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CONTENTS

Secretary General: Dr. Hajime Sato

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Price US \$3.50 per copy US \$35.00 per year

Page Invitation to the IAPH Bursary Scheme 1981/83-Membership of Internal and Technical Committees finalized—Technical Committees and Their Terms of Reference-IAPH questionnaire on the use of inert gas on chemical tankers -Conference papers now available in package-IMCO report of "the Ad Hoc Scientific Group on Dumping" held at Dartmouth/Halifax, Canada, 4-8 May 1981-Report on Port Training by Recipient of IAPH Bursary Scheme

Open forum, Port releases:

"Trade documentation at its best" (by A.E. Baylis, NCIT)	. 21
Shawneetown, Illinois Coal Handling Facility	. 22
Annual Report 1980: Clyde Port Authority	. 24
Annual Report 1980: Oslo Port Authority	. 25
Annual Report 1980: Port of Helsinki Authority	. 27
Annual Report 1979/80: Townsville Harbour Board	. 28
Annual Report 1980: Ports Authority of Fiji	. 29
Industrial Harbour Complex of Suape, Brazil	. 31

International maritime information:

World	port	news:	
~			

Coal port design: AAPA	35
Toll increase recommended: Great Lakes Seaway	35
Coal is (once again) King: Haven Amsterdam	40
Disappointment in Rotterdam over delay in shaping	
common seaport policy	41
New Facilities in the Port of Rijeka	43

The Cover: Port of Colombo, Sri Lanka. See also article on Sri Lanka Ports Authority on page 47.

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and we're still listening ...

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IAPH announcements and news

Invitation to the IAPH Bursary Scheme 1981/83

Mr. J.K. Stuart, Chairman of the IAPH Committee on International Port Development, announces the Bursary Scheme for 1981/83 with the conditions given below.

Following the success of the Scheme in the period 1979/ 81 a decision was made at the Nagoya Conference to increase the number of bursaries available in the period June 1981 to May 1983 to 15. The maximum financial assistance available per bursary has also been increased to US\$3,500.

Applications for bursary assistance must be forwarded to the Chairman of the IAPH Committee on International Port Development in accordance with the requirements of the Scheme and on the Application Form (obtainable from the Secretary General, but to save time, applicants are recommended to make up their own in accordance with the required application form contents reproduced below using standard international letter paper e.g. 295mm high x 210mm wide). Applications must be supported by the Chief Executive of the applicant's port authority and accompanied by evidence that the applicant has been accepted for a specific course by a host port or college.

Conditions for entry:

- 1. The object of the Scheme is to provide financial assistance towards the cost of sending selected applicants on approved training courses overseas. Approved training courses are, for instance, those available in developed ports as set out in the International Survey of Port Training Facilities and Requirements published by the Committee on International Port Development and distributed to all IAPH Members.
- 2. Subject to the availability of funds, up to 15 bursaries not exceeding US\$3,500 each will be awarded to approved applicants from any developing port in all developing countries in membership of IAPH.
- 3. Applicants, must have been employed in an IAPH member port for at least three years, should not be older than 50 years of age, and must already be employed in a junior or middle management capacity. After completion, the application form, which may be obtained from the Secretary General of IAPH (or prepared by the applicant himself), must be sent to the Chairman of the Committee on International Port Development. The form must include a statement confirming the suitability of the applicant for the course he wishes to attend and indicating the benefit both the port and applicant seek to achieve from the course. The statement should also indicate the applicant's potential for future promotion.
- 4. The application form must be accompanied by a letter from the developed port confirming its willingness to provide the required training and specifying the date of commencement and duration of the course.
- 5. The Bursary Scheme will be open, subject to the avail-

ability of funds, throughout the remainder of 1981, 1982 and during 1983 up to the commencement of the 13th Conference. Applications may be forwarded to the Chairman of the Committee on International Port Development at any time during this period and will be considered by him. The decision of the Chairman of the Committee on International Port Development will be final. The decision will be notified to the applicant, his Chief Executive, the Chief Executive of the developed port in which the training is to take place and the President of IAPH who will authorize the Secretary General of IAPH to disburse the necessary funds from the Technical Assistance Fund in due course. Fees payable to the host port authority will be remitted direct and the balance of the bursary after travel costs will be deposited with the host port for the applicants use. The host port/applicant will be required to account for expenditure and to reimburse the Technical Assistance Fund any monies not spent out of the bursary award.

6. After completion of the course, successful applicants will be required to prepare a brief report indicating how they propose to apply the training to their present employment. The report, which must be sent to the Chairman of the Committee on International Port Development within one month of the completion of the course, will be published at the discretion of the Chairman of the Committee on International Port Development, in "Ports and Harbors" magazine. Successful applicants will also be required to obtain and forward with their own report a letter from the developed port giving their opinion of how he has carried out the course and the benefits he has derived from it.

Application Form for International Association of Ports and Harbors' Bursay

For completion by applicant personally

- 1. Name of Applicant
- 2. Port Authority
- 3. Present Appointment
- Educational Qualifications (Please also indicate whether you are fluent in English, French or Spanish)
- 5. Professional/Technical Qualifications
- 6. Career History
- 7. Previous Overseas Courses attended
- Course for which application being made (Specify nature of Course, duration and location of host port/college)
- 9. Applicant's reasons for selecting required Course
- 10. Amount of Bursary for which application is made (Particulars of costs should be given in support of the (Continued on page 8 bottom)

Age

Date Appointed

Membership of Internal and Technical Committees finalized

Following the precedent set by his predecessors, the first and most important task for President Mayne was to appoint the chairmen and members of the 3 internal committees and 6 technical committees for the new term which lasts until the 13th Conference of IAPH.

The appointments used to take place so that they could be announced during the course of the closing session of conference, however, due to the overall restructuring of the committees at the 12th Conference, Mr. Mayne announced only the names of the chairmen and vice-chairmen at Nagoya.

Candidates comprising the existing members and new applicants were referred to the respective chairmen and following some small arrangement of those who wanted to serve on more than one committee, altogether 175 persons were appointed to serve on the 9 committees. The multifaceted nature of these committees is illustrated in their terms of reference and the membership composition which are reproduced in this edition.

Chairmen of Internal & Technical Committees and Legal Counselors



Constitution & By-Laws Mr. J.F. Stewart General Manager Wellington Harbour Board New Zealand



International Port Development Mr. J.K. Stuart Deputy Chairman & Managing Director British Transport Docks Board U.K.



Cargo Handling Operations Mr. R.P. Leach Executive Director Port of Houston U.S.A.



Legal Protection of Port Interests Mr. André Pagès Ingénieur Général des Ponts et Chaussées France

(Continued from page 7)

application)

Travel Costs Course Fees Accommodation and other costs

Total

11. State any other source from which finance for undertaking course will also be obtained and the amount of finance already obtained. (e.g. employing port authority, government, international aid organizations such as

8 PORTS and HARBORS - SEPTEMBER 1981



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Port Safety, Environment and Construction Mr. J.M. Wallace President Maritime Services Board of N.S.W., Australia



Public Affairs Mr. F.M. Wilson General Manager Port of Brisbane Authority Australia

UNCTAD, etc.)

APPLICANT'S SIGNATURE DATE

Form to be returned with evidence of acceptance by host port/college for specified course to:

Mr. J.K. Stuart, Chairman, IAPH Committee on International Port Development, c/o British Transport Docks Board, Melbury House, Melbury Terrace, London NW1 6JY England, U.K.



Membership Committee Mr. J.P. Davidson Chairman Clyde Port Authority U.K.



Trade Facilitation Mr. R.L.M. Vleugels Director-General Port of Antwerp Belgium



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12 PORTS and HARBORS - SEPTEMBER 1981

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.PORTS and HARBORS - SEPTEMBER 1981 13

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14 PORTS and HARBORS - SEPTEMBER 1981

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Technical Committees and Their Terms of Reference

1) Cargo Handling Operations Committee

To examine and keep under review matters relating to the planning, development and operation of cargo handling facilities and systems including:—

- general cargo
- containerization
- Ro/Ro
- Barging
- Equipment
- Manpower training

To report, advise and make recommendations thereon, as appropriate or as may be requested, from time to time, by the Association;

To establish sub-committees;

To take such action, alone or jointly with the representatives of inter-governmental and other international maritime organizations to further the interests of ports and harbors, as may be authorized from time to time by the Association, the Board of Directors, or Officers authorized to act on the subject on behalf of the Association; and to undertake day to day liaison with other international and national organizations as necessary.

2) Port Safety, Environment & Construction Committee

To consider matters relating to the construction, main-

tenance and safe marine operation of ports and harbors and the protection of the port environment, including vessel traffic services, the control of dangerous substances, pollution control and crisis management;

To report, advise and make recommendations thereon, as appropriate or as may be requested, from time to time, by the Association;

To establish sub-committees, and to constitute the Dredging Task Force to continue the functions of the former Ad Hoc Dredging Committee;

To take such action, alone or jointly with the representatives of inter-governmental and other international maritime organizations, to further the interests of ports and harbors, as may be authorized from time to time by the Association, the Board of Directors, or Officers authorized to act on the subject on behalf of the Association; and to undertake day to day liaison with other international and national organizations as necessary.

3) Trade Facilitation Committee

To consider procedures and documentation relating to the facilitation of trade through ports and harbors including the communication and processing of data locally, nationally and internationally, as appropriate;

To report, advise and make recommendations thereon, as appropriate or as may be requested, from time to time, by the Association;

To establish sub-committees;

To take such action, alone or jointly with the representatives of inter-governmental and other international organizations, to further the interests of ports and harbors, as may be authorized from time to time by the Association, the Board of Directors, or Officers authorized to act on the subject on behalf of the Association; and to undertake day to day liaison with other international and national organizations as necessary, including the Customs Cooperation Council, the International Chamber of Shipping and the International Chamber of Commerce.

4) Committee on International Port Development

To consider, propose and administer schemes for the provision of training, education and technical assistance to developing ports and to stimulate cooperation between developing and developed ports;

To report, advise and make recommendations thereon, as appropriate, or as may be requested, from time to time, by the Association;

To establish sub-committees;

To take such action, alone or jointly with the representatives of inter-governmental and other international maritime organizations, to further the interests of ports and harbors, as may be authorized from time to time by the Association, the Board of Directors, or Officers authorized to act on the subject on behalf of the Association; and to undertake day to day liaison with other international and national organizations as necessary.

5) Committee on Legal Protection of Port Interests

To examine and keep under review the provisions of international law affecting the interests of port;

To report and make recommendations thereon from time to time as may be appropriate or requested by the Association;

To take such action, alone or jointly with the representatives of inter-governmental and other international maritime organizations to further the interests of ports and harbors, as may be authorized from time to time by the Association, the Board of Directors, or Officers authorized to act on the subject on behalf of the Association; and to undertake day to day liaison with other international and national organizations as necessary.

In consultation with the IAASP and the IMB (International Maritime Bureau) on order and security and other related matters affecting the interests of ports; and

To establish sub-committees to consult with and advise other Committees on matters arising from their terms of reference and which impinge upon or may affect the legal protection of ports interests.

6) Committee on Public Affairs

To outline suitable practices for implementing port development plans,

To consider the effects of changes in shipping technology and cargo handling practices on the community.

To identify community attitudes to port development, port operations and industrial development in port areas,

To identify areas and sources of public concern,

To assess the economic impact of the port on the community, and,

To develop a public relations strategy to cope with the problems of the community.

To establish sub-committees;

To report, advise or make recommendations thereon, as

16 PORTS and HARBORS - SEPTEMBER 1981

appropriate, or as may be requested, from time to time, by the Association.

IAPH questionnaire on the use of inert gas on chemical tankers

The questionnaire was sent to all IAPH regular members, on June 18, 1981, for reply to Mr. A.J. Smith, IAPH Liaison Officer by the middle part of July.

The Questionnaire: An Inter-Industry Group, including IAPH, is currently considering aspects of the use of inert gas on chemical tankers. As a preliminary to determining the cost to the industry if pure nitrogen has to be used, it would be helpful to know:—

- 1) If your Port handles flammable chemicals from 'chemical tankers' and, if so, from how many jetties,
- 2) If your Port, and jetty, has liquid nitrogen tank available for loading directly to an appropriate tank on a chemical tanker,
- 3) If liquid nitrogen facilities are not available, are you able to obtain a road tanker load of liquid nitrogen on a regular basis (say every 3-4 days).

Please give your replies to the above questions, as soon as possible, to permit an early assessment of the position, by sending them to:-

Mr. A.J. Smith, British Ports Association 3 Queen Square, London WC1N 3AR, U.K.

Conference papers now available in package

This is to announce that the papers (including some reports in French language prepared by our French port members) presented to Nagoya Conference will be available for order, as listed hereunder. Because bank commission for cashing each check amounts to as much as \$6, individual items within each package cannot be ordered. As to the papers in French, our thanks go to our French port members as they kindly donated the papers for this purpose and so we are only charging mailing costs for these papers and bank commission. The charges for all other papers include both printing and mailing costs.

PACKAGE ONE

- 1. "International Port Cooperation"52 pages(Keynote Paper-1)52
- by A.J. Carmichael, Ports Adviser, The World Bank 2. "Port's Roles in the Regional Development" 93 pages (Keynote Paper-2)

by Makoto Yoshimura, Director-General, Bureau of Ports & Harbours, Ministry of Transport, Japan

3. "Papers Presented" 52 pages 1) "Legal Rights and duties of the Port Authority"

- by Kurt G.W. Grönfors, Professor, Institute of Legal Science, Gothenburg University, Sweden
- 2) "A Case Study of the Need for the Establishment of a Ports Authority" by Loh Heng-Kee, Director-General, Ports Authority
- of Fiji, Fiji 3) "A Broad-Based Impact Analysis of a Port Using an
- Interregional input-output system and a Logit Model

of Interregional Trade Patterns"

by Fujio Okazaki, Professor, Meiji Gakuin Univ., Japan

- 4. "Contributed Papers" 112 pages1) "Maritime Education and Training"
 - by Charles Bryan, President, Industran Services, Canada
 - 2) "The Geographic Advantages of Mediterranean Ports in Relation to the Increased Cost of Fuel" by R. Caillol, Direction Commercial, Etudes et Trafic, Port Autonome de Marseille, France
 - 3) "A Dredging Conflict: Ocean Commerce and the Environment"
 - by H.R. Haar, Jr., Associate Port Director, Port of New Orleans, U.S.A.
 - 4) "Port Management in Developing Countries" by Syed Mansur-ul Haq., Chairman, Chittagong Port Authority, Bangladesh
 - 5) "Some Facts and Remarks concerning Communications between Developing Ports and Ships prior to Their Arrival" by D. Bert Kruk, Lecturer; Merchant Shipping, Inter-

national Institute for Hydraulic and Environmental Engineering, Ned.

- 6) "Ultra Carrier System (UCS)" by Everth Larsson, Associate Professor, University of Lund, Sweden
- 7) "Centralized Automated Maintenance and Control" by Vernon L. Ljungren, Chief Engineer, Port of Seattle, U.S.A.
- 8) "Port of Seattle: The Challenge of Development Planning in the Urban Residential Setting" by Clifford C. Muller, Director of Planning & Research, Port of Seattle, U.S.A.
- 9) "The Contractural Framework of Marine Transportation of Oil"⁻ by Tormod Rafgard, General Manager, The International Association of Independent Tanker Owners (Intertanko), Norway
- (Intertained), rotway(Ports and Politics"by John A. Raven, Chief Executive, SITPRO Board, U.K.
- 11) "Maintenance at the Port of Vancouver" by W.E. Royds, Maintenance Manager, Port of Vancouver, Canada
- 12) "Financial Evaluation of Port Projects in Developing Countries" by Yoshio Takeuchi, President, The Overseas Coastal

Area Development Institute of Japan (OCDI), Japan

PACKAGE TWO

1.	Report of the Committee on International Port		
	Development	11	pages
2.	Report of the Committee on Containerization,		
	Barge Carriers and Ro-Ro Vessels	81	pages
3.	Bridge Clearances in World Ports		
	(by the above committee)	26	pages
4.	Report of the Committee on Community		
	Relations	151	pages
5.	Report of the Committee on Legal Protection		
	of Port Interests	39	pages
6.	A Survey of World Port Practices in the Ocean		
	Disposal of Dredged Material as Related to	36	pages
	the London Dumping Convention (xee	rox (copy)

- 7. Special Care Measures for Safe Disposal of Polluted Dredged Material in the Marine Environment
- 8. Discussion Papers for the Open Symposium on Trade Facilitation 23 pages

64 pages

PACKAGE THREE

 Guidelines for Safety and Environmental Protection of Ports (Report of the Committee on Large Ships)
 302 pages

PACKAGE FOUR (in French) (xerox copied)

Rapport de la Commission pour le Développement Portuaire International

Rapport du Comité sur la Conteneurisation, les Transporteurs de Barges et les Navires Rouliers

Rapport sur le Comité de Protection des Intérêts Portuaires

Communication de Mr. K. Grönfors 'Droits et Devoirs Légaux de l'Autorite Portuaire Relativement aux Clients'

Communication de Mr. Loh Heng-Kee 'Monographie de la Necessité de l'Etablissement d'une Autorite Portuaire'

Thème de la lère Séance de Travail 'Coopération Portuaire Internationale' par Mr. A.J. Carmichael

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IMCO report of `` the Ad Hoc Scientific Group on Dumping '' held at Dartmouth/Halifax, Canada, 4-8 May 1981

(Extract from Document: LDC VI/3)

Scientific Aspects of Disposal of Dredged Material

The observer from the International Association of Ports and Harbors (IAPH) introduced document LDC/SG.V/10 dealing with the problems of disposal of dredged spoils contaminated with Annex I substances. He pointed out that the quantities of dredged spoils generated were likely to increase and would thus necessitate a continued and increasing need for dumping at sea. Although in the majority of cases, spoils could be dumped at sites selected by national licensing authorities, the IAPH expressed concern at the

(Continued on next page bottom)

Report on Port Training by Recipient of IAPH Bursary Scheme :

Attachment Training Course at Port of Singapore Authority's Training School, March 1981

by Mr. J.K. Enyame, Ghana Ports Authority

I departed from Ghana on 7th March, 1981 to Singapore and arrived there on 9th March, 1981 for an attachment course at the Port of Singapore Authority's Conventional Wharves and attachment training at P.S.A's Crane Section for another two weeks.

Originally I was nominated and accepted for "Training for Operations Course" but this was cancelled at the last minute and alternative arrangements were made for me for the above courses.

At Singapore a new programme was however drawn up for me for the following courses:--

- (1) Attachment training at P.S.A's Conventional Wharves 9-13 March, 1981.
- (2) Attachment training at P.S.A's Container Terminal 16-27 March, 1981.
- (3) Attachment training at P.S.A's Crane Section 30th March to 3rd April, 1981.

I joined the group on the 10th March, 1981 at P.S.A's Conventional Wharves where the course was already one week old. The course was basically designed for officers who were involved in conventional operations.

I participated therefore only in the last series of lectures on stacking of cargo in the sheds, effecting delivery of cargo and customs warehousing of cargo. We were at the sheds to observe the practical aspects of the operations, too.

The Attachment at P.S.A's Container Terminal began from 16-27 March, 1981. The training included the theory and technique of stripping and stuffing of containers. We went through a programme of planning, sorting and loading and discharging and stacking of containers with the container cranes, straddle carriers and heavy fork-lift trucks. There was also practical training in discharging and loading roll-on/roll-off vessels with timber.

The planning and operation of the P.S.A's Container

(Continued from page 17)

possible problems associated with the disposal of spoils dredged from areas contaminated by Annex I substances. In circumstances where such spoils failed to meet the criteria for exemption from Annex I under the definitions of "trace contaminants" or "rapidly rendered harmless" as defined at the Third Consultative Meeting (LDC III/12, Annex 6), the IAPH proposed that "special care" methods might be considered acceptable for disposing of such spoils. These methods could include capping with clean material at dumping sites, borrow pit infill with subsequent capping, submarine canyon infill, hypersaline basin infill, and deep ocean dumping.

Several delegations expressed their appreciation to the IAPH for having brought forward proposals to address the problems of the disposal of dredged spoils contaminated by Annex I substances. Some delegations, while recognizing

18 PORTS and HARBORS - SEPTEMBER 1981

Terminal is computerized and this makes the operation very reliable and efficient.

Special attachment was arranged for me at Keppel Wharves at the Cranes Section. It was the most stimulating of all because I was at home with the cranes, my special field. I also spent 4 days at the portal cranes section at the drydocks at the Keppel Wharves to learn to operate the portal cranes, too.

I was taken through a lecture programme on how to operate the various types of cranes such as 30-ton mobile crane, 35-ton close slewing crane, 40-ton Coles Mobile Crane, 26-ton Hyster Forklift Truck and 25-ton Lancer Boss Side Loader and did operate these cranes. There was also a programme on the repair and maintenance of these cranes and planning the effective utilization of the equipment. The training was intensive and covered all aspects of crane operations with special emphasis on safety of cargo and the efficiency of handling the equipment.

My observation was that most of the personnel at the Port Operations Department of P.S.A. know much about all the aspects of the Department and they could work at any section without much difficulty. It makes for very good interaction among the staff and for work to progress smoothly.

The trip has afforded me the opportunity to see how the world's third busiest port is operated and will enhance my efficiency because I have learnt to operate bigger and more sophisticated cranes which we do not have at the moment.

Given the chance, I will be able to train my colleagues and juniors both at Tema and Takoradi on how efficiently to handle our cranes.

I take this opportunity to express my sincere gratitude to the Management of the Ghana Ports Authority for making it possible for me to attend the course in Singapore.

I wish to thank also the IAPH Secretariat and the Chairman of the Committee on International Port Development, Mr. J.K. Stuart and lastly but not the least the Port of Singapore Authority especially our course co-ordinator, Mr. K.T. Matthew who helped immensely to make my training possible.

that the "special care" measures proposed by the IAPH could be considered by national licensing authorities as a means of mitigating the possible adverse consequences of dumping dredged spoils, expressed some reservations on a number of the "special care" provisions proposed. A particular concern was expressed at the possible adverse environmental impact of dumping spoil in submarine canyons, hypersaline basins and the deep ocean.

There was general agreement that, while many of the "special care" techniques showed promise for future use, there is at present very little information on the extent to which such techniques will be successful in practice. The Ad Hoc Group, therefore, agreed that dredged spoil disposal operations involving the "special care" techniques proposed by the IAPH should be conducted as field re-

(Continued on page 26 bottom)

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"Trade documentation at its best"

By Arthur E. Baylis, Executive Director of the National Committee on International Trade Documentation, U.S.A.

Whenever people think of trade barriers that work against the smooth flow of international trade, such things as tariffs, quotas, preferences, duties and commodity restrictions come to mind. All too often, another real barrier – the paperwork barrier – is not mentioned or is thought to be too complicated to encourage solution. This paperwork barrier, more politely referred to as trade documentation, has long been one of the most costly and time-consuming impediments to international trade.

With so many parties involved in most transactions, each viewing them from his own perspective of information requirements and protection, shipments often become enshrouded in documents of all sizes, shapes and data content, with much of the basic information being repeated many times. This has resulted in the cliché that "shipments move on paper," an observation that is often all too true. In trying to find solutions, the goal has been to get the documents off the back of the shipments, and to modernize the information technology and international business demands.

For almost twenty years, specific and concentrated efforts have been made to correct documentation practices, requirements and procedures that have developed since the beginnings of international commerce. Commercial organizations, nationally and internationally, and governments in many countries have joined in work that is now being recognized as an all-out attack on paperwork. Successes thus far are impressive and have resulted in improvements not only in documents, but also in the procedures that are connected with them. It is encouraging to note that this campaign is supported by the many parties that deal in documents, with each one realizing that standards, simplicity and fewer papers will be better for everyone.

Leading this activity and representing the commercial parties are the many "National Organizations" such as NCITD in the United States, SITPRO in England, COST-PRO in Canada, JASTPRO in Japan, SWEPRO in Sweden, SIMPROFRANCE in France, and similarly-dedicated bodies in about 30 countries. The International Chamber of Commerce in Paris and the United Nations are also active in this work, with the latter coordinating its activities through the Economic Commission for Europe (ECE) in Geneva. The departments and agencies of many governments, including the United States, participate actively in this work. Those most concerned in the U.S. Government include the Department of Transportation, U.S. Customs, Treasury, Maritime Administration, Department of Commerce, Federal Maritime Administration, and the Bureau of the Census. As a result of the combined interests and concerted efforts

of all of these bodies, and despite their wide geographic separations and differences of responsibilities, they have made great progress toward the common goal of trade facilitation.

Also, through this organized support, the many commercial interests that represent the lifeblood of international trade are joining in the crusade. This includes exporters, importers, forwarders, brokers, carriers, banks, insurance interests, computer specialists, trade specialists, and many others. With such dedication to a cause and backing for its programs, something productive was sure to happen – and it is happening.

Highlights of changes that have occurred within the last few years are impressive, and are all the more convincing as these are put into practice. The basic pattern, or format, for trade documents has been standardized around a common layout configuration now in worldwide usage. The U.S. adaptation is identified as the U.S. Standard Master for International Trade, which provides a simple format for the design of all other required documents. Using this design as the base, it is then easy to prepare bills of lading and such other transport-oriented papers as may be necessary and also commercial invoices and related commercial transaction papers. With all documents coming out of the same mold, the preponderance of the information that is common to all need only to be typed or otherwise inserted once. Specialized data requirements have been greatly reduced and refined to fit easily and accurately in the "Optional Area" at the bottom of the standard forms.

It has taken almost 15 years since the adoption of the design of the standard format to achieve general acceptance, actual implementation, and usage. Such usage is now growing and being followed throughout the world. In some countries the implementation is growing faster than in the United States. To help this trend further, the basic information (usually called data elements) that is really needed to conduct most transactions has been identified, sorted out, defined and catalogued. Now, they mean the same things to everyone involved in the transaction, and their placement on the standard form is clearly understood.

All of this activity over the years has had the effect of clearly identifying all of the participants in international shipments and their responsibilities for providing information or documents. It has enabled many documents to be eliminated entirely or combined with others, along with those that must remain being standardized. For success in changing age-old documents, procedures and habits, the help of everyone is needed – in this country and elsewhere. Particularly important is the cooperation of shippers, carriers and forwarders on the commercial side, and of Census, Customs and the Export Regulatory Agencies from the U.S. Government. Fortunately, such cooperation has been forthcoming in abundance. In many other countries, (Continued on next page bottom)

Shawneetown, Illinois Coal Handling Facility

By L.L. Leal, President and Chief Executive Officer, CRS Group Engineers, Inc. and D.S. Brewer, Project Manager, CRS Group Engineers, Inc.

Like much of southern Illinois, Shawneetown's economy is based on coal mining. Like the rest of southern Illinois, Shawneetown had been the victim of an economic slump

(Continued from page 21)

including many controlled economy nations, there is a high pitch of enthusiasm for the programs to free shipments from the shackles of unnecessary documentation and the old slow, tedious procedures for information exchange. Obviously, such total international cooperation and work toward common goals is essential for success. One country's exports are another country's imports, so the standards for information exchange that may be created by the exporter in the first instance must be the same as those acceptable to the importers and vice versa, if the transaction is to move smoothly and the information is to be cleared accurately. Now such understandings are in effect and are being implemented, thanks to the work that has been accomplished in the document standardization field.

Success in the documentation program is an important international milestone in itself. However, it becomes all the more important when viewed in the light of necessary preparatory work for the automation of trade information. In many operations, the era of computerization of information is already here. This is particularly true in the handling of domestic business transactions. Now the handling of international trade information through automated programs is becoming very popular and many techniques are being employed to accomplish the results. All of these programs can now benefit by the document standards and simplification that have already been prescribed. The result will be that what the computers will handle, and how it will be programmed will be the minimal agreed data elements, and not the disorganized array of information that appeared on documents only a few years ago.

As this transaction to fewer and simpler documents, and to the automated handling of trade information has been taking place, participants have learned many important lessons.

Among these are:

- 1. Changing old habits, painful as the process may seem can be very profitable, once the objective is understood.
- 2. Most parties want to know much of the same information, and, therefore, the fewer times it needs to be repeated, the better the results are.
- 3. In the process of standardizing documents, each party is forced to review and update his informational needs, a process that usually results in discarding a lot of data no longer used.
- 4. Information that "travels" should be clearly separated

up until 1973, the year of the first major oil embargo. In the analysis that followed that worldwide upset, interest was revived in coal as the most available and usable form of energy next to oil. In addition to long term economic revitalization, the development of the coal industry would mean an immediate surge of regional industry in plant construction and maintenance — so the population of Shawneetown was encouraged about its future as the nation's coal suppliers.

In 1974, the Shawneetown Regional Port District decided to enhance the local coal transportation system by

from "in house" information, with only the former being required on the standardized trade documents.

5. In the work to eliminate unnecessary or special documents, the data contained on the standard bills of lading and the standard commercial invoices can often serve multiple purposes. The expanded use of these two key forms — one for transport and one for the buyer-seller relationships — can produce lasting efficiencies and economies.

Parties responsible for port operations are often confronted with delays and congestion, as well as lost shipments, pilferage and mis-direction of cargo. The same is true at truck and rail terminals and at airports. While there is no quick or easy panacea for all of these problems, it is known that many of them are caused by lack of timely information. Late documents, wrong documents, or those that are incomplete or contain errors - or no documents at all - can, and do, tie up port and terminal operations and paralyze traffic flow. Since those who are responsible for these operations usually have little or no control over the preparation and flow of basic documents, they are at the mercy of an information system beyond their reach. Undoubtedly, many of the port and terminal problems that are now causing so much trouble will be minimized as improved documentation procedures are adopted. Documentation can create, and can also solve, port problems. For that reason, it is important that those responsible for goods handling at ports and terminals be kept abreast of improvements in documentation and the procedures for handling information.

In all of this documentation standardization and simplification work, the requirements of all of the transaction participants have been kept in mind. The normal question, constantly asked and answered, is "If I do make the changes in my information programs, what's in it for me?" The answer is simply — greater efficiency, economy, accuracy and speed in each transaction. It is a game in which there are no losers.

The programs for change in international trade documentation are available now, and now is the time for them to be used by everyone who is interested in making involvement in international trade more attractive.

(By courtesy of VIA PORT of New York-New Jersey)

22 PORTS and HARBORS - SEPTEMBER 1981

building a coal loading and transfer facility on an undeveloped site near the Ohio River. As a public operation, the new facility would receive coal from any coal mine in the area, stockpile, reclaim and manage its transfer to river barges. The Port District, of course, wanted to utilize the most sophisticated, efficient equipment and designs available. The plan adopted by the Port District called for a completely automatic stacker and reclaimer system with simultaneous stacking and barge-loading capability, accessed by both rail and trucks.

Funding for the project was located through both federal and state sources. The U.S. Department of Commerce, Economic and Development Administration awarded the Port District \$2.7 million in grants and loans. The State of Illinois through its Office of Business and Economic Development and the Capital Development Board (CDB) made grants and loans totaling an additional \$1.6 million, for a total project budget of \$4.3 million.

In sum, the Port District had a set of ambitious plans – limited by some strict guidelines, several government reviews, and a \$4.3 million budget.

Critical Factors in Winning the Job

The Port District engaged a consultant and proceeded into detailed design. Land acquisition and site preparation was begun. Because all available funding resources had been tapped, there was absolutely no room in the budget for cost variation. Unfortunately, after nearly \$800,000 was spent and the design work nearly complete the construction cost was estimated at about \$9 million or more than twice the budget. It was now obvious to all involved that the facility would need to be completely re-designed to bring the cost within the remaining \$3.5 million.

As an added complication, the Port District had arranged for the new facility to adjoin an existing conveyor belt and marine operation owned by neighboring Peabody Coal Company, the nation's largest coal miner. Peabody was to operate the completed facility under a contract with the Port District. The agreement automatically involved Peabody in design approval and meant that neither quality nor ease of operation and maintenance could be sacrificed in the cutbacks from the original plan.

The new realities facing the Port District were: 1) a site purchased and prepared, and, 2) a \$9 million facility design to be re-worked to fit into a \$3.5 million budget.

With these factors in mind, the CRS Group conducted an independent feasibility study with the conclusion that there was indeed a way to design and build a modified, though entirely suitable, coal handling complex for the money available. This early Master Plan was firmly rooted in reality – containing, in addition to planning and concept design, cost estimating and the development of a construction program and budget. Basically, our solution called for construction of the first phase of the Port District's desired facility within the budget available.

The design efforts of the CRS Group were twofold: to stretch the construction dollar for the initial phase of the coal handling project and to lay a good foundation for its future development. While certain conveniences (such as rail access and automatic stocking and reclaiming) were eliminated from the first phase, the design of the facility included allowances for expansion and improvement. For example, the motors for the conveyor system are sized for service to the full project capacity. The other important future consideration, the automatic stacker/reclaimer, would require the addition of another conveyor, also scheduled into our long term Master Plan.

After presentation of the CRS Group study in February of 1976, the Port District and funding agencies accepted our strategy, and when the contract between the CDB and the Port District was drawn up, both the statement of goals for the project and the detailed building program were adopted from the CRS Group study.

Initial Phase Design – Locating the Essential Components

Because of the limited budget, the CRS Group organized the project around tight control and strict accountability. We established a project team headed by a Project Director, responsible for maintaining client contact, and served by a Project Manager, responsible for overall control of the work. The Project Manager was in turn supported by a supervisor and team for each of the engineering disciplines – structural, electrical/mechanical and civil. Two consultants outside of the CRS Group were engaged: FEECO International of Green Bay, Wisconsin for the material handling system and A & H Engineering Corporation of Carbondale, Illinois for the geotechnical engineering and testing services.

The revised in-budget version of the Shawneetown Coal Handling Facility was designed as a truck only operation, consisting of conveyors, transfer tower, rail-mounted charging hopper, office and maintenance building for rubber-tired equipment, electrical buildings, scale house and electrical services. The project included 3,000 feet of perimeter road, specially designed to accommodate the fireclay material used for the stockpile embankment; a pollution control facility for primary treatment of surface runoff collected from the site; and fueling services. We also designed the heating and ventilation systems, dust control, pumping, piping and mechanical facilities for the process works.

The conveyor system was a major cost and concern in the design, amounting to about one-half of the construction cost for the entire project. The facility's conveyors transport the areas' high-BTU coal, processed to two- or threeinch pieces at the mines to a transfer tower and eventually to the linkup with Peabody Coal Co.'s system. The conveyor is rated at 3,000 TPH of coal at 600 FPM. The belts are 72 inches wide. The yard conveyor, which has a low profile to permit transfer of coal from stockpiles, is 735 feet long and rises to the transfer tower. A second conveyor, 680 feet long transfers the coal to the Peabody system and eventually to river barges.

The conveyor system is served by a structural steel hopper $(14' \times 31' \times 13')$, with a capacity of 58 cubic yards. The hopper rides on 490 feet of railroad track to service approximately 11 acres of coal stockpile area.

Cost and Schedule Success

From April 1977 to May 1978, we proceeded through the stages of design and the preparation of construction documents. We presented a construction cost estimate along with drawings at each design stage, and this careful cost tracking during the detailed design proved invaluable in meeting the project budget. Actually, when the seven separate contracts involved were bid in July 1978, costs were running 5% below our final estimates. And the project was still within the estimates presented by the CRS (Continued on next page bottom)

Annual Report 1980 : Clyde Port Authority (Extracts)

1. Chairman's statement (extract)

As the Report and Accounts demonstrate, the prolonged economic recession and consequential fall in international trade, coupled with the drop in crude oil imports from the Middle East and further rationalisation of the conventional break/bulk general cargo trades into containers, all contributed to a fall in tonnage and revenue in 1980. Our finances were also affected by the four-week strike at the container terminal at the start of the year.

At Glasgow the decline in conventional break/bulk cargoes resulted in high labour surpluses throughout most of the year and our stevedoring subsidiary had a loss of £923,000 of which £532,000 was directly attributable to labour for whom there was no work. The container terminal also recorded a poor year, exacerbated by the withdrawal from the North Atlantic route of Seatrain Lines, Inc. whose UK/North Atlantic trade was wholly centred on Greenock and accounted for almost one-third of the terminal's traffic. The terminal now has surplus capacity and surplus labour and its operations are being tailored in keeping with the trade offering. The port of Ardrossan also suffered from a drop in trade and our haulage and warehousing enterprises did not escape the consequences of the recession. In July we had no alternative but to close the haulage operation of Scotway Haulage Limited and concentrate on general storage and container repair. The economics however of continuing to operate at the Castlebank Street site with its high burden of local rates are under scrutiny.

After exceptional items and surplus on the disposal of fixed assets totalling $\pounds 1,139,000$ the surplus for the year was $\pounds 46,000$. This disappointing result is indicative of the present recession and poor international trading climate

(Continued from page 23)

Group in February, 1976.

Construction began in October 1978, and final acceptance papers were processed in February 1980 – within four months of the Port District's original schedule set in 1977. Changes were minimal during construction, resulting in a finished project below the original budget.

On November 19, 1980, the Shawneetown Coal Handling Facility was put into service, a result of a contract with a Kentucky-based firm, Tower Resources, that calls for 40,000-50,000 tons of coal to be loaded every 45 days from a mine in Webster County Kentucky. The coal will be processed and transported to Shawneetown, shipped downriver to New Orleans, and from there on to a foreign market.

This first successful operation proved what our feasibility study asserted: that a \$4.3 million coal handling system can contain the essential ingredients to service both Shawneetown and its clients very well. As a result, the Shawneetown Coal Handling Facility is injecting new life into a depressed region of the country, and moving coal from southern Illinois to energy-hungry markets in the U.S. and around the world.

24 PORTS and HARBORS - SEPTEMBER 1981

which are having consequential long term effects on the ports and shipping industry. The traditional general cargo ports who do not have the benefit of oil revenues are now having to adjust and slim down even more rapidly than envisaged a year ago to meet the changing situation. It was therefore with considerable regret that in the latter part of the year the Authority had to take the decision to reduce its work force ranging from management staff to dock workers. Redundancies are always unpalatable — particularly so at a time of high unemployment — but in the interests of the port as a whole we were left with no feasible alternative. Provision of £511,000 was made in the accounts towards redundancy costs.

I feel I must place on record the special supplementary severance (applicable for the months of March and April 1981) being financed by the Government for registered dock workers in London and Liverpool of up to $\pounds 5,500$ per man beyond the industry's national maximum has frustrated the Authority in achieving all the reductions necessary in their dock labour force. Strong representations have been made to Government that the special severance assistance should be extended to all Dock Labour Scheme ports since the surplus of registered dock workers is truly a national problem — not one confined to London and Liverpool.

In the present climate I cannot hold out hope of a profitable year in 1981. Our balance sheet however is strong and our liquidity good and we will not shrink from taking whatever steps may be necessary to adjust our operations with a view to a return to profitability in 1982.

> J.P. Davidson Chairman

2. Consolidated Revenue and Expenditure Account for the year ended 31 December, 1980

	<u>1980</u>	1979
	£	£
Operating Revenue		
Dues		
On ships	3,783,783	4,279,996
On goods	2,592,565	2,834,421
On passengers	11,000	11,002
	6,387,348	7,125,419
Cargo handling	9,077,574	9,892,536
Cranes and plant	607,146	834,483
Warehousing and storage	1,051,187	1,365,391
Haulage	1,499,096	2,072,366
Sundry services and facilities	610,225	716,475
Other revenue	2,549,745	1,936,753
Total operating revenue	21,782,321	23,943,423

(Continued on next page bottom)

Annual Report 1980 : Oslo Port Authority (Extracts)

1. Cargo Turnover and Economy

Cargo Turnover

The Port of Oslo registered in 1980 the highest cargo turn-over ever. Altogether 5.4 mill. tons of cargo were handled -2.7 mill. tons in domestic trade and 2.7 mill. tons in foreign trade.

Foreign trade increased with 3.4% and domestic with 2.1% compared with the previous year. Last year's increase in trade is mostly due to higher import of general cargo.

The reason for the increase is to some extent due to rerouting of cargo from Gothenburg to Oslo caused by a strike in the spring of 1980. The second half of 1980 showed a more moderate traffic increase and more in accordance with the economic development in Norway.

The increase in use of containers and larger units has continued and 140 000 units were handled in 1980. Out of this total 129 000 units were transported by ship and represented 1.1 mill. tons of cargo. Compared to 1979 this is an increase of 9.5%.

The Port of Oslo has experienced a growing passenger traffic. In 1980 1.04 mill. passengers passed through the port which was 11% up from the previous year. The capacity of the passenger-ferries has increased significantly due to the introduction of new and larger tonnage.

Economy

The financial result of 1980 was satisfactory with a net profit of 2.9 mill. kroner. Undistributed profit in 1979 amounted to 3.4 mill. kroner.

The freeze of prices and income came to an end in 1980 and the income from operations accordingly increased substantially. Part of the increase in income is also due to traffic diverted from Gothenburg during the port strike in the spring of last year.

As can be seen in the table (page 26) the three main

ige 24)			1000	1070
1980	<u>1979</u>		<u>1980</u>	$\frac{1979}{5}$
£	£	Constal England	L	L
5 120 992	5 250 402	in Undertaking		
5,120,882	3,239,403	Fixed assets		
1,299,334	091,112	Cross amount	12 696 281	43 062 786
8,894,130	8,303,238	Aggregate depreciation	20 980 547	21 121 135
5 666 225	1 185 820	Aggregate depreciation	$\frac{20,980,947}{21,715,734}$	$\frac{21,121,155}{21,941,651}$
20,000,223	$\frac{4,185,829}{18,706,242}$	Capital works in progress at cost	331 411	163 192
20,980,377	18,700,242	Capital works in progress, at cost	551,411	105,172
		Hunterston marine works	22.240.564	21 505 002
801 744	5 237 181	Cost	32,249,564	31,585,003
1 563 942	1 251 328	Aggregate depreciation	63,281	21 505 002
1,505,712	1,201,020		32,186,283	31,585,003
219.516	196.227	•••	54,233,428	53,689,846
1.344.426	1.055.101	Net current assets		
<u></u>	<u>-,</u>	Current assets	1 4 2 7 9 0	144 467
(542,682)	4,182,080	Stocks	143,789	144,407
436,176	181,738	Debtors and payments in advance	28 4,364,104	3,300,387
(106,506)	4,363,818	Tax recoverable	970	43,134 8 140 000
1,355,212	1,136,360	Short term loans	8,555,000 30,766	36 200
1,248,706	5,500,178	Bank and cash balances	13 103 635	13 870 307
2,022,366	2,117,680	Current lighilities	15,105,055	15,670,507
(773,660)	3,382,498	Bank overdrafts	343 536	88 008
(703,089)	1,300,000	Creditors and accrued expenses	2 729 867	2 253 512
		Interest accrued	257 395	276 943
		Provisions	300.000	1.000.000
(70,571)	2,082,498		3.630.798	3.618.463
135,799	38,088		9,472,837	10,251,844
		Deferred liability		- , ,
65,228	2,120,586	Deferred taxation	(212,081) (347,880)
			63,494,184	63,593,810
18,760	<u>25,943</u>	Represented by		
		Capital debt	46,136,402	46,229,250
46,468	2,094,643	Reserves	12,007,265	11,960,797
	250,000	Interest of outside shareholders	18,805	25,988
46,468	2,344,643		58,162,472	58,216,035
ce Sheet	t as at	Port improvement grants	5,331,712	5,377,775
0			63,494,184	<u>63,593,810</u>
	$\begin{array}{r} \begin{array}{c} 1980\\ \underline{1980}\\ \underline{1}\\ 5,120,882\\ 1,299,334\\ 8,894,136\\ \underline{5,666,225}\\ \underline{20,980,577}\\ 801,744\\ 1,563,942\\ \underline{219,516}\\ \underline{1,344,426}\\ (542,682)\\ 436,176\\ (106,506)\\ 1,355,212\\ 1,248,706\\ 2,022,366\\ (773,660)\\ (703,089)\\ \hline{(70,571)}\\ \underline{135,799}\\ 65,228\\ \underline{18,760}\\ 46,468\\ \underline{46,468}\\ \underline{46,468}\\ \mathbf{ce\ Sheet\ 0}\\ 0\end{array}$	Inge 24) $1980 \\ fmodel{1}{\pounds}$ $1979 \\ fmodel{1}{\pounds}$ 5,120,8825,259,4031,299,334897,7728,894,1368,363,2385,666,2254,185,82920,980,57718,706,242801,7445,237,1811,563,9421,251,328 $\frac{219,516}{1,344,426}$ 1,065,101(542,682)4,182,080436,176181,738(106,506)4,363,8181,355,2121,136,3601,248,7065,500,1782,022,3662,117,680(773,660)3,382,498(703,089)1,300,000(70,571)2,082,498135,79938,08865,2282,120,58618,76025,94346,4682,094,643250,000 $\frac{46,468}{2,344,643}$ 202344,643	gge 24) 1980 £ 1979 £5,120,8825,259,403 1,299,334897,772 8,894,136Capital Employed in Undertaking5,666,2254,185,829 20,980,577Fixed assets 	Image 24)Image 24) $\frac{1980}{\pounds}$ $\frac{1979}{\pounds}$ $\frac{1980}{\pounds}$ $\frac{1980}{\pounds}$ $\frac{1979}{\pounds}$ Capital Employed5,120,8825,259,403Fixed assets8,894,1368,363,238Gross amount42,696,281Aggregate depreciation20,980,54721,715,73420,980,57718,706,242Capital works in progress, at cost331,411Hunterston marine worksCost32,249,564801,7445,237,181Aggregate depreciation63,2811,563,9421,251,328Net current assets32,186,283219,516196,227Debtors and payments in advance4,564,1041,344,4261,055,101Current assetsStocks143,789(106,506)4,36,818Debtors and payments in advance4,564,1041,248,7065,500,178Debtors and payments in advance39,7662,022,3662,117,680Current liabilities31,103,635(703,089)1,300,000Current liabilities30,630,798(70,571)2,082,498Deferred liability20,94,643(5,2282,120,586Deferred liability20,94,643(63,494,184250,000Agresented by $(212,081)$ (26,4682,344,643250,000Agresented by(26,4682,344,643Port improvement grants5,331,71200000

groups of port charges all show a significant increase from 1979 to 1980.

The contribution from port operations to investments in real- and finance-capital was 25.1 mill. kroner — an increase of approx. 8 mill. kroner from the previous year.

In addition the Port Authority took up loans of 19.6 mill. kroner thus making possible investments in new facilities and equipment of 37.9 mill. kroner, payment on loans 3.9 mill. kroner and a net surplus of 2.9 mill. kroner. Due to the loans made, the Port Authority's debt increased from 45.2 mill. kroner to 60.9 mill. kroner.

2. New Constructions and Modernisation

The Port Authority spent approx. 43 mill. kroner on new constructions, modernisation and maintenance of existing facilities. Out of this total some 17 mill. kroner (40%) was spent on quay constructions and terminal facilities needed to accommodate new tonnage.

The quay constructions have taken place at Ormsundkaia and Revierhavna and added 147 m. quays to the port's quayage now totalling 12.4 km. In the same period 359 m. quays have been lost through filling in old basins and similar work, but much needed land area has been gained instead.

At Ormsund a new ro/ro-ramp has been constructed along with a 100 m. new quay being the first step of a planned 250 m. front. Terminal ground prepared so far cover 9 000 m² of which 6 000 m² have been asphalted.

Modernisation has been carried on in the central port area with the demolition of Pier 1 covering $9\ 000\ m^2$ and the preparation of the adjacent, new Revierhavna. The project is being continued in 1981.

At Kongshavn the Port Authority has provided a floating ro/ro-ramp and built the necessary mooring fixtures pending finalisation of the quay front. The backup area totals $30\ 000\ m^2$ of which $10\ 000\ m^2$ is asphalted. The area is reclaimed from the sea and represent a valuable addition much needed.

At Kneppeskjærutstikkeren temporary sheds have been removed after the completion of the new shed 89 and thus freed an area of 2 000 m² now also asphalted. Another 4 000 m² have been readied for storage of import cars.

3. Future Projects

The increasing traffic of passenger ferries has made it necessary for the Harbour Board to allocate means to project new ferryterminals. The decision was taken in the spring and much of the preparatory work and negotiations have taken place during the year. Construction works at Bjørvikutstikkeren is expected to start in late 1981.

4. Operating Accounts

1 January-31 December 1980

	In thousand kroner	
	<u>1980</u>	<u>1979</u>
INCOME		
Charges on vessels	5 807	4 762
Charges on goods	35 835	30 607
Cranage and rents	31 688	28 237
Internal transfers	5 081	5 2 5 2
Total income	78 411	68 858

26 PORTS and HARBORS - SEPTEMBER 1981

EXPENDITURE	1980	1979
Administration	15 262	14 353
Operating costs, maintenance	26 881	25 190
Interest and instalments	8 910	9 223
Modernisation, new equipment	18 284	14 240
Miscellaneous expenditure	1 104	2 4 4 2
Total expenditure	70 441	65 448
Undistributed profits	7 970	3 410

5. Balance Sheet

ASSETS	1980	<u>1979</u>
Fixed assets-properties, buildings,	202 699	198 767
quays, cranes		
Stock and inventory	900	900
Work in progress financed by loans	60 921	45 237
Advanced purchases plus stock	1 737	1 247
Debitors	5 332	4 997
Cash deposits	<u>19 805</u>	<u>13 371</u>
-	<u>291 394</u>	<u>264 519</u>
DEBTS		
Loans	60 921	45 237
Creditors	5 5 5 5 5	6 662
Unused allowances transferred	9 939	6 530
Profit from previous year	3 410	2 833
Undistributed profit transferred	7 970	3 410
next year		
Capital account	<u>203 599</u>	<u>199 667</u>
	<u>291 394</u>	<u>264 519</u>

(Continued from page 18)

search studies to gather experience with a view to eventually allowing these "special care" measures to be used on a routine basis.

The Ad Hoc Group agreed that the existing regulations or the interpretation of the terms "trace contaminants" or "rapidly rendered harmless", in respect of Annex I contamination of dredged spoils could be interpreted to allow national authorities to evaluate research results and utilize, as appropriate, "special care" measures in the disposal of dredged spoil. These measures should ensure that disposal was conducted in a manner which would avoid undesirable effects, especially the possibility of acute or chronic toxic effects on marine organism or human health whether or not arising from bio-accumulation in marine organisms and especially in food species.

The Ad Hoc Group, therefore, recommends to the Consultative Meeting that the Contracting Parties should take note of the possibility of using "special care" methods as suggested by the IAPH, where disposal of dredged spoils contaminated by Annex I substances is being considered. The Group also recommends that Contracting Parties should be invited to submit details of any experience gained with respect to using these methods to future meetings of the Ad Hoc Group.

Annual Report 1980 : Port of Helsinki Authority

(Extracts from the Summary)

1980 was an active period for the Finnish economy. Total output rose by 5.5%, exceeding the economic growth of the other western industrialized countries for the second year in a row.

Export markets were favourable. Finnish export industries' competitiveness, which had remained stable since the beginning of the year, began to weaken somewhat late in the year, however. The volume of Finnish exports rose 9% in all. The growth of exports was limited by the forest industry's occasionally insufficient capacity.

Imports rose a total of 13% over the previous year. Growth was speeded up particularly by increased domestic demand and investment activities. The price of crude oil continued to rise, and the import bill also rose by one-third, which led to a deficit of around FIM 5,000 million in the nation's balance of current payments in 1980.

Costs and prices rose rapidly, and midway through the year monetary policies were used to curb inflation and financial policies to curb domestic demand. The weakening in the economic situation was offset, however, by a rise in productivity exceeding that of other countries.

Foreign-trade shipments rose to 53.3 million tons (National Board of Customs), with 84% of the total or 46.4 million tons travelling by sea. The forest industry's share of export shipments was a dominating 66%. Two-thirds of imports consisted of liquid and solid fuels, i.e. oil and coal.

Harbour Traffic

1980 was a good year for the Port of Helsinki as far as traffic is concerned. Helsinki's position as an import and export centre was reinforced. Shipping volumes were of record proportions. The port was utilized at 80-90% of capacity, with export terminals practically in full use.

Total cargo traffic – foreign and domestic shipping together – exceeded 6.6 million tons. Helsinki is Finland's largest general port with regard to traffic volume.

Imports

Imports via the Port of Helsinki rose to 3.4 million tons in 1980. Slightly more than 2.0 million tons of this was general cargo, with 1.4 million tons of bulk cargo, primarily coal and petroleum products.

Helsinki is Finland's leading general cargo import centre, accounting for 24 per cent of total volume. Helsinki's share of consumer-goods imports reaches 70 per cent, and the figure for investment goods is 40 per cent. Helsinki handled about 15 per cent of Finland's industrial imports — raw material and semi-finished goods; three-fourths of general cargo imports via Helsinki consist of industrial imports.

With regard to general-cargo imports, Helsinki can be considered a national port. For bulk imports, however, with fuels accounting for over 90 per cent, the opposite is true, and imports serve primarily to satisfy the energy needs of the Helsinki area.

Coal and coke are the main fuels used by Helsinki's power plants, which have an annual coal consumption of slightly more than 1 million tons. Some commercial coal is also imported via Helsinki. In recent years 90-95 per cent of Helsinki's coal has been imported from Poland within the framework of a long-term commercial agreement between Poland and Finland. In the latter part of 1980, coal deliveries from Poland encountered difficulties and eventually stopped all together because of unstable economic conditions in Poland.

Imports via Helsinki of petroleum products refined abroad decreased to 0.3 million tons. This decrease was due to the lateness of deliveries scheduled for 1980. Exports

1980 was a record year for export shipments via Helsinki. Exports rose to 1.6 million tons. Helsinki was Finlands's third largest export centre, accounting for 9 per cent of total volume.

Helsinki grew in importance as an export centre for the Finnish forest industry: forest-industry exports via Helsinki increased by 28%, while the corresponding figure for the country as a whole was 4%. Growth was partly due to a reorganization of shipping connections.

Two-thirds of the exports leaving the Port of Helsinki are products of the engineering, foodstuffs, textile and chemical industries.

Exports via the Port of Helsinki grew for the fifth straight year. Practically speaking, general cargo imports and exports (the latter being entirely general cargo shipments) are balanced. This balance means a more effective utilization of harbour storage facilities and equipment.

West Germany, Sweden and England are the most important destinations for exports leaving the Port of Helsinki. The main goods shipped to these markets are engineering poducts, paper products and general cargo items. England is an especially important buyer of Finnish newsprint.

Traffic to ports in Belgium, France, Denmark and the Mediterranean showed the biggest growth. Services on these routes were rearranged in 1980 in order to make shipping more efficient.

Marketing efforts made by Finnish industry in South America have produced results, and trade has stepped up with this area. All Finnish traffic to South America centred on Helsinki, and shipments doubled in 1980 compared with the previous year.

Container Traffic

The use of containers for general cargo shipments increased by one-third in 1980 compared with the previous year. The number of containers handled by the port (expressed in 20 feet units) rose to 87,000 TEU.

Helsinki is Finland's leading container port: Helsinki handled 61% of the containers leaving the country and no less than 77% of those arriving in Finland by sea in 1980.

Finances

The positive development of traffic improved the Port Authority's financial results. Total revenue rose to FIM 123.4 million, an increase of FIM 17.9 million (17%) over 1979. Traffic revenue rose 13%, storage and renting-activity

Annual Report 1979/80 : Townsville Harbour Board (Extracts)

1. Chairman's message (extract)

The year ended 30th June 1980, the first of the present Board's triennium, has continued to see progress in developmental works both at the Harbour proper and its precincts as well as at the Ross River Small Boat Harbour.

Trade through the Port was 2 077 112 tonnes (imports 913 587 tonnes, exports 1 163 525 tonnes). This tonnage was the lowest since 1974. The main cause in decline in trade was the cessation of rock phosphate shipments in 1979. Export of meat and associated products also showed decline with a tonnage of only 16 325 tonnes. Centralisation of cargoes such as meat in southern ports has caused this downward trend together with the fact that the regular Russian shipping service to Asian ports and West Coast of U.S.A. was discontinued during the year under review. Indications are that total throughput of cargo will increase for the year 1980-81 with the potential re-opening of the Duchess Phosphate Mine and new shipping schedules which will offer benefits to primary producers to ship meat and wool through Townsville rather than centralise in Southern ports.

Major expenditures over the year on developmental work have been:

Ross River and Small Boat Harbour	
and Ross River Channel	\$524,339
Reclamation Eastern Breakwater	\$261,032

The development of Ross River Small Boat Harbour is essential to alleviate the excessive congestion of passenger ferries, charter boats, private pleasure boats, fishing and prawning boats in Ross Creek.

(Continued from page 27)

revenue 25% and materials-handling revenue 27% over 1979 levels. The increase in revenue from harbour charges and vessel services, however, was lower because of the nearly two-month spring strike, which decreased Port Authority income by an estimated FIM 2-3 million.

Total operating costs in the final accounts for 1980 amounted to FIM 127.8 million. Expenditure was up by only FIM 2.6 million or 2% compared with 1979. Personnel costs increased by 1%, other costs by 10% and capital costs by 2% over 1979 figures.

Because of the positive revenue development and savings on the expenditure side, the result improved over that for 1979, rising a total of FIM 15 million. The gross margin was FIM 43.7 million, or more than twice that in 1979. If revenue is compared with the actual use of funds, the Port produced a financing surplus of FIM 14.4 million for the City; in 1979 the financing deficit was FIM 1.2 million. The return of fixed assets was 5.2%, compared with 2.2% in 1979.

The Port made a total of FIM 29.0 million worth of investments in 1980. Capital outlay for public works totalled FIM 4.3 million. The value of fixed assets rose from FIM 534.0 million to FIM 548.2 million.

28 PORTS and HARBORS - SEPTEMBER 1981

The Harbour Fund and Expenditure Account shows a net profit for the year of \$573,601. The Board's long term liabilities as at 30th June, 1980 are \$13,384,048 whilst the total net value of assets (at historical cost) less depreciation is \$26,233,266 giving an excess of assets over liabilities of \$12,849,218.

It was necessary over the year to increase harbour dues on cargo throughput to offset the decline in tonnages as this revenue item is the main source of the Board's income. However, the increase was kept to a low 5% which is much less than the National inflation rate.

The Board has devoted considerable attention to correcting the undesirable trend of centralising the products of our hinterland and the hinterland of other Northern ports, in Brisbane and Sydney. It is the Board's strong conviction that the Queensland system of Regional ports is essential to our State's decentralised economy. Thus trade through these ports must be encouraged, not discouraged.

> A.G. Field Chairman

2. Trade of the Port

Although there was a decrease of about 9 percent trade for the year, total throughput of cargo was 2 077 112 tonnes (imports 913 587 tonnes, exports, 1 163 525 tonnes). The oil industry was the major port user with 801 295 tonnes imports.

There were 589 570 tonnes of minerals and 512 458 tonnes of sugar and molasses exported.

The following gives a summary of percentage of total trade and percentage of total harbour dues: -

Industry	Percent of	Percent of
	Trade	Harbour
		Dues
Oil Industry	38.58	43.85
Mining Industry	29.53	25.97
Sugar Industry	25.88	20.34
Pastoral Industry	1.09	1.13
General Cargo	4.92	8.71
	100.00	100.00

During the year 323 cargo vessels with a gross registered tonnage of 3 099 060 tons entered the port.

3. Balance Sheet as at 30th June

	1980	1979
ACCUMULATED FUNDS	\$12,480,826	\$8,866,026
Reserves	368,392	3,401,779
Total	\$12,849,218	\$12,267,805
REPRESENTED BY		
Current Assets & Investments	2,012,103	964,829
Deduct Current Liabilities	205,893	238,810
Working Capital	1,806,210	726,019

(Continued on next page bottom)

Annual Report 1980: Ports Authority of Fiji (Extracts)

1. Chairman's review (extract)

ACCUMULATED FUNDS

There has been a steady continuation of the overall demand for port services with a somewhat reduced growth rate, reflecting the prevailing economic situation. The bulk loading of sugar and the handling of containerized cargo have however shown worthwhile increases and the first shipments of pine logs were handled during the year.

Three major events which took place in 1980 augur well for the Ports Authority of Fiji (PAF) as it enters a new decade:-

• The reconstruction of Levuka wharf completed in May at a cost of \$600,000 has greatly improved shipping and cargo operations in the Port of Levuka on the island of Ovalau

- In July a firm of overseas consultants was appointed to undertake design and engineering work for the \$10 million Suva Port Rehabilitation Project.
- The new \$1.2 million PAF Headquarters Building "Kaunikuila House" at Flagstaff Suva was opened in Julv.

Despite the inflationary trend and sharp increases in oil prices, 1980 showed a modest increase of 1 percent in the total sea-borne cargo of 1,565,051 tonnes loaded and discharged through the ports of Fiji compared with 1,549,306 tonnes handled in 1979. A significant point worthy of mention was an increase of 6 percent in exports and a drop of 3 percent in imports. The export of bulk sugar increased

1979

(265,034)

2,833,658

749,276

23,859

258,326

25.042

95 877

29.856

2,662

4,642

107,661

382,854

4,513,713

4,248,679

473,217

471,243

82,284

143,201

2,916

86,975

200,544

798.269

673.707

400,103

382,854

233,852

3,949,165

\$299,514

9,412

(Continued from page 28) 4. Receipts & Payments for the Year 1979 1980 ended 30th June Fixed Assets 1980 10,664,237 Wharves 169,676 Less Redemption Reserve 7,381,346 HARBOUR FUND 10,494,561 12.989.884 Balance 1st July 299,514 Lands & Tenanted Buildings Less Redemption Reserve & Advances 8,179,983 4,809,901 5,096,613 Receipts Small Boat Harbours & Facilities 251,722 252,581 Harbour Dues 2,750,045 Major Plant - Cranes 1,671,960 Tonnage Rates 650,199 Less Redemption Reserve 866,848 Channel Development Charge 62,596 754,772 805.112 Rents 254.039 205,914 159 414 Dredging Plant Plant Hire 32.765 45.811 51,230 113,054 Workshops Water & Electricity Charges Miscellaneous Plant 79,456 96,996 102.129 Interest on Investments 97,970 Electrical Distribution 88,720 117,802 Other Operating Receipts 22,065 19,490 Wharf Supervision Advances for Container Crane Store Facilities 150 150 370,182 Advances from Assets Fund Administration 179,061 182,749 13,819 Asset Retirements 9.285 Engineering 13,338 4,476,042 12,050 18 050 4,775,556 Fire Services Sub-Total 27,000 24,500 Access Roads 5,997,700 5,997,000 Channels & Swing Basins **Payments** Parks, Gardens, Cleaning 20,864 12,712 471,452 Administration Work-in Progress 2,466,146 Dredging 660,975 1,094,979 4,095,757 Less Advances Wharves Maintenance 124,608 24,377,592 24,300,315 53,723 Lands & Tenancies 72,250 Plant Hire Intangible Assets Wharf Supervision 94,318 154,523 49.464 Water & Electrical Services 24,427,056 24,300,315 934.307 Interest 628,770 Other Operating Costs 698,622 Deduct Long Term Liabilities Loan Commitments 2,697,199 Transfers to Assets Replacement Fund 370,182 Special Advances 1,002,585 Capital Expenditure 474,430 Less Redemption 1,858,965 1,694,614 4,738,160 Balance 30th June \$37,396 Loans General 11,689,434 10,899,564 13,384,048 12,758,529 11,043,008 11,541,786

\$12,849,218 \$12,267,805

by 9 percent from 397,343 tonnes in 1979 to 431,866 tonnes for the year under review. Timber and log exports increased four fold from 7,633 tonnes in 1979 to 31,802 tonnes in 1980.

In the Port of Suva the total cargo handled in 1980 was 540,509 tonnes which was 3.5 percent less than the 1979 figure of 560,435 tonnes. Lautoka on the other hand recorded an increase of 6 percent from 571,928 tonnes in 1979 to 606,418 tonnes in 1980. Levuka in 1980 handled 17,306 tonnes which was 15 percent higher than the previous year's figure of 15,074 tonnes.

The changing pattern of shipping and cargo-handling in Fiji ports was particularly noticeable in recent years. Container and ro-ro traffic further increased in 1980. In Suva 8,225 containers (TEU) were handled in 1980 as opposed to 7.433 TEU in 1979 – an increase of 11 percent. This trend has been taken into consideration in the development strategy of port facilities in Fiji.

The value of PAF assets for the first five years of operation from 1975 was based on a nominal figure of \$2,968,000. After a revaluation exercise carried out by a firm of registered valuers, the revalued assets of the Ports Authority of Fiji including new buildings, plant and equipment are now assessed at \$25,650,000. This represents a more realistic value of port assets and it has been accepted and approved by the Auditor General.

As a result of increases in depreciation on revised port assets, maintenance costs, and administration costs, the surplus of revenue over expenditure fell by 25 percent compared with the previous year. Statutory tariff charges such as wharfage, dockage, port dues, etc. introduced in 1975 have not been revised despite rising maintenance and operating costs during the last five years. On the revised valuation, the return on assets is 8.5 percent.

1980 saw the beginning of a comprehensive development and expansion programme being implemented to modernize Fiji ports. The completion of the first phase of the construction and upgrading of the port facilities in Levuka will be followed by the commencement of rehabilitation and construction work in the Port of Suva during the latter part of 1981. Port development in Lautoka, Savusavu and other Fiji ports will also receive attention.

In the course of the current decade the entire port system in Fiji is to be revamped and modernized to cater for international and inter-island shipping and trade, particularly in terms of container, unit-load and ro-ro traffic.

To promote better liaison and understanding with portusers and the public, the PAF will intensify its public relations efforts and set up a port advisory committee. As a member of the International Association of Ports and Harbors, PAF will also co-operate and work closely with overseas ports so as to constantly improve and upgrade its services and facilities.

Improved port infrastructural facilities in Fiji will also benefit the region as a whole. As an entrepot centre of the South Pacific, Fiji will be able to serve and provide an efficient port service to a large area of the South Pacific.

The PAF is placing much emphasis on staff training and manpower development to ensure that the ports of Fiji will be properly managed and efficiently operated. It is also our desire in due course to extend training facilities to the ports of other South Pacific countries.

> D.G. Peck Chairman

2. Statement of Financial Position as at 31 December, 1980

The Funds Employed Were	1980	1979
The Funds Employed Here	\$	\$
Capital Fund	2,968,750	2,968,750
Government Grant		20,000
Development Reserve	3,350,000	2,750,000
General Reserve	2,170,000	1,580,000
Unappropriated Surplus	8,559	6,499
Revaluation Reserve	21,453,421	-
Long Term Liabilities		
A.D.B. Loan	242,036	-
	30, 192, 766	7,325,249
These Funds Were Represented By		<u> </u>
Share Capital	4,000	_
Fixed Assets less Depreciation	25,455,660	3,159,479
Work-in-Progress	197,145	1,264,566
	25,656,805	4,424,045
Current Assets		
Stock	9,374	7,579
Accounts Receivable & Payments		
made in Advance	990,061	846,035
Refundable Deposits	17,577	1,310
Staff Advances	71,739	73,400
Cash & Bank Balances	5,184,336	3,972,076
	6,273,087	4,900,400
Less Current Liabilities		
Accounts Payable	585,232	418,778
Provisions	151,894	80,418
Government of Fiji Consolidated		
Fund	1,000,000	1,500,000
	1,737,126	1,999,196
	4,535,961	2,901,204
Total Nett Assets	30,192,766	7,325,249

3. Revenue and Appropriation Account for the year ending 31 December, 1980

Revenue	1980	1979
	\$	\$
Wharfage	620,223	607,488
Dockage & Berthing	641,770	640,988
Port Dues	461,486	463,607
Wharf Services & Storage	706,549	393,294
Cargo Handling Service	3,950,526	4,235,746
IFS. Services & Storage	498,082 [.]	297,526
Equipment	1,083,955	1,140,110
Study Revenue	10,260	125,669
TOTAL REVENUE	7,972,851	7,904,428
Expenditure		
Operating Salaries, Wages &		
Staff Benefits	3,039,294	3,148,262
Repairs & Maintenance of Wharves.		
Buildings & Equipment	186,999	159,918
Depreciation	1,336,402	635,527
Sundry Operating Expenses	798,719	580,042
Administration Expenses	661,044	530,749
Provision for Doubtful Debts	72,500	39,850
Total Expensiture	6,094,958	5,094,348
Operating surplus	1,877,893	2,810,080

(Continued on next page bottom)

Industrial Harbour Complex of Suape, Brazil

The Industrial Habour Complex of Suape is an undertaking of the Brazilian Government, specifically of the State Government of Pernambuco. Its main objective is to gather, in an estuary situated at 40 km in the south of the city of Recife, state capital of Pernambuco, in the northeastern region of Brazil, a series of basic industries with a strong development potential.

In this site, which has the name of one of its beaches, Suape, railways, roadways, power, water and sewerage, telecommunication, industrial districts, residential zones, forest zones, green urban and rural zones, touristic zones and a deep water harbour are found.

The Northeast will derive great benefit from Suape's goals

The importance of The Industrial Habour Complex of Suape can be seen, in the social and economic realm, by its objectives to be attained in short, middle and long terms, from the beginning of construction stages to the complete utilization of the undertaking.

Among the short term objectives, one of them is the use of the existing seabed and interior. In the proximity of the Headland of Cupe, depth varies betwen 17 and 20 meters, and 35m at 6 km from the coast. The interior relief may be considered already leveled for the Industrial-harbour urbanization.

In 1974, the capacity of cargo ships in the international trade was changed from 65 to 150 thousand TWD. Taking into account that world-wide tendency, one of the goals of the State of Pernambuco is to fit itself into that reality.

(Continued from page 30)			
	1980	1979	
Other Revenue	\$	\$	
Interest from Staff Loan	5,666	-	
Profit on Sale of Fixed Assets	4,474		
Miscellaneous	30,912	—	
Interest from Investments	243,252	143,546	
Grants	-	2,015	
Rental from Properties	35,502	18,045	
Surplus for the year	2,197,699	2,973,686	
Add Unappropriated Balance			
brought forward	6,499	9,332	
Government Grant for purchase of			
Capital Items	20,000	80,000	
	2,224,198	3,063,018	
Add Prior Year's Adjustments	14,638	(126,519)	
	2,238,836	2,936,499	
Less Interest/Commitment Fee on			
Capital Loan	40,277	-	
Profit before Appropriation	2,198,559	2,936,499	
Less Appropriation			
Government of Fiji Consolidated			
Fund	1,000,000	1,500,000	
Development Reserve	600,000	750,000	
General Reserve	590,000	680,000	
	2,190,000	2,930,000	
Unappropriated Surplus Carried			
Forward .	<u>\$ 8,559</u>	<u>\$ 6,499</u>	

Together with the implementation of the Industrial Harbour Complex, Pernambuco will be interconnected to the natural flow of products of the Amazon region. The already existence of the Federal motorway BR-232, which starts at the state coast up to the city of Picos, in the state of Piauì where it is then linked to the Transamazon Roadway Network, makes that interconnection viable.

The natural features of the region such as: beaches, lagoons and historic monuments will be utilized by the Industrial Harbour Complex for leisure and recreation. International technicians of tourism affairs consider the area adequate for the implementation of the national tourism system in the coastland, evidencing thus the typical characteristics of the Northeast and contrasting it with the states of Salvador and Rio de Janeiro.

As factories are being installed, 66,300 industrial jobs will be available, at the same time there will be more employment for the tertiary economic sector (general services).

Among other advantages, Suape is located about 8 hours distance from the international maritime routes of the large cargo ships to American and European ports, giving thus benefits to large-scale maritime terminals. The closest ports to Suape are: Salvador at 24 hours and Rio de Janeiro at 48 hours distance.

Another goal to be reached is the decentralization of the Metropolitan Region of Recife, which tends to enlarge. Besides being away from that problem, Suape will grant Pernambuco the most important port of the Northeast.

Suape is localized close to the main international trade routes and to the industrial centre of the Northeast. This will provide a natural reduction of costs, in production and distribution of goods, diminishing freight and transportinsurance expenses.

LOCALIZATION

The Industrial Harbour Complex of Suape is situated 35 km by sea from Recife, the Capital of the State of Pernambuco. It is identified geographically in the parallels $8^{\circ}14'$ and $8^{\circ}29'S$, and meridians $34^{\circ}56'$ and $35^{\circ}06'$ WG, comprising the municipalities of Ipojuca and Cabo, and in the coastland, from the Ipojuca river mouth to Porto de Galinhas beach.

Two excellent motorways are found in the Complex's area, the BR-101 and PE-60, besides the South branch of the Federal Railway Network, RFFSA. Because of its strategic location, the Complex will have a regional traffic marshalling and maintenance yard.

The Government and entrepreneurs' decision for the site of Suape was based upon some unquestionable advantages of the area, such as: its proximity to the South Atlantic routes and the equidistance in relation to the extreme points of the Brazilian Cabotage Network which is actually passing through a phase of increasing the tonnage transported by national ships.

Moreover, Suape is within the Metropolitan area of Recife; it is close to the International Airport of Guararapes, besides having good conditions for installing a power sub-station through CHESF (Hydroelectric Company of São Francisco).

Besides these natural advantages, the undertaking



presents others of large social-economic importance, as for example the various benefits from the Legislation of Federal, State and Municipal fiscal incentives; its proximity to the largest population centre economically active in the State (employed people), and also its inclusion in the regional market.

Furthermore, Suape will benefit from the educational structure for labour preparation in the Metropolitan Region of Recife through SENAC (National Labour Training Service for Commerce) and SENAI (National Labour Training Service for Industry).

Site planning involves the port and industries

The original idea of a dredged port using, to its advantage, the existing physical conditions, consists of the objective of associating harbour facilities with the capacity of constructing industries in the area of Suape. Harbour installations will serve private terminals and general services. The final definition of the project was based upon hydrographic and geophysical studies made in the area.

The port access will have just one entrance close to which a turning basin will be constructed; this will be dredged, in its first phase, 19,372 meters in relation to the CNG zero (National Geography Council). It will permit berthing of vessels up to 135 thousand TWD.

Two canals will be constructed along the axis of the Ipojuca and Massangana rivers. Both will have the same depth of the basin, which will diminish as they get away from it.

LAND QCCUPATION

The land use plan was made with the objective of occupying the total area of the Complex, keeping excellent conditions for the population which will inhabit there and, at the same time, utilizing the resources to be invested in the infrastructure and in the industrial and habour installations.

32 PORTS and HARBORS - SEPTEMBER 1981

In face of that, the area was divided in zones, starting from the port, taking into account selective standards which led to the definition of five basic ones: Harbour, Industrial, Residential, Touristic and finally, the Ecological Preservation Zone.

The Harbour Zone (HZ) will comprise the collective port and the necessary areas for the different activities related to it, such as: bulk terminals, containers, roll on/roll off, lash, offshore and others. It is also anticipated the construction of a pier for fishing activities and of an area for the implementation of factories linked to this sector.

INDUSTRIAL ZONE (IZ)

The Industrial Zone (IZ) is characterized by its subdivisions according to the type of industries to be set up, using as much as possible the infrastructure and the land.

The industries which will need private terminals for receiving their raw-material, for their own use and for export, will be localized in the Industrial Zone 1 (IZ-1).

On the other hand, the IZ-2 will include those industries which will depend directly on the basic industries in the IZ-1, as well as those which, even receiving their raw-material from maritime via, do not need a pier for their supply or distribution of finished products.

The independent industries, that is, those not attracted by harbour installations, but by the Industrial Harbour Complex infrastructure and by the goods demand and services of other industries, will be situated in the IZ-3.

ADMINISTRATIVE ZONE

The Master Plan also embraces an area for the Administrative Zone (AZ) and services of the Industrial Harbour Complex of Suape, making specific areas for different functions, as for example the AZ-1, where the administrative centre, a community support centre, maintenance services and a leisure area will be installed.

The AZ-2 will be made up of a large public recreation area containing a play-ground, a forest and gardens. This will be for the purpose of getting the population interested



in sporting and recreative activities which will be implemented in the Complex.

Finally in the IZ-3, harbour-administrative activities will be developed together with the installation of the necessary social infrastructure, therefore confirming the complete efficiency of that area.

The Touristic Zones (TZ) will be constituted of beaches situated in the area of the Complex. These are destined to conciliate the industrialization process, man and his surroundings with touristic activities.

Within that same point of view, the Project of Suape defined the TZ-1, where a complete infrastructure will be set up for the tourism industry, while the TZ-2 is reserved for temporary tourism, including camping areas. For this type of land occupation, a series of urban equipments will be installed permitting people to enjoy the environment and leisure offered by Suape.

The zones occupied by coconut plantations, remainders of forests and the existing swamp areas are considered parts of the Ecological Preservation Zone (EPZ). These added to the reforestment program will make up a dense forest, at the same time, keeping the typical flora of the region.

The division of the Green Urban Areas (GUA) was done after taking into consideration the function each one will perform. It is defined as GUZ-1, the areas which will be used as parks, gardens, etc. An urbanization study will be made in the GUZ-1 with the purpose of installing hotels and restaurants which will be integrated to the green area, and work as a social infrastructure for the administrative sector of the port.

INDUSTRIAL SUPPORT

It is foreseen investments totalling Cr\$26.8 billion (US\$90 million) for establishing the first phase of industrial activities of the port.

In that phase, a fertilizer factory will be constructed. It will produce annually, starting in 1985, 215 T of phosphates, and from 1987 on, 1 million T/y of raw materials and finished products. For the implementation of this undertaking Cr billion (US\$6 million) will be needed.

It will also have a cement export terminal with a production capacity of about 3 million T/y, starting in 1985. For the amplification of the regional cement production capacity, there will be an application of resources in a total of Cr3.3 billion (US1.1 million).

About Cr\$9.5 billion (3.1 million) will be invested in a metallic aluminum factory which, starting in 1982, will be putting into market 100 thousand T. Nowadays, the regional market absorbs between 30 and 40 thousand T, however, this consumption will be multiplied by 1985.

For the Complex's industrial support, a siderurgy plant will be implemented. The investments for that will amount to Cr\$12 billion (US\$4 million). This industry should be producing, starting in 1985, 800 thousand T of rolled steel sheets and common steel.

Gradually the transfer of the tankfarm to Suape, which is located in the port of Recife, is being done. This will be storing, by 1985, over 3 million T of petroleum derivatives. The installation of a sucrose-chemical industry will also be very important.

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International maritime information: World port news:

Coal port design: AAPA

The debate over coal ports and the prospects for "super colliers" has turned largely to questions of funding, national trade policy and political considerations. Less has been said about the technical criteria governing channel design and the related problems of ship dimensions and handling qualities. We have compiled basic physical data on dry bulk carriers currently employed in world trade that gives some indication of what is required in channel design. The source is H. Clarkson's Bulk Carrier Register 1980.

DRY BULK CARRIERS (BY DEADWEIGHT TON RANGE)

	40,000	60,000-	80,000-	
	59,999 dwt	79,999 dwt	99,999 dwt	
Average Length				
Overall	691′	773'	846′	
Average Beam	99′	106′	112′	
Average Maximum				
Draft	39'6''	43'7"	45'7"	
Average Maximum				
Speed	15.3	15.7	15.4	
(knots)				

	100,000-		
	149,999 dwt 150,000 dwt		
Average Length		<u> </u>	
Overall	861'	981′	
Average Beam	131′	141'	
Average Maximum			
Draft	53'7"	57'1"	
Average Maximum			
Speed	15.4	15	
(knots)			

Channel design must naturally reflect the actual economies of ships in particular trades. Economies of scale presuppose that costs increase with distance and decrease with ship size. The length of haul, which in the major coal trades ranges from 3,500 to more than 12,000 nautical miles, and cargo volume dictate the size of vessels. On comparatively short hauls to markets where demand is chiefly for shipments of 60,000 tons or less, there is less apparent need for channels dredged to accommodate 100,000 dwt bulkers.

The channels themselves must be designed to permit safe and economical maneuvering of the vessels most likely to use a particular port. Drafts must take into account speed, bouyancy and the tendency of ships to settle or "squat" as they move, and allow sufficient bottom clearance, which, one authority estimates, is one to two feet in soft material and three to four feet in rock. They must also be wide enough to assure bank clearance and, where two-way traffic occurs, permit ships to pass one another at a safe distance. One rule of thumb is that maneuvering lanes must be 160 percent, 180 percent or 200 percent of vessel beam depending on whether a ship's handling qualities are excellent, good or poor.

Keep in mind also that relatively few U.S. ports have channel depths in excess of 35 feet. None on the East or Gulf coasts exceed 45 feet. Furthermore, controlling dimensions of the Panama Canal are: length -1,000 feet; width -110 feet; and depth -40 feet. (AAPA ADVISO-RY)

Toll increase recommended: Great Lakes Seaway

A U.S.-Canadian tolls review board is recommending that tolls charged for use of the St. Lawrence Seaway be raised 30 percent, possibly as early as September 1. The higher tolls are needed, the board claims, to cover deficits totaling \$27.1 million it projects for the years 1981 and 1982. The board's recommendations are now being reviewed by David W. Oberlin, administrator of the U.S. Saint Lawrence Seaway Development Corporation, and William A. O'Neil, president of the St. Lawrence Seaway Authority of Canada. The two will begin formal discussions on the toll question in the near future. The Joint Tolls Review Board, consisting of four members, two from each of the Seaway agencies, was established in March 1978.

New port impact study to be completed soon: Maryland Port Administration

The way has been cleared for the completion of a new economic impact study of the port of Baltimore by the end of the year.

The purpose of the study is to determine the significance of the port of Baltimore to the city and metropolitan region, the State and the entire Mid-Atlantic region. In addition to being a valuable guide for future port planning efforts, the study will be of considerable value to the Maryland Port Administration in its efforts to promote international trade through the port of Baltimore.

The \$70,000 study will be jointly funded by the Maryland Port Administration, the Greater Baltimore Committee, the Steamship Trade Association, and the Maryland Chamber of Commerce.

"The port administration is most pleased at the cooperation of the private sector as exemplified by this agreement," Maryland Port Administrator, W. Gregory Halpin said. "The MPA's involvement with the GBC is a concrete example of the MPA's policy of coordinating its programs with private interests to the fullest extent possible."

Northern route to Port of Baltimore open to larger ships

The long-awaited widening and deepening of the Chesapeake and Delaware Canal has been completed and the 46mile long waterway is open to deep-draft ship traffic.

The canal, now deepened to 35 feet throughout its



entire main channel and approaches, has already recorded a noticeable increase in the number of large container vessels plying the route between the upper Chesapeake Bay and the Delaware River.

Forced to "take the long way around" because of the canal's previous limited depth, modern container ships, which average more than 700 feet in length and need a 32-foot depth in which to maneuver, have had to travel further to call at the port of Baltimore for many years.

Use of the C&D eliminates the need to sail around the Virginia Capes when going between the ports of Baltimore and Philadelphia and points north. The canal waterway is operated and maintained by the U.S. Army Corps of Engineers.

The canal serves as an important link between the Chesapeake Bay and the Delaware River, reducing the travel distance between Baltimore and Philadelphia by some 286 nautical miles, Baltimore and other Northeast Coast ports by 147 nautical miles and Baltimore and north European ports by 115 nautical miles.

For years, however, the controlling depth in the canal, described as "the port of Baltimore's northern gateway to Europe", has been 29.6 feet (increased from an earlier 26.1 feet). This has limited the size of ships that could take advantage of the obviously shorter route.

The 35-foot depth for the C&D was initially authorized as an Army Engineers project in 1935 and modified in 1939. The total project called for a channel 450 feet wide and 35 feet deep from the Delaware River to deep water near Poole's Island, Maryland.

Most of the work, including the construction of four major bridges crossing the canal, was finished in 1968, but completion of the dredging to the authorized 35-foot depth had been deferred for years because of environmental objections to disposal, and other matters.

Following intensive coordination with involved federal and state agencies regarding the problems, restoration of the depth project commenced in earnest in 1978 and was completed this April.

"Although the 35-foot depth work was only recently finished, there has already been a noticeable increase in ship traffic through the C&D," noted Frank L. Hamons, manager of harbor development for the Maryland Port Administration.

"The average container ship has a 30-foot draft, requiring a depth of from 32 to 35 feet, which now exists throughout the middle part of the entire channel and its approaches," he explained. "However, the outside quarters of the canal are currently only 31 or 32 feet deep.

"What this means is that up to now, pilots who steer the vessels through the C&D have only permitted ships with 29.6-foot drafts through the waterway. With the new 35-foot availability, the pilots may increase the limit to 31 or 32 feet, thus opening the canal to far more vessels than ever before."

Hamons said the 29.6-foot limit takes into account a two-foot over-depth as a safety precaution to assure enough depth for ships using the canal.

Significant economic benefits are expected to result in the port of Baltimore now that the controlling depth of the canal has been increased to 35 feet. Even before the completion of the project this year, in fact, an increase in the number of vessels using the facility was noted in the 1980 year end report of the MPA.

Although total vessel arrivals in the port of Baltimore last year showed a small dip from 4,214 in 1979 to 4,012, the use of the canal increased 3.3 per cent: from 2,343 ships to 2,421. This figure is expected to rise dramatically by the end of 1981.

In addition, the worth of benefits derived from the canal improvements, including vessel operating costs and pilotage fees, will also increase accordingly. No current figures are available, but in a traffic potential analysis prepared for the Corps of Engineers in 1977, it was estimated that if the C&D canal were dredged to a controlling depth of 35 feet, the worth of benefits (in terms of 1977 dollars) would exceed \$300 million based on a 100-year project life starting in 1980.

That amount would be much higher, of course, using 1981 dollar values.

Other benefits expected to result from the completion of the 35-foot depth project and the opening of the C&D to larger container ships, according to a spokesman for the Corps of Engineers, include the replacement of barge operations, increases in fuel and fresh water allowances, the elimination of overload cargo transports, an increased frequency of service and less travel hazards.

Another plus, the spokesman stated, is the fact that steamship companies can alter their schedules now that the C&D has been deepened. This will result in a frequency of service to both Baltimore and ports along the Delaware River, increased efficiency and time savings, it was claimed.

"And don't forget the safety factor," he concluded. "Travel on a protected waterway is less hazardous than at sea, and the deepened canal should help reduce the incidence of accidents."

Recently, container volume at the port of Baltimore hit the 2,000,000 mark. Since the first container was brought into the port at Canton Marine Terminal aboard the S.S. Mobile in 1963, it took 14 years for the MPA to process its one millionth container.

Thanks to the continuing development of container trade and modern facilities and other improvements, the MPA in April, 1981 reached its second million container in only four years.

With the deepening of the Chesapeake and Delaware Canal to 35 feet and the increase in container ship traffic that is expected to follow, the MPA may reach its third million container in even less time than that.

SCSPA, City of Charleston agree on a plan of waterfront redevelopment

The South Carolina State Ports Authority Board and Mayor Joseph P. Riley, Jr. of the City of Charleston recently announced agreement on a plan of action designed to enhance the revitalization and development of the waterfront area between Market and Exchange Streets. The plan, which is in the form of a memorandum of agreement between the two parties, calls for the exchange of several properties and a cooperative effort toward achieving the highest and best use of the land in that area. Advancement of city plans for a waterfront park, construction of a maritime office building and adjoining parking garage, and eventual development of the area between Concord Street and the SPA Passenger Terminal should result from the action.

Part of the agreement clarifies title to properties the City gave to the Ports Authority in 1947. In particular, the SPA returns to the City the land bounded east and west by Concord and Prioleau Streets and north and south by the rightby-way of Gendron Street and Gillon Street, extended. The property is now utilized as a restaurant parking lot, but the City's master plan for the area would put retail shops and single-family dwellings there. These would be compatible with the proposed waterfront park. In return, the SPA would gain clear title to the old Port Utilities Commission building and its parking area, which will be used as additional office space, and to parcels now leased to Champion Building Products and Stein Hall.

This outstanding example of cooperation between a city and an agency of the State will not only visually enhance that part of Charleston, but will create the framework for new business opportunities and jobs, as well as expand the City's tax base. The Ports Authority can now fulfill a long-standing commitment to provide new office space for waterfront-related businesses, in addition to assuring proper use of the passenger terminal tract.

25 years of containerization; Port of Houston received first container ship

The intermodal container, probably the most significant innovation in shipping since self-propulsion, has been in use for 25 years this month and the Port of Houston has played a key role in helping the concept to succeed.

Containers are 20- or 40-foot long metal "boxes" that can carry as much as 30 tons of cargo. Special equipment easily shifts containers between ships, trucks and flat cars.

Houston was the port of call in May 1956 for the first ship ever loaded with containers. The IDEAL-X was operated weekly by the Pan Atlantic Steamship Corporation's Sea-Land Service between New York and Houston.

The vessel was a tanker on which a special deck had been built. Fifty-eight truck trailer bodies were carried on the deck. The bodies were lifted between the ship and trailer chassis by a large crane at each port.

Containers are still handled in much the same manner. The "boxes" protect cargo from theft and damage to some degree, but their chief advantage over un-containerized or break-bulk cargo remains cargo-handling speed.

Container ships can discharge and load cargo in hours rather than days and get under way again. Thus they can spend a greater portion of their time at sea transporting cargo.

Because of the concept whose silver anniversary is being celebrated, billions of dollars have been invested around the world in container ships, cranes, chassis, other containerhandling equipment, and in specialized marine terminals such as the Port of Houston Authority's Barbours Cut Terminal.

The Port Authority's investment at Barbours Cut is approaching \$100 million and the terminal, one of the most modern in the world, annually records substantial increases in the number of containers handled.

Sea-Land Service went on from its beginning with the IDEAL-X to become the largest container ship line in the world. Now owned by R.J. Reynolds Industries, the line has served the Port of Houston throughout the last 25 years.

New Port Authority budget approved for 1981: Port Authority of NY&NJ

The Port Authority of New York and New Jersey recently unveiled a budget of \$949 million to cover its operating expenses, capital improvements, debt service and expenditure adjustments for the year 1981.

Among the projects earmarked for specific development were several in the marine and aviation fields. Planned capital expenditures of \$8 million for the Elizabeth-Port Authority Marine Terminal will include development of property acquired from the Central Railroad of New Jersey, construction of new distribution buildings and erection of a warehouse in the Foreign Trade Zone area.

At Port Newark, the planned capital expenditures include \$6 million in construction costs for berth repairs and a new meat-handling facility. Capital expenditures at the Brooklyn-Port Authority Marine Terminal include \$2 million for rebuilding a wharf south of Pier 12.

Of the World Trade Center's \$29 million worth of construction work, \$6 million will go toward continuing work on the fire safety program, \$5 million for relocation of television broadcast facilities, and \$4 million each for work on tenant spaces and restaurants.

In presenting the financial plan for the year, Port Authority Chairman Alan Sagner noted that the major portion of the capital improvement program would be directed toward bus transportation and PATH projects in the two states. Some \$118 million has been set aside for these projects.

Executive Director Peter C. Goldmark, Jr. explained, that the budget had been carefully balanced so that the agency's ongoing programs of economic development and transportation and its borrowing capacity would be maintained in the face of continuing high inflation.

APL ready to build 45-foot production unit containers

American President Lines (APL) has called for bids for construction of an initial order of 733 45-foot containers, the world's first, according to Richard L. Hill, vice president for Land Operations and project manager.

The new containers will have a cargo capacity of 3,035 cubic feet, some 27 percent more than the standard 40-foot container. Because handling and transportation costs are largely determined on a unit basis rather than by the



APL's new 45-foot container being stowed atop a 40-foot container, aboard SS President Grant.

size of the container, the larger vans are expected to provide significant savings, and to help hold the line on rapidly rising costs. Each container will be nine feet, six inches high.

The 45-foot container is not expected to replace the standard 20- and 40-foot lengths, and will initially be designated for on-deck stowage only. It is anticipated that APL's 45-footers will be deployed on selected intermodal routes in order to increase operating efficiency. Initially, they will go into service to haul less-than-containerload (LCL) cargo between major Asian ports and Northeastern U.S. destinations.

Georgia Ports perspective : George J. Nichols, Executive Director

Agricultural commodities have traditionally occupied a key position in the cargo portfolios of the Ports of Savannah and Brunswick. Our natural hinterlalnd includes large, fertile areas which generate large volumes of raw and processed goods.

The United States has always served as a sort of farmer to the world. Our country possesses and unrivalled combination of land availability and technological knowhow. Our ability to produce agriproducts far beyond domestic needs is proven, and international trade is the logical outlet for our surplus.

Agriproduct exports possess enormous potential in terms of alleviating our critical balance of payments problem. It is incumbent upon us to identify world food markets and to develop the delivery systems to serve them. Trade

development interests from both the governmental and private sectors must redouble their efforts to publicize the availability of these markets for potential exporters.

We are already seeing the results of their efforts. Bulk grain tonnages through our ports have risen geometrically over the last four years. The demand for containers for agricultural commodities is on the rise. Poultry and other temperature controlled products are moving through at a brisk pace. Obviously, the sluggishness in our economy has prompted many producers to examine the overseas side of the fence.

The State of Georgia must play a pivotal role in the continued growth of the agriexport business. Our ability to handle and store these commodities rapidly and safely can make the critical difference. Agricultural commodities by their nature tend to have a high weight to dollar value ratio. For this reason, transportation cost add-ons can have a disproportionate and disastrous effect on the delivered price of the cargo. GPA's responsibilities are to provide the service expertise, facilities, and administrative systems that will guarantee the most expeditious and economical handling possible across our terminals.

Currently, our handling of agriproducts is centered in our Savannah dry bulk facility. In addition, a number of bulk, bagged, processed, and refrigerated goods move through in containers. At Brunswick, recently refurbished transit shed one houses dry bulk operations for agriculturals.

Our firm belief in the future of agriproduct exports reflected in our near term contruction and planning package. In Brunswick we have just added a hopper car unloading station and elevator at Transit Shed One. Funds have been approved for the dredging of a channel from the existing East River channel to our Colonel's Island industrial site. Engineering and design now in progress will culminate in the construction on Colonel's Island of a \$22 million dry bulk handling complex and attendant dock structures.

At the Savannah dry bulk facility, a second truck unloading station recently completed will improve delivery turnaround times. The existing cold storage facility will be more than doubled in size providing additional capacity and improved truck access for agriproducts requiring temperature controlled care.

A strong export program for agricultural products through the Southeast is essential to the stability of the agricultural/economic base of the region. Farmers and food processors must examine the saleability of their product beyond traditional domestic markets. Foreign trade promotion agencies must perform the analyses that will enable them to connect U.S. producers with potential buyers abroad. Inland transportation concerns and waterborne terminal operators must provide systems and equipment that guarantee minimum adverse impact on the producers delivered price quotation. We at Georgia Ports believe that the move toward the exporting of agriproducts is intelligent, unavoidable, and growing daily. We intend to be prepared to execute our responsibility to these shippers.

Port of Seattle establishes fixed truck contract rates

Effective June 1, 1981, the Port of Seattle implemented a new truck contract rate program, a major step designed to simplify less-than-truck-load shipping (LTL) and aid the shipper.

The program offers shippers a fixed rate--one guaranteed for six months. Rates are all-inclusive, covering services formerly quoted separately, such as pier pick-up, prorated split pickups and stop charges, rate to destination, distribution charges and fuel surcharge. All rates quoted include total truck shipping charges.

The system is designed to be simple and stable so that business people can figure their shipping charges several months in advance. And rates are the lowest available on the West Coast. They are set to save shippers 10 to 30 percent over FAK tariff rates, and as much as 300 percent over LTL class rates.

Rates will be adjusted on a six-month basis to keep pace with normal operational costs.

According to James D. Dwyer, senior director of Port Development and Relations, "We have worked for many months to establish this program, and we think we have come up with one of the finest, innovative rate systems covering LTL shipping in existence anywhere. This is a first, and we believe the only rate system of its kind in the country."

The system provides rates on contracts based on volumne guaranteed to the carrier.

Port of Tacoma constructing new cool rooms

Port of Tacoma is presently constructing additional reefer cool rooms at Terminal 7, Berth A. Cost of these new cool rooms is \$500,000 and completion is scheduled for September 1981 which is the start of the 1981/1982 fruit season. The new 12,000 sq. ft., fiberglass insulated facility will add 50,000 box (fruit) capacity to Tacoma's existing cool rooms at Pier 2 which are also 50,000 box capacity. A cool room temperature of 34° F (1.7°C) will be maintained for handling fruit, however, it is possible to vary temperatures to below freezing or raise temperatures above 34° F depending on the requirements of the cargo.

For the past several years the fruit trade has grown tremendously; in 1979-80 Eight Million boxes of apples were shipped from Washington ports and it is anticipated that this trend will continue. With the addition of Tacoma's cool rooms at Terminal 7, Berth A, Tacoma is looking forward to dedicating the existing Pier 2 cool rooms to additional new business which fruit shippers have been most anxious for Tacoma to handle.

Noord Natie inaugurates a new terminal: Port of Antwerp

At present Noord Natie is building a new container and general cargo terminal at the Delwaide Dock. The terminal will have a total quay length of 1,070 m. At the end of April a first area of 500 m. quay length and 500 m. depth became operational for the handling of conventional and multi-purpose vessels. By means of six cranes with a lifting capacity of 25 tons at 30 m. and 15 tons at 43 m. both conventional general cargo and containers can be handled at the terminal.

Two warehouses of $6,000 \text{ m}^2$ each are available for storage. A 20 m. wide marshalling yard, consisting of four rail-tracks will be built by the Belgian national railway company (N.M.B.S.) at a distance of 500 m. from the discharging berth.

A second phase, foreseen for 1982, aims at transferring the fully containerized traffic from the present terminal at the Churchill Dock to the supplementary 570 m. of berthing length Noord Natie has in concession at the Delewaide Dock.

BTDB reject subsidies for Port of Hull

The British Transport Docks Board have rejected proposals for reductions in charges at Hull at the expense of other ports.

Proposals to this effect were presented to Sir Humphrey Browne, Chairman of the Docks Board, by representatives of Hull Chamber of Commerce and Shipping accompanied by Humberside MPs.

The representatives claimed that high charges are damaging the port's trade. The Docks Board, however, pointed out that despite the recession, traffic through Hull increased by over 5% last year, that container business grew by 13%, and that Hull's share of general cargo trade also increased.

The Docks Board Chairman blamed the port's financial loss on over-manning. He added that price cutting at Hull would simply mean subsidizing the port at the expense of other Docks Board ports.

Sir Humphrey said that the start of double-shift working at the port, combined with a substantial marketing effort, had succeeded in attracting several new services since the beginning of 1981.

New Merseyside coal shipping terminal opens: National Coal Board, BTDB

Industry on Merseyside received a timely shot in the arm recently with the opening of a new coal shipping terminal costing more than $\pounds 1\frac{1}{4}$ million at Garston Docks, Liverpool.

The new facility, which is a joint development between the British Transport Docks Board and the National Coal Board, was opened by local M.P. Mr. Malcolm Thornton (Con. Liverpool, Garston). The terminal will help to provide job continuity for 250 BTDB employees at the port of Garston.

The terminal is the only one of its kind in the UK, and was specially designed to handle shipments of housecoal from collieries in the Midlands, Nottinghamshire, Lancashire and Yorkshire to Northern Ireland, the Irish Republic and the Isle of Man. It is equipped for a throughput of about 1¹/₄ million tonnes annually – more than double the tonnage handled at Garston over recent years.

Speaking at a luncheon in Liverpool following the inauguration ceremony, Mr. Keith Stuart, Deputy Chairman and Managing Director of the BTDB, described the terminal as one of the most important developments in the port of Garston's long history.

"This investment demonstrates our confidence in the port, and in the coal industry. It is important also for Merseyside and is a good omen for the future," he said.

Garston had won the terminal contract in the face of (Continued on next page bottom)

PORTS and HARBORS - SEPTEMBER 1981 39

Coal is (once again) King : HAVEN AMSTERDAM

The forecasts vary, but most experts would concur that world coal consumption will be 10 to 15 times what it is now by the end of the century. Certainly mining operations are expanding, particularly in the United States (which has proven reserves good for several hundred years) the Soviet Union, South Africa and Australia.

The world's developed countries are demanding more coal for their energy needs. However, the inability of most developed countries to meet their coal needs through domestic production will necessitate tremendous increases in the amount of coal moving in international trade.

The world's main exporters are the United States (56.1 million tons in 1980), Australia (38.2 million tons) and South Africa (24 million tons). Poland has contracts to supply between 40 and 45 million tons a year, but currently is exporting only just over 20 million tons.

The gap is being filled by the others. It is estimated that the United States alone will raise its coal export from 56 million tons in 1980 to as much as 600 million tons by the year 2000. Other producing countries are also raising their export levels.

Reasons for the switch to coal are the sharp increases in oil prices, setbacks in the nuclear power industry and the desirability for longterm security of supply.

Given current oil and natural gas reserves and world petrochemical production capability, coal will eventually supply between one-half and two-thirds of the world's energy needs.

Coal looms as a major short and medium term solution to world energy needs and energy experts agree that coal will be the 'energy bridge' which will carry the world through the development period for new technologies and alternate resources during the next 100 years. However the transport problems posed by the fast growth are very involved indeed.

Naturally, with such sharp increases in sea-going transport, economy of scale dictates a trend to much larger vessels. It is estimated that by 1985, 30 percent of all coal will move in vessels of 100,000 dwt or larger. By the end of the Century, the average coal carrier will probably have a capacity of 150,000 tons or larger.

Dr. H.J. Alkema, director of marketing and coal acquisition for Shell Coal International in London, has predicted that about 700 bulk carriers in the 100,000 to 150,000 dwt range will be needed by the year 2000 to transport coal. This is in addition to the world's present smaller fleet. It must also be very good news to the shipbuilding industry.

Coal is not without its problems. There are concerns about strip mining and environmental acceptibility. Port congestion in the United States is another. Richards Bay,

(Continued from page 39)

strong competition from other ports. "One reason for choosing Garston was the ability of the BTDB to invest from our own resources without borrowing from Government. Equally important, management and all grades of employees at Garston have demonstrated that they can work together flexibly and effectively," Mr. Stuart added. South Africa Roberts Bank in Vancouver and Hay Point in Australia can handle vessels in the 150,000 ton range. These are presently deepening their approaches so that even larger vessels will be able to be handled.

However, virtually all U.S. coal is exported through the East and Gulf Coast ports, the deepest of which can only handle vessels drawing less than 45 feet: in other words ships of up to about 100,000 tons deadweight capacity. Several coat superports are being planned, most notably at New York, Craney Island, Virginia, Moorehead City, North Carolina, Savannah, Georgia, Mobile Alabama, and New Orleans.

Most of these would be able to handle vessels drawing 55 feet and thus bulk carriers in the 150,000 dwt range. However, it may be five or even 10 years before the U.S. can begin exporting coal in the largest bulk carriers.

Amsterdam is one port which is preparing itself to receive and distribute these streams of coal. The planned deep-water dry bulk cargo terminal at IJmuiden would be able to handle large bulk vessels in the 150,000 ton range. This 75-acre terminal would be capable of handling 10 million tons a year, double Amsterdam's present capacity.

In 1980, Amsterdam handled 4,247,000 tons of coal, 84 percent increase over the 2,310,000 ton handled the previous year. Amsterdam's distribution function is underscored by the fact that more than half of this was moved onwards, to the United Kingdom, West Germany and even Belguim and northern France. At present, Amsterdam shares the problems of the U.S. ports in that it can only receive vessels drawing up to 45 feet. Thus the planned dry bulk facility is necessary, particularly when American ports can handle the larger vessels.

In 1980, The Dutch Ports of Amsterdam, Rotterdam and Terneuzen handled 14 million tons of coal; by 1990 it is estimated that they will handle 65 million tons. Much of this is distributed in other countries, but the Dutch government's energy policy calls for increasing reliance on coal as an energy source.

To show Amsterdam's preparedness to meet the coal challenge, the Amsterdam Seaport Group has formed a subgrouping to project Amsterdam's coal interests. As 'Amsterdam Coal Port', they will participate in strength at the Coal Technology Europe exhibition in Cologne from June 9th through 12th. The Group markets itself as an excellent coal port.

The following companies are participating as we go to press: Overslagbedrijf 'Amsterdam' (OBA), Havenbedrijf 'De Rietlanden', the Nieuwe Rijnvaart Maatschappij (NRM) and Havensleepdiensten Goedkoop as well as the Port Management. The Vereniging 'De Amsterdamse Haven' serves as secretariat.

Amsterdam's strengths include its dry bulk terminals, especially OBA, the plans for the deepwater port and its excellent distribution system. Coal moves inland largely by barge and the NRM has just taken delivery of a 4-barge unit which makes it possible to move more than 10,000 tons at once. Amsterdam is prepared to meet the coal challenge of the future.

Disappointment in Rotterdam over delay in shaping common seaport policy

Alderman J. Riezenkamp tells EEC Transport Committee:

"I know that most West European port circles reject suggestions to develop a common seaport policy." They feel that possible problems between the ports will be solved automatically within the scope of a common transport policy.

"We do not share this view," Port Alderman Jan Riezenkamp recently told the European parliament's transport committee headed by chairman Horst Seefeld during a recent two-day visit to Rotterdam.

"The necessity of a common transport policy need not be discussed here by me; we, too, feel that this is beyond dispute," Mr. Riezenkamp said. "Our views have been formulated clearly in a motion adopted by the Rotterdam city council in April 1980."

This motion stated that the present relations between the West European seaports were "predominantly" characterised by the principle of competitiveness. The continuing internationalisation of all kinds of activities has made it necessary to base one's policy on the principle of cooperation.

Therefore the city council asked mayor and aldermen to work for cooperation with other West European ports in every possible field. In doing so the following subjects could be considered:

a environmental and safety policy,

b policy on government financing,

c social policy.

"Ports are not synominous with transport." Mr. Riezenkamp continued. "They have quite distinct characteristics: as links in transportation and as the seat of transport firms and transport-oriented industries.

Although this is sufficient reason in itself to give ports a separate place within the framework of the European Community, we feel that the correctness of this view has been confirmed by a fact-finding report published by an EEC working group in 1977, which described the structural differences of the EEC seaports.

Therefore we are still in favour of a common seaport policy based on the starting points laid down in a resolution adopted by the European Parliament."

Old wishes

The alderman said the resolution's most important starting points were:

- non-discrimination (i.e. putting an end to lasting unilateral - artificial - advantages for particular seaports),

- healthy competition between the seaports (to prevent competition for subsidies and a division of tasks among the ports by the governments),

- profitability (coverage of the ports' total expenditure by their income),

- taking account of the growth of world trade and the

care for sufficient transhipment capacity related to this, — maintaining good labour relations in the ports.

Rules, please

"We have always started from the view that a common seaport policy on this basis must not amount to port management centralised in Brussels," Mr. Riezenkamp said. "Brussels dirigisme would be unacceptable to us. But we would welcome a policy aimed at drawing up rules meant chiefly to harmonise the conditions for competition and to create a structure for cooperation among the seaports within the EEC.

The urgency of this will become clear on reviewing the present principles of competition and profitability in the EEC seaports. The EEC working group has listed the facts quite clearly in its report. It shows that the principles of competition and profitability in the EEC countries are nothing but a purely theoretical basis for port policy.

The two original factors on which a port's competitiveness should be based – geographic position and labour productivity – are in practice pushed completely into the background by the enormous subsidies, in particular for the infrastructure of the ports.

Ports which are unable to operate at a profit because of their geographic position and productivity are thus being enabled to remain in the market.

This situation is a main source of the distortion of competition. If this is not changed drastically, it will lead to large overcapacity in the present years of stagnating economic growth.

Realism required

"In my opinion the rules within the scope of a common port policy should primarily be aimed at this problem," Mr. Riezenkamp said.

"In this context I would not suggest the abolition of government subsidies to ports. This would not be realistic because the regional and, sometimes, also the national interests of a seaport may justify a certain measure of subsidising.

Harmonisation of the extent and structure of government subsidies would be a step in the right direction. So would a uniform system for the bases of overcharges made by the port management. Thus a beginning could be made with the restoration of a sound basis for fair competition while infrastructural overcapacity could be prevented."

The EEC executive should take initiatives to realise these aims. Mr. Riezenkamp was not very optimistic about this in his address to the visiting EEG parliamentarians.

Even though the European parliament called - as early as in 1972 - in a resolution for such initiatives, no progress has apparently been possible so far.

A recent report indicates that the majority of the community's seaports are opposed to measures aimed at a common seaport policy. The views on this are sharply divided.

No initiatives

Alderman Riezenkamp said he feared this might be a reason for the "European rules" to take no initiatives at all in this respect: "This fear is growing because insiders have told me that a reorganisation of the EEC's general directorate for transport has resulted in the abolition of the seaports division."

"Should I gather from this that the EEC executive in Brussels has removed the seaports from its list of activities?" he finally asked. "This seems most likely and therefore I have to conclude my address rather gloomily by expressing my concern above all to you, the transport experts of the European parliament and by asking you for your views on this situation."

Serious defeat

Mr. Seefeld recalled in a brief reaction that he was responsible for drawing up the following report in April 1972 on behalf of the Transport Committee: The fact that it has not yet been possible to outline a European transport policy fifteen years after the Rome Treaties became effective must be seen as a serious defeat."

"Meanwhile another eight years have passed," Mr. Seefeld said, adding: "The words I used at the time are still applicable today. I sincerely regret having to observe here that a great deal still has to be done."

Mr. Seefeld confirmed that the EEC transport directorate's seaports division had been abolished. This was a serious mistake, he said. Therefore the European transport committee had lodged a protest stating it did not accept the explanation given for this decision.

He expressed disappointement about the results obtained so far within the EEC by the successive administrators in respect of an integrated transport policy. It was inconceivable why in this vital sector for the European Community a complete standstill had set in; we are faced with a serious deadlock, he said.

Mr. Seefeld had talks on this situation in various cities, including The Hague, where he met the relevant cabinet ministers. He felt that Holland could play a major role in the activities, which should now be aimed at finding a compromise.

Merger of two docks: Port of Antwerp

Construction works at the link between the Fifth Harbour and Amerika docks have also entailed the breaking off of the spit of land between the Amerika dock and the Lefébvre dock. This resulted into the merger of these two docks into one single basin.

For this reason the Court of Burgomaster and Alderman of Antwerp decided only to maintain the name of Amerika dock for the whole basin.

Container traffic continues expansion

Recently the 'Statistik der Schiffahrt', of the German Institute of Shipping Economics, Bremen, published the precise container-handling details for 1979 (latest data). 29,569,736 TEUs were handled world-wide – 11.8%

42 PORTS and HARBORS - SEPTEMBER 1981

more than in 1978. The USA was ahead with 6,476,727 containers (+8.9%), followed by Japan with 2,341,567 (-4.8%), England with 2,128,108 (-2.1%), the Netherlands with 1,866,181 (+10.1%), Taiwan with 1,340,966 (+28.3%), the Federal Republic of Germany with 1,331,901 (+13.2%), Hongkong with 1,303,923 (+6.4%), Australia with 1,036,353 (+17.6%) and Italy with 1,002,195 containers (+21.6% more than in 1978).

Port of Amsterdam registers 13% growth in 1980

The Port of Amsterdam demonstrated energetic growth in the course of 1980, with a 13.4 percent increase in international sea-going goods traffic over the previous year. Total cargo volume in 1980 amounted to almost 22.4 million tons. This makes 1980 the second most favourable year for the port.

At the beginning of the 1970s, the total cargo flow exceeded the 20 million ton level for four consecutive years, with a record volume of over 24 million tons in 1971.

Thereafter, volume handled dropped to a low of 17.2 million tons in 1977 and 1978. In 1979, total tonnage handled rose to 19.7 million tons, an increase of 15.4 percent.

This very satisfactory development is due largely to increases in the transhipment of dry bulk goods. Compared to 1979, coal traffic rose by 84 percent to 4,247,000 tons while ore volume rose by 35 percent to 3,213,000 tons.

In the current year, the Port Management expect even further development in dry bulk goods traffic, particularly in the coal and grain sectors. The prospects for ore are uncertain in view of possible new production limitations on steel within the European Economic Community. The outlook for oil seeds is also good because of the new Cargill sunflower seed oil factory in the Amerikahaven where production started up last September.

Amsterdam is gearing itself to handle the continued increase of coal traffic in the coming years with plans for a new deep-water dry bulk terminal outside the locks at IJmuiden.

The general cargo sector increased by 11 percent to 2.7 million tons in 1980. This labour-intensive sector of port handling includes not only conventional cargo such as cocoa packed in bags, but containers and imported automobiles.

There was a decline of 12 percent to 639,000 tons in timber. This is largely attributed to the prevailing stagnation in the construction industry.

New Facilities in the Port of Rijeka

Reported by Mr. Boris Pričard, International Information Officer, Port of Rijeka Work Organisation

The port of Rijeka is the largest port of Yugoslavia, handling large volumes of goods in the seaborne trade of Yugoslavia and Central European countries. The port has a very favourable geographical position, providing good connections with Central Europe (Fig. 1). Besides, it offers some of the advantages such as:

- the sea depth alongside and in the accesses, enabling the accommodation of largest vessels;
- long tradition in liner service; and
- skilled labour.

Port of Rijeka has gone through a rapid development during the seventies. From a typical Mediterranean port, restricted in area by the surrounding city, Rijeka has grown into a modern multi-purpose port with a great degree of mechanization of cargo handling operations. There are some ninety liner departures per month.

The development can easily be traced from the traffic growth throughout this period.

Total Traffic of the Port of Rijeka, 1970 - 1980

Year	Tons	Year	Tons
1970	10,349,000	1975	12,029,000
1971	10,740,000	1976	13,997,000
1972	9,941,000	1977	14,135,000
1973	10,483,000	1978	14,733,000
1974	12,663,000	1979	16,419,000
		1980	20 435 000

Transit cargo has always played an important role in the traffic of the port, and in this respect Rijeka shares the same traffic characteristics as for instance Hamburg, Triest or some other port serving Central Europe. The two tables below are a presentation of the share of transit goods in the total traffic of the port of Rijeka as well as of the distribution of transit traffic per individual countries.

Port of Rijeka, Transit Traffic (oil excluded)

Year	Transit Traffic tons	Total Traffic tons
1970	3,423,000	10,349,000
1975	4,190,000	12,029,000
1979	4,616,000	16,608,000

Breakdown of Transit Traffic per Countries (1979) (oil excluded)

Year	Transit Traffic tons	Country	%
1979	2,184,000	Austria	48
	1,581,000	Czechoslovakia	34
	515,000	Hungary	11
	330,000	Other	7

Oil caters for a half of the total traffic of the port (9,630,000 tons in 1979), and is mostly discharged at the new oil terminal run by the Yugoslav Oil Pipeline. Very significant, though is the constant increase of bulk cargo and general cargo traffic.



Port of Rijeka: Old Port



Port of Rijeka: Bulk cargo terminal

Port of Rijeka, Breakdown of Traffic per Kind of Goods (1970, 1975, 1980)

	1970	1975	1980
Liquid Cargo	4,821,000	6,265,000	12,771,000
Dry Bulk Cargo	2,798,000	3,640,000	5,255,000
General Cargo	2,730,000	2,124,000	2,519,000
Total	10,349,000	12,029,000	20,545,000

All the cargo, with the exception of oil, is handled by the facilities owned and operated by the Work Organization "LUKA" Rijeka, i.e. Port of Rijeka Work Organization.

The work of the port is organized in six basins as shown in Fig. No. 2. The facilities of the port are spread in the coastal area more than a hundred kilometres long, including the bridge-connected Island of Krk where there is an international airport. There are both rail and road connections of the port's basins with the hinterland.

To meet the requirements of the ever increasing traffic, there has been a great deal of investment recently. Among

the most important investments are the extension of the bulk cargo terminal, new container terminal with a roll-on/ roll-off berth, new port industrial zone and timber terminal, inland storage facility, and a number of minor ones (phosphate terminal, equipment, etc.).

The area of the old port is restricted by the town, allowing therefore no possibility for large-scale extension within the boundaries of the old city port constructed almost a century ago. As is the case with any port facing similar space problems, Rijeka had to adopt the only option – that of spreading its new facilities in the nearby coastal and insular area. Particularly decisive was also the demand of modern transport technologies for vast areas of land. Figure No. 2 shows how the various port terminals and facilities are located, and the following is a brief account of the basic port investments made in the past five year period.



Fig. 1 Port of Rijeka

Extension of the Bulk Cargo Terminal

The Bulk Cargo Terminal situated in the Bay of Bakar, only 10 km distant from Rijeka, was put into operation in 1967 and was designed for the discharge of bulk carriers up to 100,000 dwt, carrying iron ore, coal, or bauxite. As the traffic grew, the terminal had to meet the demands of accommodating larger vessels and to grant higher unloading rates. Therefore the reconstruction of the terminal, which took one year, but without interfering the operation of the existing facility, involved the extension of the berth length, the erection of a new grab unloader and the reconstruction of the conveyor belt system for the transportation of the material. Simultaneously an underwater conveyor tube was constructed connecting the terminal to the coke plant just across the Bay. The entirely reconstructed and extended terminal became operational in the beginning of 1978. As a result, the unloading rate of the terminal was doubled, and today it reaches about 3,000 tons per hour. The terminal now disposes of a 384 m long berth, with 18.5 m depth of the quay, which permits the terminal to accommodate iron ore carriers up to 150,000 dwt. The terminal equipment consists of one 45-ton ship unloader built by WBB Austria, two 16-ton Krupp built unloaders, one 11-ton stockyard gantry, and a conveyor system with a distribution station and a rail car loading and weighing station. The discharge process is highly automatized requiring relatively low share of human workpower.

In 1979 the terminal handled more than 4 million tons of cargo, i.e. about 3 million tons iron ore and one million tons coal. When the planned storage area is extended, however, and when the rail transport conditions are improved,



Fig. 2 Port of Rijeka, Distribution of Port Facilities

the annual capacity is to range between 7 and 8 million tons.

Iron ore handled by the terminal is mostly destined to Austrian iron and steel works, as well as to Czechoslovakia, Hungary and to home heavy industry. The total amount of coal is used by the nearby coke plant. Iron ore is of various origin, prevailingly from Brazil, India, etc.

This modern port facility is today the largest bulk cargo terminal in the Mediterranean.

Container Terminal

The first full container vessel called at the port in 1973. The container terminal, named "Brajdica", was built in the eastern part of the old port and put into operation in 1979. With a total capacity of 50,000 TEU's per annum, the terminal is to meet the present requirements, but a large container terminal is envisaged in the future and vast land area has been acquired for this purpose outside the town. The "Brajdica" terminal consists of a newly constructed pier 163 m long and 12 m deep. The 50,000 sq. m of stacking area to back up the berth also includes about 7,000 sq. m CFS space. The container handling equipment enables a relatively high handling rate and consists of one Liebherr-built container crane, 35/50 tons lifting capacity, one 50-ton straddle carrier, one 35/45-ton side loader, a number of heavy duty FLT's, tractors and trailers.

Adjacent to the container berth is a roll-on/roll-off berth with a 56 m wide ramp for the simultaneous accommodation of two ro-ro ships. The berth is also equipped with two tug-masters and a number of ro-ro trailers and semitrailers.

The port of Rijeka is particularly suitable for ro-ro traffic, considering its geographical position in the Mediter-ranean and a minimum tidal range (1.2 m).

The container and ro-ro terminal in the port of Rijeka also offers possibilities for the handling of refrigerated containers as there are 40 reefer power sockets.

The container traffic in 1980 was more than 18,000 TEU's but this figure is expected to increase considerably in the forthcoming period, as a great percentage of general cargo passing through the port (1.32 million tons in 1979) is easily containerizable.

Besides, there are weekly and fortnightly container and ro-ro vessel departures for the ports in the Mediterranean, North America. The container service is mainly operated by the Rijeka-based shipping companies "Jugolinija" and "Lošinjska Plovidba" as well as a few foreign container operators. Containers are also introduced on the Middle and Far East routes maintained by their multi-purpose vessels.

The New Timber Terminal

Rijeka ranks among the largest and most experienced timber handling ports in the Mediterranean. Timber and timber products have been the basic export cargoes passing through the port of Rijeka ever since the first historical record of Rijeka as a port in the 12th century. On account of the insufficient and inadequate facilities within the old part, a new timber terminal was constructed in the 11 km long Bay of Raša some 50 km westwards from Rijeka. The Bay is naturally protected and has an average depth of 30 metres. In addition in the valley of the river Raša about five million square metres of land is available for the development of port industry and facilities. In Stage 1 of the new timber terminal, which was put into operation in 1979, a 164 m long and 10 m deep berth was constructed and equipped with two 5-ton dockside cranes, a number of fork lift trucks, tractors and trailers. There are both road and rail connections. The timber storage area includes about 40,000 sq. m covered and 150,000 sq. m open space. Presently, the port of Rijeka handles about 600,000 tons of timber and timber products.

Inland Storage Facility

To meet the demand for a speedy turn-round of general cargo vessels, which require efficient transit shed service, the Port of Rijeka Work Organization decided to construct a large facility for medium and long-term storage of goods outside the limits of the old port, and in this way speed up the direct ship-to-shore operations and the short-term storage of goods.

As no sufficient area of land was available in the existing port facilities, a new location for such developments was reserved about 10 km inland from Rijeka and only 3 km distant from the Bay of Bakar, where there were quay facilities already available.

Presently, in the first stage of construction, the inland storage facility covers a large paved area of 150,000 sq. m storage space. When the final stage is completed, there will be a total of 400,000 sq. m of land, with an annual throughput of the facility of 500,000 tons.

The facility, Stage 1, was put into operation in 1978, and includes four concrete sheds of 7,000 square metres each.

There is also a road link to the trunk roads, whereas the facility is to be connected to the railway network by the end of this year.

The sheds are also available for various degrees of goods processing, working, etc.

Conclusion

The port of Rijeka has invested a great deal over the past decade in order to meet the requirements of its users and the broader hinterland, including such countries as Austria, Czechoslovakia, Hungary, and others. Special attention has been paid to the improvement of the facilities and a significant step has been taken for the introduction of modern transport and handling technologies, such as containerization, roll-on/roll-off concept, etc.

Consequently, "LUKA", i.e. the Port of Rijeka Work Organization, has been forced to move a number of its facilities outside the town in search for ample space offered by the surrounding coastal and inland area. In such a way, not only the requirements of the port users but also of environment protection are being met.

All the investments have proved to be profitable, and they make part of the port's long-term development plan.

Mr. Haraguchi appointed as Executive Vice-President, Nagoya Port Authority





Mr. Yoshiro Haraguchi Executive Vice-President Nagoya Port Authority

Mr. Fumio Kohmura President, Nagoya Container Berth Company Ltd.

For over 13 years, Mr. Fumio Kohmura has played a leading role in the growth of Nagoya Port as the Executive Vice-President of Nagoya Port Authority, concurrently holding the post of the Third Vice-President of IAPH. He resigned, as of 10 June 1981, from Nagoya Port Authority and will now take the office of the President of Nagoya Container Berth Company Ltd., to which he will whole-heartedly devote himself hereafter.

His successor is Mr. Yoshiro Haraguchi, ex-Director, Hanshin (Osaka Bay) Port Development Authority. He was appointed as such upon the approval of the NPA Assembly which met on 19 June. Mr. Haraguchi is the son of the late Dr. Chujiro Haraguchi who was a founding father of IAPH. Mr. Yoshiro Haraguchi graduated from Tokyo Imperial University in 1948 and has served at the Ministry of Transport for many years thereafter. Since 1975, he has energetically worked for the Hanshin (Osaka Bay) Port Development Authority.

The Port and the Community: Port of Melbourne

Ports are a vital part of the community. Through an efficient port flow the imports and exports which are essential to the economic well being of the state or nation it serves. Ports generate business; provide jobs both directly and indirectly; they are substantial customers to local business and as prosperity increases they are leading growth centres. Ports are servants to the community.

Apart from its essential commercial function a port has, like any other organization, a social responsibility to the community in which it is located.

The Port of Melbourne Authority, within the limitations required to operate an efficient and safe port, is at its own cost undertaking two major community and trade oriented projects. It will also be actively supporting community efforts in the coming year.

Late in 1980 the PMA adopted a Landscape and Public Access Strategy which will, when completed in ten years time, progressively open up selected areas of the Port for both passive and active public recreation activities. As part of this scheme a comprehensive landscaping and planting programme will be undertaken to enhance the visual environment of the Port area. The entire scheme will cost a total of \$10 million to complete.

Another project being sponsored by the PMA is the construction of the World Trade Centre. Although primarily trade oriented it has potentially far reaching community benefits to be gained from its location in a historic area of the Port close to the heart of the City. Apart from the economic benefits to flow on to the community from the increased trading opportunities the Centre will generate, there will be a dramatic change in the public use of the area. Additional jobs will be created with the establishment of shops and other facilities such as banks, travel agents, etc., necessary to cater for the needs of tenants and visitors to the Centre.

In addition, tenants and visitors alike will be able to enjoy the River Walk – two levels of landscaped gardens overlooking the river – and other recreational facilities which are to be provided for public use.

Both the Landscape and Public Access Strategy and the World Trade Centre are high capital cost projects which will be tangible and permanent assets to the community.

But the PMA's participation in community affairs does not end with these two major projects. Other public oriented activities organized by community bodies have been, or will be, supported by the Authority.

During the recent Australia Day weekend the Williamstown Festival included a pictorial display arranged and mounted by the PMA; hard hat diving demonstrations by divers of the Port Emergency Service; and the inclusion of various appliances from the Port Emergency Service in the street parade held on the final day of the Festival. In addition Port Hostesses provided the commentary on the ferry Blackbird which took members of the public on sightseeing tours of the wharves and other installations on the Williamstown waterfront.

At Easter this year the Melbourne City Square has been made available to the Port Emergency Service to stage a 24-hour diving marathon in aid of the Royal Children's Hospital. A similar exercise was carried out in 1979 when more than \$10,000 was raised through sponsorships.

This year's "Divathon" will be on a much larger scale and it is hoped to at least double the amount of money raised for the hospital. The funds will be used for research into Cystic Fibrosis, a dietary disease affecting one in every 2,500 children. The two divers attempting to break the 24hour underwater record will be assisting the research by being placed on a special diet based on that used by N.A.S.A. astronauts.

For many years the PMA has provided educational tours of the Port for secondary school students and other groups. Each year approximately 15,000 visitors are conducted around the Port in the inspection launch Commissioner. As an extension to this important community service Port Hostesses frequently deliver illustrated talks to schools and other groups.

Through participation in these community activities the Port of Melbourne Authority is demonstrating in the most practical way possible its awareness of its responsibilities to the civic life and well being of the community it serves.

Darling Harbour Project completes : The Maritime Services Board of N.S.W.

The official opening of No. 3 Berth Darling Harbour on April 6 marked the completion of the \$30 million project to redevelop Darling Harbour north of the Pymont Bridge in the Port of Sydney.

Since 1968 the Maritime Services Board has provided new berths at Nos. 6, 5, 4 and now 3. All are designed to accommodate general cargo shipping including Ro-Ro stern quarter ramp vessels.

The transit shed at the new wharf measures 130 metres by 45 metres and the wharf face is 228 metres long. Stacking and shed areas cover 3.5 hectares and the apron width from the shed to the edge of the wharf is 27 metres.

The construction of No. 3 Darling Harbour had some noteworthy features.

• To provide a satisfactory layout for the berth and stacking area it was necessary to move historic Moore's Wharf Store nearly 50 metres from its original site. The sandstone masonry building was rebuilt on a new steel pilling and reinforced concrete foundation.

• The berth was constructed using the last of the 1200tonne reinforced concrete caissons of which the Board built more than 200 in the 1960s and early 1970s for reconstruction projects in Port Jackson. To 14 previously unused caissons was added one of the three special-design caissons salvaged when No. 2 Balmain was demolished in 1977. Incorporation of this 'secondhand' unit resulted in a considerable cost saving.

• No. 3 Berth Darling Harbour is built over the site of the former Nos. 10 and 11 Berths Walsh Bay. It was orginally intended that the face line of the new berth would be the same as the old. However, the sandstone rock face at Millers Point falls sharply to the north and west. Underwater bedrock levels at the proposed face line were too high to permit the founding of caissons for the new wharf face without costly underwater removal of substantial quantities of sandstone. The problem was solved by moving the face line 15 metres seaward. Underwater rock removal was reduced to a highspot trimming operation without encroaching on the main shipping channel. The solution added the benefit of improved traffic and stacking arrangements.

• Some of the large Ro-Ro vessels which will use No. 3 Berth require a bow mooring point well beyond the eastern end of the wharf. Mooring was provided by truncating the adjacent No. 8/9 Walsh Bay (to align with the face of No. 3 Darling Harbour) and by the construction of a mooring bollard on the new outer end of No. 9 Walsh Bay.

The President of the Board, Mr. John Wallace, in his introductory address told the large gathering in the transit shed that the Board was already planning an overall development of the Pymont Wharfage.

Berths 19 to 23 will be redeveloped to provide modern general cargo accommodation.

"It is also intended that new wharfage alignment will be determined so as to improve the width of channel available to vessels entering and leaving White Bay and Johnston's Bay," Mr. Wallace said.

"In addition, investigations are being made into ways of upgrading Nos. 7 - 10 and Nos. 24/25."

Direct export of cement a possibility: Northland Harbour Board

Direct cement exports to the Pacific Islands from the Portland works in Whangarei harbour could result from the \$37 million modernization of the works.

The modernization programme would make the works more efficient and competitive. Exports, which now total 8000 tonnes – about three per cent of last year's production – could be boosted and export surveys are currently under way.

According to the managing director of Blue Circle Industries Ltd. of London, Mr. John Milne, the present double handling of cement from Portland to an Auckland depot and thence by container to Pacific destinations was costly.

Cement for the local market was shipped in bulk in shallow draft vessels directly from Portland, said Mr. Milne. The shallowness of the upper Whangarei habour was one factor which could inhibit direct exports.

The modernization programme would reduce fuel costs at the works and would also end pollution of the harbour through solid waste disposal, he claimed.

A glimpse of the Sri Lanka Ports Authority (See front cover also.)

The New Ports Authority

1979 was a significant year for the ports of Sri Lanka. The Ministry of Trade & Shipping took a far-reaching and innovative step to streamline and co-ordinate port activities by bringing in legislation to unify management, cargohandling operations, engineering, maintenance and development. These activities were earlier performed by three State Institutions, viz. Port (Cargo) Corporation, Colombo Port Commission and Port Tally & Protective Services Corporation. The Ports Authority was established on 1.8.79 by Act of Parliament No. 51 of 1979. The new Ports Authority streamlined the functions and services to avoid overlapping and duplication of work. This step has brought Sri Lanka ports in line with other developed ports in the region.

Port of Colombo

The Port of Colombo, as an open anchorage, was known to sea-farers even during the pre-Christian era. History records that from the time a Greek navigator named Hippalos discovered in the first century B.C. the use of monsoon winds to sail from the mouth of the Red Sea across the Indian Ocean, Graeco-Roman shipping, and later the intrepid Arab coasters, found their way to the western coast of Sri Lanka. The main items of trade were elephants, ivory, gems and spices such as cinnamon and pepper. Arabs, Greeks and Persians alike frequently came to Sri Lanka to rendezvous with vessels bringing precious loads of silk from distant China. Thus the Island's strategic position enabled it to play an important role in a nascent sea-borne trade and exchange of goods.

It was only after the advent of the Portuguese in 1505 that Colombo became known to the modern Western

world. During the occupancy of the Island by the Dutch and the British who followed, Colombo became more and more important as a port of call.

During the British period, the Legislative Council passed a resolution in 1871 that a Breakwater projected from Galle Buck or Custom House point would be best calculated to afford protection to the open roadstead of Colombo. Sir John Coode, a great habour expert, was commissioned as Consulting Engineer, and the preliminary work began in 1874. In 1875, King Edward VII (then Prince of Wales) laid the foundation stone of the South-West arm of the Breakwater. Though the construction of the South-West Breakwater transformed the roadstead Port of Call to a port with safe anchorage, it was only after the construction of the North-East Breakwater and the North-West Breakwater in 1898 and the construction of the extension arm to the South-West Breakwater in 1912, that the Port of Colombo become a sheltered haven for ships in all seasons.

Up to 1950, however, Colombo was mainly a lighterage port with one alongside berth. In that year, a major development scheme was launched and completed in 1956 at a cost of over Rs. 110 million. This project transformed the port to what it is today with its alongside berthing facilities, modern pillar-less transit sheds, wide quays, cargo-handling equipment and other services to ensure fast and economical movement of cargo.

The designs, plans and the execution of construction were carried out by foreign Consulting Engineers and Contractors. The main features of this project were the construction of deep-water quays, increasing the number of alongside berths for cargo vessels from 01 to 14, together with 30,000 square metres of adjacent warehouse space. In addition, 30.0 metres of quay providing 3 berths for coasters, a new Oil Dock and a new Passenger Terminal were built and ancillary facilities provided.

The administration of Port was in the hands of the Harbour Board from 1882. This was superseded by the Port Commission which was established in 1913. From the commencement, cargo-handling operations in the Port were in the hands of private operators who leased transit sheds. Some of them had their own lighter fleets and employed labour for discharging operations from stevedore contractors. Cargo handling in the Port of Colombo was nationalized in 1958.

The Port (Cargo) Corporation which took over the handling of cargoes, continued to perform these functions till the formation of the Ports Authority in 1979.

Sri Lanka still holds a prominent position for minerals, gem stones and spices, and over the years has extended the range of exports to Tea, Rubber, Coconut products, Plumbago and manufactured goods. With major development projects undertaken during the post-war period, it has enhanced its favourable position on the major shipping routes of the world, providing specialized facilities for modern callers.

Quays

Queen Elizabeth Quay has 5 alongside berths to accommodate large vessels. The draught alongside ranges from

9.0 metres to 12.8 metres.

- Bandaranaike Quay has 4 berths to accommodate large vessels with draughts ranging from 6.7 metres to 10.3 metres. In addition, there are 2 other Coaster berths, their draught is 5.5 metres.
- Prince Vijaya Quay has two alongside berths with draughts ranging from 7.5 to 9.5 metres.
- Guide Pier has two alongside berths at the entrance to the Graving Dock with draughts ranging from 7.5 metres to 9.5 metres. Across this berth there is one alongside berth at South Pier which can accommodate a large vessel with a maximum draught of 9.5 metres.
- North Pier has a draught of 10.0 metres.

Container Terminal

The new Container Terminal which is an extension to the Queen Elizabeth Quay, was completed and ceremonially inaugurated by His Excellency the President J.R. Jayewardene, on 1st August, 1980.

This Terminal is 300 metres long with a draught of 12.8 metres L.W.O.S.T. and is ready to handle all Container vessels plying on the U.K./Continental/Australian/Far Eastern/American routes. The new Terminal also provides approximately 3.2 hectares of additional space adjacent to it, to serve as a Marshalling and Stacking Yard for Containers awaiting removal outside the port premises, export, transhipment and for stuffing and stripping of Import/ Export cargo.

The Port handles an average of 5,000 T.E.U.'s a month and additional stacking area is available within the port premises. The Management is making arrangements to install a Gantry Crane at Queen Elizabeth Quay to meet the increasing demand for container handling.

Towards Port Development

At the request of the Sri Lanka Government, the Government of Japan sent a Survey Team in June, 1979, to conduct a study on the Development Project of the Port of Colombo. The study was conducted by the Japan International Co-operation Agency (JICA) and its Report has been submitted to the Government. According to the Master Plan proposed by the Team, the following proposals will be taken up:—

- ★ Development and construction of a 900-metre alongside deep water Quay berth to accommodate three thirdgeneration container vessels, and establishing a proper Container Terminal providing the required Gantry Cranes and other shore mechanical equipment along with C.F.S. and Container Yard facilities Two of these berths are expected to be completed in 1983. Preliminary sub-soil investigations have already been started.
- ★ Development of the North Pier for alongside handling of cargo.
- ★ Widening of the Harbour entrance to secure safe entry for larger and deeper vessels, with an extension arm to the Breakwater for extra protection of the Harbour basin.
- ★ Carrying out of a feasibility study for a new Oil Berth including sonic sounding in the approach channel.
- ★ Providing for container and container-handling equipment and all other back-up services.
- ★ Providing a system of road and rail transport in the Port and zoning off areas for different activities.



Through the combined efforts of the State of New York, the City of New York and The Port Authority of New York and New Jersey, construction is now nearing completion on the new 1,000,000-ton capacity Red Hook Container Terminal in Brooklyn, New York, which has been leased to Universal Maritime Service Corp. This new container terminal, capable of handling Ro/Ro, as well as container and breakbulk vessels, is being completed at a cost of \$20,000,000. It will have a 1,000-foot-long container berth supported by two cranes and 40 acres of upland area. Approximately 30,000 containers are expected to move via Red Hook each year and the facility will have the capability of handling trucks on a 100 percent appointment system. The site enjoys exceptional navigational advantages since it is located along Buttermilk Channel where the Corps of Engineers maintains a depth of 40 feet.

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- 5. Transtainer[®] Operation Supervising System
- 6. Portainer® Operation Supervising System

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