May 2007 Vol 52 No3



PORTS HARBORS

Official Journal of the International Association of Ports and Harbors

Making easier decisions PIANC and IAPH combine to help

Investments into profits Auckland changes to cater for growing trade

Easing the task Nagoya on its successful automation

Peace for ports

GUARD

Security is advancing throughout the transport chain

11.5

World Peace through World Trade – World Trade through World Ports www.iaphworldports.org

Cavotec in action.



As care of the environment, and subsequent social issues arising from pollution, become ever more important to companies around the world, we are continuously expanding our knowledge and expertise on the subject.

Minimal pollution. Maximum efficiency.

This focus has led, amongst other achievements, to us becoming a main supplier of alternative maritime power (AMP) supply systems to ports and ship owners around the world.

By allowing ships to disengage their engines when in port, local

pollution levels drop dramatically. The success of these systems is measured by an ever increasing flow of interest from the market and society itself.

After 30 years of leadership in our industries, we understand that our customers require solutions that help to reduce their environmental impact without also reducing their bottom line. This approach will better ensure a cleaner and safer global environment for future generations and make the world a more pleasant place to live in today.



For more information, contact us at communications@cavotec.com or visit our website www.cavotec.com

REGULARS

Comment: Secretary General Inoue on how to give	
ports the tools to fight global warming	3
News: The latest from the industry, including new port	
developments, environmental projects, people and more	4
Open Forum: Geoff Vazey on how Auckland's	
privatisation turned around the port's fortunes	26
Cover Story: Security is never far from people's minds	
and Will Watson and Bridget Hogan outline the latest moves	
along the supply chain in the US and abroad	28
Maritime Update: The latest from organisations	
such as MarAd, PIANC, ICS and INTERTANKO	42
IAPH Info: A bumper round-up, including details of a	
new legal convention, IAPH's draft Green Tool Box, the Sines	
Europe/Africa regional meeting and the UNCTAD port study	44
Bulletin Board: Speeches from the IAPH at conference	s
and seminars, new members and visitors	50
Last Word: Argentina James on the biggest port	
gathering in the world starting now in Houston	52

FEATURES

PORTS HARBORS	A guide to making easier decisions: Help in			
Peace for	dredging projects – Axel Netzband and Jerry Cura explain	16		
ports	Case study: How one port keeps its busy waterway ope	n		
	through its dredging schedule	20		
	Dry bulks: growth is not straightforward for China			
	and India, as <i>P&H</i> finds outs	22		
As IAPH members gather in Houston for the World Ports	Boom state: Eve Duffy outlines Western Australia's			
	expansion plans to get exports to markets	24		
Conference, <i>P&H</i>	Filling the labour gaps: Hitoshi Uchiyama			
looks at security in the supply chain	describes the world's first automated RTG terminal	34		
	Opting for intermodal: Antwerp is developing its			
	hinterland connections, as Anitra Green explains	37		
	Shortsea solutions: Why are Motorways of the Sea			
May 2007 ISSUE 03 VOL 52	not more successful? Jodie O'Keefe investigates	40		





transport insurance plus service

Insurance for: Transport and logistics operators Ports and terminals Cargo handling facilities Ship operators



TT CLUB

Contact TT via your broker or at any point in the network. London Tel +44 (0)20 7204 2626 New Jersey Tel +1 201 557 7300 Hong Kong Tel +852 2832 9301 SingaporeTel +65 6323 6577 www.ttclub.com marketing@ttclub.com

1

Delivering Excellence Globally.

MOFFATT & NICHOL

Internationally recognized leader in trade forecasting, freight/cargo economics, bulk handling, coastal engineering, transportation, and port and maritime planning and design.

Creative People, Practical Solutions. Locations throughout the United States, Canada, Panama, and the United Kingdom www.moffattnichol.com

PORTS HARBORS

Official Journal of the International Association of Ports and Harbors

PORTS & HARBORS

Published bi-monthly by the International Association of Ports and Harbors (IAPH), edited and produced by Lloyd's Register-Fairplay Ltd.

PUBLISHER

Dr. Satoshi Inoue Secretary General, IAPH info@iaphworldports.org

EDITOR

Bridget Hogan bridget.hogan@lrfairplay.com +44 (0)1737 379148

ASSISTANT EDITOR

Stephen Cousins stephen.cousins@lrfairplay.com

SUB-EDITOR

Stephen Spark stephen.spark@lrfairplay.com

SALES MANAGER

Adam Foster adam.foster@lrfairplay.com +44 (0)1737 379710

DESIGN & PRODUCTION

Phil McAllister phil.mcallister@lrfairplay.com +44 (0)1737 379165

Matt Ramsdale

Neal Thompson

Hannah Kidd Liz Wall liz.wall@lrfairplay.com

+44 (0)1737 379166

Eleanor Healey

MANAGING EDITOR

G. Paul Gunton Lloyd's Register–Fairplay Ltd paul.gunton@lrfairplay.com

EDITOR-IN-CHIEF

Tony Slinn Lloyd's Register–Fairplay Ltd tony.slinn@lrfairplay.com +44 (0)1737 379159

ASSOCIATE EDITOR

Yuko Akamatsu Assistant Under Secretary, IAPH ph@iaphworldports.org

EDITORIAL & PRODUCTION Lloyd's Register–Fairplay Ltd

Lombard House, 3 Princess Way Redhill, Surrey RH1 1UP, United Kingdom Tel: +44 (0)1737 379000 Fax: +44 (0)1737 379001 Web: www.fairplay.co.uk

SUBSCRIPTIONS

International Association of Ports and Harbors Price Japanese ¥12,000 (US\$115 / UK£60 / €87) or per issue ¥2,000, postage included. Visa and MasterCard accepted or for Bank Transfer You do not have to be an IAPH member to subscribe - contact the IAPH. 7th Floor, South Tower, New Pier Takeshiba 1-16-1 Kaigan, Minato-ku Tokyo 105-0022, Japan Tel: +81-3-5403-2770 Fax: +81-354037651 Email: ph@iaphworldports.org Web: www.iaphworldports.org

COPYRIGHT

No article may be reproduced by any means, in whole or in part, without the written permission of IAPH and Lloyd's Register– Fairplay Ltd

DISCLAIMER

The Lloyd's Register–Fairplay Group shall not be liable to any person for any loss, damage or expense caused by reliance on information or advice in this publication unless that person has signed a contract with the relevant LRF Group entity and in that case any liability is on the terms set out in that contract.

necessarily those of IAPH or the LRF Group and the inclusion of an advertisement implies no endorsement of any kind by IAPH or the LRF Group of the product or service advertised. IAPH is unable to accept any liability for the consequences of any inaccuracies, errors or omissions in this publication.

Printed by The Manson Group Ltd, Hertfordshire, England

Tools to fight global warming

On every side ports are being told about climate change and the industry is responding

F ormer US vice-president Al Gore described the rapid increase of greenhouse gases in our atmosphere in his award-winning film *An Inconvenient Truth*. The UN's Intergovernmental Panel on Climate Change (IPCC) says that the world is expected to be 1.8–4.0° C warmer by the end of this century. Sea levels are rising too – perhaps by 0.18–0.59m.

The emissions being targeted to help ameliorate these problems are CO₂, CH₄ and NO₂ and we must act now, as any measures will take time to have a significant effect. The maritime industry has already started. Some shipping lines are going beyond the provisions

Solutions should be systematic and not a one size fits all approach

of MARPOL Annex VI by lowering the sulphur content of their ships' fuel.

APL recently agreed with the Port of Seattle to use cleaner fuel in port. All major shipping lines calling at the Ports of Los Angeles and Long Beach have agreed to use shore-based power. The US and Japan have also separately submitted to the

IMO their proposals to amend MARPOL to limit NO2 and PM from ships' exhaust.

Ports have a responsibility to tackle global warming. Most ports are located close to urban centres, where air conditions are likely to affect the health and quality of life of many people.

Various emission sources are to be found in and around ports. In addition to ships, there are cranes, yard equipment, tugs and pilot boats, trucks, dredgers and construction equipment. The way forward needs to be systematic, as a 'one size fits all' solution won't take account of different air pollution levels, major pollution contributors, geographical and meteorological conditions etc.

Our Port Environment Committee is developing the IAPH Tool Box for Clean Air Ports, led by the Port of Los Angeles (see p 46). The tool box will provide all ports with valuable suggestions for dealing with this issue and it will include case studies, ways to develop an integrated approach and methods of improving existing measures.

This issue of P&H has been printed earlier than usual for distribution to those attending the 25th IAPH World Ports Conference in Houston. I am looking forward to welcoming you. PH

8. June

Dr. Satoshi Inoue Secretary General – The International Association of Ports and Harbors

Port updates

SCANNER DELAY

Installation of a fixed scanner at Apapa port may not be complete for another two years, according to Cotecna MD BJK Karingithi. Among other services, inspection and certification company Cotecna provides destination inspections at Nigerian terminals. Karingithi broke the news at the commissioning of a scanner at Tin Can Island terminal. He said the delay with the Apapa equipment resulted from lack of a suitable site after port concessioning.

SECURITY WORK

Work has began on a \$20M security command and control centre at the Port of Long Beach. The 2,300m² building will also house units from the city police department and Port of Los Angeles. In emergencies it will also be used by the Coast Guard and Customs and Border Protection. The centre is expected to be ready for use later next year.

OPENING POSTPONED

Opening of the LNG terminal in Ningbo, 150km south of Shanghai, has been postponed. No suitable foreign supplier has been found to feed the terminal's 3M tonnes per annum capacity. PetroChina HAAS received approval for the 3M tpa terminal in Rudong (100km north of Shanghai), a joint venture also involving Singapore RGMI's Pacific Oil & Gas. China Shipping announced that it will set up several LNG joint ventures with PetroChina and China Petroleum in the next few months. In Guangdong province, CNOOC is aiming for its first LNG production plant to be open within a year. The Zhuhai plant (north of Macau) will have a capacity of around 12M tpa, all of which comes from nearby gas fields.

MUNDRA VENTURE

Adani group-owned Mundra Port & Special Economic Zone has set up a joint venture with Indian Oiltanking to own, operate and develop a liquid product terminal at Mundra, India. The new Mundra Indian Oiltanking will also operate as an independent liquid storage provider.



Squeezing in: larger vessels are docking at Ceres Paragon

Bigger ships for Ceres Paragon

Ceres Paragon container terminal in Amsterdam saw the first visit of an OOCL-operated 8,000teu container ship when the *OOCL Shenzhen*, which sails on the EU2 service between Western Europe and China via the Middle East, visited.

The EU2 service is operated by the Grand Alliance a joint venture between four shipping companies, namely Hapag-Lloyd, NYK, MISC and OOCL. Normally, 6,500teu ships ply this route. But the Grand Alliance is now gradually introducing bigger vessels to cope with the higher demand for transport capacity.

The OOCL Shenzhen is the second in a total of six new 8,000teu ships that will be calling at the port of Amsterdam. Earlier, Hapag-Lloyd began deploying bigger vessels on the route to Amsterdam.

Last hurricane vessel recovered

The *St. Luc Express*, the last of a dozen vessels left abandoned at Port Canaveral after Hurricanes Jeanne, Charley and Frances three years ago, has been recovered from the waters of the Banana River.

It brings to a close the port authority's joint efforts with the US Coast Guard, the Florida Wildlife Commission and the Brevard Sheriff's Department to ensure that Brevard waterways are clear and navigable.

Left in the unique situation of

having derelict vessels scattered across port property after the back-to-back hurricanes, the port authority immediately initiated the process for cleanup to prevent possible boating or environmental hazards.

"The port authority utilised the assistance of federal, state, and local agencies to notify and give vessel owners the opportunity to remove their vessels," said Stanley Payne, CEO, Port Canaveral. "We are pleased that the waterways now are clear again for both recreational and commercial use."

The majority of the owners or their agents took responsibility for the vessel removals. The port authority paid for the disposal of five vessels.

Port tenant Beyel Bros patched and refloated the *St. Luc Express*, then transported it to the company's leased property on the Barge Canal. The vessel will be cut up and recycled as scrap metal.

Cruise benefits Los Angeles

An economic impact study focused on cruise operations at the Port of Los Angeles shows significant benefits to the harbor district and greater Los Angeles areas.

In 2006, the 226 ship calls by the three homeported cruise lines at the Port generated \$253.7M in economic benefits to the harbor and greater Los Angeles region – an average of \$1.1M per ship call. An additional 39 cruise ships called at the port in 2006 which were not a part of the study.

According to the study, economic benefit to the harbor area (San Pedro, Wilmington and Harbor City) equalled \$108M, averaging \$478,000 per ship call. Economic benefits to the greater Los Angeles area and surrounding counties equalled \$146M in 2006, an average of \$622,000 per ship call.

"This report confirms that the harbor communities

PLA chief speaks out for ports

Port of London Authority (PLA) chief executive Richard Everitt has been elected to chair the United Kingdom Major Ports Group (UKMPG).

The UKMPG represents most of the major ports in the UK. The trade association's members handle 75% of the goods passing through UK ports. The Group works to make sure the industry's voice is heard at national level by politicians, the media and key decision-makers.

Everitt, who will continue as

chief executive of the PLA, said: "Ports like London make a huge contribution to the quality of the daily lives of everyone in the UK. This includes their gateway role for essentials such as fuel, food and clothing in addition to the electronic goods and cars that improve our quality of life. My work at the PLA means that every day I see the vital role that the Thames and its port facilities play for people in London, Kent and Essex.

"I look forward to working

Clearing the air in the west

Japan-based Kawasaki Kisen Kaisha, ("K" Line) has announced that all container vessels in its Pacific Northwest service (NOWCO-A), calling at Tacoma, WA, and Vancouver, BC, will use low-sulphur fuel in auxiliary machinery while the vessels are docked at the ports.

All container ships in "K" Line's NOWCO-A service will be shifting to distillate fuel with a target level of 0.5% sulphur or less, the company said. This distillate fuel will be used in the ships' generators, which supply power to the ship while the ship is docked.

The switch to distillate fuel will significantly reduce emissions of sulphur oxide (SOx) and particulate matter (PM). Sulphur

oxide emission is expected to be reduced by 80% and PM emission is expected to be cut by 70%.

"The Puget Sound region is in compliance with federal air quality standards today," said Port of Tacoma executive director Timothy Farrell. He added: "As we continue to benefit from the growth of international trade, voluntary actions like "K" Line's will ensure that our region continues to be a great place to work and a great place to live."

Dennis McLerran, the executive director of the Puget Sound Clean Air Agency, expressed his support for the announcement. "We greatly appreciate "K" Line's shift to lowsulphur fuels." with others in the UKMPG to ensure that the ports' voice is heard loud and clear in government, parliament, Whitehall and in Brussels."

and Los Angeles at large benefit in a wide variety of ways from cruise operations at the Port of Los

Angeles," said Geraldine Knatz, executive director at

"Cruise travel is a strong and growing segment of

tourism - an industry that recognises Los Angeles as a

world-renowned vacation destination. We have the

opportunity to grow this business in the years ahead

such as alternative maritime power, which enables

while reducing cruise ship pollution with technologies

ships to plug into clean electric power while at berth."

In terms of employment, approximately 1,277 jobs

in the harbor area are generated by cruise operations

at the Port, as well as an additional 1,202 jobs in the

region. Related wages equalled \$52.5M in the harbor

area alone, and \$36.6M for the rest of the five-county

the Port of Los Angeles.

Southern California region.

He concluded: "Ports are central not only to the whole transport debate but also to other key issues such as the environment and energy supply. I will be able to contribute to those national policy debates, reflecting the key matters that we face on the Thames and in the Port of London area."

Africa needs private sector

African port efficiency only improves when the private sector becomes involved, delegates at the 5th Intermodal Africa Conference in Durban were told.

Mærsk Line operations manager Jan Scheck said productivity had improved when some form of private partnership had been introduced. Africa is a challenging and costly market in which to do business, with a considerably different risk profile to European, US and large parts of Asian markets, he said.

Little development has taken place, despite increased volumes of 10–25% year on year, he added.

Port updates

DELEGATION ADVISED

Delegation of power from the shipping ministry to India's major port trusts has been recommended to allow decisions to be made quickly. A Rotterdam Port Authority report noted that, although relatively cash-rich, major ports in India had to await various clearances just to invest in a berth. Commissioned by the Indian port association, the report went on to suggest that the ports should outsource the implementation of their master plans. Greater attention should to given to mechanised cargo handling equipment instead of the expensive alternative of building more berths. Pointing out that hinterland links are a problem, the report advised investment should focus on this area.

PAKISTAN PLAN

Pakistan's PM Shaukat Aziz has approved a plan to develop a new port city on the Balochistan coast. To be located at Miani Hor, the plan was approved following a presentation on the proposed port city, Aladin. A developer should be sought through international tender to prepare a master plan for the project, the prime minister said. The new city is also to be marketed as a tourist resort and industrial hub.

LNG PLANS

Singapore will soon have an LNG terminal capable of handling vessels of 260,000m³, according to Ear Chow Foo, deputy director of the republic's Energy Market Authority. The terminal's location is yet to be identified, but it will cover 30ha, Ear said, with two storage tanks. Singapore imports about 5M tonnes of LNG a year.

SEALED TRANSIT

Pakistan has introduced a new security sealing system, inaugurated at Karachi, for transhipment, transit and export cargo containers. The system devised by customs is to provide security against pilferage and revenue loss to inland and transit cargo. Under the new rules, all transport units carrying transhipment goods must be sealed by Customs Container Security.

Port updates

TERMINAL SAVINGS

In a new study, the US Army Corps of Engineers has underlined the potential economic benefits of the Virginia Port Authority's proposed \$1.76Bn Craney Island terminal.

The report suggests that the 242.8ha terminal would save shippers \$345M in transportation costs and give the port sufficient capacity to handle projected cargo growth that's expected to nearly double by 2017. Before construction can begin, however, the Corps must first secure Congressional approval. *More info: www.vaports.com* & www.usace.army.mil

EEMSHAVEN

Groningen Seaports is to invest about €30M (\$40M) in the Dutch port of Eemshaven to extend its 400m dry bulk quay by 350m, excavate a new harbor for shortsea shipping and build a 10ha terminal. *More info: www.groningenseaports.com*

OIL FLOWS IN

Work has started on a new oil terminal at the northeast China port of Jingzhou, which is spending RMB850M (\$110M) on the facility. It will be capable of handling 250,000dwt tankers and goes into operation at the end of the year.

RAIL AND PORT LINK

Chemical intermodal service provider Bertschi has announced plans to build a €4M (\$5M), 20,000teu rail container terminal at the Dutch port of Terneuzen to serve Dow Chemical's nearby complex. The terminal is scheduled to become operational late this year to link the port with Busto, near Milan. *More info: www.bertschi.com*

MORE BOX DEPTH

Inchon Regional Maritime Affairs and Fisheries Office in South Korea has completed dredging work at Sunkwang Inchon Container Terminal to deepen the water depth to 11m from 9m. The port's two multi-purpose berths can now accommodate 17,000teu container ships.



Evans: setting out on a new port management training programme

Learning modern skills

A new trainee has joined the Port of London Authority (PLA) as the first person to embark upon a new management training scheme for the organisation.

Nick Evans, aged 25, is the first recruit for the PLA's new marine trainee scheme. The approach is different from the earlier PLA marine apprentice programme. The new scheme not only develops the wide range of marine skills needed on the Thames in the 21st century but also aims to develop potential future marine managers.

In the first two years of the three-year course Evans will complete an intensive two-year training programme on PLA craft in navigation skills, marine and port operations. The final year will involve more specialised training in key areas of PLA activity. This includes harbor master activities, pilotage, port control centre work, and operational support.

At the end of his training, which will also include a period at college, Evans will have a practical marine qualification. He will also have a wide understanding and knowledge of the PLA, the Thames – which is used by a diverse range of vessel types and sizes – and the Port of London.

Proactive move to cut air emissions

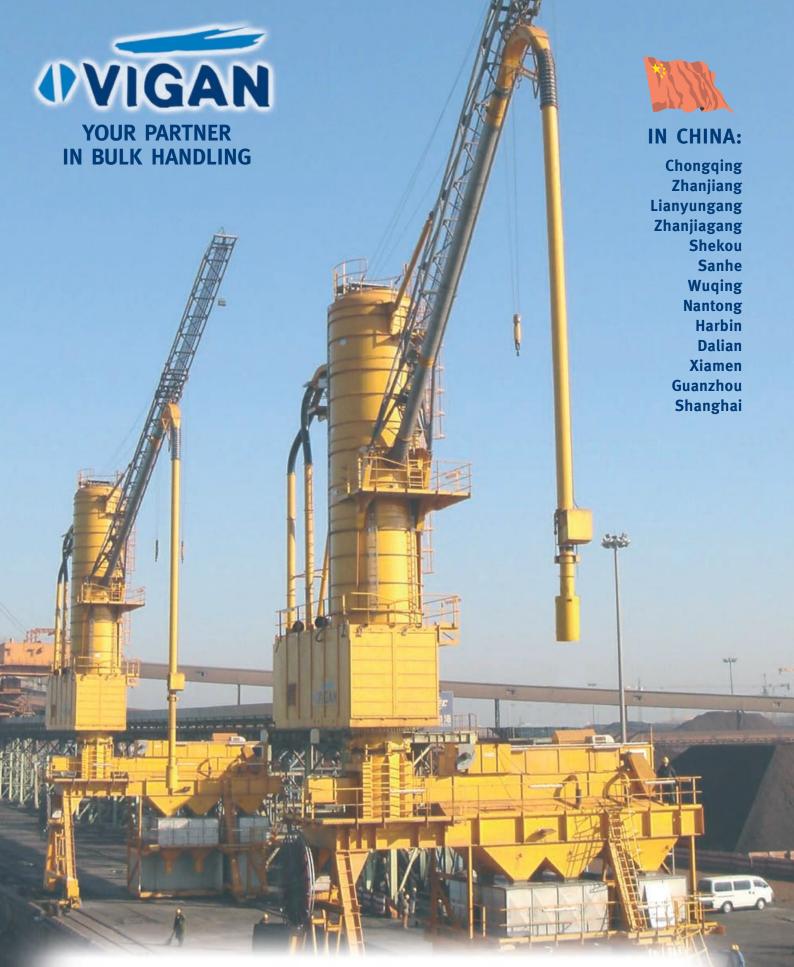
In a voluntary, proactive effort to reduce port-related emissions to the air, the South Carolina State Ports Authority (SCPA) has forged a formal agreement with the state's Department of Health and Environmental Control (DHEC).

The two agencies will "evaluate and implement" ways to cut emissions at the port's existing and future facilities, improving air quality in the Charleston region, said a statement.

"A cleaner environment and economic development are mutually compatible goals," said Bernard S Groseclose, president and CEO of the SCPA. "This agreement provides dual benefits to the Charleston community. It preserves quality of life by studying and enacting ways to cut port-related air emissions. At the same time, it generates more high-paying jobs as business expands at the Port of Charleston." The agreement calls for DHEC to designate an individual to co-ordinate air quality consultation for new and existing port facilities. DHEC will also develop and conduct training for SPA personnel on an annual basis.

"The Ports Authority has stepped up to address not only impacts from the new terminal, but existing terminals as well," said DHEC commissioner Earl Hunter. "DHEC appreciates this commitment to improve air quality in the Charleston region and we look forward to working with the Ports Authority," Hunter said.

The SPA will take specific steps at new and existing facilities, including funding the purchase, installation and utility costs for a particulate matter monitoring station; conducting an emissions inventory of existing facilities within 18 months; and purchasing cleaner equipment for the Navy Base Terminal.



VIGAN ship unloaders for alumina in Rizhao Port - Shandong Province - China More than 1,000 equipment all over the world for grains, oil seeds, feedstuffs, chemicals, ...

VIGAN Engineering s.a. Rue de L'Industrie, 16 - 1400 Nivelles (Belgium) Phone: +32 67 89 50 41 - Fax: +32 67 89 50 60 - Internet: www.vigan.com - E-mail: info@vigan.com

Port updates

DURBAN'S BOX PLAN

The Port of Durban is creating additional capacity through a \$270M development plan to establish Pier 1 as a highperformance container terminal. The first berth has just started operations and when complete at the year's end, the three-berth terminal should be able to handle 720,000teu a year, using six shipto-shore cranes and 18 RTGs. *More info: www.ports.co.za/ durban-harbour.php*

PASSENGER UPGRADE

Philippine Ports Authority is upgrading the country's provincial ports with new facilities including passenger terminal buildings and back-up areas. Top investment targets include Manila Harbour, Iloilo, Cagayan de Oro, Davao, Sasa Wharf, General Santos, Ozamis, Misamis Oriental Zamboanga and Batangas – bidding to operate the latter is expected to start this month, with Asian Terminals a likely candidate. *More info: www.ppa.com.ph*

GREENFIELD ONE...

SP-PSA International Port – a joint venture between PSA International and Saigon Port, will develop a deepwater container port with road and inland waterway links to Ho Chi Minh City and Vietnam's southern industrial hinterland. Phase 1 is due to open in 2009, with ultimate capacity set at 2M teu a year. The \$294M project will be funded partly by the Vietnamese government and partly by an unnamed Japanese bank.

...AND TWO FOR VIETNAM

A \$260M joint venture to build Saigon International Terminals Vietnam has been agreed between Hutchison Port Holdings and Saigon Investment Construction & Commerce, with operations due to start in 2011. The three-berth terminal will have 730m quay length, alongside depth of 14m and total yard area of 33ha. Initial capacity has been set at 1.1M teu a year. *More info: www.internationalpsa. com* + *www.hph.com*



\$7M wildlife sites

Associated British Ports (ABP) has opened two new wildlife sites, which created more than 60ha of new mudflat habitat on the banks of the Humber Estuary.

The sites, developed at a cost of £3.5M (\$7M), are considered crucial for supporting the region's populations of waders and waterfowl.

Chowder Ness Foreshore and Welwick Foreshore have been created by ABP as part of its commitment to the sustainable development of its ports.

Dr Helen Phillips, chief executive of Natural England – the UK government's new environmental body – officially opened Chowder Ness and Welwick Foreshores in a ceremony held alongside the mudflats at Chowder Ness.

The projects are in mitigation of 31ha of mudflats, lost to the building of Immingham Outer Harbour, at the Port of Immingham, and for the soon-tobe-built Hull Riverside Container Terminal at the Port of Hull.

This legally binding agreement – the first of its kind to be struck in the UK – has meant that ABP and the environmental organisations did not have to face a lengthy and costly public inquiry.

The sites are an illustration of ABP's "commitment" to the sustainable development of its

On site at Chowder Ness Foreshore, left to right: Peter Barham, ABP's sustainable development manager; Nick Palmer, ABP port director Grimsby and Immingham; Dr Helen Phillips, chief executive of Natural England; Matthew Kennerley, ABP port director Hull & Goole; and Roger Arundale, assistant port manager Grimsby and Immingham

ports and show how it is possible to expand without harming the environment, said Peter Barham, ABP's sustainable development manager.

"Chowder Ness and Welwick Foreshores represent a very important step forward for ABP," he said. "We have shown how it is possible to balance the needs of the environment and of business and how the development of one need not be to the detriment of the other."

Phillips said Natural England would work with ABP "to ensure that sustainable port development and the estuary's internationally important wildlife can continue to coexist well into the future."

Chowder Ness and Welwick represent about 20% of the total number of managed realignment schemes carried out in the UK so far.

LNG leads the way for shore-based power

The LNG industry could become on the first to adopt uniform standards for shore-based ship power, if an initiative by BP is successful.

BP Shipping is currently building four 155,000m³ dual-fuel, diesel-electric LNG carriers, which are intended for the Crown Landing LNG terminal in New Jersey, where there are shore-based fuel facilities.

On the shore side, there will be two cables from the shore power grid, which will reach to the jetty, according to Duncan Gould, project manager research and development for Lloyd's Register of Shipping.

"The primary technical concerns were the emergency shutdown and disconnect systems that are standard onboard LNG ships to help minimise the risk of injury to personnel or damage to the ship or terminal," he said.

The shore-based power systems have to be compatible with the LNG industry's emergency systems, said Mike Smyth, bio-fuels strategy adviser at BP Shipping. "What we tried to do from the shipping perspective was to minimise the complexity of the system to make it easy to maintain and operate from the shipboard side of things."

The chosen system has the advantage of reducing the number of cables that need to be connected to the ship while it is at the jetty.

Having found a workable system, BP has sought to share the project-specific standard it has developed with the rest of the LNG industry to ensure standardisation.

"With the LNG industry being quite a standardised industry, there is a push from the LNG industry to maintain a standard interface between ship and shore," says Smyth.

"We went ahead because of the timelines for the ships and the Crown Landing project, but we hope that, with the industry's help, we'll be able to roll this system out across our entire LNG fleet and to LNG vessels operated by other organisations."

Hybrid tug planned

US-based Foss Maritime Company has announced plans to build the world's first hybrid tug boat, in a bid to make major cuts in emissions of harmful NO, particulate matter, SO2 and carbon. The tug is also expected to consume less fuel and be quieter than its conventional predecessors, according to the company.

The project was given a boost by a decision from the Port of Los Angeles to pledge \$850,000 to the project, in association with the South Coast Air Quality Management District. The Long Beach Board of Harbor Commissioners has also preliminarily approved a \$500,000 contribution to the vessel's construction.

The hybrid tug could be used as part of the San Pedro Bay Ports Clean Air Action Plan.

More info: www.foss.com

Solar power first



Turning a roof into power: the new Tokyo power station

A new solar power station has started operation at Tokyo International Container Terminal, following its opening by Mitsui O.S.K. Lines.

MOL senior executive officer Masakazu Yakushiji said the system reflected the shipping line's commitment to preserving and protecting the environment in all its business activities.

The 1,200 solar panels have

been installed on the roofs of the gatehouse and container washing facility, covering an area of some 1,600m².

Able to generate up to 200kW, the facility is the largest private solar power generation system in metropolitan Tokyo and MOL said it expects it to reduce CO₂ terminal emissions by some 128 tonnes a year, equivalent to 45,000 litres of crude oil.

Air quality awards

Container shipping leader APL has been recognised for its innovative air quality initiatives by one of California's oldest and most respected marine aquariums.

The 70-year-old Cabrillo Marine Aquarium of San Pedro named APL winner of its prestigious John M Olguin Marine Environment Award, recognising a series of APL clean air initiatives.

These include a partnership with the US Environmental Protection Agency, California air quality districts and the ports of Los Angeles and Long Beach to test fuel emulsification aboard the container vessel APL Singapore. The innovative process injects water into ship fuel to reduce harmful emissions. APL has converted all 23 of its vessels calling California ports to burn cleaner, low-sulphur fuel.

The aquarium also honoured Dr Geraldine Knatz, executive director of the Port of Los Angeles and chair of the IAPH Environment Committee, with its Leadership Award for pursuing the twin goals of trade growth and environmental protection in Southern California.

29th IADC INTERNATIONAL SEMINAR ON DREDGING AND RECLAMATION

18 – 22 June 2007 Delft, The Netherlands

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 29th Seminar will take place in Delft, Monday 18 June until Friday 22 June 2007 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 and Project Phasing
- Day 2 What is Dredging? Dredging Equipment, Survey Systems
- Day 3 Cost, Pricing and Contracts
- Day 4 Preparation of a Dredging Contract Day 5 Dredging Projects

The cost of the seminar will be € 1.850,-; this fee includes all tuition, seminar proceedings, workshops, accommodation and a special participants dinner, but is exclusive of all travel costs. A group accommodation agreement has been made with the hotel at a corporate rate.

The Seminars reflect IADC's commitment to Continuing Education, and to improving knowledge about dredging throughout the world. Participants should have an education level equivalent to at least a B.Sc. or comparable work experience.

IADC Secretariat IADC PO Box 80521 2508 GM The Hague The Netherlands Phone: + 31 (0)70 352 33 34 Fax: + 31 (0)70 351 26 54 E-mail: info@iadc-dredging.com Website: www.iadc-dredging.com

Dredging

CHINA MOVES SOUTH

Shanghai Dredging Corp's first foray into the Argentine market will be a \$13M contract to deepen the 12km access channel to the Port of Buenos Aires to 10.36m and widen it to 100m. Completion is due by the end of the year and the 4,200m³ TSHD Hang Jun 4011 will be deployed. More info: www. puertobuenosaires.gov.ar

ACCESSING VIETNAM

An estimated \$125M is to be invested rehabilitating Vietnam's 30km Soai Rap access channel – once the main route to Ho Chi Minh City and Saigon Port, but now partly blocked by a sand bar. The initial phase will open the channel to 25,000dwt vessels, but eventually it should be accessible to 50,000dwt ships. Work will start next year, with completion scheduled for 2011. *More info: www.ipcvn.com*

DEEPER AT CHENNAI

Chennai Port Trust is investing Rs1Bn (\$23M) in land reclamation, dredging and deepening from 12m to 15.5m for a new container terminal. The three-berth, 1M teu-capacity, \$114M Chennai International Container Terminal terminal is due to open in two years' time. *More info: www.chennaiport.gov.in*

MELBOURNE RESULT

A 'supplementary environmental effects statement' on the Port of Melbourne's long-planned A\$763M (\$607M) channel-deepening project has found that it won't cause any long-term damage to Port Philip Bay. The port is hoping to move ahead with development soon. *More info: www.portofmelbourne.com*

YANGTZE CAMPAIGN

A series of reefs that hamper shipping on the 26km Taiziji section of the Yangtze River are being cleared with controlled explosions – a key project in the \$1.88Bn Yangtze dredging campaign. Blasting is due to end in June, but the debris won't be cleared until February next year. *More info: english.people.com.cn*

Strong Southampton results



Southampton: \$18M cruise investments

Southampton, part of Associated British Ports (ABP), reported a successful year in 2006, boosted by improved container and cruise operations.

The port welcomed more than 250 cruise ship calls and a record 738,000 international cruise passengers, up from 702,000 in 2005. ABP is now investing £9M (\$18M) in the expansion and enhancement of its City Cruise Terminal, supported by a new seven-year agreement with Royal Caribbean Cruises.

During 2006, Southampton's container operations grew to 1.5M teu – an increase of 9% on

the previous year. Southampton Container Terminals (SCT) – of which ABP owns 49% – has consolidated all Grand Alliance Atlantic services at Southampton, resulting in a further six weekly deepsea services to the port.

On the back of this, SCT has earmarked some £15M for two new quayside gantry cranes and eight new straddle carriers to increase its capacity to 2M teu.

SCT has started operating its fifth container-handling transhipment berth, featuring a dedicated 100-tonne mobile harbour crane, which four new weekly feeder services are using.

ABP has announced plans to increase container capacity at the port by some 85%, which involves the reuse of existing dock infrastructure, coupled with significant improvements in efficiency through state-of-the-art container-handling technology rather than building new berths.

The group will invest £4.4M (\$9M) to create a new bulk handling terminal at a disused drydock at the port.

Combining to build at Jasper

Co-operation triumphed over acrimony as the governors of South Carolina and Georgia agreed to jointly develop a new container port in Jasper County. This will be only the second port to be developed by neighbouring states in the US since New York and New Jersey agreed to run terminals jointly in the greater New York City area more than 80 years ago.

Standing on the 600ha proposed terminal site on the lower Savannah River, South Carolina governor Mark Sanford and Georgia governor Sonny Perdue ended years of bickering over the site and outlined general plans for the project that will be managed by a bi-state port authority. Under the proposal, the Georgia Department of Transportation – which uses the land for dredge spoil – would sell its interest in the Jasper site to the authority at market value and private companies would be asked to submit proposals for the development of the first phase using private capital.

The proposal must still be ratified by the two states' legislatures and by the US Congress. But the two state chief executives said the plan will benefit both states as well as Jasper County. The latter lost out on its own bid to use the land for a terminal, which was to have been developed by SSA Marine. Sanford said the pact would allow the two states to maintain their growth rates as major container ports.

Kandla aims to be logistics hub

The Port of Kandla's ambition to become a global logistic hub were outlined by Kandla Port Trust Chairman Shri A Janardhana Rao at a ceremony to celebrate India's Republic Day (January 26). He said there were "extensive and massive" projects at the port, which has undergone substantial growth in recent years.

Development of the port as a hub would strengthen the

national economy too, he added.

Kandla handled over 50M tonnes of cargo last year, the first time it has reached that target. Newly constructed facilities will add some 2M tonnes to capacity.

Maritime Security Expo 2007

6th Annual Expo & Conference

November 27-28, 2007 Jacob Javits Convention Center New York City

The Largest Maritime Security Event in the World

2000 Attendees 175 Exhibiting Companies 20 Countries

Organized By:

RITY

MSE



E. J. KRAUSE & Associates, inc. For information on exhibiting or sponsorship opportunities, please contact George DeBakey, Harry Carter or Peter Cappiello at 301-493-5500.

www.maritimesecurityexpo.com

People

JNPT GETS NEW HEAD

S S Hussain, principal secretary (revenue) of Maharashtra government, was appointed chairman of Jawaharlal Nehru Port Trust. After former chairman Ravi Budhiraja retired on May 31, 2006, the post at India's largest container port lay vacant for nine months because the state government did not release the original candidate, Johny Joseph, from his position as Mumbai municipal commissioner.

MINISTERS CHANGE

Following internal differences within the Sri Lankan government, ports minister Mangala Samaraweera has left his post together with the minister of port development, Sripathi Sooriyaarachi, and the national heritage minister, Anura Bandaranaike. It's understood that government projects, including plans for a new deepwater harbour next to Colombo port and a new port in southern Hambantota, are unlikely to be affected by these changes.

NEW AT THE TOP

Exxtor Terminal, the four-berth roro and lo-lo terminal at Associated British Ports' Port of Immingham, has a new general manager. Martin Szakal took up his post in February after two years as general manager of ABP Hull's dedicated forest products facility, Finland Terminal. Szakal's career in the ports industry began in 1978, in ABP's general cargo department at the Port of Barry in South Wales. He then worked at various ports around the country before returning to ABP in 2004.

MARKETING ROLE

The Jacksonville Port Authority (Jaxport), currently undergoing expansion (see p13), has named Robert Peek as director of marketing development, working to grow cargo sales through the port. Robert's new role comes after 11 years in the port's external affairs office, where he served as communications director. He joined Jaxport in 1995 as a communications co-ordinator.



Reefer knowledge: Madsen spent time in the shipping trades

Madsen steps up to Auckland post

Auckland port in New Zealand has appointed former Mærsk Line manager Jens Madsen as chief executive-designate, to replace the present chief executive and MD, Geoff Vazey, who will retire on August 31.

Madsen joined Ports of Auckland as CEO in February 2006 after 28 years with AP Møller-Mærsk, including time as head of Mærsk's New Zealand arm from 1996 to 2000. He then went on to be a leading figure in the global refrigerated container trade.

Mærsk Line recently chose Auckland over Tauranga to handle most of its North Island New Zealand services.

"This is a significant appointment for both Ports of Auckland and New Zealand's shipping and logistics industry," said Ports of Auckland chairman Gary Judd. Vazey, who has been chief executive since 1996, will remain MD until his retirement, he said.

See Open Forum pp 26, 27

US accolade for Panama president

US port heads have named Panamanian president Martin Torrijos as Port Person of the Year because of his support for the Panama Canal expansion, which is expected to help port economies.

"The Panama Canal expansion will have a profound effect on US, Canadian, South American and Caribbean maritime businesses and will help facilitate the movement of the dramatic increases in global trade expected in the coming years," American Association of Port Authorities (AAPA) president and CEO Kurt Nagle said.

Agustín Díaz, MD of the Curaçao Ports Authority and chairman of AAPA's Latin American Delegation, added: "The history of Panama is intimately linked to the history of the oceans touching its coasts. The actions developed during President Torrijos' administration have deep significance for the Panamanians as well as for the international maritime industry."

In addition to the canal, the AAPA praised Torrijos for proposing "a new \$600M megaport on the Pacific side of the Panama Canal". The award is to be given to Torrijos at AAPA's 2007 annual meeting set for October in Norfolk, Virginia.

Environmental scientist becomes MD

Long Beach Board of Harbor Commissioners has promoted Robert Kanter from director of planning and environmental affairs to the new position of MD of environmental management and planning.

In this role, Kanter will oversee the port's reorganised environmental management and planning bureau, which comprises the planning, environmental services and transportation planning divisions.

Port executive director Richard Steinke praised Kanter's relationship with state and federal regulatory agencies and his work on the San Pedro Bay Ports Clean Air Action Plan (CAAP).

The reorganisation reflects the increased importance of environmental improvements at the

port. "It updates our administrative structure to better reflect the high level of importance we place on environmental issues," he said.

As director of planning and environmental affairs – a position he has held since 1999 – Kanter was one of the chief architects of the industry-leading Green Port Policy and the Clean Air Action Plan, one of the most aggressive environmental strategies adopted by any seaport complex in the world.

As MD, Kanter will oversee divisions involved in implementing the green policy and the CAAP, along with additional environmental planning and regulatory compliance issues, land use and legislative matters, transportation planning and short- and longrange forecasting.

Terminal construction starts

The first phase of development of the Jacksonville Port Authority's (JAXPORT's) newest container terminal, set to start operations in late 2008, is under way.

Construction has started on the new Trans Pacific Container Service Corporation (TraPac) Terminal at Dames Point. There are three major areas of initial work: dredging the berthing area to 12m; building 730m of berth; and paving, lighting and fencing the 52ha cargo storage area.

TraPac, owned by Mitsui O.S.K. Lines (MOL), expects to handle 800,000teu of containerised cargo each year, thereby doubling annual

Growth at DP World

DP World is projecting a 75% increase in container handling capacity at its terminals worldwide to 84M teu by 2016. The company said it achieved a throughput of 42M teu in 2006, representing an increase of 16% on the combined volume from DP World and P&O operations in 2005.

DP World is set to increase its handling capacity "significantly"

over the next few years and has plans for a number of expansion and development projects in key growth markets, including India, China and the Middle East, according to a spokesman.

The company is investing \$5Bn in new developments in the next three to five years.

Jebel Ali Port, the group's biggest facility, is undergoing a

container throughput at the port. JAXPORT executive director Rick Ferrin described the venture as the biggest undertaken by the port. Bidding on the second phase of the TraPac Container Terminal

construction has already started. This will include construction of the buildings and entrance road.

\$1.5Bn expansion to increase capacity from 9M teu to 15M teu when completed in 2008.

Of the 25.5M teu capacity under development for the group worldwide, 11M teu will be ready by 2010.

The biggest expansion outside the UAE is in China, where DP World is building facilities with a capacity of 6M teu.

People

SOLENT MASTER

Associated British Ports's marine adviser, Capt Philip Holliday, takes over as harbor master at the Port of Southampton. Capt Holliday joined ABP in 1998 as marine assistant at Southampton and most recently has been marine manager at ABP's South Wales Ports of Newport, Cardiff, Barry, Swansea and Port Talbot. He began his career with Souter Shipping and Ropner Shipping Services.

PROJECT PLANNER

Wade Morefield has become Port Canaveral's first director of planning. Wade brings to Port Canaveral his experience as director of planning for the city of Anniston, Alabama, including transport projects. Current major projects at Port Canaveral include development of the north cargo area.

GETTING A FIX ON SOLAR: Going Green Helps You Find Your Way

With Carmanah's solar-powered LED lanterns, solar-powered floodlights and solar-powered generators, going green is a cost-effective alternative for ports and harbors.

Green = Clean and Renewable:

- · Solar power reduces green house gas emissions
- Solar products include lanterns, floodlights and back-up power solutions

Green = Cost Savings:

- Solar power is abundant and free
- No external power requirements = no ongoing energy costs
- Easy installation no trenching or cabling reducing costs of contracted labor

Green = Reliability

- Solar technology is reliable, and in use by Coast Guards, ports, harbors and navies around the world
- No maintenance for up to five years or more



Contact our Marine Lighting Division for more information: Worldwide: +1.250.380.0052 • info@solarmarinelights.com • solarmarinelights.com

CHANGE THE WORLD WITH US™

Cash & cargo

EXPANSION LOAN

The Asian Development Bank has approved a \$300M loan to help fund construction of the Colombo Port expansion project, which aims to increase container-handling capacity from 3.3M teu in 2006 to 5.7M by 2010 and eventually to 10.5M. Foreign direct investment in Sri Lanka's ports sector is expected to increase by about \$800M by 2024. *More info: www.adb.org*

ECONOMIC IMPACT

Georgia's deepwater ports generated \$55.8Bn in sales, \$14.9Bn in income and \$2.8Bn in state and local taxes in 2006. They also directly and indirectly supported 286,476 jobs. According to the University of Georgia, the Port of Savannah was the fastestgrowing port in the US, between 2000 and 2005 with a growth rate of 16.5%, against a national average of 9.7%. *More info: www.gaports.com*

IRAN'S GROWTH

Iran has allocated £563M for expanding and upgrading its ports in 2007–8. Of this, \$216M will be made available for some projects through finance and sales of participation bonds. Most will be used to expand container handling operations at Bandar Abbas and to develop Chabahar Port.

MAHERS SELL UP

Brian and Basil Maher have sold Maher Terminals, which operates in Port Elizabeth, New Jersey, and Port of Prince Rupert, Canada, to RREEF Infrastructure. The new owner is part of RREEF Alternative Investments, the global alternatives asset management business arm of Deutsche Bank. No purchase price was announced, but it has been suggested that it could exceed \$1.25Bn. *More info: www.db.com*

MUNDRA PORT IPO

Mundra Port and Special Economic Zone (MPSEZ), in the Gulf of Kutch, plans to raise Rs180M (\$407M) by selling shares – the first initial stock sale by an Indian port. *More info: www.portofmundra.com*



Special discharge: Halterm takes delivery of the new cranes

Canada's first all-electric RTGs

The Halterm Container Terminal at Halifax has taken delivery of four rubber-tyred gantry (RTG) cranes, valued at \$2M each, aimed at improving equipment downtime.

The cranes operate on a purely electric system, which is

expected to make them reliable in harsh marine conditions. They should also require little maintenance, as only the spreader employs hydraulics.

The RTGs, manufactured by Konecranes of Finland, are one-

over-five cranes with a lifting height of 18.1m. They have a loaded hoist speed of 31m per minute. The first-ever all-electric RTGs for a Canadian container terminal, they are part of a long-term development plan.

Special port post in Brazil

President Louis Inácio Lula da Silva (Lula) of Brazil has appointed former national integration minister Pedro Brito to the post of special ports minister, in a move that underlines the importance he places on the maritime and transport sector and his Reais500Bn (\$240Bn) PAC programme aimed at boosting economic growth.

Brito is expected to drive forward Lula's port policies, which are all – with the exception of Imbituba – administered by Companhias Docas, run by politicians from either the federal or state governments.

Brito's role will be to carry out Lula's PAC policy and cut unnecessary red tape blocking port development, especially at Santos, which handles 30% of Brazil's foreign trade.

Merger talks called off

Merger talks involving New Zealand's two largest ports, Auckland and Tauranga, have ended. John Parker, Tauranga Ports chairman, said it was "reluctantly" withdrawing from discussions because Auckland could not decide whether the move was worthwhile. "We believe a very sound business case exists for the merger," he said.

Merger talks were prompted by the growing power of international shipping companies, the increased pressure they exert and the need for ports to be big enough and efficient enough to respond.

Talks started more than a year ago and both ports had devoted significant time and resources to the discussions.

Chief executive Mark Cairns commented that a country with such a small population as New Zealand – 4M – "cannot sustain" funding of high-quality road and rail infrastructure connections to all its 13 ports.

Box mergers – expect more

Mergers and acquisitions in the liner industry are expected to gather pace as operators push for economies of scale, leaving ports with fewer customers.

"By 2015 it is expected that 80% of the liner market will be controlled by the top 10 companies as against 60% in 2006," Pacific International Lines MD Teo Siong Seng told the Sea Asia conference in Singapore.

He added that small and medium-sized operators would probably be marginalised. There was agreement at the meeting that strong economic growth from China, India, Vietnam and the Middle East would continue to drive freight rates higher.

Mesmerizing **GFEZ**

The best partner will help you excel and reach the top faster than anyone else !

Ok-In Baek, Director of GFEZ





Gwangywang Port

hinterland logistics complex

Joint logistics center

Marine center

The Gwangyang Bay Area Free Economic Zone [GFEZ] Save logistics costs through the numerous advantages offered by Gwangywang Port!

- Located on an international trunk line connecting China, Japan, Europe and the USA.
- The lowest logistics cost among all ports in Northeast Asia
- High-tech facilities capable of accommodating up to 16 ships and able to handle 5,480,000 TEUs per year; 24-hours a day
- Nested in a great industrial belt that includes large-scale port's hinterland(4.5 km²), POSCO Gwangyang Steel, Yeosu National Industrial Complex, etc.
- 20m water depth at the berths facilitates easy entry and exit of large container vessels
- Magnificent weather makes possible year-round operations
- Great natural surroundings protect the port from natural disasters

Join us at Gwangyang Port; your new logistics hub of Northeast Asia !

GFEZ Gwangyang Bay Area Free Economic Zone Authority

For more information, please contact : http://www.gfez.go.kr Tel:+82-61-760-5510,+82-61-760-5540/Fax:+82-61-760-5711~3



Guide to making easier decisions

Assessing the environmental risks in some dredging and disposal operations has just become easier, thanks to new guidance, as **Axel Netzband** and **Jerry Cura** explain

A new approach to assessing environmental risks when ports plan dredging projects is evolving under the guidance of a dedicated working group in PIANC. Working Group 10 (WG10) aims to help ports resolve complex operational and environmental aspects of their projects and meet the economic, engineering and environmental challenges they pose.

The results of WG10's deliberations have been published as *Environmental risk assessment of dredging and disposal operations*, which is available from PIANC. The report draws on guidance and practice from a number of countries to offer an explanation

IAPH and PIANC collaboration

The long-term working relations between the two associations were brought even closer in 2001, when they signed an MOU at the IAPH Montreal Conference. IAPH is associated with the work of several PIANC Working Groups including Small Island Ports and Dimensions of Fairways. Axel Netzband, of the Port of Hamburg, represents IAPH in the Working Group on environmental risk assessment of dredging and disposal operations, which is chaired by Jerry Cura, of US-based The Science Collaborative. of risk assessment, a step-by-step description of the necessary elements and an information base for those thinking of applying risk assessment to their projects.

It includes a running case study based on an actual project to illustrate how each of the steps should be applied. The glossary will be of help to the nonexpert, links point to information-rich websites, while for the practitioner there are references to technical documents from international sources.

The purpose of the report is to help environmental scientists and engineers apply risk assessment techniques to the decision-making process. The guidance recognises that it is only appropriate to apply risk assessment in certain circumstances and only when the practitioner understands the technique's advantages and limitations.

Its advantages are that it supplements and continues the work of prior studies such as an environmental impact assessment, avoids unrealistic conservatism of generic criteria, addresses issue- and site-specific concerns, and focuses on critical path issues.

Risk assessment is not a replacement for compliance with regulatory requirements, but it does allow environmental and human health concerns to be

Dredging and Marine Contractors





A sea of opportunity

Palm Deira, Dubai

Van Oord has been awarded the contract to build the largest land reclamation project in the world: Palm Deira. One billion cubic metres of sand and 40 million tons of rock will be involved in building the island. The project will be completed within eight years.



Van Oord is a dredging and marine contracting company with a worldwide reputation for building tomorrow's infrastructure. We carry out projects around the world, offering solutions to our clients' marine engineering problems and managing the entire process from design to completion. Our work combines professional skill with experience in local environments and innovative solutions. Van Oord employs 2,900 well-trained professionals and has the world's largest state-of-the-art dredging fleet. The company arose from the merger between Ballast Ham Dredging and Van Oord ACZ.

Van Oord PO Box 8574 3009 AN Rotterdam The Netherlands T +31 10 4478444 F +31 10 4478100 E info@vanoord.com developed within a specific and internationally recognised framework. Application of the framework brings crucial issues to the front and so helps define the critical path.

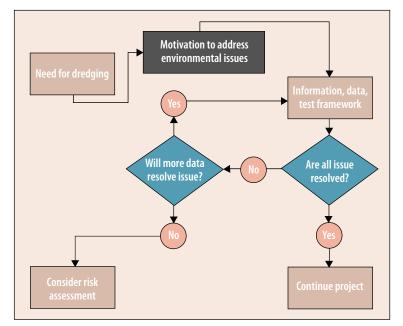
The environmental risk assessment described in the guidance can be used to address a specific ecological or human health effect that relates to a particular contaminant and a particular receptor, such as a fish species or a human group. It's appropriate, therefore, where there is an identified potential effect but it has not been possible to decide whether to proceed, select among alternative plans or reconsider the project.

The guidance has its limitations, as it applies to just one element of the decision-making process. It is generally applied only to chemical risk, although PIANC continues to apply the risk structure to issues associated with physical modifications.

As the management of dredged material comes under more intense scrutiny and the complexity of the processes involved become more apparent, the attendant volume of information has been increasing. Simultaneously, both proponents and regulators now recognise the magnitude of the uncertainties surrounding the potential effects of dredging and subsequent management of the dredged material. As a result, decision-making has become more difficult and time-consuming.

Harold Koethe, of the German Federal Institute of Hydrology, reviewed the status of the decision-making process in Europe and concluded that there is "a need to have a simpler, practice-oriented, harmonised guidance for sediment/dredged material management in Europe. We believe that risk assessment contributes to answering this need."

In particular, the report recognises that the ultimate reason for carrying out a risk assessment is to facilitate project decisions. Risk assessment does this best when started early in planning. The process of conducting the assessment brings parties together and forces



them to discuss their specific concerns.

This specificity is crucial. Applying the risk assessment framework helps avoid the frustration and inefficiency of *ad hoc* decision-making.

It achieves this because the framework is formalised, structured, integrates information, uses weight of evidence, requires transparency, is linear and allows 'what if' analyses very easily.

An essential part of the process of defining the critical path is discussion and analysis of specific issues. The PIANC guidance stresses that the risk assessment requires specification of time, place, activity, receptor, possible hazard and specific impact. It also allows for specific future changes that may require risks to be revisited and revised.

Ultimately, decision-making is subjective and the risk assessment needs to take account of the interests of the engineers and the business and political communities, while building within regulatory constraints. The guidance recognises this interaction and requires that the expert incorporate uncertainty into the analyses by providing technical justification for an expressed confidence level either qualitatively or quantitatively.

Frank recognition of the uncertainty provides the basis for dialogue, and this in turn helps the interested parties agree a mutually acceptable definition of confidence as they search for common ground upon which to base a decision.

The guidance steers the reader through a familiar risk assessment framework, always keeping the focus on those dredging and disposal issues that managers of ports and harbors most often encounter.

The guide explains exposure assessment and describes how to estimate the magnitude, frequency and duration of ecological or human exposure to physical and chemical stressors based upon the pathways developed in the conceptual model.

To help the user compile an effects assessment, the guide provides information sources and methods to review the current toxicological literature and identify the threshold values above which contaminant exposure is assumed to have an adverse effect.

Another section looks at risk characterisation and ways of integrating the exposure and effects assessments into a quantitative and qualitative expression of risk. In ecological risk assessment, risk characterisation quantifies hazard by comparing a contaminant's toxic exposure level (concentration or dose) with the predicted exposure, by directly measuring or modelling predictions of toxicity.

It is not generally useful to incorporate observation of current ecological conditions in dredged material disposal risk characterisations, as these observations are not predictive. In human health risk assessment, risk characterisation quantifies carcinogenic risk as an incremental probability of occurrence and noncarcinogenic hazard as a comparison of the toxic dose to the predicted dose. **PH**

More info: www.pianc-aipcn.org

Artificial Islands Pearl - Qatar

Versatility to secure progress

Worldwide contracting for port development

Port Construction

Green Energy Beatrice Windfarm - United Kingdom



Environmental Remediation Hulsfred Lakes - Sweden



GROUP

DEME

DREDGING

STATES IN COLUMN

INTERNATIONAL

Haven 1025, Scheldedijk 30 - B-2070 Zwijndrecht - Belgium - Tel.: +32 3 250 52 11 Fax +32 3 250 56 50 - Web site: www.deme.be - Email: dredging@dredging.com

THERE'S NO SUBSTITUTE FOR EXPERIENCE

Keeping a busy waterway clear

Many ports require periodic dredging, but some face a greater problem than others, as **P&H** reports

Galileï 2000 enters the Port of Nieuwpoort t is one thing to factor in a dredging programme, but what if you have a restricted season for dredging? What if you have a busy, congested and narrow waterway? What if you have a constant need to dredge? What if they all apply?

This is the case at the Belgian port of Nieuwpoort, Flanders, where a busy general cargo berth, a large fishing port and northern Europe's largest yacht marina all compete to use the busy channel. The shifting sands of the North Sea, combined with the relentless introduction of larger vessels for all activities, mean that dredging is central to the port's life.

In addition, concern over the environmental effects of dredging and disposal of dredged material, the scarcity of suitable disposal sites and dredging's role in supporting waterborne commerce have

combined to bring the issue in to the public policy debate of Flanders. Nieuwpoort is the responsibility of the Flemish government's coastal department, part of the Ministry of Public Works, Energy, Environment and Nature, which last year awarded a four-year maintenance dredging contract to Jan De Nul to dredge the busy marina and waterway.

Located 16km south of the busy cross-channel ro-ro port of Ostend, Nieuwpoort cannot afford to close, but its narrow and busy waterway needs to be dredged.

The operation is necessary to remove sediment brought in partly by the tides and partly by the River IJzer, which flows into the North Sea at this point.

To add to the difficulties caused by the traffic flow and the confined area, dredging is only allowed in Nieuwpoort between November 1 and March 31, so



operators have to face the worst of winter's storms to finish the task. During this time the contract calls for an average of 250,000m³ of sediment to be removed.

The work is sensitive, as areas of the IJzer valley are important sites for marshland and water birds. The floodable parts of the valley are protected as Ramsar Convention wetlands and as special protection areas under the European Bird Directive.

A series of small, specialist craft have evolved to deal with the problems faced by ports that need dredging to be carried out in confined and busy areas, such as Nieuwpoort. These are small cutter suction dredgers (CSDs) and thanks to their ability to work so well in confined port areas, or in remote locations where access is restricted, these craft are experiencing unparalleled demand worldwide, the industry reports.

The term 'small dredger' found its ultimate expression in the pocket-sized self-manoeuvring CSD Hendrik Geeraert, newly built and delivered to owner Jan De Nul last November. By fixing a pontoon in place using three spuds, it can work in tight spaces between piers and moored yachts.

The dredger, which was selected to work on aspects of the Nieuwpoort, moves on the three spuds, so neither anchors nor wires are necessary to operate it. This allows yachts to navigate the waterway and the dredger to operate in the same marina.

There is still the flexibility to use anchors when there is a large enough dredging area that is unaffected by traffic, Jan de Nul reports.

Another feature, the swinging ladder, which consists of three sections controlled by hydraulic rams, enables the operator to reach under pontoons. This minimised disruption in the marina, as only the yachts needed to be moved before dredging.

Real-time dredging software was used in the Nieuwpoort project to achieve accurate positioning of the dredger. The LRK software can show the dredging operations online. The terrain is portrayed digitally together with the dredging area, including pontoons, gangways and dredging limits.

Operators on the vessel can follow the outline of the intended operation - the so-called dredging design - from multiple viewpoints, including side view and top view. The software also shows the cutter position and the correct cutter depth.

Last November the 2,339m³ trailing suction hopper

Nieuwport facts

Location	2.4km up the River IJzer
Facilities	General cargo quay
Fishing harbor	35 fishing boats
Yacht marina	2,000 yachts
Traffic	950 commercial vessels a year
Max size	1,736dwt
Max LOA	82m
Draught	5.3m
Quay	460m long
Facilities	2 × 80t mobile cranes

dredger (TSHD) Galileï 2000, chartered from Dredging International, started dredging the access channel, plus the berths for fishing vessels and aggregate carriers. Hendrik Geeraert started work on the marinas soon after.

Flemish environmental regulations stipulate that no sediment can be pumped into the sea but must be transported to designated offshore disposal sites. The Nieuwpoort disposal site is 7nm offshore and can only be reached by seagoing TSHDs and self-propelled hopper barges. Careful co-ordination is required as the transfer operations have to be undertaken in the busy waterway.

The trailer Galileï 2000 and 1,000m³ split-hopper barge DI 69 therefore now work in combination with Hendrik Geeraert, the former used simply as a hopper vessel to transport the sediment to the disposal site.

When dredging in the marinas Hendrik Geeraert pumps sediment through a floating pipeline to a specially built barge that loads the two hoppers. To avoid the risk of inadvertent contact causing damage to expensive yachts in the marina, the pipeline is made of rubber. Use of submerged pipelines keeps the marina entrance clear of obstructions.

Throughout the operations, which will resume once the sailing season is over, Jan de Nul stays in daily communication with the yachting clubs and the port authority. PH

More info: www.nieuwpoort.be

Stages in a dredging operation: the waterway was kept open by use of specialist equipment







Troubles come in bulk

There is no stalling in the growth of China's bulk trades, but there are complications in India's export plans, as **P&H** discovers

xplosive growth of bulk imports continues, but China's ore and coal exports have diminished as the country's industry has absorbed more and more domestic resources. This has helped to alleviate congestion at ports.

Expansion of the road and railway infrastructure has helped ease the problem, removing stocks from ports quicker. And new terminals are starting operations.

Their development is linked to a new government policy aimed at shifting production from traditional centres to new ones and building power stations and steel plants near ports to achieve this.

Take the case of the new Caofeidian Port in Hebei province, between Tianjin and Qinhuangdao and some 225km from Beijing, which is designed to handle trade for Beijing too. When complete in 2009 it will be one of the world's largest coal ports and the largest in China. Plans are for two 300,000 tonne oil berths, 16 coal berths each able to handle 50,000 to 100,000 tonnes at a time, four ore berths with capacity of 250,000 to 400,000 tonnes, and one liquefied natural gas berth.

More than \$900M is being spent on building the

port in two phases. Ultimately, the bulk capacity will be 400M tonnes, mostly oil and coal, but a 500,000teucapacity container port is also planned.

Expectations are that Caofeidian could cut China's import costs by some \$2–9 per tonne on commodities from Australia and Brazil, as it handled material more efficiently than Huangdao port in Shandong province.

The 220km, \$660M Qiancao Railway is under construction to link Caofeidian with Qianan, a coal production centre in the Tangshan region. This will cut costs further, as it will overcome the need to use more expensive road transport to the existing coal-shipment port of Tianjin.

One of the investors is Datang International Power Generation, China's second-largest electricity producer, which sees the railway line as a way to secure coal supplies for some of its coastal power plants.

Beijing-based Shougang Steel is moving production to Caofeidian at a cost of \$9M. It should significantly reduce air pollution in the capital in time for the 2008 Olympics.

Shougang will eventually occupy 20km² at

Grab hoppers alongside the bulk cranes at Ningbo Port quayside

Caofeidian, partly reclaimed, and once the plant reaches maximum capacity will be able to produce 50M tonnes of steel a year, worth \$26M, about a quarter of the zone's projected economic output.

From the start, Shougang will be consuming 50M tonnes of coal annually, rising to 800M tonnes once the complex becomes fully operational in five years. Steel production is expected to begin in October.

PetroChina, one of the country's two largest oil companies, plans to spend \$1Bn to build a 100,000-tonne-a-year capacity LNG terminal in Caofeidian, together with port and storage facilities and 15M tonnes of refining capacity. The project is due for completion in July 2008 and about two-thirds of the gas it produces will be sent to Beijing via pipeline.

Caofeidian's port will mimic the success of the three existing big Bohai Sea ports – Qingdao, Tianjin and Dalian – where throughput has been growing by 20% a year for several years.

The port's capacity is badly needed, as official commodity import figures for 2006 show. Imports of iron ore topped 325M tonnes and the figure is expected to rise by 30% to 355M tonnes this year. Domestic steel production rose to 418M tonnes, of which 43M tonnes were exported. Crude oil imports surpassed 130M tonnes and are expected to touch 200M tonnes by 2010. Exports of thermal coal on the other hand have been falling in the face of rising domestic consumption, but they still exceed 50M tonnes.

Chinese prime minister Wen Jiabao has said that economic growth would be slashed to 8% this year from 10.7% in 2006. It is unlikely, however, that the move will have any impact on shipping or port activity.

By contrast, Indian ports are bracing themselves for a reduction in exports of iron ore. New export duties for iron ore are likely to ensure China sources a higher proportion of its supplies from Brazil, despite high transportation costs for bringing the raw material from South America.

Fuelling China's booming economy, quayside grab-cranes discharge cargo from a bulk carrier at Ningbo port

The Rs300 (\$6.77) per tonne export tax would increase Indian ore prices to about \$95 a tonne, delivered to China, well beyond Brazilian prices of about \$90 a tonne – unless Indian suppliers shoulder the additional costs.

India, the number three iron ore supplier for China

World crude steel

Share of production (%)	1996	2001	2006
China	13	18	34
N/S America	21	18	14
Europe CIS	37	36	29
Other Asia	25	24	20
China's production (Mt)	101.2	150.9	418.8
		Source: The International Iron and Steel Institute	

after Australia and Brazil, announced the export duties in the budget in a move to keep more of the minerals for steel mills at home. Some Indian exporters immediately suspended shipments, as they were reluctant to bear the costs. The smaller traders are likely to be the worst hit, as the larger mines will probably have to bear the increase to maintain trade.

There is little likelihood of extra cargo availability from Brazil in the short-term, especially as there is a shortage in the supply of large vessels in the Atlantic.

Customs data shows Chinese iron ore imports in January hit a monthly record of 35.8M tonnes, with India accounting for 6.9M tonnes, up 17.7% over the corresponding period last year.

Other countries are competing for various cargoes. Indonesia has overtaken Australia as the world's largest exporter of thermal coal, although Australia remains the biggest exporter of metallurgical coal.

According to Fred Doll, of Doll Shipping Consultancy, iron ore and coal make up the largest sources of seaborne trade growth for India. The steel industry accounts for 49% of major bulk trades, steam coal and coking coal together comprise about 39% and the growth in steel markets has resulted in growth in seaborne coking coal trades, he said.

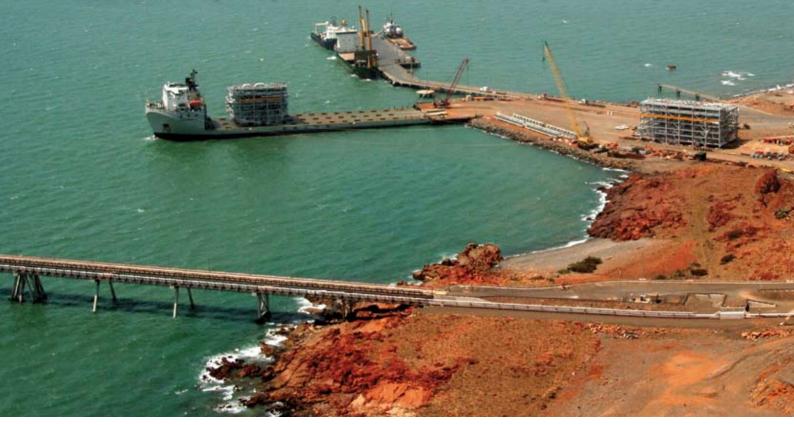
He predicts great potential for growth in the future, as the country's steel production rose from 27M tonnes in 2000 to 44M tonnes last year. This put the country in the number seven slot for world production.

India's iron ore exports increased from 37M tonnes in 2000 to 90M tonnes in 2006. "India is still a very low consumer of steel per capita at 31kg in 2004, so there is great potential for growth," he said. **PH**



Giant ports for a giant state

Western Australia expects to export 500M tonnes of iron ore by 2025 and its producers are anxious to avoid the port congestion that plagues coal exporters in the east of the country. **Evelyn Duffy** investigates how they are preparing to cope with growth



he vast state of Western Australia (WA) possesses huge reserves of the raw materials that the world – particularly China – needs to feed growing industries. Existing ports, such as Geraldton, are coping well, reports industry. But the fear is that the future could be different.

A look at the growth of trade in the iron ore mining area shows that the port of Geraldton handled 170,000 tonnes of commodities destined for China in 2002– 2003 out of a total annual trade of 2.5M tonnes. Iron ore wasn't even in the statistics.

By 2004–2005 China was taking nearly 2M tonnes and iron ore contributed some 2M tonnes to the port's annual 5.5M tonnes exports. By December 2006, 1.6M tonnes of commodities moved over the quayside.

Now there are plans to build a deepwater port 25km north of Geraldton on the mouth of the Oakajee River for completion in 2010.

WA's state government has announced plans to build a new deepwater port in the Pilbara in the next decade to cater for the expansion of the iron ore industry. WA planning minister Alannah MacTiernan announced that a greenfield site at Ronsard Island Port, 80km west of Port Hedland, was the government's preferred choice for a new port. Port Hedland is Australia's largest port by tonnage and the expectations are that Ronsard Island Port will be even bigger.

The state government plans to invest about A\$500M in the project. Private companies are expected to develop berthing facilities.

WA premier Alan Carpenter has also announced funding of A\$9.5M for a major dredging project for the harbor at Port Hedland to enable the port to handle

Throughput WA ports (M tonnes)

	2006	2016
Port Hedland		
Geraldton	5.5	
Ronsard Island*	n/a	
Dampier Port		
*To be constructed		



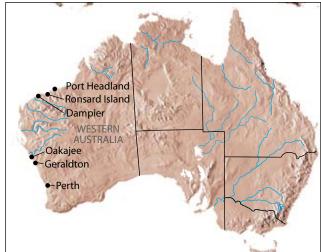
Dampier: one of the Western Australian ports that are receiving billions of dollars to expand Panamax bulk carriers at a proposed new multi-user minerals berth at Utah Point. The project would cut a berth pocket 300m long by 60m wide and 14m deep. The new berth, which would have an initial capacity

of more than 7.2M tonnes a year, could produce additional annual state revenue of more than A\$30M. Port Hedland recorded total trade of more than 110.6M tonnes in the last financial year.

At Port Dampier construction of new facilities and a dredging programme costing \$690M are under way to accommodate expanding capacity at the region's mines. Further investment by Rio Tinto Iron Ore will see the port's output rise to 220M tonnes.

At least four mining companies – Mount Gibson Iron, Midwest Corporation, Gindalbie Metals and Murchison Metals – are using Geraldton Port, where an upgrade of Berth 5 to cater for mid-west iron ore exporters is on track for completion later this year.

Since last September, the Geraldton Port Authority has awarded contracts totalling A\$18.5M to advance the project. "Geraldton's iron ore facility at Berth 4 is in use 80% of the time, so a new berth will speed



ship turnarounds and save costs for exporters and purchasers," MacTiernan explained.

It is expected that Western Australian ports will export up to 900M tonnes of iron ore a year from 2025. Trading partners in China, Japan and South Korea currently take around 240M tonnes of iron ore from WA annually.

Until the new facilities are completed, there is concern about how emerging mining companies can access ports to get their commodities to market. Traditionally, the mining giants, such as Rio Tinto and BHP Billiton, built and operated their own infrastructure for their own needs. However, the trade structure is changing and, increasingly, smaller players are developing mines.

These enterprises lack the capacity for the multibillion dollar investments that new port and railway infrastructure demands and have limited access to existing facilities. For smaller players, these issues are major barriers to market entry.

The WA government initiated infrastructure strategy consultations more than 12 months ago, aimed at providing a 20-year planning frame to cover major developments in areas such as roads, railways and ports.

The consultations brought together major industry groups, mining companies and port authorities. "This process will add rigour to the way infrastructure projects are identified and assessed," Chamber of Minerals and Energy of WA (CMEWA) chief executive Tim Shanahan said. "It's a useful process and will contribute to putting Western Australia in front of the game instead of playing catch-up."

CMEWA director David Parker said that while port bottlenecks have been a major issue for exporters out of east coast ports, WA's mining companies have generally not faced massive ship queues. One of the state's biggest independent mining companies, Mount Gibson Iron, claimed that congestion at the Port of Geraldton is hampering exports.

It also claimed that expansion projects, such as the development of the Extension Hill hematite iron ore mine, were likely to be delayed because of poor railway links and discharging problems at the port. **PH**

Turning heavy investments into profits

The changing pattern of global maritime trade and its consequences for Ports of Auckland is outlined by **Geoff Vazey**

he goal of continuously improving efficiencies has been brought sharply into focus by recent mergers and acquisitions among shipping lines that have resulted in the big lines holding immense power. The pressure put on port companies to raise their productivity and trim their charges has made it increasingly difficult for ports to achieve a satisfactory return on their assets.

Ports build capacity infrequently and at huge cost. Their business cannot 'turn on a dime' and, unlike a ship, a port cannot be shifted to a new location. A port that has invested heavily in building new capacity can find itself under enormous pressure to lower its prices if it fears losing a major customer. Port power-plays by shipping lines can add cost to the total world supply chains. Global transport logistics mean that entire supply chains are now competing with each other. Increasingly, market share is determined by the ability to get goods to market rather than the difference between goods. Ports of Auckland's focus is on improving the efficiency of New Zealand's supply chain to help our exports compete on the world stage.

We are well placed to do so. Until 1988, Auckland's port operations came under the authority of the Auckland Harbour Board, a publicly elected body that was established by the New Zealand government back in 1871.

The Harbour Board oversaw the development of the Port from the sailing ship era through to the arrival of the first container ships in the early 1970s. Predictably, the Port grew in tandem with the city. However, throughout this era of management by local government, the Port's productivity was very poor.

In 1988 there was a major change when the Port Company Act came into effect and all New Zealand harbor boards were corporatised, so the AHB became Ports of Auckland Ltd. Ownership was retained by regional bodies in Auckland and Waikato, but within a few months the Waikato Regional Council floated its 20% shareholding, and the company was listed on the New Zealand Stock Exchange.

While 80% of the company was retained by Auckland regional bodies, the incentive to perform to meet shareholders' expectations as a publicly traded company resulted in Ports of Auckland undergoing radical changes of organisation, operations and investment. Over the nearly two decades since corporatisation, it has operated successfully in a business environment where anticipating and handling changing market patterns and emerging global

OPEN FORUM



trends is essential to successfully meeting customer needs.

In 2005, Auckland Regional Holdings moved to full ownership, buying out private minority shareholders, and the company was de-listed from the stock exchange. However, while its profits are now devoted to the public purse, the company's efficient operations and business skills have in no way diminished.

The company is now in the upper quartile of productivity by world benchmarking standards.

This means we are ready to take on the next phase of port evolution. Ports need to move on from the micro-dynamics that have typified the last decade, where different sectors in supply chains have used their power of the day to extract disproportionate 'rents' from others in that supply chain. Such tactics only add costs, which have a domino effect throughout the supply chain.

Players in supply chains need to work with each other, not against each other. As this

reality comes to pass, we are seeing periods of co-operation between the various links in the supply chain.

One recent development at Ports of Auckland is our express export system that allows all container documentation to be completed electronically before delivery to the port. Truck drivers entering the port simply enter a pin number and are admitted to pick up their containers without a single piece of paper changing hands.

The Port's goal is to reduce truck turnaround times to an average of 15 minutes. Truck congestion caused by a recent surge in container volumes has seen average times increase, but the company is working with road carriers on measures to improve this situation.

Border agencies recognise that they too are part of the supply chain. For example, the New Zealand Customs Service is progressive in working with business interests on formulating ideas for improving cross-border



Vazey: Staff are in the loop

processes. However, much more can be done to reduce the interface costs and to share financial returns.

Port companies invest a substantial amount in well-targeted staff training. The training tends to focus on improving individual skills – making individuals better at driving a straddle carrier or better at using computer software, for example.

All that is important, but it overlooks the fact that ports are engaged in a team sport. We are in a service industry, and in service industries the team with the best service wins.

Take the All Blacks, New Zealand's premier rugby team, as an example. Each team member practises five days a week and has done so for at least the past 10 years. But while they are trained in individual skills, what makes the winning difference is team plays, group plays, communication and how team members co-ordinate.

Some of the very best All Blacks do not score many points themselves, but they are absolutely critical to the team's success because they set up things for other players in the team.

I believe that there is a need for more training within our ports to help individual staff work together with a concerted eye on the team result, so that 1+1+1=>3.

That is what we are working towards at Ports of Auckland. Through internal communications ranging from mess room talks to weekly updates on how we are doing in every part of our operation, we keep all our staff – from the stevedores who operate the port's cranes and straddles to those in office positions – constantly in the loop.

Ports can be a great place to have a career. Focused training can make ports even better places to work. **PH**

Geoff Vazey is chief executive of Ports of Auckland More info: www.poal.co.nz

Fighting for peace

In the US, ports are relieved that there are signs they may be receiving \$400M in security grants, but, given the demands for ever-increasing and sophisticated security, will it be enough? *Will Watson* and *Bridget Hogan* investigate Port security officers in the US are optimistic Congress will approve \$400M in security grants for FY 2008, the first time the industry would get its full allocation. While last year's SAFE Port Act did say ports should get \$400M, Congress appropriated only \$210M for 2007. It's the same story for 2008. Congress has approved \$210M, but a question mark hangs over the remaining \$190M. Lobbying by industry groups such as the American Association of Port Authorities (AAPA) continues.

Talking to *P&H*, both Jay Grant, director of the Port Security Council of America (PSCA), and Kurt Nagle, president of AAPA, described news of the proposed increase as "great". Even this sum is considered insufficient, however. Grant said \$400M would have been right in 2004 – "But even that isn't enough now".

Grant is an outside lobbyist – the first hired by the AAPA. "The association had never done this before," Nagle told *P&H*. "We knew the issue of port security and funding for it was critical and we realised we needed special help."

Grant pointed to growing numbers of security programmes such as the Transportation Worker Identification Credential (TWIC) card and the scanning of inbound containers as increasing the demands on ports. "The federal funds don't even cover the capital projects," he noted. "And then there are the operational costs that the ports must bear themselves."

He added that ports have been underfunded since the programme began. While the added funds are appreciated, he says ports still face an uphill battle to cope with federally mandated security programmes.

An indication of the amounts involved was given by Canaveral Port Authority CEO Stan Payne, who said security amounts to nearly 20% of the port authority's annual budget. Before the World Trade Center terrorist attacks it was closer to 4%, he estimated.

To help in its campaign, Grant has been involved in publishing a special *Port Security Journal*, a quarterly glossy magazine that PSCA distributes to legislators and government officials. "We have to get the facts in front of the members," he observed.

Front line: ports are working together to get the maximum grants There have been other issues over the way the Department for Homeland Security (DHS) has handled the port grant system. Grant said that the speed with which money has been released has been a major problem, but in Round 7 – the most recent – distribution was speeded up. "We have worked closely with the Coast Guard and the DHS Office of Grants and Training on the guidance and distribution of funds to work out the issues," Grant said.

Beyond speed, there's an issue about which ports are eligible for funds. Grant noted that originally all ports could apply. Then the number was limited to the 100 biggest ports. Under the SAFE Port Act all ports can again apply, and Grant and others at AAPA say that's a good thing.

Grant is getting together with DHS officials to establish a more formal process with port officials to examine the latest round of grants to determine what has worked and what should be changed. To increase the size of their grants, some ports have been cooperating with each other by forming collectives.

An early tendency of the DHS to send money to the writers of the best proposals – not necessarily the ports with the greatest need – has been countered. The AAPA has been holding grant-writing workshops so those in ports who handle submissions can understand what government officials are looking for in a proposal.

Bernard Groseclose, CEO of the South Carolina State Port Authority and a former chair of the AAPA, said "there has been a disconnect between rhetoric and funding" over port security. "And getting our issues to the forefront has been a challenge."

The US is in the process of implementing the Transportation Worker Identification Credential programme, known as TWIC. Some 750,000 maritime workers, including ports personnel, will require the cards, the DHS estimates.

Implementation of the scheme is stalling over the failure of technology to provide a reader that does not require touch processing and that can withstand the rigours of weather and salt water at ports. Once such a reader has been produced, DHS plans to try it out at the ports of Los Angeles and Long Beach early next year.

There has also been debate over the price of the card, as DHS says the card must be self-financing. The standard TWIC could cost \$137, while a replacement for a lost or damaged card could cost \$36 – although the final amount could be nearer to \$60.



US ports: may get the full budget allowance for security for the first time this year

Federal funds don't even cover the capital projects and ports must bear the operational costs themselves

The card is expected to be in full use at all US ports by late next year, according to John Schwartz, assistant director of the TWIC programme. While many had assumed that the TWIC card would supersede local credentials, Schwartz said that isn't the case.

In fact, the only credential that may eventually be fully merged with TWIC is the merchant mariner credential currently issued by the USCG. In the meantime, even merchant mariners will need two cards – the TWIC and a separate document detailing training and qualifications.

Concerns remain over US efforts to screen all cargoes bound for the country. The resulting discussion has covered a range of proposals including the X-raying of containers. Critics point to the time these measures will take and their potential for causing congestion.

On patrol: screening suspect areas takes many forms The US Senate has not yet voted on a proposal approved by the Democrat-controlled US House of Representatives calling for 100% of the containers arriving at US ports to be individually inspected for all dangerous materials. Ports have rejected this as



unrealistic and not needed.

Homeland security secretary Michael Chertoff told the AAPA of the agency's plans to extend its scanning in US ports, which he said was consistent with the agency's layered security approach.

"We have built and enhanced our capabilities of scanning at our US domestic ports as well," he said. "In our own US ports, we are now scanning more than 90% of the cargo for radiation, and we're going to reach 98% at our major seaports by the end of this year, and almost 100% for all ports of entry, sea and land by the end of 2008." In 2000, "we scanned exactly zero," he added. "So that is a huge, huge revolution in our capability to protect this country from people smuggling in nuclear or radiological materials."

Turning to accusations that DHS spends billions of dollars on aviation, but only millions on ports, Chertoff said: "That number undercounts the fact that our port security, while certainly grants are important to it, is not entirely dependent upon grants. A big amount of what we do to invest in port security is inkind investment in the form of the Coast Guard and Customs and Border Protection (CBP)." He said that, taking all this into account, the US administration has spent some \$10Bn on port security.

The government's risk analysis adopts a regional approach, so individual ports are clustered to reflect proximity and the interdependency of assets, shared risk and shared waterways. In all, 102 ports were clustered into 72 areas that align with area maritime security strategies and US Coast Guard security operations.

Added Certoff: "We want to fund projects that increase awareness in and around port areas; address the significant threat posed by improvised explosive devices through USS *Cole*-style attacks; expand training and exercises; implement the TWIC credential and access control process; and support our overall national preparedness priorities."

He urged ports to plan for disaster so that the loss of operation that has been experienced after recent natural disasters is not repeated following a terrorist attack. This would require government and ports to work together, Certoff said.

The Coast Guard and CBP are working on national protocols for the resumption of trade after an attack. This process includes the input from multiple agencies, including the Department of Transportation, TSA and the Department of Defense.

The private sector also has a major role to play in this process and will be included through the Maritime Sector Coordinating Council and other outreach efforts, through the National Response Plan, the National Infrastructure Protection Plan and the Maritime Infrastructure Recovery Plan. "This will be an important focus for all of us in the months ahead," Certoff emphasised. **PH**

AISLIVE THE FIRST GLOBAL AIS NETWORK

Launch of AISLive 2.0 - 30th April SPECIAL DISCOUNTS FOR IAPH MEMBERS

TEMPERA

AISLive has built what is, to our knowledge, the largest global AIS network with coverage in 70+ countries and over 1,200 ports and terminals. It also has over 107,000 registered users.

AISLive 2.0 includes



State of the art tile based chart application
Global folio of charts

16 levels of zoom



Vessels tracked right down to the berth Email alerts on arrival in any of our global 'trigger zones'.

Connect or Subscribe

Connect your port to AISLive and receive 40% discount

AISLive has the technology and equipment to connect your port to the AISLive network with an 'Installation Kit'. This is available for a one off cost and contains everything needed to connect your port to our network.

Subscribe to AISLive.com and receive 20% Discount

If we already have coverage in your port then you also have the option of paying an annual fee to subscribe. The normal rate for subscription is £690 for a single user and £1182 per year for a 5 user licence. We are offering a 20% discount on the above rates during April to all IAPH members

PLEASE QUOTE IAPH0407 TO RECEIVE YOUR DISCOUNT

AISLive – The First Global AIS Network

Winner of the 2006 Defence Technology Exchange Award for Innovation

AIS Live Ltd was registered in England in 2004 and is a joint venture company owned by Lloyd's Register - Fairplay of the UK and QPS BV of the Netherlands.

www.aislive.com



Joining up the links in the transport chain

Around the world ports are facing measures to improve security from the factory to the consumer. Most of these are led by the US, and here **P&H** examines how international co-operation is evolving

hose involved in the transport industry are increasingly being called upon to work together on security issues. Industry feels a need to try to influence the course of new security measures, particularly in the US. When the US introduces new laws, such as the SAFE Port Act, gateways around the world are affected, and so too are their users and customers.

As policies have evolved since 2001, shipping lines and other transport providers have been vying to have their say on supply chain security. Earl Agron, VP security for container ship operator APL, recently urged shippers to take an active role in shaping future policies. He told the American Apparel and Footwear Association annual conference in the US that the SAFE Port Act was "the most significant" port security legislation of the past five years.

He encouraged all shippers to work with lawmakers,

government officials and their own trade association on issues ranging from container security standards to radiation scanning in foreign ports. "We have to ensure we get the most out of each security dollar we spend," he said.

Agron said the SAFE Port Act was "an intelligent approach to complicated issues". He approved of provisions in the act requiring the US Department of Homeland Security to work with the private sector to develop supply chain security measures. But he warned that the industry should be cautious about pursuing certain issues.

Chief among these is a requirement for container security standards. Agron didn't want to see legislation that would mean fitting containers with electronic seals or other security devices. He feared they may be ineffective and may provide a false sense of security.

Agron also opposed plans by the US to introduce

100% scanning of containers before they are shipped to the country's ports. He claimed there isn't enough money, manpower or technology to make the proposal feasible.

He fears these and other issues will not improve supply chain security but merely prevent the free flow of cargoes around the world and through ports.

One port leader has called the Customs Trade Partnership Against Terrorism (C-TPAT) initiative the "largest most successful government-private sector partnership to emerge from the ashes of the New York Trade Center's 9-11 terrorism attack."

Tom Kornegay, executive director of the Port of Houston Authority, explained that the initiative was launched in the US by only seven companies just two months after the attack. "Today, over 7,400 companies are enrolled, and these companies are critical players in the global supply chain—importers, customs brokers, terminal operators, carriers and foreign manufacturers," he said.

He described the strategic plan from Customs and Border Protection (CBP), part of the US Department of Homeland Security, as concentrating on three areas:

Improve security of a "significant percentage" of shipments to the US;

be taken to protect cargo on all transport modes

Measures have to

Provide benefits and incentives to private-sector companies that meet or exceed C-TPAT supply chain security criteria and best practices; and

Concentrate CBP's inspection resources and capabilities on high-risk shipments.

The agency will need to work effectively with the international community to achieve this, Kornegay said. "CBP will strive to internationalise the principles of C-TPAT, while supporting other agency activities designed to secure and facilitate global trade."

Turning to the Container Security Initiative (CSI), which screens sea containers at ports that send high volumes of cargo to the US before they reach the country, Kornegay reported that more than 50 ports had joined the scheme. They were spread through 32 countries, representing about 80% of US imports, with Israel one of the latest countries to sign up.

"These security measures are designed to highlight (at an early stage) high-risk cargo to allow for intelligent, targeted checks while providing minimal disruption to the normal flow of trade," said Kornegay. "It is another layer of protection to provide increased security."

Nevertheless, critics worry that a false sense of security is being engendered by plans to scan USbound containers for radiation. In the coming weeks, a Congressional conference committee will decide whether to order all US-bound boxes undergo the scanning before leaving their ports of embarkation.

Experts fear that, although they may find improperly shipped scrap and perhaps even a dirty bomb, these measures will probably miss a real nuclear device. Recently the spotlight fell on reports from US government sources – including those from the National Nuclear Security Administration (NNSA), which oversees the Megaports programme for the Department of Energy – that scanners at some ports have found improperly shipped nuclear materials. The particular incident quoted was of an outbound container that passed through the Port of Colombo, Sri Lanka, in October 2005.

That container tripped radiological sensors, but because all the equipment needed for complete scanning had yet to be installed at the port, the box made it on to one of five departing ships. Using spy satellites, and military and intelligence resources, the shipment was tracked to a vessel bound for another Asian port. The cargo was discovered to be scrap metal containing some radioactive materials that had been improperly dumped.

But that discovery didn't occur before two of the five ships were stopped and searched by the US Coast Guard and scientists on the Nuclear Emergency Support Team (NEST) on their way to New York. NEST units also flew to Canada and Hamburg to help search two of the remaining vessels bound for ports there.

Dave Huizenga, who runs the Megaports Initiative for NNSA, told *P&H* that finding such improperly discarded materials isn't common, but counted the incident as a success.

Another security expert, Kim Petersen, said that such scanning is highly effective in locating improperly shipped waste – as in this case – and could also find "relatively unsophisticated" weapons such as a dirty bomb, in which conventional explosives are combined with radiological materials. He warned that even the latest-generation scanners probably won't find a real nuclear bomb.

Petersen said sophisticated weapons, like small nuclear warheads developed by the former Soviet Union (some of which are missing) are well shielded and "their background radiation signatures are too small for the detectors to find".

Huizenga retorted that charge was "unfair", because tests have shown that scanners can detect shielded weapons – at least in some cases. "It's a very effective system," he said, noting that Megaports isn't intended only to stop illicit US-bound radiological cargo, but is part of a larger non-proliferation scheme meant to intercept shipments of all illegal radiological shipments.

NNSA says the Megaports Initiative works with foreign governments "to install specialized radiation detection equipment and enhance capabilities to deter, detect, and interdict illicit shipments of nuclear and other radioactive materials at international ports". The initiative operates in six countries, and is at various stages of implementation and negotiation with about 30 other countries around the world. **PH**

Experts fear that scanning may find improperly shipped scrap and perhaps a dirty bomb, but not a real nuclear device



Automation fills the labour gaps

The world's first RTG automated container terminal has had more than a year of operational experience. Here, *Hitoshi Uchiyama* explains the developments

agoya's Tobishima Container Berth (TCB) had little choice but to automate Japan's declining birth rate and its ageing workforce combined with the increase in trade particularly from China all contributed to a decision that wherever possible fewer humans should be involved in cargo movements.

Investment has resulted in the world's first remote automated rubber-tyred gantry (RTG) terminal, which now operates 24 hours a day, 365 days a year. It has also improved the working environment for those staff left in the terminal.

Once construction of the terminal was completed and operations began, the challenge was to ensure services were efficient and operating costs kept low.

Before automation is introduced, a terminal needs enough cargo volume to justify the huge investment in equipment and modifications to the terminal. Iif automation can be shown to reduce operating costs, cargo volume may not be such an imperative.

Nagoya is typical in this respect, as its local labour force is expensive and the available pool of prospective employees is shrinking as Japanese society ages. In addition, there are few, if any, sources of cheap labour, such as foreign workers.

TCB was determined to automate for positive reasons too. The incentive was there to improve working conditions, as dockworkers had to work in elevated positions, at unsocial hours including nights, in the severe cold and intense heat.

The next task was to see how the cargo volume and trade patterns could be organised to ensure there were enough containers to justify automation. At this point the decision was made to concentrate container port development on Tobishima Pier.

Then TCB had to decide what equipment it would use. The trend is for automated terminals to use



rail-mounted gantry cranes (RMGs), which deliver consistency of operation and high accuracy in placing containers, it is felt.

At Nagoya we decided against this course. We decided there were numerous reasons why we should prefer RTGs to RMGs. Investment costs are lower for RTGs than for RMGs. As well as the equipment, expenditure has to be incurred in adapting the terminal and laying the rails.

Once installed, these rails are vulnerable to earthquake damage, which generally renders all the RMGs unusable. RTGs are considered to be more robust under these circumstances. Initial concerns that RTGs might be less compatible with IT systems than RMGs proved to be unfounded – the opposite was the case.

We also decided against RMGs on the grounds of cost and manoeuvrability. TCB noted that RMGs offer less flexibility, because they are dedicated to particular lanes, whereas in peak times RTGs are free to switch lanes. There is no difference in stacking ability.

RTGs offer another advantage: they reduce the need for maintenance in the terminal because there is no travelling rail. RMGs are generally arranged three to a rail. If the centre crane needs repair, the sound crane alongside must be removed first before the faulty one can be dealt with. When there is a problem with an RTG it can just be pulled out of service and repaired very easily.

Our demands called for manoeuvrability to within 50mm, emergency stops over 150mm by the autosteering system and positioning accuracy within 30mm. To help emergency stops a 'magic eye' was developed. Advanced sensors on RTGs match the scanned data with container information on the yard planning system. If an error is discovered the unit performs an emergency stop.

After over a year's operation, we have not experienced any serious problems and have been satisfied with the performance of our RTGs. Once the purchase of the cargo handling equipment was determined, it was time to turn attention to its control.

Formerly the port had used a public 2.4GHz band for communications, but this was considered too risky, as there was thought to be the possibility that other

TCB construction plan

	Phase 1	Phase 2	Phase 3
Opening	2005	Mid-2008	N/A
Total quay length	400m	800m	1,050m
Water depth	-16m	-16m	-15m or -16m
Quay cranes (22 rows on deck)	3	6	8 or 9
Facilities: RTG	12	23	34
AGV	N/A	40	60
TC	N/A	4	6
Throughput (M teu)	0.30-0.35	0.7–0.8	1–1.1

messages could be received. To solve this, a new a 5.0GHz radio station was developed.

The yard planning system was developed taking into account the unbalanced flow of containers into and out of the container yard. At the berth it was necessary to synchronise RTG and quay crane operation and ensure a smooth flow at the gate. All container storage is automated, which helps to minimise container movements.

During Phase 2 the automated area was extended, to provide full automation inside the terminal. The next stage is aimed at minimising waiting times for trailers, and a system to achieve this is being worked on.

Also under development is a system to help all autonomous guided vehicles synchronise efficiently with RTGs, quay crane operations and the transfer of containers outside unmanned area. The demands are high: vehicles must be able to travel straight, around bends and be able to stop quickly. In addition, we are looking at durability and reliability. More work will be undertaken in the future to ensure TCB continues to contribute to the Port of Nagoya's development. **PH**

Hitoshi Uchiyama is president of TCB

More info: www.tcb-terminal.co.jp/english/index.html www.port-authority.minato.nagoya.jp/english/ container_terminals.htm

www.port-authority.minato.nagoya.jp/english/ tobishima_southside.htm



RTGs have proved economical and reliable – and have a better chance of surviving earthquakes than RMGs





DIN Jan De Nul G R O U P

Jan De Nul Group, operating

worldwide, is specialized in dredging and land reclamation, rock placing, trenching, rock dumping for oil and gas related offshore pipeline projects, quay walls, marine related projects, civil engineering and large-scale environmental remediation projects, with a good reputation in turnkey projects.

With a yearly turnover estimated at 1.1 billion Euro, the company ranks amongst the international top of dredging contractors and the top of marine engineering contractors.

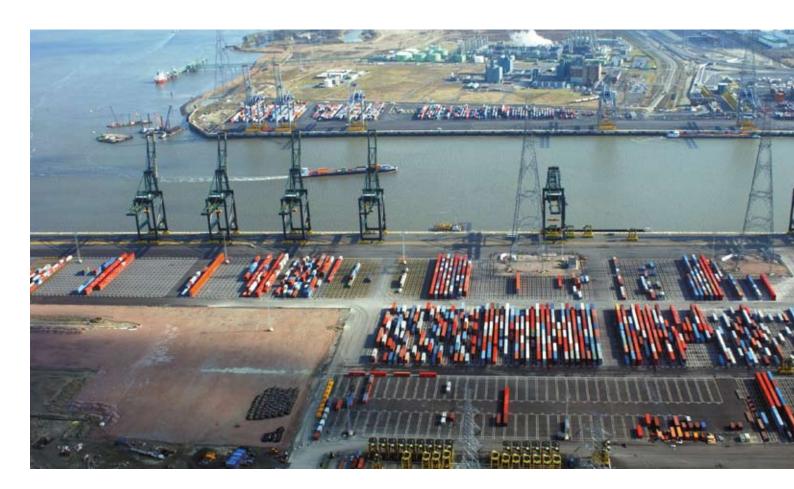






OFFICE JAN DE NUL N.V.

Tragel 60, B-9308 HOFSTADE-AALST Tel.: Intl. Division: 32 53 73 17 11 Fax: 32 53 78 17 60 - 32 53 77 28 55 E-mail: info@jandenul.com Website: www.jandenul.com



Antwerp opts for intermodal

Reliable hinterland connections are an essential success factor for ports and a well-developed rail infrastructure can be crucial, as **Anitra Green** explains

> Antwerp is Europe's second-largest port, handling 167.4M tonnes last year, up by 4%. The main driver of growth is container traffic, which last year rose by 8% to a little more than 7M teu, confirming Antwerp's position as Europe's third-largest container port. Box volumes have more than doubled within the last decade, and the port expects future annual growth of about 10%.

> The opening of the Deurganckdok, and the new capacity it has added, is responsible for much of this growth. The dock started up in July 2005, handling 810,000teu in its first full year of operation. By the time it is completed this year, it will boast 5.3km of quayside and be capable of handling more than 7M teu – doubling Antwerp's present capacity to 14M teu a year.

However, it is clear that this figure will be reached only if the port can actually move the goods in and out of the port precincts fast enough to avoid congestion. Many ports are facing this very problem, which can rapidly become chronic if not taken in hand at the outset of a major expansion.

Antwerp is well served by inland waterway connections, which are continuing to grow, but the position with rail is rather different. A glance at the modal split of Antwerp's cross-border hinterland traffic between 1998 and 2004 shows that while barge transport's share of this traffic grew from 30% to 46% – at the expense of road, which dropped from 59% to 45% – the share of rail transport slid from 11% to 9%, despite the growing market.

Plans for improving the rail infrastructure are under way to reverse this downward trend. Antwerp already has a fully automated marshalling yard that is one of the largest in Europe, and the new Deurganckdok has its own rail handling facilities. A new rail tunnel under the River Scheldt is expected to open in 2011 or 2012, and a second line to the port is planned.

But despite the arrival of new market entrants like Hupac and DLC, which offer direct links between Antwerp and the rest of Europe and provide an element of competition that should improve quality of service, intermodal transport is still under-used.

The Antwerp Port Authority (APA) has therefore teamed up with P&O Ports (now part of DP World),

Deurganckdok's extra capacity (above) can only be filled if the port can move the goods in and out fast enough to avoid congestion

Deurganckdok's extra capacity can only be filled if the port can move the goods in and out fast enough to avoid congestion

PSA and Infrabel (Belgium's rail infrastructure manager) in a project to boost intermodal transport. Called Antwerp Intermodal Solutions (AIS), its aims are to bundle volumes on the demand side and stimulate the supply of rail services.

First results have been encouraging, according to Eric Janssens, adviser to APA: AIS has 10 new connections and improvements to its credit and another six are planned. But what is needed is continuous follow-up and support, for example from the EU's Marco Polo programme.

"A multimodal port like Antwerp needs to use every mode of transport available, and there is a clear and present need for rail and intermodal solutions," he told an ASI conference in Geneva on the future of railfreight in Europe.

Janssens described some of the obstacles. Ports do not always get the service they require, although national railway companies are trying to change this. More customer-oriented sales and marketing efforts are needed. And there is a lack of co-operation on the rail supply side, as maritime containers compete with land-based containers for rail capacity, and incumbents compete with new entrants to the market.

Moreover, the demand for rail products is too fragmented, with shipowners, shippers and forwarders all making separate demands. These should be bundled, said Janssens: "The future lies in running full trains."

There is perhaps a lesson to be learned from a comparison between barge and rail transport, Janssens continued. Numerous operators serve the growing barge market in Antwerp, and private operators are medium-sized. By contrast, the railway world has a limited number of operators and is dominated by the larger, state-owned companies.

In Europe, inland waterways enjoy a large degree of liberalisation and no cross-border constraints, whereas

railways are only partially liberalised and face many technical cross-border constraints. Lastly, there is almost no congestion on the inland shipping network, but Europe's railways are congested and have a large, expensive infrastructure.

As for prices and transit times, while barges cannot always compete with railways over medium and long distances, the mode has – surprisingly – been shown to do well on short-haul routes, even competing successfully with road haulage over distances of 40km to 220km from the port. Transit time by barge over 50–60km is one day, and while this is a little longer than by road, there are gains from avoiding congestion round Antwerp and terminal procedures.

Another consideration favours the development of more rail services. As Janssens pointed out, there is always a need for alternatives, especially when customers see their consignments held up by high or low water and have to turn to rail carriers. "Customers are prepared to pay a bit more for reliability, and support these alternative solutions as a result." This is backed up by a survey by Mercer, which finds the reason a customer switches from an incumbent to a new player is based primarily on reliability; price is a secondary consideration.

Antwerp's need for more, and more efficient, rail services has reawakened the debate over the Iron Rhine. This is a disused railway line linking Antwerp with the German border, which, if refurbished, would contribute substantially to more efficient transport of goods between Antwerp and its prime inland markets.

Belgium has been negotiating to reopen this 160km line as a dedicated freight railway, but appears to have reached stalemate for the time being. One problem is that the line runs partly over Dutch territory – and the Netherlands has its own major project, the Betuwe Line, between the German border and Rotterdam.

The Betuwe Line is complete – at a cost of €5–6Bn – and is theoretically ready for operation, but has run into unexpected delays partly caused by unresolved safety and security issues. At the time of writing, it was reported the line would open in June or July. But there are still many in Belgium who consider that dropping the Iron Rhine project is unacceptable, particularly in the present European climate. **PH**

More info: www.portofantwerp.be



The main hub: the Port of Antwerp's central area where railfreight transport is organised



To view samples of our maps please review the sample maps posted at www.kgj.ca and send us an email to place an order or ask for further information.

© KG JOHNSON Created from data © The XYZ Digital Map Company (www.xyzmaps.com)

Nanse Sholo

hina Sea



Shortsea solutions

Motorways of the sea sound, in theory, like a perfect solution. They take cargo off the congested road and rail networks and provide a potential to reduce transport emissions. So why are they not more successful? Jodie O'Keefe investigates

> urope's transport system is under strain as it tries to cope with the increasing trade through the region. Now the momentum for transferring cargo off Europe's roads in favour of a more multimodal approach is gathering pace.

Motorways of the Sea (MoS) are attracting more attention from the big shipping operators that have the clout to make a difference. Two ro-ro operators, Italian-based Grimaldi and French company Louis Dreyfus Lines, joined forces in 2005 to serve Toulon and Rome-Civitavecchia.

Paul Kyprianou, MD of the joint venture, said that the company expects the route to become profitable by the end of this year, three years in, thanks to funding last year from the European Union's Marco Polo programme. The three-times-aweek service avoids the congested roads over the Alps, benefiting shippers by reducing transit times to 15 hours.

Road competition poses the greatest obstacle to MoS projects, as it is perceived not to pay its share of costs. Sea shipments also face lengthier bureaucratic border procedures compared with road transits.

To combat these problems Kyprianou suggests

introducing an eco-bonus that would reduce and simplify administrative procedures Europe-wide. Special port tariffs could also be tailor-made for vessels operating in a MoS. Co-operation between railway, road and maritime modes is essential, Kyprianou added.

The European Commission is trying to extend shortsea shipping with its Motorways of the Sea programme, which it inaugurated in 2001.

About 10% of Europe's roads are affected by bottlenecks, and 20% of railways, according to the MD of Bluewater Ship Management, Ian Buchanan. He estimates that delays cause an additional consumption of 1.9Bn litres of fuel, some 6% of total annual consumption.

Intermodality is the solution, Buchanan suggests. Bluewater manages operator UN RoRo, which has a service linking Trieste in Italy to the Istanbul-Pendik terminal in Turkey. The journey takes 60 hours and allows shippers to meet just-in-time delivery demands by avoiding difficulties at border crossings along the road route. The service eliminates six border crossings, each of which has different customs formalities and bureaucratic procedures.



Motorways of the sea

Four corridors to be completed by 2010

Motorway of the Baltic Sea

From EU member states in the Baltic Sea region to member states in central and western Europe, including the route through the Kiel Canal

Motorway of the Sea of Western Europe

From Portugal and Spain via the Atlantic Arc to the North Sea and the Irish Sea

Motorway of the Sea of South-east Europe

Connecting the Adriatic Sea to the Ionian Sea and the eastern Mediterranean, including Cyprus

Motorway of the Sea of South-west Europe

Western Mediterranean, connecting Spain, France, Italy and including Malta and linking with the Motorway of the Sea of South-east Europe and including links to the Black Sea

Source: EU

Joined-up service: Grimaldi and Louis Dreyfus Lines operate services France and Italy Both Kyprianou and Buchanan say that governments need greater funding so that port infrastructure can be improved. Tonny Paulsen, partner and MD of container feeder servicer Unifeeder, agrees: "A major obstacle is insufficient capacity in ports and terminals".

Unifeeder specialises in services around northern Europe, mainly linking the Nordic countries, the Baltic states and Russia. Paulsen advocates fixed slots in ports and terminals for feeder operators, as well as insourcing of the entire logistics and distribution operation with major customers.

Earlier this year an international group of scientists stressed the catastrophic effects that would ensue unless immediate action was taken to avoid further climate change. This warning echoed the UK's Stern Report, which declared that the situation would only be brought under control by stabilising emissions in the next 20 years and then reducing them by 1–3% each year thereafter. For shipping, the challenge is to secure economic growth and still be environmentally sustainable.

Shortsea offers the shipping industry a big chance to demonstrate how it can help reduce emissions by attracting freight. The opportunities are there, as the other alternative, rail, currently offers only limited opportunities for a modal switch, mainly because it does not have the required capacity. It could be used in conjunction with sea, however.

It will not be easy to persuade shippers to transfer from a mode to which they have become conditioned, observed Professor Alfred Baird, head of the maritime research group at Napier University, Edinburgh. He told *P&H* that it is generally acknowledged that shortsea routes will not be

G Road competition poses the greatest obstacle to MoS as it does not pay its share of costs

successful unless funding distortions are corrected or shortsea shipping is subsidised. "Whenever constraints are put on road transport we will see MoS develop," Baird added.

But resistance remains strong. David Asprey of the UK Chamber of Shipping said that there is an underlying political dimension in that road transport doesn't pay its full costs. He told *P&H* that he supports the shortsea alternative and its environmental benefits.

Leonids Loginovs, CEO of the Freeport of Riga, expressed scepticism about the future of MoS projects in the Baltic region, where inter-regional trade is growing by 20% a year. Speaking at the IAPH regional meeting in Sines, he said there were several factors impeding growth of the concept in the region.

He criticised bureaucratic impediments to project development and qualification, such as the requirement to include at least two EU member states in project applications. The present scheme forced member states to decide which of their ports 'earn' the right for development, Loginovs said.

"Therefore industry representatives are quite sceptical regarding benefits of the concept and their activity in project development is low," he said. "There is a lack of unity of interests in MoS and lack of comprehensive studies."

He attributed this to different vested interests in the region. "It is easy to define common strategies on paper, but hard to realise it in practice."

The cost of infrastructure use faced by road was also raised by Braga da Cruz, co-ordinator of Portugal's MoS project, PORTMOS. Simplifying customs procedures would be one way to attract more MoS projects, he said, adding that access to intermodal systems and the development of ports and harbors were needed too.

"Portugal hopes its MoS will integrate it further into the EU, losing its status as an outpost," he said. The project plans are expected to be delivered by the end of the year, he added. **PH**

Funds available for MoS

Marco Polo Programme		
2007–2013	€400/	M (\$534M)
TEN-T major infrastructure pro	ojects	
2007–2013	€8B	in (\$10M)
	Source: Marc van der Hagen, European C	ommission DGTREN

Info-swap security scheme

Talks with the US Coast Guard (USCG) to set up a maritime Information Sharing and Analysis Center (ISAC) should begin soon, Phillip Murray, chairman of the US Maritime Security Council, has told *P&H*. The much-anticipated centre is seen as necessary to help protect the maritime industry against terrorist threats.

Murray said he was pleased that the USCG was again entertaining an industry-run information-sharing scheme, because in recent months the service had proposed organising the entity itself.

This idea made many in the industry "nervous" because of fears that information shared on such subjects as stowaways or lapses in port security during calls could come back to haunt them in the form of increased Coast Guard boardings – and other government scrutiny.

Current plans envisage that ISAC will be staffed by analysts operating around the clock, reviewing information on terrorist threats gathered from government, media and industry sources. It would redistribute that information to members to allow them to make security decisions based on accurate and detailed data.

The ISAC concept was authorised in a directive issued by former president Bill Clinton. Thirteen centres are already operating in critical industries ranging from water supply and electricity to surface transport.

Everyone at the council meeting in Fort Lauderdale was enthusiastic about the concept. David Sanborn, who runs DP World's terminal holdings in the Americas, told *P&H* he will begin work "immediately" to ensure the system is instituted. And Thomas Timlen, head of BIMCO's security and international affairs department, said that his organisation – and many of its members – should have a seat at the table.

Many ISACS are wholly domestic and some extend to Canadian and Mexican members. But Timlen said that to be effective, the maritime ISAC would have to include international owners and terminal operators.



Ports are 'the future'

Port infrastructure and development were recently described as "the future of the Maritime Administration" by Sean Connaughton, the head of the US agency.

Speaking at the Connecticut Maritime Association, he affirmed that a greater federal role will be required to identify funding priorities as US imports are concentrated into about 10 major ports, and intermodal chokepoints arise as trade accelerates.

The raised profile for ports forms one strand of a reorganisation of MarAd that will also include the agency stressing national security and promotional programmes for American industry and attending to compliance issues.

MarAd will also target three new areas with specialised teams: short-sea shipping – now dubbed the Marine Highway Initiative – overcoming America's obstacles to participation in the global shipping industry, and the national ports strategy, which will seek a federal solution for tackling increased congestion at US ports.

The initiatives come at a time when the US ports industry is stressing its concerns over the growing volume of freight moving over the country's already congested transport system.

American Association of Port Authorities (AAPA) executive VP and general counsel Jean Godwin

Call for action: MarAd aims to prevent congestion at ports such as Los Angeles

urged the National Surface Transportation Policy and Revenue Study Commission to recognise the importance of "efficient port access" when making recommendations to Congress to address future surface transport needs.

"Public port authorities are dependent on the nation's surface transportation infrastructure for the landside movement of goods and military cargo and the facilitation of cruise passengers," Godwin said at a Washington hearing.

"Faced with unprecedented projected growth in international trade, a robust cruise industry and the needs of the US military, public port authorities will become increasingly dependent on the nation's surface transportation infrastructure and policies that help facilitate the movement of people and goods to and through US ports and harbors."

Godwin set out the freight infrastructure the AAPA says is needed if future gridlock in the national movement of goods is to be avoided. These include improved access roads to freight terminals; promotion of port projects; appointment of state freight co-ordinators; railway investment tax credits; new project financing methods; promotion of water transport to switch traffic from roads; and more dredging projects to improve access to ports for larger vessels.

IACS gets backing in EU dispute

Proposals by the EU to force classification societies to mutually recognise other societies' type approval certificates do not have the backing of the industry, claims IACS.

IACS met to discuss the issue with representatives of international shipping and marine industry associations including ICS, INTERTANKO, INTERCARGO, the Committee for Excellence in Shipbuilding Standards (representing shipbuilders), the IUMI and International Group of P&I Clubs.

After the meeting, the IACS Council issued a statement saying that the proposals meant an "increased risk for reduced safety and quality" if

mutual recognition takes place, which it said would not be in the "best interest of the general public" nor of the industry.

The EC is proposing a revision of Class Directive 94/57. Under this, EU-recognised organisations, made up of 13 classification societies, some of which are non-IACS, would have to agree on the conditions under which they would mutually recognise their respective class certificates.

IACS added that, despite their rejection of the proposals, members were prepared to work with equipment manufacturers to improve the efficiency and effectiveness of the certification processes.

Task force for climate change

PIANC's environment committee has set up a new task force to investigate climate change, to be headed by Dr Peter Hawkes of UKbased HR Wallingford.

The group expects to review the drivers, potential impacts and possible responses to climate change for three categories of navigation: inland (rivers), non-polar (ocean) and polar (near Arctic).

"I'm look forward to working with the committee's chairman, Hans Moser, from the Federal Institute of Hydrology, Germany, and the rest of the group on this task," said Hawkes.

"We will be considering evidence of changes that have already happened, projections of



Hawkes: will raise issues to be studied

changes from future climate modelling, and operational changes. Our aim is to provide a dispassionate review of the potential impacts, whether they might be seen as neutral, positive or negative."

The group will take a broad look at all potential issues associated with climate change and navigation, and suggest particular issues that other PIANC working groups could look at in more detail. It aims to produce an interim discussion document by the time of its second meeting at Wallingford in August, and a final report early in 2008.

"I welcome any information that members of PIANC and others involved in navigation can share with me," said Hawkes. *More info: email p.hawkes@ hrwallingford.co.uk*

Keep ships efficient call

ICS chairman/ISF president Spyros Polemis warned the CMA Shipping 2007 conference that regulations aimed at improving the environmental performance of shipping must be "compatible with the continued efficiency of maritime commerce."

Polemis stressed the maritime industry's willingness to make a significant contribution to reduce greenhouse gas emissions, citing work continuing at IMO on measurement, an indexing system and the development of more fuel-efficient engine technologies.

He believes that discussion about reducing emissions "has probably not yet begun in earnest", but with the Kyoto Treaty up for review before expiry in 2012, shipping "would need to be ready to respond".

However, Polemis's greatest concern is ballast water management. "In the absence of the entry into force of a global regime there is a threat of proliferating national regulations at variance with the IMO regime, with the risk of operational chaos as shipowners struggle to comply with conflicting requirements in different parts of their voyages."

He pointed to the difficulty of meeting US Congress's "kill standard" for water treatment, considered to be 100 times more stringent than that agreed at IMO, even though proven treatment technology does not yet exist even to meet IMO's standards.

ICS supports IMO's discussions on further reductions to air emissions – which might include the use of distillate fuels, according to Polemis.

"We do believe strongly that IMO should continue to explore other options for achieving compliance with agreed goals and should review the environmental necessity of banning the use of higher sulphur fuels in the middle of the ocean, when the results of decisions by IMO could be to increase overall CO2 emissions by oil refineries."

The debate on reducing pollution by tightening standards within Marpol Annex VI needs to be linked to an evaluation of the impact on greenhouse gas emissions, Polemis added. "We could finish up with a regulation which solves one problem by creating another."

ICS pushes for convention ratification

A campaign for IMO conventions to be ratified by national governments has been launched by the International Chamber of Shipping (ICS) and its worldwide membership.

Explaining the reasons for the campaign, ICS secretary general Tony Mason said: "It is vital that regulations governing matters such as safety, environmental protection and liability are common to all ships in international trade and that the same rules apply at both ends of the voyage."

The alternative could be a "web of conflicting national regulations" and could encourage "unwelcome calls" for unilateral or regional regulation, Mason continued.

ICS has identified the following IMO conventions, which it believes it is important for all governments to ratify as a matter of urgent priority: Ballast Water Management, Anti Fouling Systems, Limitation of Liability for Maritime Claims, HNS Liability, Bunker Spill Liability, and MARPOL Annex VI (air pollution).

Move to stop new discharge regulations

An industry coalition is appealing against a decision by the US to formulate new regulations to cover all discharges from ships including ballast water.

The group – made up of INTERTANKO, the Chamber of Shipping of America, the American Waterways Operators, the World Shipping Council, the Lake Carriers Association and the Cruise Lines International Association – submitted the proposal to the US Court of Appeals.

It is an appealing against a US District Court ruling that would require the US Environmental Protection Agency (EPA) to develop regulations governing all discharges from ships, including ballast water discharges. In September 2006, a Federal District judge in the Northern California District issued an order requiring the EPA to develop regulations governing these discharges by no later than 30 September 2008. In issuing this order, the judge acknowledged that Congress had given the US Coast Guard authority to regulate ballast water discharges. Oral arguments will be in August.

Security top of the forwarder agenda

Freight forwarders are concerned that there is little global harmonisation in the proliferating security rules and regulations governing the transport of cargo, according to FIATA.

Its recently created *ad hoc* security working group, meeting in Zurich, said FIATA is "supportive"

of any security precaution that helps to minimise the threat of terrorism. But it urged that such measures should be standardised and be established in close co-operation with the affected industry. Some 210 delegates from 59 countries joined in the call at the meeting.



Many ports fund security measures themselves and don't expect to recoup charges

Ports pay billions for security

A new report by UNCTAD, to which IAPH members contributed, shows how anti-crime and anti-terrorism measures are paid for

UNCTAD's global survey of the costs of meeting security in ports, in which IAPH participated, has now been published under the title Maritime Security: ISPS Code Implementation. Costs and Related Financing (UNCTAD/SDTE/ TI B/2007/1).

The agency says the study is considered a first step towards any assessment of potential economic implications of the new international maritime security requirements.

The main objective of the study was to establish the order of magnitude of the financial resources required to comply with the SOLAS and

the ISPS Code requirements.

It also sought to clarify matters relating to the implementation process, level of compliance and other less easily quantifiable impacts that could be described as indirect effects of ISPS Code implementation.

July 1, 2004, marked the entry into force of the amendments to the 1974 International Convention for the Safety of Life at Sea (SOLAS), including the ISPS Code adopted in 2002 by IMO.

These amendments introduced new obligations for governments, port facilities and shipowning and/or operating companies.

Implementing these obligations

entails costs and potential economic implications.

Given the ISPS Code's entry into force date, governments, ports and the shipping sector are expected to have obtained a better appreciation of the actual costs associated with the ISPS Code implementation.

It was against this background, that UNCTAD conducted its global study, which it based on a set of questionnaires designed to obtain first-hand information from all affected parties.

Replies from members helped UNCTAD's report be as wideranging as possible. An informative pool of data was obtained,

particularly on the costs of the ISPS Code and related financing.

Respondent ports are located in both developed and developing countries and spread over all geographic regions.

Relevant respondent ports handle about 16% of the global port cargo throughput by tonnes and about 24% of global container port traffic, based on 2004 figures on world seaborne trade (tonnes) and global container port throughput published in UNCTAD's Review of Maritime Transport, 2006.

The study shows that full compliance seems to have been achieved with no major difficulties. The mandatory requirements in Part A of the ISPS Code are largely fulfilled on the basis of the guidance contained in Part B of the Code.

In many cases, additional measures, either governmentor industry-driven, have been adopted. These include extending the ISPS Code requirements to the entire port area and applying the IMO/ILO Code of Practice.

Reported initial cost figures range between a low of \$3,000 and a high of \$35.5M, while reported annual costs range between \$1,000 and \$19M.

Unit costs and averages have been assessed on the basis of a number of parameters. These include respondents' annual revenues, cargo throughput (tonnes and teu), ship calls and the number of the ISPS port facilities.

The analysis revealed important cost differentials between respondents, especially between larger and smaller ports (see box opposite).

The ratio of costs to revenue. cargo and ship throughput, as well as to the number of the ISPS port facilities, suggests that economies of scale, the type and structure of the cargo traffic handled, and the state of security set up prior to the application of the ISPS Code may play important roles in this respect.

As to the manner in which costs are distributed among various cost headings, responses received suggest that, on average, expenditures on equipment absorb the largest share of

the initial costs followed by expenditures on infrastructure, personnel and staff time, training, drills and exercises, ICT use, administration, operations and procedures, and upgrades of security to levels 2 and 3.

With respect to the annual costs, on average, personnel and staff time represent by far the largest share of the ISPS Code-related costs, followed by expenditures on training, drills and exercises, and equipment.

Other cost headings such as administrative functions, ICT-related requirements, infrastructure, operational requirements and security upgrades to levels 2 and 3 take up a smaller share of the annual costs.

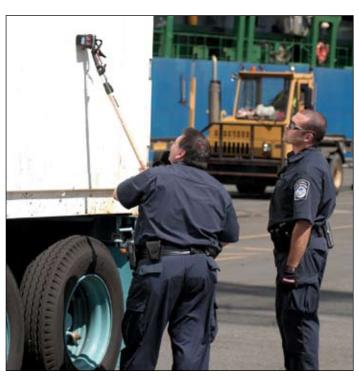
Based on the returns, UNCTAD estimates the portrelated global costs of the ISPS Code to range between about \$1.1Bn and \$2.3Bn initially and \$400M and \$900M annually.

These expenditures would be equivalent to increases in international maritime freight payments of about 1% and 0.5%, respectively (based on 2004 figures).

The report shows that the port industry relies on various approaches to finance its ISPS Code-related costs.

These range from cases where costs are financed in full by ports with no cost-recovery schemes and funding in place, to instances where ports governments and port users together share the costs of the new port security regime.

More specifically, market-



ISPS Code compliance costs ports up to \$2.3Bn a year says UNCTAD

driven solutions where security surcharges are levied directly on port users appear to be more or less widespread and concentrated in developed regions.

Where applicable, ports seem to favour cost-recovery systems affecting several categories of port user, but particularly cargo and containerised traffic. In general, less than full recovery of both initial and annual costs is expected.

As to security charges applied, responses received did not shed much light on the criteria used to establish the basis and set the levels of the charges.

The survey also revealed that not all ports had received

public assistance. Where applicable, assistance included government grants and costsharing agreements, mainly for respondents located in developed regions.

Respondents in developing countries appear to have benefited mainly from technical assistance and capacity-building provided by international organisations.

The call by some respondent ports for assistance suggests that international organisations, including UNCTAD, may have a role to play in facilitating global implementation of the ISPS Code,.

This may be through the provision of technical assistance

and capacity-building. In this respect, responses received reiterate the message that emerged from IAPH's own survey.

A number of IAPH members called for assistance or support including for personnel training and installation of advanced security equipment and drew special attention to the particular needs of ports in developing countries.

In terms of the ISPS Code's indirect effects on various performance measures, such as efficiency, use of information and communication technologies (ICTs) and throughput growth, respondents' perceptions appeared rather positive.

Nevertheless, some respondents reported experiencing increased delays and few noted a decrease in competitiveness, while many said the ISPS Code had had no impact at all.

Ports seem to have accepted the ISPS Code objectives as legitimate and reported an overall positive impression of the new security regime, especially in terms of increasing awareness, streamlining processes, standardising risk assessment and improving business practices.

Respondent ports that emphasised the negative impact of the Code appeared particularly concerned about the operational interferences of the Code as well as the cost implications and associated funding requirements.

More info: http://r0.unctad. org/ttl/ttl-docs-legal.htm

ISPS Code-related average costs of respondent ports

	Percen annual	tage of revenue	Per tonne of cargo throughput		Per teu throughput		Per ISPS port facility		Per ship call	
	Larger > \$45M	Smaller	Larger > 15M tonnes	Smaller	Larger > 500,000 teu	Smaller	Larger > 10 facilities	Smaller	Larger > 3,000 calls	Smaller
lnitial Annual	0.8 1.0	1.2 3.0	\$0.01 \$0.03	\$0.05 \$0.06	\$0.8 \$1.6	\$2.30 \$2.50	\$181,000 \$81,000	\$386,000 \$128,000	\$72 \$132	\$113 \$244

Smaller ports = bottom 50% of respondents; Larger ports = top 50%. Except for the average costs per ISPS port facility, average initial costs are annualised over a five-year depreciation period. Relevant valid data was obtained from respondents handling, depending on the parameter under consideration, between 7% and 13% of the global port cargo throughput (tonnes), based on 2004 data on world seaborne trade.



A new maritime transport contract convention

"UNCITRAL is finalising a new maritime transport law convention that will affect the legal environment of ports," says Frans van Zoelen, chair of the Legal Committee. Here, the main port-related issues are explained by **Prof Gertjan van der Ziel,** chairman of the Netherlands' Association of Maritime and Transport Law and head of the government delegation to the UNCITRAL working group on transport law

Maritime transport contracts are, to a large extent, standardised. One of the most important of these contracts, the bill of lading, is governed by an international convention. This convention, the 'Hague Rules', dates from 1924 and was modernised somewhat in 1968. A further modernisation of international maritime transport law, the 'Hamburg Rules', dates from 1978. Although the Hamburg Rules are also in force, they failed to win the acceptance of the major trading countries. Thus, currently, the international legal basis of the bill of lading has deteriorated, in addition to having become seriously outdated.

Some 10 years ago, a couple of important trading countries took the initiative to try and restore unification of law in respect of the maritime transport contract. Under the auspices of the UN Commission on International Trade Law (UNCITRAL) and in consultation with the industry involved, work started towards the development of a new convention aimed at replacing all of the old ones. Needless to say, care was taken to ensure that the new convention should duly take into account all new economic and technical developments in maritime transport. This intergovernmental work has now reached its final stage, and a realistic target is that the new convention could be adopted by the UN General Assembly at the end of 2008. Thereafter, once the new convention is in force, individual countries will be bound as from their date of ratification.

For ports and its customers, it is important to realise that the new convention also includes subjects that are not dealt with in the old conventions, such as "delivery of goods by the carrier" and "legal control of goods in transit". Further, traditional subjects have been substantially modernised. The main changes in this regard are: The scope of the convention is no longer restricted only to bills of lading, but is extended to any maritime transport contract except those used in the bulk trades. In addition, the convention covers multimodal transport contracts, provided they include a sea leg.

The rights and obligations of carriers and shippers have been adjusted to take into account the modern operational and commercial features of maritime transport and are more systematically dealt with than in the old conventions. In addition, the current requirements for safety and security are duly taken into account.
The rules for the carrier's liability

for loss, damage or delay incurred by the goods have been rebalanced. Generally, they have become more 'cargo friendly'.

The provisions relating to cargo documentation have been fully adjusted to modern practices. Also, a legal basis for the use of electronic transport documents is provided, including the situation where such a document must be negotiable.

Of course, it is in the general interest of ports that the legal basis on which their customers do business with each other, is again brought up to standard. Such a development can only facilitate trade and transport. The new convention includes two issues, however, that may be of particular interest to ports: the new delivery rules and the possible liability of stevedores and terminal operators under the new convention.

As to the delivery provisions, the first aim of the convention is to create the flexibility that is needed in view of the particular circumstances of a certain trade or a specific port. Therefore, the convention provides that the time and location of delivery is subject to agreement of the parties. Failing such agreement, the customs, practices or usages of the trade will govern.

The additional rules on this subject have been included partly

Commercial port operators may need to check their insurance policies

in order to avoid congestion in ports. Since the transported goods may have a negative value, the introduction of a general obligation of the consignee to take delivery of the goods upon their arrival at destination would go too far. Instead, it is provided that, once the consignee has involved himself in the carriage, he is no longer allowed to decline acceptance of the delivery of the goods by the carrier.

An increasing problem in the maritime carriage of goods is the unavailability of a bill of lading at the place of destination. In such a situation, a consignee is not able to identify himself as the person entitled to the goods. The new convention provides that in such case a carrier must seek the instructions of the shipper and, as a main rule, any delivery of the goods following such instruction discharges the carrier's obligation under its transportation contract.

Finally, when goods are undeliverable, the carrier has, under the new convention, broad discretion to dispose of the goods.

It is a feature of modern transport conventions that not only the person who concludes the contract of carriage with a shipper is the person liable, pursuant to the contract, but also the person that, wholly or partly, actually performs the carriage, or undertakes to do so. The new convention also includes the principle of joint and several liability of contractual carrier and performing carrier. Because loading and discharging operations are part of the duty of a carrier, a stevedore or terminal operator may fall under this joint and several liability rule. Therefore, in the event that goods are lost or damaged during their loading or discharging (or during their stay at the terminal prior to delivery), a consignee or shipper may hold the stevedore or terminal operator liable for such loss or damage under the liability rules of the convention.

It follows that, once the new convention is in force, commercial port operators may have to check their liability insurance policy. In addition, they may seek an indemnity or coinsurance under their contractual arrangements with their principal. In any case, any port operator who falls under the definition of 'maritime performing party' under the new convention should be aware of these aspects of the new convention.

In view of the clear need for a new convention relating to the maritime transport contract and the active participation in its development by all major trading countries, the political prospects of the new convention are good. Of course, because almost all provisions are either new or, at least, substantially redrafted old ones, any ratifying state will have to adjust its internal laws. Such a legislative process may take time, but it is realistic to assume that approximately 10 years from now, the envisaged UNCITRAL convention will have set the new legal standard in maritime transport. More info: www.uncitral.org



Getting the tools to do the job

The IAPH Environmental Committee has been busy developing a practical reference guide for members who need to deal with air pollution issues.

Chair Dr Geraldine Knatz, of the Port of Los Angeles, has played a leading role in drafting the document.

A draft of the Maritime Clean Air Tool Box is now available and it will be finalised soon. Its main points will be discussed at the Houston World Ports Conference.

It is likely that the document will be developed as a webbased resource

The tool box is aimed at providing IAPH members with quick access to information, options and tools that can help them begin the planning process to address port-related air quality issues.

The concept acts as a mere outline, as it sets up a frame for each proposed webpage or fact sheet. However, the tool box concept does not give every detail and serves only to give an idea on how the tool box might look.

The committee says that it will take a collaboration of minds to agree on the content and presentation of this very important document.

Elements will include fact sheets to provide overviews on port-related air pollution and the call for action to reduce emissions.

Strategies that can be used to reduce emissions in ports will be outlined, and further details on each one given. This could cover vessels, harbor craft, cargo handling equipment, heavy duty vehicles and locomotives.

Examples will be given of strategies that have proved effective for members, so ports can create their own clean air plans. Resources that members can call on will also be detailed. Sines's most famous son, Vasco da Gama, looks out over the new container port (1); delegates outside the Port of Sines headquarters (2); Dr Inoue and Gichiri Ndua confer (3); and he presents Lídia Sequeira with a thank you gift (4)

Meeting stresses members' co-operation

The 124 delegates from 16 countries who attended the Europe/Africa Regional Meeting in Portugal were confirming the "ideal of co-operation" promoted by IAPH and its members, according to host Lídia Sequeira, president of the Port of Sines.

She welcomed delegates, who included IAPH president Tom Kornegay, saying: "We believe this is the way to international development in our sector."

Sequeira added that Portugal is particularly interested in promoting the EU Motorways of the Sea initiative through developing maritime corridors that are fully integrated with logistic transport chains.

The meeting was officially

opened by Ana Paula Vitorino, Portugal's secretary of state for transport, who said one of the strengths of IAPH was cooperation between members, which promoted debates and the sharing of experiences of the latest trends of port management and operation.

She wished the delegates success in their deliberations and added



that devising

transport policies in general, and those concerning ports in particular, was increasingly "complex" against a background of globalisationaffected economies.

Gichiri Ndua, second vicepresident, told the conference how Sines reminded him of his own port town, Mombassa, whose old castle, Fort Jesus, had also been erected by the Portuguese. "Sines is a perfect gateway to discuss maritime issues."

He added: "Ports are the big brothers of the transport chain and at IAPH we discuss global issues." He praised assistance given to African ports by other members of the association, saying: "We need skills and experience, and our more developed partners can help us acquire these."

Dr Satoshi Inoue said he was "grateful to Port of Sines for organising our regional meeting in such a wonderful way and extending a welcome for all the members coming from so many countries to the Port of Sines." He described the turnout as "very good".

And he added: "It is fitting we are meeting in the birthplace of Vasco da Gama. With his exploration of the trade routes, he opened up the first round of globalisation."





Sines port is a recent creation, for work on it started only in 1973 and it opened for business in 1978. Since then high development rates culminated in a record throughput last year of 27M tonnes – 43% of the total cargo handled by Portugal's ports. The deepwater – 28m – port has five specialised terminals handling oil and other liquid bulks, dry bulks, LNG and containers. Sines supplies half of Portugal's LNG needs.

Policies under the spotlight

Several port policy plans and initiatives were outlined by speakers. Initiatives in the Europe Union were outlined by Patrick Verhoeven of ESPO, the European Sea Ports Organisation. He pinpointed five areas that were under discussion that affected ports:

- Transport policy
- Shortsea shipping
- Inland navigation
- Logistics
- Maritime policy.

He called on the EU to give European ports a coherent policy framework to remedy the current "patchwork" of measures and urged the European port sector to form a clear opinion on its requirements and "overcome its internal differences."

Up to 7% of those working in the Rotterdam maritime cluster could be retiring next year, warned STC-Group MD Willem Nowé. He said economists estimate that 3% of the general working population will retire next year – which is expected to be the biggest ever for retirements.

He urged the port industry to train more and to reach out to students younger – at secondary and even primary school age.

The need to integrate social cost-benefit analysis (SCBA) and PPP-evaluation in the future was stressed by Dr Theo Notteboom of Antwerp-based ITMMA. He said this would become necessary as port authorities headed towards full financial liability for port projects

The challenge facing African ports in developing were highlighted by Adebayo Sarumi, MD and CEO of the Nigerian Ports Authority. He told the meeting that until the privatisation round started last year, Lagos port had bought only two cranes since 1978.

He favoured government funding for basic port infrastructure, especially for projects with very low rates of internal return and long payback periods. At the same time, he advocated liberalisation of port operations to encourage private sector participation in port management.

Peter Mollema, director, strategy port infrastructure and maritime affairs for the Port of Rotterdam, said its corporate social responsibility programme was developing along three lines: sustainable entrepreneurship, community investment in social and cultural initiatives, and transparency. "Our approach is to create added value for business, clients and stakeholders," he added.

Information on port community systems (PCS) and the ways in which they can help ports will be delivered at the IAPH World Ports Conference in Houston, said Santiago Milà, deputy MD strategy and development at the Port of Barcelona.

So far, preliminary findings of an IAPH questionnaire of members indicate that 75% of PCS work as a single window at port. In 20% of cases, the use of PCS is financed by public administrations or by the port authority.

Reverberations continue from the case of the *Probo Koala*, which discharged waste in



Ivory Coast, killing 10 and injuring 1,500, Henri van der Weide, from Amsterdam Port Authority, said. At present there were still more questions than answers concerning this incident, and he hoped some of these would be clarified with port state control authorities.

A renewed call for shore-based power plug-in connections to be standardised, so all ships encounter the same conditions in all ports, was made at the meeting by Hans-Erhard Schmidt, of Siemens in Germany.

Schmidt said the company's SIHARBOR system used an industrial 11kV power socket that provided medium voltage to shoreside connections. A simple plug-in connection from the shore with an interlock, made it impossible to pull out the plug when in use, which ensures the safety of personnel, he added.

The connection can supply different frequencies for shoreside to ship between 50–60Hz, Schmidt explained. The power supply from shore must have overcurrent time protection (circuit breaker).

The IAPH line-up (above): Dr Inoue, Gichiri Ndua,Lídia Sequeira and Tom Kornegay



Ports pivotal in African development



Ndua: action "now" for African ports

The vital and pivotal role of ports in Africa's development was outlined by 2nd vice-president Gichiri Ndua at the first African ministerial meeting on maritime affairs.

Ministers, who gathered from all over Africa in Abuja, Nigeria, for the meeting, were told by Ndua: "To say that ports are important ingredients in economic development is an understatement. They are mostly pivotal."

In the African perspective, it was "highly unlikely" that two efficiently operating ports could be found in close proximity, able to provide back-up in the event one suffered damage.

"Consequently, our ports are

prime movers because the dysfunction of a seaport translates into a major tragedy for the economic region served by the port in question," he said. "The ease with which Rotterdam and Antwerp can be interchanged cannot be replicated in our countries."

Seaports in Africa may share some characteristics but cannot be said to compete effectively or complement each other, he continued. The legacy of Africa's colonial port development is road and railway infrastructure that serves areas where raw materials are found, but not necessarily areas with the largest population.

Containerisation exacerbated the problems, as many African ports have not caught up with the demands of the trade boom, he continued. The high unexpected growth in container traffic outstripped their capabilities.

Container dwell times are sometimes two to four times the global average of seven days, and can be as high as 36 days in some ports in West Africa.

Vessel delay surcharges (VDS) have become a permanent feature around the region.

So Africa's ports continue to be "inefficient and expensive," he said.

They lag behind in investments in equipment, IT, compliance with the ISPS Code and dredging. As a result, Ndua estimates, that only three African ports would be able to accommodate ships of more than 8,000teu capacity.

This growing investment gap needs to be filled "sooner rather than later", he said.

"Our ports are small and inadequate in the light of global demand which we expect to see grow at levels above 5% in the short and medium term. There is also need for skills to manage evolving developments."

Africa cannot afford to fall out of the global trade axis, he continued. Returns on investments are high, and the area should attract developments.

"We provide an alternative to the

rush to the Far East and China. We are hard working and that is how we have survived."

He called for a continent-wide master plan to ensure investment in port and infrastructure projects. Privatisation can offer short-term solutions, but in the longer term, profits should not be exported and ports and the surrounding areas should participate in investments, Ndua said.

Port expansion can take 10–15 years and greenfield projects even longer, Ndua added. "The number of new ports that have been developed in the last ten years can be counted on one hand." At the same time, ports continue to seriously degenerate.

To counter this, the whole continent should take action, he said: "We need to act and act now."

Africa's seaborne traffic

Cost of maritime transport as a percentage of trade

	World	Africa
1990		
2000		
2003		
Source: UNCTAD Review o	f Maritime Transport 2005	

Membership notes

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

Regular member

Porto de Cabinda E.P.

Address: Telephone: Fax: Email: Website: Representative: Rua do Comércio, Cabinda, ANGOLA +244 2312 23007 +244 2312 22464 portocab@supernet.ao www.portodecabinda.com Osvaldo Lobo Nascimento, director general

Associate member

Lee Convention Co Ltd Address:

519 Ocean Tower, 760-3, Woo 1-dong, Haeundae-gu, Busan, KOREA

Telephone:	+82 51 740 5512
Fax:	+82 51 740 5519
Email:	info75@lee-expo.com
Website:	www.lee-expo.com
Representative:	Christie Lee, president
Nature of business activities:	professional convention organiser

Carmanah Technologies Corporation

Address:	#4 203 Harbour Rd, Victoria, BC V9A 3S2, CANADA
Telephone:	+1 250 380 0052
Fax:	+1 250 380 0062
Email:	cfarrington@carmanah.com
Website:	www.solarmarinelights.com
Representative:	Art Aylesworth, CEO, director
Nature of business act	tivities: solar/LED lighting for coast guard,
	navigation and port security



Lively discussions: the Dutch visitors with Dr Inoue (right)

Tokyo research trip

Students and officials from the Netherlands visited the IAPH offices as part of a research trip into urban planning.

Led by Prof Luuk Boelens, students from Utrecht University and representatives from the ministries of urban planning from Amsterdam and Rotterdam visited the IAPH secretariat.

Following a week in Hong Kong, their research trip to Japan focused on the shifts in Tokyo and Yokohama from distribution and production to services and office work, and the relationship between city and port.

During the visit to IAPH, secretary general Dr Satoshi Inoue gave an overview of Japanese ports and their management. Shogo Kubo, director of the Waterfront Vitalization and Environment Research Center, gave a presentation on waterfront redevelopment projects in Japan. These presentations led to lively discussions to conclude a full morning.

Palestine waits for port

The possibility of a seaport being established in Gaza is a "long-term" proposition, according to a major study to which IAPH contributed.

Wouter De Ruyter, a student of Ghent University, Belgium, presented a paper detailing proposals on the project, which date back to 2000 when IAPH participated in a UN mission.

The then MD of IAPH Europe, Peter van der Kluit, went to Gaza on behalf of the association, but the project was postponed because of hostilities in the area.

De Ruyter decided to study the development of a Gaza port for his masters thesis and called on IAPH for help. His project was a cooperative effort between Ghent University and the Palestinian University of Birzeit, supported by the Port of Antwerp and the Dutch ministry of waterways.

He has now presented his findings at a seminar attended by both the present IAPH Europe MD, Fer van de Laar, and van der Kluit. In the presence of Prof Faisal Awadallah of Birzeit University and Prof Dr Georges Allaert of Ghent University and other officials from both universities, De Ruyter gave a presentation entitled: *Strengths and weaknesses of cross border development Gaza – West Bank.*

Gaza is geographically separated from the other Palestinian territory, the West Bank, so efficient hinterland connections across Israeli territory between Gaza port and the West Bank are essential. Complex political tensions in the area mean that the possibility of a port in the Gaza area being constructed soon is unrealistic, De Ruyter said.

However, the event provided a glimmer of hope to those that are still involved in this development. A memorandum of understanding between the Universities of Ghent and Birzeit was signed during the course of the seminar.

Dates for your diary

Major maritime congresses throughout the world

Clabel Convity Conference and Evensition

May

2

3

-10	San Antonio, US More info: www.globalsecurity.com
0–11	4th Trans Asia 2007 – Ningbo, China More info: www.transportevents.com
4–15	IPER New Partnership in Port Organization – Le Havre, France <i>More info: www.iper.f</i> r
7–1	The 18th World Dredging Congress – Florida, US More info: www.westerndredging.org/woda_xviii.php
1–1	ESPO Conference – Algeciras, Spain <i>More info: www.espo.be</i>
luna	

The 2007 Airport & Seaport Police International Port
Security Conference and 38th annual IAASP meeting -
Washington DC, US
More info: www.usportpolice.org

- **11–12** Port Finance and Investments Amsterdam, The Netherlands *More info: www.millenniumconferences.com*
- 11–12 APEC Container Terminal Management Antwerp, Belguim More info: www.portofantwerp.be/apec
- **14–15** 5th Asean Ports and Shipping 2007 Johor Malaysia *More info: www.transportevents.com*
- **19–20** Indian Ports Forum Mumbai, India *More info: www.indianportsforum.com*
- **19–20** Ports & Terminals Operations India 2007 Mumbai, India *More info: www.www.informedia-india.com*
- 25–29 TOC Europe Istanbul, Turkey More info: www.toc-events.com
- **19–20** IPER Port Finance Le Havre, France *More info: www.iper.fr*

July

9–11 Maritime Economics – London, UK More info: www.lloydsmaritimeacademy.com

August

25–30 Association of Canadian Port Authorities AGM and conference – Montreal, Canada. *More info: www.acpa-ports.net*



The port executives featured at this conference have influence on nearly 3Bn tonnes of total cargo volume and 100M teu in container traffic

The future and the past at Houston's conference

IAPH Conference VP, Argentina M James, who is also Port of Houston Authority director of public affairs, reflects on the work that has gone into the world's largest port gathering

This month 30 years ago the Port of Houston Authority welcomed delegates and guests to Houston to the 10th IAPH World Ports Conference. The Port Authority had just opened its Barbours Cut Terminal and immediately became a major player in the container trade. The biennial conference that year was highlighted by the planting of a time capsule at the new Barbours Cut Terminal.

At that time, the price of petrol in the US was 62 cents per gallon, the Dow Jones averaged 900, and planet Earth's population was 4.2Bn.

Today, the price of petrol in the US is averaging around \$3 per gallon, the Dow Jones hovers around 12,000, the Earth has more than 6.2Bn people, and the Port of Houston is still growing and setting the pace for delivering the goods.

Earlier this year we at the Port Authority began operations at our Bayport Container and Cruise Terminal – a \$1.4Bn state of the art facility that will triple our container capacity. Meanwhile, we again find ourselves preparing to serve as host and welcoming conference delegates, guests and members of the media to the 25th World Ports Conference. Innovations like email and the World Wide Web have helped make preparations easier this time around. As a result of technological advances, we are able to make plans for and convene port representatives and maritime industry leaders from more than 50 countries representing the seven continents of the world.

The port executives featured at this conference have influence on nearly 3Bn tonnes of total cargo volume and 100M teu in container traffic. The conference attendees will see how, yet again, Houston is simply the best place to host such a dynamic group.

During this year's conference we will celebrate the past, present and future by unveiling the contents of the 30 year-old time capsule, planting another in the new Bayport facility and by looking forward to another 30 years of growth and innovation in our field.

We hope your experience in Houston is memorable. We are dedicated to providing you with *Simply the Best* of everything we have to offer during your stay with us. INH





Getting you there.

FORTIS

Worldwide Marine Insurance Risk Management Based Partnering Trade Worldwide

 Antwerp:
 Antwerp Tower, De Keyserlei 5, box 6, B 2018 Antwerp, Tel: +32 3 222 27 12, Fax: +32 3 222 28 50

 Rotterdam:
 W.T.C. Building, Beursplein 37, NL 3011 AA Rotterdam, Tel: +31 10 448 31 11, Fax: +31 10 448 31 20

 www.fci.fortis.com
 Image: State St



I DO IT MYSELF

WE DO IT TOGETHER

YOU DO IT FOR ME

KALMAR SERVICES MAKING BUSINESS DECISIONS AS EASY AS EVERYDAY LIFE CHOICES

In your everyday life, you decide whether it's better to do something yourself, do it with someone else or to call upon a professional to do everything for you. We believe you deserve the same flexibility in your business life. That's why if you want to take care of your own service, we provide the best after market network in the industry. But if you prefer working together, you can benefit from our added-value services such as smart products and service inspections. We can even take you to the ultimate service level where you only pay per performance and one invoice gives you total peace of mind. Sound interesting? Check out our online service configurator to learn more.



www.kalmarind.com/serviceconfigurator