fiscal year ended June 30.

#### New Jersey Conference Focuses on EC After 92

(Reproduced from "Via Port of New York-New Jersey')

As in the past, this year's Annual New Jersey World Trade Conference and luncheon (the 23rd such event) proved to be one of the most popular and well-attended events held during World Trade Week 1990. Sponsored by the New Jersey World Trade Council, the theme of this year's meeting was "The European Community After 1992 – Challenges and Opportunities."

Mr. Charles Ludolph, International Trade Administration, U.S. Department of Commerce, was among the many highly informative speakers who shared their expertise with the shipping and transportation executives in attendance at the Birchwood Manor in Whippany, New Jersey.

Describing the EC-92 program, as a Utopian undertaking on a grand scale which presented a real marketing challenge, Mr. Ludolph stated: "The fact that people are talking about a single market makes you jump to the conclusion that a U.S. businessman should take steps to treat Europe as a single continental market. This is far from reality for the moment, and I recommend that you approach Europe as if it was evolving as the European 'cross-border market.' Most of the strategies I have seen by businesses in Europe involved moving from a national base across a border to enter a new national market previously forbidden by legal barriers."

He further cautioned: "In time there will probably be a single European market, but businessmen should not attempt to conquer a continent based on legal assurance when the consumer is not ready. U.S. businessmen should prepare for the single European market, but we must examine the transition to that market very closely before we grasp the full opportunities."

He said that American exporters were historically unable to tap into the potential European market to any great extent due to technical and legal barriers that the EC will terminate in 1992. He noted, however, that there are equally important commercial and cultural reasons for national marketing strategies which the EC-92 program will not directly affect, and American exporters must continue to pay attention to these even after EC-92 comes into play.

The Department of Commerce official advised that as barriers between national markets disappear, consumers outside national sales territories will become increasingly aware of products and prices in other EC markets and will demand the same if prices are lower or quality better. The result, according to Mr. Ludolph, is that exclusive national sales agreements will be under increasing scrutiny for adherence to competition policies in the EC. He believes that exclusive national agreements will also be under increased pressure competitive as more cross-border sales grow.

Mr. G.W. Jewkes, the British Consul-General at New York, was the keynote speaker during the luncheon session. Noting that the commercial links of the United Kingdom and the European Community with New Jersey are stronger than ever, he stated that Europe is the Garden State's single largest export market, taking 35 percent of New Jersey's exports in 1935. In this regard, he pointed out that Britain is New Jersey's biggest trading partner, taking \$468 million worth of N.J. products in 1988 and \$535 million in 1989. He also noted that at the present time, 639 European Community companies, including 16Å British-owned firms, help to sustain New Jersey's impressively strong economic performance.

Turning his attention to EC-92, the Consul General explained that the single market concept should make it easier for everyone, including American firms, to do business in Europe.

He stated that he does not think the European Community will become an inward looking fortress. If this were to happen, he observed, it would be contrary to the nature and interests of most if not all of the EC members.

The British official went on to say: "For U.S. business, the completed Single Market will present an essentially barrier-free economic zone in place of what has largely been twelve separate entities. This means, whether we are talking about firms which export from the United States, or which establish manufacturing bases in Europe - that there will be both opportunities and incentives to expand their geographic base to serve a larger customer base with greater facility than at present." He then explained that this will apply to all firms whether they are headquartered or operate inside the Community, and whether they are EC, U.S. or third-country companies.

The Consul-General's final advice to American business executives was to study the national characteristics of targeted customers in the EC. He stated, "A better understanding of what makes us so different could make all the difference between success and failure in your international business."

#### Chocolate-processing Plant in Newark

Chocolate lovers and other confectionery aficionados, in fact, every person with a sweet tooth in the New York-New Jersey metropolitan region, all have good reason to stand up and cheer.

Aarhus Inc. held a grand opening ceremony marking the completion of

its new \$15 million processing plant at the Port Authority's Port Newark Marine Terminal in Newark, New Jersey. Aarhus produces specialty oils, such as cocoa butter substitutes, which are used extensively in the making of chocolate flavored confections and other candies.

Danish Ambassador to the United States Peter Dyvig cut a symbolic ribbon officially opening the 26,000-square-foot plant. More than 200 government and civic leaders, maritime and food industry executives attended the ceremony held at the plant site on Marsh Street at the seaport.

Aarhus, a subsidiary of Aarhus Olie, the Danish-based international food products firm, imports palm kernel, coconut and other specialty vegetable oils by ship from Malaysia and the Philippines and processes it for the chocolate, confectionery and food industries.

"This new state-of-the-art processing plant is another milestone in the 120year history of our company," said Aarhus Olie Managing Director Jorgen Handberg. "For more than a century we have had a tradition of leadership in process design, production techniques and quality standards. Customers worldwide rely on this tradition, which guarantees for them consistency throughout the production process."

Aarhus Inc. President J. John Pease told the assembled guests at the cere-"This computer-controlled mony, processing facility is strategically located to serve chocolate and confectionery manufacturers, the majority of which are located in the northeastern region of the United States. The raw materials are brought by ship from Malaysia and the Philippines to this new facility where the most modern methods in the world are used during the processing. From here we are able to serve the American food industry with superior levels of freshness, stability and flavor."

Mr. Roy H. Jaeger, Assistant Director of the Port Authority's Port Department, stated: "We are pleased that Aarhus selected the Port Newark-Elizabeth Port Authority Marine Terminal complex as the location for their major U.S. facility. This modern plant and its neighboring edible oils storage facility, the Hudson Tank Terminal Corp., equip this Port with unique advantages for servicing the food and confectionery industries."

The plant has been two years under construction. Although the actual capacity of the plant has not been disclosed, it can produce in excess of 50,000 metric tons of processed vegetable oil annually. Aarhus clients include major chocolate, confectionery and food product manufacturers in the United States and around the world.

Aarhus Olie was founded in 1871 in Aarhus, Denmark for the processing of palm kernel oil. In 1896, an Aarhus research scientist developed a formula for lauric hard butters that made it possible to use fractionated palm kernel oil as a basis for cocoa butter substitutes in confectionery products. Today, Aarhus has 1,500 employees worldwide and produces and markets vegetable oils and specialty fat systems, vegetable protein concentrates and oleochemicals around the globe.

#### Seattle Commission HQ To Move to Pier 69

The Port of Seattle Commission has approved a plan that will move the port's headquarters from Pier 66 to Pier 69 by late 1992.

The unanimous vote will move the Port offices from Pier 66, where it has been based since 1914, to a new building constructed from the remains of an old cannery that has stood vacant since 1976. The new structure will reflect the Port's role in regional economic development, stewardship of waterfront facilities, and civic responsibility.

The building will house approximately 400 Port employees and continue to maintain and support waterdependent uses by providing tenant space for Seafloor Surveys International (SSI), a marine survey firm, the Victoria Clipper, which provides catamaran passenger service, and possibly Pacific Salmon, a fish-processing company, which will receive a sizable subsidy to relocate and establish a new facility.

The 160,000-square-foot building will feature commission chambers, a reception area, tenant space, and a cafeteria on the first floor. The second floor will be Port office space, as well as the third floor, which will be highlighted by an expanded conference room area. Another added feature will be five existing skylights, giving Port employees more access to natural light. The interior will be open, functional, and flexible, to accommodate staff assignments, and enhance communication, teamwork, and other components that are the nucleus of the Port's new reorganization, thus reflecting the new Port culture.

"I feel that this is a very sound business decision and one that will reflect the Port's role in the international business world," said Chief Executive Officer Zeger J.J. van Asch van Wijck.

Commission President patricia Davis said, "The Pier 69 project will serve as a beacon for our region. It will champion maritime uses on the pier level, and will represent the values and the calibre of our King County citizenry."

Airica/Europe

#### Cargo Shipments Recover in Amsterdam

Cargo shipments in the Port of Amsterdam recovered during the second quarter of 1990 as arrivals of coal and petroleum products increased sharply.

This growth corrected the disappointing results in the first quarter of the year, and comparative first half of 1989 figures reveal a 0.7% increase for the first six months of 1990. In total, nearly 14.6 mln tonnes were handled in the Port of Amsterdam in the first half year. On this basis the Port Management of Amsterdam is forecasting a total of about 30 mln tonnes for the full year.

**Liquid bulk:** The transshipment of mineral oil products increased sharply in the second quarter, reaching 6.1 mln tonnes for the first half year, a 0.2% increase over the year-earlier periods. Molasses and edible oils declined in the first half to 402,000 tonnes and 74,000 tonnes respectively.

**Dry bulk:** The Port Management said the sharp growth of coal arrivals in the second quarter was partly due to the current low freight prices for dry bulk shipments which stimulated replenishing of stockpiles. A total of 2.1 mln tonnes of coal was transshipped in the Port of Amsterdam in the first half year (+ 17.9%)

Transshipment of grain, derivates and fodders/oilseeds remained under pressure due to European Community agriculture quotas. In the first half, about 151,000 tonnes (- 35%) of grain was moved; derivates, fodders and oilseeds reached 2.2 mln tonnes, a slight 1.3% increase over the 1989 first half.

"Other cargoes" gained 6.7% to 1.5 mln tonnes due to the arrival of (seasonal) shipments of fertilizers/phosphates. It is expected that this trend will continue into the third quarter.

General cargo: The Port of Amsterdam handled about 400,000 tonnes of conventional general cargo in the first half.

Transshipments of containers totalled 425,000 tonnes, a slight decline. Roll-on/roll-off and other unit loads rose sharply, reaching levels of 396,000 tonnes and 205,000 tonnes respectively.

About 344,000 tonnes of cocoa was handled in the first six months, a decline over the year-earlier period. The downturn is partly due to high current stockpiles.

In the past six months, 2,171 ocean-going vessels (with gross tonnages of 14.6 mln tonnes) were handled in the port.

#### Sea-Land, BLG Sign Handling Agreement

Sea-Land Service, Inc. on August 30 signed a Handling Agreement with Bremer Lagerhaus-Gesellschaft (BLG), the leading German port operating company, for Sea-Land containers in Bremerhaven. The agreement went immediately into effect.

"This new agreement ensures that we will have a Quality partner in the port of Bremerhaven, which will enhance Seal-Land's changed service to the German trade", commented Mr. J. T. Keegan, Sea-Land's vice president, Europe and Middle East.

"Sea-Land and BLG have been business partners for well over 24 years, and we look forward to continuing the partnership for many years to come", said Dr. W. Maywald, a board member of BLG.

Both Sea-Land and BLG see great potential in Bremerhaven in view of the positive developments taking place in Eastern Europe, and they plan to offer customers in Eastern Europe a variety of services such as rail, truck and also feeder connections, connecting them to the global transportation Network of Sea-Land.

"Our mutual goal is to provide optimum transportation services to our customers in Germany and throughout Eastern Europe", commented Mr. Keegan.

Sea-Land Service, Inc., a unit of CSX Corporation, Richmond, VA., is a world leader in international intermodal freight transportation and related trade services. Sea-Land operates more than 60 container ships and 128,000 containers in U.S. and foreign trade and serves 80 ports and 70 countries and territories around the world.

BLG, the leading German port operating company, headquartered in Bremen, offers a broad service-oriented package, stevedoring of containers, conventional cargo handling, car handling, stuffing and stripping of containers, in both ports of Bremerhaven and Bremen.

#### Rotterdam: Terminal For Interstevedoring

The Rotterdam Municipal Port Management and Interstevedoring are about to open talks which are expected to result in a permanent site for Interstevedoring in the Port of Rotterdam.

The talk will concern the development of a new terminal for Interstevedoring on the south side of the Mississippihaven on the Maasvlakte. This is possible in view of the fact that the Beerdam will eventually be removed. The talks are being held with the proviso that the City Council gives its approval to the plans.

In order to comply with the wishes of Interstevedoring in the short term, temporary facilities are being considered on the north side of the Maasvlakte, near the 8th Petroleumhaven. This will allow Interstevedoring independently to handle deep draught bulk carriers (more than 45 feet) by means of floating transshipment until the new terminal is ready.

Interstevedoring transships dry bulk cargo with the aid of floating cranes. Interstevedoring works on buoys and



The agreement was signed in the show room of BLG by Mr. Jan Gelderland (Sea-Land Bremerhaven), Dr. Werner Maywald (Member of the Board of BLG), Mr. J. T. Keegan (Sea-Land Vice President Europe and Middle East), Dr. Rolf Fastenau (Chairman of the Board of BLG) and Mr. M. Gijsbrecht (Sea-Land, Bremen).



so far has not had its own terminal on shore. The latter has been the wish for years of Mr. Rijsdijk, managing director of Interstevedoring. The lack of space in the port, the transshipment activities of Interstevedoring and the requisite layout of the terminal (a lot of quay, limited site-depth) have always stood in the way of a quick solution.

The implementation of the interim solution may still be effected by the completion of the new deep-sea quay wall at the Euroterminal in the first week of September. The Municipal Port Management is considering leasing this quay wall, until the date of transfer to the permanent tenant, to others including Interstevedoring for floating transshipment activities. The lease will initially run until 1 January 1991.

#### Gothenburg Develops EDI Discharge Advice

An electronic discharge cargo advice has been developed by the Port of Gothenburg, its affiliate HT Data AB and the Swedish Trade Procedures Council (SWEPRO).

This means that it is now possible to manage a large portion of the imports by means of electronic data interchange (EDI). On the export side, as much as 80 per cent of the instructions between port customers and the Port itself is already managed by EDI at Gothenburg.

The new routine, called DISCAR for Discharge Cargo Advice, has been designed to meet the demands of port customers but also the demands of Sweden's new Customs Data System. DISCAR has an international structure (IFTMFR), and the system has been forwarded to the international organizations concerned for approval.

#### Gothenburg: 10% More Cargo in First 6 Months

Port of Gothenburg cargo turnover increased by ten per cent in the first six months of the year compared with the same period last year. The increase is equally distributed between the oil and general cargo sectors. In all, 12.74 million tons of cargo were handled.

The Gothenburg oil ports saw their imports and domestic volumes increase, while the exports were lower. A change in taxation rules regarding oil and oil products in Sweden is part of the reason behind the changes.

General cargo showed a slightly higher increase in imports than in exports. Also, domestic transports increased considerably, mostly due to a



The Port of Gothenburg

successful inland waterway feeder system introduced last year.

Container traffic was unchanged between the two periods with 208,000 TEUs handled. There was a significant change within this sector, though: the number of empty containers handled was down by 8,000 TEUs, and the number of containers with load was up correspondingly.

#### ABP Half-Year Profits Up 24% to £30.5 Million

Associated British Ports Holdings PLC on September 13 announced results for the half-year ended 30th June 1990.

Pre-tax profits rose from £24.5 million to £30.5 million. Port and transport activities contributed £29.7 million and property contributed £2.0 million. Earnings per share rose from  $9.5p^*$  to 11.4p for the half year.

**Dividend:** The Directors have declared an interim dividend of 2.75p per share (1989 interim dividend 2.25p\* per share). It will be paid on Wednesday 7 November 1990 to shareholders on the register on Friday 5 October 1990.

Commenting on the interim results, ABP Holdings Chairman, Sir Keith Stuart, said:

"The increase in our profits, at a time of difficulty in the property market, illustrates the considerable strength of the Company and the value of our well-balanced range of activities. The level of interest in port services and associated business opportunities has risen sharply following the abolition of the National Dock Labour Scheme in July 1989."

**Ports and Transport:** ABP's ports and transport activities achieved strong growth in the first half of 1990. A 12.5%

increase in turnover has been achieved despite the fact that at several of its ports ABP is no longer directly involved in cargo handling. The increase reflects partly the acquisition of the Red Funnel Group at Southampton, but also an expansion in port business.

ABP's direct employment of former Registered Dock Workers has been further reduced to 440 at 30 June 1990, compared with over 1700 at 30 June 1989 and just over 600 at 31 December 1989. The associated severance costs are being dealt with as part of an extraordinary item in this year's accounts, as was also the case in 1989. These extraordinary costs amounted to £8 million, net of tax, in the first half and a further, similar amount is expected to arise in the second half.

The expansion of port business, stimulated by the ending of the National Dock Labour Scheme, has enabled ABP to re-open the 190-acre Alexandra Dock at Hull. The Associated British Ports Act 1990, which completed its passage through Parliament in July, gives ABP powers to expand capacity at Immingham, King's Lynn and Port Talbot.

At Southampton, plans have also



#### New Mobile Computer Terminals at Gothenburg

Truck and tractor cabs, as well as tally booths, in Port of Gothenburg's Skandia and Älvsborg Harbours have been fitted with new mobile computer terminals. The new terminals, of Canadian MDI make, are using the Mobitex network. The number of mobile computer terminals in the port is now about 100; this includes a total replacement of old terminals and an addition. Mobile computer terminals are used by the Port's truck and tractor operators, tallymen and foremen to communicate with the Port's central computers. In this way, they get instructions and confirm actions regarding container movements in real-time. been announced for the building of a new terminal for Red Funnel services operating to the Isle of Wight. A new passenger terminal has recently been completed at West Cowes. Red Funnel has already announced its investment in two fast passenger craft, scheduled to come into service in 1991.

The Middle East: Commenting on the current Middle East situation, Sir Keith Stuart said:

"Because of the wide spread of our port business, the current situation in the Middle East is not having and is unlikely to have a material impact on our overall port results."

**Property:** The Company's property activities have been affected by the current downturn in the market, particularly in relation to the sale of completed projects. Property developments at the ports, however, continue to make good progress, most notably at Hull and Southampton. ABP's interests at Southampton have been further strengthened through the acquisition of the leasehold development project at Town Quay.

The profit of £2.0 million from property activities in the first half of 1990 derives from rental income on port land and some development profits at the ports, partially offset by provisions on development schemes and general expenditure at the Company's subsidiary, Grosvenor Square Properties, in total about £3.5 million.

On property activities, the Chairman commented:

"Despite the currently subdued state of the property market, our widely diversified development programme and our substantial land bank at the ports offer the potential for improved results in the future."

Among Grosvenor Square Properties' larger schemes, the position at Aldwych House has been strengthened with the letting of two floors (35,550 sq. ft) to Mobil Holdings (UK) Ltd. Aldwych House is now almost fully let and marketing of the property as an investment is under way.

Land and Property Valuation: In view of the beneficial impact of the abolition of the National Dock Labour Scheme on the utilisation of the Company's land holdings at the ports, and the potential effect on values since the last valuation at December 1988, a new valuation of port properties will be undertaken by professional valuers at December 1990. The results of this will be reported in the 1990 full-year accounts.

**Prospects:** On prospects for 1990, Sir Keith Stuart stated:

"Prospects for the year as a whole have been enhanced by the growing strength of our ports business where an increasing proportion of our income is to a large extent unaffected by fluctuations in domestic UK economic and industrial conditions. Property profits are likely to be lower than last year but are largely dependent on the sale of completed projects. I am confident that the overall results for the Company in 1990 will be satisfactory."

\* adjusted for 1 for 1 scrip issue May 1990

#### New Regulations for Thames Watermen

The Port of London Authority, in conjunction with The Company of Watermen and Lightermen, have reviewed the regulations by which the competence of watermen is measured. The two-year reappraisal of the regulations by which both new applicants for apprenticeship and existing licensed watermen wishing to renew their licences is measured, has been completed.

The new regulations have been communicated to all the existing licensed watermen and lightermen. PLA's Chief Harbour Master, Captain Gordon Varney says, "We have been working for almost two years to bring the regulations currently in force upto-date as part of the ongoing process by which we help to regulate the navigation of the River Thames."

A feature of the five-year apprenticeship will be a new style log book, designed to help the Master record the candidate's progress and an interim qualification, which is a provisional licence. The licence will be awarded by the PLA through the Company of Watermen and Lightermen after the candidate has passed the PLA Grades I and II examinations in Seamanship and Chartwork that they will take during the apprenticeship.

Mr. David Jeffery, Chief Executive of the PLA River Division, said, "The traditional practice of binding young people to a Master to serve an apprenticeship has not been entirely abandoned, although the welcome initiatives promoted by the Government in the field of Young Peoples Training Schemes might suggest that this is the case. We value our traditions on the River Thames and are proud of the heritage stretching back to Henry VIII's day but at the same time the regulations and practices are regularly reviewed to ensure that they meet the demands of working on the river today."

#### Le Havre: Equipment For Agricultural Produce

Caillard and the Port of Le Havre Authority have signed a contract for the enlargement and improvement of the Multibulks Centre in the port/industry zone, on the south bank of the Havre Ship Canal. The aim is to increase the capacity of the present facility and in particular to install a new conveyor belt system for agricultural produce.

The Mutibulks Centre can at present handle 15,000 tons a day, at a discharge rate of 1,200 tons an hour.

The new equipment ordered from Caillard should lead to a big improvement in the rates both of unloading and of discharging, which could not previously be carried out simultaneously.

The target has been set at 20,000 tons a day, either loaded or discharged, at a rate of 2,400 tph for loading and of 1,200 tph for discharging.

To achieve an improvement of this order, and to link up the main berth, the coaster berth and the silo, Caillard will be installing for the owners, the Port of Havre Authority:

- an additional 500 m circuit of conveyor belts, linked up to the existing system,

- reloading equipment for barges and coasters, to be set up at the future reloading berth,

- a tower and commercial weighing equipment.

Traffic must not be in any way interrupted at the Multibulks Centre during the construction period, which means that Caillard will have to perform the delicate operation of linking up the old and new conveyor systems in a very short time, without bringing the belts to a standstill.

The new facilities are expected to come into service during the first half of 1991. (*Port of Le Havre Flashes*)

#### Le Havre Publishes Road Haulage Directory

"Road Service to and from Le Harvre" is the title of a new publication brought out by the Port of Le Havre Authority. Roads are as much a daily part of the life of the port as railways and waterways and this highly professional booklet lists all the road haulage concerns operating in the port.

Its main aim is to provide a reference list of the whole range of services to and from the port provided by the various transport firms, though the authors insist that it cannot be exhaustive.

There are detailed sections on all the different types of goods that can be carried by road, including container transport, scheduled conventional road services and those available on request, reefer transport, hopper lorries, tankers, parcel deliveries and express parcels, and the carriage of bulky goods and timber.

It serves as a valuable directory for all involved in road haulage, and particularly for present and potential shippers using the port of Le Havre, who will find it a mine of information.

Full details from: Mr. Le Gurun, Service Transports Intérieurs et Transit Portuaire, Port of Le Havre Authority. (Port of Le Havre Flashes)

#### Asia/Oceania

#### Total Cargo Handled at Fremantle 500 M. Tons

The Port of Fremantle handled its 500 millionth tonne of cargo during August, a milestone achieved 93 years after the inner harbour was officially opened in 1897.

A Fremantle Port Authority spokesperson said that the mark was reached during unloading of the new container ship *Berlin Express* which arrived in the Port on Tuesday, August 28th.

He said that Fremantle was the third largest general cargo port after Melbourne and Sydney and was now handling nearly 18 million mass tonnes a year.

Its 17.6 million mass tonnes of cargo in 1989/90 was an increase of 4 percent

over the previous year's total of 17 million mass tonnes.

At this rate, the port would reach the 1 billion tonnes of cargo mark in about 20 years.

The Authority spokesperson said that the deeper inner harbour where dredging last year gave it two metres more depth to 13 metres was enhancing the port's trade.

It now enabled it to cater for ships such as the *Berlin Express* whose draught was greater than that which could have been accommodated by the harbour's previous depth.

During its visit to Fremantle, the *Berlin Express* handled containers totalling 356 TEU's (twenty-foot equivalent units).

While in Port, the Authority presented the ship's master with a special plaque commemorating its role in the Port's 500 millionth tonne of cargo.

(Port of Fremantle)

#### School in Partnership With Fremantle Authority

John Curtin Senior High School is now in partnership with the Fremantle Port Authority after the formal signing of the Western Australian Compact for Schools Education.

The program has been established by the Western Australian Chamber of Commerce and Industry and was initiated to link businesses and school educational programs so students can have a better understanding of the business community and as a result produce students who understand the world of industry.

Other schools linked with businesses are Servite College with Canon Australia Pty Ltd and Australind Senior High School with S.C.M. Chemicals Limited.

Finance Director Alec Meyer together with Mr. William Izett, Principal of John Curtin, signed the document at an official ceremony on Thursday 9 August, 1990.

Speakers included Mr. Henry Kitson, president of the Western Australian Chamber of Commerce and Industry, Dr. Geoff Gallop, Minister for Education, Parliamentary and Electoral Reform and Dr. Peter Tannock, Chairman, Catholic Education Commission. (Port of Fremantle)

#### Kelang Terminal: Record Performance

Kelang Container Terminal appears poised once again to achieve a record year for 1990. For the first half of 1990 container traffic rose to 229,518 TEUs, an increase of 25.9 percent over the 1989 figure of 182,370 TEUs for the same period.

This comes after the Terminal's record breaking performance in March when for the first time the monthly figure reached the 40,000-TEU mark. The Terminal handled 40,323 TEUs in March and this was followed by another record handling throughput of 40,414 TEUs in June.

Whilst imports registered a 24.0 percent hike from 95,675 TEUs in 1989 to 118,649 TEUs in 1990, exports increased by 27.9 percent from 86,695 TEUs in 1989 to 110,869 TEUs for the corresponding period in 1990.

#### **Ship Arrivals**

The Terminal registered a 14.6 percent increase in vessel calls for the first half of this year. It recorded 923 vessels in 1990 compared to 805 vessels in 1989.

There was a marginal increase in the main line vessel calls which accounted for 68.8 percent of the total traffic, whilst feeder and conventional vessels made up 28.5 and 2.8 percent respectively.

#### Service Level

• Gantry crane performance ... registered 27.6 container moves per hour.

• Vessel turnaround time ... was 9.4 hours.

• Gantry crane availability ... improved from 87.4 percent in 1989 to 90.8 percent in 1990.

• Straddle carrier availability ... showed significant improvement of 92.8 percent from the previous level of 90.9 percent achieved in 1989.

• Berth utilisation ... increased from 59.6 percent in 1989 to 66.7 percent in 1990.

#### **CFS Performance**

The total container traffic handled at the depot for the January to June period, registered a slight increase of 5.25 percent from 28,088 TEUs in 1989 to 29,562 TEUs in 1990.

While there was a decrease in the

consolidation of export cargo via the CFS facilities, where 15,680 TEUs were handled in 1990 compared to the 1989 figure of 16,199 TEUs, import cargo experienced a higher growth of 13,882 TEUs against 11,889 TEUs in 1989 thus constituting a 53:47 ratio between export and import cargo as compared to 1989's ratio of 58:42.

#### **Intermodal Traffic**

Container movement by road ... increased significantly by 33.7 percent from 147,068 TEUs to 196,605 TEUs for the first half of 1990.

Container movement by rail ... increased marginally from 23,656 TEUs in 1989 to 24,449 TEUs representing a 3.4 percent growth.

Block train service between Prai and KCT experienced a decrease of 17.9 percent in traffic from 4,944 TEUs in 1989 to 4,060 TEUs in 1990.

With foreign investments continuing to pour into Malaysia and coupled with the nation's economy growing from strength to strength, KCT is anticipating better results this year.

The continuing surge in traffic from the manufacturing sector is expected to push KCT's 1990 throughput beyond the 480,000-TEU mark. (*Portrait*)

Collective Agreement For KCT Staff Signed

The Kelang Container Terminal Staff Union (KCTSU) and the Management of the Company signed a new Collective Agreement on 2 June 1990 following three months of negotiation.

The new agreement signed at Holiday Villa, Subang Jaya came into effect from 1 October 1989 and shall be valid for 3 years thereon.

It involves 26 categories of staff including Supervisors, Clerks, Engineering Personnel, SK/Crane Operators, Typists, Container Handlers and Tea Lady.

Beside a \$45 to \$60 annual salary increment, the staff will also enjoy higher shift and meal allowances.

Other improvements in benefits include special allowances for certain categories of staff, provision of protective clothings and uniforms, and an increase in annual leave for employees who have opted to join KCT after having completed a total of 10 years'

service with the Klang Port Authority and the Company.

The new agreement also provides for a special gift of one month's salary based on the last drawn basic salary for employees who have attained the compulsory age of retirement or who have been medically boarded out for health reasons.

Speaking at the signing ceremony, Chairman En. Rahmat Jamari thanked the KCTSU for their cooperation during the negotiation and hoped that both parties will abide by the terms and conditions agreed upon in the new agreement.

Meanwhile, a new incentive bonus scheme for staff is under study. The new scheme which will replace the current container movement bonus will result in additional benefits for operational staff with higher levels of achievement/productivity. (Portrait)

#### 25 Millionth TEU on Singapore's 25th Anniv.

#### By Michael Loh Public Relations & Marketing Department Port of Singapore Authority

The Port of Singapore reached yet another milestone on 11 July 90. The Port of Singapore Authority commemorated the handling of the 25 millionth TEU at the Tanjong Pagar Terminal (TPT).

Dr. Yeo Ning Hong, Minister for Communications & Information, and Second Minister for Defence (Policy), was the Guest-of-Honour at a celebration held at Hall 4, World Trade Centre (WTC). The historic unloading of the 25 millionth container at TPT was watched by over 600 guests and PSA staff, through a "live" telecast on a video-wall. The 25 millionth TEU was then driven around the city for public viewing.

"The container throughput in Singapore has always grown by double digits for the last 18 years, except for 1982 when it grew by 5 percent," said Dr. Yeo. According to him, 25 million containers were comparable to a span of 152,000 km or four times the circumference of the earth, when placed from end to end.

"A Port's Story, A Nation's

#### Success"

The Minister also launched a new book entitled "A Port's Story, A Nation's Success." Dr. Yeo and Mr. Lim Kim San, Chairman, PSA, both signed their respective forewords and exchanged copies of the book. In his foreword, Dr. Yeo described the book as a tribute to Singaporeans. "I hope this story of the pioneers who worked so hard to build our port will inspire us to meet the challenges of the 21st century."

In his foreword, Mr. Lim Kim San said: "Singapore's prosperity and the growth in its trade and economy can be easily gauged by the volume of the cargo handled by the port. In less than two centuries, we have progressed from an entrepot port to a Technoport, from a warehousing centre to a Global Distriport."

#### Singapore Maritime Showcase

At the ceremony, Dr. Yeo also unveiled a plaque on the redevelopment of the World Trade Centre and announced the establishment of the Singapore Maritime Showcase (SMS), which will form part of the upgraded WTC Complex.

The SMS will promote Singapore as an international maritime centre and serve as a one-stop information centre to disseminate information on the Port and the maritime industry in an educational and entertaining way. The importance of the Port and the maritime sector to Singapore's international trade, commerce and prosperity will be highlighted. Its location at the WTC will also enhance the maritime character of the Complex which is the nucleus of a new Maritime Business Park to be established.

PSA is investing some \$5 million for the design and construction of the exhibits for this project, which will be completed in Dec 1991.

#### **Further Reduction in Port Charges**

Port users and the shipping community can expect another round of reduction of port charges. This means lower costs for the more efficient operators. Port users can also expect lower charges for the use of PSA's facilities during off-peak periods. "To maximise the utilisation of our port's limited land and sea resources, store rents and port dues will be restructured," said Dr. Yeo. The reduction in port charges is expected to be implemented in the last quarter of 1990. (PSA Port View)

#### Singapore's EDI Link With Seattle Port

By Angela Loh Public Relations & Marketing Department Port of Singapore Authority

During the recent port mission to the United States of America in March '90, a Memorandum of Understanding was signed between the Port of Seattle and the Port of Singapore Authority (PSA) to establish an EDI (Electronic Data Interchange) link.

The Memorandum was signed by Mr. Zeger J.J. van Asch van Wijck, Executive Director, Port of Seattle, and Mr. Goon Kok Loon, Deputy Executive Director, PSA.

The Memorandum sets out the basis of co-operation between the Port of Seattle and PSA for the establishment of an EDI link relating to the exchange of shipping information between the two ports. On a trial basis, the information to be provided to each party shall be in relation to Ship Arrival/Departure Information, and Container Loading Information.

There is also provision in the Memorandum for the establishment of other telecommunication links in the future, whether international or local; for the interchange of data information and news between various ports, government agencies and companies dealing with port business and transportation.

With the EDI links, the users of both ports will benefit from faster, more comprehensive and more accurate transmission of information to give them the competitive edge to serve their customers better. The information also facilitates pre-planning in the port to increase the productivity and efficiency in operations so that PSA and Port of Seattle can also provide better services to our port users.

The Port of Singapore is also linked to the Hong Kong International Terminal (HIT), Modern Terminals Ltd. (HK), and the Port of Bremen in West Germany. A Memorandum of Understanding was also signed in Dec. '89 to establish EDI links with the Port of New South Wales, Australia. (PSA Port View)

#### **PSA Reefer Monitoring** Systems to Be Enhanced

By Lim Choon Chai Engineering/Marine Systems Department Port of Singapore Authority

The number of reefers handled by the Port of Singapore Authority (PSA) has been increasing annually. Over the next three years, PSA will increase the number of reefer monitoring points from 690 to 1,200.

To provide better service to customers, the reefer monitoring process was computerized in mid-1989. Hand-held data terminals are used to capture the temperature readings of all the reefer containers, and a personal computer is used to analyse the data to detect problems with the reefers.

PSA is enhancing the system to enable the shipping lines to extract the temperature readings of their refer containers through PORTNET. With this enhanced feature, the printing of notifications to the shipping lines for abnormalities detected would also be automated.

PSA has also decided to implement the latest reefer technology — Remote Reefer Monitoring. It is a fully automatic temperature monitoring system capable of reading the temperatures from a control station every 5 minutes or at even shorter intervals.

The shipping lines can obtain close to real time information on the condition of the reefers through PORTNET. The control station will trigger off an alarm for any abnormalities detected by the system to alert the refer Technicians.

The advantages of this system are:

- (a) Physical checking is done only once daily instead six times and no recording if temperature is required, saving manpower and minimising errors due to manual recording;
- (b) Monitoring of reefer temperatures in real time provides early warning for any abnormalities detected to the operators. Corrective action could be taken before major problems develop;
- (c) Reefer temperature readings are updated every 5 minutes compared

to every 4 hours presently, providing more accurate information to the shipping lines.

(PSA Port View)

#### SPI Managing Container Operations Course

#### By R.S. Lesslar Singapore Port Institute

A course on Managing Container Operations was conducted by the Singapore Port Institute (SPI) on 18-29 June 90.

The objective of the course was to enhance participants' knowledge and skills in the effective planning of container operations; requisition and deployment of resources for operations efficiency; and supervision and control of container handling operations.

The course was structured into sequentially linked units, each unit dealing with one major aspect of container operations and management. Topics included layout and facilities of Tanjong Pagar Terminal (TPT); measurement of terminal performance; ship stowage planning; ship operations; quay transfer operations; yard storage; receipt and delivery of containers; and terminal planning and management.

This course, which is offered annually to local and overseas personnel from the shipping and port related industries, continued to attract favorable response with a total of 21 participants. These included 3 local shipping executives and 18 overseas port and shipping personnel from Bahrain, Sri Lanka, Western Samoa and the ASEAN countries.

The lectures were conducted by officers from TPT, Container Terminal Engineering Department and the SPI. Case studies and site visits were included to make the course more meaningful and educational.

"The course will definitely be useful in helping me to improve the stacking systems of our container yard," said Mr. Hussein Latiff from Public Port Corporation II, Indonesia.

"The course has provided with me a good account of the working relationship between the port and the hauliers," commented Mr. Jaafar Hitam, Kelang Container Terminal, West Malaysia. (PSA Port View)

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