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Ports & Harbors June, 1994 Vol. 39 No. 5

## Ports Harbors

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ASEAN Capability to Fight Oil Spill Enhanced



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AUTHORITHY PORT OF LISBON

## IAPH ANNOUNCEMENTS AND NEWS

## Members Sounded Out for 1999 IAPH Conference Site

The site selection for the 21st biennial Conference of IAPH to be held in 1999 in the Asian Region will be made by the post-Conference meeting of the Board of Directors which will be held immediately after the close of the Seattle/Tacoma Conference on June 16, 1995.

In accordance with past practice, the Secretary General circulated a letter dated April 20, 1994 to all Regular Members in the Asian Region, sounding them out about their interest in hosting the 21st World Ports Conference of IAPH in 1999.

The conference venue is to be selected on the basis of presentations from the candidates.

In the same letter, the Secretary General indicates that, even prior to his exploratory letter, as of April 20, 1994, two Regular Members in Japan, namely the Ports of Osaka and Kobe, have already expressed their willingness to host the 1999 Conference and their official letters of invitation have been received from the respective Mayors.

In order to assist the members in examining the possibility of performing such a role, the Secretary General presented some background data on the recent conferences and mid-term meetings of the Executive Committee, which include the following list of IAPH events.

#### Chronological list of the IAPH Conferences and EXCO meetings

Year	Africa/Europe	America	Asia
1952			PREP CONF: Kobe
1055			
1955		IST CONF: Los Angeles	
1956			
1957			
1958			
1959		2ND CONF: Mexico City	
1960		EXCO: Honolulu	
1961			
1962			EXCO: Taipei
1963		3RD CONF: New Orleans	
1964		EXCO: San Francisco	
1965	4TH CONF: London		
1966		EXCO: Los Angeles	
1967		-	5TH CONF: Tokyo
1968		EXCO: New Orleans	
1969			6TH CONF: Melbourne
1970			EXCO: Singapore
1971		7TH CONF: Montreal	01
1972	EXCO: Lisbon		
1973	8TH CONF: Amsterdam		
1974			EXCO: Auckland
1975			9TH CONF: Singapore
1976		EXCO: Curação	congapore
1977	·	10TH CONF: Houston	

		EXCO: Mombasa	1978
		11TH CONF: Le Havre	1979
EXCO: Brisbane			1980
12TH CONF: Nagoya			1981
	EXCO: Aruba		1982
	13TH CONF: Vancouver		1983
		EXCO: Glasgow	1984
		14TH CONF: Hamburg	1985
EXCO: Auckland			1986
15TH CONF: Seoul			1987
		EXCO: Abidjan	1988
	16TH CONF: Miami		1989
EXCO: Fremantle			1990
		17TH CONF: Barcelona	1991
	EXCO: Charleston		1992
18TH CONF: Sydney			1993
		EXCO: Copenhagen	1994
	TH CONF: Seattle/Tacoma	19"	1995
EXCO: ?			1996
		20TH CONF: London	1997
	EXCO: ?		1998
21ST CONF: ?			1999
		EXCO: ?	2000
	22ND CONF: ?		2001

Note 1: The frequency of the conference until the London Conference was once in three years until the same was amended to be once in two years as currently provided for in the By-Laws (Sec. 27).

Note 2: EXCO was held in the same region where conference was held since 1972 until 1986.

## IAPH Information Technology Award '94

#### Eleven papers entered

To the call for papers for the IAPH Information Technology Award Scheme 1994, which was established at the initiative of the IAPH Trade Facilitation Committee chaired by Mr. David Jeffery (Port of London Authority) to recognize the outstanding application of information technology in a port, by the closing date set at 4 pm, Tokyo time, April 14, 1994, a total of eleven papers had been received from the following organizations.

#### **List of Entry Papers**

#### (As of 14 April 1994)

- 1. Port of Helsingborg, Sweden
  - Nominator: Barbro Wahlin, Chairman of the Board and Per Olof Jansson, Managing Director Nominee: Goran Hammarskjold, Manager, Technical Department, and Peter Fagander, Project Engineer
  - Title: "The New Ferry Terminal Operation System — A new computerized management system for operating vehicle ferry terminals"

#### 2. Shanghai Port Authority, China

- Nominator: Ming-Yueh Lin, Director, Dept. of Information System
- 2.1 Nominee: Ye Hanlin, Information Centre Title: "Information System for General Cargo Management at Shed/Yard"
- 2.2 Nominee: She Hui, Information Centre Title: "Pilot Management Information System in the Port of Shanghai"

#### 3. Port of Cotonou, Benin

Nominator:	Issa Badarou-Soulè, Director General
Nominee:	Port of Cotonou
Title:	"Port Ware – Le Logiciel Portuaire"

 Rotterdam Municipal Port Management, the Netherlands Nominator: Peter van der Kluit, Policy Adviser and Executive Secretary Nominee: H.B. Hanekamp, Head Safety and Envi-

ronment, Directorate of Shipping Title: "Electronic Notification System"

 5. Administração do Porto de Sines, Portugal Nominator: Eugenio Fialho Borralho, President Nominee: Luis Arroz, Commercial Director

#### 6. Puerto de Santander, Spain

Nominator: Miguel Angel Pesguera, President Nominee: Ignacio Merino, Logistics Manager

 7. The Port Authority of New York & New Jersey, USA. Nominator: Lillian C. Liburdi, Director, Port Department
 Nominee: Larry Sposi, Manager, ACES, Port Demartment, Marketing Division

#### 8. Synetics Corporation, Vienna, VA, USA

Nominator: Abdel M. Fouard, Senior Director, SYN-ETICS Corporation,

Nominee: Martin Louri, Directer General, L'Office des Ports et Rades du Gabon (OPRAG)

#### 9. Port of Singapore Authority, Singapore

Nominator: Patrick T. C. Phoon, Director, RTW Shipping (S) Pte Ltd.

Nominee: Lee Chee Yeng, Director, Information Systems Division, Port of Singapore Authority

Title: "Description of Information Technology Application"

#### 10. Antwerp Port Authority, Belgium

Nominator: Peter Verwaerde, IT-coordinator

- Nominee: Antwerp Port Authority Information Department
- Title: Antwerpen Port Information and Control System

The entry papers are being reviewed and screened by the Selection Committee, which is composed of the following individuals:

**David Jeffery**, Chairman of the IAPH Trade Facilitation Committee (Port of London Authority), as the chairman **Dr. Hassan J. Ansary**, Executive Vice President, The Canada Ports Corporation, the representative of the host port organization at which the award will be presented (Ports Canada, for the 1994 award)

John Hirst, Executive Director, The Association of Australian Ports and Marine Authorities, a member of the IAPH Trade Facilitation

Rinnosuke Kondoh, Deputy Secretary General, the IAPH Head Office Secretariat

The results of the selection committee's judgement will be announced by the end of May this year, whereupon the winners of the gold, silver and bronze awards will be notified and will be invited to attend the Fifth Ports Canada International Computer Conference to receive the awards at the gala dinner on June 8, 1994 in Toronto, Canada. Ports Canada is offering free conference registration to a representative from each of the winning ports/organizations.

### **Cyprus Ports Authority Computer Based Information System**



#### By Joseph Bayada General Manager Cyprus Ports Authority

(A paper contributed to the meeting of the IAPH Trade Facilitation Committee held in New York on November 19, 1993)

#### Introduction

In March 1990 a contract was awarded by the Cyprus Ports Authority to W.S. Atkins and the Port of Felixstowe International for a Systems Study for the Introduction of a Computer Based Information System.

In April 1990 a study team was set up to develop an Information Systems Strategy for the Authority, which would meet the Authority's requirements for the next ten years. The Strategy Study identified the system requirements of the Authority and established priorities for the introduction of the systems.

The analysis of the business objectives and consequential activities as well as the information needs associated with this identified the need for eight systems.

- Port Operations
- Accounts
- Office Automation
- Marketing and Port Planning
- Project and Contract Management
- Engineering Planned Maintenance
- Personnel Database
- Licence Management

The Authority is almost finished with the installation and testing of the necessary hardware, whereas the Port Operations System, under the EC Meditel Programme, and the implementation of the "EDI Station – Electronic Data Interchange", which is currently being designed, are expected to become operational by mid-1995.

All other functions and activities of the Authority, both at headquarters and port level, will be computerised too, by 1995.

#### **Systems Description**

#### **Port Operations System**

This system will be completed within the framework of the EC MEDITEL programme.

MEDITEL is an EC initiated and financed project providing for the electronic exchange of information among the various ports of the Mediterranean. The Cyprus Ports Authority joined the Meditel project in February 1991.

It is a two-phase project. It involves, first, the computerisation of port operations, and then the linking of all computerised ports through a MEDITEL EDI network.

The Port Operations System called "ESCALE", which is part of the European Community MEDITEL project, will record details of all vessel movements, arrivals, and departures at Cyprus Ports and will create an inventory of all cargo passing through the ports. The system will provide direct access to all users of the port, shipping lines, agents, freight forwarders, customs and terminal operators to the data held in the system. All this will be subject to commercial confidentiality.

The openness of this system will provide services to all port users. Small or large systems, already in operation, can easily be connected to the system either to provide information on their vessel, transfer the manifest, apply for the use of a crane or any other services provided by the port, or alternatively to get historical information for their operations, such as the number of times a particular ship enters the ports, the number of tons of cargo pertaining to the previous year and the number of containers, as well as various other statistical data useful in their planning.

The system will allow messsaging amongst all users of the system, thus reducing the number of telephone, fax and telex messages, as well as visits to the ports.

From the point of the announcement of a call, the confirmation of the arrival, the cargo inventory (manifest) and the storage and delivery of goods, a common system will be used. All information will flow through the computer network.

Connections between the systems and other systems and databases will utilise EDI (Electronic Data Interchange) and intersystem communications, where appropriate. Standards developed and used within the EC in relation to EDI, harmonisation and dangerous goods, and EDIFACT - SEA CARGO MANIFEST Implementation Guide by the TCIEG – have been taken into consideration and will be adopted.

IMO standards concerning General Declaration and Cargo Declaration heve already been adopted and will be used by the new Information System.

#### Accounts

This is a series of subsystems covering the accountancy functions of the Authority.

#### **Office Automation**

The system will provide electronic mail, word processing, and issue management and electronic diary management, to all departments within the CPA. The word processing system is in operation both at headquarters and port level.

The office automation systems are expected to become

fully operational by the end of July.

#### **Marketing and Port Planning**

The Marketing System is based on the provision of marketing information relating to existing and potential customers and competitors. This information can be gathered from two main sources. One is from public, third party databases which specialise in providing marine- and traderelated data.

The second is from "in-house" information gathered as a result of active marketing and from visits, interviews and research into the needs of existing and potential customers. Also included in the latter area of information are data relating to other ports in competition or potential competitors to CPA.

The Port Planning System is based on a data model of the CPA port activities. The model will be built up from details of: current port physical attributes such as: infrastructure, mechanical equipment, marine equipment, etc.; standing data such as equipment types and performance and operational manning; daily or weekly returns relating to throughput, vessels, operational performance and utilisation emerging as a by-product of other systems; and forecasts of future traffic, patterns, trade, customer profiles, etc.

By interrogating the system or by altering the parameters, the CPA can carry out wide-ranging "what if" interactive interrogations in support of strategic business decisions.

#### **Project and Contract Management**

This system incorporates PERT-like techniques and enables management to build up a project plan, allocate resources to a project and dynamically reallocate resources where required. The system could be used to create a plan on a project, showing timescales and resources, and could also be used to monitor the progress of the project and help to identify slippages and extra resource requirements. This system is already installed and it is expected to become operational by the end of March 1994.

#### **Engineering Planned Maintenance**

The system provides facilities for the engineers to examine the maintenance schedules, determine which equipment requires maintenance, both planned and ad-hoc, in the near future (generally up to one week ahead), ascertain the resource requirement and availability in terms of spare parts and labour, and formulate the work plan. In carrying out this task, the engineer will take into consideration the forecast shipping requirements (from the port operations system) and arrange the plan to allow for minimum interference to the port operations.

Part of the system also maintains a stores stock control, an asset register, information on plant in/out of service, servicing history and engineering costing.

#### **Personnel Database**

The system will maintain records of the CPA employees, indicating their career history, training, training needs, etc. It could also be used to record changes which would affect the monthly payroll run.

#### **Licence Management System**

The system maintains details of licences applied for and issued, payments made, royalties received, etc.

## Entry Form for 1995 Directory to Members

An entry form for the 1995 edition of the IAPH Membership Directory is to be sent to all IAPH members from the Tokyo Head Office in late May, 1994.

Upon receipt of the form, all members are requested to check the attached information and make the necessary corrections and changes. The completed form should be returned to the Head Office by July 30, 1994.

Members are also invited to run their advertisement in the Directory at reasonable rates: \$80,000 (152x 75mm) for a full page and \$50,000 for a half-page (75 x 75mm).

All members are urged to cooperate in supplying Tokyo with updated information concerning their organizations so as to enable the Head Office secretariat to progress with the compilation work. The new edition of the Directory will be published in late October this year for distribution among IAPH members, who may agree that the Directory is one of the most convenient and accurate reference books for identifying" who's who" in world ports as well as the annual tonnage handled at each IAPH member port.

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

#### Contributions to the Special Fund For the Term of 1992 to 1994 (As of May 10, 1994) Contributors Amount Paid: (US\$)

Paid:	(USS)
ABP (Associated British Ports), U.K.	3,000
Akatsuka, Dr. Yuzo, Univ. of Saitma, Japan	230
Akiyama, Mr. Toru, IAPH Secretary	
General Emeritus, Japan	1,000
Auckland, Ports of, Limited, New Zealand	500
Barcelona, Puerto Autonomo de, Spain	1,000
Bintulu Port SDN BHD, Malaysia	200
Cameroon National Ports Authority,	
Cameroon	480
Cayman Islands, Port Authority of,	
the Cayman Islands	250
Clydeport Ltd., U.K.	1,000
Constanta Port Administration, Romania	250
Copenhagen Authority, Port of, Denmark	1,000
Cotonou, Port Autonome de, Benin	100
Cyprus Ports Authority, Cyprus	1,000
Delfzijl/eemshaven, Port Authority of,	
the Netherlands	350
de Vos, Dr. Fred, IAPH Life Supporting	
Member, Canada	150
Dubai Ports Authority, U.A.E.	500
Dundee Port Authority, U.K.	250
Empresa Nacional de Administracao	
dos Portos, E.P., Cabo Verde	250
Fiji, Ports Authority of, Fiji	100
Fraser River Harbour Commission, Canada	250
Fremantle Port Authority, Australia	250
Gambia Ports Authority, the Gambia	250
Ghana Ports and Harbors Authority, Ghana	250
Hakata, Port of, (Fukuoka City) Japan	1,705
Halifax, Port of, Canada	250
Helsingborg, Port of, Sweden	500

#### 523 Hiroshima Prefecture, Japan 1,000 **Irish Port Authorities Association** Japan Academic Society for Port Affairs, 267 the, Japan Japan Cargo Handling Mechanization 259 Association, Japan Japan Port and Harbor Association, 493 the, Japan Japanese Shipowners' Association, 516 the, Japan 500 Johor Port Sdn. Bhd., Malaysia Kawasaki, City of, Japan 1,702 Klang Port Authority, Malaysia 200 924 Kobe Port Terminal Corporation, Japan 100 Korea Container Terminal Authority, Korea KSC (Kuwait Oil Company), Kuwait 1,000 Kudo, Dr. Kazuo, Tokyo Denki University, 4,000 Japan 500 London Authority, Port of, U.K. Maldives Ports Authority, Maldives 100 Marine and Harbours Agency of the Deparment of Transport, South Australia, 150 Australia 500 Marine Department, Hong Kong Maritime Services Board of New South Wales, 367 Australia 200 Mauritius Marine Authority, Mauritius 1,000 Melbourne Authority, Port of, Australia 100 Miri Port Authority, Malaysia Montreal, Port of, Canada 500 Nagoya Container Berth Co., Ltd., Japan 518 Nagoya Port Authority, Japan 3,564 250 Nanaimo Harbour Commission, Canada Napier, Port of, Limited, New Zealand 100 New York & New Jersey, Port Authority 1,000 of, U.S.A. Niigata, Port of, (Niigata Prefecture), Japan 860 Okubo, Mr. Kiichi, Japan 274 Osaka Port Terminal Development Corp., 570 Janan Pacific Consultants International, Japan 243 500 Penta Ocean Construction Co., Ltd., Japan **Point Lisas Industrial Port Development** 100 Co. Ltd., Trinidad \*Primer Concurso Internacional de Memorias Portuarias: Carlos Armero Sisto, Anuario 300 de Puertos: Buenos Aires, Argentina 180 **Public Port Corporation I, Indonesia** Pusan East Container Terminal Co., Ltd., 200 Korea Qubec, Port of, Canada 250 500 Shipping Guides Limited, U.K. Solomon Islands Ports Authority, Solomon 100 Islands South Carolina State Ports Authority, 1,000 U.S.A. Tauranga, Port of, New Zealand 500 **Tovama Prefecture**, Japan 254 **UPACCIM** (French Ports Association), France 1,905 500 Vancouver, Port of, Canada US\$43,634 Total:

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

#### A bursary recipient from Cameroon

Following the submission of a report on his attendance at the Port Management Seminar in Delft last year, the report which we carried in the January-February 1994 issue of "Ports and Harbors" (on pages 14/15), Mr. Beat Christopher Edgard from the Office National des Ports, Cameroon, has recently sent us a portrait photo of himself.



As the bursary recipient's photo failed to reach Tokyo in time for inclusion in the January-February issue of the journal, we are including it in this issue.

### **Membership Notes:**

#### **New Member**

#### **Regular Member**

Ministere de l'Equipement (Algeria)

Address: 3 Rue Mohamed Allilar Kouba, Alger International Affairs Department Mailing Addressee:

#### Changes

Philippine Ports Authority [Regular] (Philippine)

Mailing Addressee:	Commodore	
	Carlos L. Agustin	
	General Man-	
	ager	
General Manager:	Commodore	Commodore
	Carlos L. Agustin	Carlos L. Agustin
Asst. General Manage	er for Operations:	
	Serafin P. Rivera	
Asst. General Manage	er for Engineering	Services:
	Ray Francis Alcos	seba
Manager, Legal Servie	ces Department:	
_	Edgar Pilar	
Manager, Commercial	l Services Departm	ent:
	Leonardo Yu	
Manager, Harbor Ma	intenance Departm	ent:
	Cristero Dinopol	
Port Manager, PMO	Legaspi:	
	Edmond D. More	no
Port Manager, PMO	Iligan:	
	Benigno Magpale,	Jr.
Port Manager, PMO	Tacloban:	
_	Fernando Almeda	, Jr.
Administraçao do Port	to de Lisboa [Regul	ar] (Portugal)
Mailing Addressee:	Mr. Albano de Fis	gueiredo e Sousa

Admin Mailing President

Administração do Porto de Sines [Regular] (Portugal) Mailing Addressee: Mr. Eugenio Fialho Borralho President President: Mr. Eugenio Fialho Borralho Commercial Director: Mr. Luis Arroz

**Obituary** 

#### **Dr. Willis E. Pequegnat**



Dr. Pequegnat in Tokyo in October 1990

Dr. Willis E. Pequegnat, world-renowned scientist, who had been the scientific advisor to IAPH on dredging since 1980, died of bone cancer at his home in LaJolla, California on April 2, 1994. He was 79.

The sad news concerning Dr. Pequegnat reached the Tokyo Head Office on April 13, via Mr. Herbert R. Haar, Jr., former Chairman of the IAPH Dredging Task Force from the Port of New Orleans.

As many IAPH members and readers of the journal of IAPH might remember, Dr. Pequegnat's name frequently appeared in the IAPH position papers submitted to IMO's London Dumping Convention meetings, as he was actively engaged in the work of the IAPH Dredging Task Force as scientific advisor to Chairman Haar, who was succeeded by Mr. Dwayne Lee in 1991.

Secretary General Kusaka, jointly with his senior staff members, sent a letter of condolence to Dr. Linda Pequegnat, the widow of Willis, and his professional colleague.

According to the article appearing in the San Diegobased newspaper "Union-Tribune", which Mr. Haar supplied to the Tokyo Secretariat, Dr. Willis Pequegnat pioneered the use of aqualungs for research and underwater photography off the coast of Laguna Beach in the 1950s. The same newspaper article carries a profile of Dr. Pequegnat, as follows.

"Dr. Pequegnat was later appointed program director at the National Science Foundation in Washington, a post he held in 1960-62."

"He then taught for nearly two decades in the graduate oceanography program at Texas A&M University. He pioneered reserach in deep-sea biology off the Gulf of Mexico coast and authored numerous scientitic papers and books before his retirement from Texas A&M in 1980."

"One of his big jobs was five or six years ago, when he was involved in the dredging of Oakland Harbors. An expert on the disposal of debris in the ocean, as well as the dredging of ocean deposits, Dr. Pequegnat was a scientific adviser in marine affairs for the past 14 years. He represented the International Association of Ports and Harbors at the London Dumping Convention, a Unted Nations Treaty Organization consisting of more than 70 nations."

"In addition to his wife of 36 years, Dr. Pequegnat is survived by two daughters, two sons and three grandchildren. 'He is referred to by many of his colleagues and former students as'the last of the old-time naturalist,' said his wife."

## **OPEN FORUM**

## THE SEA JAPAN 1994 Conference Outlook for Raw Materials and Energy Supply and Demand

Keynote speech by Fridtjof Lorentzen President Designate, BIMCO\* on March 10, 1994 in Yokohama

Ladies and Gentlemen,

It is a privilege to have been invited to address you today.

To present "The outlook for raw materials and energy supply and demand" is quite a challenge. We are living in an era of rapid change, making it rather difficult to speak about the future with any degree of certainty. I have drawn on the cumulative expertise of a number of experts and institutions, but even



minor variations in one or more of the basic macro-economic parameters may cause significant fluctuations in the forecasts that I will present.

When contemplating the immediate future it is natural to ask simple questions, like:

Will the conclusion of the Uruguay Round have the predicted impact on world trade?

Grain is an immensely important commodity, but with changing weather conditions and the influence of political factors, is it then possible for anyone to predict annual harvests with any degree of confidence?

Will China's economy allow for the continuation of the vital infrastructure projects that they have started, so ambitiously; thereby ensuring the steady import of iron and iron ore?

Many African countries have suffered severe period of famine. Is there any likelihood that this situation will change?

Wars and civil unrest plague many countries. Will that situation ever improve?

#### **Outline**

In the following, I shall very briefly review the more

\*BIMCO - Baltic and International Maritime Council

recent developments.

I shall also give an outline of expectations for the future and present the arguments for these expectations.

Finally, I shall endeavour to summarize the supply and demand situation for various key raw materials.

#### Growth of the world economy

It would be prudent to take a brief look at the growth of the world economy in recent years and for the coming years.

The industrial market economies in the <u>OECD</u> contribute well over 70% of the economic product of the world. The development within this group of countries therefore has a dominating influence on the global economy. For the period up to 2000, an annual growth of 2.6% is projected. In comparison growth of 2.1 per cent was predicted a few years ago, so we may view this development with modest optimism.

Expectations for economic growth in the <u>developing</u> <u>countries</u> have, however, been lowered, compared to the previous forecast. In 1988, it was expected that these economies would grow at an average annual rate of 4.1%, while the latest projection indicates growth of only 3.4%.

The last major group of countries includes the former centrally planned economies, i.e. the Commonwealth of Independent States (CIS), non-OECD Europe and China.

The annual growth rate for 1991-95 is expected to be negative by 0.5%, increasing, however, to a positive 4.3% for 1996-2000.

#### **Raw Materials**

I shall now give you my views on the prospects for raw materials. For the purpose of this presentation and considering that I shall be talking about energy separately, I shall not include as raw materials products such as coal, oil and petroleum products.

Indications are that the growth rate for world trade in <u>major raw materials</u> until the end of this decade will exceed the growth we have seen from 1985 to 1992. The increase which took place was about 13%, which was characterized as one of strong growth.

In comparison, the growth rate for the period 1993 to 2000 is estimated to be 16% for the seven year period, which is still very significant.

#### Iron ore

Let us look at the prospects for iron ore. Trade in this commodity is expected to grow by 43 mil. tons from 1993 to 1996 to 383 mil. tons, and I expect it to stagnate at this

level until the year 2000.

When examining the sources of iron ore, no changes are expected. Brazil and Australia will continue to dominate the trade, representing two thirds of the world's production.

Similarly, the countries in the European Union, which I shall now refer to as the EU, and Japan will continue to be the largest importers of iron ore, although slight declines in import volumes are forecast. Growth prospects are to be found only in China, Taiwan, Eastern Europe and some nations in West and South Asia.

#### Iron and steel

Although <u>iron and steel</u> is considered a "minor bulk" commodity in most forecasts, the volumes shipped in bulk are considerable, representing about 10% of total dry bulk shipped, or about 130 mil. tons per year at present.

Trading patterns are not expected to change significantly in the period up to the year 2000. The EU, Japan, Brazil and South Korea are likely to continue as key exporters, with the EU and Asia probably cementing their position as the crucial import markets, also in the future. (I shall continue to mention trading patterns for the various products as these are of importance to shipping.)

Provided there is a reasonable development in the world economy supported by the recent conclusion of the GATT negotiations, it is expected that trade in iron and steel will grow by 21.5% to 157 million tons by the year 2000.

#### **Forest products**

The trade in forest products is driven by two primary forces, construction and paper making, both very sensitive to changes in the economic climate. Forest products may be divided into six major sub-categories, i.e. logs, lumber, boards, pulp, paper and wood-chip. Export and import patterns for each sub-category vary. Asian interests are considerable in most of these trades. Trade in forest products increased in the second half of the 1980s, in line with the growth of the world's leading economies, culminating in 1989, when seaborne trade in forest products totalled 169 million tons. All sub-categories were affected by the beginning of the global recession.

The dominating producers of forest products are the USA, Canada, South East Asia, New Zealand and Scandinavia, with the CIS, Chile and Brazil gaining importance. Excluding intra-North American trades in forest products, the major importers are found in Western Europe and in North East Asia, including China. A steady decline in log traffic may be expected due to reductions in resources and increased local processing. Focus will continue to be on the Far East markets, although some growth could be expected in supplies from Chile, New Zealand and the CIS.

On the other hand, sawmill products, including sawn timbers, plywoods and boards, are likely to show a steady increase, with Indonesia, Malaysia and Singapore as the major exporters. The major importers will continue to be Japan, China, South Korea and Western Europe.

The newsprint trade is expected to be relatively stable, whereas trade in pulp and paper could revert to an upward trend, with some of the newer pulp producers, such as Brazil and Chile, gaining importance. Whether the influence of paper recycling will dampen trade is virtually impossible to predict, as the economics of recycling can be marginal.

Forecasters are extremely cautious about putting figures on their predictions of trade developments for forest products but based on the aforementioned assumptions, Drewry has come up with estimates for 1995 and 2000 for the major sectors. The estimate anticipates growth in total trade of 4% from 1991 to 1995, increasing to 9% in the period 1995-2000, with trade totalling 180 million tons by the turn of the century.

#### **Fertilizers**

Dry bulk trade in phosphate rock has declined from 44 million tons in 1984 to an estimated 30 million tons in 1993, a reduction of 32%. The steep decline is due to the increasing tendency to turn rock into intermediate materials or finished fertilizers in the country of origin. I will therefore include phosrock with potash, sulphur and other fertilizers.

One of the components of the Uruguay Round of the GATT negotiations is to reduce subsidies for grain production over the next few years, leading to a further contraction of European phosrock demand. The demand for phosrock is therefore expected to drop by a further 19%.

This reduction will, however, be offset by higher demand for other fertilizer materials and finished products of 8%. The combined effect will mean growth in fertilizer shipments of only 900,000 tons in the year 2000, over the figure for 1993 trade.

The growth in the demand for manufactured fertilizers is expected to be concentrated largely in South and East Asia.

#### Grain

World production of <u>grain</u> exceeds 1.3 billion tons. About 15% is being traded, while 85% is consumed in the countries of production. In 1991, the volumes of grain and soyabeans carried by sea totalled 222 million tons, according to Drewry.

The grain market is dominated by three commodities - wheat, maize and barley. Food grains, i.e. wheat and wheat flour, account for about 54% of total trade, and feed grains - maize and barley - account for 40%.

The other grains, sorghum, oats, rye and millet, thus account for only 6% of total trade. The world's principal grain exporter is the USA, shipping around 30-35 million tons of wheat plus 50-70 million tons of feed gains. Other major exporters include Canada and the EU Countries. The Far East region is the main import area for grain, followed by the CIS and Africa. These areas account for about 70% of world food grain imports. Feed grain imports are concentrated in the Far East, the CIS and the Middle East.

As mentioned in my introduction, forecasting future harvests is extremely difficult because of changing weather conditions, economic growth and political factors. Drewry projects that the world grain trade will actually decrease slightly up to the end of this year. In 1995 the picture will change, and a minor increase may be expected. From 1995 to 2000, an annual growth rate of 1.3% is estimated, leading to total world trade in bulk grain of 228 million tons by the turn of the century.

This projection is supported by the International Wheat Council. At the 1993 annual Grain and Feed Trade Association dinner in London, the executive director of IWC, Mr. Daniel Amstutz, said that world <u>wheat consumption</u> by the year 2000 should increase by at least 10% from current levels. Mr. Amstutz also said that world <u>wheat trade</u> should grow by 20%, to 120 million tons in the next seven years. He predicted that China will become the largest single <u>wheat</u> importer and that about 50% will be purchased by Asian countries.

Where will the future supply of grain come from? Assuming that the world does not experience fundamental climatic changes, the USA will most likely maintain its dominance in world grain exports. The USA has been the principal exporter of all types of grain for many years. Canada has recently overtaken the EU as the second largest exporter of wheat flour, and between them these three regions control close to three-quarters of total wheat and wheat flour exports.

More than 60% of world exports of feed grains originated in the USA up to the crop year 1991/92, when it dropped to 55%. Other leading suppliers of feed grains are China, now ranking second with more than 10%, and the EU, Argentina and Canada.

As mentioned earlier, the Far East is the main import region for grain, accounting for approximately 36% of all grain imports. Grain trade in this region is expected to grow to 80 million tons in 2000, which is close to 40% of the total grain trade. World grain trade is predicted to rise from 216 mil. tons in 1993 to 228 mil. tons in the year 2000, a modest increase of 5.5%.

#### Other raw materials

The list of raw materials is long, but some of the remaining bulk commodities deserve a quick glance, as they are of significance to world shipping.

#### Bauxite and alumina

Trade in <u>bauxite and alumina</u>, the feedstock for the aluminium industry, has regained a reasonably important position in dry bulk trades after a slump in the middle of the 1980s. In 1991, seaborne trade in these commodities came to 55 million tons, or close to 5% of total dry bulk raw materials.

Around 80% of the <u>bauxite</u> exports emerge from four sources: Guinea, Brazil, Australia and Jamaica. Three <u>shippers</u> – Australia (the absolute leader), Jamaica and Surinam – had a market share of 71% of world <u>alumina</u> exports in 1991. Demand centres on North America, Europe and Japan, who accounted for 85% of world bauxite and alumina imports in 1991.

No radical changes are foreseen in the trading pattern, although it is envisaged that alumina will continue to gain in importance. The total trade is expected to grow by 2.5-3.0% annually until 1995, whereafter trade growth may be reduced to about 1% annually for the rest of the decade.

#### Agricultural bulk products – other than grain

There are a few agricultural bulk products other than grain which should be mentioned, including sugar, rice and tapioca. Such commodities accounted for about 78 million tons in 1991, with sugar being the largest commodity with total exports of nearly 28 million tons. About 40% of sugar exports originate from two sources, Cuba and the EU.

Two factors are expected to influence the trading pattern for sugar: Cuba's historic dependence on barter arrangements with what was then the Soviet Union may have come to an end, and the import markets' increasing demand for white sugar may have a strong positive effect on EU sugar exports. The volume of exports has been quite stable at around 27 mil. tons annually in recent years.

The rice trade was dominated by Thailand and the USA, accounting for 50% of exports. The annual volume of rice exports has been hovering around 12 to 14 mil. tons. The

GATT negotiations, recently concluded, contain the agreement by Japan to open 4% of its market to imports in 1995, rising later to 8%. Beneficiaries are expected to include the USA, Australia and perhaps Thailand and Vietnam.

The tapioca trade is dominated by Thailand, which exported about 5.6 million tons in 1991, of which 4.4 mil. tons went to the EU. Thailand and the EU have a trade agreement permitting Thailand to ship a maximum of 21 million tons of tapioca in the four-year period 1991-1994, at 6% ad valorem. At higher tariff levels the product would not be competitive.

#### Energy

#### Introduction to energy

I shall now, for a moment, leave the subject of raw materials, and proceed to the question of energy.

Volumes of commodities needed to produce energy showed a serious decline from 1978 to 1986, but trade has subsequently grown to account for more than 50% of seaborne trades.

From 1986 to 1990, the world's consumption of primary energy rose by 2.2% p.a.; whereas the growth rate in the OECD countries was 1.8% p.a. only. Growing concern about the environment has led to a political preference for alternatives to the traditional fuels in order to reduce acid rain. Interest in gas has therefore increased but the world is still dependent on oil and coal, which are expected to cover about 65% of world energy consumption in the coming years, dropping slightly.

Demand for nuclear fuels is expected to increase but will generally follow the pattern of oil and coal.

Almost 40% of the world's electricity output is generated by coal-fired power stations. Nuclear energy account for about 24%, and the balance is generated in power plants using hydropower, oil, various other solid fuels, geothermal and solar energy, as well as gas.

#### Steam Coal

<u>Steam coal</u> exports amounted to 195 mil. tons in 1991. Steam coal is produced on all six continents, however, Australia is the leading supplier, contributing about 28% of 1991 world exports. South Africa had a 22% market share in 1991 and the USA had 18%. China and Colombia each had a market share of about 7.5% in 1991.

Projections for steam coal are quite optimistic. Exports are estimated to grow to 229 mil. tons in 1995, and to 312 mil. tons by the year 2000.

The trading pattern for steam coal is expected to remain unchanged.

Despite environmental concerns mentioned earlier, imports of steam coal are expected to increase by 18% from 1991 to 1995, and by 36% from 1995 to 2000.

The twelve countries in the EU make up the largest import region for steam coal, accounting for 48% in 1991. Requirements in the EU are expected to grow modestly up to 1995. Despite an increase in volumes from 112 to 140 million tons by the year 2000, the EU's share is projected to drop to 45% of all imports.

The single largest importer of steam coal is Japan, accounting for about 20% of steam coal imports in 1991. Japan's requirements are expected to grow from 39.5 million tons in 1991 to 63.5 million tons by the year 2000.

Other major importers in the Pacific region are Taiwan and South Korea. The Asia-Pacific countries are expected to require 47 mil. tons of steam coal in 1995, growing to 68 mil. tons by 2000, an increase of 45%.

#### Coking coal

<u>Coking coal</u> is one of the main elements in blast furnace steel production. The market for coking coal increased from 124 mil. tons in 1981 to a peak of 172 mil. tons in 1991 an increase of nearly 40%. However, the economic downturn and the introduction of new production techniques which are less polluting make the outlook for coking coal rather gloomy. The impact of these factors was already noticeable in 1992, when a number of the exporting nations reported depressed trades.

Major exporters of coking coal are Australia, the USA and Canada, accounting for about 86% of 1991 seaborne exports. The market dominance by these three countries is expected to be maintained. Total exports may amount to 135 mil. tons in 1995, increasing to about 148 mil. tons in the year 2000.

Japan is by far the largest single importer of coking coal, taking about 75 mil. tons, which is 44% of world imports. The demand for coking coal is expected to drop to 148 mil. tons by the year 2000, Japan taking about 59 mil. tons.

The balance of imports is distributed almost equally between Europe and the rest of the world. In 1991 Europe accounted for about 26% of world imports, growing modestly up to the end of the decade. By the year 2000 Europe is expected to import 49 mil. tons. The remaining markets are expected to import 39 mil. tons by the year 2000.

#### Crude oil

The world continues to be dependent on <u>oil</u> for its energy needs. Its importance in the OECD countries has, however, declined from 55% of total primary energy consumption in 1973 to 42% in 1992. In the developing world oil still accounts for more than 50% of total primary energy consumption.

World crude oil exports peaked in 1978, when total experts amounted to 1,597 mil. tons. From 1978 to 1988 a sharp downturn of 20% to 1,285 mil. tons was experienced. The development was reversed after 1988, and total world exports grew by 11% up to the end of 1990, when the market stagnated.

Imports peaked in 1978, totalling 1,640 mil. tons. A significant decline of 20.3% followed and by 1988 imports had reduced to 1,307 mil. tons. Thereafter, imports again rose to 1.410 mil. tons by 1991.

The level of growth may be in the region of 2.5% p.a. during the remainder of the nineties. If that position turns out to be correct, shipments of crude oil may reach 1,740 mil. tons by the year 2000.

No major shifts are anticipated in world supply sources, however, output by the OECD countries may fall slightly towards the end of the decade. Middle East production is expected to compensate for this.

The Middle East to Japan trade will probably continue to be the most important. Some increase in Asian crude oil production is forecast, but not sufficient to meet the additional demand. Considerable growth is therefore predicted in the Middle East to South East Asia trade, where there are expectations of a growth rate of 50% during the period 1991 to 1997, in line with the increasing refining capacity in South East Asia.

#### Petroleum products

Having declined from 1989 to 1991 shipments of <u>pe-</u> <u>troleum products</u> recovered in 1992, with provisional estimates indicating an increase from 271 to 286 mil. tons.

This positive trend in requirements for shipping capacity is expected to continue for the rest of the decade, with volume increases expected to exceed 4% annually.

This development stems from further additions to refinery capacity in the Middle East. It has been estimated that Japanese imports will increase by 40% from 1991 to 1997. The full effect of the expansion of South East Asian refinery capacity is also expected to come through that year, causing a shift in trading patterns away from the Middle East for Japan's import requirements.

Total trade in petroleum products by the year 2000 may therefore reach 423 mil. tons, an increase of 56% over 1991 trade.

#### Conclusions

What can we conclude from the developments I have outlined? Well, we can certainly conclude that the forecasts are based on a large number of factors, some of which are developing independently of each other.

According to the projection I have shown, the total demand for seaborne transportation may increase from 3,361 mil. tons in 1993 to 4,027 mil. tons by the year 2000, an increase of 20 per cent. What will be significant is to examine whether the supply of the various categories of vessel capacity will be better balanced with demand.

It would be too time-consuming to attempt to do so on this occasion.

What I think is necessary is that shipowners follow closely the developments of changes in the demand for products that they specialise in carrying, and in the supply of the particular types of vessels required to transport them.

There are, however, many influencing factors that a shipowner may face in this respect, over which he has no control.

What will happen to shipyard capacities?

Will shipbuilding receive various types of government support to the extent that speculative building will be encouraged, thereby risking that the imbalance of supply and demand will be prolonged for many years?

Or, will financial backers adopt a more cautious approach, acknowledging that long-term investments in high-cost new-buildings may be a risky affair?

Will scrapping solve the problem of oversupply?

Or, will the cost of extending the life-span of existing vessels be preferred to making large investments in newbuildings in the short term?

Alternatively, will future legislation, based for instance on the criteria of age, turn the scale?

Will new legislative steps make shipowning so difficult and risky that players will withdraw, or shall we see a new influx of investors whose primary interests are different from those of the traditional shipowners?

These are only some of the questions one needs to know the answers to in order to evaluate the full consequences of investments in shipping.

#### Closing remark:

Based on what we know today and on what we may expect to see happen, I would like to conclude that we may be reasonably optimistic about the developments of world trade, but that shipowning may continue to remain a difficult (Continued on Page 12)

# International Maritime Information **VYORLD PORT NEVY5**

#### **Competition Essential to Efficiency Enhancement**

(Reproduced from Press Release: UNCTAD/INF/2390)

Competition is as important as regulation in promoting the efficiency objectives of privatization. Social considerations are essential for the success of privatization programmes, and should be incorporated from their inception. These were the main broad conclusions reached by the Ad Hoc Working Group on Comparative Experiences with Privatization at its third session, held in Geneva from 29 November to 3 December.

Government representatives and experts on privatization from 63 countries addressed the topics of competition and regulation of privatized monopolies and social aspects of privatization. The meeting was chaired by Bror Wahlroos (Finland). The discussion on the topics was introduced by two separate panels of experts participating in their personal capacity. The panel membership reflected a broad range of opinions and country experiences.

#### **Competition and regulation**

In the discussion on competition and regulation of privatized monopolies it was stressed that preference should be given to competition wherever feasible, in order to enhance efficiency. However competition may be impeded by monopolistic market structures and restrictive licencing policies. It is therefore essential to promote a pro-competition legal framework. With regard to the special case of public utilities it was suggested that contestable sectors should be separated from those displaying natural monopoly characteristics and the former exposed to competition.

In a competitive market, competition is the best regulator. However in a monopoly situation, regulation is necessary to protect consumer welfare and serves as a substitute for competitive pressure. Important lessons drawn from the experience with privatization of public utilities are the need to establish before-hand a clear regulatory framework and the need for regulatory authorities to be independent and free from political interference. The creation of market structures allowing for maximum competition is a further requirement.

Another important area investigated by the Ad Hoc Working Group and attracting increasing attention of governments is the private provision of infrastructure. The underlying reasons for this have been the constraints on the public sector's ability to finance infrastructure projects as a result of budgetary constraints and spending needs in other areas. Government are responding to these funding constraints by turning to the private sector to finance, build, operate and maintain infrastructure facilities.

#### **Social considerations**

Concerning social aspects the Ad Hoc Working Group stressed that they should form an integral part of the design and implementation of privatization policies and programmes. Social considerations should be incorporated into the process of privatization as early as possible and not as an afterthought.

In order to maintain the credibility and the sustainability of the privatization process, consensus building on privatization, increasing public awareness of its objectives, transparency and accountability play a critical role. It is particularly important to enter into consultations with all groups involved in, or affected by, privatization to ensure their participation and that the design of the privatization process would maximize social welfare gains.

Socially-related support measures are needed to help cushion the potential hardships that may be caused by privatization. In this context special attention was given to social compensation and safety net measures and employment creation. Concerning the latter, the experts discussed the possible contribution of public works programme, private sector development, support for SMEs, the promotion of entrepreneurship and the role of the informal sector. The financing of social support measures was examined and in this respect the question of the use of privatization proceeds was raised. On the basis of country experiences experts noted the positive role that could be played by international financial institutions in financing socially-related support measures related to privatization.

The experts participating in the panel on competition and regulation were Mr. Lucas Danho (Côte d'Ivoire), Ms. Kharmazan Ahmed Meah (Malaysia), Mr. Juan Carlos Sanchez-Arnau (Argentina), Mr. Andrzej Szablewski (Poland), Mr. Adrian van de Ven (Netherlands) and Mr. James A. Waddell (USA).

Social issues were considered by a panel consisting of Mr. Jorge Botero (Accion international), Mr. Bechir Essid (Tunisia), Mr. Pierre Guislain (World Bank), Mr. Rolph van der Hoeven (ILO), Mr. Tissa J. M. Jayasinghe (Sri Lanka), Mr. Brendan Martin (ICFTU/PSI) and Mr. Zoltan Roman

(Continued from Page 11, Col. 2)

business in the immediate future.

#### Acknowledgements:

#### **Drewry Shipping Consultants:**

"Options for Bulk Carrier Trading" (May 1993) "Global Prospects for Steam Coal Trade" (July 1992) "World Iron Ore Trade – Shipping and Costs to 2000" (October 1992) "Pacific Rim Trade and Shipping" (April 1993)

#### International Energy Agency/OECD

"Oil and Gas Information 1992"

- "Coal Information 1992"
- "World Energy Outlook"

#### Association of West European Shipbuilders:

"Review on Global Shipbuilding Requirements to 2005"

#### (Hungary).

In the closing meeting the Ad Hoc Working Group adopted its agenda for its fourth and final session which will meet in April 1994. This session is expected to elaborate basic elements for consideration in formulating privatization programmes and plans.

#### Pacific Coast Assoc. Conference in Guam

The 81st Annual Conference of the Pacific Coast Association of Port Authorities will be held July 16-20, 1994 in Tumon Bay, Guam.

The Conference theme: "Pacific Trade and Development Opportunities - Business, Resources and the Environment."

For further information, please contact:

Conference Coordinator Tel: (671)477-5931/35 Fax: (671)477-2689

### **New Publications**

#### Review of Maritime Transport 1992

By the UNCTAD Secretariat. Document No. TD/B/CN.4/27. (Geneva: United Nations, December 1993). 121 pages. Introduction. Tables. Boxes. Graphs.

Order from: Distribution and Sales Section, United Nations, Palais des Nations, 8-14 Avenue de la Paix, 1211 Geneva 10, SWITZERLAND.

Fax: 011-41-22-917-0027.

Price: US30 + US5 (packing and postage).

This annual publication by the UNCTAD Secretariat reviews major developments in world maritime transport and provides an abundance of statistical data on many facets of international shipping and port activity.

Chapters focus individually on seaborne trade; development of the world merchant fleet; ship productivity, supply, and demand; shipbuilding and scrappage; port development; multimodal transport and technological developments; and, UNCTAD maritime conventions, shipping and other activity of relevance to shipping. 1992 highlights include:

- International seaborne trade expanded for the seventh consecutive year, though at a slowing annual rate, to 4.2 billion metric tons.
- Total ton-miles for all cargoes increased to 18.3 billion (up 2.3 percent from 1991).
- The world merchant fleet expanded by a "minimal" 1.6 percent to 694.7 million dwt "despite a quadrupling of scrapping and a decline in new building orders.
- The productivity of the world fleet continued to improve, reaching 26,314 miles per dwt.
- Global container traffic reached a record 93.1 million TEUs in 1991. The rate of growth in developing countries and territories, at 18.1 percent for 1990/91, was more than double that of the rest of the world and significantly higher than the 12.3 percent attained in 1989/90.
- Freight rate indicators for most sectors declined from 1991. In the liner market, however, a slight increase occurred in "selected conference container rates."

With respect to ports, the UNCTAD Review makes the following points:

- Ports today can be classified into three categories, or generations, based on (a) port development policy, strategy and attitude; (b) the scope and extension of port activities, especially in the area of information; and, (c) the integration of port activities and organization.
- First Generation Ports: Those where activity is restricted to the traditional function of loading and discharging cargo, a "fixed and limited role" that "tends to make decision-makers ... favor conservative or passive policies."
- Second Generation Ports: Those with a broader range of functions that include the offering of industrial or commercial services not directly connected to traditional cargo loading/discharging activity. In contrast to those in the first category, second generation ports "enjoy a closer relationship with transport and trade partners who have built cargo transformation facilities in the

port area."

• Third Generation Ports: Those regarded by their policy-makers, managers and operators as "dynamic nodes in the complex international production/distribution network." Activities and services "are specialized, variable and integrated" and include traditional port services, industrial/ environmental services, administrative and commercial services, and logistics services.

"Timing and coordination of action" are regarded as critical factors in the building of a third-generation port. Ultimate success depends on building "a common consciousness of the port's development" — on "the quality of the joint work of the port community, government authorities, the municipalities and even the people living in the port."

#### United States Port Development Expenditure Report

By the U.S. Maritime Administration, Office of Port & Intermodal Development. Washington, DC: February 1994. 17 pages. Tables. Figures. Appendix.

Order from: Maritime Administration, Office of Port & Intermodal Development, U.S. Department of Transportation, MAR-830, Room 7201, 400 Seventh Street, N.W., Washington, DC 20590.

Tel: (202) 366-4357.

Fax: (202) 366-5522. No charge.

U.S. public ports spent nearly \$671.8 million for capital improvements in 1992 and plan spending more than \$5.5 billion for the same purpose over the next five years, according to the Maritime Administration's (MarAd) latest review. MarAd's 1994 report is the fourth to be published in the last four years and continues a series begun by The Port Authority of New York and New Jersey in 1956.

As with its three predecessors, MarAd compiled the 1994 report from data collected from survey questionnaires circulated by AAPA to all of its U.S. corporate members. Responses were received from a total of 66 public seaport agencies.

The 1992 expenditures, though down 1.5 percent compared to 1991, brought

to \$12.5 billion total spending by U.S. public seaport agencies for facility construction and modernization since the end of World War II. They do not include spending by the private sector for the same purpose.

Gulf region ports accounted for the greatest share (21.6 percent) in 1992, followed by the South Pacific (20.9 percent), and the North Atlantic (18.9 percent). The four-year, 1989/92 spending pattern is detailed in Table 1.

#### 1. U.S. Public Ports Capital Expenditures 1989-92 (Millions of Dollars)

. (					
Region	1992	1991	1990	1989	
North Atlantic	\$127.0	\$124.4	\$116.4	\$156.0	
South Atlantic	108.2	109.6	169.3	146.4	
Gulf	145.4	156.1	97.7	97.1	
South Pacific	140.3	206.4	209.9	149.3	
North Pacific	45.6	84.9	60.4	106.1	
Great Lakes	3.2	.7	4.3	2.6	
AK, HI, PR, VI(*)	102.0	-	10.2	17.0	
Guam, Saipan			_	14.8	
Total	\$671.8	\$682.0	\$668.1	\$689.2	
(*) Alaska, Hawaii, Puerto Rico, U.S. Virgin Islands					

Sources: U.S. Maritime Administration, United States Port Expenditure Report (February 1994), p. 4.

MarAd cautions that some of the differences in the year-to-year data may be explained by differences in the number of respondents to each of its annual surveys. It also notes that annual expenditures can be expected to fluctuate "due to new starts and/or completions of major terminal projects."

Top spenders in 1992 were the Puerto Rico Ports Authority (\$99.1 million) and the ports of Long Beach (\$60.8 million), New York/New Jersey (\$55.8 million), Gulfport (\$39.0 million), Houston (\$35.4 million), Port Everglades (\$35.1 million), Port Everglades (\$35.1 million), Seattle (\$29.5 million), Houston (\$31.9 million), Miami (\$29.3 million), and Oakland (\$25.0 million). These 10 ports together accounted for 68.1 percent of total expenditures in 1992.

"New construction" expenditures in 1992 by facility type show "specialized general cargo" (e.g., container, ro/ro, etc.) accounting for \$177.8 million (41.9 percent), general cargo for \$78.1 million (18.4 percent), dry bulk for \$23.8 million (5.6 percent), and "passenger" for \$33.5 million. Additional expenditure categories include liquid bulk, off- and on-terminal infrastructure, dredging (\$33 million in 1992), and "other", which captures investment in "structures, spaces and fixtures not directly related to the movement of cargo, such as maintenance and administrative facilities."

The South Pacific was the biggest spender under "specialized general cargo" (\$95.9 million), the Gulf led in "general cargo" (\$43.4 million) and "dry bulk" (\$21.5 million), while the South Atlantic was tops in the "passenger" category (\$8.14 million).

As for "funding sources," MarAd reports that port revenues and revenue bonds "continued to predominate" during 1989-92. However, their "combined use" fell, from 88.3 percent in 1988 to 60.9 percent in 1992 partly due to "a resurgence" in the use of general obligation (GO) bonds, from 2.7 percent in 1988 to 12.7 percent in 1992. On the other hand, "the collective use of grants, and "other" funding methods remained a "fairly constant" 16 percent since 1988.

The MarAd study also reports projected capital expenditures by U.S. public ports will total some \$5.5 billion in the period 1993-97. Nearly 60 percent will occur in the South Pacific and South Atlantic regions, as indicated below:

#### 2. U.S. Public Ports Projected Capital Expenditures 1993-97, by Region (Thousands of Dollars)

	Projected	
Region	Expenditures	Percentage
North Atlantic	\$657,718	11.9%
South Atlantic	711,075	13.1%
Gulf	920,172	16.6%
South Pacific	2,196,763	39.8%
North Pacific	857,448	15.5%
Great Lakes	16,000	0.3%
AK, HI, PR, VI	155,184	2.8%
Guam Saipan	-	0.0%
Total	\$5.525.360	100.0%

Source: U.S. Maritime Administration, United States Port Expenditure Report (February 1994), p. 10.

Nearly 33 percent of the planned investment is targeted at specialized general cargo facilities. Port revenues will be the primary source of funding (32.8 percent), followed by revenue bonds (29.4 percent), and GO bonds (16.5 percent).

Projected expenditures by facility type are listed in Table 3.

In summary, MarAd concludes that the U.S. public port industry "remains committed to provide this Nation with modern and efficient cargo handling

3. U.S. Public Ports		
<b>Projected Capital Expenditures</b>		
by Facility Type 1993-97		
(Thousands of Dollars)		

	Projected	
Facility Type	Expenditures	Share
General Cargo	\$806,125	14.6%
Specialized Genera	al	
Cargo	1,800,681	32.6%
Dry Bulk	218,675	4.0%
Liquid Bulk	22,400	0.4%
Passenger	195,631	3.5%
Other	993,103	18.0%
Infrastructure	974,692	17.6%
Dredging	514,053	9.3%
Total	\$5,525,360	100.0%

Source: U.S. Maritime Administration, United States Port Expenditure Report (March 1993), p. 9.

facilities." However, despite the economic recovery, "the past financial and budgetary constraints persist today meaning that the pressure for individual ports to maintain or become more self-sufficient will remain into the foreseeable future." (AAPA Advisory)

#### Maritime System of the Americas: River/Ocean Operations

By U.S. Department of Transportation, Maritime Administration. Report No: MA-PORT-830-94001. (Springfield, VA: May 1993). 169 pages. Tables. Figures. Appendices.

Order from: National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161.

Fax: (703) 321-8547.

Tel: (703) 487-4650.

Price: \$27.00

Also available from: LSU National Ports & Waterways Institute, 1300 North 17th Street, Suite 320, Rosslyn, Virginia 22209.

Tel: (703) 276-7101 Fax. (703) 276-7102.

The Maritime System of the Americas consists of waterways connecting the central United States and Canada with Mexico, Central America, the Caribbean countries, and the northern rim of South America. Specifically included are the Gulf of Mexico; the Mississippi River, its navigable tributaries, and other rivers emptying into the Gulf of Mexico; the Gulf Intracoastal Waterway; the Caribbean Sea; and the Great Lakes.

This study is the first in a series being conducted by the U.S. Maritime Ad-

ministration (MarAd) on U.S. Waterborne trade with Canada and Mexico. It was prepared under contract to MarAd by Louisiana State University's National Ports and Waterways Institute.

Substantial waterborne trade already exists between U.S. Gulf ports and Mexico – 38.4 million tons valued at \$4.8 billion in 1991 alone. That trade is predominately oil northbound (from Mexico to the Untied States), but also included considerable quantities of fertilizer, grain, and chemicals.

#### U.S. Gulf/Mexico Trade 1991 (Millions of Tons, Billions of Dollars)

Direction	Commod	lity T	ons	Value
Northbound	All	;	33.3	\$3.8
Northbound	Oil	:	29.9	\$3.4
Northbound	Non-Oil		3.4	\$0.4
Southbound	All		5.1	\$1.0
Southbound	Oil		1.7	\$0.4
Southbound	Non-Oil		3.4	\$0.7
Maritime	System	of the	Am	ericas:
River/Ocean Operations, p. xvi.				

The study examines the market potential for so-called "river/ocean vessels" (R/O) of 1,500 to 2,000 dwt and river barges. A transportation model is used to estimate costs for different shipping distances and commodities to and from U.S. and Mexican ports for the marine mode and to compare them with costs of direct rail and truck service.

For bulk cargo, the cost advantages overwhelmingly favor river barges with transhipment to ocean-going vessels on the Lower Mississippi, from Baton Rouge to the Gulf.

However, the study also finds that a "specialized niche market" exists for high value general cargo shipments moving in small lots moving by river/ocean vessel as an alternative to carload rail service. R/Os (i.e., vessels small enough to negotiate shallow draft waterway systems but built to withstand the rigors of deepsea navigation) are widely used in Western Europe and Russia but non-existent in the United States (though vessels of comparable dimensions do call at U.S. coastal ports). A Russian R/O and the crosssection of a European R/O are illustrated in the ivory attachment.

R/Os were found to offer the greatest savings for movements between the Mississippi as far north as St. Louis and Port of Progreso on Mexico's Yucatán peninsula. These vessels were also found to be cost competitive for high value shipments to the vicinity of Mexico City by way of the Mexican central Gulf coast. The researchers conclude that "a market for general cargo/minor bulk shipments clearly exists that could be successfully served by R/O vessels."

The competitive cargo requirements to sustain the viability of an R/O venture are judged "very modest relative to other vessel technologies and competing modes of transportation" — 85,000 to 100,000 tons of "general or minor bulk cargo annually in both directions" for bi-monthly service, 180,000 tons annually for weekly service. Cargo commitments would come primarily from "shippers and to a lesser extent ports who are able to identify and promote the savings of R/O services to key users."

In brief, the researchers see "rather robust and favorable prospects for deployment of R/O services in the merging Mid-America markets."

(AAPA Advisory)

#### Product Tankers: Demand & Profitability Prospects to 2005

A major new study from Ocean Shipping Consultants forecasts continued significant fleet growth for the product tanker sector, although the scale of expected demand expansion will fund improvements in market conditions over the second half of the 1990s.

The following is a summary of the main findings of the highly detailed 155-page Report.

#### Product Tanker Fleet Development to 2005

\* In terms of the overall world tanker fleet, product tankers represent around 17% of the aggregate. Product tankers represent approximately 85% of all tankers of 10/60,000 dwt, and around 11.5% of the 83m DWT total of 60/150,000 dwt vessels.

\* The current product tanker fleet aggregates 44.7m DWT. In contrast to the development of the aggregate tanker fleet, this current level represents an increase of over 80% since the late 1970s.

\* There are some 2.75m DWT of

product tankers currently on order. Within the total, the 30-40,000dwt category is by far the most significant, with a total of over 1m DWT, this representing almost 40% of the total. The 40-50,000dwt category of vessels is also significant, with over 0.7m DWT (26%), with a small number (two) of larger vessels.

\* The product tanker orderbook for vessels exceeding 10,000dwt approximates 2.6m DWT — this representing around 6% of the existing fleet. This compares to an equivalent 12% for the crude carrier sector.

\* For the forward study period, scrapping volumes are expected to continue to rise although newbuilding volumes are expected to continue to exceed fleet deletions, thereby funding continued net fleet growth.

\* The pace of fleet expansion for the 10/40,000 dwt sector is set to vary on an annual basis between 0.1-0.8 DWT. For the 40,000 +dwt size sector, the profile of forward fleet development is set to be more positive, this based on the more youthful age profile of the fleet. Fleet sector expansion is set to vary in an approximate 0.2-0.7m DWT annual range.

\* For the overall product tanker fleet, the profile for newbuildings is one of annual levels rising in the late 1990s after a decline from the 1993 volume. Whilst scrapping levels are set to increase from the recent low volumes, the implication is for aggregate fleet expansion throughout the forward study period.

\* In terms of tonnage volume, the 10/40,000dwt sector is set to advance from 27.8m DWT to 31.4m DWT by 2000 and to almost 33m DWT by 2005. The larger tonnage sector is set to expand from 16.9m DWT to over 20m DWT by 2000, and 21.5m DWT by 2005.

\* It is expected that product tankers will represent just over 20% of the world tanker fleet by 2000, this against the 1993 share of a little over 17%.

## Oil Trade & Product Tanker Employment to 2005

\* Forward oil product trade volume growth is expected to be relatively rapid. Expansion of 19% is forecast for the period to 2000, taking the total to 610mt. In the subsequent half-decade, the world total is set to rise further to 639mta — some 24% above the 1993

#### volume.

\* Product tanker employment growth is forecast at 36.5% by 2000, with a total forward study period expansion of just under 46% taking the annual aggregate to 2265bn TM in 2005. This overall development is significantly more positive than the profile projected for trade volumes, and is a function of the increase in relative significance for the longer-haul trades from the Middle East to Europe, North America, and Asia.

\* For the 10/40,000 dwt vessel sector, the most significant growth is set to be witnessed in the near/medium-term, with total expansion of over 20% in the period of 1997. By 2000 the expansion approximates 26.5%, and almost 34% by the end of the study period.

\* For the larger product tanker classes of 40,000 + dwt, overall forward growth is set to be more significant, as the new generation of larger vessels figure increasingly in long-haul product trades. Total employment growth is thus estimated at around 50% by 2000, and 62% for the whole forward period.

## Product Tanker Freight Rates & Costs to 2005

\* The profile of forward development for total operating costs is expected to be one of significant escalation. By 2000, the cost level is expected to be some 55% above that recorded in 1992. Overall cost growth for the forward study period approximates 85%. This involves an annual expense total rising from \$1.3m in 1992 to \$2.5m in 2005 for a 30,000dwt product tanker.

\* For newbuilding prices, the expected overall profile of development is one of significant price escalation from the mid-1990s onwards, this after near-term price softening. Some marginal real-term price decline is expected in the final years of the study period.

\* In terms of actual price levels, the average price for a 30,000dwt product tanker is expected to develop from US\$29m in 1993 to over \$40m by the end of the 1990s, with an expected peak of around \$44.5m, before a 2005 level of \$42.5m.

\* For vessels of around 30,000dwt, the expected freight rate development profile is one of some expansion over the near-term, with limited development thereafter. This approximates the average productivity profile, with rates supported towards the end of the study period by favourable rate development in other fleet sectors.

\* In \$/day terms, from an average of around \$9,600 in 1993, the daily rate for a 1-year time charter is expected to rise to around \$14,500 in 1997, before falling back to just under the \$13,000 level for much of the remaining period.

\* For larger tonnage, the freight rate outlook is similar to that for the smaller vessel class. With a slightly more positive average productivity development profile however, rate advance is set to be marginally more marked.

\* For product tanker profitability, it is estimated that daily time charter rates are approximately \$5,500 above average operating costs in 1993 for a 30,000 dwt vessel — with this differential set to rise to over \$9,300 in 1997. Thereafter, the differential is set to decline as freight rates stabilise and marginally fall.

\* By 2000 the differential is projected at around \$7,000, and by the final years of the study period the differential is expected to approximate \$5,500-6,000.

\* The deficit between freight revenue and operating/capital costs for a newbuilding is set to markedly decrease over the mid-1990s — from the estimated daily level of \$4,500 in 1993 to \$1,500 in 1997, this before rising to average over \$9,000 in the next decade.

#### Forecast 30,000DWT Product Tanker Profitability Trends to 2005 US\$/day (1993 terms for forecasts)

	Operating	Full
	Profit	Profit
1993	5,600	4,500
1995	7,300	-2,700
1997	9,300	—1,500
2000	6,900	7,400
2005	5,900	

Operating Profit = Revenue less Operating Costs

Full Profit = Revenue less Operating/ Capital Costs (newbuilding)

See text for assumptions.

Source: Ocean Shipping Consultants Ltd.

The highly detailed 155-page Report contains analysis of all aspects of future product tanker market development, and is essential reading for all parties with an interest in the tanker sector. *Product Tankers: Demand & Profit*- ability Prospects to 2005 available from: Study Sales Department Ocean Shipping Consultants Ltd Ocean House 60 Guildford Street Chertsey Surrey KT16 9BE

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## Lloyd's Maritime Directory 1994

Editor Chris Emery

Published by Lloyd's of London Press ISBN 1-85044-548-6 ISSN 0268-327X

934 pp. Hardback. Price £140.

The 1994 edition of *Lloyd's Maritime Directory*, which last year won the Directory Publishers Association Directory of the Year Award, has been published by Lloyd's of London Press.

With the continuing westernization of Russia, the republics and the former satellite countries, more and more company information is becoming available and has been added throughout the new directory.

The main shipowners/managers section now contains full details of 6,652 companies and 31,276 vessels under their control, all extensively updated using Lloyd's unique shipping database. The Towage & Salvage section now lists 6,338 vessels of 100 gt and over. Vessel call signs are included, but an international list of call signs in alpha and numerical order has also been added.

Other handy reference sections give details of ship management services, shipbuilders and repairers, marine engine builders and repairers, marine consultants, maritime solicitors/lawyers (now listed by country), insurers, P&I clubs, and banks and finance.

The introductory editorial "The Year in Shipping" highlights major events in the 1993 maritime year.

#### TradeWinds

*TradeWinds* is the only independent weekly newspaper that focuses solely on the shipping industry, with objective

and investigative journalism that is free of any special interests, both inside and outside the industry. We give you the plain truth, and we need no other friends than our readers.

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Trade Winds has its head office in Oslo and its staff of top journalists is spread across the glove, with offices in London, Hong Kong, Aarhus, Athens and Tokyo, as well as freelance writers working out of San Francisco, Rio de Janeiro, Madrid and New Delhi.

The annual subscription rate is NOK 3,250 (approx. £295, \$440) in Europe and NOK 3,460 (approx. £315, \$470) overseas.

TradeWinds P.O. Box 1182 Sentrum N-0107 Oslo, Norway Fax. +47 22 00 12 60

The Americas

#### NAFTA

#### What can the Port expect?

#### By Jeffrey S. Thomas

Currently, Canada's bilateral trade with Mexico is minimal, totalling about \$3 billion in 1991 — relatively minor next to the \$200 billion total of Canada-U.S. bilateral trade. Mexico ranked sixth as a source of imports, and seventeenth as a destination for Canadian exports.

Direct shipments from Western Canada to Mexico by any transportation mode have been limited, with most goods shipped to the U.S., and routed to Mexico. Due to Mexico's inadequate port infrastructure, costly customs clearance and long distances from ports to major markets like Mexico City, most exports have been transported by truck.

Most experts estimate that total Canada-Mexico trade will reach \$5

billion by the year 2000, which represents a 60 percent increase but still pales next to Canada-U.S. trade.

However, the sectors with export potential include agriculture and food products, forest products and bituminous substances — products currently exported through the Port of Vancouver. For instance, Mexico's total imports of softwood products are expected to increase 12 percent from its current \$1 billion total.

Anticipating increased trade, Mexico is aggressively modernizing its transportation infrastructure, including its ports — which could mean a substantial reduction in ocean shipping costs and regular service between Vancouver and Mexico's west coast.

Not everyone sees benefits in NAFTA, including Canada's trading partners in the Far East, who believe Mexico's preferential access to North America may mean it will gain market share over Asian countries. Compounding this potential is the possibility that foreign investors may relocate their manufacturing facilities from the Far East to Mexico to take advantage of NAFTA. Such trade diversion could have an impact on Vancouver, as a shift in import traffic from the Far East to Mexico would mean a decrease in ocean shipping and an increase in truck and rail shipments.

But there are reasons to believe that NAFTA will not result in significant trade diversion. First, as developing nations, many Asian countries already enjoy tariff-free access for many products exported to Canada under Canada's General Preferential Tariff, which is not affected by NAFTA.

More importantly, the completion of GATT's Uruguay Round negotiations means that Mexico's preferential access to the U.S. and Canada will be eroded substantially. Trade barriers for Canadian exports will also be reduced by an average of 60 percent. Any potential trade diversion occurring under NAFTA will be submerged by increasing exports from the Far East, and Canadian exporters will also benefit significantly from Uruguay Round much more so than NAFTA. Also, goods benefitting most from tariff reductions include Port of Vancouver staples such as pulp, paper and softwood products. (Port News - Vancouver Port Corporation)

#### Barbours Cut Dealing With Increasing Demand

One by one, eight mammoth structures roll quietly and smoothly off the M/V Super Servant 4, a semi-submersible vessel docked at Barbours Cut Container Terminal. Measuring almost 69 feet tall and 74 feet wide, they look and move like creations from the movie "Star Wars." In reality, they are the newest additions to the fleet of yard cranes at Barbours Cut. They were shipped fully erected from Santos, Brazil.

These striking imports bring the total number of yard cranes at the Port of Houston Authority's intermodal terminal to 20. Manufactured by Bardella S.A. Industrias Mechanicas of Brazil, each crane has a capacity of 40 long tons. Together, the cranes cost \$9.6 million.

#### **Peaks in Volume**

"The new equipment will enable us to better deal with the frequent peaks in volume that we see here," says Jimmy Jamison, manager of Barbours Cut Terminal. "We'll be prepared to handle whatever business the industry can bring our way, whether we're talking about vessel traffic or road traffic. That gives the steamship lines the comfort level they need to know we can accommodate their cargo."

Before the newest cranes arrived, all of the terminal's crane fleet was in constant use during peak periods. Crane maintenance had to be performed on a "catch-up" basis at night and on weekends, the only times cranes could be spared from service. Once all the new cranes are in use, maintenance staff will be able to rotate each crane in and out of service during the week to attend to routine upkeep.

"This will help us protect the equipment as well as improve dependability," says Jamison.

#### **More Than Cranes**

However, growth at Barbours Cut goes far beyond the terminal's fleet of yard cranes. Last fall, a fifth 1,000 foot-long berth, complete with two new wharf cranes, was put into service. A bond election in November paved the way for additional expansion when voters approved the sale of \$150 million in port improvement bonds. More than \$90 million of those funds will be earmarked for improvements at Barbours Cut. Plans call for construction of a sixth berth, equipment acquisitions, upgrading the rail ramp, and rehabilitation and modernization projects.

Currently, all containers that move across the rail ramp, which is located at the west end of the Barbours Cut facility, must enter the terminal near Berth 1, located a mile away at the terminal's east end. In the future, the Port Authority plans to route most of the business bound for the rail ramp through the entry complex on the terminal's west end. The change is expected to significantly reduce traffic congestion at the terminal, Jamison says.

"With five berths at this facility, we can work six or seven ships simultaneously. However, having an ample number of berths and wharf cranes isn't enough," says Jamison. "About a thousand trucks come through Barbours Cut Terminal each day. We can't focus exclusively on expediting vessel traffic because that's just one side of the business. We've also got to have the equipment and facilities to keep the trucks moving, and the rail traffic as well."

#### **Training Programs**

Still, good equipment and good facilities are of little value without good people. That's why a number of employee training programs have been launched at Barbours Cut Terminal to ensure cargo-handling equipment and port facilities are used properly and safely. Most of the programs are organized cooperatively by the International Longshoremen's Association, the Port Authority and the West Gulf Maritime Association. A key training course is the certification program for crane operators: with the advent of new yard cranes at the terminal, the Port Authority hopes to expand its pool of certified operators.

Starting this spring or summer, a certification program will be launched for employees who inspect trucks and chassis at the terminal. Other programs focus on safety issues and hazardous materials training.

"All of these programs are designed to help our employees works as efficiently and safely as possible," says Jamison. "We believe that when you put state-of-the-art equipment in the hands of good, knowledgeable people, the desired end product will always be achieved," says Jamison.

#### **Keeping Pace**

The intent behind development at Barbours Cut is to enable the facility to keep up with steadily increasing demand. Tonnage has risen almost every year since the terminal opened in 1977; last year was the facility's best ever. In 1993, Barbours Cut handled almost 3.9 million tons of cargo, up 8 percent from 1992. Containers accounted for 2.9 million tons of the 1993 traffic, up 12 percent from the 1992 total of 2.6 million tons. Barbours Cut moved more than 327,000 TEUs of containerized cargo last year, up 13.5 percent from the 288,000 TEUs handled during the prior 12 months.

Jamison emphasizes that most of the 23 lines that call at Barbours Cut Terminal have a steady cargo base and are experiencing thriving business; they are the reason the terminal has grown and must continue to expand.

"The business doesn't come because we expand the terminal," says Jamison. "We are expanding because our steamship lines are experiencing steady growth." (Port of Houston)

#### Crane Raising Work Completed at LA

PACECO® CORP. was awarded a contract by the Port of Los Angeles to modify the PACECO Portainer Crane, Serial No. 1060, located at Evergreen Terminal at the Port of Los Angeles. The modification work included the following:

- Raising the crane by 20 feet to provide 100"-0" lift.
- Replacing the main hoist drum, wire ropes and headblock.
- Extending the maintenance elevator.
- Other modifications required by the 20 foot raise of legs.

The boom of the crane was extended by 5 feet in June of 1991 by PACECO CORP. The port decided to make another modification to handle the larger Evergreen container ships.

The crane raising work was successfully completed in December of 1993 in collaboration with PACECO's business associates. PACECO® CORP.

accomplished a similar crane raising job at the Port of Oakland last year and the same jacking system was used for this project.

(PACECO Newsletter)

#### \$35 Million Funding Sought for NY-NJ

Officials of the State of New Jersey, the City of New York and The Port Authority of New York and New Jersey urged Congress to provide almost \$35 million for several design, construction, maintenance and research projects essential to navigation in the Port of New York and New Jersey for fiscal year 1995.

In testimony before the House Appropriations Subcommittee on Energy and Water Development, the officials concurred with federal budget recommendations of \$23.3 million and asked for an additional \$11.6 million to be authorized primarily for projects designed to address the port's dredged-material disposal crisis.

The testimony was supported by more than 30 civic, business, labor, trade and maritime organizations in the bistate region.

Joseph Birgeles, Manager of External Affairs for the Port Department of the Port Authority, said much of the additional funding is necessary to broaden the range of options available for the disposal of dredged material.

"Our regional competitiveness is tied in large part to our ability to maintain a thriving, healthy port," he said. "These vital projects will enable us to maintain our channels — our highways to the sea — and simultaneously look for additional dredged-material disposal alternatives to employ in meeting both the economic and environmental needs of the harbor."

Also testifying for the regional port projects were Joseph Grossi, Director of the Bayshore office of the New Jersey Department of Commerce and Economic Development, and Chris Ward, Senior Vice President for Transportation and Commerce of the New York City Economic Development Corporation.

The projects include:

• Kill Van Kull and Newark Bay Channels, NY & NJ harbor deepening project. Recommending \$1.5 million above the budget recommendations of \$8.1 million. Additional sums to be used to continue analysis connected with bringing the channel to authorized depth of 45 feet.

- The Arthur Kill Channel, Howland Hook Marine Terminal, NY. Recommending that \$370,000 be added to the federal budget request of \$630,000 to resolve the dredged-materials disposal problem and complete preconstruction, engineering and design work as authorized by Congress.
- Decontamination Demonstration. \$3 million is requested to support the Congressionally authorized demonstration of sediment decontamination technologies in the bistate Port, recently begun by the Corps and the EPA.
- Disposal Alternatives Study. \$2.5 million is requested for dredged materials alternatives studies including studies to look at testing protocols and criteria.
- Ocean Site Designation. \$1 million is requested to support dredged materials ocean disposal site designation work under way by the Corps.

#### Agreement OKd for Joint Intermodal Terminal

The Port of Oakland, the Southern Pacific Railroad and the Union Pacific Railroad have signed a memorandum of understanding clearing the way for development of an \$80 million Joint Intermodal Terminal (JIT).

The Board of Port Commissioners authorized Port Executive Director Charles R. Roberts to sign the pact, which had previously been approved by both SP and UP.

"The Joint Intermodal Terminal is the key to the maritime future of the Port of Oakland, "Roberts said. "It will give us a unique advantage in handling intermodal cargo, unmatched on the West Coast or anyplace else."

Approval of the memorandum means work will get underway on preliminary engineering and environmental documentation for the project. Caltrans, the state transportation agency, has authorized a grant of \$2.4 million in federal funding under the Intermodal Surface Transportation Efficiency Act. The Port is putting up \$600,000 in local matching funds.

It is anticipated that the Santa Fe Railroad, which is not a signator to the memorandum, will participate in the venture at a later date.

Under the agreement, the Port and the two railroad participants will prepare an operating plan and physical layout that will enable them to do a detailed cost-benefit analysis of the project and an assessment of funding requirements.

When the participants agree to proceed to the next step, they will sign a contract bringing the JIT to full development and operation.

The final phase in a giant project will be the actual construction and operation of the JIT by an independent terminal operator.

In addition to the \$2.4 million grant for environmental review and preliminary engineering, an application for \$7 million in construction funds is currently undergoing initial review by the Oakland Metropolitan Transportation Commission.

Opening of the JIT will involve moving the present Union Pacific tracks from the shoreline of the Oakland Estuary and enable the Port to develop six major new intermodal terminals on the Estuary.

#### Port of Oakland Finds 1993 a Good Year

At the Port of Oakland, the big story last year was President Clinton's pledge to support dredging and the leasing to the port of the adjacent Naval Supply Center for commercial cargo use. An agreement for the first 80-acre parcel was concluded at year's end with port occupancy to follow in June, 1994. Over the next 24 months, the port will lease an additional 320 acres of the sprawling defense depot.

Mr. Clinton also told the Federal agencies primarily responsible for the Oakland harbor deepening project, the Army Corps of Engineers and the Environmental Protection Agency, to "get on with it", and proceed with dredging the port's channels to -42 feet. The Corps later announced the project would start by the end of 1994.

Meanwhile, Oakland's seaport quietly set new records for container handling. The tally of loaded boxes moving across port wharves rose 2.1 percent. Altogether, the port handled the equivalent of more than 1.23 million 20-foot boxes during the year, retaining its distinction as the fourth busiest U.S. containerport, trailing only Long Beach, Los Angeles and New York.

European trade through Oakland in 1993 increased four percent, a much higher rate than other West Coast ports, at a time when U.S.-Europe trade overall declined. Some 35 percent of all West Coast-Europe trade now moves through the port.

Similarly, Oakland outpaced other West Coast ports in trade with Australasia, capturing more than 19 percent of the market at year's end.

Adding to that growth were two lines serving Australia and New Zealand, Blue Start and Columbus, that joined the port's ocean carrier roster last year. A third line, China Ocean Shipping Company (COSCO), signed an agreement that will bring its transpacific containerships to the port this May.

#### Port Canaveral FTZ #136 Exporter No. 1 in 1993

Port Canaveral's Foreign Trade Zone #136 recorded the highest volume of exports of any general purpose zone in the United States. The 54th Annual Report of the Foreign Trade Zones Board to Congress shows FTZ #136 reported exports valued at \$553.20 million in 1993.

FTZ #136 plays a unique role among foreign trade zones, serving the United States and the world in the push into space. The zone contains the only two commercial payload processing facilities located in a foreign trade zone in the United States — Astrotech, in Titusville, Florida, and SpaceHab, at Port Canaveral.

Canaveral Port Authority officials are enthusiastic about the port's growing role in space commercialization. As the boundaries of FTZ #136 expand and additional aerospace industries come on line, Port Canaveral will realize a vital role linking Florida's Space Coast and the United States to commercial space exploration.

FTZ #136 will greatly ensure the throughput of U.S.-made goods throughout the global marketplace. Encompassing 4,160 acres, Foreign Trade Zone #136 is one of the largest general purpose zones in acreage in the United States. The zone includes the entire seaport, Space Center Executive Airport, Spaceport Florida and Melbourne International Airport.

#### **Ground Broken for Cruise Terminal 10**

Port Canaveral officials recently broke ground for the construction of Cruise Terminal 10.

Cruise Terminal 10, a 60,000 square-foot structure, will feature tropical luxury and airy elegance. The terminal was designed to complement the spirit of the newest luxury cruise liners afloat today.

With its own unique personality, Cruise Terminal 10 will have a 400-foot front. A tension fabric, mimicking the form of a wave, will give a sense of movement to this frontage and create a covered drop-off area for passengers.

The entrance atrium will feature fountains, representing a fantasy of Caribbean islands. The fountain basins will take on organic form. Tile mosaics, shading from dark blues to light, will represent a change from deep to shallow water, around planters landscaped like deserted tropical islands.

Double flights of stairs will be suspended over the fountains. A glass tube elevator to the second floor will rise from the center of the waters, approachable from "dry land" by a bridge of transparent glass block. Complementary colors, materials and design features will reinforce the Caribbean theme.

The second floor roof will be a barrel vaulted structure with steel tubular trusses and acoustical metal decking. Stunning views of berthed cruise ships will greet passengers making their way to the serpentine, wave-form ticketing counters along the back wall. The east wall of the terminal will be glassed to take advantage of the beautiful water views looking straight down the port channel.

Cruise Terminal 10 is scheduled for completion in April, 1995. Total cost for the terminal and accompanying waterside facilities is \$22 million. One mega ship or two medium sized cruise ships using the terminal will generate an economic impact of \$500 million on the local area.

#### 1993 Container Growth Over 10% at Portland

The Port of Portland's container growth surpassed 10 percent during 1993, the fastest rate of growth of any West Coast seaport.

This follows a 24 percent growth rate during 1992 as compared to the previous year.

Portland handled 239,439 TEUs during 1993, a 10.1 percent increase over 1992, while the West Coast average growth rate was 2 to 3 percent.

Portland is a cargo rich gateway that has benefitted from expanded carrier services, increased ship capacity and more frequent ship schedules. Hanjin Shipping became a new Portland weekly caller last March and Hapag-Lloyd Transpacific started Portland service in April, joining other transpacific container carriers: Evergreen Line; Hyundai Merchant Marine Co., Ltd.; "K" Line; Mitsui O.S.K. Lines, Ltd.; Neptune Orient Lines, Ltd.; NYK Line and PM & O Line.

Intermodal rail moves through the Port's 34-acre, on-dock intermodal rail yard were up 29.3 percent during 1993 compared to the previous year — reflecting heavy train moves from the East, Midwest and Canadian points.

Overall, cargo was down 3 percent from last year's all-time record high, a reflection of soft world markets for mineral bulks, grain an automobiles.

Competition intensified during 1993 for such breakbulk products as steel, aluminum and pulp.

To meet current and future traffic demand, a \$16 million crane project is under way for the Port by Hyundai Heavy Industries, Korea. The first post-Panamax crane will arrive early in 1995 and, after assembly and testing, join the Port's eight existing container cranes later in the year. A second post-Panamax crane is expected as early as 1997.

A \$25 million railbridge and trackage expansion plan to serve Terminals 4, 5 and 6, will be started in 1994 and is scheduled for completion in 1996. This bridge will join North and South Rivergate. It will also provide expanded track capacity in the growing Rivergate District which is served by Union Pacific and Burlington Northern rail-roads.

Looking to the future, the Port is acquiring 750 acres of West Hayden Island for marine development. This land, on the 40-foot navigation channel, is immediately adjacent to Terminal 6, and will have fast access to rail, truck, barge and air transportation.

It is believed it will be the premier marine development site on the West Coast in the next century. (*Portside*)

#### Wando Terminal Adding 3 More Container Cranes

The Port of Charleston will have three new container cranes on line when its \$90 million Wando Terminal expansion is completed next fall.

The addition will give the terminal nine container cranes and the Port a total of eighteen. North Charleston Terminal now has six container cranes and Columbus Street Terminal has three.

The addition will also give the port a total of nine Post-Panamax cranes — the type of cranes needed to service ships which are too large to pass through the Panama Canal.

Morris Mechanical Handling, Ltd., of the United Kingdom, a subsidiary of Trafalgar House, P.L.C., is the contractor for the new cranes.

The State Ports Authority Board approved two cranes for the Wando Terminal in May 1993. Since then, additional business prompted the purchase of another crane under option. The first two cranes are scheduled for delivery next summer and will be operational by September or October, 1994.

The three \$5.4 million cranes will be delivered partially assembled and completed on-site.

The 50-long ton capacity cranes will have a 100-foot gauge, twice the width of the Wando terminal's six existing cranes, and a 50-foot back reach. Minimum hoist speeds are set for rated loads at 150 feet per minute and for spreader only at 360 feet per minute.

The Wando Terminal expansion project, several months ahead of schedule, also includes a 1,373- linear-foot, straight-line berth extension, more than 70 acres of paved container storage and 440 refrigerated container slots.

The Wando Terminal last year handled 2.5 million tons, or 40 percent, of the Port's total containerized cargo throughput.

(Port News, Port of Charleston)

#### Work Begins on Bypass Highway Around Tacoma

Federal, state and local leaders broke ground March 31 on State Route 509, a major new bypass highway that will loop around the south end of the Port of Tacoma.

The \$180 million highway will replace Tacoma's East 11th Street corridor with a new route for commuters traveling to downtown Tacoma from nearby communities.

With the ground-breaking came words of encouragement from Congressman Norm Dicks (D-Bremerton).

"When it's all said and done, we may make some minor alterations, but we've got to go forward," said Dicks. "It's time to get it done."

Dicks called the project "crucial" for the City of Tacoma and the Port of Tacoma. He also cited the highway as a significant part of the Puyallup Indian Land Claims Settlement, which was signed into law in 1989.

Port Commissioner Pat O'Malley said the project would prove to be vital for the Port and the community at large.

"I strongly believe the recent attention given this project could lead to some fine-tuning adjustments that will improve the overall results," said Port Commissioner Pat O'Malley. "We want to make this highway a win-win situation for both those who use the Port and those who must drive to and from Tacoma through the Port."

The new route will parallel Tacoma's existing East-West Road. It will begin with an upgraded Marine View Drive to the east and end with a new cable-stay bridge into downtown Tacoma.

"We have experienced tremendous growth in residential areas of Northeast Tacoma in recent years," said Tacoma Mayor Harold G. Moss. "Combined with the economic growth at the Port of Tacoma it's obvious we need a better way for the folks of Northeast Tacoma to get downtown."

The new highway will allow removal of the Blair Bridge, opening the Port

of Tacoma's Blair Waterway to the latest generation of larger container vessels. The Port already is completing preliminary site work on a new West Blair Terminal, a 100-acre intermodal container facility that is part of the Port's \$450 million 2010 Plan.

The new route also will allow vehicles to move around the Port without delays caused by train crossings and drawbridges.

The construction schedule includes these milestones:

- Summer 1995 Completion of widening of Marine View Drive.
- Fall 1995 Blair Bridge removal begins.
- December 1995 Removal of the Blair Bridge completed.
- End of 1996 Entire project completed.

Work crews already have begun stabilizing the highway site in the Port area, and work is underway to widen Marine View Drive.

"Now you'll begin to see the dirt move and before long you'll start to see people moving along a 509 corridor that will be vital to the city, the port and the state," said Sid Morrison, Washington State secretary of transportation.

#### Port of Tacoma Opening Its Gateway to the Future

#### By Robert G. Earley President Port of Tacome Commiss

Port of Tacoma Commission

Now is the time to take a close look at the 21st century. Those who are able to peer through today's visionary telescope will greet the future with open arms.

The Port of Tacoma dedicated much of 1993 to the process of focusing its own telescope on the future. It was a time to prepare for the next two decades. A time to position the Port for a new era of growth.

This growth will come in the form of the Port's 2010 Plan, a \$450 million terminal development plan. The Blair Waterway, one of the most promising maritime sites on the West Coast, is the centerpiece of this expansion effort. A new generation of larger ships will berth at one of the most advanced intermodal terminals in the world. International trade will bring more energy than ever to the Pacific Rim's global economy.

Amid this 1993 planning effort came a year of modest economic growth. Still, our Port attracted healthy cargo volumes and handled record-high container traffic with more than 1 million twenty-foot equivalent units (TEUs). But the year's true success cannot be described in just TEUs, tonnage or intermodal cargo lifts.

The real progress of 1993 came with carefully planned capital improvements, industrial development and burgeoning trade ties. With these steps, we are creating a foundation for the trade growth of the future.

We launched major improvements to our prime marine channels and moved forward with planning the upland facilities that will surround these waterways.

Dredging on the Blair and Sitcum waterways, which began in the fall of 1993, will open our Port to the largest containerships on the seas. The project, planned in conjunction with the federal Environmental Protection Agency, also provides a model for blending environmental improvements with development plans. This approach will allow the Port to move forward with a well-balanced program for growth.

At the same time, the Port's industrial development program helped to produce the economic building blocks of the future, attracting businesses that are providing new jobs and enhancing the region's economy.

On the international front, the Asia Pacific Economic Cooperation (APEC) conference gave Puget Sound ports a worldwide stature for Pacific Rim trade.

A the Port of Tacoma, all of these 1993 developments occurred against a backdrop of available land for development, superior rail and highway connections, a superb labor force, and strong community support. These are the assets that help produce a strong worldwide standing for our Port and our region.

The Port of Tacoma has long been known as the Pacific gateway for cargo moving between the United States and its international trading partners. In 1993, we began to open another gateway — the gateway to the future. (Port of Tacoma 1993 Annual Report)

### Africa/Europe

#### Concession on Antwerp Terminal to Noord Natie

The Antwerp City Council has granted the concession of the second container terminal alongside the river Scheldt by a clear majority of votes to stevedoring company Noord Natie.

The Nord Natie/N.M.B.S. venture is expected to invest Brf. 3bn in the new 60 hecatres terminal on top of the Bfr. 2.8bn already earmarked for the facility. The terminal will have a maximum capacity of 650,000 TEUs and will be accessible for all post-panamax container vessels. Work on the 1,075-m quay wall is due to start on April 1 with completion due by mid 1996

There were three candidates for the concession of the new terminal: Hessenatie, the Seaport Terminals/Mediterranean Shipping Company venture and the Noord Natie/N.M.B.S. venture, Studies showed that all three will be facing lack of capacity in the near future, and thus had a reason to claim the concession on the second container terminal.

It appeared, however, from a number of meetings and discussions that such an agreement was not possible either for one of all possible combinations between two candidates together or for an agreement between all of the three candidates.

As a consequence the suspended procedure was started again.

It came out that Nord Natie was most indicated:

The candidacy of Hessenatie was considered to be less appropriate since Hessenatie already has a concession on the first Scheldt terminal and would thus acquire a too dominant position in the container handling in Antwerp with 71% of total container handling capacity and a monopoly of handling outside the existing lock system. This could weaken competition between the different companies and might even give raise to legal objections.

The candidacy of Seaport Terminals and Mediterranean Shipping Company raised the problem of a carrier participating in the container handling and thus endanger the principle of a multi-user terminal. It was therefore preferred to select a stevedoring company so that free competition was maintained and objections from other carriers avoided.

Particular reasons to select Noord Natie were also:

During the period 1985-1993 Noord Natie did experience the best results in attracting new traffic to the port of Antwerp and has realised the strongest expansion of its container traffic both in relative as in absolute terms. The growth rate was 172% or 263,000 TEUs increasing Noord Naties market share from 11% to 22% (in TEU).

As a medium-sized container stevedoring company, Noord Natie is considered to be most likely to maintain competition within the port and to strengthen the position of the port as a whole.

Moreover the need for additional capacity of Noord Natie is more urgent than that of the other candidates. Since 1991 part of the container traffic acquired by Noord Natie was handled at Hessenatie Scheldt terminal.

The submitted balance sheets and accounts reveal that Noord Natie, also in combination with Belgian Railways, offers the most solid financial structure with regard to the investments in equipment.

The commitment of N.M.B.S. in the consortium will create possible synergies in order to optimize railway infrastructure at different terminals, and to develop railway logistics to the benefit of the entire Antwerp port.

#### Port of Antwerp in 1993: 101.9 Million Tonnes

Despite the recession the port of Antwerp was able to notch up an impressive 101.9 million tonnes of trade in 1993, only 1.7% less than the record set in 1992. When we recall the negative trends of early 1993, and trading developments in other European ports, we may justifiably conclude that Antwerp can be proud of this result.

It is worth noting that the fall in trade was limited almost entirely to dry bulk goods, whereas absolute records were established in several other areas. General cargo rose to 46.8 million tonnes (up by 3.4%) and the container trade by 1.8% to 20 million tonnes. Liquid bulk goods rose 1.8% to 27.4 million tonnes. Dry bulk goods, however, fell back by 12% to 27.6 million tonnes. This decline was primarily due to a 2 million tonne fall in coal and ore, a development which has been seen in other ports as well.

In 1993 there were a total of 15,687 shipping arrivals representing a total of 149,307,926 GRT.

The discouraging results seen in the first quarter were by and large offset in the last quarter. It is interesting to note that the goods handling figures for October came to 9.86 million tonnes, an absolute record, while both November and December saw about 9 million tonnes of trade pass through the port.

#### • Port infrastructure

The combination of the growth in container traffic and the success of the "Europaterminal", Antwerp's first riverside container terminal, has resulted in a decision to build a second riverside container terminal. This terminal will have an overall length of 1,375 m, including provision for a ro-ro pontoon. The useful berth length is 1070 m, with a water depth of 14 m. A barge berth is being built on the inland side of the terminal. This will front Canal Dock B3 and have an overall length of 320 m. The total area of the new terminal will be 570,000 m<sup>2</sup>, corresponding to an annual capacity of 600,000 TEUs. It will also be possible to expand the terminal by further 100,000 m<sup>2</sup> in the future. The construction of the terminal has been awarded to a consortium of leading Belgian construction companies, namely Franki, Herbosch-Kiere, and Antwerpse Bouwwerken Verbeeck, and will cost BEF 1,700 million. The terminal must be completed in 30 calendar months and should be ready for use in mid-1996.

#### • EDI

The spurt in the use of Seagha for data interchanges in 1992 was continued in 1993. A total 532,105 messages were sent by the Seagha system. This is the result of the growing use of EDI by port-based industry in and around Antwerp. Electronic mail between shipping agencies and container terminals rose by 43% compared to 1992. Forwarder-agent interchanges made the critical breakthrough and messages traffic more than doubled. Last year 29,334 messages were exchange with the port authorities. This is an increase of 53% over the previous year. At present 32 agents subscribe and roughly 40% of shipping reports and requests for berths in Antwerp are submitted electronically.

Since mid-1993, Seagha has also offered a direct link to Belgian Railways. Various applications have been made available to Seagha users. One of the most important is "RAILEDI", which can be used to exchange consignment note details with the NMBS via Edifact messages. The disappearance of Europe's internal boundaries meant that there was a commensurate decline in electronic customs declarations via Sadbel. It is, however, expected that greater use will be made of this service in 1994. A significant rise in electronic mail and the number of users is forecast. Increasingly firms and organizations outside the Antwerp area are subscribing to Seagha. A number of additional facilities will tend to reinforce the positive trend. The automation of goods accounting is planned as part of the further development of the Sadbel application. Electronic mail with the port authorities will undoubtedly keep on growing as a result of the inclusion of financial messages and dangerous goods notices.

#### Helsinki: Environmental Auditing Completed

The time of year has come when last year's accounts are scrutinized. It's time to find out what's on the bottom line. Accounts are also required for environmental factors, but the bottom line consists of shredded paper, exhaust gases, noise pollution and changes in the scenery. Green accounting still lacks a definite form and strong examples in various fields.

The first Environmental Auditing covering the entire Port of Helsinki was published in the summer of 1993. Now the auditing has been reviewed to cover the whole year.

The assessment of environmental consequences gives figures for wastes, exhaust gases, hazardous substances and hazardous wastes. It does not deal exclusively with the operations of the Port of Helsinki Authority; instead, all parties involved in the port are included — ships too. In legal terms, environmental matters are the responsibility of each party, but it is easier to see the significance of individual problems against a background of the port as a whole.

Port-related organizations are showing strong signs of increasing greenness in the form of various subcommittees. Helsinki has kept up to date by publishing its own environmental principles.

There were no significant accidents in the transportation of hazardous substances during 1993. Sulphur dioxide concentrations were not found to be above standard levels when measured. Fuels with a lower sulphur content have become available for vessels.

#### Helsinki: Survey on Flow of Unit Goods

An analysis was made in November 1993 by the Port of Helsinki Authority, in cooperation with freightage companies, of the directional flow of unit goods in Finland. The analysis sampled 100,000 tonnes of imports and 110,000 tonnes of exports, mainly on the basis of terminal reports from the container terminals at West Harbour and North Harbour. The results indicate that two-thirds of the unit goods imported are headed for the Helsinki economic region while 70% of exports originate from outside this region.

Unit goods	Percentage of imports	Percentage of exports	
Helsinki	48	21	
Other economic area			
of Helsinki	18	9	
Central Finland*	14	27	
Eastern Finland	3	15	
Western Finland	5	<sup>°</sup> 15	
Northern Finland	A. 1	12	
In transit	11	_	
Total	100	100	

\* The Helsinki-Vaasa-Kuopio triangle excluding the Helsinki economic region.

#### Helsinki Plans Creation Of Vuosaari Harbour

In the competition between cities, international traffic connections will

come to play an increasingly important role. Helsinki is a port city and its harbours are integral part of the city's competitive arsenal. Both directly and indirectly, the Port of Helsinki holds an important position in the business infrastructure other Finnish capital. The Port and the commerce that it brings to the city is an important source of revenue. There are also sound logistical and transport-oriented reasons for retaining port operations in the City of Helsinki area.

The general cargo ports of the West and North Harbour have become surrounded by the expanding city skyline. This is a familiar situation in many other European cities. The harbour units can no longer be expanded in their present locations. In fact the opposite is true; in particular the overall area of the West Harbour has shrunk quite considerably in recent years.

In order to safeguard the smooth running of the Port and provide for the anticipated growth in cargo traffic, it has become necessary to build a new and modern port facility.

The new harbour at Vuosaari is on the eastern outskirts of the city, ideally placed in terms of the urban framework and transport links, but still close to the main focus of shipments in and out. It is possible to build in Vuosaari a modern and efficient harbour that will replace the existing general cargo ports closer to the city centre. At the same time, the site offers scope for future expansion. The 1992 Master Plan approved by the Helsinki City Council contains an endorsement of the these urban restructuring arguments.

Following the approval of the Master Plan, the Council's executive committee charged an independent working group with drawing up a plan to establish a new harbour. The working group took the name VUOPE, and has been chaired by Eero Leppänen, Technical Director of the Port of Helsinki. In addition to representatives from the Port of Helsinki, the working group has taken members from the Helsinki City Planning Office, the Environmental Centre, the Real Estate department, and the City Office.

VUOPE has drafted a plan for the foundation of the new Vuosaari Harbour on the basis of the land use provisions set out in the 1992 Master Plan. The land area of the harbour is 159 hectares. The project would go ahead in three stages. After the first stage, Vuosaari would take over the functions now performed by the West Harbour, and after completion of the second phase those of the North Harbour would be transferred to the new site. The third phase would be built as and when additional harbour capacity becomes necessary.

The greatest part of the area to be taken over by the new harbour (93 ha) is water. The existing dockyard facilities account for some 36 ha. The remaining 30 hectares are undeveloped land.

The VUOPE plan has made detailed calculations of the dredging and landfill requirements of the venture. Hence it has been possible to draw up cost estimates on an increasingly reliable footing.

According to the general plan for the Vuosaari Harbour, dredging operations would generate some 5.2 million  $m^3$  of material Landfill of 12.8 million  $m^3$  would be primarily from marine sand deposits. There would be some 2850 metres of quays, forming 15 separate berths.

The costs to the City of Helsinki of transferring the present general cargo harbours to Vuosaari would amount to FIM 846 million. Expansion of the harbour to its full extent would involve some FIM 400 million. This would allow for a throughout of 12 million tons of cargo.

The National Board of Navigation has drafted a general plan for the approaches to Vuosaari. The main fairway can be realised with relatively little dredging and new sealane markings. The fairway would cost FIM 26 million.

A study carried out a couple of years ago reported that a rail link to the main line at Tikkurila would cost from FIM 268-300 million. Extending the outer ring road (Kehä III) to the harbour would cost FIM 95-107 million.

The VUOPE plan has also estimated the likely return on investment of the transfer of the existing harbours, from the perspective of the city's finances. Costs and revenues have been calculated over a 50-year term. According to the basic model the internal rate of return on the venture is 12.8%, in other words the project is a highly profitable one. The value of the additional benefits to be derived from the project at a calculated 5% rate of interest is FIM 904 million in current money values. The basic model takes account of the

land value of the existing harbour areas.

If the value of the existing harbour areas is discarded completely from the calculations, the internal rate of return is 6.6%. The ventures is thus profitable even assuming that the City earns nothing by way of land sales or rental income from the release of the existing harbour sites.

The transfer of the general cargo harbours away from the city centre will substantially increase the scope for building in the downtown area. According to the 1992 Master Plan, the sites to be released could accommodate total of  $840,000 \text{ m}^2$  of residental dwellings and  $260,000 \text{ m}^2$  of commercial and office space.

The rail connections to the existing harbours would be removed, and the extensive Pasila railway yard would be relocated in Riihimäki. The current plans for building a deck over the prospective development area between East and West Pasila could then be abandoned, resulting in considerable savings in construction costs for this area.

The VUOPE plan does not contain new information on road transport connections. Clarification of these issue is under way with the City of Vantaa and the nearby municipality of Sipoo.

The Action Assessment of Environmental Impact (YVA) comes into force from the summer of 1994. A very great number of different environmental assays have already been carried out on the Vuosaari Harbour. Nevertheless, the process as specified in the YVA Act has not yet been undertaken. It will be launched as soon as the Act comes into effect. An assessment programme along the lines of the draft government bill is already in progress.

The VUOPE foundation plan was presented yesterday (21.2.1994) to the City Board. After this, it will be forwarded to various committees for their comments and statements, and thereafter it will probably be brought to the City Council before the summer recess.

In the event that the City Council ratifies the plan, it will be possible to undertake building work at the earliest at the beginning of the 1997 navigation season. Prior to this, it will be necessary to go through the process of assessing the environmental impact of the venture, to draw up a town plan, and secure landfill permits from the Water Rights Court. The first phase of building will take four years, and the second phase a further two years. Hence the operations of the West Harbour and North Harbour would not be transferred to Vuosaari until some ten years from the initial decision to go ahead with the project, meaning that 2004 would become the first full year of operations.

#### Le Havre: '94 Promising Season for Cruise Liners

Le Havre is by tradition a port which about a million passengers go through each year on board the car-ferries bound for Great Britain and Ireland.

Le Havre has kept the image of a port of call for transatlantic liners which have shaped its maritime history. But, do you know today that the cruise trade of the Port of Le Havre is far from being insignificant and that it is steadily developing again.

19 calls of liners and 14,877 passengers were thus reckoned in 1991, 26 calls and 31,593 passengers in 1992, 37 calls and 58,536 passengers in 1993; the year 1993 was undoubtedly very favourable to the development of the cruising business in the Port of Le Havre. 14 liners operated by 9 different shipowners came in turn to make 37 calls between May and late September 1993, with a peak period of about ten calls per month in August and September. Our principal customers were the British Company Peninsular & Oriental with Oceanlink as agent making 8 calls with the Royal Princess, 7 calls with the Pacific Princess and one call with the Canberra, the Royal Caribbean Cruises Line Company in Miami, with Saga as agent making 5 calls with the Sun Viking and 2 calls with the Song of Norway, the Royal Cruise Line company in Piraeus, with Agena as agent, making 4 calls with the Crown Odyssey, and the Ukrainian Company Black Sea Shipping with Sagmar as agent, making 2 calls with the Tarass Shevchenko and one call with the Azerbaydzhan. The Odessa and Mermoz of Paquet cruise lines (Paris), the Crystal Harmony of Crystal Cruises (Los Angeles), the Europa of Hapag Lloyd (Hamburg), the Statendam of Holland America Line (Rotterdam) and the Vistamar of the Spanish company Hoteles Marinos are to be added to these nine vessels.

Further to the contacts kept by the ship's agents, all these customers have fully appreciated the improvements made by the port of Le Havre concerning the reception, the quality of service and the berth environment. The call schedules planned for the 1994 summer season confirm these excellent results.

More than forty liners are indeed already scheduled including the *Queen Elizabeth 2* on June 7 next, at the time of the celebration of the fiftieth anniversary of the Normandy landing.

#### Hamburg Intermodal – America's Gateway to EU

There was considerable growth in the volume of overseas container traffic passing through Germany's seaports on 1992-93 despite the global recession. In Hamburg growth was even higher than in the rival Northern Range ports.

The trend is visible in the table which shows the German seaport's respective shares of domestic traffic and trade with Scandinavia, Central and Eastern Europe, Switzerland and Austria -a market of more than 400 million people. A striking feature of this market, and a fact of which many shippers and forwarders in America are unaware, is that the Port of Rotterdam only has a 20% share of cargo traffic to and from the above-mentioned countries. The reason is primarily the longer inland transport routes.

The Port of Hamburg's strength is the systematic integration of intermodal cargoes into its hinterland flows of traffic. More than 70% of all long-distance container movements are by rail, the environmentally sound solution.

Besides cooperation with German Railways, Transfracht and Intercontainer, private-sector operators are playing an increasingly important role in trade with Eastern Europe.

Through EUROKOMBI, HHCE, Metrans and Polzug Hamburg's port economy has become heavily involved in this field in order to offer "all-in-one" hinterland transport.

Consequently, Poland, Hungary and the Czech and Slovak Republics are served by direct-block trains between two and seven times a week in both directions.

There is also a direct link to the

Hinterland Port Hamburg

Region	Total TEU (x 1,000)	% R'dam	% B'haven	% H'burg
Germany Scandinavia Eastern Europ <del>e</del> Ch/Austria	2.108 571 198 172	22.3 8.8 10.1 29.2	25.4 35.2 39.4 30.2	52.3 56.0 50.5 40.6
Total	3.049	29.2	28.0	52.0

Source: German-Federal Office of Statistics

Note: \*Excludes UK, French, other European cargo as well as transshipments to and from the Mediterranean



Intermodal Rail Terminal Hamburg-Billwerder

Ukraine via the Czech Republic. What's more, there are plans to extend the intermodal transport links to include Rumania and Bulgaria.

This would open up the possibility of extending the line to serve Thessalonica and thus include Greece as well. Besides all this, there are also door-to-door services to Austria and Southern Germany.

The Port of Hamburg is linked to its hinterland not just by this modern rail network but also by high-capacity motorways, inland waterways and numerous domestic and international airlines. From Hamburg hundreds of carriers offer a reliable just-in-time distribution service to every corner of Europe.

#### Osaka Quay Now Operationally Active

The Osaka quay located on the western edge of the new Pacific Dock has now entered an operationally active phase since the beginning of the month of March. From now on, large container-ships are following one another along this quay, 450 m long, built within the scope of the first phase of extension of the container Rapid Turnaround Port, located in tidal dock.

The Pacific Dock which was dug near the Asia quay in the south part of the port is dredged to the mark -13.50m, which enables it to accommodate the largest container-ships in low tide.

Thus, from March 5th, the following ships have already succeeded one another, the Hanjin Vancouver, Ming Comfort (on 10th), Choyang Success (on 14th), Choyang Moscow (on 16th), Ming Fortune (on 17th), Bright River (on 18th), St Petersburg Senator (on 21st), Ming Moon (on 24th), Patria (on 29th), Ming Sun (31st), Ming Sun (April 1st), Choyang Park (on 3rd), Smart River (on 4th).

With the coming-on-stream of two overpanamax gantry cranes, the first one is already in operation, the second one will be in service in a few weeks, the overall investment amounts to around 500 million francs financed by the State, the Upper-Normandy Region, the "Seine-Maritime" Regional Council, the Port of Le Havre Authority and private operators. The operation is managed by "Terminaux de Normandie" terminal operators.

#### Marseilles: Reform for Brisk Trade Recovery

Trade suffered moderately but Marseilles-Fos managed well.

1993 has been the year in which the PMA implemented the port cargo handling reform, thanks to which there has been a brisk recovery in general cargo despite the setbacks in summer when the new system was being put through its paces for the very first time.

1993 has been a year of uncompromising recession, the worst since 1975 for Europe as a whole. Of course this has meant a drop in trade figures for all European ports, including Marseilles-Fos. Total tonnage for the year: 88.6 MT, which means a net drop of 3.4%.

The port has nevertheless been able to recover a fair amount of market share in the general cargo trade by improving the end of year results for this trade by 13%.

There has clearly been a cut back of 2.8% in the oil trade and of 20.5% in dry bulk partly due to local conditions here in Marseilles but the liquid bulk trade has maintained a sustained improvement curve and climbed by 12%.

The drop in total trade figures has also had an effect on the ship repair business and limited total revenue to 910 MF which is an increase of 0.5%over the previous year. But, expenditure has been increased owing to the implementation of the cargo handling reform and the year is likely to end with a deficit of about 30 MF.

(Europort South)

#### Port Charges and EU Funding: Dublin Port

Dublin Port's charging structure is usually compared with that of similar ports in this state and with ports in Northern Ireland. Charges at Dublin are broadly equivalent to those of Cork, which is the nearest port in size within the state.

Dun Laoghaire Harbour is Dublin Port's nearest competitor and, for the same trade, Dublin Port's scheduled charges are approximately 20% lower than those of Dun Laoghaire.

Charges at Dublin Port are alleged to be more than 50% higher than at Belfast Port. This is a reflection of a continuous investment policy by the U.K. Government in port facilities in Northern Ireland during a period when ports in the Republic, and Dublin in particular, were starved of investment grants and funding. It is also significant in this regard that there has been no harbours legislation in the Republic since 1947.

That means that today, ports in the Republic of Ireland are governed by legislation which is almost 50 years old. In fact, the principal act, which is the Harbours Act 1946, is based on the Report of the Ports and Harbours Tribunal, which sat in 1930 and reported in 1933. Obviously, the research for that tribunal was carried out and based on activities which happened in the 1920's.

Therefore, the ports of the Republic of Ireland, soon to be the only island nation in the European Union, operate under legislative conditions which place them squarely in the era when ports were regarded as extensions of local authorities and not as the vibrant, commercial organisations they need to be today.

It is fair to say that the Report of the Review Body on Commercial Harbours has been adopted by the Minister for the Marine and that new legislation is expected shortly. However, the report was presented in June 1992 and does not appear to have invoked any degree of urgency within Dail circles.

Eventually Dublin Port was granted access to European funding under the National Development Programme 1988 - 1993. For the first time in the history of the port there was outside assistance with development funding.

The South Bank Container Terminal was extended and a new crane erected; a 20 tonne bulk crane with a dust aspirated hopper and associated engineering works enhanced bulk grabbing and handling facilities: a new tug improved towage and safety features: a store for handling dry bulk product was erected: an export shed for Bord na Mona is under construction.

These additional facilities assisted the Port in development programmes without the need to increase charges. The Port has been conscious of the need to contain and reduce port charges while providing a competitive service to customers. Financing of capital works, together with the cost of labour rationalisation, made serious demands on resources but, nevertheless, the Board has pursued a policy of containing port charges.

Some facts are worthy of notice

- in the last six years Dublin Port had a single increase of 3% in rates and charges. In the same period charges in the transport sector generally increased by 15%.
- in 1990 drive accompanied Ro/Ro charges were reduced by 35%.
- on 1st January 1993 container crane charges were reduced by 5%.
- stevedoring charges have reduced and the quality of service has improved as a result of labour rationalisation and privatisation of stevedoring services.

A recent report by Dublin City University on the role of Dublin Port charges in export transport cost came to a number of interesting conclusions. This report, soon to be published, states that the comments in the Government, Culliton and Moriarty reports do not reflect a full understanding of the transport chain, the determinants of the diversion of traffic to Northern ports, the role of the northern haulage industry and possible cheap backloading, the role of charges in export cost and the possible implications on export transport cost of significant reductions in, and even total removal of, Dublin Port charges.

The report concluded port charges amount to a small proportion of export transport cost (varying between 1.6% and 4%).

- There could be no expectation that any reduction in port ro/ro charges would be passed on because of lack of competition and capacity utilisation levels in the central corridor ro/ro mode.
- Reductions in port charges would primarily result in improved profits for ferry operators.
- Existing levels of port charges have not held back new entrants to the business.
- Lower charges will not attract new entrants in the absence of appropriate facilities.
- Dublin has improved its share of the island's ro/ro traffic relative to Larne over the past few years.

• The perception that high Dublin Port charges has led to diversion of traffic to Larne is incorrect. (Port Times)

#### Chairman of Mauritius Doubly Honored

(News Release dated 31 March 1994 from the Director General, Mauritius Marine Authority)

The Council of the Chartered Institute of Transport, London has elevated Mr. Hurrypersad Ramnarain, OBE, to the grade of Fellow of the Chartered Institute of Transport (FCIT).

Port Louis Harbour, administered by the Mauritius Marine Authority (MMA), is a modern port and one of the most efficient in this part of the world. It was essentially a lighterage port where the waiting time for vessels went up to even two months; today a ship is handled in a maximum of two days. Mr. Ramnarain as Chairman of the MMA since 1976 has been the driving force behind the achievement. His investiture with FCIT is the culmination of his sagacity, vision and immense contribution to making Port Louis what it is today.

On the occasion of the third anniversary of the Republic Day of Mauritius, the President, Mr. Cassam Uteem, on the advice of the Prime Minister, Sir Anerood Jugnauth, was graciously pleased to confer upon Mr. Ramnarain the highest decoration of the State of Mauritius - The Grand Officer of the Order of the Star and Kev of the Indian Ocean (GOSK). It is worth recalling that as a trade union leader, he fought bravely for the dignity and better living conditions of the workers during the dark days of colonialism. His leadership in the trade union movement spans over 30 years. As regards his part played in active politics, he served as Member of Par-



liament and Minister for 18 years.Our warmest congratulations to Mr.H. Ramnarain, GOSK, OBE, FCIT.

#### Amsterdam-Rhine Canal Now 4 Metres Deep

The possibilities of transport by inland vessel between the port of Amsterdam and Germany were recently improved considerably. With a symbolic "last grab", executive managing director of Port Management of Amsterdam, Godfried van den Heuvel, and engineering director of Rijkswaterstaat, Public Works and Water Management Utrecht, J.P.A.P. Bevers increased water depth in the Amsterdam-Rhine canal to four metres.

The deepening of the Amsterdam-Rhine canal is a vitally important factor to the port area of Amsterdam in its role as Euro-logistics centre. Inland vessels fully loaded to a draught of four metres — the Dutch national standard for inland shipping — can now transport goods to the German hinterland and further. Maximum load depth used to be 3.3 metres. The transport of comparatively heavy bulk, such as coal, sand and gravel, will gain particularly. Cost savings of some 12% are considered possible.

#### **Environment-friendly**

Amsterdam's improved hinterland connections also mean extra incentives for ecology-conscious transport by water. Use of inland waterways for the supply and transport of goods has increased rapidly over recent years. Regular container services by inland vessel - the so-called shuttles for instance started from the port of Amsterdam last year. The port now offers regular services to Rotterdam, Antwerp, Harlingen (Friesland) and Germany. Inland vessels are increasingly taking business from road transport for the transport of cars. Currently total shipments via the canal to and from the port area of Amsterdam are running at a rate of more than 20 million tons a year.

Managing director of Amsterdam Port Management, Godfried C.G. Heuvel, is delighted the port area of Amsterdam has yet better hinterland connections: "With this access depth we have opened our backdoor even wider for import and export by the most environment-friendly form of transport, inland shipping."

According to Van den Heuvel, inland shipping will continue to gain a share of goods transport over the next twenty years, provided the required degree of organisation is achieved. "Tailored work from local transhipment stations will be an important factor. From these stations door-to-door service with smaller transport modules will guarantee final finishing. Computerisation for optimal planning and the lowest transport costs is also playing a key role."

#### Super lock

The maritime entrance at IJmuiden is also of great importance in the development and strengthening of Amsterdam port's position. In view of the growth in shipping traffic the present complex of locks in IJmuiden will no longer be satisfactory. If the port area wants to maintain its position as a growth area for the economy and employment, then a second super-lock will be essential in IJmuiden.

The deepening of the Amsterdam-Rhine canal has meant major civil engineering work over the last few years for clients Amsterdam and Directorate General of public Works and Water Management, Utrecht. Bottom protection at the pushbarge lock in Wijk bij Duurstede was lowered in 1989 and steel sheet pilings installed along the banks in the canal estuary in 1990. As part of works the underwater barrier of the Zeeburg lock was lowered in 1991.

A layer of foundation fill for the Sifon pipeline (used for letting in fresh IJsselmeer water to the canals of Amsterdam), was removed as well. Last year large quantities of bottom spoil at Wijk bij Duurstede, Ravenswaai and Amsterdam were removed. In 1994 the estuary of the Am-sterdam Rhine canal will be broadened to allow shipping easier and safer access. These works are linked to the construction of the enormous Oranjesluizen pushbarge locks, which will be commissioned in 1995.

The total investments for deepening the Amsterdam Rhine canal amounted to twenty million guilders.

For security reasons a traffic control post will be built at Wijk bij Duurstede this year and radar posts will be positioned at several places along the Amsterdam Rhine canal in 1995. This traffic control system will be put into operation in 1995.

#### Green Award for Safe, Sound Seamanship

The Green Award Certification Scheme: to promote safe and environmentally sound seamanship and ship design. Designed to have preference given to quality ships and to create quality-related differentiation in fees and facilities.

The Scheme, initially meant for crude-oil tankers above 50,000 dwt, started in January. The first certificates are to be issued in April 1994.

The Scheme is to expand to oil tankers and bulkcarriers in 1995 and 1996.

The Foundation Green Award was established in February 1994. The Committee, chaired by Mr. A. Korteland, chairman of the Dutch Shipowners Association, consists of members of the Ministry of Transport, the Port of Rotterdam and the Dutch Pilots Association. The Board of Experts, chaired by Mr. H. Rootliep, former chairman of the Nedlloyd Board of Directors, consists of members of the TU Delft, Rotterdam Shipbroker and Shipagency Association, Dutch Shipbuilding Industry Association, Shipping Inspectorate, Port of Amsterdam, Port of Sullom Voe, The Nautical Institute, the Dutch Shipowners Association and P & I.

The Scheme is supported and adopted by the Port of Rotterdam, Europoortterminals, the Boatmen Association, Pilot Association and the Dutch Ministry of Transport (financially and at policy and operational levels).

Green Award intends to be recognised and accepted internationally. The Foundation therefore aims at further commitment by contiguous action.

Actual incentives for Green Award registered ships, sofar, are:

The Dutch Pilot Association: Gives a substantial financial contribution to the Foundation, resulting in the 1994 application fee reduction of 10% and in 1995 a contribution fee reduction up to 50%. During helicopter pilot transfer to Green Award vessels, operational personnel can be transferred on the same flight—if seats are available — at no costs. The Port of Rotterdam: Gives a premium on portfees up to 9% from January 1 1995.

The Rotterdam Boatmen Association: Waives travel and waiting expenses, if boatmen are embarked for portoperations.

It is recommended to apply for Green Award as soon as possible if the procedure is to be concluded before January 1, 1995.

For the complete informationset ("Seacure for Operations"), applicationforms and further information contact the Bureau Green Award Secretariat.

Information through Bulletin Board also available from May 1, 1994.

Telephone + 31 10 489 7496 Speed 1200 - 14400 baud Settings N,8,1 Emulation VT 100/ANSI

A.J.W. Wolters Managing Director

#### Barcelona's Quality Plan Giving Dramatic Results

The so-called Quality Plan has been applied at our port for the last weeks, promoted by the Port of Barcelona Authority, and having as priority objective to offer the best service to the direct customer (goods) through careful handling, a reduction in clearing time, cost reduction and safety.

The Plan, on its first stage, is being applied at the operational level of the container terminal, and the results, according to president of the Port Institution, Josep Munne, can be considered as "dramatic". It was thus stated by Munne in a ceremony organized by the Council of Sea Transport Users at the Lotja del Mar.

The ceremony, which was attended by a large representation of shippers and receives-users from our port, where the president of the institution, Antoni Negre, was present, managers of the APB involved in this Project explained the objectives, dimensions and organizational structure. Santiago Bassols, Xavier Campasol and Leandro Amargos explained the details and features of the project.

#### **First results**

The creation of a fixed timetable for



Mr. Josep Munne, President of Autoridad Portuaria de Barcelona

the cargo inspection at the container terminal, the creation of a security precinct and other controls have already-given the first results. The first of them is the reduction in costs as a consequence of the drop in movements of containers, which is attained automatically, with a drastic reduction in cargo clearing time.

Container control by means of a precinct created to this end, guaranteeing its content once it has been inspected, which reduces possible thefts, the origin of which was sometime unjustly attributed to the port.

#### Guarantees

In order to seek self-responsibility, the Project contemplates a project of guarantees on certain issues, the non-compliance of which will mean the payment of cash money to the user. These guarantees are focused on following aspects:

**Guarantee of the security precinct:** The port of Barcelona guarantees the setting up of a security precinct for 100% of the containers handled at the international terminal (TCB), guaranteeing the full safety of the goods while in transit at the terminal.

In the import containers, the precinct will be attached at the moment the container is unloaded from the ship, guaranteeing that it will leave the terminal with the precinct.

**Guarantee of immediate transit:** The port of Barcelona guarantees that the clearing of documents for containerized cargo in transit, handled at the international container terminal (TCB) will take place on the same day of acceptance of the transit document or the first working day afterwards.

**Guarantee of FCL cargo clearing** 

for imports: The port of Barcelona guarantees that document clearing of cargo for FCL import containers at the international terminal (TCB) will take place on the same day of acceptance of the customs statement or the first working day right afterwards.

In case the customs process to the exam of the goods, the clearing will take place on the working day right after acceptance of the statement.

**Guarantee of single positioning:** 

The port of Barcelona guarantees that containers handled at the international terminal (TCB), whose examination may have been required by the institutions in charge of inspection other than Customs (Health, Veterinary or SOIVRE services) will be positioned at a single place in an area of inspection before clearing the goods.

**Guarantee of information to the importer/exporter:** The port guarantees to the user the necessary information on the situation of the cargo during its stay at the container terminal (TCB).

The port must stop being a < < black box >>: As for the relationship between the direct user (goods) and the port, it was underlined that the complex pattern of port activity must stop being a true < < black box > >, which requires the beginning of wide-ranging informative actions. To this end, it is expected to publish an Information Guide that will include a  $\langle \langle Who's Who \rangle \rangle$  in the chain of implied agents. The putting in operation of a Customer Service Department and the creation of telephone line with the 900 can resolve doubts and problems.

The creation of a Confronta Portuario, as a future < < notary > > in charge of the precinct, the setting up of future telematic systems (EDI) that will pool the whole port chain and the putting in operation of the Quality Project in the two following stages (Multiuse Terminals and rest of the port), were others of the issues developed by the people in charge of the project, which gave rise to the participation of the present in a discussion that was held next and which was closed by the President of the Council of Users, Mr. Bores. (Spanish International Trans PORT NEWSPAPER).

#### Felixstowe Privatisation To Better Rail Service

Port and rail operations are natural partners at the Port of Felixstowe. Our own statutory authority is, after all, the Felixstowe Dock & Railway Company.

Two wholly owned and purpose-built terminals inside the Port serve container trains running daily to and from industrial regions of Britain.

Proposals to extend these interests through the privatisation this year of British Rail have been submitted to the Government. Felixstowe's aim is to step up traffic by rail, which currently accounts for only 13.5% of more than one million containers passing through the Port each year. The present daily flow of 190 wagon loads could be raised to 300 within existing facilities.

Road transport well served by the haulage industry at Felixstowe, is indeed highly competitive, eager to give just-in-time service on excellent roads to firms wanting to minimise expensive stocks. But the railway system offers uncongested, long haul alternatives with environmental advantages.

The Port intends to apply its proven management, operational and marketing skills to freight trains operating on key routes, the prime objective being to provide a commercially competitive service to Port customers.

(March 1994 Progress Report)



#### Shanghai, Pusan Form Sister Port Affiliation

The Ports of Shanghai and Pusan completed a sister port agreement on April 12 in Shanghai during the visit of a Pusan port mission headed by Mr. Hangkyu Lee, Director-General, Pusan District Maritime and Port Authority.

Mr. Tu Deming, Port Director of Shanghai Port Authority, and Mr. Lee jointly signed the agreement. The ceremony took place in the Jin Jiang Hotel, one of Shanghai's oldest and most famous hotels.

The event was witnessed by about



100 guests, including officials from the Shanghai Municipal Government, a representative from the Ministry of Communications in Beijing, the Korean Consul General in Shanghai, and executives from COSCO Shanghai, Penavico Shanghai and Sinotrans Shanghai. Representatives of major Korean companies in Shanghai, e.g. Hyndai, Samsung, Hanjin and Halla, were also invited.

Shanghai and Pusan established a sister-city relationship in 1993 and this was thought to be an opportune time for the two ports to become sister ports. Cargo traffic between the two ports was 734,000 tons (containers 55,000 TEUs) in 1992, but the figure reached 1.047 million (containers 90,000 TEUs) in 1993, representing an annual growth rate of 42.6% (61.8% for container traffic). The number of container liner services between the two ports has increased from 3 to 7 since early this year.

Mr. Tu expressed his hope that the sister-port affiliation will open up new areas of cooperation between the Ports of Shanghai and Pusan.

#### Pricing Change Wins Support at Fremantle

An intended change in pricing policy by the Fremantle Port Authority (FPA) which offers a number of advantages to ships owners and their agents has received in-principle support from the leaders of key industry bodies.

The WA Shippers Council and WA chapter of the Australian Chamber of Shipping (ACOS) have both agreed in principle to the concept of changing from the existing system, which is based on ship tonnage and hourly related charges, to the FPA's proposed new system, which is based on cargo loaded or discharged and time alongside for non-cargo carrying vessels.

The Shippers Council represents the

interests of companies shipping goods through the port and ACOS is the peak body representing the interests of the shipping lines.

Introducing the proposed changes to industry representatives at Fremantle Port, the General Manger of the FPA, Kerry Sanderson, said that consultation with the two representative bodies had brought support for the proposed change, which is subject to approval from Government.

"The proposed new system for Fremantle was suggested by customers and is based partly on the widely accepted and successful Brisbane model which levies port dues on the basis of cargo exchanged," said Mrs Sanderson.

"The new pricing structure will ensure that FPA continues to maintain its edge as manger of 'Australia's most competitive port' at the same time as providing the port services and facilities expected by shipping operators. These include maintained channels, navigational aids, emergency response and vessel scheduling and movement control."

The big pluses of the new system are that:

- ship owners and their agents will be able to calculate full port authority charges when making commercial decisions
- ship owners will no longer pay additional port authority charges attributable to delays beyond their control
- commercial parties to transactions will be aware of the correct port authority charges.

Mrs Sanderson said Fremantle was responsible for around 80 per cent by value of WA's imports and around 40 per cent of the State's exports. Maintaining efficient services and facilities was necessary to attract ships to WA. Recently Fremantle was named by the Bureau of Industry Economics as having best Australian practice for labour productivity and price for container vessels.

She said the "revenue neutrality" of the proposed changes to the Tonnage Pricing Policy, by cargo class and overall, would ensure the continuation of the competitive advantage of Fremantle Port. "Revenue neutrality" means that when an alternative pricing basis is introduced the total amount exchanged between the parties remains constant.

"In fact, Fremantle Port Authority was heartened during preliminary discussions with customers because opinions were expressed that a pricing policy based on cargo exchange as a replacement for the present Tonnage System offers advantages for port users," said Mrs Sanderson.

#### Cranes Shipped to Jaya, Colombo from Japan

Three MITSUI-PACECO Transtainer Cranes and one Portainer Crane were shipped from Tamano, Japan, to JAYA container terminal at the Port of Colombo, Sri Lanka. The Portainer Crane is equipped with a Catch-load system to prevent the crane from being overloaded by the vessel movement due to a big swell. The Transtainer Cranes are equipped with Gyro TAS System. (PACEO Newsletter)

#### PSA, Belawan Sign EDI Memorandum

#### By Adrian Lim Public Relations Department Port of Singapore Authority

We've signed a Memorandum of Understanding with the Indonesian Public Port Corporation I (PPCI) to establish Electronic Data Interchange (EDI) links with the Port of Belawan (PB). PB is situated at northern Sumatra and serves the city of Medan.

Mr Goon Kok Loon, PSA's Deputy Executive Director, signed the agreement in Medan on 3 Feb 94 with PPCI's Managing Director, Mr S.F. Makalew. The memorandum sets the basis of the co-operation.

PSA will provide PB the computer software for the capture of information on vessel arrival/departure. This will be one of the shipping information exchanged under the EDI links besides the Daily Berthing situation. At a later stage, facilities like the Container Stowage Instructions, information on Dangerous Goods and bayplans of container ships will be extended to PB. This will allow shippers to benefit from better transhipment connections through Singapore. Not only will port users gain from the faster, more comprehensive and accurate transmission of information brought by the link, the advanced and timely information flow will also help both ports plan for more efficient port operations.

PSA has established EDI links with several ports worldwide, like Bremen, Hong Kong, Port of Seattle, Le Harve, Hamburg, Marseilles, Port of Thailand and Penang. The Port of Belawan is the first Indonesian port to establish an EDI link with PSA. This agreement will pave the way for EDI links with other ports under PPCI, which supervises 15 branch ports located in the provinces of Aceh, North Sumatra and Riau in Indonesia.

#### PSA Acquires 2 Simulators for Training

The Port of Singapore has been the world's busiest port since 1986. One of the key challenges for the Port as custodian of port waters is to maintain navigational safety while managing the heavy marine traffic and providing efficient marine services such as pilotage and tug services to ships calling at Singapore.

Part of its objective as a premier maritime centre is to provide comprehensive training programmes to PSA staff and the shipping community. Port personnel undergo constant training and skills upgrading. PSA recently acquired a Full Mission Shiphandling Simulator and Quay/Yardcrane Simulator. These two simulators are located at the Singapore Port Institute, the training arm of PSA.

#### Full Mission Shiphandling Simulator

#### 1) Introduction

The Port of Singapore Authority has commissioned a Full Mission Shiphandling Simulator (FMSS) from British Aerospace Simulation Limited, United Kingdom. The \$10m Simulator was handed over to PSA in May 1993 and is located on the 5th Storey of the Singapore Port Institute (SPI).

This purchase will upgrade marine training for Port personnel and meet the need to improve the level of navigational standards in port waters. The FMSS is another means by which PSA will provide more comprehensive training to its staff, local and regional shipping community.

## 2) Rationale for a Shiphandling Simulation Centre

PSA's main objectives for acquiring the FMSS are as follows:

• To provide enhanced training for persons employed or engaged in marine related activities both within and beyond PSA in the following areas:

- i) Skill enhancement for marine personnel
- ii) Crisis management
- iii) Aptitude examination for upgrading and recruitment and pilotage exemption
- iv) Bridge team management
- v) Planning and development of manoeuvring techniques
- To provide Research and Devel-
- opment capabilities in the following areas:
  - i) Port and terminal expansion
  - ii) Berth designs
  - iii) Review of navigational constraints and restrictions
  - iv) Optimisation of tug usage and utilisation
  - v) Risk analysis
  - vi) Reconstruction and investigation of marine related incidents

#### 3) Advantages of Simulator Training

#### a) Cost Effective

- i) Simulation training costs less when compared to training onboard a vessel.
- ii) It provides hands-on on-site training experience.
- iii) Training period is condensed with fundamentals easily explained, demonstrated and understood.

#### b) Operator Focus

- i) Simulated exercises are controlled by the training programme. Instructors can modify the programme and simulate changes in environment conditions and vessel traffic as required to meet specific training objectives.
- ii) Learning targets are identified and easily set in the training programme.

#### c) Quantifiable Results

- i) Training results can be monitored and quantified.
- ii) Learning curve is improved

because exercises can be played back for any chosen location and repeated to emphasise a particular point or technique.

#### d) Eliminates Risk

i) Simulation training is safe as manoeuvring techniques and strategies are developed and tested at no risk to personnel or property. Mistakes from a bad manoeuvre will not result in damage to property, injuries to personnel and loss of life.

#### e) Tactics in Crisis Management

- i) Emergency drills can be repeated until the correct response is received or procedures adhered to.
- ii) The vessel can be grounded or permitted to collide in the process of learning and exposure to a wider range of navigational crisis can be experienced in a short frame of time.

#### f) Bridge Team Management

i) Standard Operating Procedures (SOPs) can be transferred to new bridge teams accurately and effectively. New SOPs can be investigated and evaluated without risk. Any deficiencies in existing SOPs can be identified and remedial action taken immediately.

#### 4) System and Component Features

The Shiphandling Simulation system is one of the most advanced to be developed. It provides real-time computer-based simulation. Incorporating state-of-the-art simulation hardware, software and computer processors, it provides up to 3-bridge interactive exercise with realistic visual imagery and ship control equipment.

Main components of this system are:a) Main Bridge with 240° field of view

- b) Tugboat/Ownship Bridge with 120° field of view
- c) Instructor's Station
- d) Research & Development/Data Input Station
- e) Remote Monitoring and Playback/Debriefing Station
- f) Hydrodynamic Ship Models

#### 5) Courses Offered

The Port of Singapore Authority is building upon its reputation as a regional training centre. Trainees can have real shipboard training by accompanying practising harbour pilots while on the job for specific vessels or berths.

Current practising pilots are enlisted as instructors/trainers. They impart valuable experience to participants during the course.

Courses like Bridge Teamwork and Shiphandling Simulation are jointly conducted with Singapore Polytechnic to provide jointly theory and practice.

Some typical courses offered are:-

- i) Basic and Advanced Shiphandling Training
- ii) Pilotage Training and Attachment
- iii) Bridge Teamwork and Shiphandling Simulation Training
- iv) Shiphandling for Harbour Craft Masters

In addition to these programmes, courses are designed to meet the specific needs of individual clients.

#### 6) Research & Development

The system can be used to conduct R&D Studies through marine simulation. Such simulation studies cater for berth and terminal designs, channel configuration and expansion works. Such studies provide advance information on development projects and can determine the optimum design, dimensions and configurations.

The system used for R&D Studies for the Third Container Terminal at Pair Panjang and was also employed in investigatory studies in the berthing of third generation container vessels at Tanjong Pagar Berth No.7 involving Berths M9 and M10 being extended by approximately 140 metres.

#### 7) Current users

- i) PSA Harbour Pilots A total of 28 pilots and 9 trainees have used the simulator for upgrding of their licences and training respectively.
- Senior Officers from Maersk Line Singapore (6 Captains and 4 Chief Officers) have attended the Bridge teamwork and Shiphandling Simulation Course.
- iii) Harbour Craft Masters (21 Harbour Craft Masters attended the Harbour Masters Course)
- iv) Other Departments within PSA

#### 8) Future Target Users:

- i) Harbour pilots from ports in the Asia Pacific Region
- ii) R&D Studies for various marine installations within Singapore and neighbouring ports
- iii) Further R&D Studies for PSA
- iv) Other major shipping lines

#### **Quay/Yard Crane Simulator** 1) Introduction

Crane simulation is a significant development in crane operations training. Through the use of simulation, even experienced crane operators are able to enhance their operating skills.

PSA has acquired a Quay/Yard Crane Simulator from Digitran INC. USA for the training of more than 1,000 PSA's Container Machine Operators. The Simulator can simulate quay, rubber-tyred gantry, deck, mobile and tower crane operations to sharpen the skills of the Operators.

The Simulator's cabin features realistic controls, hydraulic system providing cab movements and motion sensations, a sound system for audio effects and a graphic system which provides the all-important visual aspect of the simulation. All these elements are controlled and coordinated by a high-speed computer systems. The operator sits in the simulator cab and manipulates controls, senses movements, hears operating sounds and views the operating environment just as in a crane.

Each trainee undergoes an average of 10 hrs training on the simulator as part of the 42 hours programme.

#### 2) Advantages of Simulator Training

The key advantages of crane simulation training are :

- a) Safety risks to personnel are virtually eliminated. Mistakes can be made during training with no adverse effects to personnel or equipment.
- b) The Simulator provides trainees with the opportunity to cope with problem scenarios and challenging situations before they are encountered on the job. Areas of weak trainee performance can be rehearsed repeatedly.
- c) More operators can be trained in a given period of time. The Simulator can also offer different

levels of training to cater to the needs of experienced operators as well as novices.

- d) The Simulator provides an objective means of evaluating trainee the performance. It also serves as a screening tool to ascertain the potential and aptitude of the trainees to become competent crane operators.
- e) Simulation training eliminates scheduling problems and loss of productivity caused by taking an operational crane out of service for training purposes.

#### 3) Current users

Since December 1993, the Quay/Yard Crane Simulator has been used to train some 170 Container Machine Operators from PSA and 12 crane operators from Voltri Terminal, Genoa, Italy.

PSA plans to market the Simulator training programme to the regional ports.

#### 4) Feedback

Feedback from trainees has been positive. They expressed that Simulator training had enhanced their skills in controlling and preventing speader swing during container offloading and mounting operations. They also indicated that simulation training had given them greater confidence in quay and yard crane operations during their practical training sessions.

#### ASEAN Capability to Fight Oil Spill Enhanced

The Port of Singapore Authority (PSA) will sign a Memorandum of Delivery and Acceptance with Japan for about 60 million yen worth (approximately \$\$900,000) of oil spill combat equipment under the Oil Spill Preparedness And Response (OSPAR) project during a handover ceremony on 25 Mar 94. PSA will be the custodian for the equipment to be used in efforts to minimise the impact of oil spills on the environment.

The Memorandum will be signed by Mr Goon Kok Loon, Deputy Executive Director, PSA and Mr Katsumi Matsuzaki, Managing Director of The Japan Association for Preventing Marine Accidents. The equipment, which comprises booms, an oil skimmer and oil-dispersant sprays, are part of the one billion yen worth of equipment donated by Japan to six ASEAN countries under the OSPAR project. The countries are Brunei, Indonesia, Malaysia, Philippines, Singapore and Thailand.

The OSPAR project was mooted by Japan in support of the International Maritime Organisation's adoption of the International Convention on Oil Spill Preparedness, Response and Co-operation in 1990. Upon agreement in May 1993, it is being coordinated by the Ministry of Transport of Japan (MOT) and implemented progressively by The Japan Association for Preventing Marine Accidents. The project is sponsored by the Sasakawa Foundation and The Japanese Shipowners' Association, whose representatives will be present at the signing. Officials from the MOT of Japan and the Embassy of Japan will be also be in attendance.

The OSPAR project provides the financial assistance to establish 10 bases in the six countries. Each base will have a stockpile of oil spill combat equipment. While each of the countries has its contingency plans to deal with an oil spill, the addition of equipment will enhance their individual response capability. The project also sets up an information network system linking these countries, with Jakarta as the co-ordination centre. A management committee comprising representatives from the 6 countries and Japan ensures the effective management of the equipment stockpile bases and the information network system. The project helps construct a necessary framework for international co-operation in the event of a major oil spill in the busy water ways in ASEAN. A prompt and co-ordinated regional effort will minimise adverse impact to the environment.

PSA supports the OSPAR project. The additional equipment and co-operation with other ASEAN countries will boost Singapore's preparedness and response to an oil spill promptly and effectively.



# SEEKING POSSIBILITIES ? PORT OF NAGOYA



# JAPAN'S GATEWAY TO THE WORLD



NAGOYA PORT AUTHORITY 8-21 Irifune 1-chome Minato-ku Nagoya 455 JAPAN Tel:81-52-654-7840 Fax:81-52-654-7995 A GLOBAL WAR AGAINST DRUGS

# DECLARE WAR ON THE ILLEGAL TRAFFICKING OF DRUGS THROUGH THE WORLD SEAPORTS

OUR WEAPONS INCLUDE: VIGILANCE ENHANCEMENT OF SECURITY COORDINATION, COOPERATION & COMMUNICATION WITH THE FIGHTING MEMBERS OF PORT COMMUNITY AND AWARENESS OF RESPONSIBILITY TO THE WORLD COMMUNITY



IAPH (The International Association of Ports and Harbors) supports the initiative of CCC (The Customs Co-operation Council) for their fight against the illegal trafficking of drugs