

PORTS *and* HARBORS

June, 1983 Vol. 28, No. 6



Port of Tokyo

The Publisher: The International Association of Ports and Harbors

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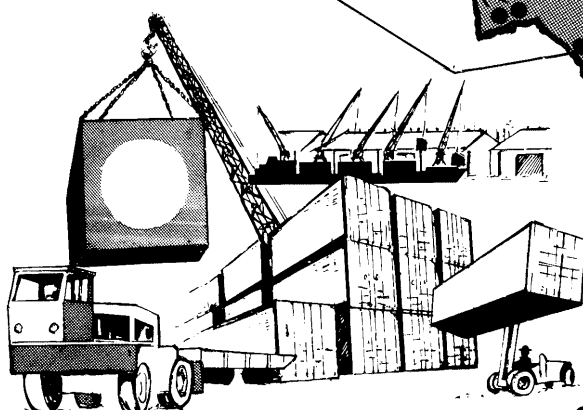
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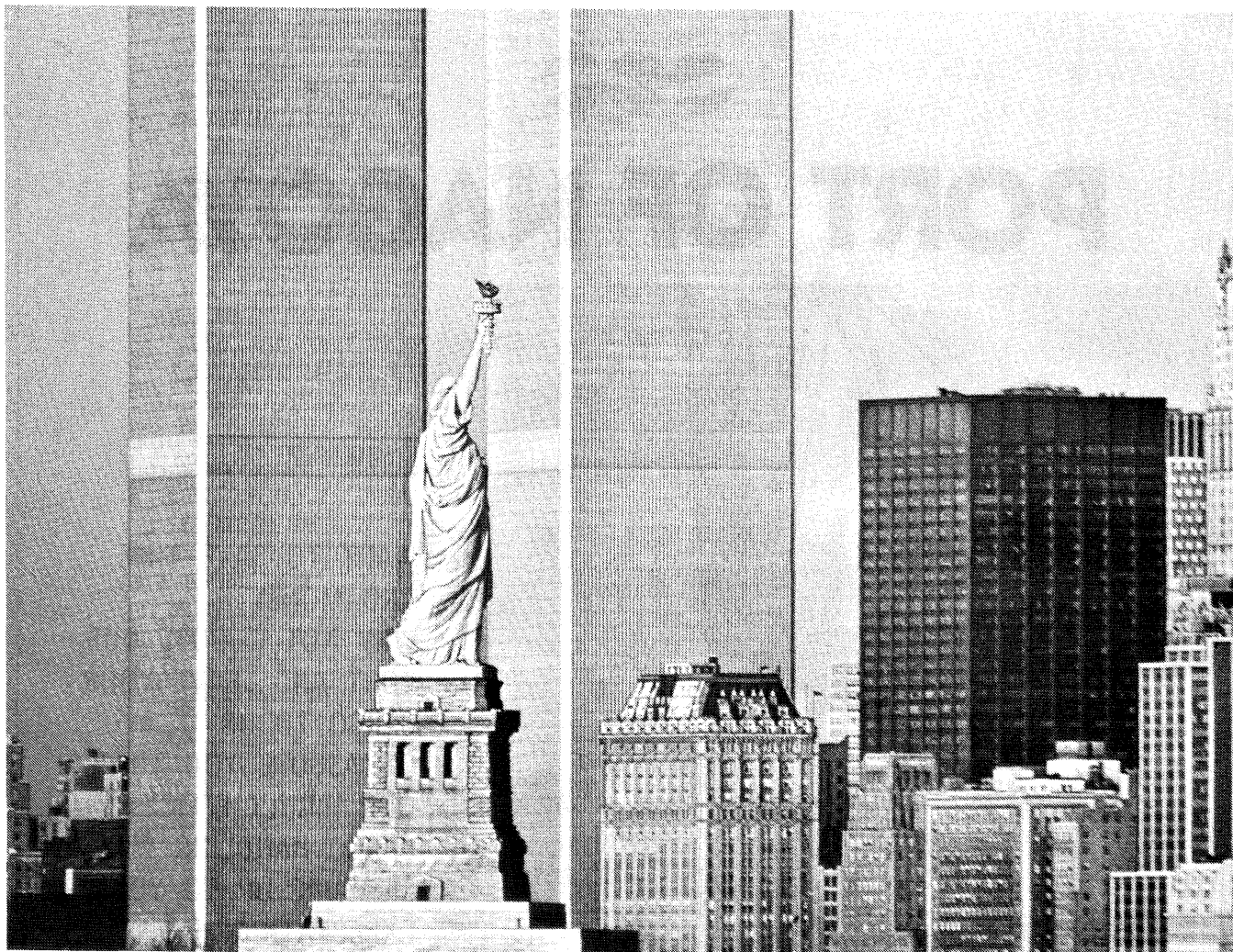
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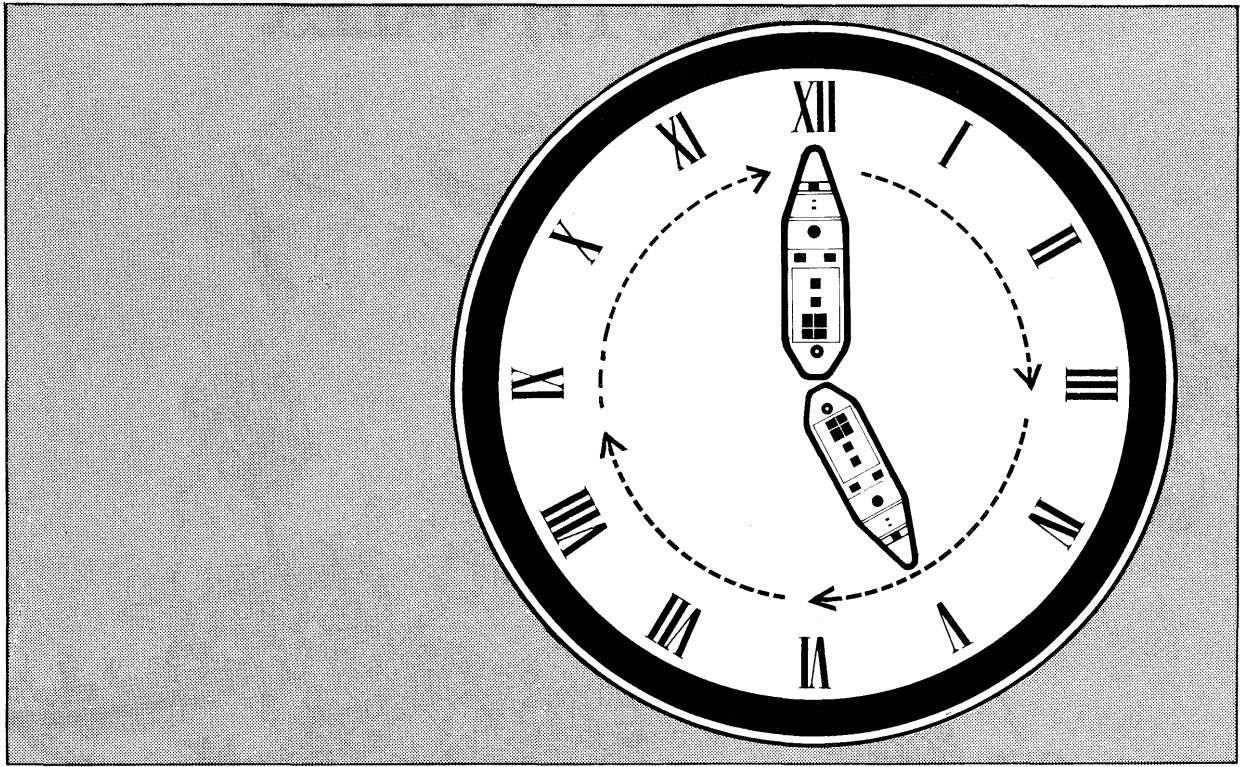
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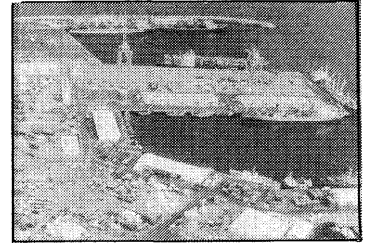
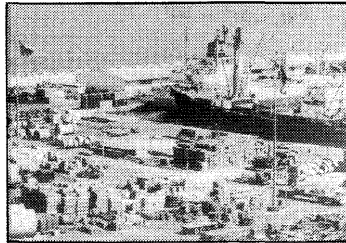
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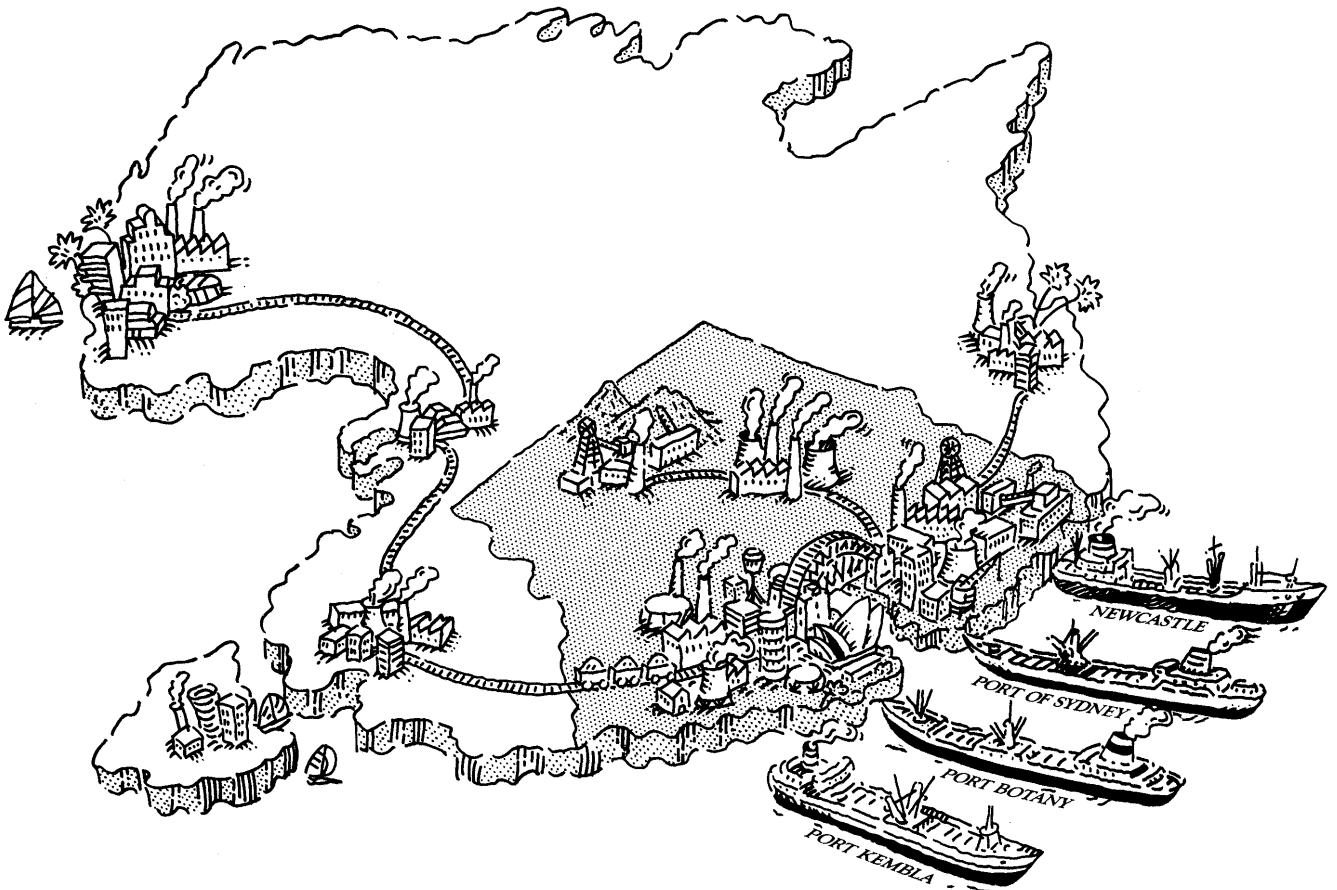
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PORTS *and* HARBORS

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The Cover: Port of Tokyo Oh-i Container Terminal

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IAPH announcements and news

Conference Chairman Ekstrom visits Tokyo Head Office

Mr. Bo A. Ekstrom, the newly appointed Chairman of the 13th Conference of IAPH, visited the Head Office in Tokyo on Thursday, April 21, 1983, and had a meeting with the Secretary General and his staff concerning the details of the programs for the Conference.

Following the meeting in Vancouver held on March 1, 1983, involving IAPH President Mayne, First Vice-President Tozzoli and the Conference Organizing Committee, and also joined by a member of the Head Office Secretariat staff, Mr. Ekstrom flew to Tokyo by CP Air, the official air carrier for our June Conference, to discuss and review the latest situation concerning the preparations for the conference.

At the meeting, which commenced at 10 a.m. and continued until 5 p.m. with an hour for lunch, all items in the program for the conference were reviewed and checked in considerable detail. As a result, both the host port Organizing Committee and the Head Office Secretariat were able to get a clearer picture of how the proceedings are likely to unfold.

Dr. Sato thanked Mr. Ekstrom for taking up so much of his time for this extraordinary meeting and expressed his appreciation to his assistance in our efforts to make the conference a success.

Your entries for the 1984 edition of the IAPH Membership Directory invited

Towards the end of May, the Secretary General will circulate entry forms to all IAPH members and requests their cooperation in returning the completed entries to the Tokyo Head Office for the 1984 edition of the IAPH Membership Directory.

Upon receipt of the Secretary General's letter, all members are requested to check the information which the Secretary General has attached to the entry form and to make the necessary corrections and changes on the given items, including: 1) name of organization, 2) annual volume of cargo handled (both general and bulk cargo in the case of Regular Members) in metric tons, 3) address, 4) mailing addressee, 5) cable address, 6) telex number and answer-back code, 7) office phone number(s) and 8) names and positions of principal officers.

In case any member fails to update the relevant information through this channel, the Head Office will be obliged to carry the previously published information in the new edition of the Directory. The Secretary General appeals to members not to waste this once-a-year opportunity to acquaint the world ports and port-related businesses which receive our Membership Directory with up-to-date details concerning their organizations.

Members are also invited to run their advertisements in the Directory at reasonable rates, namely, US\$300 for a full page and US\$180 for a half-page.

Ms. Phinopoulos of Cyprus receives an IAPH bursary

Mr. J.K. Stuart, Chairman of the Committee on International Port Development, has approved a request for bursary assistance from the General Manager of the Cyprus Ports Authority. This award will enable Ms. Daphne Phinopoulos, Planning Officer of the C.P.A. to go to the Port of Gothenburg to attend a course on traffic forecasting from mid-August to the end of September 1983. According to Mr. Stuart's telex to the Secretary General, the Port of Gothenburg is to meet costs of training and accommodation, and therefore IAPH's financial help is limited to travel costs of 800 US Dollars, which the Secretary General remitted to the Cyprus Ports Authority.

Ms. Phinopoulos was the first person to win the top prize in the IAPH Award Scheme, and received her award at the 11th Conference of IAPH held in Deauville, France, in May, 1979.

Two more bursaries approved

The Chairman of the Committee on International Port Development announced the following 2 recipients of the Bursary recently approved.

1. Mr. Samuel Banini, Officer in charge of studies, Office of the General Manager, Cameroon Ports Authority, to attend a course on port finance to be jointly organized by UNCTAD and IPER (Institut Portuaire d'Enseignement et de Recherche) in Le Havre, France, for the period May 30-June 10, 1983.
2. Mr. J.N. Msangi, Tanzania Harbours Authority, to attend a course on port management and operations at the Port of Singapore Training Centre for three weeks from May 24, 1983.

The Secretary General has arranged the remittance of their bursary money to the respective sources.

The reports on their participation in the respective courses will be carried in this journal as soon as they are received.

Port of Brisbane issues invitation to host 15th IAPH Conference

Mr. F.M. Wilson, General Manager, Port of Brisbane Authority, Australia, informed the Secretary General on April 22, 1983 that his Port Authority would present a proposal to the Board meeting in Vancouver to host the 15th Conference to be held in 1987 in the Asian Region, in Brisbane.

As previously announced, an invitation has also been received from the Korea Maritime and Port Administration (KMPA), and the venue is to be selected on the basis of presentations from the respective candidates at the Board meeting on June 11, 1983.

Visitors

On April 25, 1983, Mr. D.P. Liveras, Chairman, Cyprus Ports Authority, accompanied by Mr. Michael Constantinides, Senior Mechanical Engineer, Mr. Marios A. Meletiou, Civil Engineer, and Mr. Demetris G. Phellas, Senior Accountant, visited the head office and met Secretary-General, Dr. Hajime Sato and his staff. The party was on a visit to Japan and Singapore for the purpose of studying the container handling equipment—gantries and transtainers in particular—actually operated at those container terminals in the region. During their study tour, the party visited the Bureau of Ports and Harbours, MOT, and met Mr. S. Onodera, Technical Counselor, Ohi Container Terminals. They then inspected the Port of Tokyo by launch, finishing up the day's program by visiting Mr. Kyuya Tashiro, Director General of the Bureau of Port and Harbour, Tokyo Metropolitan Government.

On April 27, the party visited the Port of Kobe and met Mr. Yukio Torii, Director General, Bureau of Port and Harbour, Kobe City, and inspected the Port by "Owada", Kobe Port's official boat.

On April 28, Mr. Meletiou, invited civil engineers from the Port of Tokyo and Tokyo Port Terminal Corporation as well as experts from the Japan Reclamation and Dredging Engineering Association to the IAPH Head Office to hear him present his paper entitled "Gravel Beds for Stacking Containers". The paper was enthusiastically received by his audience. It conclusively proved the merits of paving the stacking yards of container terminals using transtainers by means of gravel, instead of covering the surface with cement or asphalt, thus reducing the initial investment to a great extent and literally eliminating maintenance costs. Mr. Meletiou first presented it to the "International Conference on Coastal and Port Engineering in Developing Countries" which had been convened at Colombo, Sri Lanka, from 20 to 26 March, 1983, sponsored by the Sri Lanka Ports Authority, the UN Dept. of Technical Cooperation for Development (UNDTCD), the UN Economic and Social Commission for Asia and Pacific (UNESCAP), the Danish International Development Agency (DANIDA) and other bodies. One of the organizers, in his letter to the author, indicated that it was the only paper which necessitated the arrangement of a separate and second presentation on the subject.

Membership Notes

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(Mr. Chul Whan Ahn, President)

A new logo for the Port of Nagoya



A logo for the Port of Nagoya has been selected from 897 entries submitted in an open competition. The winning design, symbolizing trade, prosperity and the future, represents the Port of Nagoya as a growing and developing world port. The three circles represent the three major oceans, with a capital "N" (for the Port of Nagoya) conveying the image of the waves and shipping routes that bind the world. The numerals "1907" at the top indicate the year in which the Port of Nagoya was opened to international trade.

— Report on Port Training by Mr. R.U. Kumedzro (Turned back from page 10)

It is this determination to excel on the part of individual employees and the Authority which most readily commends itself for emulation, for underneath it lies the tonic to succeed, and the explanation for the high level of efficiency.

Outstanding equipment, high productivity, customer satisfaction and friendly staff are probably the main attributes for which the Forth Ports Authority will best be remembered by any visitor to its ports.

I wish to express my gratitude to Mr. J.K. Stuart's Committee on International Port Development and the IAPH for granting me the bursary, and to the Managing Director and staff of the Forth Ports Authority for accepting me for the attachment and for the assistance they gave me. The depth of interest they showed in my training and personal welfare overwhelmed me.

I wish to assure the IAPH and the Forth Ports Authority that the knowledge I gained during the attachment will be seriously applied, in my own small way, towards the achievement of the objective of improving the port transport industry around the globe.

Report on Port Training by Recipient of IAPH Bursary Scheme

By Mr. R.U. Kumedzro, Training & Safety Manager, Ghana Cargo Handling Co., Ltd.

From 23 August to 17 September, 1982 I undertook attachment training with the Forth Ports Authority in Scotland, United Kingdom. The course was made possible by a 3,500 U.S. dollars bursary from the IAPH under the International Port Development Scheme.

Though the attachment was basically intended to give me an insight into the administration of the training and safety functions in the Forth ports, it was extended to cover all aspects of the port transport industry. My visits to the various departments of the ports were not only limited to familiarization, but I was also given the chance to participate in the operations. I attended to Joint Negotiation and Safety Committee Meetings at both Leith and Grangemouth, the two main ports of the Forth estuary, for example, and partially attended a Training Course for Dockworkers at the National Dock Labour Board's Training Centre for Scotland at Grangemouth, the closing session of which I had the honour to join a panel in an Open Forum to discuss problems of changing cargo handling methods and technology and related matters.

My hosts also arranged for me visits to Aberdeen Harbour, equipped with ultra-modern facilities to serve the North Sea Oil operations, and to the Clyde Ports of Glasgow, Greenock, Hunterston and Ardrossan. Indeed the programme was so well organised that every available moment was spent learning something new or doing something useful and relevant.

During the attachment which took me to the six ports of the Forth estuary, namely Leith, Grangemouth, Granton, Burntisland, Methil and Kirkcaldy, I was highly impressed with the efficiency exhibited by the staff in the cargo handling operations. Some of the aspects of the operations which impressed me most were:

- a. The great concern of the management for the safety of the workers and the resultant high level of safety awareness among the employees.
- b. The relatively small number of dockworkers and staff of the ancillary sections. (It was noted that in Leith, for example, the number of dockworkers had reduced from over 1000 in the late 1960s to just over 200 at the moment although cargo tonnage had increased considerably).
- c. The very efficient and safe manner work was done, leading to a fast turn-round of ships without damage to cargo and injury to persons.
- d. The involvement of workers in all aspects of the operations; true participatory democracy at its best.

Following discussions I held with the Managing Director and his top officials about our two organizations establishing sister-port relations in line with the IAPH Sister-Port Scheme, it was agreed in principle that the two organizations consider a staff exchange Programme as a first step towards the full adoption of the Sister-Port Scheme. The details would be worked out later.

The attachment coincided with a reorganization in the

management structure of the Forth Ports Authority. As a result the Port Superintendents of Leith, Grangemouth and the Fife ports (Methil, Burntisland and Kirkcaldy) were elevated to the status of Port Managers and became answerable directly to the Managing Director for operational matters in their respective ports. Previously they reported to the Director of Engineering and Operations, who had become Director (Engineering and Marine). The reorganization also led to the appointment of a Business Development Officer charged with the task of public relations and business promotion. The purposes for the reorganization were to increase the level of efficiency and to achieve better interaction with the community. Positive signs that these objectives were being achieved had already started to show by the time my attachment terminated.

Based on my observation during the attachment and my visits to the various Scottish ports, my recommendations towards improvements in the port industry in Ghana, and the developing countries generally, are

- a. Mandatory safety regulations should be enacted and safe working practices including the use of appropriate protective clothing, shoes and gloves enforced to reduce or eliminate damage to goods and injury to employees. (Although the willingness of port employers to ensure a certain minimum standard of safe working practices is necessary for the achievement of results, governmental action is a *sine qua non*. It requires the strong arm of government to induce employers and staff to observe safe working practices, with adequate punishment for offenders as a deterrent. It should be noted that a safe working place is, in itself, an un-sung but essential source of motivation to workers).
- b. The establishment of a modern well equipped training school for the port industry to serve the West African sub-region should be expedited. This will enhance efficiency.
- c. Port employers should summon courage and effect a reduction in their labour force, some of whom have become redundant due to the introduction of the container traffic. This should be done with the agreement of the affected staff either through voluntary severance or redeployment. (It should be noted that in handling bulk cargo and containers, the less labour-intensive the operation, the better for operational efficiency and safety both for goods and persons).
- d. Equipping the ports and introducing appropriate technology in the industry should be given higher consideration. Shipping/the port transport industry is international: cargoes loaded in one port of the world have to be discharged in another. Therefore, compatibility or standardization within the industry as a whole, and between different countries and ports is highly desirable. Developing countries should, therefore, strive to maintain the pace of development in the industry to avoid the creation of bottlenecks, brought about by their reliance on obsolete machinery and methods.
- e. Access to the port security areas should be further

restricted to ensure that unauthorised persons, some of whom are casual thieves and saboteurs, are not allowed entry.

- f. Since direct contact is naturally more effective in negotiations, an officer should be appointed by IAPH to match developed and developing ports which desire to enter into sister-port relationships. The establishment of staff Exchange Programmes as part of the Sister-Port Scheme will make possible mutually beneficial professional contacts between the personnel from the various ports and assist in developing responsibilities and exchange of ideas and procedures thereby increasing port efficiency and stimulating the smooth development of sea-borne trade. It will also contribute towards mutual cross-cultural exchange, international understanding and world peace.
- g. To avoid tensions and to ensure efficient operations the Ports Authority being the owner/administrator of the ports should initiate some regular joint consultation between her and the other Companies performing stevedoring and shorehandling functions to discuss common problems and their solution, thereby enabling them to work in a spirit of co-operation, co-ordination and responsiveness, and towards the achievement of common goals. In the near peculiar case of Ghana, where stevedoring and even shorehandling are wholly undertaken by bodies which are independent of the Ports Authority, for example, the usefulness of such joint consultation cannot be overemphasised.
- h. Finally the relations between Ports Authorities and the Companies operating in the ports on the one hand and the community and the general public on the other should be improved and maintained. This is of great importance if good understanding is to be developed between the ports and the general public especially in these times when taxpayers are becoming increasingly critical of public investment, and the use to which public funds are put and, generally, accountability. It does not serve any useful purpose for ports' officials to wait and only reply to queries, and adverse comments from, the community.

Improving port-community relations will increase the citizens' awareness of the role of the ports in the national/regional economy and their influence on and contribution to the community. This should take account not only of the port as an industry in itself, but also the port-dependent industries i.e. those that receive or ship goods/products through the ports, and also the secondary industries i.e. those industries and activities on which the ports have indirect impact or those that are generated by the "ripple effects" of port activities.

Maintaining a high citizens' awareness of port activities is extremely important since firstly it helps in confronting and averting unfavourable political actions regarding the ports. Secondly it aids in identifying the advantages and limitations of the ports and their facilities which, in turn, leads to better functioning of the ports. Thirdly it keeps port administrators on their toes since they are able to get a better understanding of the feelings and criticisms of members of the community.

In my opinion, this is best achieved through the institution of a National Port Day/Week during which celebration attention of the population, especially in the region and community, is drawn to the role of the ports in the national

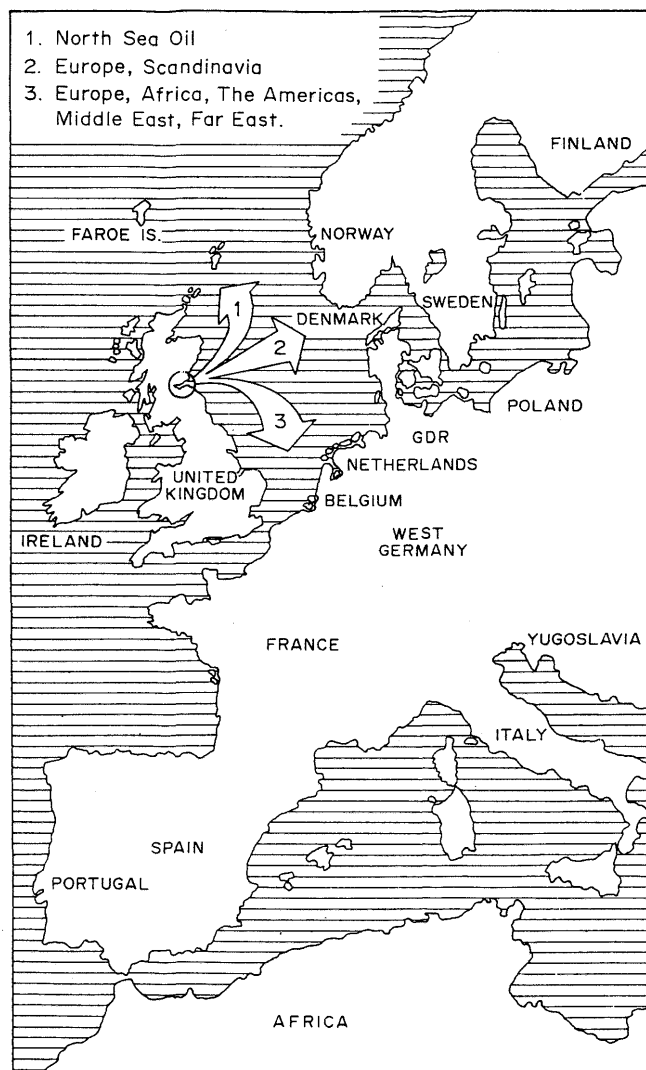
economic effort.

Ports are important tools in community life and they must be brought as close to the community they serve as possible.

The Period of my attachment also coincided with the annual Edinburgh International Festival marked by its famous military Tattoos, Jazz Parades, Carnivals, the Edinburgh Marathon and splendid weather. And I was treated to near-incredible hospitality and friendliness by all I met.

The situation of the Forth estuary itself is an advantage to its ports since it penetrates into the industrial heartland of Scotland, serving a region where it is acknowledged that about 90% of Scotland's manufacturing capacity is situated. Its location on the east coast of the British Isles gives its ports easy access to the vast and expanding markets of Scandinavia, the continent (Europe), and the rest of the world.

Over 10 million tonnes of cargo and 20 million tonnes of crude oil are handled annually. But no member of staff of the Authority is satisfied with this achievement; all the staff are united in their determination to achieve what seems to be the main objective of the Authority: to ensure the best for their customers by the quick despatch of ships and efficient handling of cargo.



FORTH PORTS SERVE THE WORLD

(Turn back to page 8)

Open forum: Port releases:

Ports: Our Nation's Lifeblood

By James B. Edwards, United States Secretary of Energy

This nation's ports symbolize the mighty strength of this great nation of ours. Into our ports have come a successive wave of immigrants who forsook their own land to carve out new futures in this land of opportunity. And through our ports the real business of international relations is conducted, especially with the other nations in this hemisphere.

When I was a merchant seaman, during and right after World War II, the American fleet was still strong and the old dilapidated break-bulk docks that scar some of our harbors were then still full of activity.

Our ports have changed enormously in the twentieth century, but during the last two decades, the world's ports have experienced the most profound transformation in history. The old passenger liners are almost gone. Today, the container ship and the shoreside cranes that service them have become the most prominent sights in most of our ports.

There is one other change, too — the sad decline in the American fleet. The Reagan administration is working to strengthen the American fleet. There are no simple answers to a set of problems that have been so long in the making as these. But there is no question: the weakest link in our national security today is the declining numbers of ships that fly the American flag. Despite the surplus in overall world shipping capacity, we still find it difficult to charter American tankers to deliver oil to the strategic petroleum reserve. When we came to office, less than 30 percent of the tonnage was in American bottoms. Thus far this year, however, 59 percent of the bottoms we've hired to deliver oil to Strategic Petroleum Reserve have proudly flown the American flag. But it isn't easy to line up American ships.

It is in this Nation's best interest to strengthen the American fleet. Everyone of those funnels with the gold hammer and sickle tied up at our piers means fewer jobs for Americans and diminished security for the nation.

Every ship built in a U.S. yard means more employment at home and more capacity to build vessels. It hurts every time I see a collier leaving a coal tipple flying the flag of some other nation.

This administration knows that the problem is complicated. We can't dictate any simple solutions, but we need to be sure that we don't make the situation any worse.

U.S. ports are caught in a financial crossfire of their own between increasing costs and a scarcity of funds. The recovery has begun — but it's going to take time. Capital will remain costly and, in a time of economic turmoil, there is a need to think hard about priorities.

In many ports, recreational projects compete with ports for scarce waterfront space. And everywhere in the country, the cost of permit compliance continues to grow. Last

August, Drew Lewis, the Secretary of Transportation, signed off on an annual report to Congress about the state of our ports. In the back of that report, there is a list of 65 different federal agencies, including the Department of Energy, that in one way or another think they have the right to control port activities. That's too many agencies, too much paperwork and too much of a financial burden for the Nation. I'm more and more convinced that the over-regulation of America is one of the causes of our economic decline.

That's why I don't completely understand why some ports continue to pressure the Federal Government to become more involved in the business of our ports. Our ports are united by many common interests. On the issue of dredging, however, there seems to be a difference of opinion. Ever since 1824, the U.S. Army Corps of Engineers has taken responsibility for dredging and maintaining our harbors. The Corps has the expertise and the equipment needed to do the job. But the question is — who should pay? There are more than 20 bills in Congress right now — none of which is being acted upon this session — that call for the Federal Government to pay for all, most, part or none of the cost of deepening and maintaining harbors. It's not in the national interest to just wait for Congress to thrash out these issues. Ports need to provide guidance to help Congress narrow the options. I'm pleased, for example, to know that procedures have been set up to resolve differences between large and small ports.

The position of this administration is that from now on we intend to recover more of the costs and expect ports to accept greater responsibility.

I want to explain why we have the policy we do on recovering costs. First, we don't think it is right for the federal taxpayer to assume the entire burden. We believe that whenever a user can be easily identified, the user should pay.

Second, whenever the government gets too involved in business, bad decisions result. Nearly every port in this country wants deeper channels. Some need them, some don't. I don't think anybody in Washington can make those decisions. There is a risk that some ports will wind up with deeper channels that aren't used very often and other ports will wind up turning away good business. The market can do a far better job of making those decisions than government can.

Third, deeper channels are not always an economical proposition. If ports think they are, then ports should be willing to assume more of the financial obligation or to encourage private investment, as was the case, for example, with LOOP — The Louisiana Offshore Oil Port.

Before this nation rushes off and deepens East and Gulf Coast channels to accommodate 150,000 deadweight ton colliers, we better be sure that's the only economical alternative. Actually, there are other options: including shallow draft, wide beam vessels, topping off, self-loading barges,

anchored loading, and deep water slurry loading piers.

And, there is an important point that is often overlooked: the bottom line for our ports and for our producers is how much coal, or grain — or whatever commodity — we'll wind up shipping. If a convincing case can be made that we'll lose business to Australia, South Africa and other countries, unless larger ships can get into American ports, then we better start dredging. But, on the other hand, if just as much metallurgical and steam coal will be sold if it is loaded on to smaller Panamax (largest ships able to transit Panama Canal) ships as on to larger vessels, then widespread dredging may not be the answer.

And finally, if we deepen our harbors, thereby encouraging the construction of larger vessels, where are they going to be built? And whose flag are they going to fly? America's natural resources ought, whenever possible, to be handled on board American ships.

We have to ask these questions and be pretty sure we have the right answers.

I raise these questions because if we don't make the right decisions, we could wind up with too much capacity to handle the volume of coal exports we expect. I don't want to sound negative; I'm an optimist. Our vast coal reserves are one of this Nation's greatest assets. The market for coal in Europe and Asia is growing and will continue to grow for the foreseeable future. Someday, our exports of coal will bring in more revenue than we pay to import oil and other energy supplies. We'll be net energy exporters, as we were before the second World War. We'll be able to help other nations wean themselves from high-priced, politically volatile crude oil.

For the first six months of 1982, a total of 57 million tons of bituminous coal has moved through our Nation's ports — an increase of some 35 percent over the same period last year when shipments were reduced by strikes. Of that 57 million tons, about 38 million tons were metallurgical — a 59 percent increase over the same period in 1981; and about 18 million tons were steam coal — a 2.7 percent increase.

Projections for all of 1982 vary, but nearly everyone now assumes that we'll export more than 100 million tons this year.

The coal industry is subject to enormous swings in demand. But that's no excuse to put off decisions. Let's recognize the fact that we're going to have a number of peaks and valleys. Ports need to develop the capacity to share the load in times of prosperity and to jointly weather hard times.

Less than 6 months ago, the Chesapeake Bay and the Delaware River were still crowded with vessels waiting for their turn to load coal. Demurrage costs were enormous, and the rail-roads were straining capacity to deliver coal to the ports. Private industry responded to that crisis quickly. In only 18 months, new ports have been opened, and within the next two years U.S. coal export capacity will probably be adequate if we keep on building new piers and storage facilities.

Right now, we can handle about 162 million short tons a year from our Atlantic, Gulf, Pacific and Great Lakes ports. By 1985, capacity will reach about 300 million tons a year. And Great Lakes vessels registered in Canada have been transshipping coal to large colliers loading at St. Lawrence River ports, giving us added export capacity.

I'm bullish about the future. World coal trade has been estimated as high as 400 million tons a year by the year 2000. Coal is a trump card with which the United States can dramatically improve its balance of trade. Coal, after a 30-year hiatus, will once again become a premium fuel all over the world.

And, most important, it will be through American ports that much of King Coal travels. We have to get our act together if foreign buyers are going to have confidence in our ability to efficiently handle coal exports. If not we'll keep losing business to other countries. Now is not the time for an extended debate among ourselves about who will pay for port development, especially when we're very near to a solution. I think it's safe to say that most U.S. ports agree on the following points:

1. Expediting of the project/permitting approval process and construction of channel improvements are essential to keep our ports competitive;
2. A basic port system with depths up to 45 feet should be provided and maintained by the Federal Government as at present;
3. Channel deepening to depths greater than 45 feet should have federal/local cost-sharing; and
4. User fees should be permitted to raise the local portion of costs on projects deeper than 45 feet.

Our ports are our Nation's lifeblood. Keeping them modern and competitive is good for all Americans. I'm confident that we're making the right decisions and that the ports and the Federal Government will be able to work together to implement those decisions in an efficient, equitable manner.

It's time to get on with the job.

(Via Port of New York-New Jersey)

Shipping and Indian Ports

By K.K. Uppal
Chairman of Bombay Port Trust
Chairman of Indian Ports Association

(Address at the National Shipping Board Seminar on "Changing Phase of Shipping Industry—Strategy for Development" held in Bombay on 10th December 1982)

I have approached the subject of 'Changing Phase of Shipping Industry—Strategy for Development' with a certain amount of trepidation. It appeared to me that the Indian Ports Association could not bring to bear any special

expertise on this particular theme. Yet it is axiomatic that Ports and Shipping are integrally related and they exist cheek by jowl. It would be more appropriate to dwell upon and highlight the aspect of service rendered by the Ports to Shipping. The ports are a service organisation and the criterion for their functioning has to be the quality of service rendered to shipping.

In exploring this aspect the approach should not be one of judgment in a crisis situation. For example the suggestion does not command itself that investment in the Port Sector should be determined by the requirement of cargo being carried by Indian bottoms. There are requirements of

the Ports themselves and compulsions of trade which determine the quantum and pace of this investment. The reservation of berths for Indian lines or special lower tariffs can be considered provided it fashioned as a national policy after taking into account the possible impact in foreign ports concerning our shipping. Again our action will have to be visible and not unobstructive since we run and open system, susceptible to verification.

The view has held ground per se as well as in the regional context that the service rendered by the Indian Ports to shipping is tardy and overly expensive. This was highlighted with wealth of details and incisiveness by David Jankins in his contribution to *Far East Economic Review* in February 1981. According to him the high cost of loading and discharging vessels in Indian Ports is staggering. With less facilities and more delays, stevedoring is at 5 to 9 US\$ per freight tonne against 4 \$ in S. Korea, 3.50 in Taiwan, 4 in Hongkong, 4.50 in Singapore and about 2.50 in Thailand. The cost is also to be reckoned in terms of slower turn-round of vessels and waiting for berths. The same is true about container handling. While it is a relatively new system of transportation and the approach should be promotional, the cost of handling containers in Indian Ports is much more than any Port in the region, leave aside those on the continent. It has reached such a critical stage that a Committee has gone into the cost structure of container handling and come to a finding that there should be a ceiling. And beyond that limit the cost should be absorbed by the Ports.

How to improve the service to shipping in terms of cutting down delays in berthing, quicker turn-round of vessels and reduction in cost, is in my opinion, the heart of the matter.

The major problem lies in the historical growth of industrial relations in the Ports to the extent that the trade unions have now a definite say in the management and running of the Ports. This is a reality which cannot be got over by any argument or wished away. It has reached a stage where the complexion of the industrial relations and peace in the Port are the very foundations on which the impact of managerial measures has to be realised. This is not to suggest that there is no managerial action outside this context; but the labour situation impinges upon all major decisions.

Containerisation has come in Indian Ports but on a slow motion. It is realised that the change is a must because in foreign countries they have by and large dismantled break-bulk facilities and unless we take to containerisation, export trade would be substantially lost. But the pace of containerisation is determined to a large extent by the complexion of industrial relations. An Inland Container Depot was contemplated to be started at Bombay with Delhi as the Dry Port from 1st July 1981. It has not come into being and is nowhere in sight because settlement on the demand for compensatory payment, by the labour unions, has not come about. Let me take another illustration. Shipping industry is in a steep recession and is suffering heavy losses. At the same time certain services in the port are unremunerative and there is an endeavour to make them remunerative and in the process saddle more cost on to shipping. The services become unremunerative because the costs are going up all the time and, in the structure of cost, wages constitute the largest single element. The quantitative cost of labour is very high. It is argued that the situation cannot be otherwise since in a developing country

the undertaking has to be labour intensive. Be that as it may. The implication of this proposition has to be accepted. As the labour cost continues to be preponderant and ever on the rise, the services are apt to be rendered unremunerative. When these are priced up, shipping is saddled with more and more expenses. While the labour argues that the wages are kept low by keeping services unremunerative the other side of the coin is the ever increasing labour cost itself gives rise to this situation.

It is a cycle: Higher labour costs, unremunerative services, higher pricing and saddling shipping with more cost. Where to cut the gordian knot! In a developing country like India, unit cost of labour is low, but quantitative cost is enormously high. Even such an outstanding scholar like Prof. Wassily Leontief overlooked this point and argued, erroneously, that labour costs in a developing country are minimal.

Having regard to the conditions in Indian Ports, the pervasive and peculiar situation of industrial relations, the clear conclusion is that merely a physical model of port development and modernisation cannot and will not serve the purpose. That is why a straight comparison of an Indian Port with Singapore or Hongkong is not relevant because conditions differ widely. Unlike up those ports are in a position to develop and execute a model of physical development and modernisation without over-tone of labour relations.

A very perceptive key note address was delivered by Shri C.P. Srivastava, Secretary General of IMCO, on the occasion of Madras Port's centenary celebrations in December 1981. It is well to quote his words—

“... If in this context we were to ask ourselves the question whether the port development programme in India has kept pace with developments elsewhere, the answer must be that there is a significant gap which needs to be filled. As I said earlier, India is most fortunate in having extremely competent, indeed brilliant, technical expertise. There is absolutely no handicap in this regard. What is needed, however, is a very clear and unambiguous acceptance on the part of authorities who make planning and investment decisions that modern, efficient and adequate port facilities in all their facets, developed on the basis of a use of advanced technology to the maximum extent feasible are vitally necessary in the interest of the overall economic development of the country.”

“... In the West, a port is regarded as a business enterprise and every endeavour is made to attract business. And it is considered that port capacity must never run the danger of proving inadequate, otherwise its business attraction would diminish. Those who invest in the development of port facilities are hard-headed businessmen. They always plan to meet the anticipated traffic at its peak with some spare capacity to take care of any unforeseen developments. They do not regard this as over-investment but as an essential investment for keeping themselves attractive to importers and exporters and to men of business and industry, and eventually for keeping themselves economically viable. It is my submission that such a concept should be the basis for India's future port development programme. The acceptance and effective implementation of such a concept would necessarily require decisions to be made for massive additional investment in ports. A high level of investment in ports for ensuring the achievement of the desired objective, namely a free, efficient and uninterrupted flow of India's export and import trade, is not a luxury

which can be avoided but a necessity, which cannot be done without."

One cannot have any quarrel with the concept or the objectives which have been outlined, the objectives of speedy, efficient and economical services to Shipping. But it is not a question merely of marshalling physical resources. Ports are not a sector which has been starved of investment. In the Five-Year Plans since 1951, an amount of 1120 million US\$ was expended and another 437 millions has been earmarked in the current plan. The fact is that resources, just the fiscal resources, do not suffice and do not constitute an ideal and exclusive base to ensure modernisation and development of the Ports. There is the human element, the man-power aspect, the industrial relations, which continually interact with management and impinge upon all the development schemes. The quality

and cost of services provided by the Ports to shipping is related to and conditioned by this particular situation. If there is need to invest more, it is not merely on the fiscal side but also in the endeavour to bring about changes in the human situation. There is no other way to ensure an uninterrupted development. It is my submission that if we concentrate purely on a physical model of port development and modernisation, an essential dimension is missed and the situation does not become promising of results. If there is need to change physical configuration of Indian Ports, there is the same and even greater urgency to change the attitudes, approaches, the human context—unmistakably a more arduous job. I recall the words which Admiral Cunningham used at the battle of Crete, "It takes three years to build a ship. It takes three hundred years to rebuild a tradition." (*Indian Shipping*)

The Delwaide Dock and the Berendrecht Lock

By the Port of Antwerp

I. The Delwaide Dock

1. The Dock

The Delwaide Dock has a total quay-length of 4,700 m, a waterdepth of 50 ft (and of 55 ft at the quays of the ore terminal) and very wide quay aprons stretching over 500 m to 750 m.

These characteristics do not only allow a quick and modern cargo handling but also offer vast possibilities for storage and distribution.

2. Increasing Traffics

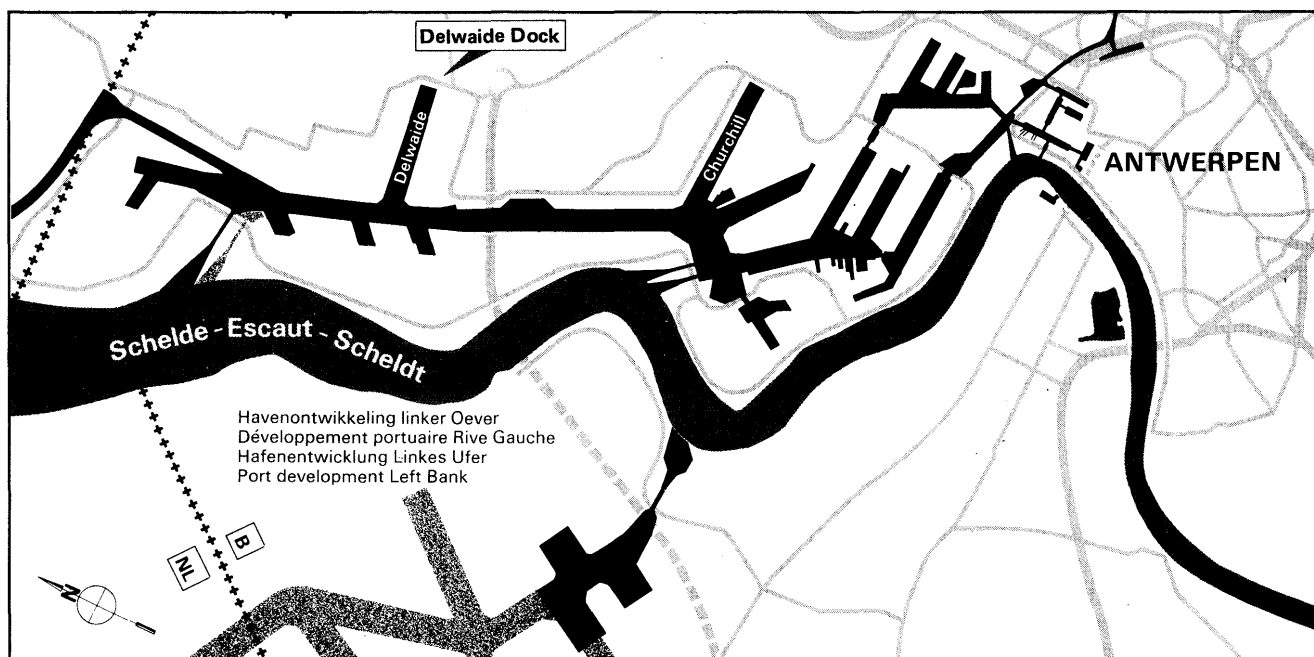
At the time works at the Delwaide Dock were started, the City of Antwerp, acting as principal, presumed companies from the private sector were in need of additional areas for handling a growing traffic flow.

The City was not disappointed in its expectations since the entire area around the dock was given in concession to 5 individual terminal operators even before the infrastructure works had been completed. Each of these terminal operators is now fully equipping his concession for handling specific cargoes. In the mean time the overall maritime traffic of the port continued to grow, last year reaching 84.2 million tons as a result of a 5.5% increase.

3. The Terminals

In a first phase the companies involved made investments up to 5,500 million BF in addition to the 3,100 million BF which have been or are being invested by public authorities for infrastructure and railway connections.

Specialized terminals are being erected on each of the sites given in concession. At the northern side of the Delwaide Dock a bulk cargo terminal (Stocatra) and two general cargo terminals (Allied Stevedores and Seaport



Terminals) are being built while the southern side is reserved for two general cargo terminals (Hessenatie and Noord Natie).

1) Stocatra

With a draught of 55 feet beside the quay this new terminal will be accessible to fully laden seagoing vessels with a cargo capacity of 120,000 to 130,000 tons provided that the Scheldt has been dredged in accordance with the plan to allow vessels with a 50 foot draught to sail upriver.

Stocatra has a concession 80 ha in size. The terminal has a berthing length of 1,000 m as well as 600 m for barges and coasters at canal dock B2.

In accordance with the new concept the ore is directly loaded onto conveyor belts (length 4 km) by two gantry cranes with a lifting capacity of 50 tons. The unloading capacity per crane per hour amounts to 2,650 tons in the case of ores and 2,000 tons for coal.

2) Allied stevedores

Allied Stevedores have a 300,000 m² concession on the northern side of the Delwaide Dock. The quay length amounts to 600 m with a site depth of 500 m.

The terminal comprises a ro/ro ramp, 6 cranes, 2 warehouses. The stress will be principally on various types of general cargo, iron and steel, pipes, cars and containers. The road haulage company Teveco and Scandia Volga also established on the concession.

3) Seaport terminals

Seaport Terminals' concession at the Delwaide Dock has a total surface area of 318,000 m² with 620 m of moorings along the longitudinal quay and another 150 m at the transverse quay, suitable amongst other things for ro/ro.

The new terminal will be especially used for handling forest products, containers and ro/ro traffic.

Three sheds total 18,000 m² of covered storage space. For a first phase the terminal was equipped with one 50 ton container gantry and two 35 ton multi-purpose cranes. In a second phase the number of the cranes will be doubled.

4) Hessenatie

In the first phase the terminal covers an area of 594,000 m². The port operations will be carried out at a quaywall 1,100 metres long plus another 150 m along the transverse quay. The concession has a depth of 500 m with an option on a further 240 m.

The terminal has been equipped mainly for handling and storing containers and cars. It also comprises ro/ro facilities (a permanent jetty in the middle of the long quaywall and a slope at the transverse quay). The containers will be handled by means of three gantries. There is a warehouse for stuffing and stripping. The terminal is operated by a fully computerized data processing system.

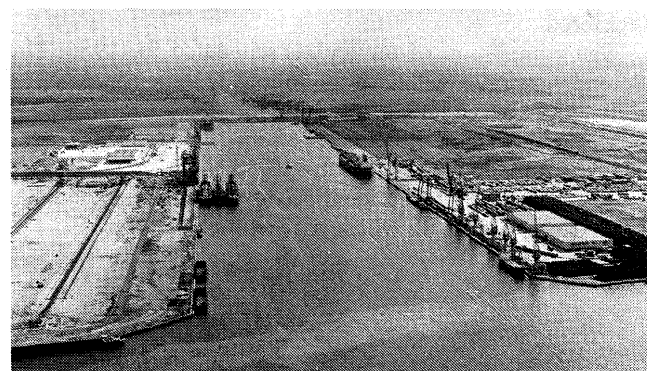
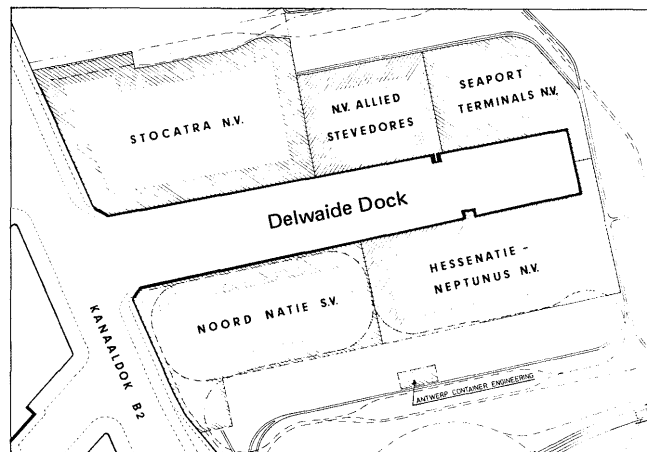
5) Noordnatie

Noordnatie's new terminal for conventional and multi-purpose vessels was the first installation to be operative at the Delwaide Dock. Next to it there is a container terminal which also has a quaylength of over 500 m. The depth of the site is about 500 m and there is a further possibility of expansion.

There are four conventional cranes with high lifting capacities and three container gantries. One of the three warehouses is used for stuffing and stripping containers.

Finally, at the western side of the concession there are another 500 m of berthing facilities for barges.

It goes without saying that the above described terminals also dispose of proper handling equipment such as forklifts,



The Delwaide Dock (situation on August 20, 1982)

straddle carriers etc. . . which will not be detailed in the framework of this short survey.

The Belgian Railways built tracks on the quay aprons and a marshalling yard which is linked directly to the Belgian railway network.

Just south of the Delwaide Dock the port of Antwerp has set up a multi-purpose Ro/Ro terminal on the east side of Canal Dock B2.

The terminal has two berths separated by a central pier. The berth on the landward side is intended for barges which have been specially built for the transport of such heavy loads, while the other berth is intended for Ro/Ro seagoing vessels, of which 260 are at the present time registered throughout the world as specializing in the transport of heavy and bulky loads.

This terminal will thus make it possible with the aid of powerful tractors to drive heavy unit loads out of the barge and onto the seagoing vessel moored alongside, and vice versa. Already at the outset loads of up to about 2,000 tons can be handled.

From the above appears clearly that cargo handling at the Delwaide Dock is done according to the most advanced standards of technology and space.

II. The Berendrecht Lock

As a result of the increase and change in composition of the Antwerp port traffic it was decided to increase the number of locks giving access to the docks on the right bank of the river Scheldt.

A new lock, called Berendrecht lock, is now under construction south of the Zandvliet lock at some 20 km downstream from the Antwerp roadstead.

The works have been commissioned by the Ministry of Public Works, whereas the decision to build the lock was

based on a prognostic survey carried out by the City of Antwerp.

From this survey it appeared that the expected increase in maritime traffic could not be handled by the existing sea locks. Besides the traffic volume it was also taken into account that ships do not arrive at the locks evenly throughout the day, but that there are marked traffic peaks.

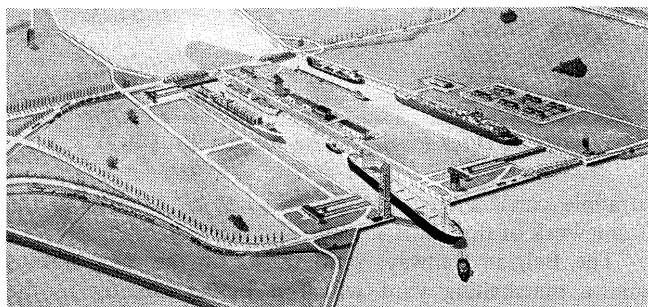
Furthermore ships with a 40 ft draught or more have to pass through the Zandvliet Lock because of their size. Thanks to the considerable improvement of the navigability of the Scheldt and its estuary a growing number of vessels of greater draught and beam are being used for transport to Antwerp. This implies that the Zandvliet Lock operates increasingly at more than design capacity.

In 1982 137 ships with a draught of minimum 41' arrived at the port. The year before 118 such vessels were registered.

The completion of the lock is scheduled for 1986. The Berendrecht Lock will have the following dimensions:

- length between lock gates : 500 m.
- width between walls : 68 m.
- level of the lock sill : -13.50 NKD

These dimensions are identical to those of the Zandvliet Lock except the width which is 57 m for the latter.



Artist's design of the Zandvliet Lock (to the right) and of the Berendrecht Lock (to the left)

The deepening of the maritime approach route to the port of Antwerp.

The maritime approach route

The ships which sail to Antwerp and arrive at the pilot station at Ostend (buoy A 1) take the approach route in the Scheldt estuary which is approximately 55 km or 30 nautical miles long.

Between Flushing and the Zandvliet lock the approach route is 67 km or 36 nautical miles long.

Upriver from the Zandvliet lock the fairway in the sea reaches of the Scheldt forms the maritime approach route to the Baudouin, Van Cauwelaert, Kallo and Royer locks. This part of the route is less important for deepdraught seagoing vessels because they enter the port by the Zandvliet lock.

Increased draughts and the 48'/43' programme

The present navigational possibilities on the maritime approach route are already considerably greater than a few years ago. Between December 1980 and March 1982 the maximum recommended draughts were increased by 4' so that under favourable tidal circumstances vessels with draughts of over 48', already could reach the port.

However, in order to strengthen the port's competitive position it is necessary to further deepen the maritime approach route.

The reasons for deepening the approaches can be put as

follows: increasing use is being made of vessels from 125,000 to 150,000 dwt for the carriage of dry bulk cargo (especially ore and coal).

Such vessels can at present call at the port of Antwerp but with a limited draught and hence a limited cargo, up to 100/110,000 T.

It would not be impossible for even larger bulk carriers of 150,000 to 200,000 dwt to call at the port although with a limited draught and providing that length and breadth remained within acceptable limits. Another reason is the ever increasing use of container and ro-ro vessels for the carriage of general cargo.

As these vessels are tied to a strict schedule with regard to calls at the various ports, it is important to let them sail up or down the river as independently as possible from tidal conditions.

After the completion of the 48'/43' programme, the following navigational possibilities will be made available:

- passage upriver on one tide for ships with a draught of 48' (14.64 m);
- passage upriver on two tides for ships with a draught of 50' (15.25 m);
- passage downriver on one tide for 42'8" (13 m) container vessels;
- vessels not bound by the tides may have a draught of up to 38' (11.59 m).

Finally, the 48'/43' programme has to be considered together with other projects for the shipping traffic, such as the construction of the Berendrecht lock, good coordination of shipping traffic on the river and in the port, the extension of the shore radar chain down the Scheldt and the installation of port radar.

All these measures taken together are intended to guarantee a safe navigation and a quick turnaround to all ships calling at Antwerp.

The extension of the port area on the left bank.

The extension of the port area on the left bank is carried out in several phases.

Prior to the present-day development schemes which have both industrial and port aspects, the left bank area has already had for years an important industrial vocation.

On sites with a total superficies of more than 1,000 ha, at industrial enterprises established, belonging mostly to the chemical and petrochemical sector and employing at this moment some 4,400 people.

In the same area we also find two power plants, one conventional and the other nuclear.

The more recent development of the left bank comprises a.o. the completed Kallo Lock as a southern entrance to a canal dock part of which has also been completed. The more northern sections of this canal dock will lead to the Dutch border and beyond it via the Baalhoek Canal communicate with the Baalhoek Lock in Netherlands territory. These parts of the project however have to be considered long term plans. Let us therefore come back to the southern areas near Kallo and focus our attention on the Canal Dock and the inset docks. These docks have a design tailored to the activities of each dock. Docks which are intended for handling liquid products will have a bottom width of 350 to 450 m and will be constructed with sloping sides. Docks for handling general cargoes and dry bulk goods will have a width of 300 to 400 m and will be constructed with quay walls on pilework foundation giving an available water depth of 18 m.

Smaller sections of the embankment will be built with direct foundation for waiting inland vessels and for smaller firms which are not geared to transport by ocean-going ships. The depth of water available in front of these walls measures 7 m.

At the present time a total bank length of 6,900 m is available for mooring ships. The total surface area of the filled and finished industrial sites to the south and north of the water area ready for use, measures 320 ha.

On one of the sites a first LPG terminal is under construction and a second one is planned.

More to the north the so called Fourth Dock (Vrasene Dock) is under construction. It is planned as a dock for deep-water tied companies handling general cargoes and dry bulk goods. As such it is suitable for ships up to 150,000 tdw.

Originally, the Fourth Dock was intended for storing and handling liquid products, and the embankments were to be in sloping form. Since interest in these activities fell away in the seventies, and, by contrast, increasing interest

in handling general cargoes and dry bulk goods became evident, it was decided in 1978 to build the dock with quay walls.

In order to make the construction of these in the dry possible, further widenings of the walls by 60 m were planned along 700 m in the northern part of the dock which had already been dredged. Passage to that part of the dock with the normal width is by a cross wall where a Ro-Ro ramp was built to accommodate demand.

To the east lie construction sites having a depth behind the quay wall varying from 390 m to 480 m. On the west side, the depth of the site measures up to 740 m and offers space for company activities requiring a very large storage capacity.

The completion of the Fourth Dock, including dredging and equipment of the surrounding port area, may be expected towards the end of 1985. From that moment on the industrial activities and traffics at the left bank area will be combined with an ever widening fan of goods handled and stored.

MARAD '81 — Port and Intermodal Development

(Extracts from the Annual Report of the Maritime Administration for Fiscal Year 1981)

Administrator's foreword

The Annual Report of the Maritime Administration (MARAD) is submitted in accordance with the Merchant Marine Act of 1936, as amended. It reviews the Agency's activities in administering Federal maritime programs and pertinent developments which affected the U.S. maritime industry in the fiscal year ending September 30, 1981.

The status of the industry as of that date was not good. Government programs conducted under the basic 1936 act and expanded and improved under the Merchant Marine Act of 1970—all launched with high hopes—had failed to stem the industry's decline. A change in course was necessary.

During this reporting period, the Administration took a number of steps toward formulating and implementing corrective policy actions.

As an important first step, the President requested and the Congress quickly approved the transfer of the Maritime Administration from the Department of Commerce to the Department of Transportation (DOT). This action became effective on August 6, 1981, with the signing of the enabling legislation (Public Law 97-31).

The physical move to DOT began with the transfer of the Agency's headquarters staff and other components to Departmental headquarters in September 1981.

Concurrently with the Agency's transfer, the President designated the Secretary of Transportation as his spokesman in maritime affairs, providing the U.S. industry with a Cabinet-level ombudsman for the first time.

Soon after I was sworn in as Maritime Administrator on October 19, the Secretary directed me to begin a program-by-program and issue-by-issue review of the U.S. maritime policy.

Pending the initiation of workable maritime programs,

the Administration also announced reductions in two maritime financial-support areas in line with the President's Economic Recovery Program. The cutbacks occurred in the funding of construction-differential subsidy (CDS) and in reduced ceilings established by the President for MARAD's Ship Financing Guarantees Program under Title XI of the 1936 act.

No new CDS funds were requested in Federal budgets for either FY 1982 or FY 1983 pending further review of the program's effectiveness.

Ceilings for the Title XI program administered by the Maritime Administration were set at \$675 million for FY 1982 and \$600 million for FY 1983 as part of an effort to reduce the Government's impact on the commercial credit market.

Meanwhile, in the absence of CDS funding, Congress authorized a new—and temporary—build-abroad option for eligible recipients of, or applicants for, operating-differential subsidy. Under this program, contained in a new Section 615 of the 1936 act, a number of U.S.-flag ship operators sought the Maritime Administration's permission to acquire new ships or reconstruct vessels abroad. Processing of these applications was begun late in FY 1981 and was continuing at year's end.

H.E. SHEAR

Maritime Administrator

Port and Intermodal Development

During fiscal year 1981, the Maritime Administration (MARAD) continued its support of national, regional, State, and local efforts to assist the American port industry and foster the development of intermodal transportation. These efforts help stimulate the economies of the municipalities and States involved and ensure support of national priorities in times of emergency.

In FY 1981, MARAD provided assessments of present and future port needs to other Federal Agencies, regional

agencies, and individual ports. In the intermodal area, the Agency carried out investigations and demonstrations which produced cost/benefit data related to port technology and contributed to major national port objectives.

Annual Report to Congress

New legislation (Section 2, P.L. 96-371, passed October 3, 1980) requires the Secretary of Transportation to submit an annual report to the Congress on the status of public ports of the United States. The report will describe problems which ocean and inland waterway ports are experiencing as a result of technological changes, resources allocation, competition, environmental concerns, inflation, and legislation and regulation at all levels of government.

Activities Related to Coal

As industrial nations continued their shift in energy priorities toward greater reliance on coal and the international coal market expanded, MARAD became a major participant in joint Government-industry efforts to increase U.S. coal exports. The Agency contributed to a number of projects and studies designed to assess present U.S. port capabilities and forecast both the transportation system requirements and industry's opportunities to ship more American coal abroad.

MARAD, in cooperation with other Agencies, produced a report entitled *Moving U.S. Coal to Export Markets*. This report assessed the American transportation system's present and planned capabilities for moving coal abroad.

Another study, *Great Lakes Export Coal Potential*, examined the capacity of that waterway system's coal-loading terminals and their competitive position compared to ports on the Atlantic Coast.

(A number of other MARAD activities related to coal are covered elsewhere in this report.)

Technical Port Assistance

During this reporting period, MARAD provided technical assistance on a large number of Federal programs and projects related to ports. This involved public port applications to the Economic Development Administration for Federal grants and loans and individual State plans for coastal zone management submitted to the National Oceanic and Atmospheric Administration. MARAD also reviewed the navigational improvement feasibility studies of the U.S. Army Corps of Engineers.

The Agency expanded its technical assistance to include port marketing. The initial objective was to provide information and analytical tools with which individual ports can derive or enhance their own marketing strategies.

With the assistance of the American Association of Port Authorities (AAPA), the Agency began a major effort to develop a pricing formula which will enable U.S. ports to establish "reasonable compensatory" tariff rates for using public marine terminal facilities. The formula is especially designed to determine bench-mark prices for the use of docks, wharves, and cranes and the leasing of terminal facilities.

During the fiscal year, MARAD chaired a technical sales seminar in the People's Republic of China sponsored by the U.S. Department of Commerce's Bureau of East-West Trade and staffed by senior executives of U.S. marine and port equipment manufacturers. It also cosponsored, with the Organization of American States, a three-week Port Safety and Security Seminar conducted by the Maryland State

Police and the Maryland Port Administration for Mexican port officials.

The Agency was a major sponsor of the Maritime Alaska '81 conference held in Anchorage from September 21 to September 24, 1981. Other sponsors of the Alaskan conference on maritime commerce and port development were the U.S. Army Corps of Engineers, U.S. Coast Guard, Alaska Department of Transportation and Public Facilities, and University of Alaska Sea Grant Program.

Port Planning Program

MARAD continued its cost-sharing program and actively cooperated in master planning studies with local, State, and regional port agencies and associations. The following projects were initiated, underway, or completed during this reporting period:

- *Port Public Liability Insurance and Risk Management Study*—Provides historical background for understanding U.S. port public liability insurance problems. It includes a profile of the liability insurance and risk management programs at public ports participating in the study, and a comprehensive discussion of practical alternatives for treatment of risk at the U.S. ports. This effort assists ports to develop sound liability insurance and risk-management programs.
- *Great Lakes Cooperative Port Planning Study*—Provides a marketing strategy for the implementation of a direct overseas container vessel service between certain ports on the Great Lakes and Central Europe.
- *Delaware River Regional Port Study*—Analyzes regional long-range port development requirements in the Delaware River estuary. The study, under the management of the Delaware River Port Authority, involves four major cities and two counties.
- *Texas Port Study*—Analyzes Texas waterborne commerce and the demand it places on waterfront, wetland, and submerged land resources. Techniques to assess the impact of commerce on the State's economy are emphasized.
- *Hawaii Port Planning Study*—Continues a study which, in FY 1981, produced computer models to analyze the State's transportation and distribution activity and the capacity of its ports. The study also evaluated the role of Hawaii as a transshipment center.
- *Washington Port System Study Update*—Updates the original State of Washington Port System Study completed in 1975. Major tasks performed as part of this joint MARAD-Washington Public Ports Association effort were reworking of the waterborne commerce forecasts for ports in the study area, updating the inventory of marine terminal facilities, estimating cargo throughout capability, and analyzing the impact of the extended 200-mile fishing limit on Washington ports. The final task developed estimates of Washington port facility needs to the year 2000.
- *Western and Arctic Alaska Transportation Study*—Completes a three-phase study jointly funded by MARAD and the Alaska State Department of Transportation and Public Facilities. It encompasses all types of transportation north of the Brooks Range and along the Alaskan West Coast from the Arctic Ocean to St. Michael. It also includes a study of sea transportation along the West Coast from St. Michael to Cape Newenham. The main purpose of the study is to help the State and local governments and agencies identify and evaluate possible

improvements in transportation to and from the communities in the area and reduce transportation costs in the development of resources.

- *Maryland Statewide Port Planning Study*—Will examine alternative development strategies and uses for waterfront lands in the State's ports. It is funded under a cooperative agreement with the Maryland Department of Transportation and its Port Administration and will encompass the study of cargo demand, terminal capacity, intermodal connections, and service.
- *New York-New Jersey Regional Port Planning Study*—Will analyze cargo terminal needs and uses of city-owned docks and waterfront, intermodal services and other requirements, and future port facility sites. MARAD assisted representatives of the cities of Bayonne, Elizabeth, Jersey City and Hoboken, N.J., and the City of New York in reaching a joint agreement for this regional study.
- *American Samoa Regional Port and Distribution Study*—Planned as a study of future port requirements at Pago Pago and other ports, to include an analysis of the potential for American Samoa to act as a distribution and collection center with other island groups.
- *Guidelines for the Planning and Operation of Waterborne Passenger Transportation Systems in Urban Areas*—Continues a project to develop a manual on the planning, functional design, and operation of waterborne transit services in urban areas.
- *Commercial Port Development and Urban Waterfront Development—An Analysis of the Interrelations*—Investigated the common and conflicting interactions of port and urban waterfront development and recommended specific steps to improve institutional and unified strategies to achieve both options.
- *Development Plan for the Clark Street Marine Terminal (Detroit)*—Provides recommendations for developing and expanding the Clark Street Marine Terminal at the Port of Detroit.
- *U.S. Great Lakes-Seaway Port Development and Shipper Conference Series—Final Report*—Summarizes the 5-year conference plan cosponsored by MARAD, U.S. Army Corps of Engineers, St. Lawrence Seaway Development Corp., and U.S. Coast Guard. The report focused on the liner trades, traditional, domestic dry-bulk trades and improved vessel technology. It was prepared by the MARAD Great Lakes Region staff and distributed to regional maritime interests.
- *Great Lakes Marketing Corporation Feasibility Study*—Assessed the feasibility of such an organization as proposed during the U.S. Great Lakes-Seaway Port Development and Shipper Conference Series. The study was funded by the St. Lawrence Seaway Development Corp. and managed by the Great Lakes Commission.
- *Hartford Port Feasibility Study*—Provides options for port development in relation to other riverfront development projects proposed for Hartford, Conn.
- *National Trade and Vessel Analysis Report*—Consists of a new series of reports developed to serve ports and vessel operators by displaying summary trade and vessel data highlighting recent trends at U.S. ports. The reports present cargo and transport information by port and coast and as national totals. In addition, value per ton and percentage share of particular trades are indicated on a commodity basis.

Equipment and Facilities Program

As in port planning, MARAD shares program costs with the industry and other Federal and State agencies in assisting American port and terminal operators to increase their competitiveness through improved equipment and expanded facilities.

During FY 1981, MARAD:

- Completed two major full-scale trials in berthing a large tanker using a tugboat of special design. Jointly sponsored by MARAD and the U.S. Coast Guard, the first trials were conducted in Puget Sound in January 1981. They measured the performance of tugboat utilization in the control of large tankers after a propulsion power or rudder failure. (Tanker berthing maneuvers also were scheduled in Hampton Roads in November 1981.)
- Completed an inventory of existing and potential U.S. coal export loading terminals. The inventory provides technical data for port/terminal planning purposes and support to the coal transport industry.
- Contracted for an evaluation of terminal design criteria for large, shallow-draft, wide-beam vessels for use with the coal transport industry. The analysis provides the economic rationale and the facilities design criteria for building new or improved coal export terminal facilities accommodating bulk carriers of this design.
- Participated in the City of Tacoma's evaluation of the effectiveness and capabilities of its recently procured surface-effect ship as a multipurpose harbor service craft.
- Conducted, in cooperation with the National Aeronautics and Space Administration, a demonstration at the Port of St. Louis on the feasibility of temporarily mounting lightweight, airtransportable firefighting modules aboard tugs or other available boats during fire emergencies. The modules would augment or replace existing fireboats. This would reduce municipal burdens while improving marine fire protection.
- Dedicated the Marine Terminal Automated Management System at the Port of Oakland. This cost-shared, computer-based management control system is designed to expedite the movement of containers and equipment through public, multiuser container terminals.
- Signed a cooperative agreement with the Marine Exchange of the San Francisco Bay Region for the development of a baseline management information system by the members of the National Association of Marine Exchanges.
- Contracted with the Port Authority of New York and New Jersey to produce quantitative data on the economic impact of stevedores and marine terminal operators in terms of equipment investment, jobs, income, taxes, and expenses. The data will be used in connection with a study of the U.S. stevedoring/terminal operator industry, sponsored by MARAD and the National Association of Stevedores.
- Began negotiations in 31 port cities for the signing of Port Emergency Standby Contracts for the priority handling of Department of Defense and other Federal traffic during a national emergency.
- Conducted joint exercises with the Military Traffic Management Command designed to test and evaluate procedures for marshalling commercial motor and rail transportation services to meet Department of Defense needs in a contingency prior to a declaration of national emergency.

- Completed the Upper Mississippi River Terminal Capacity Study for the Upper Mississippi River Basin Commission. The study developed an inventory of cargo-transfer facilities on the Upper Mississippi River System and their handling capacities by commodity and river pool. The information was used to assess future capacity con-

- straints by comparing the capacity estimates against projected commodity flows through the year 2000.
- Contracted with the Massachusetts Institute of Technology to conduct a study on means to encourage the development of waterfront facilities for chemical waste incinerator ships.

Research and development contracts awarded — Fiscal Year 1981

Projects	Task	Vendor	Contract Number	Amount
Port and Intermodal:				
Maryland Port System Study	To document and identify transportation policies and goals over a 20 year period for the State of Maryland.	MD State DOT Baltimore, Md.	SAH-11008	75,000
Vessel In-Port Locator*	To develop a management information system which enables the National Association of Marine Exchanges to provide nationally integrated data on vessel movements between U.S. ports.	Marine Exchange of the San Francisco Bay Region San Francisco, Calif.	SAH-11005	94,000
Marine Terminal Automated Management Control System*	To conduct a pilot demonstration of a computer generated, automated management system in a public marine terminal.	ARINC Research Annapolis, Md.	0-01004	94,446
Tanker Berthing Evaluation*	To develop a validation simulation capability for the Computer-Aided Operations Research Facility to compare alternatives of various types of tugboats and procedures for berthing vessels.	Hydronautics Laurel, Md.	9-00087	\$130,000
Appropriate Tariff Rates for Ports	To develop a formula for ratemaking for individual port authorities and conferences to enable the development of compensatory tariff rates on marine services.	Applied Systems Inst., Inc. Washington, D.C.	0-01009	145,556
Coal Terminal Design Criteria	To demonstrate the economic and business opportunities in building both shallow draft and wide beam bulk carriers and coal terminal facilities to accommodate their loading and discharge.	John J. McMullen New York, N.Y.	1-10037	24,000
Economic Impact of Port Marine Terminal/Stevedore Industry	To develop a regional input/output model and methodology to measure the regional impact of port activities to produce economic profiles of the stevedore/terminal operators to measure jobs, income, taxes and affected industries.	The Port New York/New Jersey	9-00094	5,000
Delaware River Regional Port Study	To assess rail freight terminals and interchange facilities linking the various ports of the Delaware River Valley.	Delaware River Port Authority of Pennsylvania and New Jersey Camden, N.J.	0-01044	77,000
Inter-American Committee On Ports	MARAD's support of the Twelfth Inter-American Committee on Ports meeting.	City of Miami Miami, Fla.	0-02414	6,000

*Cost Shared

Cairns Port Authority

(Extracts from 'Annual Report', Cairns Port Authority)

Chairman's report (extract)

The year now ended in terms of development has been one of the most exciting for many years and we look forward to 1982/83 with increased confidence in the ability of the Authority to make a vital contribution to the progress of Far North Queensland.

Firstly, on 14th December, 1981, under the terms of the Cairns Airport Act, the Authority acquired the ownership, and became responsible for, both the maintenance and operation, of the Cairns Airport and the upgrading of runway and terminal facilities to international standard.

This development is proceeding satisfactorily and completion is anticipated early in 1984.

In spite of this expansion of the Authority's sphere of interest, and our change of name from The Cairns Harbour Board on 1st November, 1981, the traditional seaport development of Cairns has continued to be a major function of the Authority.

During the year, H.M.A.S. Cairns moved to the new Naval facility, which has now become a base of significant importance to Northern Australia.

Cargo movements through the seaport have totalled some 937,000 tonnes during 1981/82 and increases in this area are to be expected when the stern-loading container facility on No. 6 Wharf becomes operational in October, and the wharf extension in Smiths Creek later in the year. This latter extension was necessary to accommodate the M.V. Leichhardt, the latest addition by Mason Shipping Co. to the Gulf Service.

As in previous years, tourism continues to be of major importance to Cairns, and the Authority has endeavoured to give every encouragement to tourist-orientated development in the Port area. The terminal facilities constructed by the Great Barrier Reef Cruise Centre and improvements made by Hayles Cairns Cruises Pty. Ltd. shows local confidence placed in the Tourist Industry.

The Port limits have been extended to include part of the foreshores of Green and Fitzroy Islands and the Authority will in due course assume responsibility for the control and maintenance of the jetty facilities.

To accommodate pleasure craft within the Harbour, the Authority has extended the number of pile moorings from 78 to 102 and a further 20 moorings will be provided in 1982/83.

The Authority, in the coming year, intends to call for proposals from parties interested in the development of part of the Cairns foreshore. This Expression of Interest will be for the development of a Boat Harbour together with tourist and recreation facilities.

M. Borzi, O.B.E.
Chairman

Income and expenditure account

for the year ended 30th June 1982

	<u>1982</u>	<u>1981</u>
	\$000	\$000
Income		
Wharves		
Harbour and Tonnage Dues	1,871	1,739
Lands and Tenanted Buildings	376	334
Small Boat Harbours and Facilities	66	61
Conveyor Systems	2	3
Quarries—River Sand Dredging	29	35
Recoverable Work	341	117
Total Operating Income	2,688	2,290
Non Operating Income	461	291
Total Income	3,150	2,582
Expenditure		
Accounts written off		
Allowances and Bad Debts	6	5
Total Operating Expenditure	2,317	1,903
Non Operating Expenditure	65	43
Total Expenditure	2,382	1,947
	3,150	2,582

Balance sheet

as at 30th June 1982

	<u>1982</u>	<u>1981</u>
	\$000	\$000
Capital:		
Seaport Operations:—		
Accumulated Funds 1st July	3,197	3,180
Transfer to the Asset Replacement and Improvement Fund	982	563
Transfer to Containerised Shipping Facilities	43	43
	2,215	2,573
Transfer from Appropriation Account	740	624
	2,956	3,197
Contribution by the Asset Replacement and Improvement Fund for Capital Works	2,031	1,763
	4,987	4,961
Reserves:	1,996	1,199
Subsidies and Non-repayable Advances for Construction	8,282	7,876
Repayable Advances for Construction	211	30
Airport Operations:—	3,048	

Subsidies and Non-repayable			Administration	—	
Advances for Construction	387		Access Roads	17	
	<u>\$18,913</u>	<u>\$14,067</u>		2,490	1,091
Represented by:—			Assets Provided by		
Fixed Assets—Seaport			Lessees—Seaport		
Wharves	2,808		Bulk Sugar Terminal and		
Lands and Tenanted Buildings	1,634		Associated Facilities	11,442	
Small Boat Harbours and			Bulk Molasses Terminal	315	
Facilities	201		Conveyor Systems	92	
Major Plant and Mobile				<u>11,850</u>	<u>11,832</u>
Equipment	302			20,502	18,883
Workshops	234		Fixed Assets—Airport	2,763	
Miscellaneous Plant	110		Work in Progress—Airport	235	
Water Distribution	27			2,999	23,502
Electrical Distribution	96		Cash on Hand and		
Administration	273		Bank Balances	299	159
Engineering	6		Investments	4,294	2,649
Fire Services	9		Debtors	800	484
Access Roads	65		Stores on Hand	12	9
Channels and Swing Basins	1,352		Prepayments		6
Parks and Gardens	22			<u>28,908</u>	<u>22,182</u>
Services to Shipping	23		Deduct Liabilities:—		
Miscellaneous Tools	5		Creditors	231	109
	<u>7,175</u>	<u>6,804</u>	Suspense	—	
Less Provision for Depreciation	<u>1,013</u>	<u>844</u>	Sinking Fund Loans	2,798	2,464
	6,162	5,960	Other Loans	6,562	5,150
Work in Progress—Seaport			Security Deposits	265	274
Wharves	203		Provision for Maintenance	136	116
Lands and Tenanted Buildings	2,217			<u>\$18,913</u>	<u>\$14,067</u>
Small Boat Harbours and					
Facilities	51				

Mackay Harbour

(Extracts from Annual Report 1981-82,
Mackay Harbour Board)

Chairman's report (extract)

Grain Terminal

The highlight of the year was the construction of Stage 1 Grain Terminal Works which was the culmination of many years of endeavour to foster this new export industry for the hinterland.

It was a great occasion for this Board when the State Wheat Board (The State Grain Facilities Authority), the Central Queensland Grain Sorghum Marketing Board, and The Queensland Graingrowers' Association, gave the project their approval and construction was able to commence in May, 1981.

We gratefully acknowledge the support of The Department of Harbours and Marine, The Department of Primary Industries, and The Treasury, in approving the funding. Whilst the Board was limited to an upper borrowing limit (\$1.2 million initially and \$1.5 million per year 1982/83) and will be borrowing over a period of 4 years, the swiftness with which these Departments moved enabled funds to be raised in 1981/82 and 1982/83. Mackay Harbour Board bridging finance was then able to fund the balance of the \$5.4 million project cost. The Central Queensland Grain Sorghum Marketing Board has funded the purchase of a grain dryer, and The Queensland Government Railways

has constructed and contributed to the cost of the rail loop.

The Project Consultants were Ullman and Nolan Pty. Ltd., in association with H. L. Platt and Associates.

Opening as it did at the very end of the grain sorghum harvest in June, the Terminal was able to receive only 8,131 tonnes of grain sorghum; but all will be in readiness for an April start in the 1983 season.

Discussion is pending with The State Wheat Board to plan the next stage: the provision of a grain wharf and permanent ship loader.

The Queensland Planning Committee on Future Oilseed Handling, Storage and Transport has predicted a likely high crop size of 351,647 tonnes to 1990 and 452,057 tonnes to the year 2000. The State Wheat Board plans to have an 11,400 tonnes inland receival depot constructed at Mt. McLaren on the Blair Athol/Mackay Railway in 1983. This railway is due to be hauling grain to Mackay Harbour in 1984 and, from this date forward, we confidently expect that this new industry will be making a substantial contribution to port trade and regional prosperity.

Sugar Terminal: 25th Anniversary

Once again we pay tribute to this great industry which is our prime exporter. A new record has been created with the export of 966,136 tonnes of raw sugar in bulk. Furthermore, 15,761 tonnes of molasses, and 37,738 tonnes of ethanol (which is distilled from molasses, a by-product of the Sugar Industry), was shipped, amounting to slightly

more than 1 million tonnes of sugar industry production going out through the port, and mainly to the Pacific Basin. Despite currently low world market prices, it is very heartening indeed to see Mackay competing on this scale.

Regional Growth

The nature of growth in the Region, despite current recession, is becoming more diversified. Major industries are strongly centred on the Ports:

Coal Ex Hay Point (1981-82) — 15m. tonnes to be doubled in 1984.

Sugar Ex Mackay Harbour (1981-82) — 1 m. tonnes per year.

Grain Ex Mackay Harbour, — .3m. tonnes in prospect by 1990.

Export commodities generated export income of \$978 m. in 1980-81 which represented 22% by value of the export income of the State and 5% by value of the export income of the Nation, equivalent to \$9,780 per capita, based on a regional population of approximately 100,000 at the present time.

E. J. Cliffe
Chairman

Balance sheet

as at 30 June, 1982

	1981/82	1980/81
Funds employed		
Long Term Liabilities		
Long Term Borrowings for Harbour Works	524,076	\$1,461,100
Lessees Redemption Reserves		
The Queensland Sugar Board	33,901,283	29,460,659
The State Wheat Board	2,139,598	—
The Australian Molasses Pool	1,097,316	1,097,316
	37,138,198	\$30,557,975
Security Deposit		
The Australian National Line	246,156	\$254,948
Accumulated Funds		
Accumulated Surplus	8,010,161	6,727,907
Asset Replacement & Improvement Fund	5,669,967	5,239,240
	13,680,128	\$11,967,147
	<u>\$51,588,560</u>	<u>\$44,241,170</u>
Employment of funds		
Working Capital		
Harbour Fund Bank Account & Short Term Deposits	233,757	514,021
Trust Fund Bank Account	3,700	4,025
Loan Fund Bank Account & Short Term Deposits	209	900,507
Miscellaneous Funds Bank Account & Short Term Deposits	1,469,780	1,472,496
	\$1,707,446	\$2,891,049
Cash, Debtors, Stocks, Work-in-Progress	253,428	199,082
less Creditors, Provision for Long Service Leave, etc.	203,489	229,985
less Provision for Restoration of Dry Dock area	533,808	589,571
	(483,868)	\$(620,474)
	<u>1,223,577</u>	<u>\$2,270,575</u>
Reserves		
Long Service Leave Payments Fund (Invested)	50,000	30,000
Asset Replacement & Improvement Fund (Invested)	2,739,900	3,839,900
Harbour Fund — Sinking Fund for original Outer Harbour loan instalments after 1.7.76 (Invested)	36,200	40,400

Harbour Boards' Debt Redemption Fund for repayment of loan for Marginal Berth (Invested)

48,399 42,167
2,874,499 \$3,952,467

Advances to Lessees (Recoverable)

2,437,533 —

Fixed Assets

Land, Buildings & Constructed Works

— at cost

12,509,086 11,824,397

Plant & Equipment — at cost

1,689,015 1,596,314

less Provision for Depreciation

14,198,102 13,420,711

6,283,351 5,960,559

7,914,750 \$7,460,152

Assets Provided Lessees

Assets — at cost

Bulk Sugar Terminal

35,850,384 31,674,940

Bulk Grain Terminal

4,525,756 —

Bulk Molasses Terminal

1,097,316 1,097,317

41,473,457 32,772,257

Harbour Boards' Debt Redemption Fund for repayment of loans for Leased Assets (Invested)

666,092 561,061

42,139,550 33,333,318

less Long Term Borrowing for Leased Assets

5,001,351 2,775,342

37,138,198 \$30,557,976

\$51,588,560 \$44,241,170

Revenue account

for the year ended 30 June, 1982

	1981/82	1980/81
Income —		
Wharves		
— Harbour Dues	1,159,214	1,039,653
— Tonnage Rates	264,101	244,107
— Other Revenue	146,556	79,579
	1,569,872	1,363,339
Land & Tenancies		
— Rental	349,752	262,089
— Royalties	39,330	40,600
	389,083	302,689
Small Boat Harbour & Pioneer River Facilities		
Slipway	29,176	28,428
Water Service	18,838	18,661
Private Works	67,100	56,410
Services to Shipping	153,315	333,089
Plant Working	103,821	94,127
Quarry Working	383,404	434,655
Other Income	2,003	22,783
	—	528
	<u>\$2,716,616</u>	<u>\$2,654,709</u>
Less Expenditure —		
Wharves	1,179,194	1,238,209
Land & Tenancies	113,798	75,012
Small Boat Harbour & Pioneer River Facilities		
Slipway	30,243	29,181
Water Service	16,427	16,192
Private Works	76,017	74,707
Services to Shipping	147,547	299,602
Plant Working	101,779	96,014
Quarry Working	367,696	363,218
	1,620	3,171
	<u>\$2,034,327</u>	<u>\$2,195,306</u>
Operating Surplus	<u>\$682,288</u>	<u>\$459,403</u>

Forth Ports Authority

(Extracts from 'Report and Accounts 1982', Forth Ports Authority, U.K.)

Chairman's statement (extract)

Despite the continuing trading recession the operating surplus before interest and additional depreciation has come out at £3.2 m compared with £3 m last year. Our surplus for the year was £0.983 m as against £1.053 m last time and the cash flow continued to be satisfactory.

Whilst activity in general at Grangemouth has remained in line with recent years, we have lost some ground in tonnage handled at Leith mainly due to the downturn in coal exports. Operating revenues and surpluses at Leith and Grangemouth have been maintained at around the 1981 levels and growth in the Fife ports has continued with Methil showing a 70% growth in tonnage over the last two years.

The stevedoring companies had mixed fortunes with both Leith and Grangemouth suffering once again from the continuing decline in dry cargo. This had the most marked effect at Leith but at Grangemouth the reduction in the number of Registered Dock Workers employed allowed George Palmer to show a considerable improvement in their results. Matthew Taylor in Fife had a good year reflecting the improvement in trade, particularly at Methil.

Our role as one of the main oil and oil services Port Authorities continues to be emphasised by the completion of the B.P. embayment scheme incorporating two new jetties. We have also been awarded the towage contract for the Shell-Esso activities at Braefoot Bay. We have ordered two new tugs for this purpose for delivery in 1983. In anticipation of the gas tanker traffic at Braefoot Bay we plan to extend our radar capacity to give a total surveillance system in the estuary.

During the year the correct dredged depth at Grangemouth was achieved, and the draught restrictions were removed.

Although we are likely to continue to suffer the effects of the decline in dry cargoes, the Forth estuary is fortunate in its involvement with oil and gas and the fact that it faces Europe. These factors will ensure an active 1983.

G.A. Hepburn
Chairman

Trade

The total of 27.5 m tonnes handled during the year represented an increase of 0.8 m tonnes on the previous year. This was due to an extra 0.5 m tonnes of North Sea crude oil and 0.5 m tonnes of refined petroleum products and chemicals offsetting a reduction in dry cargo of 0.2 m tonnes. This was mainly a reduction in coal exports.

Shipping Services

During 1982 two monthly conventional line services began operations between Grangemouth and Sweden, Aros Lines and Everard Line. The regular United States Line feeder service extended its world coverage to link Grangemouth with Australia and New Zealand. In the South American trade Paraguay Linie re-established itself in the latter part of 1982.

At Leith, the first call of a monthly conventional service to the Middle East and Arabian Gulf was made by the United Arab Shipping Company. Earlier in the year Tecomar Line established a feeder service from Leith to Mexico and Central America via the regular Macvan Container Service. The service from Leith to the Faroe Islands provided by the Faroese Shipping Company ceased.

Group revenue account

Year ended 31st December 1982

	1982 £000	1981 £000
Operating Revenue		
Dues:		
On ships	3,359	3,152
On goods	4,665	4,529
On passengers	6	7
	8,030	7,688
Cargo handling	6,144	6,370
Cranes and plant	2,264	2,086
Warehousing and storage	499	487
Sundry services and facilities	800	662
Rents	1,385	1,283
Other revenue	782	670
Total Operating Revenue	19,904	19,246
Expenditure		
Operating	3,394	3,319
Maintenance	2,368	2,228
Dredging	575	501
Cargo handling	5,065	5,133
Administrative and other general expenditure	3,896	3,712
Total Expenditure	15,298	14,893
Operating Surplus before Depreciation	4,606	4,353
Provision for depreciation	1,396	1,347
Operating Surplus	3,210	3,006
Less:		
Interest change	471	612
	2,739	2,394
Less:		
Additional depreciation provision based on replacement cost of fixed assets	1,740	1,472
	999	922
(Less)/Add:		
Exceptional items	(16)	131
Surplus for Year before Taxation	983	1,053
Taxation	—	—
Surplus for Year after Taxation	983	1,053

Balance sheets

at 31st December 1982

	Group		Authority	
	1982	1981	1982	1981
	£000	£000	£000	£000
Capital employed in Undertaking				
Fixed Assets	33,784	34,157	32,162	32,424
Current Assets				
Stocks	161	159	155	149
Debtors	4,236	4,997	3,179	3,744
Deposits and investments	7,531	4,742	7,531	4,742
Bank and cash balances	77	15	1	10
	12,005	9,913	10,866	8,645
Less: Current Liabilities				
Bank loans and overdrafts	248	158	248	142

Creditors	3,433	3,077	2,865	2,582
	3,681	3,235	3,113	2,724
Net Current Assets	8,324	6,678	7,753	5,921
	42,108	40,835	39,915	38,345
Capital not employed in Undertaking				
Investment in subsidiaries	—	—	1,562	1,792
	42,108	40,835	41,477	40,137
Represented by:				
Capital debt	22,704	23,934	22,381	23,504
Reserves:				
Capital grants	3,005	3,225	2,970	3,183
Capital replacement	7,617	5,877	6,679	5,233
General	8,782	7,799	9,447	8,217
	42,108	40,835	41,477	40,137

Cyprus Ports Authority

(Extracts from 'Fifth Annual Report 1981', Cyprus Ports Authority)

Trade

During the year under review, cargo traffic through the multipurpose ports and the specialised port facilities operating in the free part of Cyprus reached 3,919,000 tonnes. Out of this traffic, 72% moved through Larnaca and Limassol ports, 26% through the oil terminals at Dhekelia, Larnaca, Moni and Vassiliko and 2% through the mineral terminal at Vassiliko.

Trends

1981 saw the continuation of certain trends observed in the Cyprus port activities during the last five years, which have led to significant dynamic changes. These trends reflect, on the one hand, the Authority's efforts to expand the Cyprus ports and adapt them to the new demands of international trade and shipping and, on the other, the current conditions prevailing in the market/production sectors and the economy, in general, both in Cyprus and internationally.

Containerized cargo continued to grow rapidly at the expense of conventional cargo. In comparison with 1977, the containerized cargo's share of the total cargo traffic through Larnaca and Limassol ports increased from 7% to 31%.

In contrast, minerals—a significant part of the country's export trade until 1973—continued a downward trend recording a 37% decrease, in comparison with 1980. Owing to mineral exhaustion, Limni Mines ceased to operate in 1981, which resulted in the elimination of traffic through the mineral terminal in the area. Furthermore, rising labour costs, coupled with low prices prevailing internationally, led the Hellenic Mining Company to cut down its production of minerals, a fact which resulted in a corresponding reduction in traffic through the mineral terminal at Vassiliko. It is expected that, in the course of the next 2-3

years, mineral will not be part of the cargo traffic through Vassiliko port, the expansion of which, in order to cope with new requirements, will be completed in 1983.

With the exception of coastal deliveries, imports of oils were maintained around previous years levels, just below 900,000 tonnes. In fact, in comparison with 1980, this traffic showed a 4% decrease.

Returning to their pre- 1979 levels, coastal deliveries, between the Oil Refinery and the special terminals at Dhekelia and Moni, showed a 40% fall, in comparison with 1980. Since 1976, with the exception of 1979 and 1980, Cyprus coastal deliveries have varied around 150,000 tonnes per annum.

Having, for the second year, in succession, overcome its stagnation, which was observed until 1979, transit cargo through the Larnaca and Limassol ports recorded a 62% increase during 1981. In contrast, Cyprus cargo traffic was stabilized at 1977 levels.

As in previous years, ship traffic through Cyprus ports continued to increase in terms of net registered tonnage capacity, while it remained constant in the number of ships called. Thus, in 1981, while the number of ships called was around 4,300, their capacity increased from 5,979,000 n.r.t. in 1980, to 6,271,000 n.r.t., thus recording an increase of 4.8%.

Cargo size and distribution

In comparison with 1980, cargo traffic through Larnaca and Limassol ports showed an increase of 7%, reaching 2,837,000 tonnes. The greater part thereof i.e. 1,911,000 tonnes, was handled at Limassol port, whereas Larnaca handled 926,000 tonnes or 33% of the said traffic. The increase in the total cargo traffic through both ports was due to the increase in transit cargo. In contrast, Cyprus total cargo traffic registered a small drop.

Port development

During the period covered by the report, the major part

of the infrastructure works at the Larnaca and Limassol ports were completed. These works constitute part of a wider development programme for these ports, which the Authority started implementing in 1979.

Larnaca Port

The construction of a 340 m. new quay at the southern side of the port, as well as a ro-ro ramp at the south-western part of the basin were completed in 1981, increasing the port's berthing capacity to a level satisfactory for the time being. Thus, together with the 200 m. provided by floating pontoons, the total quay length of Larnaca port has been increased to 888 m.

For the expansion of the open stacking areas and the provision of an access road at the southern side of the port, an area of about 125,000 m² was asphalted, during 1981. As a result, the open stacking areas of the port for general cargo and containers were increased from 50,000 m² to 150,000 m². In order that the new storage facilities might be included in the port's customs area, the port gate was relocated, a new entrance guardroom was constructed and, towards the end of the year, a new fencing of the port started.

Also, during the period of the report, an area of 70,000 m², behind the new southern quay wall, was reclaimed and a new transit shed of an area of 12,000 m² started being constructed on the reclaimed land. It is believed that this new transit shed is the biggest of its kind in the Middle East. With its completion in the summer of 1982, the covered storage areas of Larnaca port will be increased to 17,670 m².

The new quay, as well as the new storage areas were provided with water, telephones and electricity and provision was made to allow for the installation of electrical cranes on the new quay. For the adaptation of the port's electricity supply system to today's demands for energy conservation, floodlighting fittings (high pressure sodium lamps) were used in the new electrical installations and same were specified for the new transit shed under construction.

Another civil engineering project, that started at Larnaca port, in 1981, and will be completed in 1982, was the modification/expansion of a multi-storey building for the accommodation of the port administration personnel and for use as baggage hall.

In order to cater for the needs of the personnel to be housed in the new building, a new canteen started being constructed at the end of the year. It is expected that this canteen will be ready in early 1982.

Limassol Port

Towards the end of the year, the construction of a new quay, 480 m. long, was completed, which increased the total quay length of the port to 1,260 m.

The new quay, which is part of the new container terminal under construction, will be put into operation at the beginning of 1982. Out of a total area of 226,000 m², which will be paved for the new container terminal, 39,000 m² were asphalted and put into temporary use for the stacking of empty containers.

Towards the end of the year, tenders were, also, invited for the expansion of the port's electricity supply system to cover the needs of the new quay and the container terminal under construction. As in the case of Larnaca port, the specifications provide for the use of special lamps of high luminosity and low electricity consumption.

Another major civil engineering project, which started at Limassol port, in 1981, was the construction of a new office complex, which will house the port management personnel and provide office accommodation for renting to port users and various government departments. The building will cost about £800,000 and its construction is expected to be completed in 1983.

Vassiliko Port

The works for the construction of Vassiliko port were continued during 1981. This port is intended to cater for the needs of a new fertilizer plant, which started operating in the area in 1981, and for the export of cement of Vassiliko Cement Works.

Out of a total quay length of 465 m. to be finally constructed, 125 m. were completed and put into operation in December 1981.

Balance sheet

as at 31st December 1981

	1981 C£	1980 C£
Assets employed		
Fixed Assets	20,899,332	17,675,646
Current Assets		
Cash	240,689	139,921
Investments	2,030,000	3,700,000
Sundry Debtors	258,602	77,992
Stock at cost	108,022	94,207
Deferred Expenditure	109,850	74,315
	<u>2,747,163</u>	<u>4,086,435</u>
Less Current Liabilities		
Bank Overdrafts	—	—
Creditors	951,494	728,762
Sundry Accruals	1,800	1,000
	<u>953,294</u>	<u>729,762</u>
Net Current Assets	<u>1,793,869</u>	<u>3,356,673</u>
	<u>22,693,201</u>	<u>21,032,319</u>
Sources of Finance		
General Fund	9,160,529	7,527,237
Borrowings	13,532,672	13,505,082
	<u>22,693,201</u>	<u>21,032,319</u>

Revenue account

For the year ended 31st December 1981

	1981 C£	1980 C£
Income		
Operating Revenue	4,081,466	3,886,283
Rents and Royalties	258,169	210,926
Investment Income	203,013	213,725
Sundries	4,136	587
	<u>4,546,784</u>	<u>4,311,521</u>
Expenditure		
Operating	1,567,216	1,369,646
Administration	293,454	221,871
Depreciation	368,647	364,953
Loss on Disposal of Assets	—	—
Remuneration of the members of the Board of Management	3,495	3,780
	<u>2,232,812</u>	<u>1,960,250</u>

(Continued on next page)

Port of Tacoma

(Extracts from '1982 Annual Report', Port of Tacoma)

Executive Director's message (extract)

Despite a difficult economic climate in 1982, the Port of Tacoma's gross operating revenues were up for the eleventh straight year. Gross operating revenues reached \$29.4 million, while the Port's net income was \$10.5 million. This latter figure is down from last year because the Port had no extraordinary gains such as the sale of lands or buildings that it did in 1981. Considering the economy and the international trade situation, the Port had an excellent financial year in 1982.

The development of new steamship services at the Port, a variety of major construction projects, increases in containerized cargo, and the strengthening of international trade relations were just a few of the key ingredients of the Port's continued growth and progress in 1982.

During the year, the Port put a great deal of effort into strengthening trade relations with Pacific Rim countries. One such example was the visit by a delegation from our sisterport, the Port of Belawan, Indonesia. During that visit, the Indonesian Secretary to the Director General of Sea Communications stated that the Indonesian government wanted to have the Port of Tacoma serve as the major gateway for Indonesian cargo entering the United States. Our Port is currently the largest West Coast importer of crude rubber, most of which comes from Indonesia. The continued development of such relations is crucial if the Port of Tacoma is to remain a leader in Pacific Rim trade.

In addition to planning ahead in terms of international trade, the Port also looked at overall planning in a more general sense. During the year, a long-range comprehensive development plan was completed by an engineering firm which took a look at where the Port could be in the year 2000. The study predicted that under the right conditions, the Port could be handling up to three times its 1982 tonnage total by the year 2000.

One new tool for helping the Port grow is this Pacific Gateway magazine, which completed its first year of publishing in 1982. Proven to be an important aid for selling the Port and its capabilities, the magazine was honored with three awards from the Crown Zellerbach Company, the Pacific Chapter of the International Association of Business Communicators, and the American Association of Port Authorities.

Cargoes

While the overall tonnage figure was down for 1982, the

Port seemed to handle more special products cargo than ever before. This included everything from shipping eight 80-ton winches to Korea and 52 oilfield modules, which left Puget Sound bound for Alaska's North Slope, to an 85-foot commuter rail car weighing 29 tons.

A 54% drop in grain exports coupled with a 39% decline in ore imports were key factors in the Port's overall reduction of tonnage for 1982. Despite these declines, containerized cargo traffic showed a dramatic 22% increase. This is particularly significant because the Port made this a primary objective for 1982. A portion of this increase can be attributed to the intermodal railroad service put into operation by the Port.

Other increases were seen in general cargo tonnage, which was up 2%. Logs were also up 26%, primarily due to the fact that mainland China has become a new market for exported logs. Increases in lumber and woodchips also contributed to an overall increase in forest products for the year.

New Construction

The Port undertook over \$8 million in new construction, maintenance, and repair projects during 1982. One major accomplishment was the construction of the new Port administrative office building. In addition to giving Tacoma the proper image for being a world class port, the building centralizes eight departments which were previously scattered throughout the Port area. The centralization of the Port workforce into one building has resulted in increased cooperation, efficiency, and productivity.

Another major construction project was the new 152,000 square foot Marshall Avenue warehouse which is being leased to Panasonic. Improvements at Terminal Four included lighting and electrical changes, a new gatehouse, and paving of the gatehouse area. Fill work was done at Slip Two as well as the relocation and completion of moorage. A contract was also awarded for the filling of a 47-acre site west of Milwaukee Way.

Conclusion

Throughout the year, new construction, careful planning, and aggressive selling helped the Port of Tacoma meet the competitive challenges it faced in the world of shipping and international trade during 1982. The Port will continue to meet these challenges in the years to come.

Richard Dale Smith
Executive Director

Balance sheets

December 31, 1982 and 1981

(Continued from page 26)

Operating Surplus	2,313,972	2,351,271
Interest on long-term loans	674,304	636,588
Surplus for the year	1,639,668	1,714,683
Surplus brought forward	7,527,237	
Add: Income/(Expenditure)	5,653	
relating to previous years	(12,029)	
	<u>7,520,861</u>	<u>5,812,554</u>
Surplus carried to General Fund	<u>9,160,529</u>	<u>7,527,237</u>

	<u>1982</u>	<u>1981</u>
	\$000	\$000
Assets		
Land, Facilities and Equipment	155,678	148,588
Less accumulated depreciation	<u>34,159</u>	<u>30,374</u>
	121,519	118,213
Construction work in progress	8,913	4,635
Total land, facilities and equipment	<u>130,432</u>	<u>122,849</u>

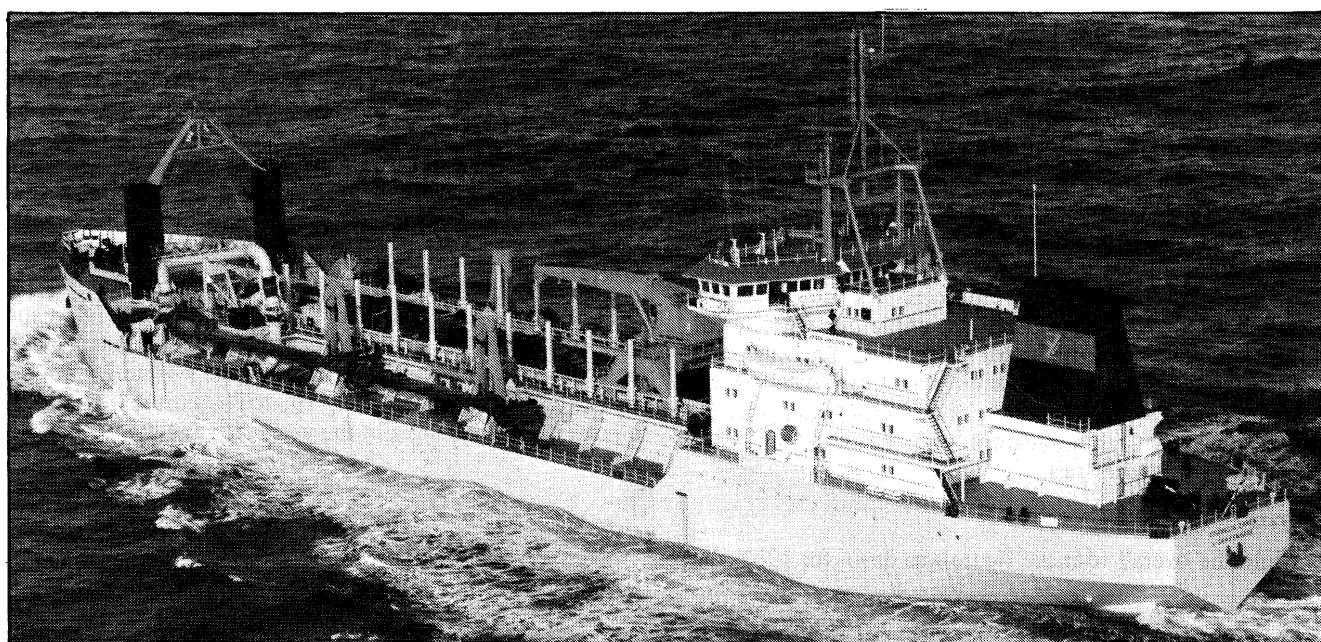
Sinking, Redemption and Special Funds	14,538	13,694	Terminal services	20,122	20,228
Current Assets			Property rentals	6,312	6,580
Total current assets	27,357,811	27,934,066	Industrial yard	2,997	2,372
Deferred and Other Assets	4,187	4,703	Total revenues	29,431	29,181
Total Assets	<u>176,515</u>	<u>169,181</u>	Operating Expenses		
Equity and Liabilities			Operations	10,297	10,697
Equity			Maintenance	2,672	2,942
Operations	56,500	45,802	Administration	3,256	2,719
Taxation	41,591	38,390	Total before depreciation	16,226	16,359
Grants	9,253	9,461	Depreciation	4,159	3,933
Total equity	107,345	93,655	Total operating expenses	<u>20,386</u>	<u>20,292</u>
Long-Term Debt			Income from Operations	9,045	8,888
General obligation bonds	7,835	8,405	Other Income (Expense)		
Revenue bonds	53,815	55,175	Interest income	5,214	5,730
Other	1,465	6,469	Interest expense	(3,856)	(4,041)
Total long-term debt	63,115	70,049	Gain on disposition of land, facilities and equipment	5	3,078
Current Liabilities			Other income (expense)—net	80	(79)
Total current liabilities	4,510	4,082	Total other income	<u>1,443</u>	<u>4,688</u>
Operating Reserves			Income before Extraordinary Item	10,489	13,577
Total operating reserves	1,544	1,394	Extraordinary Item		
Commitments	—	—	Gain from escrow substitution	—	1,005
Total Equity and Liabilities	<u>176,515</u>	<u>169,181</u>	Net Income	<u>10,489</u>	<u>14,582</u>

Statements of operations

Years Ended December 31, 1982 and 1981

	1982	1981
	\$000	\$000

Revenues



Zanen Verstoep nv
Dredging Contractors

hopper capacity 8000 m³

Head Office: Holland
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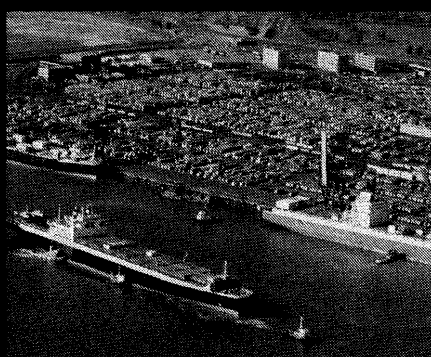
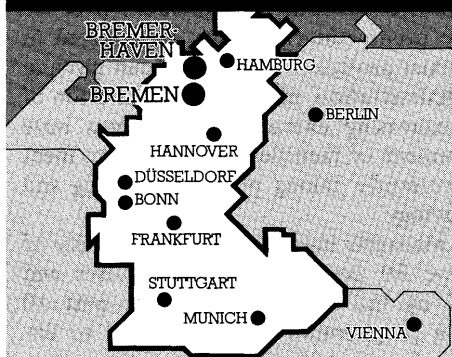
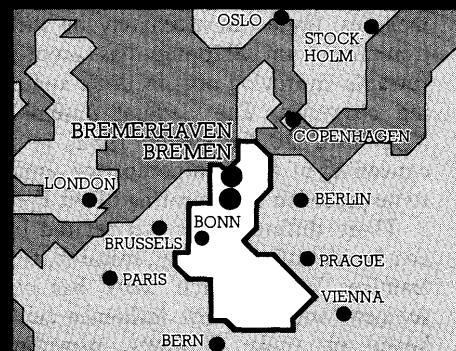
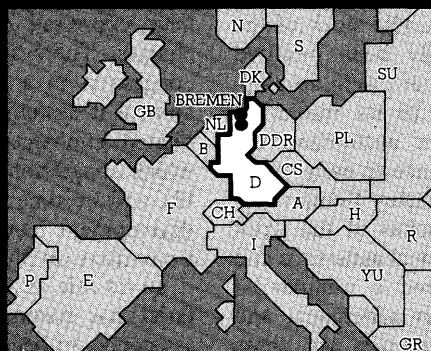
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International maritime information: World port news:

Review of the activities of UNCTAD in shipping

(Extracts from 'UNCTAD activities in the field of shipping') (UNCTAD document: TD/278)

Ports

Many ships spend over 50 per cent of their operational time in ports and, for liner shipping, port costs represent some two-thirds of the total cost of sea transport. Thus, conditions in port have a profound impact on the efficiency of maritime transport. Whereas shippers can often choose between different shipping services, they are generally obliged to use a particular port and are therefore at the mercy of its efficiency. When such a port lacks adequate facilities, trade can ultimately be stifled. The work of the Committee on Shipping has accordingly been oriented towards improving port facilities and operations in developing countries. The General Assembly, in its resolution 37/209 of 20 December 1982, in turn authorized the convening of the plenipotentiary conference in early 1984, to be preceded by a meeting of the Preparatory Committee.

Three different but interrelated branches of the work can be identified, namely, research, technical assistance and training. The research work has covered a number of subjects with a major influence on port efficiency, and hence on trade. However, providing reports on these subjects is not the same as ensuring implementation of the results of such research. The work has, therefore, formed the basis of inputs into technical assistance and training projects carried out with financial assistance from UNDP, bilateral sources and, sometimes, the recipient countries themselves.

Many ports have a greater cargo-handling potential with their existing facilities than their current performance would indicate. The secretariat has developed methods by which port authorities can identify bottlenecks to higher throughput, assess the benefits of removing these bottlenecks and evaluate ways of doing so. These methods allow ports to obtain vital increases in capacity without heavy investment or long delays.

Various studies have also been carried out to provide guidelines for more effective port management. Examples of subjects studied are port statistics, port performance indicators, port pricing and financial management of ports. Reports on these subjects cover principles and practices aimed at facilitating better exploitation of ports and at encouraging a certain degree of harmonization among ports so that they can collaborate more closely.

The paramount importance of a far-sighted port development policy does not appear to have been fully appreciated by all governments. As a result, many ports have failed to keep pace with the rate of expansion of the country's overseas and coastal trade. The initial result is port congestion, with significant increases in trading costs. Disruption of trade follows, and eventually trade is forced to adapt to

the limited port capacity with a permanent detrimental effect on the national economy.

Elaboration of a methodology for port development planning has been an important activity of the secretariat and a major output has been the production of a port development handbook. ^{12/} Other reports have dealt with such subjects as investment appraisal and the impact on ports of technological changes in shipping.

At a time when many ports were seriously affected by congestion, an UNCTAD expert group prepared a practical report on measures which could be taken by the countries concerned. Bilateral financing enabled a number of task force missions to help with the implementation of such measures in countries particularly affected. A related problem about which governments of developing countries have expressed concern is that of port congestion surcharges. There is at present no consistent definition of congestion in a port; port authorities do not measure or control it systematically and liner companies do not levy related surcharges in any consistent manner. Proposals by which congestion surcharges could be applied more equitably and become an instrument to encourage efficient port development continue to engage the attention of the Committee on Shipping.

In its role as a participating agency of UNDP, the secretariat has assumed responsibility for executing technical assistance projects in the field of ports, among others. National port projects have been conducted in over 40 countries and many other countries have participated in regional and subregional projects. Advice has been given in all aspects of the administration, planning and operation of ports. To an ever-increasing extent these projects have involved the improvement of facilities and services to meet the rapid changes currently taking place in shipping and cargo-handling technology.

Over 700 senior managers have had the opportunity of participating in some 30 port management courses and seminars conducted by the secretariat over the past 10 years. These training programmes have been used to disseminate the results of secretariat research to port managers.

More recently, attention has been given to the needs of middle management, although the increased number of people in this category gives the training problem a new dimension. The secretariat is currently assisting several governments in the establishment of local training institutes and offering training for local instructors. UNCTAD is also preparing training materials which may be used by the developing countries themselves to carry out their own training programmes.

The three activities—research, technical assistance and training—are vitally interconnected. Through research the secretariat gains a clearer insight into the solution of port problems. Through its training programmes, the results of this research can be presented directly to port management and government officials. The implementation of the results

by the ports, either by them or with technical assistance, see the work carried to its logical conclusion, thus helping to increase the contribution which ports in developing countries can make towards more efficient maritime transport. Finally, it merely remains to add that ports constitute compulsory "convergence points" for cargo and documents where the physical transfer of cargo from one mode of transport to another and the consequential transfer of responsibility between operators engage a number of procedures and documents. The number and variety of parties involved, often with conflicting interests and varying information needs, inevitably make these operations complex and time-consuming. The situation can be remedied through a co-ordinated effort, by all parties concerned, to rationalize and streamline the information flow. Inexpensive and simple solutions can substantially reduce the time and costs of complying with formalities and procedures. The UNCTAD Special Programme on Trade Facilitation provides advisory assistance and technical co-operation in this area.

12/ Port development: A handbook for planners in developing countries (TD/B/C.4/175 and Corr. 1), United Nations publication, Sales No. E.77.II.D.8.

Status at 15 February 1983 of Conventions and Amendments: IMO

	Date of initial entry into force	
International Convention for the Safety of Life at Sea, 1974 (SOLAS 1974)	25 May 1980	
— 1981 Amendments	not yet in force	
SOLAS Protocol 1978	1 May 1981	
— 1981 Amendments	not yet in force	
Convention on the International Regulations for Preventing Collisions at Sea, 1972 (COLREG 1972)	15 July 1977	
— 1981 Amendment	1 June 1983	
International Convention for the Prevention of Pollution of the Sea by Oil, 1954 (OILPOL 1954)	26 July 1958	
— 1971 (Great Barrier) Amendments	not yet in force	
— 1971 (Tanks) Amendments	not yet in force	
International Convention for the Prevention of Pollution from Ships, 1973 (MARPOL 1973), as modified by the Protocol of 1978 thereto (MARPOL 73/78)	2 October 1983	
— Annex I	2 October 1983	
— Annex II to V	not yet in force	
Convention on Facilitation of International Maritime Traffic, 1965 (FAL 1965)	5 March 1967	
— 1973 Amendment	not yet in force	
International Conference in Load Lines, 1966 (LL 1966)	21 July 1968	
— 1971 Amendment	not yet in force	
— 1975 Amendment	not yet in force	
— 1979 Amendment	not yet in force	
International Conference on Tonnage Measurement of Ships, 1969 (TONNAGE 1969)	18 July 1982	
Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969 (INTERVENTION 1969)	6 May 1975	
INTERVENTION Protocol 1973 (INTERVENTION PROT 1973)	30 March 1983	
International Convention on Civil Liability for Oil Pollution Damage, 1969 (CLC 1969)	19 June 1975	
CLC Protocol 1976 (CLC PROT 1976)	8 April 1981	
International Conference on Special Trade Passenger Ships, 1971 (STP 1971)	2 January 1974	
International Conference on Space Requirements for Special Trade Passenger Ships, 1973 (SPACE STP 1973)	2 June 1977	
Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material, 1971 (NUCLEAR 1971)	15 July 1975	
Conference on the Establishment of an International Compensation Fund for Oil Pollution Damage, 1971 (FUND 1971)	16 October 1978	
FUND Protocol 1976 (FUND PROT 1976)	not yet in force	
International Convention for Safe Containers, 1972 (CSC 1972)	6 September 1977	
Athens Convention Relating to the Carriage of Passengers and their Luggage by Sea, 1974 (PAL 1974)	not yet in force	
PAL Protocol 1976 (PAL PROT 1976)	not yet in force	
Convention on the International Maritime Satellite Organization (INMARSAT)	16 July 1979	
International Conference on Limitation of Liability for Maritime Claims, 1976 (LIMC 1976)	not yet in force	
International Conference on Safety of Fishing Vessels, 1977 (SFV 1977)	not yet in force	
International Convention on Standards of Training Certification and Watchkeeping for Seafarers, 1978 (STCW 1978)	not yet in force	
International Convention on Maritime Search and Rescue, 1979 (SAR 1979)	not yet in force	
Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (LDC 1972)	30 August 1975	
— 1978 (Disputes) Amendments	not yet in force	
International Convention for the Safety of Life at Sea, 1960 (SOLAS 1960)	26 May 1965	
— 1966, 1967, 1968, 1969, 1971, 1973 (General), 1973 (Grain) Amendments	not yet in force	
Regulations for Preventing Collisions at Sea (COLREG 1960)	1 September 1965	

Publications

"Regulations for the Prevention of Pollution by Oil"

Sales No. 525.82.19.E, price £5.50 (English)

"Oily-Water Separators and Monitoring Equipment"

Sales No. 608.82.15.E, price £2.25 (English)

"IMO/UNEP Guidelines on Oil Spill Dispersant Application and Environmental Considerations"

Sales No. 575.82.18.E, price £2.00 (English)

"Medical First Aid Guide for Use in Accidents Involving Dangerous Goods (MFAG)"

Sales No. 251.82.17.E, price £3.75 (English)

"Code of Safety for Nuclear Merchant Ships"

Sales No. 851.82.10.E, price £3.00 (English)

IMO Secretariat,
Publications Section,
4, Albert Embankment,
London SE1 7SR, UK

INTERTANKO publishes 'TANKER PORT PARTICULARS'

The International Association of Independent Tanker Owners has published an updated edition of its compilation of TANKER PORT PARTICULARS. It lists over 1000 ports worldwide, giving particulars as to location by name, country and coordinates, maximum allowable draught, maximum allowable length, minimum allowable length when appropriate, the nature of the terminal: Open seaport, single point mooring, offshore platform, and a wealth of other pertinent information such as tides, ballast reception facilities, and airdraught under bridges.

This booklet has proved indispensable to owners and brokers, satisfying their need of immediate-access data. The updated edition is available for USD 15,- from INTERTANKO's office, P.O. Box 1452, Vika, OSLO 1, Norway.

Nanaimo Harbour announces \$1 Million Waterfront Park Project

The Nanaimo Waterfront Proposal, a harbour development plan announced just a year ago, was a broad and visionary concept, offering a practical approach to making the best possible use of Nanaimo's unique harbour shoreline. It received acclaim from all sectors of the community at the time.

But it existed only on paper. Now Nanaimo Harbour Commission in cooperation with the federal government, is going to implement one phase of the overall plan.

Tenders are to be called immediately for creation of a lagoon-park area including steps, walkways, beach and planting areas, that will transform a neglected piece of waterfront into an attractive and unusual development.

"The citizens of Nanaimo and visitors will experience an exciting concept of waterfront gardens and walkways which will provide a dramatic gateway to the city centre," says Nanaimo Harbour Commission Chairman, Don Rawlins.

Commissioner Rawlins on behalf of Senator Ray Perrault representing the federal government, and Nanaimo Harbour Commission, told a press conference that arrangements had been completed and that the project, which may run as high as \$1 million, had been given the green light.

The federal government will contribute \$320,000. The Harbour Commission's share will be upward of \$400,000, Commissioner Rawlins said. Total cost is expected to be between \$750,000 and \$1 million. Work should start before summer and be completed this year, Rawlins hoped.

The area slated to be transformed from an unsightly piece of shoreline into a unique marine garden, lies between Maffeo-Sutton Park, at the mouth of the Millstone River, and Georgia Park on the bank below Front Street across from the highrise building.

A lagoon will be created by extending a section of shoreline and an intertidal weir with a walkway above will connect the new part with the shore at Maffeo-Sutton Park. The weir and spillway will insure flushing of the lagoon making it suitable for fish and other aquatic life.

Nanaimo Harbour Commission looks on the project as being a catalyst to start the whole waterfront re-development proposal moving.

Revitalization

The plan fits in with the general philosophy of the Waterfront Proposal which calls for upgrading and revitalization of the waterfront area for the use of the community.

Completion of the new marine garden will mean that Nanaimo will have a continuous seashore walkway from Georgia Park through to the mouth of the Millstone River and thus link up with the proposed Millstone Walkway to Bowen Park or the proposed link with the Newcastle Channel Walkway.

This year's project, it is hoped, will give impetus to further development of the Waterfront Proposal by public and private sectors of the community.

Port of Vancouver seeks corporate status in new system

The Port of Vancouver expects soon to become a locally directed corporation in Canada's new ports administration system, says Bo Ekstrom, Acting General Manager of the Port.

The new system was formally launched in February when federal Transport Minister Jean-Luc Pepin announced the makeup of the Canada Ports Corporation, or "Ports Canada," replacing the National Harbours Board.

Under the Canada Ports Corporation Act, passed by Parliament last summer and proclaimed on February 24, 1983, Ports Canada assumes over-all responsibility for the country's ports network.

The legislation also provides for establishing local corporations to manage and operate major ports with a high degree of autonomy. A local corporation can be established at a port which is nationally or regionally significant, financially self-sufficient and able to demonstrate a strong local interest in the management of its affairs.

"The Port of Vancouver qualifies on every count, and our application for corporate status has been sent to the new Ports Canada board of directors for early consideration," Mr. Ekstrom said.

The Ports Canada board will make its recommendations to the Minister of Transport, who issues letters patent for local port corporations with Cabinet approval.

Mr. Ekstrom said the process will take time, "but we are hoping to receive approval of corporate status by sometime in April. We expect to be one of the first ports to establish a local corporation."

He pointed out that the Port of Vancouver is well-represented on the 17-member board of Ports Canada, which is set up to provide more effective regional representation in national policy direction than was possible under the four-member National Harbours Board.

Glenn McPherson, chairman of the Vancouver Port Authority since 1973, is the first chairman of the Ports Canada board. Mr. McPherson has been a driving force behind the 10-year effort to develop a new national policy which provides local ports with greater autonomy while preserving the integrity and efficiency of Canada's ports system.

Also appointed to the Ports Canada board is Marian Robson of Richmond, B.C., who has worked closely with the Port of Vancouver since her appointment to the National Harbours Board in 1981.

When approved, the local port corporation would have a board of local directors, serving on a part-time basis for three-year terms. Vancouver port officials who have been National Harbours Board employees would become employees of the local corporation.

Mr. Ekstrom emphasized that Ports Canada automatically assumes the legal rights and obligations of the NHB, so existing contracts, leases and agreements with Port users, terminal operators and suppliers will not be altered.

The Canada Ports Corporation will have broader powers than those held by the National Harbours Board. For example, Mr. Ekstrom said, it is anticipated that Ports Canada will be able to authorize capital expenditures up to \$10 million. In the past the NHB had to seek Treasury Board permission to spend more than \$50,000 on capital projects.

Many of these broad powers are expected to be passed along to local corporations when they are formed, he said.

"We expect that increased local decision-making authority plus strong Western representation on the Ports Canada national board will result in more responsive, efficient and effective management of our port."

1983 seen as 'pivotal' year: Port of Vancouver

1983 promises to be a pivotal year for the Port of Vancouver, with several major developments that will improve its operation and administration, says Bo Ekstrom, Acting General Manager of the Port.

"It will be an extremely busy and exciting year for everyone involved with the Port as we prepare for a period of dramatic growth and advancement," Mr. Ekstrom said.

The expected highlights of 1983 include:

- Establishment of a Vancouver port corporation under

the new Ports Canada system, providing greater local direction of the Port's operation;

- Adoption of the long-awaited Master Plan, mapping the Port's development over the next 30 years;
- Completion of a \$50-million infrastructure expansion of the Roberts Bank coal port, quadrupling its potential capacity to export Western Canadian coal;
- Start of construction on the \$137-million Canada Harbour Place cruise ship facility and trade and convention centre;
- Completion of one of the two new container cranes ordered for Vanterm and Centennial Pier respectively, strengthening the Port's overall container-handling capacity.

"These developments will contribute significantly to our ability to respond to the opportunities that lie ahead," Mr. Ekstrom said. "Our research indicates that the long-term prospects for trade through the Port of Vancouver are outstanding."

"Although the world has been passing through a difficult economic period recently, the Port's own health has remained strong. Now, with signs that the world-wide recession may be nearing its end, we can look forward to growth in almost every aspect of Port activity."

Further draught reduction for Panama Canal

The Panama Canal Commission has announced that a draught restriction of 35 feet 6 inches tropical fresh water (TFW) is scheduled to go into effect May 2.

The current draught allowance is 37.0 which will be reduced to 36.6 on April 18 and 36.0 April 25.

These continuing draught restrictions for the Panama Canal are the result of the early and unusually dry season in November 1982 with very dry conditions persisting into April.

When the drought breaks (the rainy season usually begins sometime after the middle of April), the maximum draught of 39.5 feet will be restored as quickly as possible. Increases of permissible draught will be announced in 6 inch (0.5 foot) increments with as much advance notice as possible.

'About U.S. Foreign Trade Zones': National Association of Foreign-Trade Zones

What is a foreign-trade zone?

A foreign-trade zone is a site within the United States where foreign and domestic merchandise are considered by the U.S. government, generally, as not being within the U.S. Customs territory but in international commerce. Foreign or domestic merchandise may enter this enclave without a formal Customs entry or the payment of Customs duties or government excise taxes, and without a thorough examination.

Merchandise entering a zone may be:

- STORED
- DISPLAYED
- ASSEMBLED
- TESTED
- REPAIRED
- MANUFACTURED
- CLEANED
- MANIPULATED
- SALVAGED
- SAMPLED
- MIXED
- DESTROYED

● RELABELED ● PROCESSED ● RE-EXPORTED
● REPACKAGED

If the final product is exported from the United States, no U.S. Customs duty or excise tax is levied. If the final product is imported into the United States, U.S. Customs duty and excise taxes are due only at the time of transfer from the foreign-trade zone and formal entry into the U.S. on the product itself or its imported parts, whichever is lower.

Who governs foreign-trade zones?

The United States Foreign-Trade Zones Board consists of three (3) members: The U.S. Secretary of Commerce who acts as Chairman, the Secretary of the Treasury and the Secretary of the Army. (The Secretary of the Army is a member because framers of the Act envisioned these facilities constructed by the U.S. Army Corps of Engineers at deepwater ports.) A Committee of Alternates is designated by the three Secretaries. An Executive Secretary manages the Board.

The U.S. Customs Service provides the daily governmental enforcement for zone operations.

U.S. benefits

Minimal expenditure of U.S. tax dollars.

The establishment and maintenance of FTZs require minimal federal expenditure of tax dollars. The salaries of Customs officials in zones are paid by zone users. The zones are a self-sustaining tool of international commerce offering great benefits to U.S. industry and the U.S. balance of trade.

Jobs in the U.S. rather than overseas.

As labor costs soar abroad, the U.S. becomes increasingly attractive to domestic and foreign manufacturers. Favorable tariff and Customs regulation treatment may cause an investment decision in favor of the U.S. rather than overseas. FTZs now directly employ over 14,000 people. Because of the complexity of international commerce, economists indicate a multiple of 2.9 is reasonable; therefore, FTZs can be said to have generated an estimated 40,000 U.S. jobs.

New capital investment in U.S.

U.S. corporations, as well as firms from Japan, United Kingdom, France, West Germany, Italy, Czechoslovakia, Argentina, Finland, Thailand, Holland, Mexico, Brazil, Panama, Taiwan, Pakistan, People's Republic of China, U.S.S.R., Spain, Denmark, Philippines and elsewhere have invested in U.S. operations because of economic advantages the zones can offer.

Substitution of U.S. Source Parts for Imported Parts.

Because of economics and advantages built into the law, a domestic or foreign company operating in a U.S. zone is likely to substitute U.S. for foreign components where possible.

Export Stimulation.

With no Customs duties levied on re-exported items, domestic and foreign companies find U.S. zones attractive assembling and distributing centers for re-export. Overall 40% of merchandise flowing through zones is exported with some zones exporting 75% to 95% of all merchandise.

Increase in International Trade.

In the past decade FTZs have grown in dollar volume from \$213 million to \$5.5 billion (est.).

Historic perspectives

In 1934 the U.S. Congress passed the Foreign-Trade Zones Act "to expedite and encourage foreign commerce". A rare piece of New Deal legislation in that it cost taxpayers virtually nothing, the Act was designed to stimulate international trade and thereby create jobs in the U.S. At that time zones were envisioned as storage, manipulation and transshipment centers. In 1950 an amendment was passed authorizing manufacturing and exhibition.

The 1970s saw a major expansion in the number of zones. In all the years preceding 1970 twelve (12) zones were approved, while over six (6) times that number have been approved since.

The number of businesses in U.S. FTZs has multiplied twenty-five (25) times in the past decade.

On April 21, 1980 a significant Regulation amendment of the U.S. Customs Service excluded U.S.-sourced processing costs in zones from U.S. Customs duty, opening the door to major new operations.

FTZ facts

- In the decade from 1971-1981, the dollar volume of goods processed through U.S. zones mushroomed from 213 million dollars to an estimated 5.5 billion dollars.

Fiscal Year:	Dollar Volume
1971	213 million
1972	245 million
1973	305 million
1974	405 million
1975	643 million
1976	975 million
1977	1,261 billion
1978	1.55 billion
1979	2.97 billion
1980	5 billion (est.)
1981	5.5 billion (est.)

- Over six times as many zones have been approved since Jan. 1, 1970 as in all the preceding years.
- In fiscal year 1981, an estimated 1,400 companies used U.S. zones, employing more than 14,000 people.
- Zones have generated new capital investments in the U.S. in excess of \$2.2 billion—investments which otherwise might have been made in other countries.
- About forty percent of the goods passing through zones is exported. Some zones, like New York, San Francisco and Miami, handle in excess of seventy-five percent (75%) re-export trade.
- Zones create subsidiary economic benefits for their communities, both in attracting new businesses to build near the zones, and in spin-off jobs in supporting industries such as banking, trucking, customs brokerage, and freight forwarding.
- Forty of the approved sixty zones were fully operational at the end of fiscal year 1981. Most of the non-operational zones are newly approved.

Zone highlights

- Canadian company assembling electronic teaching

machines using cabinets from Italy, electronics from Taiwan, Korea, and Japan, labor from U.S., for export to Colombia and Peru.

- U.S. skate company assembling shoes from Taiwan and Korea with domestic skate parts and labor.
- European-based medical supply company manufacturing kidney dialysis machines and sterile tubing, using raw material from West Germany, U.S. labor, and exporting 30% to Scandinavia.
- Swiss cosmetics company importing in bulk and repackaging for retailing, using U.S. labor, packaging and labels.
- Major U.S., German, and Japanese firms assembling autos and trucks combining domestic and foreign components.
- Importer displaying, inspecting, and storing Russian, and Indian rugs.
- Major U.S. vehicle company approved to manufacture agricultural equipment.
- Japanese firm manufacturing motorcycles, jet skis, and 3-wheel all-terrain vehicles for import as well as export to Canada, Latin America, and Europe.
- Major electronics firm warehousing, testing, repairing and scrapping components.
- European firm repackaging merchandise for export to Canada.
- Dutch-based textile firm assembling imported textile yarn stands with U.S. labor.
- Hundreds of domestic and foreign firms located in an international trade mart.
- Diverse companies unpacking, inspecting, testing, repacking, storing, and destroying such items as lacquerware, knives, jewelry, musical instruments, toys, carpet sweepers, perfume, video recorders, computers, flight controls, needlepoint, liquor, optical frames, and jade carvings.
- Major U.S. firm producing a wide variety of pharmaceutical goods.
- American oil refinery producing gasoline, jet fuel, synthetic natural gas and carbon dioxide.
- Foreign firms adding or subtracting components to meet U.S. standards.
- European firm assembling Holland-mode racing wheels with U.S. labor, re-exporting to Mexico.
- Large U.S. firm inspecting, repairing, and repackaging cameras with U.S. film and binoculars for export and import.
- U.S. women's clothing manufacturer cutting and sewing imported fabric for import and export.
- Major Japanese firm to manufacture trucks with domestic and foreign components completely replacing U.S. production with previous imports.

Asparagus now moving by sea to Asia: APL

Special handling methods for delicate asparagus are changing the way this highly perishable product is shipped to Asia. The shift, from air transport to ocean carriage, will mean greater availability of asparagus in Japan, says O.L. (Larry) Creech, director of the Special Commodities department at Oakland-based American President Lines. Other Asian markets are also being considered.

The intermodal transportation firm, which carries perishable commodities throughout the Pacific Basin and as far as the Arabian Gulf, has determined that consistently excellent out-turn from its ocean containers can be assured through use of special procedures. These include hydro-cooling the asparagus to carrying temperature before loading; use of special moist pads in the packages to ensure constant moisture during the 12-day voyage; pre-cooling the container and use of modified atmosphere in the container.

Creech said the company's fast transit time to Japan from San Pedro contributes to the successful out-turn. He also noted that APL has a greatly expanded capacity for produce and other refrigerated cargo as a result of the introduction of three new vessels, the Presidents Lincoln, Washington and Monroe, which are the largest container-ships to be built in the U.S.

The company's Special Commodities Services department includes agricultural, technical, and marketing specialists. Creech said it is their practice to "team up" with the truckers, the shipper and other involved parties to produce the kind of success recorded to date in transporting asparagus in refrigerated ocean containers.

Duluth Foreign-Trade Zone activated

The first shipments have been moved into Duluth's Foreign-Trade Zone located at the Clure Public Marine Terminal on the waterfront.

According to Jerome Marks, manager of Duluth's Foreign-Trade Zone Number 51, the first cargoes of a new metallic roofing material have been moved into the zone for distribution throughout the United States and Canada by Kenneth Pauna Designing and Building Inc., of Cloquet, Minn.

Duluth's Foreign-Trade Zone becomes the 51st Zone to be activated in the United States out of 76 which are licensed. Duluth has the only Zone in Minnesota. It includes one acre of land and an 11,000 sq. foot building at the terminal complex, plus a 26-acre sub-zone located adjacent to Duluth International Airport in the Airpark Industrial Park.

The roofing material is a new design manufactured in Finland and features special coatings that make it durable. The corrugated material carries a 25-year guarantee. Marks says material in the zone will be unpacked from containers and cut to fit specific job orders. U.S. Customs duties will not be collected until the product is shipped to the customer resulting in savings to the importer. On shipments to Canada, no customs is ever paid.

Recession, drilling decline cause decrease in tonnage; general cargo 3rd-highest: Port of Houston

The national and world-wide recessions, together with an international slow-down in exploration for and production of fossil fuels, caused a reduction in cargo shipments through the Port of Houston during 1982.

Total tonnage fell from 98,902,014 in 1981 to 77,346,275 in 1982, a decline of 22 percent, according to preliminary statistics released by the Port of Houston Authority.

Although general cargo was down last year compared to 1981 and 1980, the 9,636,702 tons shipped through port facilities in 1982 was the third highest since the Port of Houston opened in 1914. The Authority's revenue tonnage, most of which is general cargo, was down 18 percent compared to the port's overall 22 percent decrease.

The slow-down in energy exploration and production accounted for decreases in such general cargo items as drilling and gathering pipe and oil field tools.

Pipe was the port's largest category of steel imports in 1981 when steel overall was the leading import (by value) to Houston.

Imports of steel products in other forms, such as plates and sheets used in the fabrication of drilling rigs, probably also will show declines when individual commodity figures for 1982 are available. Although total steel shipments fell from the 1981 record of 5,896,412 tons to 3,765,771 tons, last year's tally will probably keep the Port of Houston the nation's leading steel handler.

Of the 9.6 million tons in general cargo, 8.4 million tons were handled at Port Authority facilities.

The largest tonnage decrease was the shipment of bulk cargoes, off 17.7 million tons from 85,484,357 tons in 1981 to 67,709,573 tons last year. This decline included a 12½-million-ton drop in coastwise shipments of bulk liquid cargoes and a 5.2-million-ton decrease in grain exports. Most bulk cargoes in the Port of Houston are handled at private terminals serving channel industries.

The coastwise bulk liquid cargoes which declined so severely are primarily petrochemicals and refinery products which move between the refineries and plants along the Gulf Intracoastal Waterway between the Houston and Mississippi River areas. Slumps in such domestic industries as homebuilding and auto manufacturing, which are large consumers of such petrochemical end-products as plastics, paints, and insulating materials, are largely responsible for this 12½-million-ton drop.

The grain market has been soft world-wide since 1981. Last year, the port's five grain elevators exported 7,392,455 tons compared to 12,575,644 tons in 1981.

Other 1982 statistics released by the Authority show automobile imports held up well with 228,742 units landed last year compared to 237,010 in 1981. Container movements in twenty-foot-equivalent units (TEU) totaled 302,699, a five percent drop from 318,661 TEU in 1981.

The number of ships calling at the port was 5,471 compared to 5,592 in 1981.

During the year the Port Authority took several steps to stimulate cargo flow. Some tariffs were frozen while increases in others were delayed, saving money for shippers and ship owners. The Authority has asked the federal Foreign Trade Zone Board to act promptly on the pending Houston Foreign Trade Zone application which, if approved, will stimulate waterborne commerce. The Authority has been preparing for economic recovery by constructing new facilities and modernizing existing ones. (*Port of Houston*)

286th PACECO PORTAINER* crane up, running: Port of Los Angeles



One of two of PACECO's newest MACH PORTAINER cranes was recently put into full operation at the Port of Los Angeles, California, USA, representing one of nearly 1000 PORTAINER, TRANSTAINER* and SHIP-STAINER* cranes manufactured by PACECO and its licensees since 1958.

The 40 long ton capacity crane is a dockside ship to shore container handling gantry crane of the latest design featuring a 115' dual box girder boom, a lifting speed of 150 fpm and a trolley speed of 500 fpm.

One of the most unique features of the crane is its longlife coating. The extended coating life is due to PACECO's new environmentally controlled blast and coating facility which allows blasting, coating and curing under exacting conditions.

Port of New Orleans extends 'free time' to 30 days

The Board of Commissioners of the Port of New Orleans has increased "free time" shippers are allowed for keeping goods in the Port's transit sheds. The move was made to allow shippers having difficulty meeting the "free time" allowance additional days before incurring demurrage charges. The new allowance became effective on Monday, January 17, 1983.

The previous "free time" allowance was for 15 days not including Saturdays, Sundays, and holidays. The revised allowance is for 30 calendar days, including Saturdays, Sundays, and holidays.

Adding "free time" is feasible at this time, according to Edward S. Reed, executive port director/general manager of the Port, because the current depressed state of the maritime industry has left some New Orleans wharves without cargo. "When the economy recovers and the demand for wharf space increases, the Board may have to return to the old free time allowance," he added. Shippers will receive 30-days notice of any future decrease in free time.

In a companion move to attract more cargo to New Orleans, the Board agreed to cut the wharfage charge for shipments of export lead ingots from \$1.30 to 90 cents per ton for a 90-day trial period. At the end of the 90 days the effect of this reduction will determine whether the reduction continues or is returned to the higher charge.

Number one port in value of oceanborne foreign trade cargoes in 1982: Port of NY-NJ

The Port of New York-New Jersey handled a total of 43 million long tons of oceanborne cargoes, both general and bulk, valued at \$42.2 billion. Of this total, \$35.1 billion represented the value of general cargoes, and the remaining \$7.1 billion, bulk cargoes.

"The Port of New York-New Jersey again demonstrated its leadership among the nation's ports in handling high value cargoes last year," Port Authority Chairman Sagner said. "The second ranking customs district, Houston—which includes the ports of Houston, Galveston and Corpus Christi—handled cargoes valued at \$37.2 billion, or \$5 billion less than the New York-New Jersey Port's dollar values."

In handling the important oceanborne general cargoes during 1982, the Port of New York-New Jersey increased its share of such cargo handled at North Atlantic ports for the fourth consecutive year. The 10.4 million long tons of oceanborne general cargo handled at the New York-New Jersey Port in 1982 represented 47.3 percent of the 22 million long tons of such cargo handled at all North Atlantic ports.

The North Atlantic range of ports including New York, Boston, Philadelphia and Baltimore, in addition to Bridgeport and Providence, extends from Portland, Maine to Norfolk, Virginia.

"The improved competitive position of the Port of New York-New Jersey was achieved in the face of deep recessionary conditions for the United States and its major European trading partners last year," Mr. Sagner said.

"Despite these limiting factors," Mr. Sagner said, "the Port increased its competitive share of oceanborne general cargo trade among North Atlantic ports by 1.5 percentage points from the 45.8 percent share held in 1981."

General Cargo Imports

The Port's oceanborne general cargo imports rose 1.0 percent to 7.3 million long tons in 1982, Mr. Sagner reported. The gain was attributed in part to the positive effect of the strength of the dollar on the competitiveness of imports. This rate of growth was moderated by the U.S. recession. Two important commodity groups—food products, and iron and steel products—showed above average strength.

The bi-state Port did exceptionally well in food product imports. Bananas, the top ranking general cargo import commodity, climbed 16.7 percent to 792,975 tons. Alcoholic beverages, in second place, rose 7.7 percent to 759,168 tons. Gains were also posted by coffee, vegetables and vegetable preparations, and dairy products.

Other import commodities experiencing gains included road motor vehicles, plastic and rubber materials, and clothing. Steel plates and sheets, not known for heavy movements in the Port, experienced the greatest relative gain among the leading commodities, up 110.7 percent to 89,122 tons.

Significantly, New York-New Jersey's 49.2 percent share of North Atlantic oceanborne general cargo imports was close to a ten-year high, exceeded only by the 49.3 percent share in 1976.

General Cargo Exports

Oceanborne general cargo exports, on the other hand, fell at the Port of New York-New Jersey by 14.9 percent to 3.1 million long tons in 1982. The key factors in the decline of export trade were depressed economic conditions in major European countries, a weakening demand by key Far East trading partners, and debt problems facing many developing countries. Finally, the rise of the dollar continued to curtail the New York-New Jersey Port's outbound cargoes.

Contributing to the decline in export trade were the continued high interest rates last year, which coupled with depressed demand encouraged foreign companies to reduce their inventory level.

The across-the-board decline in the Port's top general cargo export commodities clearly reflects the economic factors affecting export trade. Such commodities included plastic materials, road motor vehicles, paper and paperboard, and organic products. Waste paper, New York-New Jersey's top ranking general cargo commodity, however, climbed to 253,029 tons, a rise of 27.6 percent.

"With the modest rise in imports helping to offset the decline in exports, the Port of New York-New Jersey had a combined export/import general cargo volume of 10.4 million long tons last year, down 4.2 percent from 1981," Mr. Sagner reported. "The bi-state Port remains basically strong," he said, "as its combined export/import percentage decline was considerably less than that of the North Atlantic ports, down 7.2 percent, and for all United States ports, down 7.8 percent."

Bulk Cargoes

The Port of New York-New Jersey's oceanborne bulk cargo trade, principally petroleum, fell 11.1 percent last year to 32.6 million long tons.

Among the Port's non-petroleum bulk cargo commodities, iron and steel scrap exports enjoyed a 31.5 percent increase from depressed 1981 levels to 1,121,937 tons in 1982. In contrast, outbound movements of anthracite coal fell from the unusually high levels of 1981 by 71.2 percent to 293,541 tons.

Non-petroleum bulk imports were mixed. Salt was up 148.1 percent to 279,005 tons, while gypsum increased 9.9 percent to 937,429 tons. At the same time, sugar imports fell 39.5 percent to 644,186 tons. Imports of clay and refracted materials declined 21.7 percent to 229,153 tons.

Petroleum

Petroleum imports, which account for 84.5 percent of the Port's bulk cargo, fell 10.1 percent in 1982 to 27.6 million tons. Since United States petroleum imports fell 19.6 percent in the same period, the New York-New Jersey share of U.S. oceanborne petroleum imports actually rose last year, from 10.8 percent in 1981 to 12.1 percent in 1982.

The bi-state Port's crude oil imports, down 39.5 percent totaled 8.2 million tons last year. However, some refined petroleum products showed gains. Residual fuel oils, the leading refined petroleum import, rose 12.3 percent to 15.3 million tons. Imports of gasoline, naphtha and kerosene, including jet fuel, rose during the year, while importation of distillate fuel oils declined.

NY & NJ Port maintains its status as leading car importer

Even though more and more foreign automobile manufacturers are now having substantial numbers of vehicles made in U.S. plants, the volume of import cars moving via the New York-New Jersey Port continues to climb, reinforcing the ports status as the leading U.S. North Atlantic port for handling of import vehicles. Figures recently gathered for the first six months of 1982 show that the bi-state port handled 170,040 import automobiles, an increase of 3,383 units over the same comparable period in 1981. Baltimore and Providence, which ranked second and third for import cars during this same six-month span, handled 113,106 and 33,959 units respectively.

Of the 456,729 cars imported via the North Atlantic range of ports during this period, Japan's big three car makers—Datsun, Honda and Toyota—accounted for 60 percent of the total. On a nation-wide basis, Toyota was the leading car importer, sending 382,368 units to these shores. The North Atlantic ports handled 86,094 Toyotas, or 23 percent of the total. However, the Port of New York and New Jersey imported 46 percent of all Toyotas entering the U.S.A. by North Atlantic range of ports. The bi-state port was also a leader with Honda, handling 69 percent of all Hondas shipped via the North Atlantic ports.

The New York-New Jersey Port is, and has been, an ideal port of entry for automobiles. Its fine rail and over-the-road connections link the port with the entire nation as well as Canada. And since the crux of any long-term successful import car sales program is service and parts replacement, this excellent transportation network to and from the bi-state port is indispensable to auto part importers.

Also highly important to any automobile importer is the New York-New Jersey Metropolitan Region's status as the world's largest and wealthiest consumer market. This "Metromarket," as it is often called, encompasses a 3,900-square-mile area that includes the five boroughs of New York City, the four suburban New York counties of Nassau, Rockland, Suffolk and Westchester, and eight northern New Jersey counties. Of the New Jersey counties, Bergen County, alone accommodates eleven foreign car firms which own or lease buildings for administrative, sales and/or distribution purposes.

With the volume of import cars handled here growing steadily, the sight of the big auto carrying vessels entering the New York-New Jersey Port has become quite routine. Most of these vessels are very distinct in appearance. However, many import cars also arrive on conventional roll-on, roll-off ships such as those of Atlantic Container Line. (*VIA Port of NY-NJ*)

Nigerian Ports enter into sister ports relationship with Oakland

The Nigerian Ports Authority and the Port of Oakland have entered into a Sister Ports relationship at a ceremony in Oakland with the object of "stimulating trade and promoting better understanding" between the Port of Oakland and the ports of Nigeria.

A three-member delegation from the Nigerian Ports Authority, led by Tayo Akpata, Chairman of the Board,

signed the Sister Ports agreement at the Port of Oakland.

Herbert Eng, President of the Oakland Board of Port Commissioners, headed the Port of Oakland delegation participating at the ceremony.

The agreement noted that its objective included the establishment of friendly relations, mutual cooperation, which would include opportunities for training programs, and the furtherance of trade between the Port of Oakland and the ports of Nigeria.

The agreement recognized the contributions to world trade made by Oakland and Nigeria, the substantial ocean commerce that exists at the ports, and the potential for increasing the trade between the ports.

It also recognized that the seaports of Nigeria represent a major port area on the South Atlantic Ocean.

The Nigerian Ports Authority operates six ports, with Lagos, as the major port, handling 97 percent of Nigeria's container traffic and 75 percent of its total seaborne trade.

Oakland is the largest container port and the principal export port on the U.S. West Coast.



Shown at ceremony April 6 at the Port of Oakland which consummated the Oakland-Lagos Sister Port pact are, left to right: Walter A. Abernathy, Executive Director, Port of Oakland; Tayo Akpata, Chairman of the Board, Nigerian Ports Authority; Douglas J. Higgins, 1st Vice President, Oakland Board of Port Commissioners; Herbert Eng, President, Oakland Board of Port Commissioners; Yinko Oyeyipo, Assistant to the General Manager, Port of Lagos; and D.P. Opara, Acting General Manager, Port of Lagos.

Malaysian International Shipping Corporation to start trans-Pacific service: Port of Oakland

Malaysian International Shipping Corporation (MISC), headquartered in Kuala Lumpur, will inaugurate westbound sailings to the Far East with the departure of the container-ship Bunga Melor from the Port of Oakland on May 10.

The 900 TEU vessel will be joined on the route with her sister ship, the Bunga Raya, to provide service at 14 day frequency between Oakland and Long Beach direct to Kobe, Nagoya and Tokyo and by MISC relay service from those points to Busan, Hong Kong, Keelung, Kaohsiung, Singapore, Port Kelang, Penang, Bangkok and East Malaysia.

MISC will also serve Gulf, Midwest and East Coast ports and points by overland rail connection via Long Beach and Oakland.

The line's Oakland calls will be made at the Seventh Street Public Container Terminal, which is operated by Marine Terminal Corporation, under a five-year term agreement recently concluded with the Port of Oakland.

MISC operates a modern, diversified fleet which at the end of 1982 consisted of 44 ships with a combined deadweight of 1.4 million tons.

Vessels now in service include containerships, unitized and general cargo coastwise vessels, dry bulk carriers, wood chip carriers, parcel tankers and liquified natural gas carriers.

Portland lands six new steamship lines

Like messengers from every corner of the globe heralding the coming of better times, six new steamship services have begun calling the Port of Portland in the past year.

The latest marketing success is the announcement of new direct-calling independent service to the Far East by Westwood Shipping Co.

This twice monthly container service, which began in March, supplements a well-balanced group of steamship lines that have begun regular calls or increased schedules to the Port in the past 12 months.

The list includes Mitsui O.S.K. Lines' Far East Service to Korea, Taiwan and Hong Kong; d'Amico Lines to the Mediterranean countries; South American service by the Argentine national carrier ELMA Lines; Pacific Australia Direct (PAD) Line to Australia, and Far East service by Asia Merchant Marine Co., Ltd.

Says Port of Portland Marine Department Director Capt. Peter Norwood, "Attracting these services to the Columbia River has taken the cooperation of the region's entire maritime industry—the shippers, steamship operators, labor, freight forwarders, railroads, barge lines, truckers. It is a credit to the power of the industry all pulling together that we've done so well during these hard times. The industry has the same commitment to maintaining a high level of quality service for those lines now that they are here, as well as our longtime customers."

This is a welcomed reversal of a trend that has plagued Portland and the Pacific Northwest the past three years. During that period, services calling the Northwest were—for the most part—cutting back rather than expanding. Ports of call were being reduced. Lines were going out of business. New rotations that meant loss of service to the entire West Coast were being tested as steamship companies scrambled to cope with freight-rate price wars and a depressed world economy.

As the steamship industry emerges from this turbulent period, Portland seems to be the prime beneficiary in the Northwest. No other Northwest port has gained as much new service in the past year.

Several factors are contributing to Portland's successful steamship marketing effort.

The steamship companies are discovering that the amount of available cargo in the Columbia/Snake region has continued to grow during this period, offering a dependable export cargo base for new lines.

The other benefit Portland has to offer is a multitude of inland transportation advantages that make it a natural distribution point for import cargoes, as well. For the first

time, importers are impacted by the new rules of deregulation. The resulting rate packages are offering incentives for many shippers to break with their traditional routings and center their operations in Portland. This unique import/export balance has resulted in two new lines choosing Portland as their only Northwest port of call.

For local shippers, the geographic diversity of the new services is the key feature of this series of announcements. Almost every major world market is now being served from Portland.

The additional ships that will be calling from Portland to South America and the Mediterranean countries are especially important to local shippers because those services have been the hardest hit by the economy. (*Portside*)

Optimistic Port analysis: South Carolina Ports

The usual overflow audience was present February 15 in Charleston to hear the 11th annual "State of the Port" report. As in the past, the message was presented before Propeller Club members and guests by State Ports Authority Executive Director W. Don Welch.

Mr. Welch's remarks were well-received since they addressed shipping industry economic problems in an optimistic light. Among the encouraging factors noted is Charleston's strong position in moving containerized cargoes.

Despite the deep worldwide recession, Charleston had its second-best calendar year ever in container tonnage. The 1982 total of 1.87 million tons exceeded 1981 by 111,000 and was just 20,000 tons below the 1979 record year.

This is the text of Mr. Welch's message:

"State of the Port"

By Mr. W. Don Welch
Executive Director, South Carolina
State Ports Authority

You know, for 10 years now—to use a currently popular phrase—all of us at this port have been on a roll. Tonnage moving across our docks more than doubled during that period. With the associated activity, this has been an exciting place to work.

In the year since my last address, though, a lot has changed. We now find ourselves in the grip of a worldwide recession that has severely impacted cargo movements through the Port of Charleston.

It is not my intent to discuss our current economic situation, however. You all are much too familiar with it from personal experience or from the broad coverage given it by the media.

Instead, I would prefer to cut through the gloom and attempt to identify and isolate a few factors or trends that might be indicative of what the future holds for us. The Port of Charleston is, after all, like the sailing ship, becalmed at sea. Sooner or later, the economy, like the winds, will pick up. In which direction will we head?

First, let's analyze our cargo profile. Historically, Charleston handled cargo in conventional style. As recently as 1966, all our non-bulk cargo moved through on pallets or in individual lots. Then, a revolution in transportation ap-

peared on the scene here. Ever since, container tonnage has steadily risen, eventually surpassing breakbulk totals in 1977.

Of course, the State Ports Authority has adapted to this new means of moving cargo. The Port of Charleston, in fact, has been a leader in containerization—to the point that we now are the ninth largest container port in the United States and the largest in the South Atlantic range—from Norfolk around to Houston.

Last year, 61 percent of our general cargo moved in containers. This year, the figure will probably reach 67 percent. This ratio is less the result of the well-known decrease in breakbulk totals than it is of shippers' tendencies to stuff more and more cargo into containers.

The overall efficiencies offered by containers in terms of speed and safety have become especially attractive in this recessionary period. For some time now, we have had a saying around the Authority to the effect that, "If it can be put into a container, it will be." You might say we have regarded that as a truism and, today, we see it coming to pass in more dramatic fashion than we ever imagined.

The transition to a modern container port has not been an easy one. It has been costly in both man-hours and dollars. We have suffered through environmental constraints, federal bureaucracy, a declining bond market, and the painful elimination of jobs, among other things.

But we now have superior facilities without which we could not have accepted this accelerated move to containers. The Port of Charleston now has six berths for the large new container vessels; nine container cranes; hundreds of acres of required back-up storage space, and related specialized, container-handling equipment.

In calendar year 1982, 1.87 million container tons moved through Charleston. That total is second only to the record 1.89 million tons accumulated in 1979. There can be little doubt that the totals would be even higher but for the demise of Seatrain in late 1980. Nevertheless, we can say with some certainty that a continuing shift to containerization is in the cards for Charleston and that we are ready for it.

Please don't misunderstand me. We will continue to handle breakbulk cargo and handle it well. It will not disappear. We are of the opinion, though, that our annual breakbulk totals peaked in 1981 and that we will probably not see that level of activity again.

Another factor important to our future is the ratio of import/export trade. You all know that as recently as 1973, the majority of Charleston's cargo was imported. You also know that during the rapid growth of the last 10 years, Charleston has become an export port, with 69 percent of last year's cargo moving in the export trades.

The heavy concentration of export cargoes has hurt us during this recessionary period, particularly with the recent strength of the American dollar. We have instituted a trade development effort to obtain more of a balance in our import/export ratio. This should help us in the short run, while American goods are not selling overseas. Also, down the road, it will give us greater stability in the face of unpredictable fluctuations in the value of the dollar.

The point I really want to make, though, is that Charleston has the reputation among shippers of being a successful export port. What this means is that when the world's economy improves and American goods are once more

sought-after in the marketplace, the prospects are good that Charleston will be depended upon once again as a key outlet for satisfying that demand. So, the prediction here is that when the recovery begins, the Port of Charleston will benefit from it in a big way.

Though not trends, two projects undertaken by the Authority will certainly facilitate this port's return to normalcy. I am referring to our new central, computerized cargo system, and the planned Piedmont container terminal.

The computer system is a remarkable innovation in port operations. I could not be prouder of the members of my staff who have put the program together. And yet, as good a job as they have done, I well know it could not be a success without the reception many of you as members of the maritime community, have given it.

With Customs, the Department of Agriculture, forwarders, brokers, and steamship agents now tied into our central computer, we are recognizing measurable savings in the time it takes to process import cargo. As we move on to develop a similar program for export cargo and refine existing practices, an important competitive advantage is emerging for the Port of Charleston. The system is a valuable sales tool and will attract cargo in the future. It is an accomplishment in which we can all share a great deal of pride.

In April of last year, the Authority purchased 110 acres of land at Greer, near the Greenville-Spartanburg Airport and I-85. We are well along with plans for a container terminal there, with rail and interstate highway connections, that will make a direct contribution to the efficiency of moving containers to and from the Port of Charleston. The basic terminal will consist of a paved storage yard, covered areas for temporary storage and office space.

Our plans are to break ground in March, and construction of Phase I should take about six months. As we move toward economic recovery, this facility will be extremely valuable to us for the simple reason that it will help shippers save money.

I might add that our confidence in the value of this inland terminal—the first of its kind anywhere—received quite a boost when we learned the other day that the North Carolina State Ports Authority is seriously considering one of its own. Competition is the spice of life, isn't it?

There is yet another matter that has a direct bearing on our future success as a port—a situation outside our immediate area and, some would say, outside of our control. I have just returned from Washington, D.C., and discussions regarding the still-present spectre of port user fees.

Both Congress and the administration continue to press for federal relief from heavy annual harbor dredging costs. The President, in fact, considers the issue important enough that he mentioned it in his State of the Union Address. Those of us in the port industry were extremely gratified to hear such recognition of the value of ports to the nation's international trade posture.

We found it somewhat amusing, however, that the President called his dredging cost recovery program a "port modernization bill". The United States has the most modern port system in the world; its shoreside facilities are unsurpassed anywhere. So, the problem is not with our ports. The problem is with our navigation channels and the federal government's apparent unwillingness to continue dredging them.

We expect the administration to introduce a cost recovery bill in Congress before long. Its draft is still being massaged by the various bureaucracies but, so far, it looks to be unacceptable to the small ports group to which we belong.

On our behalf, Senator Strom Thurmond has been working with several other senators to develop a bill more to our liking. Great progress is being made toward developing a bill all parties can live with. In the spirit of compromise, we are willing to give a little, and we hope others will also.

I mentioned earlier that the Port of Charleston was like the becalmed sailing ship. My own opinion is that when the trade winds begin to rise, Charleston is going to move along smartly, reaping the benefits of a tradition of service, careful planning and hard work. We have had our share of problems associated with this recession, but we are well-positioned for a stable, long-term recovery. (*South Carolina PORT NEWS*)

New home for Panasonic: Port of Tacoma

Panasonic U.S.A. recently celebrated the move into a new modern CFS facility just completed at the Port of Tacoma. Panasonic has leased from the Port of Tacoma 97,200 sq. ft. of modern warehouse space which is being used for receiving imports, devanning containers, sorting by city destinations the various categories of goods, and loading out into truck and rail trailers for fast movement to the U.S.A. marketplace. The CFS is manned by I.L.W.U. Local 23 under the supervision of Tacoma Stevedore Company and managed under contract from Panasonic by Air Trans.

This new, more spacious facility has allowed implementation of efficient receiving and loading operations and allows Panasonic to be more responsive to market needs for their products.

Port of Antwerp in 1982

On the occasion of the beginning of a new year many a newspaper publishes a survey of the principal events which in some way or another have made the news during the previous twelve months.

In the 1982 surveys the name of Antwerp has featured repeatedly, mostly in the context of "positive" economic events, a fact that in itself deserves a mention in these present times when annual reviews (both national and international) are more gloomy than bright.

1982 has seen a continuation of the 1981 trend: a satisfactory year for the port thanks to a further rise in cargo traffic and a considerable expansion of the infrastructure and the superstructure.

This favourable evolution reveals the interplay of causes and effects: a skilled labour force and a rational organization of work encourage the introduction of modern installations and this leads to higher productivity and better local conditions, which then attract more vessels and cargo. This traffic in turn provides a stimulus and an opportunity to make large-scale investments in men and technology.

Behind all this is an unshakeable confidence in the future of the port. The following paragraphs will illustrate and confirm this.

Shipping: increase in size of vessels continues

Once again in 1982 all records were broken with regard to the total and average tonnage of vessels calling at the port.

The number of seagoing vessels was 17,097 (as against 16,802 in 1981) with a total tonnage of 112,683,219 gross register tons (as opposed to 104 million tons in 1981), or an average of almost 6,600 tons per vessel.

Thus the size of vessels calling at Antwerp is continuing to increase. The growth (+36%) in the number of very large vessels (ships with a cargo carrying capacity of 100,000 t or more) is especially striking.

In 1982 134 such vessels called at the port—on average about 3 per week—which illustrates the positive results of the improvements made to the maritime approaches to the port.

Depending upon the tide, draughts varying from 43' (13.10 m) to 48'7" (14.80 m) are already permitted on the Scheldt. The main result of this is that vessels of up to 34' (the vast majority—96%—of shipping at Antwerp) are no longer dependent upon the state of the tides and can sail up or down river at any time. In the case of larger vessels still dependent on the tides the period when passage up or down river may be commenced has been considerably lengthened so that the risk of losing time has been decreased.

This improved accessibility of the port has also meant a new record draught—the Liberian "Mermaid Jupiter" with a draught of 48'5" called at the port in June.

Cargo traffic: historic record

1982 was an especially successful year for cargo traffic in the port of Antwerp.

In spite of the continuing world-wide shipping recession as a result of which most large North Sea ports are experiencing hard times, the port of Antwerp registered an overall increase of 5.4% with regard to 1981.

This meant a total traffic of 84.1 million tons, a new historic record for Antwerp.

In addition, for the first time in the history of the port more than 8 million tons of cargo were handled in one month: April 1982 was a record month with 8.5 million tons of incoming and outgoing maritime cargo.

The overall increase in cargo traffic is largely due to the 10% rise in bulk cargo traffic which amounted to 53.5 million tons. In the case of oil traffic this percentage increase was as high as 25%. General cargo traffic was maintained at the high level of 30.6 million tons.

In the case of container traffic an almost 8% increase was noted, while roll-on/roll-off traffic rose by 3.2%.

Provisional figures for part of the year reveal the following trends in the most important sectors of bulk cargo and general cargo traffic:

- in the case of dry bulk cargo the greatest rise has been recorded in coal traffic;
- fertilizer traffic and various kinds of bulk cargo traffic (principally chemicals, sulphur and china clay) are continuing to increase;
- ore traffic and grain traffic are being maintained at about the same level as in 1981;
- with regard to general cargo the less favourable results of the iron and steel traffic and the fertilizer traffic were compensated for by an increase in the traffic of fruit, grain, flour and sugar.

Infrastructure and superstructure

1982 was an important year for the port of Antwerp as far as new infrastructure and superstructure are concerned.

The expansion of the dock complex on the right bank of the river was completed with the official inauguration of the Delwaide Dock. This new dock means a considerable increase in the port's cargo-handling capacity: not only has the area of the port been increased by 350 hectares and 4,700 m of quay, but the new, modern cargo-handling installations and the large amount of space available round the dock promise very great productivity in the handling of general and bulk cargo. The terminals have a working area of 20 hectares per 250 metre berth, which makes it possible to concentrate large quantities of cargo at each berth.

The site depth varying between 500 and 750 m at the terminals means that the installations at the Delwaide Dock meet the growing requirements of space for the short or long term storage of goods.

Beside the deepwater quays, which have a water depth of 16.75 m, 5 berths for ro/ro vessels have been built.

At the same time a specialized ro/ro terminal has come into service in the immediate vicinity of the Delwaide Dock for the direct transshipment of cargo from barge into seagoing vessel or vice versa. The terminal has been specially designed to handle very heavy unit loads of up to c. 2000 tons by the ro/ro method.

The five terminal operators who have been granted concessions round the Delwaide Dock have taken advantage of the infrastructure available to erect modern, highly technical cargo-handling installations. They have together invested over 5.5 billion Belgian francs in the first phase. The new equipment is characterized by a high degree of automation, the use of advanced technology and the introduction of computer techniques.

With regard to the equipment itself, the first phase has included the introduction of two gantry cranes for bulk cargoes (50 t. capacity), 4 mobile cranes (3 × 40 t and 1 × 25 t), two cranes on tracks (35 t), 7 container cranes (capacities ranging from 40 to 70 t), 8 multi-purpose quay cranes (capacities ranging from 25 to 35 t), transtainers, fork-lift trucks and straddle carriers. Very sophisticated loading and unloading installations and impressive conveyor belts have been erected to handle bulk cargoes.

The total covered storage area of the terminals amounts to 51,250 m² and the open storage area in the first phase is over 100 hectares. The Delwaide Dock is generally expected to stimulate port traffic.

This is one of the reasons—besides the increase in the size of seagoing vessels—why it has become urgent to continue work on the construction of a new sea-lock (the Berendrecht Lock). Preparatory work on the construction of the “largest sea-lock in the world” was begun in 1981. The first phase of actual construction began in autumn 1982. For this the Belgian Government has made funds of 1,355 billion francs available.

Finally the efforts must be mentioned which both the private and public sector are making to expand or modernize the equipment of various other berths.

Thus at the end of last year the final 6 of a series of 18 modern quay cranes were installed at the 4th and 5th Harbour Docks by the City of Antwerp. These so called slewing and luffing cranes have a nominal 27 ton capacity

and a maximum reach of 42 m. One private initiative is the installation of a completely new container terminal at the Leopold Dock. For this purpose a 440 m length of quay was equipped with 2 container gantries, each of 45 tons. The entire terminal occupies a site of 15 hectares. Two other firms have each installed 2 modern quay cranes with a maximum lifting capacity of 35 tons.

A bulk cargo handling enterprise has invested over half a billion francs in expanding its terminal facilities, including the installation of an additional stacker-reclaimer, 3 km of conveyor belts and an automatic sorting device.

The expansion of the port zone on the left bank of the Scheldt is meanwhile progressing steadily. Part of “Objective 1985”, the aim of which is the completion of the first part of the port there by 1985, has been finished, viz. the Kallo Sea-Lock and a number of inset docks. Another part, including the 4th Harbour Dock (called the Vrasene Dock), is under construction. The first two phases of this 4th dock to be used for handling and storing general cargo and dry bulk cargo have been practically completed. When finally ready the dock will have 4.5 km of deepwater quay and two double ro/ro ramps. In addition the “Company for Management of Land and Industrialization of the Left Bank of the River Scheldt” has been established with the aim of coordinating the development of industrial expansion round the completed infrastructure. The new society will acquire the necessary sites in the area, make them ready for the establishment of industry, contact prospective investors and carry on promotion work.

Industry

Industry continues to be confident of a recovery. With this in view investments are being made in certain sectors.

In 1982 General Motors led the way with plans to invest 4 billion francs over the period 1982-1983 after having already invested 10 billion francs in 1981. The aim of these investments is to modernize production by the introduction of automation and other techniques.

In the petrochemical sector R.B.P. invested 161 million francs in converting an unused production unit into a viscosity breaker.

The former Albatros refinery changed hands and once again began operations in 1982 under the name of the Belgian Refining Corporation (B.R.C.).

On the left bank of the Scheldt Antwerp Gas Terminal made a start on the construction of an LPG terminal on a 12 hectare site. The terminal has 4 3,300 m³ spherical tanks, 2 50,000 m³ tanks and 3 jetties with hydraulically operated loading-arms. With regard to physical distribution Pioneer officially began operations at its electronics distribution centre on the left bank of the Scheldt.

Promotion of the Port

The preceding survey, drawn up by the Port of Antwerp Promotion Association, gives a precise idea of the actual evolution of the port in 1982, a year during which this Association in cooperation with the municipal and provincial authorities developed several initiatives with regard to the promotion of the port.

In Antwerp itself the official inauguration of the new Delwaide Dock (November 82) by his Majesty King Baudouin was the number one event of the year. Further-

more the regional population was given the opportunity to get better acquainted with port operations during an open-door weekend.

The Association also actively promoted the port abroad by organizing "port days" in Lille (France), Linz (Austria), Duisburg (West Germany), and Geneva (Switzerland) as well as by a successful promotion tour with a numerous delegation through the Far East (Japan, Korea and Hong Kong). Moreover a special task-force was sent to Saudi Arabia to prepare a promotion mission to the Middle East.

Technical port know-how was transferred—especially to developing countries—by means of brochures, training programmes (in cooperation with A.P.E.C.) and audio-visual sessions with film and slide material.

For a wider spreading of information on Antwerp, use was made of the quarterly port review "Hinterland", the quadrilingual "Vade-Mecum of the port" (with loose-leaf system) and new editions of the Antwerp monograph and a port map.

Le Havre tops overseas trade league

The French Board of Customs has published a brochure giving the value of goods passing through French ports on their way to or from overseas countries an important factor and one which carries weight with the shipping companies.

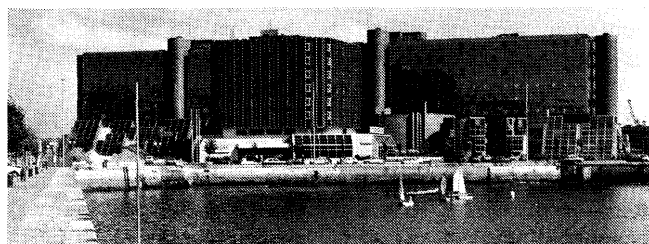
Just as in 1980, Le Havre came out top in 1981 for the value of its overseas trade (154.2 billion francs, compared with 126.6 billion in 1980) and emerges as a port dealing in high-value commodities. The next-best figures were produced by Marseilles (139.3 billion francs) and Dunkirk (38 billion).

New direct service from Le Havre to Australia

A second direct service to Australia is now available from Le Havre, proving once again that if a ship is there, freight will come to it. The company to choose Le Havre this time is the Eagle Container Line and there are sailings every 25 days to Melbourne, Sydney, Adelaide and Brisbane. Vessels are scheduled to call en route at Hodeidah in the Yemen.

It is an independent, direct container service, with vessels calling in Europe at Rotterdam, Felixstowe, Le Havre, Barcelona, Marseilles and La Spezia.

Le Havre World Trade Center strategically located between the city and the port



The Le Havre World Trade Center stands close to the Chamber of Commerce and the City Hall within a stone's throw of almost every firm that depends to a greater or lesser extent on the port. A further advantage is that it is less than 300 yards from both the railway station and the coach terminal; and is therefore easily accessible by both public and private transport of all kinds.

Port Forum & Training Institute: Port of Marseilles

The Port of Marseilles Authority, leading port of France and the Mediterranean, second port of Europe with 2600 years of Port Tradition, are now making available to their foreign or national partners all the knowhow and experience they have regarding staff and port training. The PMA, a State-controlled Public Establishment, has just created the Port Forum and Training Institute, PFTI (or IFEP in French) in order to put in concrete form their willingness to have port exchanges.

PFTI (IFEP) is . . .

- An activity-geared worktool
 - A permanent operational structure
 - The PMA's entire staff potential
- PFTI (IFEP) offers 2 types of service
- Study and development of port staff requirements
 - Organization of port exchanges and training

Study and development of port staff requirements

- Study of requirements regarding port staff
 - Analysis of jobs
 - Evaluation of staffing requirements (who to employ etc. . .)
 - Drawing up a plan to meet such requirements.
- Studies on Port Training
 - Evaluation of training requirements
 - Drawing up a training plan
 - Study of port training structures.
- Assistance
 - Consultancy missions (recruitment and training of port staff)
 - Drawing up training programmes
 - Designing and developing teaching aids.

Organizing Port exchanges and Training

- Seminars

They are of short duration (3 to 5 days) and are intended for high-ranking management people.
- Courses

They are of long duration (a few weeks to a few months) and are intended for senior staff and junior staff. These courses can be of two types:

 - «Open», and are programmed each year (Inter-company)
 - «Tailor-made», and are intra-company courses.
- Teaching Principles
 - To acquire operational behaviour patterns and methods
 - To obtain active trainee participation
 - To get port workers and executives involved
 - To achieve a permanent readjustment of programmes to match trainee requirements.
- Types of Training

Seminars and courses organized by us deal with all sectors of port life:

 - Design, construction and maintenance of infra and superstructures,
 - Design, acquisition and maintenance of cranes and handling equipment,
 - Commercial aspects of port facilities.

- Port economy, planning and statistics.
- Harbour Master's Office, how to run it.
- Personnel.
- Safety and security.
- Fees
 - Training expenses for French trainees can be covered by the Law on Vocational Training.
 - Consultancy and training for foreign trainees can be paid for by International Co-operation organizations.

Port of Marseilles Authority IFEP

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Hamburg's 1982 transit cargo volume tops the 17 million tonnes mark

Hamburg port's transit traffic, in the past always a factor for stability, was not untouched by last year's recession conditions. Compared with 1981 transit cargo dropped 5.8 per cent to 17.4 million tonnes.

"The figures show that the wretched economic situation is being felt everywhere. Economic decline has hit the COMECON countries just as painfully as the western trading nations. What has been important for the Port of Hamburg has been to main the port's market position, irrespective of trading influences. This we have achieved, despite the overall decline," said Helmut F.H. Hansen, Executive Director of Port Commerce, Port of Hamburg, The Representative, at a press conference.

Commenting on the future Hansen said he was optimistic. "It is tough, of course, to offer any meaningful predictions. Based on years of experience we take the view that exports will not be reduced and that exports, as in 1982 will be a stabilising factor in the total cargo volume handled. Should the economies of the western industrialised countries revive we hope that there will be a relative speedy improvement in imports."

Mombasa Container Terminal commissioned

The Container Terminal at the Port of Mombasa was officially commissioned at a colourful ceremony presided over by the Minister for Transport and Communications Hon. Henry Kosgey, on 20th January, 1983. The occasion coincided with celebration of the Kenya Ports Authority's 5th Anniversary and also with the handing over of new quay and yard gantry cranes by the French Government to the Kenya Government.

In his remarks during the commissioning of the Terminal, Mr. Kosgey said the Kenya Government had since independence been committed to improvement of the transport networks. Minister Kosgey said that in line with this, the development of the port formed part of the overall strategy to create an efficient and viable transportation system for the service of the country of Kenya and other neighbouring countries using the port.

Commenting specifically on the development of container handling facilities, Mr. Kosgey said "We, along with the international shipping community, have recognised that containerisation is a trend which is irreversible. Having reached saturation levels in industrialised countries the spread now is towards developing countries."

The Minister observed that developing countries had very little trade between themselves as most of their trade was with industrialised countries. Besides, he added, the developing countries have no ships of their own, and hence "It was important therefore for our ports to continue to develop in line with the recent technology such as containerisation."

Mr. Kosgey stated that feasibility studies are currently under way in respect of some ambitious programmes that are envisaged at the port of Mombasa. These include the development of bulk handling facilities to the south of the present port, with the intention of creating an export processing zone and building of World Trade Centre.

Before the Minister spoke he was introduced to the gathering by the Chairman of Kenya Ports Authority, Prof. G.G.S. Monoru. Among the guests invited for the commissioning of the container terminal were representatives from overseas ports which have most business with the port of Mombasa; Port Associated bodies like I.A.P.H., I.C.H.C.A. and P.M.A.E.S.A., representatives of other ports and shipping lines; shipping agents and their overseas principals; clearing and forwarding firms; countries using port of Mombasa other than Kenya, port users and other local firms and institutions.

Overseas Representatives

The ceremony was attended by among other personalities the Rwandese Minister for Posts and Communications, Mr. Charles Nyandwi; the Burundi Minister for Transport, Posts and Telecommunications, Mr. Remy Nkengutse; the Ugandan Minister for Transport, Mr. Yosaamu Mugenyi and, Advisor to the French Minister for Maritime Affairs, Mr. Gilbert Roubach. Among others who attended included the French Ambassador to Kenya Mr. R. Duzer, the Kenyan Ambassador to France, Mr. J. Kimani, the Rwandese Ambassador to Kenya Mr. I. Munysheyaka, the Burundi Ambassador to Kenya Mr. Z. Penyizezeko and the Malawian High Commissioner to Kenya Mr. M.W. Machinjili. Other top personalities from both Kenya and overseas also attended.

In his remarks during the commissioning ceremony, Prof. Monoru gave a lengthy background of the Mombasa container terminal which is the first to be developed in Kenya and ranked as one of the leading in Africa.

The Mombasa container terminal will eventually consist of three berths to be developed systematically to cope with the traffic. Berths 16 and 17, completed in 1975 were designed and built for conversion to container handling berths. Berth 18 was built as an open berth and was completed in 1978. Berth 17, which together with berth 16 were built with supporting transit sheds and back of port sheds, has just been converted to an open berth.

Inland Container Depot

The development of the container handling facilities are being carried out along the lines recommended after studies by experts from Felixstowe Port (U.K.) who have drawn up

master plans for the container terminal requirements.

In conversion of berth 17 for container handling, the general cargo cranes and rail tracks along berths 16 and 17 were removed and rails to carry ship to shore container handling cranes have been provided. The shed along berths 17 and the back of port shed in yards 16 and 17 have also been removed and a rail terminal is being built in its place—for transfer of containers from road trailers to rail and vice versa.

Other works to be carried out at the container terminal will include resurfacing of the container stacking yards, provision of reinforced concrete crane tracks, construction of control and administrative buildings, drainage, fencing and road works. These works are expected to be completed by early 1984.

The three container handling berths, Nos. 16, 17 and 18 have a quay length of about 588 metres and can handle two large container vessels or three medium size ones. The three berths are dredged to a depth of 10.97 metres but berth 18 is constructed in such a way that further dredging of up to about 12.5 metres can be carried out. The terminal has a back up area of 55 acres.

As part of the development for the container-handling facilities and to complement the physical development, a programme of container handling equipment purchases is being implemented. Initially a 40 ton level luffing crane was operated in conjunction with a small number of tractors and trailers with five 40-ton folklift trucks being used for stacking of containers in the yards.

The first delivery of these equipment consisting of three ship to shore cranes, four pneumatic yard gantries and two rail mounted gantries was made in December and handed over on January 20.

Master Plan

The Mombasa container terminal has been planned to operate together with an inland container depot in Nairobi located at Embakasi. When the depot starts operating by about middle of this year most of the containers destined for up-country will travel by rail. The Embakasi Terminal will have a large stacking yard, rail/road transfer facilities, a storage shed and offices. The depot is expected to be fully operational and equipped in 1984.

The development of the Mombasa container terminal will be able to handle over 250,000 TEU's annually which, in conjunction with the Embakasi terminal and other inland terminals likely to be constructed in the future will provide facilities for handling Kenya's containerised cargo, as well as the cargo for the surrounding regions served by the port.

In his speech Prof. Munoru said the development of container handling facilities at Mombasa arose out of realisation that containerisation which began in 1970s was fast becoming a major mode of transportation in maritime trade. He said it was a method devised as a cost effective measure and those in the shipping circles, including the ports, had to turn to it.

Kenya, Prof. Munoru said, was among the countries registering a very fast growth in containerised traffic. He recalled that containers started appearing in Mombasa in 1975, during which year 1,298 TEU's of containers were handled. The figures rose steadily since that year as shown below:-

<u>YEAR</u>	<u>TEU's</u>
1976.....	3,319
1977.....	4,499
1978.....	8,959
1979.....	15,147
1980.....	30,660
1981.....	44,036
1982.....	56,638

Careful planning for container terminal development has been considered right from the start with advice of experts commissioned to carry out various studies. The first such study was carried out by Economic Intelligence Unit (EIU) whose traffic forecasts drawn for the East African Harbours Corporation in 1969 drew attention to the need for careful study and planning for containerisation in East Africa.

A U.K. firm Bertlin and Partners under the World Bank/UNDP sponsorship conducted an indepth study of the East African ports, and submitted its report in 1977. The study outlined the masterplan for the container terminal and also emphasised the need for inland depots to go with this development.

A third study by a Swedish firm, Scandiaconsult whose report was submitted in 1979 further endorsed the masterplan for container terminal at Mombasa and also recommended establishment of an inland container depot at Mombasa as a supporting facility to the port terminal as well as inland terminals at Nairobi and possibly in other main towns of Eldoret, Kisumu, etc. More recent studies on container handling have been done by the Economic Intelligence Unit in 1980, and by experts from the British Container Port of Felixstowe, who have refined the masterplans for the container terminals at Mombasa and Nairobi.

While handing over the new quay and yard gantry cranes on behalf of the French Government, Mr. Roubach had this to say about the port of Mombasa:

"I would like to point out that in five years Kenya Ports Authority had acquired a world wide reputation by the quality of its services and exceptional efficiency of its management.

Mr. Roubach said his country was pleased to help Kenya technically and financially in the field of container handling equipment and general modernisation of Mombasa port. He said that while the delivery of the container gantry cranes was the first French involvement in port development in Kenya, he hoped other steps would be taken to confirm strong commitment of France in the development of transport and communications in Kenya.

British Standards Institution drafting code of practice for maritime structures

Bertlin and Partners, International Consulting Engineers, have been awarded a commission by the Property Services Agency of the Department of the Environment on behalf of the British Standards Institution to prepare the draft of a new code of practice for the design of quay walls, jetties and dolphins. The code of practice will be published in due course by the British Standards Institution.

The code will form part of a comprehensive code of practice on the design of maritime structures. Part 1 of the code, covering general criteria, has already been issued

for public comment and will be published by the British Standards Institution later this year.

The need for such a code was highlighted by a report prepared in 1970 by Bertlin and Partners for the now defunct National Ports Council. The report found that the then current code of practice for earth retaining structures did not produce such economical designs for waterfront structures as codes used by other countries.

Following this report a number of relevant research projects were carried out by the Construction Industry Research and Information Association (CIRIA). One of these was to compare designs for sheet piled quay walls using British and foreign codes of practice. The comparison confirmed that use of the British code gave less economic quay walls than those of our competitors abroad. As a result of this the British Standards Institution set up a drafting committee in 1974 to prepare a new code of practice for maritime structures. Part 1, referred to above, covers general criteria and it is planned to produce further parts covering the design of various types of maritime structures.

£5.5 million pre-tax profit in line with prospectus estimate: ABP

Associated British Ports Holdings PLC, Britain's largest ports business, announces a pre-tax profit of £5.5 million for the year to end-December 1982 (1981—loss of £10.3 million). This result is in line with the pre-tax profit (before adjustments) of £5.4 million estimated in the recent Offer for Sale.

Revenue increased from £128.2 million to £151.6 million, and operating profit from £2.3 million to £15.1 million.

Keith Stuart, Chairman, says: "Our strong recovery was achieved despite the continuing deep recession in the economy and unfavourable trading conditions. Costs were contained, operational efficiency improved, and Southampton returned to normal working. Our total volume of business increased by over 1½ million tonnes, mainly as a result of higher exports."

On the current year, Mr. Stuart says: "The general level of UK economic activity and the volume of overseas trade have not yet shown any significant improvement but our overall trading performance in the first quarter of 1983 has been satisfactory."

As stated in the Offer for Sale, no dividend is payable in respect of 1982. The directors expect, in the absence of unforeseen circumstances, to recommend total dividends in respect of 1983 of not less than 7p net per Ordinary Share. It is expected that an interim dividend will be paid in November 1983 and that a final dividend will be paid in May 1984.

Associated British Ports Holdings PLC

Preliminary Announcement of Results of Associated British Ports for the year to 30 December 1982

	1982	1981
	<u>£m</u>	<u>£m</u>
Revenue	151.6	128.2

Operating Profit	15.1	2.3
Investment Income	1.1	1.5
Exceptional Items	(3.6)	(7.0)
Interest Payable	(7.1)	(7.1)
Profit (Loss) before Taxation	5.5	(10.3)
Taxation	0.3	1.5
Profit (Loss) after Taxation	5.8	(8.8)

ABP Results by Port Group

	1982	1981
	<u>£m</u>	<u>£m</u>
Revenue		
Southampton	44.2	24.7
Humber Ports	52.4	48.1
South Wales Ports	36.6	39.0
Other Ports	18.4	16.4
Total	151.6	128.2
Operating Profit/(loss)		
Southampton	0.0	(10.4)
Humber Ports	6.6	2.4
South Wales Ports	4.1	6.8
Other Ports	4.4	3.5
Total	15.1	2.3

Current Cost Profit and Loss Account

	1982	1981
	<u>£m</u>	<u>£m</u>
Operating profit (historical cost basis)	15.1	2.3
Less current cost operating adjustments:		
Depreciation	8.9	9.2
Monetary working capital	1.0	0.3
	(9.9)	(9.5)
Current cost operating profit/(loss)	5.2	(7.2)
Investment income	1.1	1.5
	6.3	(5.7)
Exceptional items	(3.6)	(8.3)
Current cost profit/(loss) before interest and taxation	2.7	(14.0)
Taxation (after relief for interest charges)	0.3	1.5
Current cost profit/(loss) after taxation before interest	3.0	(12.5)
Interest charges	(7.1)	(7.1)
Current cost loss after interest	(4.1)	(19.6)

Southampton Australia service starts

Southampton has just received the first ship on Polish Ocean Lines' new deepsea roll-on/roll-off service between Australia and the ABP port.

The 19,000 grt, 'Katowice 11', one of four third generation ro/ro vessels which will operate the monthly service, loaded mixed cargo, including vehicles and containers. As well as conventional ro/ro cargoes, each of the four ships can carry up to 1,200 TEU's of containers.

Besides Southampton, the Line will serve the Baltic, North Continent and the Australian ports of Adelaide, Melbourne, Burnie, Sydney and Brisbane.

Polish Ocean Lines have operated a regular liner service

to Australia for over 10 years. Following studies of cargo flow between Europe and Australia, they have opted for a ro/ro service and have chosen Southampton as their sole UK port of call.

Recommendation on Ports Infrastructure: Indian National Shipping Board Seminar

A two-day Seminar on "Changing Phase of Shipping Industry – Strategy for Development" organised by the National Shipping Board was held in the Conference Hall at Scindia House, Bombay on 10th and 11th December 1982.

Four Working Groups were formed at the Seminar for detailed examination of the various policies and problems of the industry and make recommendations. The Working Group I on "Tonnage and Finance" was chaired by Shri K. M. Sheth, Deputy Chairman & Managing Director of Great Eastern Shipping Co., Group II on "Cargo Support" by Shri N. M. Trivedi, Chief Executive, Scindia Steam Navigation Co. Ltd., Group III on "Man-Power" by Shri K. E. Sukhia, General Secretary of MUI, and Group IV on "Ports Infrastructure" by Shri K. K. Uppal. The recommendations of various Groups were presented at the Valedictory Session after which Shri B. K. Rao, the Director General of Shipping, summed up these recommendations.

Following is the text of the Recommendation of the Working Group IV on Ports Infrastructure.

Recommendation on Ports Infrastructure

1. The Group recommends that the minor port developments including its dredging operations and equipments planning must be paid sufficient attention and that one way of increasing the minor ports capacity is to bring them under the organisational set up of the major ports of the region having due regard to the Centre-State relations and the Constitutional provisions.
2. Modernisation of major ports through mechanisation and automation is most welcome. But such modernisation should be within the existing parameters harmonising the interests of the ports needs to increase its capacity of cargo handling and the industrial relations.
3. On the question of proper infrastructure to be developed for all the ten major ports of India, the Group is of the opinion that instead of distributing evenly the infrastructure to all the ports, it may be relevant to retain the present day character of the port and plan on that basis and strengthen the infrastructure on the same lines and with the due regard to the needs of the hinterland.
4. The ports which are today equipped with mechanical system to export iron ore may have to some re-thinking on further planning towards fuller utilisation of their capacity and also the scope for alternative use of the existing infrastructure – for example aluminium and coal in Vizag through mechanised system and barytes through mechanised system from Madras port.
5. On the question of equipping Indian ports for handling containers in the most modern methods of handling, it is recommended that one port on the Western Coast and one port on the Eastern Coast may be equipped with the facilities of container handling. There can even be two container

ports on each of the Western and Eastern Coasts provided the facilities created in the port are adequately matched by the facilities to be created by the other agencies outside the port limit – agencies like Railways and Road system, etc. Management of such container terminal has to be entrusted to experts who have actual maritime experience in container handling.

It is necessary that while planning for container terminal the Port Management keeps in view the changing trends in the size of the container.

6. The repair facilities for repairing the ports own crafts as well as vessels passing through the ports is an important infrastructure to be created at the port level and also managed by ports themselves. An important pre-requisite to this is an ideal workshop facilities under the ports control. No doubt that the existing facilities for repairing in different ports of the country should be fully tapped but this does not minimise the need for the major ports to have their own repairing facilities and which can also be used for the benefit of the adjoining minor ports of the region.

7. Deepening of the ports by dredging them is no doubt an important and continuing infrastructure. While the responsibility of the capital dredging can be entrusted to the Dredging Corporation of India which should equip itself with the most modern technical know-how with a suitable combination of equipments used in dredging and carry out this work on reasonable cost. The maintenance dredging should be left to the ports particularly in the case of major ports. The dredging corporation of India instead of undertaking this work on a piece meal basis should proceed on the basis of a long term programme of dredging.

8. The infrastructure of the port has to match the requirements of shipping changes in their size and draft requirements all over the World so as to cater to different types of vessels with less cost and time. In this effort a lot of support is to be lent to the port by the Ministry of Commerce dealing with international trade, the Planning Commission and other Ministries.

9. Pollution, environmental as well as sea pollution must be effectively tackled. As far as possible the ports themselves should acquire the antipollution equipments required by them. A local contingency plan has to be effectively implemented particularly by ports close to the offshore installations and this must be dovetailed with the National Contingency plan on pollution control. A separate Inspectorate of Pollution Control should be created and they must be made to work directly under the deputy Port Conservator of Ports.

10. The Group is of the opinion that there should be equal treatment to all the users of port who should also have a major say in the infrastructure developments of the Indian ports. On the question whether the users of the port particularly the Indian shipowners should be encouraged to invest funds for the development of infrastructure or the ports themselves do this and only charge the users, the consensus has been that the port must own all the equipments as far as possible.

Such of those users of the port who come forward to invest their funds must have a say in the equipment utilisation and the planning for the equipment by the ports and this can be ensured only by an adequate and effective representation of their interests in the Board of Trustees.

11. No amount of infrastructure planning and mechanisa-

tion will pave the way for modernisation if the management and the organisational structure are not suitably designed and oriented to achieve results in this sphere. The technical officers of the port should have their freedom and delegated powers to take decisions on important issues. In order that the port discharges its entire responsibilities as a commercial organisation the structure has to be suitably revamped. In this context it is recommended that at least to start with the container terminal can be managed by Indian officers having acquired sufficient experience in the other advanced ports of the World.

12. There is urgent need for a national level planning as well as a port level planning for the development of the ports infrastructure. This has to be on a detailed study of the traffic projections, the future trade — based on trends in international trade and the national goals and resources and this can be achieved only by a systematic and scientific planning of the port linked to similar efforts on planning at the national level.

The Group recommends that the National Shipping Board has an important role to play not only in planning at national level but also in guiding the major ports of India for their planning at the port level. N.S.B. should emerge as a policy making body with a permanent Secretariat with specialised cell being attached to it to take important decisions. This function of the N.S.B. can be effectively discharged only when there are frequent meetings and interactions and the Planning Commission and Ministries like Commerce and the other specialised agencies and organisations represented in the Board. No doubt the Ministry of Shipping & Transport will be the implementing agency of the policies formulated by the National Shipping Board.

(Indian Shipping)

Handling record set by Container Terminal: Wellington Harbour

In late January the first shift working the Blueport Act vessel Act 7 notched up the impressive rate of 75 twenty foot equivalent units (TEU's) per hour. This compares with Wellington's former best of 70.5 TEU's per hour.

The ship exchange was completed in the record time of 18½ hours making an average handling of 62.2 TEU's per hour against the previous top of 56.4 hours clocked up working the Remuera Bay in October 1980.

January's figures were all the more creditable as the Terminal had a heavy work load that weekend stripping 105 inward rail wagons—some of which contained cargo bound for the Act 7.

Container Terminals Limited General Manager Mr. Rex McKee described the performance as very encouraging.

"It proves the Port can carry out the work. It compares very well with those terminals in North European ports which are always held up as examples of efficient handling."

'Beacon' was not able to locate comparable overseas statistics but Mr. McKee was confident Wellington had set at the least an Australasian record.

Blueport Act General Manager Mr. RC Whyte said.

"We're very pleased because we think the Wellington terminal is running particularly well—not just in this special instance, but in all its operations."

He said he thought the record handling of the Act 7

would compare most favourably with and probably better the performance at the European ports where the container vessel called regularly.

In announcing the record handling performance to Board Members, Chairman John King said the terminal maintained a high and consistent performance.

He described the recent achievement as due to a "high standard of co-ordinated competent work by all concerned; the ship planners and the supervisors: the crane and mechanical plant drivers: the control staff; the maintenance teams and all the other waterfront workers that make up an efficient and highly effective operation."

"As I have said before and repeat—they have the tools and they are doing the job".

"I make no apology for saying that the performance of the Port of Wellington container terminal is the envy of others in New Zealand and Australia and I congratulate all concerned." (BEACON)

Increasing market share: Port of Jebel Ali

Dubai's Port of Jebel Ali weathered a recessionary 1982 well by increasing its market share by 4% over 1981 to 33% even though there was a decrease in tonnage handled in some commodities. Increases shown were in container moves and bulk commodities, with a dramatic rise in oil-industry related cargoes due to the growing number of oil-related companies setting up storage and distribution bases in the Jebel Ali Industrial Zone.

Activity at the Container Terminal increased with 77,562 container moves, 4% higher than 1981 and 5,242 restows, an astonishing 94% improvement on 1981. TEUS showed a 5% decline to 102,304, attributed by Mr. Charles Heath, Director of Marketing, to the introduction of 20 foot containers by one of the shipping lines. The number of container vessels calling at Jebel Ali increased from 233 in 1981 to 273 in 1982, due to the addition of another shipping line making direct calls. Port Jebel Ali is now served direct by Hellenic Lines, Hoegh Lines, Merzario Lines, Sealand Service, N.C.H.P., Norasia, Blue Star Lines and Overseas Containers Ltd.

The Port Authority has recently leased 80,000 square feet of warehouse space to an international company planning a bagging operation. The lease also provides for a minimum of 250,000 tons of cargo to be commercially bagged on the quay adjacent to the warehouse during the first year of the agreement. Other new leases for land in the Industrial Zone include Unimuds Budebs and Cormix Middle East.

Mr. Heath said the Port Authority of Jebel Ali expects 1983 to be a tougher year and they will be doing some belt-tightening while maintaining aggressive marketing through worldwide advertising and sales efforts. He also stated that the 1982 cargo figures indicated that Jebel Ali, as expected, is becoming an industrial centre with its port activity increasing, even when other ports all over the world are showing an average drop in business of at least 15%.

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