



PORTS HARBORS

Official Journal of the International Association of Ports and Harbors

Positive image

The container world goes public

Raising the bar

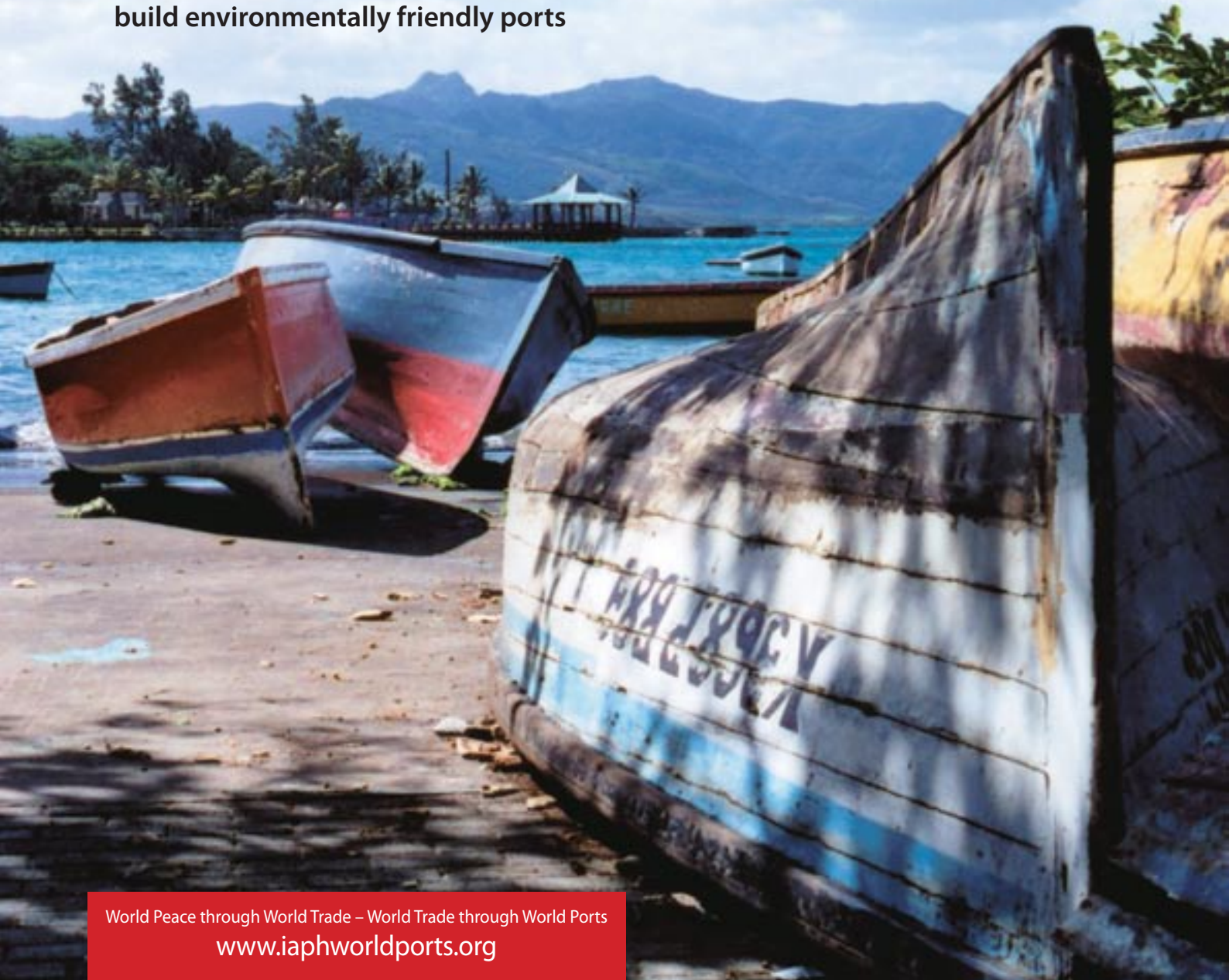
Melbourne dredges 14 years on

Speeding up

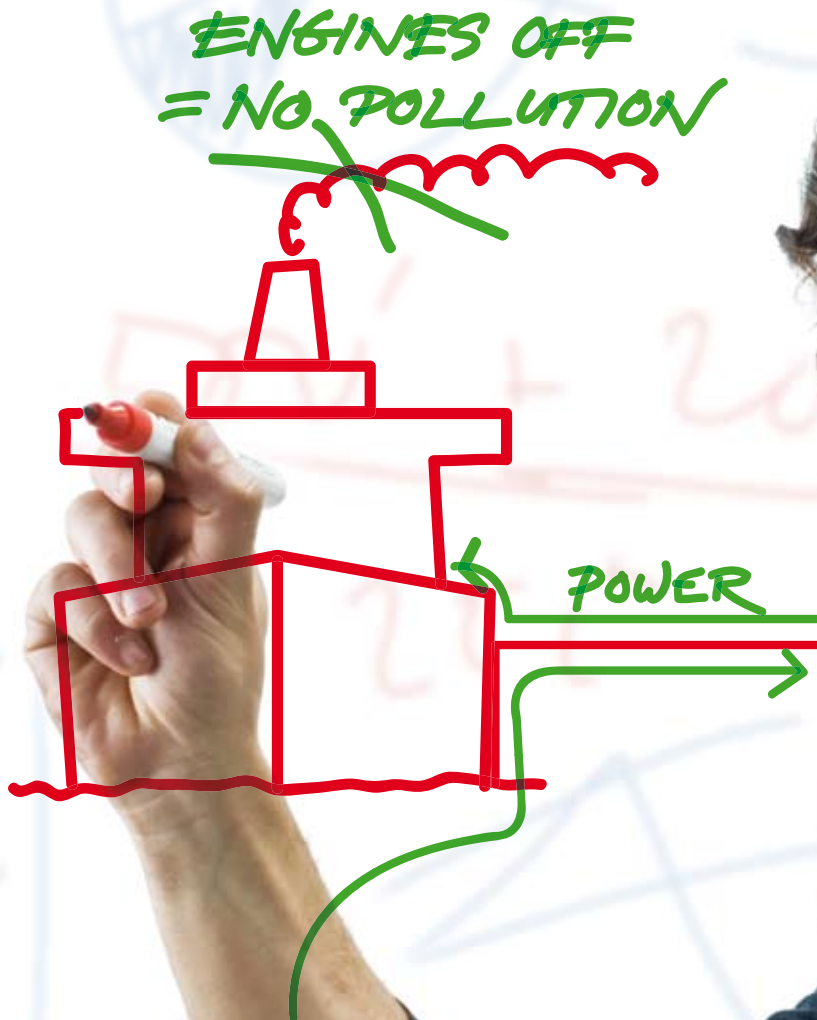
Boulogne's high speed plans

Paradise protocols

The UNEP helps developing countries
build environmentally friendly ports



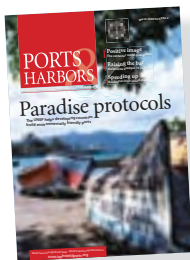
“Fresh thinking can lead to fresh air.”



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Mahébourg, which has been mooted as a site for a second port for Mauritius, shows the hard task that can face environmental stewards in developing countries

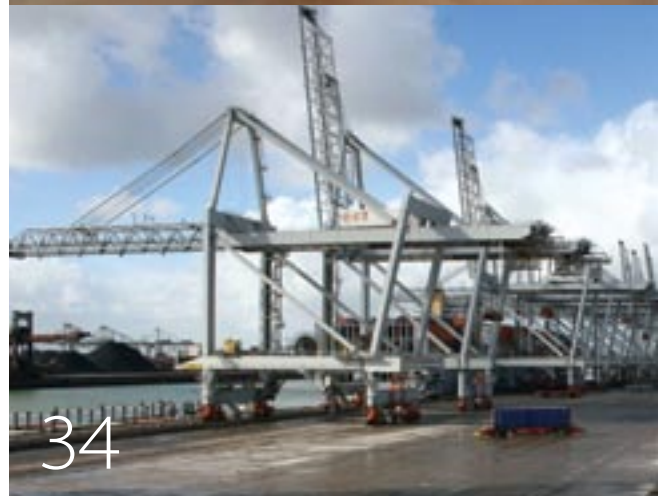
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PORTS & HARBORS

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Competing in a physical internet

Ports have to deal with a “flattened” world which brings us closer together physically

The Internet and advanced software systems have combined to empower people more than ever before to connect, compete and collaborate with others around the world. The playing field has been “flattened” for every one of us, according to US commentator Thomas Friedman.

Similarly, trade has been expanding dramatically into a borderless world, in response to global production-sharing and integrated supply chains. A physical ‘internet’ has developed to move goods between every part of the globe – another essential part of today’s globalisation. It is only thanks to this physical internet that people, either producers or consumers, can exchange

their goods across the globe and sustain their economies in the global market.

However, a recent World Bank survey of more than 800 logistics professionals worldwide concluded that this physical internet still contains many logistics gaps and problem areas.

More significantly, the survey revealed that while traditional elements such as port time and costs and efficient customs clearance

are important, traders put great value on other aspects of logistics performance, such as reliability and predictability. Traders’ prime concerns are predictable clearance of customs and timely delivery of shipments, the report said. The quality of logistics services is more and more a critical consideration for global firms in formulating marketing and investment strategies.

In other words, the competitiveness of ports and the countries they are located in is increasingly determined by the quality of overall logistics services. Our efforts, therefore, should be directed not just to reducing costs and delays at terminals, but also to improving the quality of logistics, concentrating on elements such as the predictability and reliability of shipments and timely delivery to destination. The port industry should join forces with all logistics industries and public agencies concerned to improve overall logistics quality. **PH**

Dr. Satoshi Inoue

Secretary General – The International
Association of Ports and Harbors

Port updates

BIDDING STARTS

Valencia's enlargement plans were kick-started by bids from three consortia headed by Spanish construction companies to build a 3.3km breakwater at the port. The winning bidder will invest €240M (\$352M) to build the breakwater, which will house Valencia's fourth and fifth container terminals. Construction will begin in March and is expected to last 42 months.

MARSEILLES OIL

Oil tanking-Mediaco Marseilles is to invest €200M (\$296M) in the construction of a 800,000m³-capacity terminal and storage depot for refined oil products at the Port of Marseilles' Fos oil terminal. Marseilles port authority will invest €32.7M to double its import capacity for refined oil products and €29M in the construction of three new berths at its Lavera oil terminal, bringing capacity to 1.3M tonnes for new traffic from biofuels and chemical products. Two existing fuel berths are to be dismantled and rebuilt and another constructed.

STEVEDORING DEAL

P&O Ferries and Stena Line have agreed on Stena Line's takeover of the stevedoring activities for its own vessels on the Westbank Terminal from P&O Ferries in Europoort. P&O Ferries has carried out these terminal activities for Stena Line since 2002, under what is known as the port service agreement. In turn, P&O Ferries will expand its activities for its own vessels at Europoort's Eastbank by renting extra quay space from the Rotterdam Harbour Company.

DELTA DREAM

A consortium led by the African Finance Corporation has signed an MOU to develop a huge port at Olokola, Nigeria, about 400km west of Port Harcourt, liner industry consultant Dynamar has reported. The new site is to include container facilities. The deepwater box terminal alone will require an investment of about \$1Bn, it is thought. Hong Kong-based port operator Cosco Pacific is understood to be interested in taking part.



Tarifa: the new fast ferry terminal

Fast ferry coming soon

Tarifa in Spain is to benefit from a major expansion as fast ferry services switch from Algeciras as part of a €200M (\$294.6M) plan announced by the Port Authority of Algeciras (APA).

The new developments will provide eight new berths – six for fast ferries and two ro-ro berths, one of which could be able to accommodate cruise ships.

A spokesman for APA said traffic through Tarifa was forecast to increase to 1.1M passengers and 210,000 vehicles by the end of 2008.

A key element of the project is a road link to decongest Tarifa and

divert freight traffic away from built-up areas.

In Algeciras the port authority has approved a plan by Hanjin Shipping to invest in the Isla Verde Exterior terminal, which is currently under construction.

Hanjin has pledged to invest €374M (\$542M) over its 30-year concession period, bringing in 800,000teu of trade during the first year of operation in 2010. The company plans to invest an initial €167M in the first phase of the common-user terminal, developing a 35ha site equipped with 1.2 km of quay, with draught ranging from 17.5m to 18.5m.

Work on the terminal's second phase should start in 2013, adding 37ha of space for operations.

Algeciras port authority is also investing over €300M in the Isla Verde Exterior development. It expects this to bring new import-export trade opportunities for the transshipment hub, which can accommodate box ships of 10,000teu+ capacity and handles the largest container volumes in Mediterranean region..

Hanjin will create a Spanish subsidiary based in Algeciras employing 455 and plans to develop new market footholds, including into Africa.

International partner for Bremore

Hutchison Port Holdings (HPH) is to develop a port master plan for the new €300M (\$445M) deepwater port at Bremore in north County Dublin, Ireland, bringing the start of the project a step nearer.

The announcement was made by Bremore Ireland Port Ltd, the joint venture between Drogheda Port Company and Castle Market Holdings. The company said the signing paves the way for the next phase in the development of the deepest port on the east coast of Ireland.

Bremore Ireland Port now hopes to be in a position to submit a full planning permission application within the next 12 months.

Paul Fleming, CEO Drogheda Port Company,

commented: "We are delighted to welcome HPH to the Bremore team. Their port planning and operational experience will be a major asset to the development of Bremore Ireland Port."

Bremore's development is a strategic response to the impending deficit in port capacity, not only at Drogheda Port but also on the east coast of Ireland. The new deepwater port will provide more choice for Ireland's importers and exporters, and accommodate new shortsea shipping services to the United Kingdom, Europe, Scandinavia and the Baltic states.

Bremore Port will be designed and operated to provide the highest environmental standards and respect for the local community.

Gas gate goes ahead

Port of Rotterdam's Maasvlakte development is to get the Netherlands' first LNG import terminal, it has been confirmed. It will be developed by Gasunie and Vopak, which say they have taken "the final investment decision" to construct it.

Called The Gate, it will have an initial throughput capacity of 9Bn m³ a year, with the potential to be expanded to 16Bn m³, and is expected to be fully operational in the second half of 2011.

Plans are for three storage tanks, each with a net capacity of 180,000m³, and a jetty big enough to handle the largest LNG tankers in service. It will also serve as a regasification hub and deliver gas into the transmission network for the Dutch and northwestern European markets.

Dutch energy giant Essent also

plans to participate in the project, both as a customer (for 3Bn m³) and as a shareholder (5%).

Gate MD Ulco Vermeulen said: "We've received all required permits and I'm confident Gate will attract additional interest as a delivery point, which will enable us to expand the terminal."

Gate has already signed its first customers – Denmark's DONG Energy and Austria's EconGas. Along with Essent, they have long-term agreements committing them to 3Bn m³ annually.

Total project costs are estimated at €800M (\$1.2Bn), with the Port of Rotterdam pledging investment of €60M in infrastructure, quays and berths. "It's the fulfilment of our LNG vision developed four years ago," commented port authority president Hans Smits.

A sheltered, 1.5km-long port

basin will be dredged and the 6.5M m³ of sand produced will be used in constructing Maasvlakte 2.

In a joint statement, Vopak and Gasunie chairmen John Paul Broeders and Marcel Kramer commented: "This terminal's an important addition to Dutch infrastructure for energy supply and transport.

"With the continuous increase in demand and a decrease of production of natural gas in northwest Europe, Gate helps to fill the gap."

They also announced that, in conjunction with Essent, they're planning to build another 12Bn m³ LNG import terminal in the Port of Eemshaven. A heads of agreement for this was signed late last year, with Gasunie and Vopak each acquiring a 25% stake and Essent taking 50%.

Port productivity needed

Middle East port inefficiencies and poor management cost the shipping industry \$615M in wasted bunker fuel. By contrast, terminal efficiency in the Middle East could boost capacity by 5.5M teu and save 4.2M tons of carbon emissions each year.

These claims were made by Mærsk's Poul Woodall at the MEED Port Development Conference in Dubai. He based his analysis on Mærsk's own data of 16,000 port calls in the Middle East over seven years.

His key finding was that between 2001 and 2007 the average port stay doubled, while productivity dropped by 10–20% over the same period.

"What other industry would accept such a development?" he asked, adding: "There has been a significant change to shipping costs – increasing fuel costs – that will change how we plan our network.

"Fuel consumption and port productivity are two items that are closely linked and if it's not already at

the top of the shipping industry agenda, it will be."

He declared: "We can do better with existing assets instead of building new ones. If the industry improves its productivity, there is no need to build at the same pace."

By 2012, he believes, ports in the Middle East will have 125,000teu capacity more than the 325,000teu that it is estimated will be needed in the region. From this, Woodall concluded that too much money was being invested in expanding and building new ports, which was masking poor port management.

Woodall told *P&H*: "Shipping lines would be prepared to pay an increased price if productivity improves." He also advocated that ports and shipping lines should communicate and collaborate to reduce 'silo thinking' – where lines and ports looked at their businesses in isolation. Woodall urged lines and ports to examine, and optimise, their costs.

Big box ship benefits are fading

Economies of scale for ultra-large container ships above 10,000teu are evaporating in the face of high newbuilding prices and chronic port congestion, according to shipping bank DVB.

In DVB's new *Super Post Panamax Container Market Outlook*, compiled by its research and planning unit at

Rotterdam, the bank states: "As for contracting large SPPx vessels, at current newbuilding prices (\$160–170M) there is no cost advantage per slot to be achieved in comparison to the 8,000teu vessels contracted a couple of years ago."

Newbuilding prices per slot are in the region of \$12,800/teu for a

10,000teu-plus ship contracted in 2007, compared with \$9,500/teu for an 8,000teu vessel delivered before 2007, according to DVB.

"Port congestion or challenges that hinder these large SPPx vessels from achieving the desired port interface efficiency could prove financially taxing," it warned.

Port updates

DONGHAE DEBUTS

The Port of Donghae, on the eastern side of the Korean peninsula, welcomed its first container ship call, according to regional officials, who say the port can handle up to 100,000teu a year. The maritime office signed a lease contract on the operation of Donghae West Port with a consortium led by Korea Express Co, offering container ships and their cargoes an 80% discount on the port fee. Sinokor Merchant Marine's 9,991teu *Golden Gate* was the port's first container ship.

TUNNEL VISION

Malaysia is to build a tunnel to alleviate the severe flooding during downpours that affect container movements to Port Klang, according to a Malaysia Marine Corp (MMC) official. She said the proposed tunnel will allow water to escape during unusually heavy wet weather spells reducing effects on container traffic.

ORE INVESTMENT

Mormugao Port Trust, which accounts for almost 40% of India's total iron ore exports, plans to invest more than Rs10Bn (\$250M) to expand ore-handling capacity. The port intends to use about 25% of the money to mechanise ore and coal handling at two berths.

Mormugao handled 40M tonnes of ore in 2007 despite having only 29M tonnes official capacity. Heavy demand has led to congestion and delays, and there are fears that exports could fall. Praveen Agarwal, the port trust's chairman, said: "Increasing our capacity will help build trade as bigger ships will be able to dock at the port."

COURT LETS PORT INVEST

Italy's highest administrative court has ruled that work can begin on a new container terminal at the Port of Genoa – the Calata Bettolo basin will be filled in to create a new 20ha facility with 620m of quay and draught of up to 18m. The port authority's expected to spend around €100M (\$147M) on the project, which will take about three years, while terminal operator SECH and liner MSC will invest between €80M and €90M.

Port updates

TWIC SWITCH

Some 11,000–12,000 workers at Port Canaveral are switching from badges to the new Transportation Workers Identification Credential (TWIC). The federal identification is required for all persons seeking unescorted access into secure facilities or restricted areas at the nation's seaports. Stan Payne, Port Canaveral CEO, said preparation for employees, tenants and other port workers was advanced.

NEW CLINKER TERMINAL

A joint venture formed by Tarragona Port Services and Vicport Servicios has won a 25-year tender to operate a new clinker terminal at the Catalan port of Tarragona. The consortium and Tarragona Port Authority will invest €18M (\$27M) in the 150,000-tonne-capacity terminal. The facility is expected to be operational by the end of this year.

TEESPORT PLANS GET THE NOD

The UK government has approved plans for PD Ports' £300M (\$590M) Northern Gateway container terminal development. The terminal will have 1,035m of quay with 16m alongside able to accommodate container vessels up to 10,000teu capacity. Throughput will increase to 1.25M teu after completion by late 2010 or early 2011.

SECURITY CASE DISMISSED

Canada's Federal Court of Appeal has dismissed an application from Vancouver dock workers to delay new security regulations. ILWU members said background checks violated Canada's Charter of Rights and the Privacy Act. But the court said there should be no delays and, pending an appeal, Vancouver dock workers have started applying for passes.

PSA RECORDS RISE

PSA Singapore Terminals is to add more capacity after reporting a 13% increase in container volume for 2007. A record 27.1M teu were handled and PSA plans 20M teu extra capacity over the next 10 years, with around 80% targeted for transshipment trades.



Big boost for Bahrain's boxes

APM Terminals has confirmed it expects to take over the 1M teu new Bahrain Gateway at the \$530M Port of Khalifa Bin Salman later in 2008 with operations starting by the fourth quarter.

Located in the Hidd region of Bahrain and designed to handle post-Panamax container vessels, the 110ha port has three 300m container berths, one 300m multi-purpose berth and two 300m general cargo berths. Depth alongside the 1,800m is 15m.

It's built on reclaimed land and

the dredging and reclamation contract accounted for \$200M of the investment costs and involved excavation of nearly 30M m³ of material used to build the port.

APM has a 25-year concession for Bahrain Gateway, which is to be developed as an upper Persian Gulf transshipment centre, with expansion potential to 3M teu.

"Bahrain's location within the upper Gulf makes it an ideal hub. The major commercial ports of Dammam and Jubail in Saudi Arabia, Shuwaikh and Shuaiba in

Expansion: APM will move from Khalifa Bin Salman by the end of the year

Kuwait, Assaluyeh and Bandar Imam Khomeini in Iran and Doha in Qatar are all within 18 hours' sailing time," marketing manager Iain Rawlinson commented.

"There's a clear need for new capacity to manage equipment flows into and out of the region, particularly in light of the enormous developments in the petro-chemical industry, most notably in Saudi Arabia, but also in Qatar, Kuwait and Iran.

"Additionally, there's the enormous potential market of Iraq, which is within easy reach of Bahrain," he continued.

APM has run Bahrain's existing port facilities at Mina Salman for the past year and it is anticipated that cargo flows will be transferred to the new Bahrain Gateway once it is operational. Mina Salman has enjoyed improved productivity as a result of APM's operational, training and investment initiatives.

In late November, 57 moves an hour were achieved, and gross crane productivity exceeded 30 moves in December. That, in turn, has stimulated healthy traffic figures, with Mina Salman's 2007 box throughput of 239,000teu being 11% up on 2006.

See *P&H*, September 2007

New president for Genoa Port Authority

Luigi Merlo has been appointed president of the Genoa Port Authority for the term 2008–2012.

Ratification of his role came from the minister of transport, Alessandro Bianchi, and Claudio Burlando, the regional governor of Liguria.

Luigi, 42, has been a transport councillor for the Liguria region and is a native of La Spezia.

A major challenge he faces is the increased cost of rail use. This year railway operator Trenitalia has almost doubled its tariffs, angering port users.

A lack of rail services and a shortage of freight wagons are also major concerns for Merlo, as Genoa's plan is to increase the use of the railways so that 50% of port traffic is carried by the mode.

Mexico terminal expansion planned

Ports America officially opened its new inland intermodal facility in Toluca, Mexico, and immediately announced plans for expansion.

The new facility – located 65km west of Mexico City – has a capacity of 150,000teu a year and is connected to ports such as

Lázaro Cárdenas, the Mexican Central Valley and the US by road and by the Kansas City Southern de México railway line.

With the terminal complete, Ports America is turning its attention westward, *P&H* was told by Doug Tilden, the company's

chief executive. The New Jersey-based company wants to bid to operate the planned ro-ro terminal and phase two of the container terminal at Lázaro Cárdenas and hopes to develop and operate the planned port at Punta Colonet.

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Chief Bryan Norwood

Bridgeport Police Department
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Dredging

BUSAN'S EXTRA METRE

To accommodate growing numbers of calls from container ships over 10,000teu, Busan is to deepen its port waters to guarantee safe navigation. Busan Port Authority says it will secure a water depth of 16m at Busan New Port and some parts of Busan Old Port as soon as possible.

Berths No 3 and 4 at Shinsundae Terminal, Busan Old Port, will be dredged from the current 15m to 16m by the first half of 2009, and a deeper Hanjin Shipping container terminal will go into operation early 2009. No 4 berth of Gamman Terminal and New Gamman Terminal will also be dredged after negotiation with port operating companies, the port authority said.

PAKISTAN PROJECT

Port Qasim Authority and Belgian-based Dredging International have signed an \$800M maintenance contract to dredge the port's channel for the coming year.

PQA has revised draught and dimensions to allow berthing of vessels up to a maximum 10.5m draught at its berths. PQA has also engaged the Karachi Port Trust's newly acquired dredger *Abul* to ensure that the depth is maintained.

GUAM DEVELOPMENT

Berth deepening to 15.5m, three Panamax gantry cranes and a doubling of berthing space are among the main recommendations for modernising the Port of Guam over the next 20 years.

A report by a New York private consultancy, released for public comment by the port authorities, says box capacity is expected to almost double to 320,000teu by 2015. Total cost of the programme is put at \$190M.

DELAY AT RECIFE

The tender process for dredging the Brazilian port of Recife has been delayed until the second half of 2008. Originally it was expected that BRL24M (\$13.5M) worth of dredging would start in June or July. But Recife Port Authority said the tender documents will be issued on 31 July – bidders will have 60 days after that in which to present their proposals.



Photo: Jan de Nul

Capacity: dredging companies are building new ships, but not fast enough to cope with new projects

Dredging close to capacity

Some port development and expansion projects could soon come to a halt because of a lack of dredging capacity, said a key industry figure. Speaking at the MEED Port Development conference in Dubai, Jan Pieter De Nul, MD of Jan De Nul dredging company, gave an industry-wide overview of the dredging fleet.

"We're all building, some more than others, but we will be short of capacity in 2008, 2009 and part

of 2010," he said. "Until then, competition simply will not exist."

He added that there are now very few companies left to do dredging work owing to mergers and acquisitions over the years. "The fight stopped because there were no fighters any more," he said.

New projects in the Middle East and China – not all for ports – have dominated the dredging market, since 2000.

Today, according to Jan De Nul's

figures, China is worth around €1.3Bn (\$1.9Bn), with the Middle East worth roughly €3bn (\$4.4Bn).

Demand in the Middle and Far East has absorbed dredging capacity, meaning that dredging companies can afford to pick only those projects they want to accept.

"Formerly, we were fighting for every project, but now we can choose," said Frank Jeuniaux, the Dubai-based area manager for Dredging International.

Restricted opening in Dammam

Authorities in Saudi Arabia have restricted operating times for the port of Dammam over the coming year as dredging work is undertaken in the west basin.

Plans will allow for shipping movements to alternate with dredging work, giving some three hours for each activity and all-night dredging.

Dredging will continue if there is no shipping activity in the west basin. Deep-draught vessels with restricted sailing times will have priority – dredging will be stopped and clear passage made for these vessels regardless of the timetable. Vessels arriving in the east/centre port will be unaffected.

California gets \$55M for harbour projects

California's three main container ports have received more than \$55M in federal grants for dredging and widening shipping channels.

Oakland is getting most of the money – \$41M – to widen and deepen the harbor entrance, the outer and inner harbor channels, and two turning basins. The

channels will be deepened from 16m to 18m. Another \$8M is being made available for other dredging and maintenance.

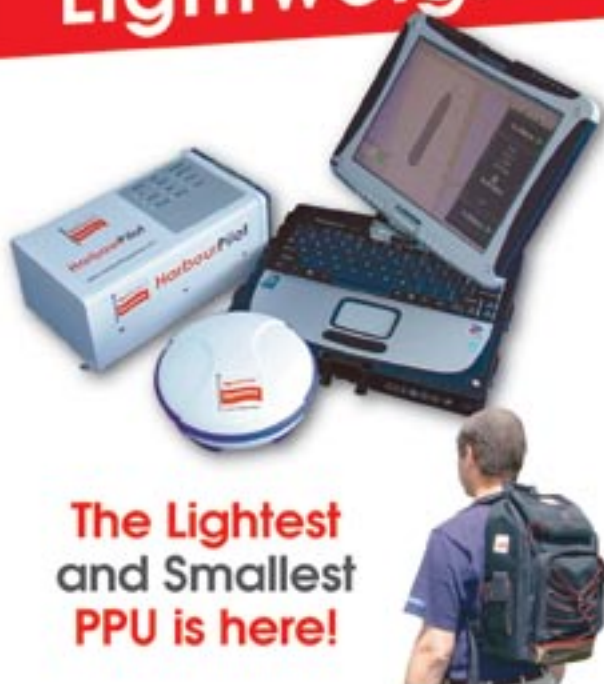
Los Angeles is getting \$3M to dredge near the mouth of the Los Angeles River that flows into the port's East Basin Channel, while Long Beach is getting \$3.5M to

dredge and widen its main channel, which is 24m deep.

The two southern California ports face no significant silting problems because they get very little run off from neighbouring storm drains and waterways. The Army Corps of Engineers will carry out the work at the three ports.

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- Andrea Maccaferri - Captain of Pilots, Port of Ravenna, Italy.

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30th IADC INTERNATIONAL SEMINAR ON DREDGING AND RECLAMATION

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For more information and registration, please contact Mr. F.H. Cammel at info@iadc-dredging.com or visit www.iadc-dredging.com

FOR WHOM?

For decision makers and their advisors in government, port and harbour authorities, off-shore companies and other organisations that have to execute dredging projects, the International Association of Dredging Companies organises in co-operation with UNESCO-IHE the International Seminar on Dredging and Reclamation.

The 30th Seminar will take place in Delft, Monday 16 to Friday 20 June 2008.

An important feature of the seminar is a trip on a trailing suction hopper or cutter to visit a dredging project being executed in the given geographical area. This gives the participants the opportunity to see dredging equipment in action and to gain a better feeling of the extent of a dredging activity.

Highlights of the programme are:

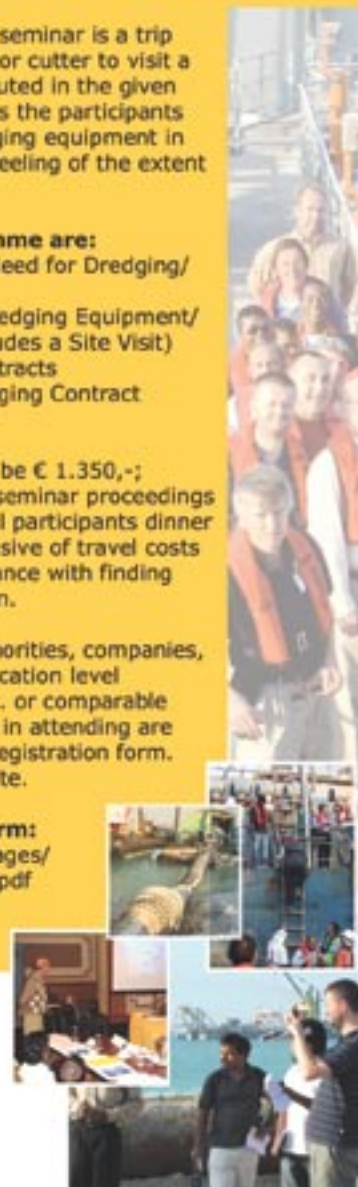
- Day 1 Why Dredging? The Need for Dredging/ Project Phasing
- Day 2 What is Dredging? Dredging Equipment/ Survey Systems (Includes a Site Visit)
- Day 3 Cost, Pricing and Contracts
- Day 4 Preparation of a Dredging Contract
- Day 5 Dredging Projects

The cost of the seminar will be € 1.350,-; this fee includes all tuition, seminar proceedings and workshops and a special participants dinner during the week but is exclusive of travel costs and accommodation. Assistance with finding accommodation can be given.

Representatives of port authorities, companies, and individuals, with an education level equivalent to at least a B.Sc. or comparable work experience, interested in attending are requested to complete the registration form. Please call or visit our website.

Download registration form:
www.iadc-dredging.com/images/stories/pdf/flyer-delft-2008.pdf

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Cash & Cargo

VUOSAARI CRANE

Steveco has ordered a ship-to-shore (STS) crane from Konecranes for its container terminal in Vuosaari, Finland. The crane is scheduled to be delivered early next year.

The recently ordered STS crane is similar to one ordered by Steveco in July 2007, which is due to be delivered to Steveco's terminal later in the year.

NEW IN NGQURA

Kalmar Industries has received an order for 22 E-One+ rubber-tyred gantry cranes from South African group Transnet. The equipment will be delivered in 2008–2009 for Transnet's port operations division Transnet Port Terminals (TPT) and is destined for the new Port of Ngqura.

The unit prices for RTGs range from €1M to 1.5M (\$1.4–2.2M).

DUBAI MOVE

Cavotec Middle East FZE has opened its newly constructed premises in Dubai. The new 7,200m² premises comprise offices, warehouse and manufacturing and assembly areas.

CHINA WINS SAUDI PORT CONTRACT

The contract to build port facilities at the new Saudi Arabian industrial city of Ras Al-Zour has been won by the China Harbour Contracting & Engineering Group. The contract is worth \$586.7M and will take three years to complete facilities to serve new fertiliser and alumina plants.

EVERGREEN AT KAOHSIUNG

Evergreen Marine Corp which currently operates two large container terminals in the Port of Kaohsiung, has extended its lease on its Container Terminal No 4 facility (Piers 115 and 116) for a further 10 years to 2018.

PRIVATISATION PLAN

French PM François Fillon said a programme to privatise stevedoring at the country's nine major ports would be approved in the next few months. The government's objective is to increase container traffic from 3.6M to 10M teu by 2015. Fillon said that port reform discussions would be held "port by port."



Artist impression: Noord-west

Funding: Rotterdam has arranged finance to secure its Maasvlakte 2 development plans

Investment in place

The Port of Rotterdam Authority took out three loans within a month to fund the construction of Maasvlakte 2 and supply infrastructure in Rotterdam's existing port area.

In the third deal a bank consortium involving ING, Fortis and Rabo entered into a funding agreement worth €450M (\$660M). Earlier deals involved the European Investment Bank (€900M) and the Bank

Nederlandse Gemeenten (€450M).

BNG, ING, Fortis and Rabo are also each providing €50M in working capital.

"These loans, totalling €2Bn, will easily cover our borrowing requirement for the coming years, including the construction of Maasvlakte 2", said financial director Thessa Menssen.

Work will start on Maasvlakte 2 later in 2008. The first terminals in the new 2,000ha port and industrial

complex will be operational in 2013. Total construction costs for Maasvlakte 2 are estimated at €3Bn. The port authority is engaged in filling in part of the Hartel Canal, building the Euromax container terminal and two LNG terminals on the Maasvlakte.

In total, the port authority, the government and trade and industry will be investing around €12Bn in the Port of Rotterdam over the next five years.

Argentine port and logistics partnership

A new partnership has been formed to operate and expand capacity at Argentina's second-largest container terminal and its complementary logistics and warehousing businesses.

PSA International, International Port Holdings and Roman Group announced that they have formed a joint venture to develop International Trade Logistics (ITL), a privately owned company.

Eddie Teh, group CEO, PSA International, said: "We are delighted to expand our presence in the Latin American market with this latest investment and we will work with our partners and the local authorities to develop and grow ITL's port-related businesses, including Exolgan Container Terminal, and capitalise on Argentina's expanding trade flows with Latin America and the rest of the world."

Flexibility in finance reform call

Barcelona Port Authority chairman Jordi Valls has renewed calls for the port to be awarded greater flexibility over port finances.

"Excessive rigidity over the establishment of tariffs on goods remains a major problem," Valls told *P&H*.

Spain's larger ports can raise or lower tariffs only within a range

established by the state port entity, Puertos del Estado. Barcelona Port Authority (APB) sets its own annual budget, but it has to be approved by Madrid before coming into force. APB says that state-imposed restrictions mean it cannot offer competitive discounts to clients.

Despite his call for reform, Valls was keen to distance himself from

predecessor Joaquim Coello's interest in running Barcelona as a limited company: "Barcelona should remain within the state port entity system," he said.

Meanwhile, APB has announced net profits of €73M (\$106M) for 2007 – a 12% growth in turnover.

Barcelona has pioneered port investment in logistics facilities.

LA's \$10M security boost

The Port of Los Angeles Authority (PoLA) will receive more than \$10M in state homeland security grants to beef up security at the nation's busiest container port.

The grants will fund new training, technology and facilities for the Los Angeles Port Police and other law-enforcement agencies that operate at the port, enabling them to speed communications and emergency responses, and inspect commercial vehicles more thoroughly.

"Our ports are the lifeblood of our prosperity, and this makes them an obvious target for those who would harm us in this age of terrorism," said Los Angeles mayor Antonio Villaraigosa.

"Protecting this great asset – the largest ports complex in the nation – is a crucial task. This injection of \$10M in Proposition 1B funds will be used to tighten vehicle inspections, expand training for our port police officers, buy equipment and implement a resource tracking system to aid first responders in the event of an emergency."

PoLA executive director Dr Geraldine Knatz welcomed the allocation. "These are funds we can use to bolster our facilities, training and field operations for the benefit of both San Pedro Bay ports and the myriad of agencies that provide our multi-layered security network."

Matthew Bettenhausen, executive director of the California Office of Homeland Security, who announced the security grants, said governor Arnold Schwarzenegger had worked extensively with the state legislature to increase funding to secure California's ports.

"The threat to our port system is one of the most fundamental challenges we face," Bettenhausen said. "The threat to California's economy is very real if our port system is vulnerable to a terrorist attack."

The grant money represents the first homeland security funding available from California's Proposition 1B, passed by California voters in November 2006 to improve air quality and goods movement, and enhance

the safety and security of the state's transportation system. The Port of Los Angeles received the single largest chunk of the \$40M.

The projects to be funded at the port include a new vehicle inspection facility where, among other things, a new X-ray imaging system will be used to examine commercial vehicles bound for the World Cruise Center.

Cash & Cargo

NEW PORTS GROUP

AIG International is to combine all its recent terminal acquisitions in the Americas under the Ports America banner. With the management merger, Ports America becomes the largest port and terminal operator in the Americas with operations in 49 ports with 95 terminals.

OIL REFINERY PLANS

Latvian oil trading company Dinaz Group plans to construct a €2.5Bn (\$3.7Bn) oil refinery project, including a new oil products export terminal.

HINTERLAND LINKS

German rail operator Deutsche Bahn and the Port of Rotterdam Authority have signed an agreement to work together more closely to improve hinterland links.



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Easy access to rail and highway transportation systems makes the Port of Houston the preferred port of call to more than 7,000 ships each year. Located in the 4th largest city in the United States, more than 50 million people live within a 500-mile radius of the port, reaching an enormous population base of consumers and producers. State-of-the-art public facilities situated along the Houston Ship Channel (45 ft deep and 530 ft wide) provide shippers with deepwater access to world markets. Learn more about how the **Port of Houston delivers the goods** at www.portofhouston.com or 1-800-688-DOCK(3625).



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(3625)

The Port of Houston Authority was the first U.S. port to implement an Environmental Management System (EMS) that meets the rigorous parameters of the International Organization of Standardization (ISO) 14001 standards.

People

HAIFA CHAIRMAN

Ben Zion Salman, former director general of Israel's Ministry of Transport, has been elected chairman of the Haifa Port Company.

Salman, 59, is an experienced transport specialist, specialising in transport infrastructure.

POSEK POST

The board of the South Carolina State Ports Authority (SCSPA) has elected David J Posek to serve a two-year term as chairman.

He joined the authority board in 2005 and has served as secretary since 2006. Posek has also chaired the board's strategic planning committee.

THOMSEN TAKES OVER

John Thomsen has moved from APM Terminals to be the new CEO of Aqaba Container Terminal.

Aqaba Development Corporation and APM signed a 25-year joint venture deal in 2006 for APM to operate, manage and market the container terminal. The facility is Jordan's only container terminal.

HALIFAX APPOINTMENTS

Two new appointments have been made to the board of directors of the Halifax Port Authority. Anne Galbraith and Thomas McInnis will each serve a three-year term. Galbraith is a past member of the Halifax Chamber of Commerce business park task force. McInnis is a member of the Greater Halifax Partnership.

REAL ESTATE MD

Joe McWilliams will head up a new department at the Port of Seattle as MD, real estate and property management. He will be responsible for port facilities and properties not directly associated with airport, cargo or cruise operations.

PORTFOLIO MANAGER

Macquarie Capital, affiliated with the Australian Macquarie Bank, the investment infrastructure agency, has appointed Robert Scavone to oversee its North American port portfolio. He joins from terminal operator Ports America (ex-P&O Terminals).



In the chair: Ottonel Popesco will head PEMA

Popesco elected PEMA president

Brussels-based Port Equipment Manufacturers' Association (PEMA) has elected Cavotec MSL chief executive Ottonel Popesco as its new president as it moves to rejuvenate itself.

"It gives me great pleasure to chair PEMA and carry forward its valuable work representing the interests of its members throughout the world," Popesco said. PEMA members have also appointed a new board of directors including influential figures from the maritime industry.

Established in 2004, PEMA

represents the interests of the world's port equipment sector to governments, international agencies and non-governmental organisations. PEMA also provides a forum for members to discuss issues, exchange expertise and reach common positions on industry norms.

Current PEMA members include ABB, Baltkran, Bromma, Cavotec MSL, Fantuzzi Reggiane, Hyster, Kalmar Industries, KCI, MAFI, RAM, SMV Liftrucks, Stinis, Svetruck, Terberg and TTS Port Equipment.

More info: www.pema.org

Middle East port risks highlighted

Would-be port operators have been warned against adopting standardised port business models by project finance lawyer Nicholas Edmondson.

"They can't possibly work," said Edmondson, a partner at law firm Trowers and Hamlin, at the MEED Port Development conference in Dubai.

He added that port operators faced severe political risks, because governments would be tempted to increase their share of revenues if the port proves successful during a long-term concession. Edmondson advised that shorter concessions were generally better or, as an alternative, operators should put in regular and frequent review clauses.

Edmondson also told delegates: "My one message relates to the early preparation of the groundwork." He said that port operators and would-be operators are often well equipped for port development but that, in the Middle East, governments are normally less well prepared.

He encouraged operators to identify the government's policy objectives, and to structure bids accordingly.

Edmondson added that judicial reviews against administrative decisions are often unavailable in the Middle East.

Congestion warning for US box trade

Container port capacity in the US North Atlantic will not keep pace with demand in the coming years, resulting in unacceptably high port use, severe congestion and reduced productivity, according to a confidential report produced for the Maine Port Authority.

Produced by the US-based Cornell Group, the report estimates North Atlantic container traffic will

increase from 10M teu in 2005 to 17.8M teu in 2015, but that US port capacity will increase from 12.2M teu to 18.8M teu.

Ports will be working at over 93% capacity. Taking 65% capacity as the level at which a facility is most efficient the report warns of 'severe' port congestion, and urges immediate new port capacity building by North Atlantic ports.

By 2015 North Atlantic ports will need to add 'at least' 43% more capacity, or 8M teu, to that already planned. The report estimates that the ports are 18% short of required efficient capacity – or 2.2M teu. If more container terminals are not built, the report warns South Atlantic ports will capture the cargo. In all, it calls for 27M teu to be added by 2015.

Barge traffic review urged in Germany

Germany's main container ports are pressing for an expansion of container barge services in a bid to ease congestion and move containers away from terminals more quickly.

Bremen state government has asked its port management group Bremenports to develop a plan for the promotion of container barge links and Hamburg terminal operators are seeking to speed up handling times and improve productivity through closer co-operation.

None of the German ocean terminals offers dedicated berths for barges and cargoes are often scattered across various loading points inside the

ports. Hamburg terminal operators HHLA and Eurogate are now introducing a joint control unit for feeder ships.

This may be extended to barge traffic as from next year, according to Thomas Lütje, an executive at HHLA and chairman of barge traffic lobby group Elbstromverein. "The idea is to co-ordinate barge calls and consolidate the cargo volumes at the respective terminals," he said.

Barge traffic at Bremerhaven and Hamburg now accounts for only 1% to 2% of all intermodal moves compared with over 30% in Antwerp and about 40% in Rotterdam.

Marsaxlokk deal signed by PM

CMA CGM will invest €130M (\$190M) in upgrading transshipment capacity at Marsaxlokk Freeport. The expansion plans include deepening the port's draught from 15.5m to 17m to accommodate 13,000teu capacity ships.

Malta's PM, Dr Lawrence Gonzi, signed an agreement with CMA CGM chairman Jacques Saadé to extend the French operator's container terminal concession from 30 to 65 years. CMA CGM said it had agreed to increase capacity at Marsaxlokk to 3M teu and create 500 new jobs.

Terminal expansion works will include the creation of 133,000 m² of new land space and a 120m extension of the berth line.

CMA CGM moved 1.5M teu of the 1.9M teu handled at Marsaxlokk during 2007.



Long lease: CMA CGM has signed for 65 years

Pan to oversee LA's \$3Bn projects

The Port of Los Angeles (PoLA) has made two senior appointments to its finance team as it gears up for unprecedented levels of spending on expansion of facilities, security and environmental measures.

Karl Pan moves as CFO to oversee development of the port's multi-billion-dollar annual budget and Ralph Hicks take over as director of economic development.

Pan is an experienced domestic and international finance expert and a former chief financial officer for Los Angeles World Airports. Pan will also conduct audits to evaluate and improve operations at PoLA. He will supervise approximately 60 employees in the port's accounting and budget, financial management, debt management, risk management and internal

management audit divisions.

"As we implement our 'green growth' strategy and a 10-year capital improvement programme that encompasses more than \$3Bn in construction projects, Karl will play a key role in ensuring that we retain our AA bond-rating and leverage our financial assets in the best possible ways," explained Molly Campbell, Port of Los Angeles' deputy executive director of finance and administration.

Hicks, who is a former senior official with the San Diego Unified Port District and brings with him broad experience in urban redevelopment projects, has a newly created post to fill.

He will help shape a variety of development projects including the San Pedro Waterfront Project,

which will create a variety of development opportunities throughout 400 acres (162ha) of port property.

"The San Pedro and Wilmington waterfront projects demonstrate the port's commitment to enhancing the surrounding communities with redevelopment that's not only attractive and people-oriented, but improves residents' quality of life," said Kathryn McDermott, PoLA's deputy executive director of business development.

The port has five terminal development projects planned or in progress and is undertaking improvements to transport links to ease land-side congestion.

More info: www.portoflosangeles.org

People

CANAVERAL TEAM

The Canaveral Port Authority has elected Joe Matheny as the new chairman of the board of commissioners. Lauren Kotas Brand, former director of trade and cargo development at Port Canaveral, has returned to the authority to a now-expanded role as senior director of business development. Diane Denig has been promoted to assistant director of tenant relations.

AT TACOMA TWO JOIN...

Tom Kress has joined the Port of Tacoma as a senior project manager, responsible for project management, contract administration, project design, construction inspection, surveying and materials testing for port construction projects. David Myers has become senior project manager, responsible for capital projects related to redevelopment of the Blair-Hylebos Peninsula.

...AND ANOTHER LEAVES

After more than three decades on the Port of Tacoma Commission, chairman of the board Jack Fabulich has retired. Over that time the port's trade has grown, taking the port's container volumes from 85,000teu in 1977 to nearly 2.1M teu now.

TERMINAL CEO

International Container Terminal Services Inc (ICTSI) has appointed Gassen C Dorsamy COO and GM of subsidiary Madagascar International Container Terminal Services.

He replaces Christian R Gonzalez, who moves to become VP and GM of ICTSI flagship Manila International Container Terminal.

SUTCLIFFE'S STEP

Gdansk port authority has engaged James Sutcliffe – founder and former chief executive officer of DCT Gdansk – to co-ordinate investment and development plans in conjunction with senior management.

Through the company Port Evolution Management UK, Sutcliffe's operations extend to major port projects in areas such as India and the Mediterranean.

Promoting a positive image

In this, the first of a new round of Open Forum, **P&H** asked **Eivind Kolding** for some views on a new initiative to get the container shipping industry's story known in the wider world

Twenty-four of the world's largest container shipping companies, working collaboratively together, have launched an initiative to improve the industry's public image. The Container Shipping Information Service (CSIS) has been established to give this influential global industry a chance to tell its story to the wider world.

"Normally people do not give the world of shipping a second thought. Yet without it modern life would not exist in the way we know it," Kolding observed. He continued: "Container shipping is a fantastic industry and one that affects everyone. Our industry connects countries, markets, businesses and people, allowing them to buy and sell goods on a scale not previously possible.

"Consumers benefit from having a much wider range of choice of goods at affordable prices and at any time of year. Manufacturers, farmers and retailers profit from a much wider base than ever before to which they can export and import cost-effectively.

"Yet for a long time the container shipping industry has remained publicly silent about its role. We now feel it's time to tell our story – and third-party market research confirms that there is a real need to do so," Kolding commented.

"CSIS aims to communicate with a wide variety of audiences to raise awareness of what we do in simple, appealing and relevant language. Given the current situation where the only time people hear about container shipping is when a marine incident occurs, the



important thing is to put our industry into a broader perspective so that everyone can understand the many benefits it brings."

By setting up CSIS, the major container shipping lines have recognised a wider demand for more information about topical industry issues. The new service will give the industry a vehicle by which to educate the wider world on the benefits it brings to people all over the planet in their daily lives. But it recognises that it affects the world in a number of ways and that people are increasingly interested in areas such as environment,

security, globalisation and innovation. Accordingly, CSIS will focus on these areas too.

As a first step, CSIS has created a public website that is designed to appeal to a broad audience. It highlights the ways in which container shipping affects daily life, and explains more about topical areas of interest.

On innovation, CSIS highlights the continual changes within the container shipping industry that have led to a highly efficient form of transport that would have been inconceivable 50 years ago. For the most part, the public just sees a box on a lorry. The apparently simple combination of a standardised container, ships and smooth connections to other transport modes is remarkably efficient and plays a huge part in our daily lives. Container shipping lines are continuing to innovate and to work with terminals to find new ways of avoiding transport bottlenecks around the world.

Considerable debate is taking place in the public arena worldwide about the impact on the environment of different forms of transport. CSIS points out that shipping remains the most environmentally acceptable way of moving



large quantities of goods around the world.

The industry is working assiduously to lower its environmental impact. For example, container lines are cutting down on their fuel consumption by reducing vessel speeds and they are also looking at the quality of the fuels used. Another way of tackling consumption is through innovative ship design, which can help reduce friction in the water. And after its useful life is over, 98% of a container ship can be recycled these days, while a steel shipping container is 100% recyclable.

Security is, of course, a paramount concern for the industry, which is working with port authorities to minimise potential threats. CSIS believes it is important that the wider world understands, and is reassured by, these joint efforts. Communicating updates on this subject will help to achieve this.

Most of the manufactured goods the public uses have been brought to them by container ships. Probably, few people realise this or appreciate the way in which the industry has facilitated world trade. The demand for consumer goods has expanded dramatically over the past 10 years, leading to a massive increase in the quantity of cargo being transported across the world.

These larger volumes benefit the consumer

Members of CSIS

Atlantic Container Line, China Shipping Group, CMA-CGM Group, COSCO, Crowley Maritime Corporation, CSAV, Evergreen Marine Corp, Hamburg Süd, Hanjin Shipping, Hapag-Lloyd, Hyundai Merchant Marine, Kawasaki Kisen Kaisha, Mærsk Line, Malaysia International Shipping Corporation, Mediterranean Shipping Co, Mitsui O.S.K. Lines, Neptune Orient Lines/APL, Nippon Yusen Kabushiki Kaisha, Orient Overseas Container Line Ltd, Pacific International Lines, United Arab Shipping Co, Wan Hai Lines, Yang Ming Marine Transport Corp, Zim Integrated Shipping Service

in the form of lower end costs. A few examples can bring home to the consumer that transport costs contribute a very small part of the final shelf price. A television set worth \$700 costs only \$15 to send from Asia to Europe, while for a kilo of coffee retailing at \$15 the transport cost amounts to just 15 cents.

These insignificant transport costs – the result of massive economies of scale achieved by the industry, including ports – have helped

producers and consumers all over the world find each other.

Kolding stated: "Getting the public across the world aware of what we do is a big task and it will not happen overnight, but we have started the process. Other industry organisations, of course, have their part to play in promoting their aspects of the industry to their specific audiences. We don't plan to compete with them, rather to complement and extend the work they are doing."

By creating CSIS, the industry aims to improve its image with a wider audience than ever before – something that will benefit all connected with the commercial maritime world. It is to be hoped that this initiative will stimulate others in the global maritime transport chain to emulate CSIS, or create websites that would follow up on some of the themes, as part of a campaign to increase awareness and emphasise the positive aspects of the container shipping industry. **PH**

*Eivind Kolding is partner, CEO of Mærsk Line and of the Container Business
More info: www.shipsandboxes.com*

Big task: Kolding (above left) has a message about the benefits of containerisation

Photo: Dietmar Hasenpusch





Dredging bar raised

It's been a cliff-hanger for over six years, but Melbourne has finally overcome public protests to start its dredging programme. The legacy may haunt other ports, however, as **P&H** reports

After overcoming a series of last-minute legal appeals, the Port of Melbourne Corporation (PoMC) finally saw its controversial and much-delayed A\$1Bn (\$893M) channel deepening project get under way last month. The go-ahead was signalled by January's Federal Court decision to dismiss an application by the local anti-dredging group Blue Wedges to halt the work.

The environmentalists were then granted another hearing to challenge federal environment minister

Under way: the *Queen of the Netherlands* started work in Melbourne last month

Peter Garrett's approval of the project and obtained interim restrictions on the work's scope and location.

This was just the latest move in what has become, over the past six years, a vast environmental soap opera. On the one hand, emotive arguments were raised over the impact of dredging Port Phillip Bay and, on the other, warnings that Melbourne would become an "economic backwater" without the deepening. Rarely has a dredging project attracted such bitter and dogged environmental and public opposition.

Dealing with the protests and the delays has cost PoMC dear. The initial environment effects statement (EES) and the supplementary EES (SEES) came to an astonishing A\$122M. The trial dredging in 2005 cost A\$30M and further expense was incurred in a pre-ordering programme for equipment – making this one of the most highly scrutinised, and costly, projects of its kind in the world.

With Victoria state funds contributing A\$150M to the project, most of the remaining A\$819M will be recouped over 25–30 years by an additional A\$31.50 per teu wharfage charge levied on full international containers coming through the port.

The port had to wait until the last minute for approval for its environmental management plan (EMP) from federal environment minister Peter Garrett. The project was unable to start without this approval. Royal Boskalis's vessel, *Queen of the Netherlands* arrived in late January, but then was kept standing by in the channel – at a cost of A\$1.7M (\$1.5M) a week – until 6 February, when the federal court heard Blue Wedges' appeal against the environment minister's decision.

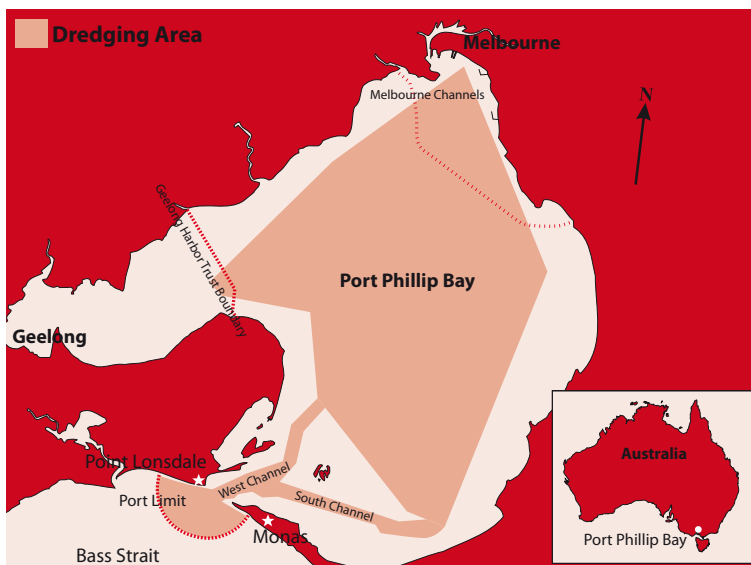
The court brokered a compromise deal restricting dredging to the previously dredged South Channel. Boskalis had not planned to start there, so *Queen of the Netherlands'* clay-configured cutter heads had to be replaced by heads suitable for sand. The court also said that only 1M m³ of material was to be dredged until a further hearing on 20 February.

The legal wrangles did not stop there, however, although some of the dredging restrictions were relaxed. Despite the judge finding Blue Wedges' arguments "very weak" and in parts "entirely unsustainable", yet another federal court hearing was fixed for 3 March. The environmentalists' core objection is that dredging will disturb contaminated silt in the Yarra River.

News of the dredging project go-ahead came as a huge relief to the international shipping industry, the port and Victoria's mainstream business community, which have been supporting channel deepening since at least 2001. The work is likely to take almost two years, during which time a certain amount of shipping dislocation will occur, although the PoMC says it will attempt to reduce the disruption as much as possible.

Shipping Australia Ltd CEO Llew Russell said ship operators still had some concerns over the likely disruptions and were also disappointed about how the project cost was being shared.

The original EES was conducted between May 2002



Growth: PoMC says the project will improve access and expand trade for the region

and July 2004, followed by an eight-month assessment. Then the SEES was started, which took a further two years, as the entire research had to be reworked when the initial study was found to be deficient.

PoMC CEO Stephen Bradford said the dredging EMP, which would shortly be made public, would prove to be the most rigorous in the world. "We'll be monitoring the bay and the outcome of dredging well after the project completes," he confirmed.

He conceded that the port initially "misunderstood the challenge of communications" with the local public. However, while welcoming the project's green light, one Australian port industry expert warned that the 'environmental bar' has now been lifted so high on the approvals process in Melbourne that other ports may now face similar difficulties and expense.

Under the plan, 23M m³ of sand, rock and clay will be removed from the seabed to deepen the channel by more than 5m in some parts of the bay. When dredging is completed by the expected date of the end of 2009 the entrance to Port Phillip Bay will have been deepened from 14m to 22m. At present, vessels can only arrive or depart with a maximum draught of 12.1m.

Once dredging has been completed vessels will be permitted a maximum draught of 14m. "We think that in early 2010 the major lines will quickly move to larger vessels," Bradford observed.

The SEES was a key component of the formal process of assessing the channel deepening project before decisions were made on whether to proceed. This "unprecedented" study of Port Phillip Bay has led to a more precise understanding of the bay's marine ecology and how best to deliver a sustainable project.

Terminology

EES: environment effects statement

SEES: supplementary environment effects statement

EMP: environmental management plan

TIMELINE Dredging programme

- 1993:** Deepening first suggested
- 1997:** Initial estimates cost project at \$50M
- 2002:** Original EES starts
- 2004:** Project cost estimates grow to \$550M
- 2004:** Original EES completed
- 2005:** Costs rise and sediment contamination discovered
- 2006:** SEES undertaken
- 2007:** Public inquiry; ministerial approval
- 2008:** January – federal court gives go ahead
- 2008:** February – dredging starts
- 2008:** March – EMP approval expected
- 2008:** Community communication starts
- 2009:** Project to finish by the end of the year

A public exhibition of the SEES was held between March and May 2007, which allowed the public the opportunity to make formal comments on it and its findings. Afterwards, an independent planning inquiry, established by the Victorian minister for planning, conducted a public hearing that comprehensively reviewed the SEES and the public submissions. The hearings concluded in July 2007, and the inquiry provided its report with recommendations to the minister in October, for assessment.

By the end of that month, the planning minister released his assessment of the channel deepening project, based on the SEES public inquiry, concluding that the project could proceed on an "environmentally acceptable basis".

Bradford said the project had set the "highest benchmark" for environmental assessment in Australia. Now the the port was set to put the next phase of community communication in place.

As a first step, the Port of Melbourne Corporation called last month for residents and industry to nominate members of a community liaison group. The port sees this as central to the continuing consultation process as the project unfolds. Bradford hopes the new group will represent a cross-section of the community, including those with an interest in the environment, heritage, recreation, tourism, business and industry.

It is anticipated that many members will be drawn from local groups. They will be expected to provide advice and input to the PoMC about community interests in the project as well as to disseminate information to outside organisations.

"As we have done previously through our community consultation process, the port wants to ensure that a diversity of voices interested in the future of the bay are heard," Bradford emphasised. "The group will provide PoMC with a forum for information exchange. It is not a decision-making body. However, the feedback will certainly help inform PoMC." **PH**

More info: www.portofmelbourne.com,
www.channelproject.com, www.dse.vic.gov.au



Photo: Joachim Affeldt

Is shipping cleaning up its act?

Disposal of ship-generated waste in ports remains a complex, contentious and often expensive issue, as **P&H** learns

Sophisticated treatment technologies mean that much of the waste generated from ships' operations can be treated on board. Effluents can now be treated to the IMO-compliant level of 15ppm or less, while most vessels, especially cruise ships, have incinerators and compact crushers on board to reduce their environment impact.

Harbor authorities also need to ensure that they provide adequate reception facilities to receive the nasty stuff that shipboard systems cannot treat. Food waste, domestic and operational effluents generated during normal ship operation, cargo residues, sewage, oil mixtures and noxious liquid substances are among the materials that must be handled. Most ports have a waste management plan that includes information on costs, availability and the types of facility offered.

Yet the disposal of ship-generated waste at port remains a contentious issue. The major concern is that current MARPOL regulations, while stipulating that ports and harbors are required to provide adequate solutions, do not offer incentives for ships to deliver their waste streams to ports. As a result, some less-

than-conscientious ship operators are still discharging illegally, according to Jens Peter Øhlenschläger, project director, port environment, for Denmark-based waste management service provider Grontmij-Carl Bro.

"Some ships continue to discharge illegally, some ports don't provide adequate facilities, there is no costs transparency and the fee system is complicated," he said. Much of the industry-wide concern and possible solutions have been succinctly detailed in a Carl Bro report for the European Maritime Safety Agency.

The document addresses the availability and use of port reception facilities for ship-generated waste. Its authors found the overall picture to be "very complex, scattered and, in some cases, confused". Their conclusions suggest that EU Directive 59/2000, with its objective of establishing sound port/ship waste guidelines, has fallen short of its intended purpose because port authorities (PAs) have interpreted the directive in a multiplicity of ways. This has led to confusion among stakeholders, namely ships, shipping agents, waste operators and environmental authorities.

"Most ports and ships have shown therefore a strong

wish to have more detailed and clear and uniform guidelines, when these are not provided by central or regional government," the report concluded.

Carl Bro recommends:

- Guidelines on the PAs' waste management role
- Cost recovery details (including principles and methods for calculation and fees)
- Contractual framework for waste operators
- A common delivery certificate to avoid fraud.

In the UK, where Associated British Ports operates 21 of the country's ports and harbors, the regulations are rigidly enforced and it is not uncommon for the PA to prosecute those that flout MARPOL or EU requirements. ABP strongly opposes any suggestion that commercial port authorities should enforce and police the requirement, however.

As Peter Barnham, ABP's sustainable development manager, said: "We expect all ships to notify us of their waste disposal requirements before they arrive and we have always provided facilities for ships to get rid of their waste, but it is not for ABP to police it. There have been moves to get PAs to [enforce the requirement], but it is not our role to be the policemen. I would be loth to see greater responsibility put on commercial ports to do this. Governments need to enforce it, not the PAs."

Richard Trafford, formerly of Tilbury Environmental Group, believes that policing the waste management process, especially by less-developed nations, is "haphazard". He said the current system leaves itself open to "skulduggery", adding that he has seen some ship operators openly offer 'backhanders' to port officials to dispose of ship's waste through irregular channels or to 'turn a blind eye' to effluents being pumped into the harbor.

Ship operators, understandably, view the situation rather differently. In their eyes, the "adequate facilities" that ports say they provide just do not exist or are unusable when needed most. The problem is especially bad for tramp shipping because the port rotation and future itinerary is often not known until the last moment. At some ports the facilities are provided by commercial contractors that service other shore-based industries as well. "We have to give these contractors a week's notice to come and collect slops in a road tanker," one ship manager told *P&H*, "but we only know our destination when the charterer declares his option – and that can be just 12 hours before arrival."

Ship operators also complain about the cost of disposing of general garbage. Many different charging methods are in use, not all of which are seen as fair. Some owners of small coasters say they have been charged hundreds of dollars merely to dispose of one or two small sacks of packaging and galley waste.

For its part, IMO is aware that more needs to be done and is working to produce an action plan that will address the issue. IMO has asked member states to provide their views on how to improve regional arrangements at the MEPC 57 meeting at the end of this month (March).

The plan includes suggestions for:

- Reporting requirements
- Provision of information on port reception facilities

- Identification of technical problems in waste transfer
- Standardisation of garbage segregation requirements
- Containment identification
- Review of type and amounts of onboard wastes
- Review of the type and capacity of port reception facilities for waste
- Revision of the IMO *Comprehensive Manual on Port Reception Facilities*
- Development of a guide to good practice on port reception facilities.

So far only a few member states have entered information on to the IMO's Port Reception Facilities Database (PRFD), a module of the Global Integrated Shipping Information System (GISIS) – see panel below. For the PRFD to improve the provision of reception facilities, the database has to be used routinely by the industry. To achieve this, extensive records of reception facilities worldwide are needed, ideally including contact points in administrations of flag and port states.

Onboard ship waste treatment solutions have come under attack too, especially oily water treatment systems. Since the revision of IMO's Annex 13 MEPC 107 (49) in 2006 there has been some confusion about how best to comply with the ruling.

Earlier resolutions covered only free oils and not pollutants from emulsified oils. Because the latter are now included, oily water separation (OWS) systems that met the MEPC 60 resolution may not be in compliance with MEPC 107, since the separation process for treating emulsions is quite different from those that separate water from free oil. OWS have to remove mechanical and chemically emulsified oils down to less than 15ppm. It is likely that new guidelines would stipulate OWS generating minimum oily effluent, the separate collection of oily drains, 'clean' drains and the provision of an integrated system to process oily bilge water and oil residues. **PH**

More info: <http://gis.imo.org>

Reported reception facilities

As at January 2008

Annex I

Oily bilge water	1,309 facilities in 57 countries
Oily residues (sludge)	1,088 facilities in 55 countries
Oily tank washings (slops)	878 facilities in 56 countries
Dirty ballast water	906 facilities in 54 countries
Scale and sludge from tank cleaning	741 facilities in 51 countries
Oily mixtures containing chemicals	721 facilities in 41 countries

Annex II

Chemicals/NLS	862 facilities in 34 countries
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Annex IV

Sewage	296 facilities in 12 countries
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Annex V

Garbage	363 facilities in 15 countries
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Annex VI

Ozone-deleting substances	22 facilities in three countries
Exhaust gas cleaning residues	33 facilities in three countries

Source: Port Reception Facilities Database, GISIS

Bagged up and ready to go – but not all ships are so conscientious and some ports lack adequate waste disposal facilities



Smart solutions sought

It takes less than a year to build a huge vessel, but much longer to construct the port to handle it. So how can ports increase productivity while conforming to strict environmental rules? **P&H** thinks smart

Movement:
terminals, such as
Antwerp, above,
are slowly looking
at automation

Robotics has transformed numerous industries over the past two decades. Many products and applications are available for land-based industries as diverse as car manufacture and mining.

Today, the idea behind these applications is slowly making itself felt, if not right on the quayside, then in the yards behind it. The aim is to improve productivity, to turn around containers faster and make their dispersal inland more efficient. But there are other benefits too.

As container throughputs continue to grow, terminals want cranes to make as many moves per hour as possible. Their productivity is often impeded by the time lost waiting for terminal tractors to be manually positioned underneath the cranes for container loading and unloading. The answer is to automate the yard movements.

Automation in ports is nothing new – there have

been products available for over 20 years – but it is still a developing sector and the future possibilities are vast, given the slow and limited spread of robotics through the industry. There are pockets of innovation, such as Rotterdam, Brisbane, Hamburg and Antwerp, where container handling in the yards is being automated to increase terminal capacity. Expansion may take a while to catch up with world trade growth, but terminals are straining to cope with the influx of boxes. Better use of machines should produce environmental gains too, as modern equipment has lower fuel consumption and lower emissions.

There is another area where improvements can be made, and that is in safety. And this is one message that the new CEO of Kalmar Industries, is determined to put across. Pekka Vauramo has joined Kalmar from Finnish mining group Sandvik Materials Handling. While at



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Other ports are watching to see how successful the Brisbane and Hamburg projects are but have been slow to take up the principle

Sandvik, Vauramo drove through new products in automated underground mining equipment and his first impressions are that ports could benefit from the safety advances seen in other industries such as mining, he told *P&H*.

Safety has to be the main issue, "particularly for bigger operators who have to show a high level of social responsibility", he observed. He wants to show the ports industry that automation promises major productivity and safety gains, as he found in mining.

"There is potential and we are investing in this," he said. "But the market doesn't exist today. We are working closely with terminal operators on that."

Automated areas are separated from manually operated areas. Human interaction with the process is limited to supervision and remote operation, reducing direct involvement with cargoes, he explained.

Just the decision to move to automation can prompt an overhaul of a terminal's processes, leading to improvements in its procedures and processes, as well as enhanced safety and security measures.

Kalmar has experience in two automation projects – in Brisbane and in Hamburg. In Antwerp, Gottwald has been active. Other ports are watching to see how successful these projects are but have been slow to adopt the principle on any scale.

At Brisbane, record levels of productivity are being reported for Patrick Stevedore's automated straddle carrier operation at Fisherman Islands' berths 7 and 9. In August, the Australian stevedore averaged 21 moves

per hour and made an impressive 32,000 lifts over the month. Terminal manager Matt Hollamby said this level of moves per hour is a significant improvement on operations six months earlier.

Patrick Stevedore's target is 25 moves per hour and Hollamby expects to achieve this early this year. Andrew Zerk, chief executive of Patrick Technology & Systems (PTS), which is overseeing development of the automated straddle carriers, said productivity improved by 30% in the second quarter of 2007.

In Hamburg, the first phase – five blocks – of the new yard at the Hamburger Hafen und Logistik AG (HHLA)-operated Container Terminal Burchardkai (CTB) will be handed over in the course of the year. The second phase, covering three more blocks, was announced in November last year.

HHLA aims to double CTB's capacity from 2.6M teu to 5.2M teu by re-engineering operations. The conventional straddle carrier container storage area will be converted to a rail-mounted automated stacking crane (ASC) system by 2015 when CTB will be a semi-automated operation.

Christian Blauert, MD of CTB, said that by 2015 the terminal will be operated with 29 yard blocks stacking 10 containers wide, five high and 44teu (330m) long. Each block will employ two smaller rail-mounted ASCs capable of travelling over the 10-wide, five-high stacking blocks, and one wider and higher ASC capable of passing over the smaller cranes.

Rail-mounted ASCs from Gottwald are being used at the DP World Antwerp Gateway Terminal. Bruno De Jonghe, director of projects and technical services Europe/Africa at DP World, the first cranes have improved "productivity, safety, reliability, costs and boosted environment-friendly operations".

He confirmed there would be more automation in the group's planned terminal expansion," said De Jonghe. The terminal was, he said, "aiming at achieving high productivity by automation". Gottwald estimates the cranes enable terminal operators to save up to 18% of space compared with other operations.

Meanwhile, at Rotterdam's expanding Maasvlakte development, ECT, part of the Hutchison Port Holdings (HPH) Group, intends its Euromax Terminal to be fully automated. Gottwald-developed software is being tested to ensure collision-free routing, high-speed container handling, accurate positioning and efficient failure management. **PH**

More info: www.kalmarautomation.com;
www.gottwald.com;

**On the rails:
Hamburg (below)
is increasing
capacity through
automation plans**



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GROWING TOGETHER.



Working together for bulk carrier safety

Can ships cope with the increased loading rates imposed at some terminals? INTERCARGO is investigating, as **Roger Holt** reports

Increased demand worldwide for commodities has led to an unprecedented level of shipments of all types of dry bulk materials – UNCTAD estimates they have risen by at least 40% since 2000. Ports are therefore under great pressure from owners, shareholders and governments to reduce terminal congestion and improve efficiency.

But trade associations such as INTERCARGO – the International Association of Dry Cargo Shipowners – owe a duty of care to their seafarers to ensure that loading is carried out responsibly to avoid the potentially fatal consequences of cargo shifting or structural damage to the ship. The topic is not new.

Good practices on stowage and trimming have been set out for decades and have been referenced in many documents, including the IMO's Code of Safe Practice for Solid Bulk Cargoes (BC code) adopted in the 1990s. The essential nature of communicating and agreeing loading and unloading plans was later enshrined in

Rules and regulations

Code of Practice for the Safe Loading and Unloading of Bulk Carriers (BLU Code)
1998 EC Directive 2001/96/EC Safe Loading and Unloading of Bulk Carriers 2003

“ Although excessive loading rates is not a new issue we need to find a forum to share this disquiet with others ”

the ship-port interface, when IMO produced the BLU code and BLU manual.

The precepts of the BLU code and manual are now followed by all responsible terminal operators throughout the world, with take-up given a boost by the European Union, which mandated the BLU Code usage in a 2001 directive.

So far so good, but surveys of many of INTERCARGO's 135 members have revealed that some terminals – notably in Brazil – have been loading high-density cargoes at rates of, and even over, 16,000 tonnes per hour, with other terminals setting their own standards for what constitutes an “efficient” loading rate.

Masters employed by our members have responded in droves to an INTERCARGO survey saying that, in their opinion, such attitudes directly compromise the structural integrity of the ship. Some have reported commercial pressure to accept loading rates that they do not feel comfortable with, while others say they have been cajoled to arrive at the terminal in a highly questionable state of de-ballasting or with the propeller only 90% immersed. This can compromise manoeuvrability at a time when it is critically required.

We are aware that in some cases mandatory assessments of ships' ballasting and de-ballasting capabilities have been used by terminals to pressurise masters into accepting particular loading sequences. We recognise that this is part of the day-to-day commercial and operational ship-port interface negotiations, but perhaps, as responsible partners in safety, we should from time to time refer back to the principles of IMO's BLU Code, which calls for communication and agreement as to loading plans.

Given these pressures, INTERCARGO has joined forces with the American Bureau of Shipping (ABS) to initiate in-depth research into the parameters affecting loading rates. Classification societies are, of course, recognised as having the ultimate technical knowledge that ensures ship safety is not compromised and ships are not at risk of blocking berths through overloading-related incidents or longer-term crack propagation.

One aim of the ABS study is to arrive at a more precise understanding of the high loading rate issues. Its technical approach will encompass sample loading sequences reflecting the essentially dynamic nature of the stresses and strains experienced by ships during loading. This is, in fact, a continuation of an earlier ABS bulk carrier study in the 1990s.

Also to be considered is how inaccurate draught readings taken at exposed berths may result in deviations from the loading plan agreed between ship and terminal. Then there is the question of overshoots. A five-minute overshoot on each pour into the vessel's hold can dump significant levels of high-density cargo at high loading rates. Industry partners must appreciate

that reading draught marks in less-than-still water conditions may well compound known inaccuracies in the weights of cargo measured by the terminal.

Although no two ships react in the same way, INTERCARGO believes that detailed research to test these potentially excessive loading rates will be needed to ensure that the natural hogging and sagging strains of bulk carriers are not breached.

The analysis and involvement of experts, such as those at ABS, will be essential if terminals and masters are to continue to operate ships within permissible structural limits. We are well aware of the need to move ahead as quickly as the results analysis allows.

In summary, those variables that need to be taken into account – and they are many and varied – involve at least the following parameters:

- Loading and operation (in port and at sea)
- Cargo hold loading pattern
- Loading sequences (number of loading pours)
- Cargo loading rate (x M tonnes/hour)
- Pump capacity (y M tonnes/hour)
- The expected overshooting time for individual loading pours
- Accuracy of draught readings
- Cargo profile in individual cargo holds.

In co-operation with INTERCARGO, ABS will select a typical Capesize bulk carrier for a sample case study and collect realistic loading sequences with high loading rates. From this it is expected to develop an approach to evaluate the effects of high loading rates and overshooting on overall structure. It will also develop an approach to evaluate the effects of high loading rates and overshooting on local structure.

INTERCARGO has supplied realistic loading sequences for an alternate hold loading condition of an average Capesize vessel – although care must of course be taken to consider the implications of what is meant by “average”. The conditions it uses are: loading rate: 9,000t/h average, deballast rate: 5,800m³/h average, number of loading pours: conservative.

Talk of loading rates even greater than the 16,000t/h – in some cases 20,000t/h – that has been mooted is disquieting, nonetheless. INTERCARGO's technical and executive committees meeting in Shanghai and Europe this year will be giving the issue the attention it deserves.

We recognise the commercial interests of others, so although excessive loading rates is not a new issue we need to find a forum to share this disquiet with others. We owe it to INTERCARGO's seafarers to press for the highest possible safety standards, as they will be the ultimate beneficiaries of our efforts. **PH**

*Roger Holt is SG of Intercargo
More info www.intercargo.org*

Photo: Southern Cross Maritime

Slow down: the demands of global trade may pose a threat to vessels



Photos: Stephen Spark

New initiatives for the future

Regional agreements are being formed this year that will govern how port developments of the future will be conducted in Africa and other developing areas, as **Bridget Hogan** discovered

Experts from all over Africa concluded discussions in February on draft revised environmental protocols to cover developments along coasts in Africa and the Black Sea areas. These should be completed by the year's end and will set out standardised procedures that those planning to develop ports and terminals will have to conform to. These new protocols bring up to date a series of measures introduced from 1984.

They also build on another initiative, from the United Nations Environmental Programme (UNEP), which included IAPH. This was the *Key Principles for Port and*

Harbour Development, published in 2004, which was aimed at raising port managers' awareness about the environmental consequences of port developments.

Up to half of the world's coastline could be the target of development, the UN estimates, much of it from industrial projects such as ports. Over a billion people live in these coastal urban areas.

Against this background, 108 governments and the European Commission declared their commitment to protect and preserve the marine environment from the adverse environmental impacts of land-based activities. The Global Programme of Action for the Protection of



Mahébourg's mangroves: they will flourish as expansion is concentrated on Port Louis

the Marine Environment from Land-based Activities (GPA) and the Washington Declaration were adopted in 1995 – UNEP was asked to lead the co-ordination effort and establish a GPA co-ordination office.

The programme officer heading the GPA is Dr Anjan Datta, who explained that UNEP developed guidelines and helped countries use them to create legislation. The latest efforts had been in revising protocols that cover coastal management and the integration of the coast. "Ports and harbors are a very important element of this and not only new facilities, but the management of older facilities as well," he said.

The Programme has worked at a regional level to ensure there is a common framework for national legislation. "The UNEP supports regional bodies to negotiate the protocols which are binding and affect the coastal and marine environments," he added.

The three protocols that are under discussion now are those covering the Black Sea, (the Tehran Convention), another for East Africa (the Nairobi Convention) and one for West and Central Africa (the Abidjan Convention). Drafts were agreed in February 2008 and Datta is confident that they will be ratified by the end of the year.

The draft protocols look to regulate a number of areas that will have an impact on development of ports and harbors. These include:

- Harmful activities
- Emissions
- Hot spots
- Environmental quality objectives.

The regional action plans that will be drawn up as a consequence will include the precautionary principle – prevention, the 'polluter pays' concept, guidelines for environmental impact assessments (EIAs) and strategic environmental assessments.

Datta stresses that UNEP encourages regional commitments so that states work in uniformity. Under the revised protocols governments will be encouraged to co-operate on EIAs and to have an integrated management approach to transboundary areas such as river basins.

The new protocols will also set out timetables for the protocols to be incorporated into national legislation, all aimed at common guidelines and standards. Datta said the revised protocols were now being scrutinised by the individual countries' justice ministries.

The new rules will insist on information and data collection together with monitoring and assessment. These would cover dredging and harbor operations as well as expansion works.

The Programme is sensitive to the fact that many countries struggle to comply with the protocols and other international regulations such as those devised by the International Maritime Organization.

"On ports and harbors we work in collaboration with IMO," Datta explained – "for instance, with MARPOL and reception facilities. Unless these are provided, the material will end up on the shore, yet many countries do not have the capacity for handling these materials."

UNEP has undertaken a project with Mauritius to help it dispose of ship-generated waste, including

Case study – Durban, South Africa

Transnet National Port Authority undertook the \$283M expansion of South Africa's busiest port, Durban, scheduled for completion by mid-2009. The width of the inner harbor channel has to be increased from 130m to 240m, the access channel widened to 300m and the harbor deepened overall by an average 5m, giving it depths that will vary from 19m in the access channel, 17m in the inner channel and 15.5m in the inner port and basins. A total of 10M m3 of material will be dredged. As part of the contract, minimum turbidity is mandated, to protect nearby beaches that are vital for tourism.

that from the many cargo and cruise ships that visit. "There are lots of tourists and it's only a small country," Datta observed. "The ships that visit generate so much waste. Port Louis does not have capacity to handle it and there is not enough land for landfill."

This highlights one of the problems of making regulations – that of enforcement. Even if a ship complies with regulations, problems at the receiving end may mean that it cannot discharge its garbage in port.

"A very good programme is being developed to address the lack of capacity and lack of stringent rules," Datta continued. People from South Africa are visiting the Mauritius pilot project. This regional exchange of expertise is another approach we encourage."

He added that UNEP can arrange financial support to help projects to bring in experts to help. Collaboration with the private sector was also being encouraged, he said, because very often governments lacked expertise.

In the case of the Mauritius project, he was hopeful that other small island states, such as the Seychelles, could benefit from the expertise being generated.

The guiding principles are for work to be developed first on a regional basis, then sub-regional and finally at a national level. "Within this we want to work with the global and regional private sector so we are happy to





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work with IAPH as well as the International Association of Dredging Companies (IADC), the Central Dredging Association (CEDA) and PIANC. In addition, we attend IMO Environment Committee meetings."

Datta continued: "The private sector has a role to play and is an important source of advice. We are open to suggestions and will work on all different levels to keep the issue alive. Certainly there is a new level of awareness on behalf of governments."

According to Shekhur Sunta, director general, Mauritius Ports Authority, the prevailing and developing environmental conditions that are of particular concern in the country's maritime gateway, Port Louis, are rising sea levels and tropical cyclones. The latter have in the past caused considerable damage to port infrastructure.

Because it faces the open sea, the modern Mauritius Container Terminal (MCT) is the most vulnerable area, and operations were disrupted by flooding earlier in the year. Dan Dhima, chairman of the Cargo Handling Corporation, believes more use could be made of the port's better-sheltered, but less well-equipped, Multi-Purpose Terminal. In the meantime, measures are being put in place to enable MCT to ride out the storms.

"There is some flooding in the MCT. Now, because of the volume of containers we handle, we have decided to put a wall behind the quayline to protect the cargo, just like London and the Thames. We've already awarded the consultancy and this should be ready by June 2008," Sunta told *P&H*.

"We have an arrangement with the Cargo Handling Corporation in a cyclone procedure to move the cargo at the back and we have increased the height of the oil jetty now under construction and due to open May 2008. We are putting in a 4m rise."

Sunta added: "The safety of the environment is top of our agenda. We have an environment charter and port emergency and environment unit, so we are well equipped to combat pollution, and we are promoting the port as a 'green port.'"

"Environmentally sensitive" certainly describes one project that has been proposed over the years – the possibility of developing a secondary port at Mahébourg, in the southeast of the island.

"We made a couple of studies and there is an environment issue, because you've got mangrove

Case study – Dakar, Senegal

The first phase of an expansion plan will see the existing container terminal enlarged through the addition of a third, 290m berth and construction of a 75,000m² storage area on reclaimed land. About 600,000m³ of material is currently being dredged from the access channel and turning circle to deepen them from 11m to 13m. The port authority prohibited the use of explosives, so Atlantic Dredging Corporation instead chose to deploy clamshell and backhoe dredgers to complete the work. Dredged material is being dumped into split barges that are transported by tugs to a designated offshore dumping area. Dredging will be completed by the end of this year.

swamps that are internationally recognised," Sunta explained. "The consultants are coming back and revisiting Mahébourg. It's negative still and they're looking at other places like Albion for the possible location of what we call the dirty cargo – coal."

Archimède Lecordier, MD of the CHC, said: "All projects here are subject to an environmental impact assessment by the government. The law is quite strict about the environment and all projects have to adhere to it. Mauritius is a small island, and one of the main economic activities is tourism, so it is important that we remain clean and respect the environment."

Mauritian law is seen at a distance to be strict on environmental matters, demanding an EIA before a major development can go ahead, for instance, although in the past it may not always have been consistently applied. Nevertheless, the increasing dependence of the Mauritian economy on earnings from tourism makes maintenance of high environmental standards imperative.

In recent years, marine environmental protection zones have been set up in sensitive areas to protect coral, marine coral sand extraction has been banned, as has fishing with explosives, and mangroves have been allowed to re-establish in some areas after being all but eradicated from the 1930s onwards, partly to remove mosquito breeding grounds.

Observers believe the various port expansion projects mooted for Port Louis are unlikely to cause major damage to environmentally sensitive areas. And northward expansion has already been ruled out because of bird feeding grounds.

The new cruise terminal is to be built on land reclaimed a few years ago, and the long-term possible plan for a container terminal at Fort William is on environmentally marginal land. The fishing harbour at Bain des Dames is to be built next to Fort Victoria Power Station so is not likely to raise major environmental issues.

Proposals for a coal port at Albion could be more contentious, as it would be near a residential area and might affect west coast tourism developments. Considerable evidence exists that fish stocks within the lagoon and the quality and quantity of coral have all declined significantly in the past 20 years. **PH**

More info www.gpa.unep.org

**Adapting to a
changing world:
Port Louis' oil jetty
is being built with
sea level rise and
cyclones in mind**





Traffic to 2009

Cargo	M tonnes
Petrol, oil and lubricants	18
Iron ore	23.8
Fertiliser raw materials	1.2
Other bulks	30.1
Containers*	2.5

* Million teu

Photo: Southern Cross Maritime

Visakhapatnam and its green iron ore solution

One of India's largest ports undertook a major environmental study before starting its expansion, as **Dr R N De**, a member of the assessment team, explains

Steaming ahead: the port is planning for super-Capesize vessels (above)

Visakhapatnam on the Bay of Bengal is one of India's 12 major ports – an important iron ore importer and a centre for containers and for LPG. Its management is undertaking a INR1,900M (\$48M) project to enable its facilities to handle 170M tonnes by 2020, with the aim of becoming a trading hub for southeast Asia.

The first phase of the new port at Gangavaram is expected to be operational by April. The super-Capesize-capacity, deep-draught port will be totally mechanised. Construction of the iron ore berth has been completed, while work on a coal berth and three dry bulk berths is progressing. The channel has been dredged to 15m and will be increased to 20m by the

end of this month (March). The original port has 26 berths – 19 in the inner harbor – which handled 56.4M tonnes in 2006–7, and traffic is expected to rise to 75.6M tonnes in 2008–09.

Visakhapatnam Port Trust (VPT) has a history of environmental consciousness, which is bolstered by its strong environmental management team and the ISO 14001 accreditation it gained for its environment management system standard in the port area.

The port's awareness of environmental issues was emphasised in its report: *Environmental Zoning and Land Use Plan* for the port area, which was prepared as early as 2003 with port development in mind.

Major cargoes handled include iron ore and pellets,



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The Port has more than 4,200 acres, 7 million s.f. of covered warehousing and open dock areas for staging and assembly.

The Port of Stockton's West Complex has:

- * More than 2.5 miles of on-dock rail service on double-reinforced concrete pier
- * Two 1.25-mile sections of on-dock rail with capacity to hold over 60 railcars, each measuring 100 feet in length
- * More than 12,000 linear feet of rail makes this the largest single terminal on-dock rail facility on the West Coast
- * Facility contains a third additional 1.25-mile section of near-dock rail within 80 yards of the water
- * 5.5 million s.f. covered storage located within 1/4 mile of the terminal's rail





finished fertilizers, raw materials for fertilizers, thermal coal, cooking coal and coke, alumina, crude oil and petroleum products. The main overseas destinations for iron ore are Japan and China.

Even before the new facilities were developed, environmental measures in place at VPT included:

- Mitigation of dust, water, noise and land pollution
- Disposal of liquid and hazardous waste
- Disposal of solid and biomedical waste.

An environmental monitoring system for air pollution, harbor water pollution and effluents from port-based industries has been operated by the Trust in conjunction with Andhra University, the State Pollution Control Board and the National Ship Design and Research Centre.

VPT has installed air pollution monitoring systems to make regular checks on ambient air quality including suspended particulate matter, PSPM, SO₂, NO_x and wind speed at six locations.

Four times a year the port carries out checks on water pollution at nine harbor water points: the fishing harbor, the open sea, the LPG berth, the turning circle (outer harbor), the iron ore berth, the inner berth harbor entrance, the jetty, the turning circle (near harbor), and the two iron ore berths.

The environment impact assessment (EIA) study for the Gangavaram development includes provision of a buffer zone around the project area. Of this 314km² only 3.05 km² – some 1% – comprises the port area.

The study conducted at the Indian Institute of Port Management, Kolkata, of which I was a member, looked at the implications of the berth expansion and the implications of the capital dredging. It was thought this could change the current profile of the

organisms living near the seabed, the benthos and the biodiversity of the plankton. This would affect the livelihoods of local fishermen.

Consideration was also given to the effect of ambient air, noise, surface water, ground water, coastal water, marine sediments, aquatic ecology and social economic status of the buffer area around the site.

We examined the likely impacts of 10 major activities, including discharging iron ore from railway wagons and road vehicles, operation of the conveyor belt and dredging. For all 10 major activities of the proposed development project, the impact as assessed at 74 sampling locations was found to be, in general, low, site-specific or local, short-term and reversible.

The present expansion project may alter the turbidity of coastal water for a time, but the effect is reversible. There may be localised leaching into soil from rainwater runoff from stockpiles, but as the soil is not used for agricultural purposes and drinking water is not pumped from the ground, this could be mitigated by appropriate measures.

The impact on surface water is anticipated to be low and the current land use pattern is not expected to change. Hearteningly, the anticipated impact score for the outer harbor project suggested there will be no appreciable effect.

One focus of the study was to assess whether there would be negative socio-economic impacts on the local fishing community. But a survey of 200 families in the fishing villages, slums and non-slum urban areas showed that, on the contrary, they would stand to gain from the increased revenues generated by the port.

The development of iron ore handling facilities would certainly contribute to the wealth of the region as a whole. The 10 activities identified for impact assessment would directly help the lower and middle strata of the society by improving economic conditions as demand for labour increased.

As part of its environmental management plan the port has planted about 422,000 saplings, and some 350,000 have survived. The total green belt area surrounding the port area is about 243ha.

The port has put in place a continuous water sprinkler system at cargo yards and pavements, which uses recycled water to help dampen dust and improve air quality. A mechanised dust suppression system has been installed with 172 sprinklers in three coal yards. There are plans to extend the system to three more cargo areas this year and to provide sprinklers at junction houses along the conveyor route to avoid dust pollution from iron ore handling.

To combat any adverse impacts of the new outer harbor activities VPT plans to concentrate on controlling four vital elements: air, water and noise pollution and maintenance of the green belt around the port. These should help ensure the environment remains pollution-free, thereby offering local people a better quality of life. **PH**

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Time to move beyond competition

Neighbouring ports have always been rivals, but this may no longer be the best model for the 21st century, as **Peter de Langen** and **Theo Notteboom** explain

Work has begun on exploring the evolving relations between ports in proximity to each other. A survey of port users undertaken in Antwerp and Rotterdam has shed some valuable light on the issue. The initial survey results were presented at the 'Ports in Proximity' conference, held in Antwerp and Rotterdam (reported in *P&H*, January).

The survey and the event were organised by Erasmus University, Rotterdam, and ITMMA (Institute of Transport and Maritime Management Antwerp) of the University of Antwerp. Both universities are playing a key role in increasing the understanding of the benefits of co-operation. These can include:

- The co-ordination of safety and environmental regulations and port policies
- Better marketing and acquisition

- Better hinterland access
- Better utilisation of assets
- Scale economies
- More professional organisation.

Co-operation has commercial as well as public advantages. Many of the world's largest ports are located close to others and we have been investigating what changes are needed to enable all parties to cope with the internationalisation of the port industry.

The fiercely competitive nature of the relationship between ports such as Rotterdam and Antwerp or Los Angeles and Long Beach is mirrored around the world. Rivalry has undoubtedly contributed to the efficiency and performance of the ports concerned. Both Antwerp and Rotterdam acknowledge that their competitiveness in a European context is partly

Major ports in proximity

Cluster	Container ports	Distance (km)*
Pearl River Delta	Hong Kong, Shenzhen, Guangzhou, Zhongshan, Jiuzhou	130
Malacca Strait	Singapore, Port Klang, Tanjung Pelepas	340
Yangtze River Delta	Shanghai, Ningbo	180
Rhine-Scheldt Delta	Rotterdam, Antwerp, Zeebrugge, Amsterdam	105
Bohai Bay	Dalian, Qingdao, Tianjin	350
San Pedro Bay	Los Angeles, Long Beach	10
Korean Twin Hub	Busan, Gwangyang	135
Helgoland Bay	Hamburg, Bremerhaven, Wilhelmshaven	95
Tokyo Bay	Tokyo, Yokohama, Shimizu	50

* Greatest distance between competing ports in the cluster



Rotterdam: many companies said they regarded it and close rival Antwerp as an integrated gateway

the result of the competitive dynamics generated by mutual proximity.

Changes in the port industry have had an impact on such port competition, however. Whereas the traditional model was predicated on competition between different port communities, the private firms in the port industry increasingly have a global focus.

For instance, about a quarter of all companies in our Rotterdam and Antwerp survey have a presence in both ports. Many others are branches of multinational companies that have a limited interest in the competitiveness of a particular port.

The purchasing power of the large market players, reinforced by strategic alliances and partnerships between them, can be used to play off one port or group of ports against another. Consequently, locally

oriented port authorities often find themselves in fierce struggles with authorities in nearby competing ports to attract investments and cargo flows of internationally operating port users.

To some extent, ports in proximity are often complementary to one other, which is demonstrated by the substantial freight flows between them. More than 60% of the companies surveyed in Rotterdam and Antwerp indicated that they generate cargo flows in the other port. Over 70% said they had at least one customer in the other port complex and 58% had at least one supplier in the other port complex.

A substantial number also indicated that integration between the two ports has increased over the past five years, mainly by provision of services, customer base and infrastructure. But integration in labour markets and innovation networks is tending to lag behind.

Proximate ports can share infrastructure benefits – as with the Alameda corridor that connects Los Angeles and Long Beach to a vast hinterland. In some cases, neighbouring ports also have a shared competitive position vis-à-vis other port ranges. For instance, Rotterdam and Antwerp both compete with the German ports and Mediterranean ports.

Our survey showed that some port users regard ports in proximity as an integrated gateway, rather than two distinct ports. Where complementary characteristics are shared it may be worthwhile exploring opportunities for co-operation. One successful example is Copenhagen Malmö Port (CMP), an integrated organisation that manages facilities in both locations. CMP has enjoyed strong traffic and profit growth following the merger.

Elsewhere, small steps have been taken towards co-operation, shifting collective actions on key issues from the individual to the broader port region. These key issues typically relate to hinterland networks (which include barges, railways, pipelines and roads), port community systems, environmental issues, safety and security, knowledge development and innovation.

Port companies in Rotterdam and Antwerp would like to see more co-operation in specific areas of mutual interest, but it will not come easily. Survey respondents cited the two ports' historical background and the cultural differences that exist between Flanders and the Netherlands as the main barriers to co-operation.

The success of port authorities in clusters will depend on their ability to integrate effectively into the supply chain's business relationships.

Co-operation with neighbouring ports on specific issues affecting the logistics performance of the whole port region is part of this change. Policy-makers, governments, port authorities and market players can each help port and industrial complexes integrate further. Ports in proximity can learn from each other's experiences, approaches and best practices. **PH**

Peter de Langen is a transport, port and regional economist at Erasmus University Rotterdam

Theo Notteboom is president of ITMMA

More info: www.portsinproximity.com



The future's bright on the Black Sea

Bulgaria's Black Sea Port of Varna is modernising to cope with growing trade and new economic circumstances, writes **P&H's Tony Slinn**

Crossroads: Varna's regional position is the basis for new developments

Varna is benefiting from Bulgaria's recent admission to the European Union, an explosive growth in container traffic and a drive towards a market economy in the country. Container throughput more than doubled from 45,000teu in 2001 to 94,000teu in 2006, while total cargo, boosted by bulk and breakbulk trades, climbed from 5.8M tonnes to 7.9M tonnes in the same period.

The Port of Varna comprises three distinct areas: Varna East, Varna West and the small satellite Port of Balchik farther along the coast. The latter made history in 2006 when it became the first Bulgarian port to be privatised when a 25-year concession was awarded to operator Port Balchik.

But in common with other Bulgarian ports, much of Varna's infrastructure is more than 30 years old – hence the need for modernisation and expansion. Heading this drive is Varna's executive director, Danail Papazov – also president of the Black & Azov Sea Ports Association – who points to the port's position as a regional crossroads. He says its "excellent" rail and road connections make it a convenient bridge for cargo flows between Europe, Russia, Ukraine, mid-Asia, the Middle East and Southeast Asia, with some 16 container lines making calls.

Four out of the 10 trans-European transport corridors

cross Bulgarian territory. Several of these are based on Transport Corridor Europe–Caucasus–Asia (TRACECA). This is the ambitious EU project aimed at connecting Central Asia with Europe by a continuous unbroken railway, mimicking the old Silk Route.

The routes that Varna can benefit from are:

■ Corridor VII (Danube River – 2,300km) – Vidin, Lom, Rousse with option to Varna and through the Black Sea to the CIS countries, TRACECA route, Asia.

■ Corridor VIII – 1,300km – Durrës, Tirana, Skopje, Sofia, Plovdiv, Bourgas/Varna, through the Black Sea to the CIS countries, TRACECA route, Asia.

■ Corridor IV – 1,600km with branches – Dresden, Budapest, Arad, Kraiova, Lom, Sofia, Thessaloniki/Plovdiv, Haskovo, Istanbul.

■ Corridor IX – 3,400km with branches – Helsinki, Saint Petersburg, Kiev/Odessa, Kishinev, Bucharest, Rousse/Varna, (TRACECA), Dimitrovgrad, Alexandroupolis.

A new ferry service is planned to link Varna and the port of Kavkaz in Russia, carrying freight and railway wagons, which the port expects to boost trade between Bulgaria, Russia and other CIS countries. However, the port of Kavkaz is not deep enough to accept large ships, so Bulgarian rail ferries, which can carry up to 108 wagons, cannot dock there. In the meantime, measures will be taken to increase the capacity of the existing



ferry line on the Varna–Ilychivsk–Poti (Batumi) route, improving its efficacy and compatibility.

Bulgaria is keen to take advantage of EU moves to switch traffic from roads to other modes, with the Bulgarian Ports Authority working with port operators to make conditions favourable for the development of water transport in the multimodal transport chain.

In co-operation with Russian experts a study has been undertaken to assess the feasibility of a new ro-ro service in the Upper and Central Danube through Bulgarian Danube ports and Varna to Novorossiysk in Russia. Bulgaria is confident this will find favour with the EU because of its economic and ecological benefits.

Bulk cargoes handled by Varna include grain, fertilisers and liquid chemicals. Calls by cruise ships are growing, adding to the optimism at the port. Recent activity has been boosted by legislation passed in 2000 that opened up the sector. As well as allowing concessions for the independent operation of ports and terminals, liberalisation of port services stimulated improvements to existing infrastructure and the introduction of market principles in port management.

Major objectives of the government-coordinated National Programme for Port Development (NPPD) are the attraction of more transit cargo through the main European corridors and measures to enhance safety, security and environmental issues. In addition, NPPD encourages the idea of moving port operations out of city centres.

At Varna this means the East Port's container terminal will be transformed into a commercial and recreation area, which will include a new and expanded cruise ship and passenger terminal, plus a marina. Papazov estimates the two-phase project will cost €1Bn (\$1.5Bn).

Varna's West Port, which is reached through two dredged access channels and across lakes Varna and Beloslav from the seaward East Port, will become the commercial hub. West Port already has bulk and breakbulk terminals and two gantry cranes at its container terminal. The East Port box facility has one.

And there are also plans for a brand-new container terminal. "By 2015, we expect to be handling up to 1M teu at the new terminal," Papazov told *P&H*. "We're

The Port of Varna vital statistics

Berths	32
Total quay length	5.6km
Open-air storage area	240,800m ²
Warehouses	77,500m ²
Box port gantry cranes	3
Mobile quay cranes	28 in Varna East, 27 in Varna West

building it 3.5km from East Port on the north bank of Lake Varna at a site called Gypsies Quarter. Why there? Because for many years we've dredged for sand and the turning basin is already 18m deep."

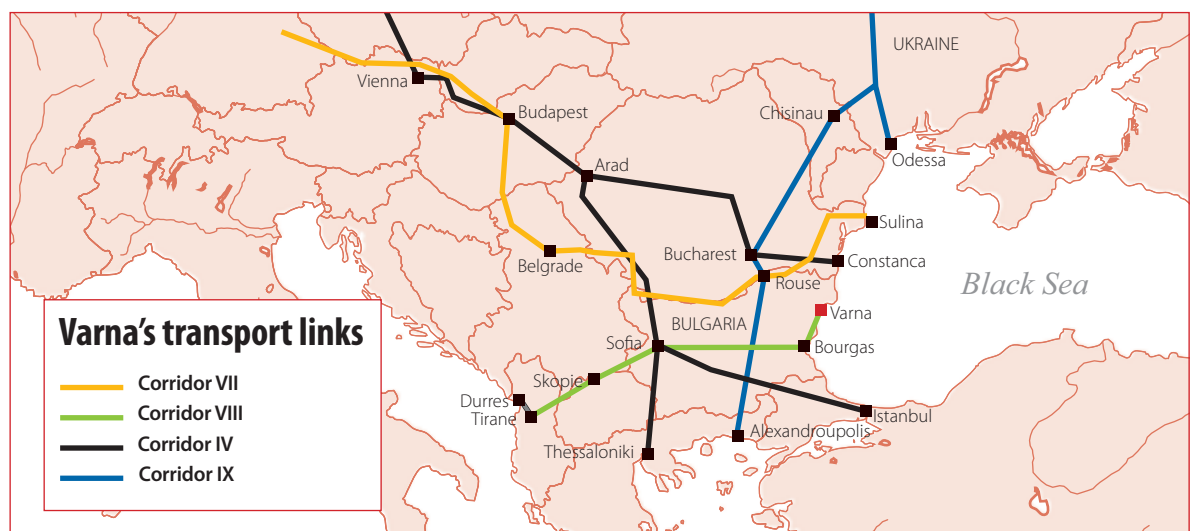
The terminal will have an 800m-long quay and three gantry cranes and be able to handle three box ships, up to 5,500teu. The present 11.5m channel will be dredged to 13m. As a Black Sea port, Varna has another advantage: "We have no tides," Papazov pointed out. "If we dredge to 13m today it will still be that depth in 10 years."

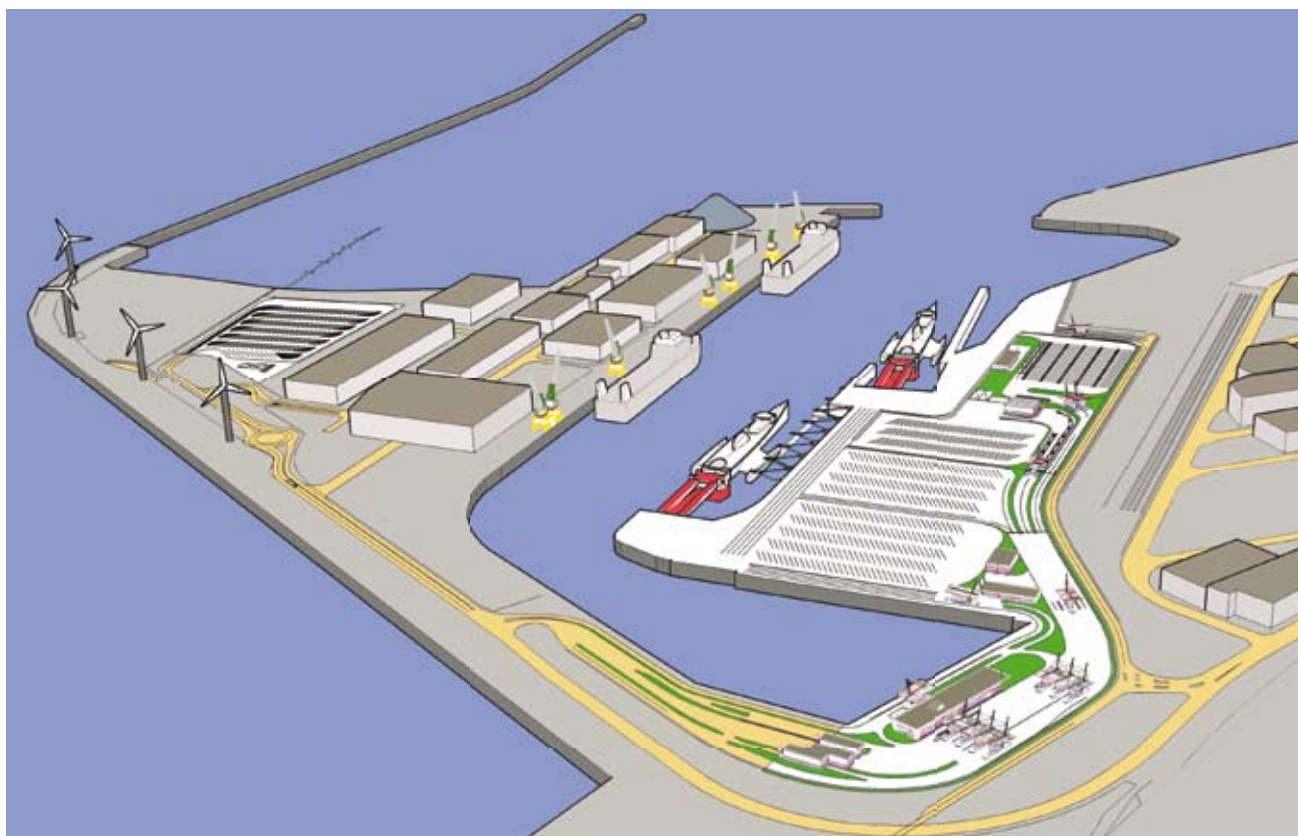
He continued: "The environmental impact statement is complete and we expect work to start this year and take 36 to 48 months. The terminal should come on stream by 2012." Papazov added: "It will be a build-operate-transfer project and we have a lot of interest – negotiations are continuing."

Varna has a further card to play – the intermodal transport possibilities offered by the River Danube. "We have plans to link Varna by rail with Rousse, where there's a barge terminal, and perhaps also Silistra [in northeastern Bulgaria, on the southern side of the lower Danube]," Papazov continued. "That means new double-track rail lines and double-stack container cars. As the roads are crammed with container lorries, using the river will ease congestion.

"It's a project for the next six or seven years," he concluded, "but it's also our big chance." **PH**

More info at www.port-varna.bg





In the fast lane

Projects in Boulogne-sur-Mer show just how a landlord port authority can act as a catalyst for change. A hub for high-speed cargo vessels will compete directly with road transport, as **Bridget Hogan** found out

Future view: the new port will cater for conventional ro-ro and HSC

There is only one way for shortsea routes to compete with roads and that is to go as fast. This is the emphatic view of Alain Rousseau, port development director of the Port of Boulogne.

Both Boulogne and Calais are no longer autonomous ports, as ownership was transferred from the government to the Conseil Regional Nord Pas de Calais. Each is under the management of its local CCI (Chambre de Commerce et d'Industrie). This seems to have cleared the way for the energetic development projects through to 2013 that Rousseau has formulated, which will see Boulogne becoming a hub for high-speed cargo services.

The efforts started in 2003, when hauliers complained to the port authority about the effect on their activities of increases in road transport costs and operating difficulties such as accidents, road congestion, tolls and driving restrictions.

Rousseau feared these problems would endanger Boulogne's seafood processing industry, on which much of the town's wealth rests. Indeed, it is an

undisputed leader of the sector in western Europe. Some 240 companies employ 6,600 people – 10% of people in the port.

He spoke to hauliers, who said they were ready to shift cargo from road transport to a sea-based mixed multi-modal system. But they demanded that the alternative systems would deliver a service as fast as, or faster than, the existing road-based one.

This presented Rousseau with a problem. The European Union was promoting Motorways of the Sea (MoS), but existing ro-ro vessels rarely exceed 35km/h. "Double that was needed, at least," he said.

With road transport being increasingly regulated and regarded by the public as environmentally unsound, the future for ro-ro traffic would be unaccompanied trailers, rather than driver-accompanied trucks, in Rousseau's view. If so, it would change the face of European trucking, turning over long-distance trades to the big companies.

Even so, it looked as if the project had foundered before it had even started, until Rousseau heard about

the High Speed Craft (HSC). Based on military applications and designated HSC 160, the manufacturer's claimed average speed of 60km/h (32kt) would allow the vessel to compete directly with road transport.

The craft's designers say an HSC is able to maintain its service speed in all weather conditions. And since Boulogne started to promote the project, speeds on European roads have fallen.

Rousseau's plan is for Boulogne to be the hub of a network. One service will link the French port with Santander and Vigo, in Spain, and another will serve Drammen in Norway and the UK port of Sheerness.

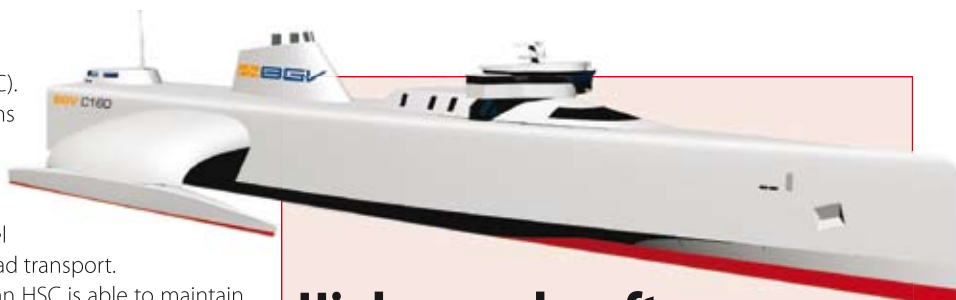
The model international co-operation prompted by the Boulogne initiative has attracted the support of the EU through the MoS scheme. In 2005 and 2006 the ports signed memoranda of understanding committing them to providing the infrastructure the HSC vessels need.

Last year, Rousseau's team finalised a study for the developments needed at Boulogne to allow the HSC expansion to go ahead. Some 40ha are being developed to put new life into the port, including new passenger terminals and amenities such as a casino.

But it is the trade in seafood that the port is anxious to preserve. Some 380,000 tonnes of seafood are handled at the port – much of it processed there. But as EU quotas bite, catches from the local fleet comprise only 40,000 tonnes of the total.

The fleet is allowed to fish for just six months of the year and landings go down each year. Rousseau said the port needs to make arrangements to adapt to the changing nature of the seafood trade. Imports are coming into the port processing plants from all over the world, particularly Norway, Iceland, Scotland and Russia – and 95% of them arrive by road.

So Rousseau is on a mission to move the greatest possible proportion of this important freight traffic to sea routes and thereby stimulate further growth in the port's trade. The port land has been reorganised and a three-part expansion is under way covering logistics, port hub activities and ferry passenger facilities.



High-speed craft HSC 160 characteristics

Speed	32kt
Operating costs per trailer average	\$1/km
Costs comparison with road	20% below direct haulage
LOA	160m
Breadth	51m
Draught	5.15m
Cargo capacity	86–94 trailers
Deadweight	2,511 tonnes

to accommodate traditional ro-ro vessels and HSCs.

In the logistics area, private investment has been secured to develop the rail links. The imperative here is to serve the supermarkets, which are buying in more imports. The indications are that the trade is switching from sourcing through Spain to Italy.

A distinctive element of the HSC programme, according to Rousseau, is the way in which the port has kept control of the project. "We have been proactive in sourcing the finance for the vessels, for instance," he explained. The port has gained government support for the vessels from Caisse des Depots, a state bank.

The port is even prepared to build the vessels itself, Rousseau declared. "We now have the financing for the ships. We have put money on the table and the ships can now be bought by the shipowners or chartered from us."

As *P&H* went to press, Rousseau was conducting negotiations with prospective shipowners. He hopes very soon to be announcing orders for ships to be built at an average cost of €80M in Europe for the services.

The port authority has been central to the success of the project, bringing together those with a need for transport – either as providers or as cargo generators – plus looking at the technical compatibility of the ports involved.

"We needed to look at all aspects of the transport chain," he said. "We needed to sort out technical difficulties. We cannot offer high speed on the sea only to be delayed in port for three hours because the ship cannot dock."

In addition, it has had to address governmental and EU issues. "There are many layers of work involved here," Rousseau observed. "This is exactly what port authorities need to do to preserve and expand their trade. We feel we are trail-blazing for shortsea shipping in Europe." **PH**

More info: www.HSC-international.com;
www.boulogne-hub.com; www.portboulogne.com

“This is what port authorities need to do to expand their trade. We are trail-blazing for shortsea shipping in Europe”

Some 15ha are being developed for logistics and ro-ro facilities for both traditional and HSC vessels. Railway links from the port will be improved and Rousseau anticipates they will be extended to Milan.

The finance has been agreed for an investment of €200M (\$293M) to 2012. The first new ro-ro berth, costing €65M, will be available from April 2009. The berth in the new ro-ro terminal will be multi-user, able

Distillate fuels gain support

The Singapore Shipping Association (SSA) has cautiously welcomed the Intertanko proposal to IMO that the shipping industry should consider switching to distillate fuels in order to reduce sulphur emissions.

But it has also called for a detailed feasibility study, as it is concerned about the short timeframe allowed for the changeover.

An SSA statement gave support to global fuel regulations but not to more sulphur emission control areas. It advocated a study be conducted before any further implementation, adding that potential increased costs to the consumer should also be considered and the impact on the environment of increased production of distillate fuel. The input of operators, engine manufacturers and oil producers was important to any study, it added.

More info: www.ssa.org.sg

BIMCO calls for IMO clean air rule

BIMCO has called on the International Maritime Organization for a "swift, practical and effective" amendment to MARPOL to reduce ship-related air pollution. It warns that both the EU and the US may introduce regional regulations for air emissions.

According to a BIMCO statement, "This will not only create a very difficult situation for the shipping industry, but will also be a slap in the face for the IMO". From 1 January 2010 all ships in EU ports must use 0.1% sulphur fuels – in practice, making all EU ports part of a micro emission control area.

BIMCO hopes that amendments will be agreed at MEPC 57 – meeting from 31 March to 4 April – so that it can be formally adopted by MEPC 58 in October 2008, with expected entry into force in April 2010.

More info: www.bimco.org



Photos: Visser Laurens

Emissions: special equipment installed on the *Pride of Kent*, above, is helping to reduce pollution

IMO emission control proposals a step nearer

Draft amendments to revise the MARPOL regulations on the prevention of air pollution from ships were agreed by the IMO Sub-Committee on Bulk Liquids and Gases (BLG) when it met for its 12th session for a week in early February, writes *Fer van der Laar*.

The Sub-Committee agreed a draft revised Annex VI to the MARPOL Convention and amendments to the NOx technical code. These will now be submitted to the Marine Environment Protection Committee (MEPC), which meets for its 57th session from 31 March to 4 April.

A number of options remain open for discussion at the MEPC, which is expected to approve the amendments prior to their formal adoption at MEPC 58 (6–10 October 2008).

The amendments would then enter into force, under the tacit acceptance procedure, 16 months later in March 2010, or on a date to be decided by the MEPC.

The first of these matters is the issue of sulphur oxide (SOx) and particulate matter (PM) emissions from ships. During the discussions,

the BLG Sub-Committee decided to reduce the six options it was considering to just three. As is customary for all UN agency deliberations, the figures in square brackets remain open for further consideration – in this case by IMO's MEPC:

Option 1 – Global
1.00% (10,000ppm) fuel standard applied globally in [2012]
0.50% (5,000ppm) fuel standard applied globally in [2015]
Option 2 – Global/regional
Global cap remains unchanged at 4.50% (45,000ppm)
Emission control areas (ECA) require 0.10% (1,000ppm) standard in [2012]
Option 3 – Global/regional with micro-areas
Global cap is lowered to 3.00% (30,000ppm) in [2012]
ECA standard lowered to 1.00% (10,000ppm) in [2010]
ECA standard lowered to 0.50% (5,000ppm) in [2015]

These three options have now been put forward by the sub-committee to the MEPC, but there is still the possibility of a hybrid proposal being developed.

Turning to NOx regulations, the sub-committee further developed the three-tier structure for new engines. This would impose progressively tighter NOx emission standards for new engines based on the date of their installation.

Tier I represents the 17g/kW standard that is stipulated in the existing Annex VI.

For *Tier II*, the sub-committee agreed to recommend a standard that would see lower NOx emission levels for new engines installed from 1 January 2011.

With regard to *Tier III*, several delegations expressed the view that a geographically based approach requiring significant reductions in designated ECAs, should be introduced.

The recommended Tier III standard, applicable to newbuilds beginning on 1 January 2016, will, therefore, see a reduction of 80% from Tier I levels in specific emission control areas designated through IMO.

IAPH will again be represented at future discussions on this issue and readers of *P&H* will be kept up to date on developments.

New pollution standards urged

The Paris-based International Chamber of Commerce (ICC) has called on the International Maritime Organization to act swiftly over air pollution from ocean-going vessels.

Its Committee on Maritime Transport said the issue is one of the "most important" issues for the international maritime and port industries, especially in major ports and busy coastal areas.

ICC has asked IMO to adopt new emissions standards for ships "in the coming months". It said that stricter global standards are urgently needed for the emission of nitrogen oxides (NOx) and for assessing technology to curb sulphur oxides (SOx) and particulates, which contribute to pollution on land and at sea, harming biodiversity, it added.

The Chamber also wants action to reduce greenhouse gas emissions from ships, particularly carbon dioxide (CO₂). "New, more effective environmental standards must also take into consideration

fuel availability for ships," it added.

IMO should act now to avert the proliferation of regional and local emissions regulations, ICC urged. Otherwise, a patchwork of varying regulations will lead to operational difficulties, varying fuel standards and higher costs across the board in the shipping industry, the Chamber warned.

The IMO is planning to amend MARPOL Annex VI, which entered into force in 2005, to reflect advances in technology and fuel standards. Even before the treaty was implemented, however, the technology to lower nitrogen oxide emissions below the treaty's requirements was already available, together with engine technology and low-sulphur fuels to reduce emissions further.

ICC has urged member states to wait until the IMO makes its amendments to the treaty, which it expects will set strict enough standards so that no further action will be required.

More info: www.iccwbo.org



Smoke trail: states should be cautious about introducing their own standards until the IMO has finished talks, says the ICC

Welcome for EC ports moves

The European Sea Ports Organisation (ESPO) has given a positive response to the European Commission's new communication on ports policy, published in November after intensive stakeholder consultation.

"We welcome the EC's new ports policy," said ESPO chairman Giuliano Gallanti (right). "It generally reflects the balanced picture that emerged from the stakeholder dialogue. Its general focus on soft law measures and instruments meets with our expectations."

ESPO has also hailed the EC's decision not to develop interventionist measures that would alter the flow of traffic across Europe.

In the organisation's view, the European port scene is becoming "more diverse" in terms of the number of ports involved and the scope of port functions and services, leading to more routeing options.

The EC's recognition of the pivotal role of port authorities and use of concessions met with ESPO's approval, too. It said it intends to continue the dialogue with the EC and other stakeholder organisations on the instruments and measures that were announced.

The organisation wants to contribute to



guidelines on application of the European Commission's environmental legislation to port development and state aid guidelines. "We encourage the Commission to produce

both before the end of 2008," said Gallanti.

He called upon port authorities to be more proactive: "The challenges of the ever-changing logistics environment and society in general require our members – whatever their form or ownership – to stop being passive and bureaucratic spectators.

"Instead, they must be dynamic co-ordinators of the port and port-related community and act as facilitators in the chain. This is true in our relation to customers, terminal operators, logistic actors and other service providers. But it is equally true in our relation to local and regional government, social partners and stakeholders of all kinds."

Port authorities need to be "strong and autonomous" in order to match commercial goals with the legitimate public interest of the port and its wider environment. Gallanti added that the EC ports policy confirms this position.

ESPO has set up a specific port governance committee to improve expertise on these matters. One of its first tasks will be a study of concessions as governance instruments. The results of this exercise will be presented at the ESPO 2008 Conference, to be held in Hamburg, Germany, on 29 and 30 May 2008.

More info: www.espo.be

World border organisation a step nearer

Members of Borderpol, including the US and China, have moved nearer to creating an inter-governmental body to strengthen border security.

A meeting in London set a timetable for moving the association from its current status as a fraternal association, to becoming an operational inter-governmental organisation.

The role of the new organisation will be to establish information and communication links between the border and immigration agencies of member states. It will promote common standards of good management, undertake training programmes and take on operational oversight of international border initiatives.

In setting up an international centre for border security, experts from academia, industry and government would be brought together to find ways to enhance border security and make efficiency gains through science and technology.

The goal is to support Borderpol members ability to detect and deter crimes such as international terrorism, human trafficking, drug smuggling, illegal immigration, illegal arms trade and other related crimes.

It was agreed that the first programme to be introduced would be to tackle human trafficking, and discussions with various members of the BEC are under way. Development would begin early this year and be managed by the corporate secretariat.

Thomas Tass, the executive director of WBO Borderpol, explained: "Currently, there is no official body or communications network that links the world's border police and immigration services in any meaningful way. This leaves a huge gap in our collective ability to detect and stop cross-border crimes such as terrorism, human trafficking etc. WBO Borderpol plans to plug that gap."

Borderpol was established in March 2003. Its mission is to develop and maintain 21st-century border management systems.

More info: www.borderpol.org



Barrot: challenges of efficiency, quality and sustainability

Policy package to give help to ports

European Transport Commission VP Jacques Barrot has explained to *P&H* the background to the initiatives he has introduced which are aimed at making freight transport in the EU more efficient and sustainable.

"Freight transport is essential for the competitiveness of the European economy and for the quality of life of EU citizens," he said. Goods transported around Europe will increase by 50% between 2000 and 2020, the EC estimates, and it wants the region's transport network, including ports,

to face the challenges of providing the industry with efficiency, quality and sustainability.

Suitable responses to the problems of congestion, climate change, energy supply and security must be found, Barrot told *P&H*. Major opportunities offered by new information and communication technologies and the influence of European freight transport on the global market, need to be grasped.

The EC's policy package covers logistics, provision of a rail network giving priority to freight and

development of European ports. Two more documents foresee a barrier-free European maritime transport area and expansion of Motorways of the Sea.

"The simultaneous adoption of all these measures gives a strong signal demonstrating the close links between logistics and the various modes of transport," he said. "The common objective of these initiatives is to promote innovative infrastructure technologies and practices, develop means of transport, improve freight management, facilitate the construction of freight transport chains, simplify administrative procedures and enhance quality throughout the logistic chain."

The EC supported shipping as the most environment-friendly and energy-efficient mode, Barrot said. To promote it, he pledged to simplify administrative procedures for maritime transport within the European region.

Documents on the European maritime transport area and the Motorways of the Sea indicate the progress that has been made with the preparation of these two initiatives and all stakeholders are invited to give their opinions.

The *Communication on European Ports Policy* is aimed at the development of an efficient port system in Europe to meet future transport needs.

The communication contains a set of tools aimed at helping the sector to cope with increasing demand for maritime transport and port services, to develop port activities and when necessary infrastructure and exploit the opportunities for development.

More info: ec.europa.eu

New code of practice for ICS

The International Chamber of Shipping (ICS) has updated its *Code of Practice on Shipping and the Environment*. The expanded fourth edition includes information on the commitments of port states and sets out the environmental obligations of shipping companies as required by the latest international regulations, and a clear set of environmental standards by which companies should operate.

It incorporates a recommended management framework to ensure compliance with the MARPOL

Convention. ICS SG Tony Mason explained: "The ICS Environment Code also contains information about the current overall environmental performance of the industry. We hope this will prove a useful tool to help policy-makers understand that shipping is the most environmentally benign form of transport."

The new edition is available from maritime booksellers, or direct from Marisec Publications for £25, including worldwide airmail delivery.

More info: www.marisec.org/pubs

In defence of tanker shipping

The oil tanker owners' association INTERTANKO has put up a spirited defence of the mode as an environment-friendly way of moving oil. Of the 2.4Bn tonnes of oil transported annually, some two-thirds are moved by sea, the organisation said. "Oil tankers are environmentally friendly, energy-efficient and effective in terms of minimising greenhouse-gas (GHG) emissions," it said in a paper.

One litre of fuel on a modern VLCC moves one tonne of cargo more than 2,800km – more than twice as far as 20 years ago, thanks to efficiency improvements. INTERTANKO's figures suggest that the average carbon footprint (in terms of CO₂ per tonne-km) of each of the world's oil tankers is less than 10% of that of a heavy truck and less than 1% of that of an aircraft.

World shipping carries 90% of world trade, and modern bulk carriers, container ships and other cargo ships – supplying the world with energy, moving raw materials and shipping finished goods – are similarly environment-friendly and

energy-efficient.

In recent years, tanker owners have invested an average of nearly \$32Bn a year in new ships, and today more than 75% of the internationally traded fleet is double-hulled.

With this increased protection for the oil cargo, as well as the ship's fuel tanks, accidental oil spills this decade have been at record low levels – one-third of the previous decade and one-tenth of the 1970s – yet the quantity of oil transported has more than doubled since the mid-1980s. Engines are more efficient, and other measures, such as segregated ballast water, the application of new tin-free paints, optimal weather routing and the recovery of otherwise wasted heat from the engine and auxiliaries, have resulted in significant gains in energy efficiency and reductions in environmental impact.

A particular issue for the tanker industry has been the control of cargo vapours (volatile organic compounds, or VOCs) during loading and on passage. VOCs

have a global warming potential approximately 20 times that of CO₂. In response, the tanker fleet has voluntarily developed methods to reduce these emissions to a small fraction of what they once were.

Tanker owners are committed to "continuous improvement", INTERANKO said. New technologies are being tested for application in both existing and new ships, including ways of achieving further efficiency gains and reducing harmful engine exhaust and GHG emissions.

In response to the IMO's initiative to revise MARPOL Annex VI on air emissions from ships, INTERTANKO is advocating adoption of the so-called "distillates option".

It said that emissions of sulphur oxides (SOx), nitrogen oxides (NOx) and particulate matter (PM) from ships can be further reduced by enforcing the global use of marine diesel oil (MDO) and including a specification for this fuel in the revised MARPOL Annex VI regulations.

More info: www.intertanko.com

IMO notes IHMA paper

The IMO has received a suggestion to harmonise the information submitted to ports by vessels when gaining entry and so avoid confusion.

The submission from the International Harbour Masters' Association (IHMA) – supported by IAPH – is aimed at making information exchange more efficient and standardised. Misunderstanding or misuse of such data bears directly on ship and port safety and the protection of the environment, IHMA said.

It noted: "Initial research showed that harbor masters were seen as the authoritative and trusted source for this information". It held consultations with the International Federation of Ship Masters' Associations (IFSMA), the Oil Companies International Marine Forum (OCIMF), BIMCO, the UK Hydrographic Office and IAPH, to develop an internationally accepted standard for port information.

Data was split into guidelines on port entry and berth and terminal information, from which was developed a successful desktop test of a sample product using material from Rotterdam.

AAPA hails security funding 'milestone'

US port authorities have hailed the \$400M security funding passed on Capitol Hill for 2008.

Describing it as an "important milestone in port security", American Association of Port Authorities (AAPA) president Kurt Nagle said it would help to fully fund the federal port security grant programme to help secure port facilities against terrorism.

The SAFE Port Act, which was passed by Congress and signed into law by President George W Bush in October 2006, set the annual funding level for the port security grant programme at \$400M, which is the level AAPA advocated for several years.

In addition to the port security grant programme, the spending bill for Fiscal Year 2008 included

\$8.1M that will fully fund the Transportation Security Administration's biometric card reader pilot projects, which are part of the federal transport worker identification credential (TWIC) programme.

These pilot projects will test the effectiveness of new TWIC card reader technology at several maritime locations in the US before implementation of those devices becomes a requirement at ports nationwide.

"AAPA and its member ports are fully committed to seaport security and we believe that protecting America's ports is essential, not only for the nation's security, but also for its economic vitality," Nagle added.

More info: www.aapa-ports.org



Photo: USCG

Spending: US ports welcome a boost to the security budget



Photo: Dietmar Hasenpusch

Clean air: ports can now make use of the tool box designed by the committee chaired by Knatz (below)

Promoting air quality and business development

After a year of thoughtful collaboration and creative design, Geraldine Knatz, chair of the Port Environment Committee, has announced the completion of the IAPH's new web-based *Tool Box for Port Clean Air Programs*.

Knatz, who is also executive director of the Port of Los Angeles, said the purpose of the tool box is to provide members quick access to information, options and tools for improving air quality while promoting business development.

"Ports continue to bring economic health and prosperity around the world," she said. "However, it is becoming apparent that ports will face obstacles to expansion unless we take action to address port-related air quality."

Most port and maritime operations depend on the operations of diesel engines in trucks, cargo handling equipment, railway locomotives and vessels. As a result, ports are significant sources of diesel emissions.

"These significant levels of diesel emissions, tied with the proximity of ports to residential population result, in the public health of communities being negatively affected by port-related operations," she continued.

More and more, ports around the world are coming to recognise the importance of the 'green' goods movement and to understand that in order to think globally they need to act locally, said Knatz. "Ports are taking important steps to address air quality by reducing the negative impact diesel emissions have on the environment and public health."

The *Tool Box for Port Clean Air Programs* is a good way for ports develop clean air programmes. The tool box, available online on the IAPH website, is a source of information and methods to understand more about what can be accomplished.

"From undertaking an inventory of port emissions sources to crafting a plan that meets your

unique situation, we do this by providing case studies on ports that have initiated their own port clean air programmes," Knatz explained.

The IAPH tool box provides the user with valuable information on air quality issues and concerns in relation to maritime activities; practical strategies to reduce diesel emissions from different types of equipment; and tools that provide the basic know-how for moving forward the port's own clean air programme.

Clean air strategies such as re-powering older engines, applying effective emission control technologies, and using alternative and cleaner fuels in operations can dramatically reduce harmful emissions and improve local air quality and public health. Some clean air strategies may

improve operational efficiency and yield fuel savings as well.

"We invite you to explore the IAPH *Tool Box for Port Clean Air Programs* and begin your clean air journey. It is important to keep in mind that while you aim to improve air quality at your port, the results also enable port businesses to continue to grow their operations. Therefore, your clean air programme makes excellent business sense."

More info: www.iaphworldports.org



Planning survey and container forecasts completed

The Port Planning & Development Committee has published a combined report for members, based on the results of its work on research into cruise terminal planning and forecasts of the world's container throughput, both of which were completed last year and briefly reported in Houston.

Chair Susumu Naruse (right) said: "We initiated the project on cruise terminals in 2003, when it was pointed out that a topic on cruise terminals was not elaborated enough in the then newly published *IAPH Guidelines on Port Planning and Design*. This was prepared under the strong leadership of the then chairman of the committee, the late John Hayes of the Sydney Ports Corporation.

"Since then, we have had a series of informative presentations on cruise terminals when the committee met, covering ports such as Sydney, Klang, Yokohama, Le Havre, Hakata, Rotterdam, Amsterdam and Houston."

There was financial support from a Japanese member, the Overseas Coastal Area Development Institute, for a consultant.

That report includes an overview of the cruise industry, key planning elements, revenue and management, and economic benefits from cruise terminals.

It discusses in detail the key planning considerations that are concerned with passenger processing facilities, piers and/or docks that ships use, and land-side features such as passenger access systems and gangways. In addition, it provides generic parameters for physical planning purposes.



The committee carried out a comparative study on forecasts of container throughput since 2005 and examined long-range forecasts and individual forecasts produced by major ports.

Global forecasts reviewed were carried out by private consultants with the exception of that from UN-ESCAP. Some 20 forecasts at local or individual port level were collected through a questionnaire survey to IAPH member ports.

Chairman Naruse thanked all the committee members and IAPH member ports for their co-operation and support, adding: "I hope that these two reports will be a valuable addition to port planning reference materials for IAPH members."



City centre: the hôtel de ville dominates the main square

Dunkirk deliberations

Members are preparing to attend the mid-term board meeting in Dunkirk, northern France in April. It will feature a conference as well as Officer and Technical Committee deliberations.

The conference, hosted by Port of Dunkirk Authority, runs between 14 and 17 April. The organising team was led by MD Jean-Claude Terrier.

Unsurprisingly, given Dunkirk's status as France's third-largest port and a major importer of coal and ore, future energy demand and its impact on port traffic will be discussed.

Other sessions will look at the future for major port developments and how projects can be made sustainable. To conclude, there is a port tour of Dunkirk's innovative terminals, which are unique in

France with their links between the port authority and private enterprise.

Dunkirk is also an industrial city, heavily dependent on the steel, food processing, shipbuilding, chemical and oil refining industries – all of which owe their success to the port's activities and have, in turn, boosted its fortunes.

There has been a port here since the 8th century and the life of the city's great naval hero, Jean Bart, is celebrated by a colossal bronze statue in the town centre, a daily reminder of Dunkirk's notable maritime connections.

More info:
www.iaphdunkerque.fr

Seafarer: one of Dunkirk's best known heroes is the corsair Jean Bart from the 17th century

Photos: Ville de Dunkerque



World port challenges

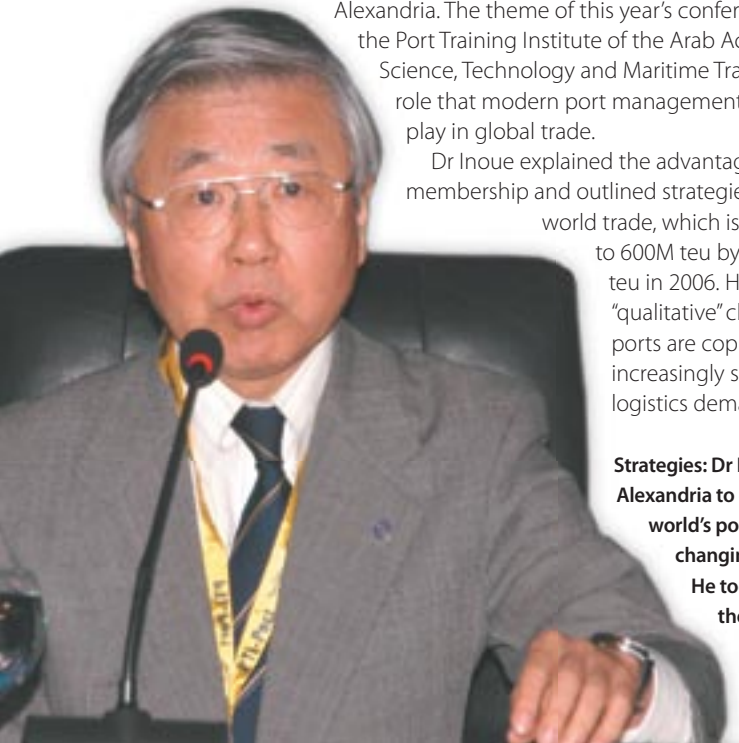
IAPH SG Dr Satoshi Inoue travelled to Egypt to give the association's view on the changing role of ports in today's world trade climate.

He was speaking at an event that has become a major part of the country's maritime scene – the 24th International Port Conference, held in Alexandria. The theme of this year's conference, organised by the Port Training Institute of the Arab Academy for Science, Technology and Maritime Transport, was the role that modern port management and port logistics play in global trade.

Dr Inoue explained the advantages of IAPH membership and outlined strategies to cope with world trade, which is expected to grow to 600M teu by 2015 – from 440M teu in 2006. He also outlined the "qualitative" challenge of how ports are coping with increasingly sophisticated logistics demands of port users.

Strategies: Dr Inoue was invited to Alexandria to explain how the world's ports are coping with changing demands.

He took advantage of the occasion to have discussions with local industry leaders



Membership notes

The IAPH is pleased to welcome the following new members to the association

Regular members

Port Nelson Limited

Address: PO Box 844, Nelson, New Zealand
 Telephone: +64 3 5482099
 Fax: +64 3 5469015
 Email: martin.byrnes@portnelson.co.nz
 Website: www.portnelson.co.nz
 Representative: Martin Byrnes, chief executive

Ulsan Port Authority

Address: #873-6 (Sam-ho B/D 2F), Dal-dong, Nam-gu, Ulsan 680-802, Korea
 Telephone: +82 52 228 5427
 Fax: +82 52 228 5429
 Email: anchoring@upa.or.kr
 Website: www.upa.or.kr
 Representative: Jong-Woon, Kim, CEO

Associate members

COSCO Container Lines Co Ltd

Address: No 378 Daming Road (East) Shanghai 200080, China
 Telephone: +86 21 35124888
 Fax: +86 21 65952857
 Email: sunjk@coscon.com
 Website: www.coscon.com
 Representative: Dr Sun Jiakang, managing director
 IAPH co-ordinator: Yu Xuelian, deputy section manager
 Nature of business activities: Shipping

Arab Sea Ports Federation

Address: PO Box Hadaek El Shallalat 21514, Alexandria, Egypt
 Telephone: +20 3 4818791/4839222
 Fax: +20 3 4818791
 Email: arabportfed@yahoo.co.uk
 Website: www.aspf.org.eg
 Representative: Adm Essam El Din Badawy, SG
 Nature of business activities: Co-operation and exchange of experiences among Arab ports

Kornegay's award

IAPH's immediate past president, Tom Kornegay, has been named Engineer of the Year 2008 for the Houston area, recognising his distinguished record of service.

Kornegay, who is executive director of the Port of Houston Authority (PHA), was selected for the award by representatives of various Houston engineering organisations in view of his contribution to numerous technical and professional societies as well as civic and humanitarian activities.

Kornegay joined the PHA in 1972 and worked his way through the ranks, serving in the engineering department for 15 years before being appointed MD.

"Tom Kornegay has distinguished himself as an engineer, as a leader in his industry and in his service to the community," said James

Dannenbaum, chairman, Dannenbaum Engineering Corporation, who was one of those who nominated Kornegay for this year's award.

"Since he became executive director, the Port of Houston Authority has become one of the recognised leaders in the industry for growth, customer service, community relations and environmental stewardship."

Since 1997, Kornegay has steered the development of the PHA's newest container and cruise terminal at Bayport, which opened last year.

Award: Kornegay is saluted by PHA colleagues and other Houston engineers



Exclusive for members

The 2008 edition of the IAPH Membership Directory has just been published. Each IAPH member should have received a copy by now.

The IAPH secretariat in Tokyo has sent out a warm 'thank you' to all the members who helped to keep the contents up to date.

It extended this to all the sponsors who supported the publication by placing advertisements in it.

The directory is available exclusively as a membership benefit to IAPH members and only in print – it is not offered for sale to non-members. For additional copies or any inquiry, please contact the IAPH Secretariat.



Houston, we have a record

The proceedings of the 25th IAPH World Ports Conference, held in Houston, US, last year have now been published and copies have been sent out to IAPH members by the host, Port of Houston Authority.

A CD-ROM containing Power Point presentations made at the working sessions as well as photos taken during the conference week is attached at the end of the publication, inside the back cover.

Dates for your diary

A selection of forthcoming maritime courses and conferences

March

- 10-13** Seatrade Cruise Shipping Convention – Miami, US
More info: www.cruiseshipping.net
- 10-21** APEC Seminar on Ro-Ro Terminal Management – Antwerp, Belgium
More info: www.portofantwerp.be/apec/
- 18-20** TOC Asia – Shanghai, China
More info: www.tocevents-asia.com
- 19-21** China Ports Future 2008 – Shanghai, China
More info: www.masterswise.com
- 23-25** The Saudi International Ports & Maritime Transport forum (SIPMT) – Jeddah, Saudi Arabia
More info: www.seaports-ksa.com
- 31-1** AAPA Spring Conference – Washington DC, US
More info: www.aapa-ports.org

April

- 3-4** Logistics and Transport Law Seminar – London, UK
More info: www.lloydsmaritimeacademy.com
- 7-10** Third Hemispheric Conference on Port Security, CIP-OAS – Punta Cana, Dominican Republic
More info: www.oas.org/cip
- 14-17** IAPH Mid-term Board Meeting – Dunkirk, France
More info: www.iaphworldports.org
- 16-17** SASMEX 2008 – Brighton, UK
More info: www.sasmex.com
- 17** ESPO-ECSA-Euroshore workshop on port reception facilities – Antwerp, Belgium
More info: www.espo.be
- 24-26** First International Symposium on Transportation and Development Innovative Best Practices (TDIBP 2008) – Beijing, China
More info: jtzx.net.cn
- 29-30** 10th Global Liner Shipping Conference – London, UK
More info: www.lloydslistevents.com

May

- 12-16** 6th Congress of the International Harbour Masters Association – St Petersburg, Russia
More info: www.ihmastpetersburg.com
- 20-22** RORO 2008 – Gothenburg, Sweden
More info: www.informa.com
- 28-30** ICHCA International 2008 Biannual Conference – Busan, Korea
More info: www.ichcainternational.co.uk
- 29-30** European Sea Ports Organisation Annual Conference – Hamburg, Germany
More info: www.espo.be



Integrated ports for integrated transport

Dr Masahiko Furuichi, from Japan's Ministry of Land, Infrastructure, Transport and Tourism and a member of the IAPH Executive Committee, explains the evolving world of ports in a time of changing trade patterns


“ This new integrated complex of ports and logistics activities will play a more important role than ever before in our transport chains ”

A wide variety of manufacturing industries have been extending their integrated production systems in the Asia/Pacific region since the 1990s. The region is now the world's factory and is becoming the world's consumer market too. The trade to and from and within the region has been increasing rapidly as a result. Much of the greater prosperity of this region depends heavily on transportation systems that are able to deliver goods and services efficiently and provide greater accessibility to its resources and markets.

Unlike Europe, Asia/Pacific is not a continent but a sea-linked region. Maritime shipping networks and ports inevitably play a greater role in the region's transport system. Consequently, the world's six busiest container ports can be found in this region. Hong Kong, Shanghai and Shenzhen have been growing, handling ever-increasing numbers of import and export containers to and from China. On the other hand, Singapore, Busan and Kaoshiung have also been successful in attracting a share of container trade destined for neighbouring countries, by extending their network of feeder services.

A feature of the trade is value-added cargoes, of finished and part-finished products, essential to the integrated production system and needing swift, reliable transport services. As a result, the ports in this value-added logistics chain have been evolving from pure transshipment centres to ones offering key elements of a logistics system. By doing so, they attract new investment and employment.

Since the late 1990s, this phenomenon has become apparent in both Europe and the Asia/Pacific region simultaneously. In the years to come, this new integrated complex of ports and logistics activities will certainly play a more important role than ever before in the world's transport chains.

I am sure that the IAPH Technical Committee will make every effort to contribute to the better development of ports and logistics functions. IAPH is truly the best platform for information sharing and discussion for the world's ports community. 

M. Furuichi

An aerial photograph of the Port of Tyne, showing the river Tyne flowing through the city of Newcastle. The port area is filled with various ships, including large container ships and smaller ferries. There are large parking lots filled with cars, industrial buildings, and storage tanks. The city skyline is visible in the background under a clear blue sky.

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of
TYNE

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EUROPEAN PORT OF THE YEAR 2007 AND 2008

The Port of Tyne is a deep river port open 24 hours / 7 days a week. A key player in the Tyne & Wear region, the port is ideally situated to the A1, M1, A19 road links and with a rail terminal linking to the main London Edinburgh (east coast) rail network.

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THE FUTURE IS BRIGHT.

Kalmar is developing eco-friendly solutions to keep the working and living environments of our customers and colleagues clean and safe. Our commitment to research and development has already produced a range of environment-friendly practices, products and services. For futures generations, we're doing our part today.

