



# PORTS & HARBORS

Official Journal of the International Association of Ports and Harbors

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Get involved in a WPCI project

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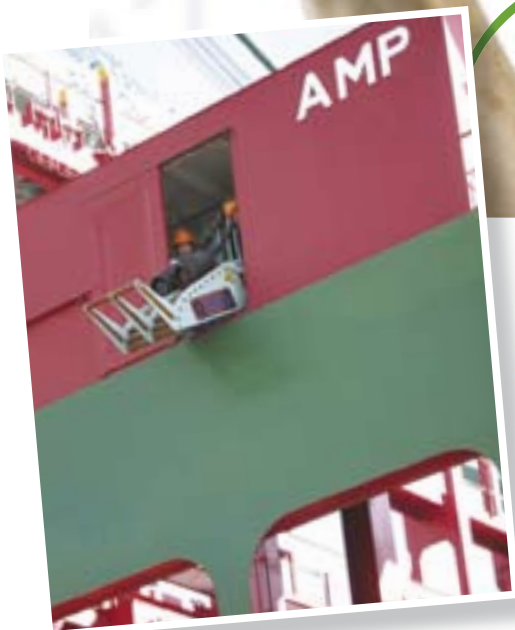
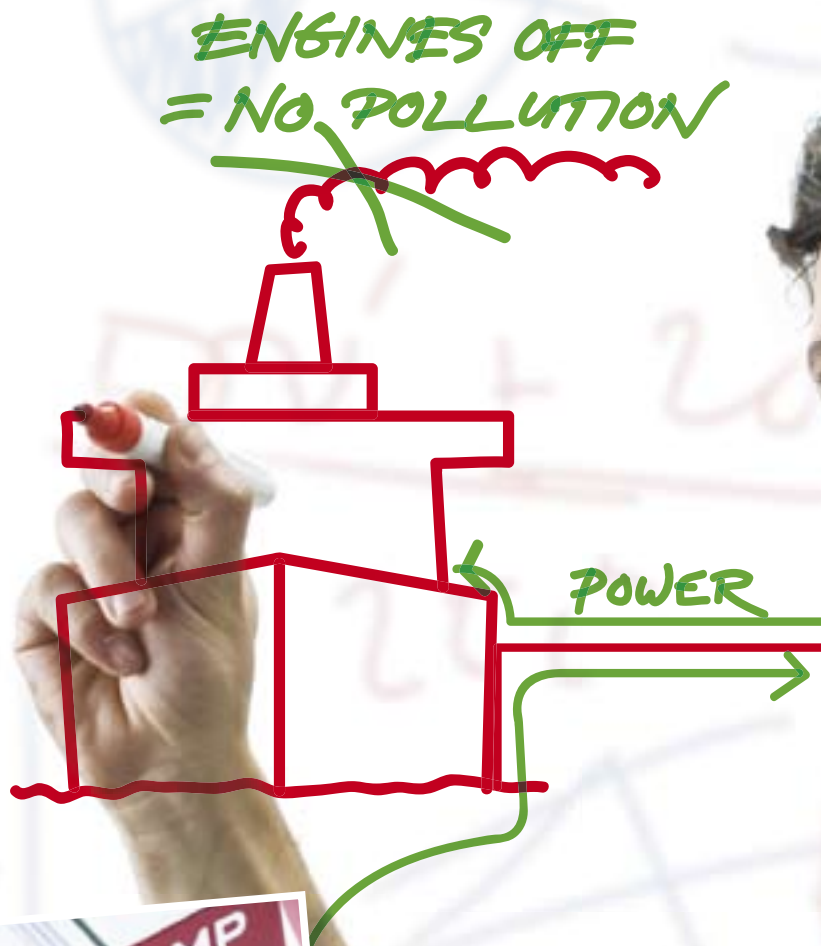
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## Clear direction

Working together to reduce greenhouse gases



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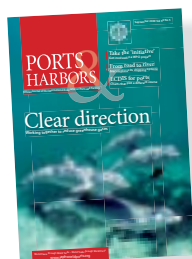
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Shipping and port communities must work together to find ways to reduce GHGs  
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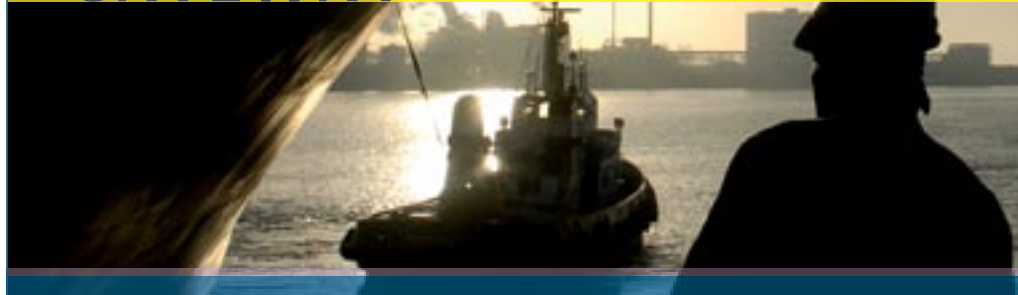
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Official Journal of the International Association of Ports and Harbors

## PORTS & HARBORS

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# Regional thinking

Intensified intra-regional trade will rely on ports linked by secure and efficient internal logistics systems

Where is the regional ports system going from here? This was the theme of a conference that the Korean government organised in Seoul recently to kick off preparatory work on its third national port policy for 2012–2021. Discussions covered a range of issues, such as development projects, logistics systems, port clusters and port governance. There is no doubt that everyone was motivated with the same wish to keep the country's main ports – Busan, Gwangyang and Incheon – growing as the regional hubs of East Asia.

I stressed in my presentation that the region's ports should pay more attention to the structural changes in the regional economy – that is, increasingly intensified economic interactions within the region, rather than outside the region. Industries in East Asia

are rapidly expanding and advancing in sophistication, with *per capita* income increasing significantly. This growth itself fuels economic activity within the region.

Moreover, to reduce greenhouse gas emissions, industries will tend to expand division of work to immediate neighbouring countries rather than across the globe. The need for stricter supply chain

Ports of East Asia need to prepare for and help accelerate intra-regional trade

security is also an incentive to develop a much shorter and more visible logistics system under tight control. All these changes will spur increases in intra-regional trade.

Ports of East Asia therefore need to prepare for and help accelerate intra-regional trade. Tightly knitted port networks will provide highly advanced internal connectivity for the region. As for trunk-line trades to Europe and the Americas, a unique regional ports system will emerge. Totally different from a traditional ports system based on the hub and spoke concept, it will be, perhaps, similar to the 'multi-port gateway' introduced by Professor Theo Notteboom in his recent report on European ports

East Asia's ports should now initiate a strategic approach. Major ports should work together to set up a single IT port community system, covering all the region's ports. For supply chain security, they could create a regional authorised economic operator scheme. One day, I hope, East Asian ports will open up a new page of the regional ports system to the world. PH



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Secretary General – The International Association of Ports and Harbors

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## Port updates

### THE SEARCH IS ON

The Port of New Orleans' best bet to pay for a \$500M container terminal expansion is through a partnership with private investors, a study by transport consultant Parsons Brinckerhoff has found.

The most likely scenario for capturing significant new business is to attract direct container services with northeast Asia transiting the Panama Canal, the study suggested. The port's current plan calls for four additional 305m berths and 28ha of additional storage yard space through the redevelopment of wharves adjacent to the current facilities already available.

### SHARED SECURITY

Port workers and truck drivers will soon pay less to access three South Florida seaports. Port Everglades, the Port of Miami and the Port of Palm Beach have agreed to share information and accept a single background check for entry into all three ports.

Workers previously had to pay for and complete a separate Florida criminal background check at each individual port to get access.

"The goal is to save money for the people who have to come to the ports to do their jobs," said Miami port director Bill Johnson. "We won't have to sacrifice security to accomplish this."

### PHOENIX IN CALACA

Manila-based Phoenix Petroleum Philippines has started operations at its new depot and terminal in Calaca, Batangas.

The depot, which has a capacity of 50M litres, will support the company's expansion of retail petrol stations in the Luzon area.

Phoenix also plans to use the Calaca depot as one of a series of terminals that will serve as a backbone for its nationwide operations.

Additional storage terminals will also be set up at Aklan, Bacolod, Cagayan de Oro, General Santos and Zamboanga. Each depot will have its own pier as well as facilities that enable it to receive vessels of around 5,000–6,000dwt.



Photo: PANYNJ

**Gaining entry... will PANYNJ be able to reduce the number of older trucks entering its ports?**

## Trucking in controversy

US ports have been receiving government money to help clean the air on the waterfront, but controversy over how these environmental programmes are administered is obscuring the greening process. The US Environmental Protection Agency (EPA) has so far provided about \$30M of its economic stimulus allotment this year for cutting diesel emissions in and around seaports. That includes money to retrofit diesel engines that power gantry cranes, tug boats and dredging equipment.

Recently, \$9.8M was awarded to help fund a clean truck programme at the Port Authority of New York and New Jersey (PANYNJ). The EPA money, plus a \$21M incentive from the port authority, will allow truck owners serving the port to replace pre-1994 trucks with newer and cleaner-burning vehicles. The authority estimated that about 16% of the trucks that call at the

port were built before 1994 and contribute 10% of the port's overall greenhouse gas emissions each year.

The clean truck programme in New York may well provoke the kind of resistance from the trucking industry that has already occurred at the Port of Los Angeles, where independent truck drivers have been banned from hauling boxes in and out of the port. That stipulation – introduced after pressure from the Teamsters (truck-drivers') union as a way to organise drivers more easily – can make ports less efficient, claim trucking advocates.

"Deregulated trucking in ports provides the most efficient and cheapest service when it comes to drayage that serves the vessels and shippers," Clayton Boyce, vice-president of public affairs for the American Trucking Associations (ATA), told *P&H*. The ATA is fighting the owner-operator ban in federal court.

The Teamsters asserts that, when operating within a clean truck programme, company-employed drivers will improve wages and make it easier for drivers to afford cleaner but more expensive trucks.

PANYNJ seems to agree, telling *P&H* that it is "working with the trucking industry, environmental and community groups and labour organisations to develop a clean truck programme and policy that will address the [port's] unique conditions".

Only a handful of major ports – New York, Los Angeles and Oakland – have attempted to regulate business practices as part of their clean truck programmes. That has so far kept the issue from becoming a priority. Aaron Ellis, spokesman for the American Association of Port Authorities, noted: "This is such an isolated kind of thing right now, I don't know if it would be considered a national issue at this point for us."

## Coal cuts lead to Mobile layoffs

Losses of close to \$10M caused partly by a steep decline in coal exports has contributed to a 12% workforce cut at the Port of Mobile, Alabama. The port had previously cut costs by reducing benefits for salaried workers and cancelling contract positions. "As

business dropped we transferred employees to the McDuffie [Coal] Terminal in hope that we could keep everyone employed, but that is no longer possible," said Jimmy Lyons, director and CEO of Alabama State Port Authority, which owns and operates the port.

## Takeover proposals for Port of Virginia

The Port of Virginia has received two competing bids to privatise port operations in addition to an earlier unsolicited bid by Centerpoint Properties Trust.

In March, Centerpoint submitted a \$3.5Bn proposal to take over Virginia's state-owned port operations. One of the two competing offers made in July was from a partnership of SSA Marine and Goldman Sachs, while the

other came from private equity firm Carlyle Group.

The three groups are said to be looking to gain the operating rights of three deepwater general marine cargo terminals, the Virginia Inland Port and the proposed state-of-the-art Craney Island Marine Terminal.

All are now operated by Virginia Inland Terminals, under the auspices of the Virginia Port

Authority. "We're hoping to get this wrapped up before the end of the year," a port spokesman told *Ports & Harbors*. "It does no one any good to drag this thing out."

Centerpoint said regardless of whether it wins the right to take over operations, it will move forward with its project to develop 365ha in rural Suffolk, Virginia, into an intermodal centre, according to local reports.

## Russian grain may go east

Three Japanese grain traders – Itochu, Sojitz and Mitsui – are competing to establish the first major Russian grain export terminal at a Russian port on the Sea of Japan. Rapid growth of demand for grains in the Asian markets, and the price advantage of Russian grain, have been stimulating Asian orders, which today are shipped from the Black Sea ports via the Suez Canal, where they then have to run the gauntlet of Somalian pirates.

A source at the Russian Grain Union told *P&H* that if there were grain terminals on Russia's eastern coast,

the export capacity would run into millions of tonnes a year. But the problem for traders and port investors is that the cross-Siberian rail tariffs are unstable and potentially more costly than the Black Sea–Indian Ocean freight charges.

"Exports that are profitable today can be unprofitable tomorrow," said Alexander Korbut, vice-president of the Union. Itochu told *P&H* it isn't exporting Russian grain yet, but it is planning how it may do, before committing to a new terminal hub for the trade.

## Crane collapses in Southampton

A crane collapsed on to the 6,661 teu *NYK Themis* (pictured) at Southampton, UK, on 13 July, seriously injuring the crane driver. Campbell Mason, managing director of DP World Southampton, said the incident was caused by the "collapse of the boom of one of the quay gantry cranes during the normal

operation of loading containers on to a vessel". Shiplside operations were temporarily suspended as the Health & Safety Executive began an investigation.

This was the second collapse of a Morris crane at Southampton in less than two years. The first took place in January 2008, when a crane collapsed on to *Kyoto Express*.



Photo: Nick Hall

## Convictions under US species act

A seafarer has become the first person to be convicted under a law designed to stop marine invasive species from entering US waters. Charles Posas was first officer on *Theotokos*, a vessel managed by Polembros Shipping.

He pleaded guilty in a New Orleans court to two felony counts of lying to the United States Coast Guard and violating laws aimed at keeping out invasive species.

Captain Panagiotis Lekkas also pleaded guilty to four felony counts of violating anti-pollution laws, ship safety laws and obstructing a United States Coast Guard investigation.

In September 2008, Lekkas and Posas tried to evade the laws by installing a device to conceal oil in the ship's ballast tanks.

John Cruden, acting assistant attorney general for environment and natural resources, said that the convictions of the two men "should act as a warning to industry and crew members alike that we will investigate and prosecute those who ignore not only pollution laws but those laws designed to protect native species". Polembros is run by the Greek shipowning brothers Adam and Spyros Polemis. Spyros Polemis is also chairman of the International Chamber of Shipping.

## Port updates

### WORKING TOGETHER

Spain and the UK have agreed to establish a new ferry link between Gibraltar and the Spanish peninsula following a meeting between government officials. An emergency hotline between the ports of Algeciras and Gibraltar will also be set up in an attempt to improve co-operation on maritime accidents and environmental emergencies.

### BUCKING THE TREND

Singapore's cruise industry grew healthily during the first five months of the year despite the global economic downturn, recording a 21% jump in passengers compared with that period in 2008. Cancellations are also unlikely over the next six months, according to industry sources. Singapore aims to attract more than 1M cruise passengers this year.

### A JOB WELL DONE

PD Ports-operated Hull Container Terminal has been commended for its handling of a specialist project cargo in June. Freight forwarder Transcar Projects transported the cargo from Kandla, India, to Hull, UK, on the *Beluga Federation*, from where it was transported to BP's Saltend power station to form part of its cooling system.

"I am very encouraged to work with such a professional team and impressed by their flexible approach to ever-changing demands as well as their ability to handle such specialised cargo efficiently and safely," said Transcar's operations manager, Di Kenny.

### INCREASED PROTECTION

Security has been tightened in Malalag Bay in Davao, Philippines following the influx of more ships anchoring for lay-up to wait out the global recession.

The added measures come in the form of additional patrols at night from the coastguard and the deployment of more private blue guards. Asia Pacific Chartering, which operates the area for lay-up purposes, said more than 30 ships have been idled in Malalag Bay which is now near to full capacity.



## Cash & Cargo

### INTERNATIONAL GAINS

The Georgia Ports Authority (GPA) was hit by a 12% drop in total tonnage at its terminals in fiscal year 2009. Despite the drop in container volume, however, GPA's ports – Bainbridge, Brunswick, Columbus and Savannah – handled over 2.4M teu. "We continued to make gains with our international carriers despite the global economic crisis," said GPA board chairman Steve Green.

### A RISE IN HARD TIMES

ICTSI-operated Mindanao Container Terminal has posted a slight increase in box throughput for the first half of the year despite the current economic downturn. Figures are up from 52,687teu to 53,886teu compared with the same period last year. ICTSI signed a 25-year contract to manage and operate the terminal last April.

### RAW DEAL FOR KIEL

Vessel transits through the Kiel Canal were down around 40% year on year in the first six months of the year, but traffic is picking up again, according to the German waterways administration. In a sign of the impact of the global recession, ships transiting declined from 22,153 to 14,643 in 1H/2009. The worst appears to be over with traffic statistics showing moderate month-on-month increases since April.

### BOX DROP IN SLOVENIA

The Port of Luka Koper, Slovenia, has reported a drop in throughput of 20% during the first half of the year compared with the same period in 2008. Container traffic fell from 170,220teu to 165,220teu. Vehicle throughput dropped by more than 50%. The port's operator said that the future looks better with two container lines operating a route between Asia and the Adriatic since June.

### PROFITS DOWN AT DUBLIN

The Port of Dublin's CEO, Enda Connellan, has predicted that its revenues will fall by over 11% this year to around €62M. Turnover is expected to be on a par with 2007's figures at around €70M. Freight volumes in 2009 fell by 16% compared with 2008.

# Modern terminal for Haifa

The Israel Ports Company (IPC) has completed the construction of the new Sh1Bn (\$250M) Carmel Container Terminal and has turned it over to the Haifa Port Company for operations.

IPC board chairman Yiftach Ron-Tal said that the terminal's modern infrastructure will facilitate more efficient service for importers and exporters and benefit the national economy. Ron-Tal added that IPC is committed to providing the port infrastructure needed to facilitate national economic growth and has therefore already begun design work on the 'next stage' container terminals in Ashdod and Haifa. These developments will be required in the coming decade, he said.



**First boxes at Carmel Container Terminal, with the Eastern Container Terminal beyond**

Shlomo Brieman, IPC chief executive, said that the Carmel project was completed on time and on budget and was built to the highest international

standards to accommodate super-post-Panamax vessels. It provides an additional capacity of about 600,000 box moves a year.

The terminal has a 700m main quay and a 250m secondary quay. Water depth at quay stands at 15.5m. Reefer racks, electrical substations, operational buildings and a specialised stacking area for dangerous and hazardous goods have also been developed as part of the project. The Haifa Port Company has ordered six ship-to-shore gantry cranes and 12 rail-mounted gantry cranes, expected to be delivered during 2010.

The IPC has completed several other projects in recent years, including the Eitan Container Terminal in Ashdod.

## Risk assessment via web portal

A web portal to assess maritime threats will be offered to shipowners starting later this year, Peter Grube of BIMCO told *Ports & Harbors*.

The portal, known as Automated Voyage Risk Assessment (AVRA), is a joint venture involving the Baltic & International Maritime Council and private security specialist Aegis, added Grube, PR chief for BIMCO. The scheme will also have input from the International Maritime Bureau. Besides piracy, the

scheme would focus on stowaways, smuggling and political unrest and corruption.

AVRA will cover not only the current hot topic of piracy, but also smuggling, corruption, drug running, domestic political unrest and stowaways. BIMCO claims that owners using the service will log on, insert their vessel's details and voyage details and the system will produce an International Ship and Port Facility (ISPS) Code-compliant threat assessment.

## Southampton asks public

Associated British Ports (ABP) has invited the public to have its say in the Port of Southampton's 20-year development master plan for at the up to 2030.

Key objectives for the consultation programme are to:

- Clarify the port's strategic planning for the medium to long term and identify how port-owned land may be developed
- Set out timescales
- Inform other planners in the

region, including transport network providers, to help them prepare and revise their own individual development strategies and plans.

The consultation process will continue until mid-November and port director Doug Morrison said: "We'll collate all the comments received and where appropriate incorporate them into the master plan – the intention's to publish it by the end of 2009."

## Green's term extended

Stephen Green will continue as chairman of the Georgia Ports Authority (GPA) after his unanimous re-election for an additional one-year term. The board also approved capital improvement projects to increase capacity and efficiency at GPA's ports. "Improving our facilities and expanding our services and market share at our deepwater ports in Savannah and Brunswick are critical for Georgia's economic recovery, and I am honoured to have the opportunity to serve our state at this time," said Green.

## Movements at Montreal

Sylvie Vachon has been named president and CEO of the Montreal Port Authority (MPA). She replaces Patrice Pelletier, who resigned in March. Vachon was selected "because of her long expertise in the marine field and, in particular, at the MPA" said chairman Michel Lessard.





Photo: Michael Holmann

Container-Terminal Altenwerder... Hapag Lloyd exchanged its share for cash

## Cash injection for Altenwerder

German container line Hapag-Lloyd has received a €315M cash injection from some of its shareholders in exchange for its 25.1% stake in Hamburg's Container-Terminal Altenwerder (CTA). The scheme is backed by tourism group TUI (which still holds 43.3% in the carrier), the city

of Hamburg and insurance group Signal Iduna. The latter two are stakeholders of the Albert Ballin consortium that took over a majority shareholding in Hapag from TUI earlier this year.

TUI will contribute the lion's share of the investment with €215M, while Hamburg and Signal

Iduna are pitching in €76M and €24M respectively. Meanwhile, HSH Nordbank, another consortium member, will provide a €15M loan for the rescue package. One stakeholder in Albert Ballin, the freight forwarder Klaus-Michael Kühne, is not participating in the scheme.

## Cash & Cargo

### RUSSIAN OPTIMISM

Novorossiysk Commercial Sea Port, the only publicly listed Russian port company, continues to lag in the stock markets roughly 33% below its share price this time last year. The company is confident its operating figures will improve in the second half of this year. Results for the first six months indicate turnover of 43M tonnes – a gain of 10% over the same period in 2008.

### BELGIAN GLOOM

Port of Antwerp handled around 77M tonnes of freight during the first half of 2009 – a 20% drop from the figures posted for the same period in 2008. "We suspect that this trend will continue for the remainder of the year," Antwerp Port Authority CEO Eddy Bruyninckx said. "At the moment there are not enough signs for an economic revival in the second half of 2009."



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## Cash & Cargo

### FALTERING FORTUNES

Turnover at the Port of Vanino, in Russia, dropped by almost 15% in the first half of 2009 compared with the corresponding period of 2008, the port authority has revealed. The total volume of goods handled at the port in 1H/2009 was 2.9M tonnes.

Export cargo handled at the port decreased by 7.6% to 1.5M tonnes over the same half-year. Around 630,000 tonnes of imported cargo was handled in the six-month period – a drop of 14%.

### MICT GOES HIGHER

Manila International Container Terminal (MICT), in the Philippines, has increased the height of its rubber-tyred gantry cranes (RTGs) in preparation for higher volumes.

ICTSI, which manages and operates the terminal, said the RTGs have been extended from one-over-four high to one-over-five high to enable the port to increase the number of containers it can accommodate. The 32 RTGs will have a new lift above ground of nearly 18m. The work was carried out by Portek Systems & Equipment.

### HPH DROPS MANTA

Hutchison Port Holdings (HPH) will relinquish its right to operate the Port of Manta following an agreement with the government of Ecuador.

The total share capital of Terminales Internacionales de Ecuador (TIDE) – valued at around \$5M – will be transferred to Manta Port Authority. Hutchison will also return to the government tax breaks said to be worth over \$1M and will pay an additional \$2M into TIDE's account.

### BUDAPEST RAIL LINK

A new rail service between Budapest International Logistics Centre (BILK) and Hamburg began last month. The Danube Express rail service provides a link from Hungary to Hyundai Merchant Marine services calling at Hamburg and ports including Busan, Kaohsiung, Hong Kong, Singapore, Shanghai, Yantian, Tokyo and Kobe.

The service began running on 26 and 28 August from Hamburg and Budapest respectively.

# Marseille Fos goes inland



**Well-situated: Marseille Fos has taken a stake in Pagny Terminal, pictured**

Leading French cargo port Marseille Fos is boosting its hinterland links with northern Europe by taking a 10% stake in Pagny Terminal, the strategically located multimodal hub at the northern end of the Rhône-Saône corridor between Chalon and Dijon. The deal is the first since April's announcement of a hinterland policy under which Marseilles Fos will seek capital

stakes in key inland platforms. The port's strategy is to become the Mediterranean alternative to northern European ports.

Enhanced rail access to markets such as southern Germany and Switzerland made Pagny a priority target. Marseille Fos believes transit times will be reduced by developing 'landbridge' solutions – combining maritime and overland logistics and expects to generate

new traffic of 40,000teu a year.

Pagny is managed by Manuport, a subsidiary of Euroports-Benelux Port Holdings, which took a 34% stake in the terminal last year and works alongside a string of local chambers of commerce. Marseille Fos heralded "the arrival of a stevedoring company of this calibre", which it said influenced approval of its own investment by the port's supervisory board.

## Antwerp calls for dredging in Scheldt

A routing decree and an implementation permit enabling a tide-independent route to be created for large modern ships to sail into the Port of Antwerp, Belgium, has been suspended by the Dutch Council of State.

The permit covers deepening of the Western Scheldt at 12 shallow points that are currently not deep enough for the largest ships. The Belgian port said in a statement released on 30 July: "For the port of Antwerp, which has long pleaded for deepening so as to afford tide-independent navigation for ships

with a draft of up to 43ft [13.10m], this project is of crucial importance for further economic development." Antwerp Port Authority made it clear that it expects the Netherlands to respect the "treaties ratified by both parties and both parliaments" and to carry out the necessary restoration work without delay, so as to enable the deepening work to go ahead.

Antwerp port alderman Marc Van Peel will urge the new Flemish government to take "all necessary steps with the Netherlands, without delay" to get work started on deepening the Scheldt.

## France to fund Philippines ports

France is lending €170M (\$236M) to the Philippines to build ports. Philippine Ports Authority general manager Oscar Sevilla said the loan is a government-to-government arrangement through French bank BNP Paribas. PPA hopes that the French loan will cover construction and repair

of more than 70 ports in the next four years. They will be modular in design and support ro-ro operations linking the country's numerous islands.

Each port has a target cost of up to PhP150M (\$3.12M), said Sevilla, who added that modular port technology is new for shipping,

but it's cheaper than traditional methods and the facilities can last between 30 and 50 years. It is believed the ports will be built in Isabela, Pangasinan, Quezon, Romblon, Mindoro, Cavite, Palawan, Masbate, Albay, Western Samar, Cotabato, Davao and Surigao del Norte.



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## People

### MANAGEMENT SHAKE-UP

The UK's Chamber of Shipping has appointed Angus Frew as its first chief executive officer. He is "tasked with leading and managing a review and transformation", which will focus on ensuring that the organisation "is equipped, structurally and financially, to meet the challenges of the long-term future".

### HERE TO HELP

Richard Lidinsky's seat on the US Federal Maritime Commission (FMC) – an independent agency that regulates US ocean transport – has been confirmed by the Senate.

Democrat Lidinsky, who has worked in international shipping for 35 years, will fill one of three vacancies on the five-member panel. "The role of the FMC is to assist all segments of waterborne commerce, including vessels and ports, in regaining their vitality until the economy comes around again," said Lidinsky.

### RISE UP THE RANKS

"When I joined the port 10 years ago I didn't see myself working in the harbormaster's office, let alone having the position," said Julian Seaman following his recent appointment as harbormaster at Shoreham Port in the south of the UK.

Seaman, who has held positions including tugmaster, port hydrographer and assistant harbormaster during his decade at Shoreham, replaces Captain Colin Crookshank, who has stepped down after seven years in the role.

### DUAL ROLE

Panama Maritime Authority's new administrator Roberto Linares has also been named as the country's Minister of Maritime Affairs.

"My priority is to increase Panama's fleet participation with aggressive marketing and by the opening of a series of technical bureaux," Linares told *Ports & Harbors*.

Meanwhile, Alfonso Castellero has also been confirmed as the head of Panama Maritime Authority's Merchant Marine Directorate, which oversees Panama's commercial fleet.

## Singapore's terminal takeover

The government of Singapore has taken over development and ownership of the country's first LNG import terminal. A new company called Singapore LNG will be set up by the Energy Market Authority. The move was necessitated by the recession, according to S Iswaran, senior minister of state, ministry of trade and industry, and of education.

Iswaran told IHS Global Insight that Powergas, a wholly owned subsidiary of Singapore Power, had been designated as the terminal's owner-operator in September 2007. Powergas and partner GDF Suez completed the terminal's front-end engineering and design work and acquired land for it, but the recession has prevented the companies from proceeding further.

According to Global Insight, "It is unclear whether this [Singapore LNG] will be fully or partially owned

by the government." It added: "The terminal already has a supply agreement signed in April 2008 from BG Group's proposed liquefaction terminal in Queensland, Australia, which is due to come on stream by 2014." The terminal is expected to handle up to 3M tonnes of LNG a year, while total investment is estimated at \$1–1.5Bn, Global Insight revealed.

The government is keen to complete the terminal so that operations can start by 2013 and it will award contracts for detailed engineering, procurement and construction by the end of this year. At present, natural gas is transported into Singapore by pipeline from fields in Malaysia and Indonesia. "The government's takeover reflects the growing uncertainty over future LNG demand in the Asia-Pacific region from project partners," noted Global Insight.

## Venice streamlines customs data

Venice Port Authority and the Italian Customs Agency have signed an agreement to implement a new data transmission system called LogIS. This system will allow data exchange between dock operators, such as freight custom forwarders, import-export operators, terminal operators etc, and the Italian Customs Agency about incoming and outgoing goods at the port.

The port authority has shown its support for this agreement by paying the project and start-up expenses in accordance with the customs guidelines.

The agreement is also supported by the Associazione



Photo: Ivan Meshkov

**Venice's data system will monitor incoming and outgoing cargo**

degli Industriali di Venezia – the main organisation representing Italian manufacturing and service companies – which sees LogIS as

a way to streamline bureaucracy as well as enabling port services to become more efficient for their members.

## Car carriers steer upwards

Vehicle carriers have been hard hit by the recession, but the worst appears to be over – that was the message from Norwegian vehicle carrier, logistics and maritime services group Wilh Wilhelmsen (WWI) when it presented its second-quarter interim results.

Volumes of cars carried by sea have declined faster than car sales in most countries, which indicates that inventories of unsold vehicles are being depleted. That, in turn, supports the view that the market has bottomed out. Nils-Petter Dyvik, WWI's chief financial officer, pointed out in a presentation that in 2Q/09 the volume of cars carried by the group's ships had already risen by 11% on the previous three-month period. However, this still left volumes 39% below

those of the corresponding period last year.

Eukor Car Carriers, of which WWI owns 40%, performed reasonably well thanks to generally good demand for cars made in South Korea. Its American Ro-Ro Carrier unit, 50% owned, also enjoyed good volumes of cargo and actually improved its performance. However, the 50%-owned Wallenius Wilhelmsen Logistics (WWL) business suffered from weakness in volumes and low cargo availability.

Twelve countries have unveiled economic stimulus packages, many of which include schemes whereby governments pay owners of old cars a certain amount in cash if they recycle the vehicle and buy a new one instead.



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## Dredging

### CHITTAGONG COLLISION

A Chittagong Port Authority (CPA) ship capsized on 11 July after colliding with a dredger in the port's channel. Lighter vessel *Modern*, laden with gypsum, lost control after the incident, which also left dredger *Khanak* severely damaged. The accident is thought to have been caused by a steering failure on board *Modern*. All 11 of its crew members were rescued without injury.

### WIDENING WORK

The US Port of Long Beach has invited bids to widen its back channel from 66m to 95m to cater for post-Panamax vessels. The depth, however, will remain at 15.8m. The successful bidder will be selected next month.

### A TIMELY DECISION

Dredging work is under way at Argentina's Port of Mar del Plata after a study by the country's National Directorate of Navigable Routes found that the port's secondary channel had accumulated over 10,000m<sup>3</sup> of extra sand between June and July. The channel will be restored to 100m in width and 9.1m in depth – and it's hoped that the main channel will receive similar treatment.

### GOOD TO GO

The US Army Corps of Engineers will spend more than \$500,000 of federal stimulus money to widen the shipping channel at Manitowoc Harbor. Investigative work started recently with a survey and the dredging campaign is expected to be completed within the next two years.

### AXE DROPS AT FALMOUTH

The South West Regional Development Agency has withdrawn its support for channel dredging and the construction of a new cruise terminal at Falmouth, UK, following budget cuts.

### GOING LOWER FOR LUBES

Alongside depth was enhanced at Singapore's Exxon Mobil Lube Oil Jetty with dredging carried in August. The work was carried out by trio of grab dredgers: *Titan*, *Janus* and *Minas*. Dredged material was transported to designated dumping grounds.

## Onshore power at Antwerp

The Port of Antwerp, Belgium, formally activated an onshore power supply (OPS) facility in May. It's said to be the first in the world to have automatic synchronisation and 50/60Hz conversion. It typically powers a docked container vessel for about three days within any one week, allowing the ship's auxiliary diesel generators to be disconnected.

This greatly reduce noise levels as well as noxious NOx, SOx and carbon dioxide emissions.

The move means the port is already compliant with an EC



**Flemish Minister-President Kris Peters (right) with John Kirkland of Independent Container Lines at the opening**

directive introducing a 0.1% maximum sulphur requirement for fuels used by ships berthing in European ports before the January 2010 implementation date.

The equipment was developed by SAM Electronics and ensures uninterrupted generation of high-voltage (800kVA) electrical power to berthed vessels in association with a local grid.

Network equipment typically comprises of a series of power and control modules and cabling, allowing vessels to connect to shoreside electricity.

## Kenya to benefit from ADB loan



Photo: Kenya Ports Authority

### Mombasa Container Terminal – a second terminal is planned using bank funding

The African Development Bank has agreed a \$326M loan to Kenya and Ethiopia to upgrade a transport corridor linking the countries by sea and land. The UN and other agencies see this corridor as having "significant potential to promote trade and quicken the pace of integration in the Horn of Africa region".

Part of the money will be used for constructing a second box terminal at the Port of Mombasa in

Kenya, where it is hoped the upgraded corridor will be able to channel a greater volume of goods through its quays.

The remainder of the funds will be allocated to the construction of a 438km-long highway that is aimed at improving the efficiency of goods transport and reducing transit times for imports and exports moving between Kenya and Ethiopia.

## Valencia wins European investment

Valencia has won €74M (\$105.5M) in EU money to help it double its port's box capacity.

Private and public funding totalling €900M (\$1.23Bn) will pay for building up container capacity

to more than 8M teu by 2013.

The Valencia port authority, APV, said the EU money will pay for a breakwater, to be built by the third quarter of 2011. The European Investment Bank is lending €350M

(nearly \$500M) for the project.

Valencia's plan is to build a €193M (\$275M) box terminal in its northern expansion. A tender for the construction work is expected to be opened next year.



## Sub-ASEAN ports in harmony

Two new Philippine ports are set to benefit from simplified trade processes by joining the sub-regional grouping known as BIMP-EAGA – the Brunei-Indonesia-Malaysia-Philippines East ASEAN Growth Area. The grouping is working on harmonising customs, immigration, quarantine and security (CIQS) procedures to boost maritime trade within the sub-region.

The Philippine Ports Authority said the Port of Mati, in Davao, and Brooke's Point, in Palawan, are the two leading contenders to benefit from the scheme. Other ports in the BIMP-EAGA have

been assigned to interconnect by mutually agreeing lower port tariffs, as agreed by their respective port authorities.

Mati, for instance, has been linked with the nearby ports of Zamboanga, in the Philippines, and Sandakan, Malaysia, with two regular ship calls a week. A one-stop shop for CIQS at Brooke's Point is reported to be nearing completion.

Port officials observed that member countries' vast natural resources mean the sub-region has the potential to become a major trade route able to attract more ships.

## TPI in on Brazil's cabotage

The latest participant in the Brazilian cabotage and east coast of South America coastal trades is Triunfo Participações e Investimentos (TPI) – a key shareholder in the Portonave box terminal in Navegantes.

After buying the multi-purpose Norsul Atlântico recently, TPI intends to start up a cabotage and coastal service linking the ports of Santos, Navegantes (Itajaí), Montevideo and Buenos Aires. TPI president Carlo Bottarelli confirmed that the purchase had been completed and that the new service would initially concentrate on containers and steel coils.

The Brazilian cabotage trade amounts to around 600,000teu a year (700,000teu including the River Plate). Considered one of the most lucrative and rapidly expanding container trades in the world today, it is expected to grow to 800,000teu a year over the next two years.

The market is currently split between Aliança (part of Hamburg Süd), Mercosul Line (part of Maersk Line) and Brazilian carrier Docenave.

## Chinese port seeks funds for new transport links

The Port of Yangkou, China, is planning a HK\$17Bn (\$2.2Bn) fundraising effort. Investment will be sought this and next year to pay for more port, road, rail and waterway links.

Hong Kong-listed PYI is playing a leading role in raising the investment, which includes targeting investors from the oil industry, as well as international, mainland China and Hong Kong companies. "As the main investor in Yangkou port, PYI will increase its infrastructure investment in the port and invite international and Chinese companies to co-

invest in Yangkou," PYI chairman Joseph Chow Ming-kuen said.

Speaking at a seminar in Beijing on developing the Jiangsu coast, he also said the investment would improve Yangkou's operations capacity and efficiency.

Yangkou is just a few hours' drive away from Shanghai. The surrounding region of the port site has been declared a major development zone by the Chinese State Council.

Yangkou's port operations contributed about US\$41M n to PYI's operating profits last year.

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The 33rd Seminar will take place in Singapore, Monday 16th to Friday 20th November 2009. An important feature of the seminars is a visit to a dredging project being executed in the given geographical area. This gives the participants the opportunity to see dredging equipment in action and to gain a better feeling of the extent of a dredging activity.

Highlights of the programme are:

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

The cost of the seminar will be € 2.950,-; this fee includes all tuition, VAT, seminar proceedings and workshops and a special participants dinner during the week but is exclusive of travel costs and accommodation. Assistance with finding accommodation can be given.

Representatives of port authorities, companies, and individuals, with an education level equivalent to at least a B.Sc. or comparable work experience, interested in attending are requested to pre-register.

For more information, please contact Mr. Frans-Herman Cammel at [info@iadc-dredging.com](mailto:info@iadc-dredging.com) or visit [www.iadc-dredging.com](http://www.iadc-dredging.com)

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# Mars protects planet

As an international shipper of chocolate, petfood, food, gum and drinks, Mars is always looking for environment-friendly transport options, **Filip Beckers** tells *P&H*

Operating with a green agenda is not a new concept for Mars. It has been interested in protecting the environment for the past 20 years, long before it became fashionable. The original reasons for the company's interest in this ethos came from a desire to act in a conscientious way towards society. We are a private company, but we are a big shipper and we wanted to set an example to other companies. Of course, today the environment is a sexy topic.

Mars's aim, wherever possible, is to use environment-friendly transport routes, with consideration given to all transport options. This must, however, be balanced out with the speed and interconnectivity of any given transport mode and associated costs. After all, Mars is a profit-making company and therefore must consider its customers and suppliers as well.

One area in which Mars has been proactive is reconsidering its transport and logistics flows. In the early 90s, we started building new warehouses that were well-connected with rail and inland waterways all over Europe. We also created visibility of our flows over the entire network in Europe. In the past, each factory organised its own transportation flows, even if they were served by the same carrier. In 1990, however, Mars took the decision to organise



Mars is constantly looking for ways to get its produce off the roads

these flows through one central organisation. The company found monitoring and organising its freight flows to be much more efficient and this activity has gone a long way reducing the empty mileage on the roads.

The company is also committed to making the most of shortsea shipping opportunities. In the UK we use this route a lot. It is also a viable option in Ireland and Scandinavian countries. At Mars, we see the environmental benefits of shortsea shipping, but it still has to fit in with the needs of our customers.

In the UK, for example, for a shipment that arrives in the country by ship there is not a huge difference between the transportation time of, on the one hand, transferring it to a coastal ship then transferring it again to road or rail for the final part of the journey and, on the other, the time taken to truck the shipment across the country by road from the moment it reaches the quayside. In other countries – Portugal, for example – it has been known to take up to six to eight days longer, because often shortsea ships don't depart every day.

In some circumstances these differences in journey time are acceptable, depending on the order, the commodity and the client, but on other occasions a quicker flow of the shipment is deemed necessary. In these cases we have



to consider alternative modes of transport.

So that it is easier for shippers to make green choices, ports need to be better connected to railway and river/canal networks. This one factor alone would make a big difference to the options available. The Netherlands has good connections between its main ports and the hinterland rivers, making transportation by barge a feasible option.

Working for a

### Filip Beckers wants to see better promotion of ports' barge and river transport connections

manufacturer and shipper, I have come to see that ports often overlook those shipments made by barge. Ports are very busy places and the links between the river or canal and the port are not always adequate. As a result, it can be very difficult to use this form of transport and still meet ship departures. In peak periods terminals do tend to delay barge operations in favour of other modes, which makes barging options less reliable; it also adds some costs on to the total price-tag.

It is often more complex to use rail and barge transport. These options are seldom promoted, are tougher to get organised and then sometimes the bill is higher. Often carriers try to compete on price to win business, but at Mars cost is not the only measure we use when considering transport alternatives. We also consider the flexibility of the carrier, the frequency of its services and the overall ease of doing business with them. In some cases, the environment-friendly option is an attractive solution for these reasons in its own right.

In the current economic downturn trucks are readily available, but in 'business as usual' periods there is, most of the time, sufficient capacity. At the moment, therefore, road transport is an easy option for the shipper. To get freight off the road and on to rail and rivers, ports need to have a balanced modal shift with regards to hinterland connections.

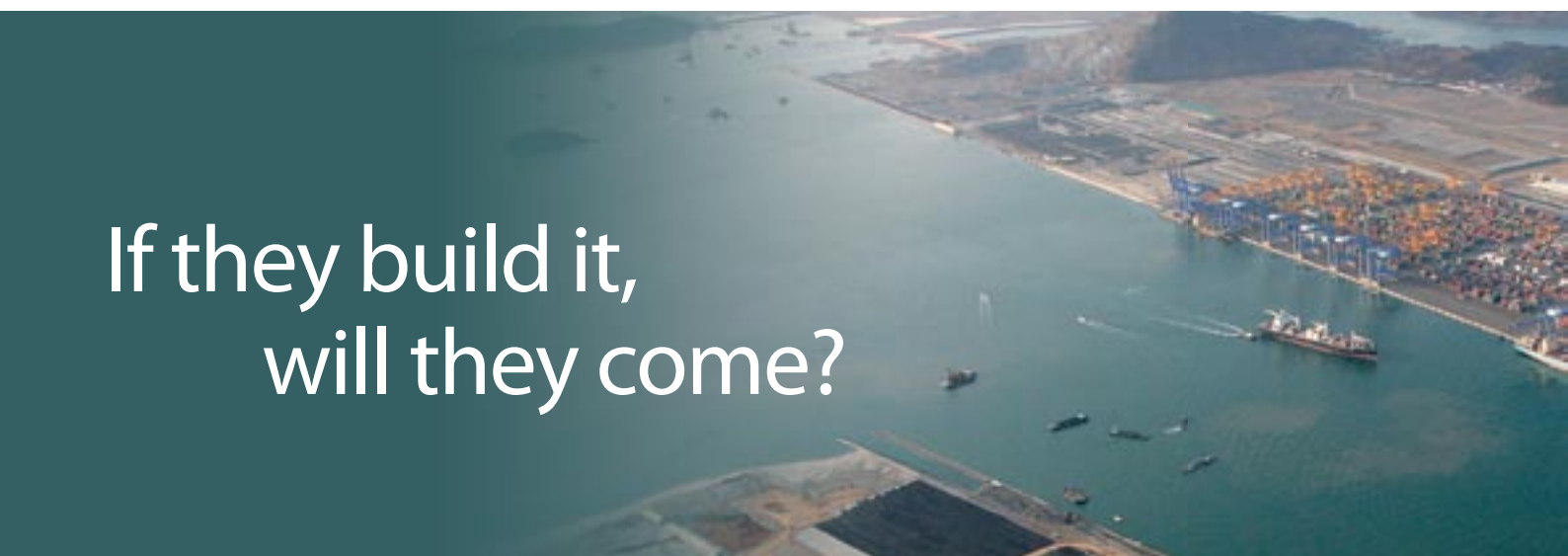
Given the current economic climate, ports may have other priorities right now, but the economy will pick up and when this happens they need to be ready to offer attractive services to their customers. Hinterland connectivity will be the key to success, especially for ports that focus on containerised cargo. Nautical accessibility is no longer the only criterion that manufacturers/shippers consider when organising transportation of their goods – they will also ask themselves, is the port well-connected? Does it have rail connections? Will goods that are sent by barge be handled in a timely fashion in the terminal?

It is important that ports can say 'yes' to all these questions when shipping is once again doing business as usual. **PH**

*Filip Beckers is transport procurement director for Mars and president of the Maritime Council of the European Shippers Council  
More info: [www.mars.com](http://www.mars.com)*







# If they build it, will they come?

Busan Port Authority has set about turning its port into an international logistics hub.  
*P&H* reports on the development

**"**It used to be the cargo followed the ship – these days the ship follows the cargo," Kieren Ring, CEO of the Global Institute of Logistics, told delegates at the IAPH World Ports Conference in Genoa in May.

So what keeps clients loyal to a port? According to Ring, the secret is to create "stickiness" between a port and a shipping company and to "get a logistics centre close to you". Rodolphe Sabonge, vice-president research of the Panama Canal Authority, supports this theory: "Geography is important, but infrastructure is key," he said.

The Port of Busan, South Korea, is taking advantage of its prime location close to China and serving as an eastern gateway to Russia by re-working itself as a regional logistics hub through the development of New Port and a distripark. The port already handles 80% of Korea's container throughput and has a proven track record as a transshipment centre.

Speaking at the conference, Hochul Park, marketing director for Busan Port Authority (BPA), said that a main aim is to diversify the port's cargo capabilities beyond containerised goods.

According to statistics presented at the conference, in 2007 Port of Busan handled 217.2M tonnes of containerised cargo, representing 89% of its 243.6M tonne throughput. BPA wants to widen its capabilities and offer its clients a versatile port with value-adding services and logistics connections.

To do this it has embarked on building the New Port. Work, consisting of two phases or areas of development, began in 1995 and should be completed in 2015. The project has already attracted attention from a number of clients. Phase one saw the development of six berths, which are being

operated by Pusan Newport Company (PNC). Plans envisage three more berths being developed, also to be operated by PNC. Phase two consists of six parts, starting with four berths operated by Hanjin, which became operational in February this year. Another four berths would be operated by Hyundai Merchant Marine (HMM) after completion in January 2010, and a further four, which would come on stream in January 2011, would be operated by Busan New Container Terminal (BNCT).

But this is only the start of the project. To realise its potential as a logistics hub, BPA is developing a 6.2M m<sup>2</sup> distripark. The Northern Logistics Park, already in operation, will soon be accompanied by Western Logistics Park on a 3.57km<sup>2</sup> site and the Southern Logistics Park, somewhat smaller at 1.42km<sup>2</sup>. Development of the western sites will be done in two phases between 2011 to 2015 and some foreign companies have already shown interest, the port told *P&H*. Development of the southern site will follow, but a specific plan has not yet been drawn up.

**“**Geography is important,  
but infrastructure is key**”**

The port expects these facilities to attract other activities such as cargo handling, transportation, storage, exhibitions and international logistics.

BPA is also revitalising its Old Port area, which is now home to its international passenger and coastal ferry terminals, as well as four more piers.

Beyond South Korea's borders, BPA is looking at clustering and development opportunities. It is developing a container terminal at the Russian fishery Port of Nakhodka, which will include three container and three multipurpose berths. Park said that the aim of the project is to create a logistics network between



#### Development at the port is already under way

the ports, promoting a cargo flow from Nakhodka into Busan. It will also provide BPA with a logistics base in northeast Asia. The project is scheduled for completion in 2010, with partial operation expected by the end of 2009.

Busan Port Authority also signed a memorandum

## New life for old port

Busan Port Authority's planned developments will cover an area of rather more than 1.5M m<sup>2</sup> and require a total budget of \$8.5Bn. Of this, \$2Bn is allocated to infrastructure and \$6.5Bn to superstructure.

The added value of the investment is said to be \$31.5Bn. Estimates indicate that 120,000 jobs will be created, including 38,000 in tourism and related industries, with the remainder allocated mainly to the construction sector.

of understanding with the local authority in Suifenhe City, China, in November 2008. Nakhodka handles cargo coming from the northeast Chinese provinces of Heilongjiang and Jilin, and Park explained that the MoU will help establish a maritime and logistics network connecting China, Russia and South Korea.

Cargoes from China and Russia can be routed to Nakhodka through the distribution centre in Suifenhe City. The cargo can then be transhipped from Nakhodka to Busan via a feeder network.

The target for the authority is now to attract shipping companies, said Park. But if Ring's theory is correct, BPA is creating a substantial amount of 'stickiness' as it aims to cater for a wide range of both port- and shipping-related activities. **PH**

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Photos: PPOS

# Boosting throughput

Journalist **David Hooper** talks to Portia's Wieger Koornstra about improving turnover and increasing safety at Trinidad and Tobago's main container port

## Ready to receive – Terminal 2 at Port of Port-of-Spain

**D**eepsea liner operators never used to be enthusiastic about scheduling ships into the Port of Port-of-Spain (PPOS). Then UK-based terminal operating company Portia Management stepped in as consultant, and began to address the port's low productivity levels.

Portia went on to win a three-year port manager contract in late 2005 that started the following March. The changes it has implemented since then have been so successful that earlier this year it won a two-year extension to implement further improvements.

Speaking recently to *P&H*, Portia's senior port consultant Wieger Koornstra – also the port's CEO – said that on Portia's recommendation, the Trinidad and Tobago government, which is also the port's landlord, "invested \$20M for new equipment and we now have five portainers, 15 rubber-tyred gantry cranes (RTGs), including five new ones, and about 40 trucks and chassis." Another 16 will be added, together with a new reachstacker. Also on his wish list are two more powerful tugs. The terminal also has 250 reefer plugs supported by reefer power packs for the peak season.

"We are looking for a new agreement with the

labour unions," declared Koornstra, stating that more efficiency and better working practices are still needed despite a productivity increase of 40%.

First, Portia's experts addressed the most urgent operational issues, which included improving discipline, procedures and health and safety matters. They also opened a customer service centre in the commercial section. Previously, cars had been mixed up with containers, said Koornstra, whereas now cars have been allocated a separate section in the terminal. Old equipment was also left on the terminal, noted

## Annual throughput

Domestic trade in 2005/6	150,000teu
Transshipment trade in 2005/6	170,000teu
Total in 2005/6	320,000teu

Today Port of Port-of-Spain's throughput is estimated to be 400,000teu a year, of which 45% is domestic and 55% transshipment trade.

Source: Portia Management





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Koornstra, who said that this too has been addressed.

The continuing search for productivity improvements through staff training is a key challenge for the port, he said, because a good port attracts cargo, whereas a bad port will lose it. To the port's credit, the enhancements achieved so far have been made with a fully unionised workforce that had in the past been known to stop work on the slightest pretext.

Nevertheless, said Koornstra, "We pay many people very little when we should pay fewer people much more." He believes that ideally the government should sever its involvement with the port and seek tenders to operate it, because labour practices still stem from the pre-containerisation era of 50 years ago, during the days of general cargo ships. Despite this, the terminal achieves 16 moves per crane per hour and 24 moves per berth per hour on average. Before Portia's involvement, moves per berth per hour averaged 12.

Koornstra is hopeful that any decline in business caused by the current recession will be more than offset by new customers. Indeed, he added, PPOS is gaining some business from Venezuelan ports that have their own congestion problems.

There are hopes that an innovative incentive scheme introduced in September 2008 will also help improve port productivity (see box).

PPOS attracts about 1,000 ship calls a year, including car-carriers, cruise ships and general cargo ships. Although box traffic is pushing 400,000 teu a year, Koornstra's target is for 500,000 teu within two years. He reveals that six ocean carriers use PPOS as a hub with transshipment services mainly serving the South American coast ports in the north, but also the Windward and Leeward Islands plus Jamaica. Three-quarters of container throughput comprises imports, he said. The port's top container operators, accounting for 75% of its business, are CMA-CGM, MSC, Zim and Chile's CSAV, with mainline services predominantly serving North America and Europe.

Ricardo Camps, operations manager of Caribbean Shipping Agencies, told *P&H* that since the Portia team took over operation of the port there has been a vast improvement in communication and access to all levels of port personnel and "an improvement in vessel turnaround at the port." He is enthusiastic about the reconfiguration of the container layout at the

## Workforce incentives

An incentive scheme was introduced on 1 September 2008 designed to increase container moves per hour and reduce truck turnaround time for delivery and collections. If certain targets are met money is put into a fund for operational staff.

The scheme works as follows (in US\$):

- For every one container move increase per gross crane-hour, \$50,000 goes into a fund
- For every one minute reduction in truck turnaround time, \$5,000 goes into the fund.
- If there are no major casualties during the year, a further \$50,000 is added to the fund.

If all of these objectives are achieved in one year the fund would stand at:

5 moves increase × \$50,000	\$250,000
30 minutes reduction × \$5,000	\$150,000
No accidents	\$50,000
<b>Total</b>	<b>\$450,000</b>

At the end of the year, this fund would then be shared equally among all those directly associated with operations – about 750 persons. In cash this equates to \$600 each.

Source: Portia's magazine Portside

terminal, highlighting the ability to stow and deliver containers with minimum fuss.

Port safety has improved too, Camps noted, commenting that previously safety issues were often disregarded, but now there is greater involvement and consequently far fewer incidents. The partnering of local personnel to pass on the desired skills is an asset that in the long run will benefit all parties, he said.

On the horizon is a potential move of the port a few kilometres east to Sea Lots. The plan is for a 1,000m quay and potential to handle 1M teu a year. A plan is being compiled by the joint-venture Rotterdam Maritime Group, the port authority (PATT), PPOS and the Trinidad and Tobago government. Although the government budget is for completion in 2010, Koornstra believes 2013 is more realistic. **PH**

**New equipment and different management has helped increase throughput**





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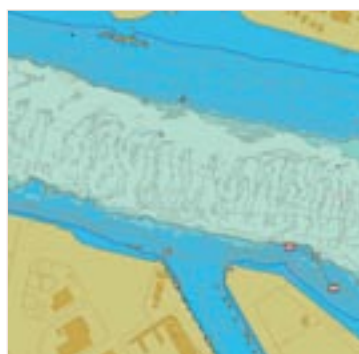
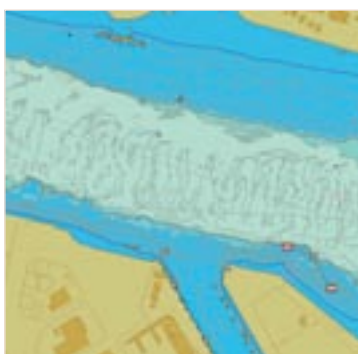
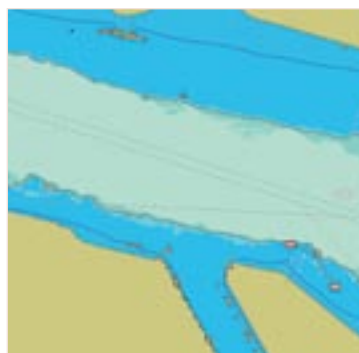
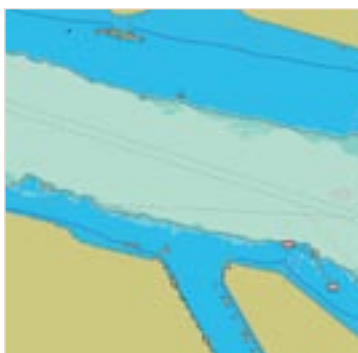
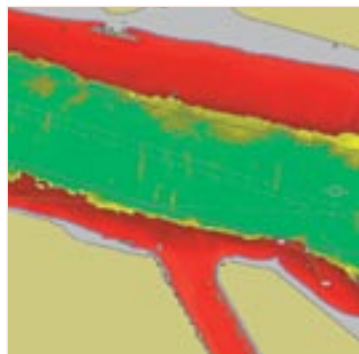
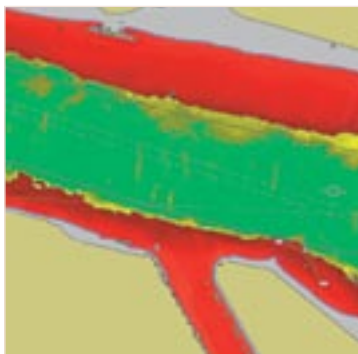
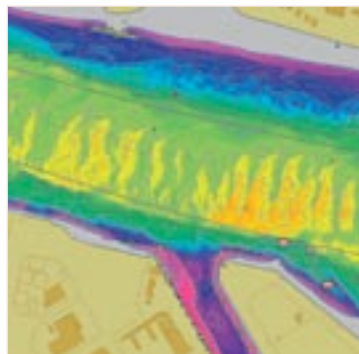
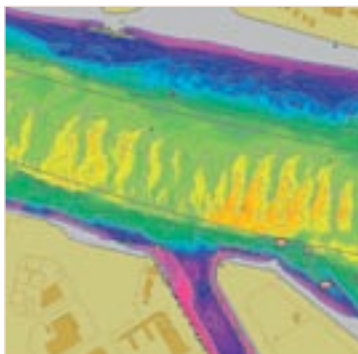


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# All in the detail

With a date for maritime ECDIS mandation finally agreed, a new project is investigating how inland port users would benefit from a version tailored to their needs. **Tom Bailey** reports for *P&H*



One of the biggest decisions to come out of the 86th session of IMO's Maritime Safety Committee (MSC) in May was the adoption of amendments to SOLAS regulation V/19. These changes were agreed last year at the Navigation Subcommittee meeting, NAV54, to make the carriage of electronic chart display and information systems (ECDIS) and bridge navigational watch alarm systems (BNWAS) mandatory. The expected entry-into-force date is 1 January 2011, when new ships will have to carry ECDIS and BNWAS; for existing ships, the legislation will be phased in by vessel type and size.

A new European Union project under the name of EFFORTS (Effective Operation in Ports), however, suggests that manoeuvring big ships in harbors and their access channels demands charts that go "far beyond" the current ECDIS standard in terms of accuracy and topicality. Its proposed Port ECDIS would be a more advanced version for use in ports, building on existing ECDIS and Inland ECDIS technology but utilising extra information to improve the interoperability of harbor-related tasks. Such a system would offer two benefits: theoretically, it would enable safer and more efficient navigation, and it would help those carrying out maintenance work on behalf of port authorities.

With vessels increasing in size and port traffic growing too, harbors increasingly operate on the cusp of their capacity. With this in mind, Hamburg Port Authority (HPA) – a member of the Port ECDIS project team – considers that the safety of navigation and proper traffic management and berth organisation can be guaranteed only if accurate and up-to-date high-resolution geographic and bathymetric data are available. Some activities, such as dredging, require that information in quasi real time.

While official electronic navigational charts (ENCs) created by hydrographic offices are designed to meet the requirements of marine navigation in general, HPA believes they have shortcomings with respect to content, detail, compilation scale and accuracy for navigation in narrow channels and shallow water or when it is necessary to attempt turning manoeuvres in areas that offer minimum under-keel clearance.

**ENCs created by the Port ECDIS team include additional detail. The top chart shows depth, the one below indicates safe operating areas, the third chart is a standard setting, and the fourth a more detailed version of the above**



The Port of Hamburg's official electronic navigation chart (ENC) meets all ECDIS-related standards, but the port says it is "too small in scale, lacks the required bathymetric detail and poorly defines horizontal accuracy of topographic features". It adds that current maritime ECDIS and Inland ECDIS standards do not define the accuracy of topographic and the bathymetric information to the same level of detail as Port ECDIS, which exceed those needed to conform to the International Hydrographic Organization (IHO) S44 Standard for Hydrographic Survey.

Another driver for a new standard is the time it takes for the existing ECDIS standards to be refreshed with new information, said Dieter Seefeldt, head of HPA's geographic and hydrographic surveying department. "The update rate of a maritime ECDIS and an Inland ECDIS cannot normally follow the local changes in the port," he told *Ports & Harbors*. "The requirements for ports are much higher, because we are responsible for safe navigation in areas with minimum under-keel clearance for deep-draught vessels. We have to maintain the area we are responsible for on a regular basis. It could be that ports like Hamburg have to use four survey vessels throughout the year to monitor the harbor bottom."

He added that the Port ECDIS project would address the needs of the users directly: "It is a completely

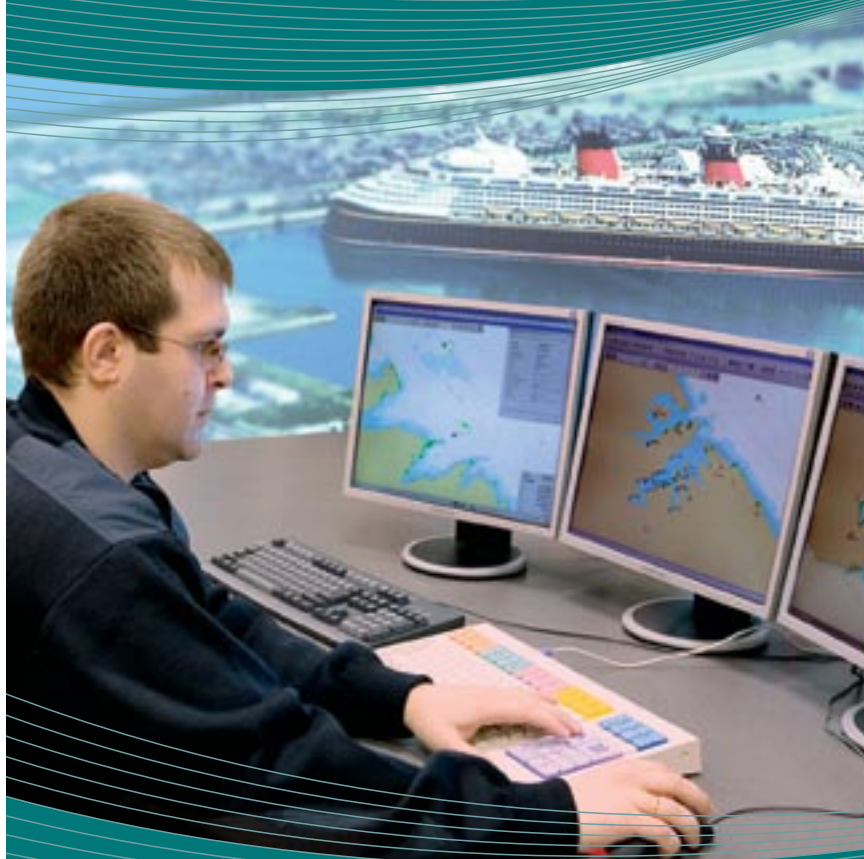
“The requirements are much higher because, we [ports] are responsible for safe navigation in areas of minimum under-keel clearance”

new approach based on a questionnaire that was carried out in the first phase of the project to collect the requirements of ECDIS users in ports, such as harbormasters, pilots and dredging offices. Maritime ECDIS deals more or less with objects for navigation on sea, and we found that it is so far not usable in ports." The aim is to develop additional data needed for effective operation in ports and harbors, small harbor basins and rivers, with attention to bollards, quay ladders and fender lines.

The Port ECDIS project team, with participants from geospatial software company CARIS; ECDIS specialist SevenCs and Hamburg Port Authority, used the Inland ECDIS standard as the basis.

This Inland ECDIS standard is based on IHO and IMO

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## Charting the bottom

In order to gather the more up-to-date and precise information required for Port ECDIS, a three-dimensional channel model of the harbor bottom was developed, explained Dieter Seefeldt, head of Hamburg Port Authority's geographic and hydrographic surveying department. A gridded bathymetry was fitted to show an extra layer of depth information. The ECDIS map, he explained, is separate from the bathymetric information.

"The comparison of both the channel model and the gridded bathymetry should make it possible to compare the channel model with the current depth situation and show areas where it is too shallow," he told *P&H*. Port ENC's, he noted, must contain up-to-date and precise information.

Any ships that do not update their ECDIS systems on board to make them compatible with Port ECDIS will still be able to see the usual ENC content, although it will lack the additional information. Ports can implement this system without any adverse effect on existing ships' navigation charts, confirmed Seefeldt.

ECDIS-related standards, but including chart features not relevant in the maritime domain; it was adopted as a recommendation for the European inland waterway system by the United Nations' Economic Commission for Europe in 2001. The team developed the additional data needed for effective operation in ports and harbors, small harbor basins and rivers, including items such as bollards, quay ladders and fender lines.

Seefeldt told *P&H*: "ECDIS and Inland ECDIS standards precisely define the rules and requirements that are essential for safe marine and river navigation respectively. The development of a Port ECDIS standard is focused on high-precision operations in ports. It must be seen as an independent, but complementary, standard to ECDIS and Inland ECDIS."

Michael Hume, project co-ordinator for CARIS, told *P&H* that there was a clear need for the standard. "The drive of the project is to make sure the most up-to-date, accurate information is available to port users at all times," he said. "Conditions in ports are constantly in a state of change, but existing maritime ENC's may only change a couple of times a year, meaning they won't

capture the current state of the port as accurately as Port ECDIS would. From the point of view of the port, it's important that the information is 100% correct. That hasn't always been the case with some of the other standards out there."

The US Port of Portland's media relations manager Josh Thomas agrees that additional information can be vital to efficiency in certain circumstances. "As an inland port, we benefit from a well-instrumented river system that provides accurate, real-time information to the river pilots," he told *Ports & Harbors*. "LOADMAX, a reporting and forecasting tool, along with sounding data, feeds the pilots' system, which shows inbound and outbound vessels with their vectors and a robust set of information about each. It is all part of what makes it possible for the big ships to move up and down the river to and from our terminals."

HPA will play host in September to a demonstration event to reveal the Port ECDIS project's initial findings – along with results from two other strands of the EFFORTS Port Navigation sub-project: Precise Navigation and Manoeuvring in Ports, which concentrates on the evolution of portable pilot units, and Tug Assistance. EFFORTS has two other sub-projects running alongside the Port Navigation scheme, including Ports and the Environment, which will have its own demonstration event in Le Havre this month. Areas covered in this sub-project will include clean energy management, water quality, port air quality and noise pollution. The final EFFORTS sub-project, named Port Organisation, concentrates on port processes and risk management frameworks.

When the Port ECDIS project ends in October the results will be handed to the IMO and the IHO and used as a basis for further activities. Seefeldt, though, is in no doubt that the project is worth seeing through to fruition: "We think – in fact we know – that a Port ECDIS standard is required and missed today." **PH**

More info: [www.efforts-project.org/cms](http://www.efforts-project.org/cms)

**Port ECDIS should provide masters with more detailed chart information**



Photo: Sperry Marine





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# Rostering goes high-tech

One Swedish port has adopted a computerised rostering system that helps it get the most out of its staff and equipment. **David Worwood** reports

**T**he Port of Göteborg (Gothenburg) has eased many of the inherent difficulties of dockworker rostering and equipment allocation by introducing new staff planning software.

In April this year the REKO (resource co-ordination) system came fully on stream at the ro-ro terminal in Göteborg after several years' development by software company Jeppesen, which worked closely to the port's specifications.

Ports have long experienced the problem of trying to gauge how many staff will be required on a given day and how to avoid equipment standing idle. Major challenges are posed by vessel delays, bad weather, schedule alterations and the late delivery of cargo. Any of these factors can lead to unplanned overtime shifts and deployment of extra staff to handle the fluctuations in workload.

It is also a complex task to ensure that stevedores not only have the qualifications to use certain equipment, but also that they comply with legal requirements for rest periods and other workplace rules before starting a shift. In Göteborg, as elsewhere, these checks used to be made manually – and as the port's trade increased, so did pressure on the existing planning system.

Four years ago Göteborg embarked on a feasibility study with Carmen Systems (subsequently acquired by the Boeing-owned transport software developer Jeppesen) to look at a rostering solution for the port. The company already had a track record in providing crew and fleet planning/rostering systems for the airline and railway industries.

Jeppesen deployed five people on the REKO project, while the port's own contribution amounted to 1.5 staff members plus support from its IT personnel and various users tasked with testing the new system.

"The product has been developed for them [Göteborg] as a standalone application... and now we can market it to other ports as well," explained Jeppesen's director of client management, Ulf Eliasson. The company designed REKO so it can be used in conjunction with existing infrastructure in ports across the world. There is a standard core product, which manages the rostering business, which is supplemented by a number of optional modules, although it is likely that the latter will need to be adapted to each port's individual needs.

"Luckily, the ports we have discussed this with have



similar ways of planning, so the amount of adaptation is less than one might expect," Eliasson noted. It is estimated that it could take between three and 12 months to install the add-on modules – which include an optimisation engine, shift or overtime bidding and 'scenario analysis' (evaluating equipment and personnel changes).

Jeppesen designed the REKO system to allow terminal operators to meet production deadlines and throughput demands at the lowest cost. Staff plans are calculated using mathematical models and optimisation methods, which, the developer claims, ensures "the most efficient solution is proposed to a given situation".

The system applies various rules, some of which are legally required, including the use of correct equipment, rest periods or overtime working limits. To these are added several 'soft' rules concerning preference groups and fairness aspects.

The operator may use the system to identify costs associated with various resource allocations and to generate cost reports, key performance indicators and statistics to help managers with strategic planning. Cost per unit and man-hours can be calculated, for instance. Jeppesen says that a basic package can be installed in a matter of weeks.

At present, the Port of Göteborg is not using the allocation function fully, and it is continuing to allocate shifts manually. The port's IT co-ordinator, Maria Renman, explained that Göteborg is using this element of the system to compile statistics at present.





Photo: Port of Göteborg

**Ports – whether large like Göteborg, pictured, or small – have to organise their equipment and staff effectively**

She said that the port may use “the functionality in a more sophisticated way in the future, but that would need integration with some other systems”.

A total of 347,000 trailers and 271,000 cars were handled at Göteborg’s ro-ro terminal in 2008. About 200 water-side workers at the terminal have been incorporated into REKO. The system also monitors tugmasters, reachstackers and straddle carriers – and of these, the tugmasters require the most planning and optimisation.

The global economic downturn that started last year, combined with some tough dock labour negotiations, undoubtedly added impetus to the REKO project at Göteborg. The port pointed out that in tough times, when trade volumes fall away, technologies of this kind assume greater importance in ensuring efficiency and providing superior service to customers.

The port was hit with an overtime blockade half-way through last year, when stevedores objected to working on public holidays – a real headache, given Sweden’s generous public holiday allocation. The dockworkers’ union eventually agreed to a system whereby staff members volunteer to work on 11 of the 18 national holidays; if insufficient workers apply, then the port may order personnel in.

Such a complex pattern of labour supply lends itself to a computerised planning tool that can react instantly to changes, making it easier to turn around a ship swiftly. A better quality of work planning and tighter compliance with workplace regulations are other benefits.

Maria Renman told *P&H* that the new planning software has “fulfilled the requirements we had when it started out”. At this early stage she estimates it has created a manpower saving of between one and two workers a day.

“When we have changes due to weather or the customers, we need to have a quick way to replan and see the best way to use our resources,” she said. Before the new system, the port’s ro-ro terminal used many different ‘work groups’, working on different schedules for various customers.

Renman pointed out that Göteborg’s aim was to keep staff numbers under control while retaining the ability to handle greater trade volumes.

When planning staff, Gantt charts (which detail the

duration of tasks) on screen give a visual representation of the work schedule. In essence, this shows who is carrying out what job and when. Further information can be found by clicking on boxes on screen. A great advantage is the instant response showing whether a planned task assignment is permissible.

The optimisation module allows the port to set system parameters to make best use of its human and equipment resources. For example, one setting could maximise profitability, another could ensure the vessel is not delayed, while a third might guarantee that service level agreements are not breached. According to Paul Kennedy, Jeppesen’s product manager for REKO, the settings are largely a matter of determining the right balance for what the port wishes to achieve.

Jeppesen estimates potential payroll savings to be in the region of 3% to 5%. These efficiencies would mainly be derived from use of the optimisation engine, although the company maintains that benefits should also accrue from non-labour-related areas – for example, by improving the ‘visibility’ of a port’s business process and enabling the port to carry out more informed business planning.

Ports that employ substantial numbers of dockworkers can make quite large cost savings by optimising their staff and equipment resources, but Eliasson indicated that smaller ports should also gain from the REKO system. He suggested that the clearer visibility of operations aids planning and improves control of resources.

“It’s also a very flexible system: if you need to adapt to any changes – ships arriving late or needing to depart early – then this tool is as beneficial to a small port as a big one. If you have good control of the machines and your manpower and [can identify] their certification, this optimises the use of your resources,” Eliasson insisted. Smaller ports can also benefit from access to key performance indicators generated by the system, Jeppesen claims.

Looking ahead, Kennedy expects REKO to include the capability for port workers to log on to the system and select leave periods or even choose to finish work early on certain days. This is something that is already available in equivalent software used by the aviation and railway industries and provides workers with far greater flexibility to meet family commitments, for example. If ports adopt similar systems, they should be better able to adapt to the real-life demands of their employees, which often clash with the fixed hours of traditional shift work.

Jeppesen believes the system offers advantages for container terminals. At this stage it is unclear whether Göteborg will adopt REKO for its own container facility, as the municipal council intends to transfer control of its terminals to private operators.

One major challenge for ports adopting this kind of system is managing the change that its integration inevitably brings, because staff members need to accustom themselves to new ways of working. However, the signs are that Göteborg is already beginning to reap benefits from its early adoption of the technology. **PH**

## Planning ahead

The Port of Göteborg determined the following specifications for the REKO rostering/planning tool:

- a system that mirrored its existing planning process
- optimising the use of personnel and equipment resources in the terminal
- enabling a closer overview of equipment, personnel, their qualifications and their assigned tasks
- the ability to plan fairly late and adapt to changes
- operational flexibility, the ability to identify the staff available (visibility)
- rapid access to information and ease of use.

Other elements of the core software include workload estimation, easy update of payload and arrival data, long-term planning for holiday requests and other absences, user-defined roster periods, individual schedules for personnel and support for grouping teams of workers.



# Satisfying shippers

Battered by the global economic crisis, Chinese ports are considering their options to retain their clients and maintain throughput. *Yangtze Transport* editor **David Lammie** reports for *P&H*

**Trade at Shekou Container Terminal in Shenzhen is dominated by exports of consumer goods**

Chinese ports have experienced their first major setback in nearly two decades of sustained growth. Terminals that had previously focused their energies on boosting capacity to keep up with market demand have seen throughput fall by a fifth and are now lowering rates to hold on to market share. The impact has been far from uniform, however, with marked geographical and sectoral differences.

The bulk cargo industry was an early casualty of the global economic downturn, with the Baltic Dry Index plunging by more than 90% in 2008 as China's waning growth sapped demand for imported commodities. Last year's collapse in building construction activity, precipitated by Beijing's crackdown on an overheating property market, hit demand for commodities such as cement and copper. The economic downturn in neighbouring countries has also weakened the export market. Japan and South Korea, for example, two major importers of Chinese coke, cut back on orders because of falling steel production in their home markets.

This year has seen a steady recovery thanks in part to the Chinese government's Rmb4,000Bn (\$585Bn) fiscal stimulus package announced in late 2008. With a focus on transport infrastructure spending in China's interior, the programme is having an especially positive impact on bulk cargo traffic in central and western China. In Sichuan province demand has also been boosted by

reconstruction work following last year's earthquake.

The huge amount of road and railway construction has precipitated major increases in the shipment of construction materials. Jiangyin Port imported 841,000 tonnes of steel in the first quarter of 2009 – a more than eight-fold increase over the same period last year. Jiangyin is an increasingly important steel billet distribution centre situated on the lower reaches of the Yangtze River.

In May 2009, cargo throughput at the country's main ports rose 5% from a year earlier to 495M tonnes, the third successive month of growth. Coal and iron ore were two of the top-performing commodities in May, recording year-on-year growth rates of 11% and 25% respectively. China consumes more than half of the world's iron ore and, since it doesn't have abundant high-quality reserves of its own, much of the country's steelmaking capacity is sourced from Australia, Brazil and smaller suppliers like India.

This rebound in bulk cargo fortunes contrasts with a continuing decline in container throughput – by 11% in the first four months of 2009, according to Credit Suisse. Those ports that serve China's vast export-oriented consumer goods manufacturers have been worst affected, especially Port of Shenzhen in Guangdong province, where throughput fell 22% year on year to 5.2M teu in the January to April period.





Photo: Peter Newton

Farther north, where the local economy is less reliant on the export market, Tianjin was one of the few major Chinese ports to report a growth in box volumes over the same period. Another was Guangzhou, China's fifth-largest port by container throughput, which claims to have been relatively unaffected by the financial crisis because of its focus on domestic business.

Several smaller ports, too, have felt the benefit of strong domestic traffic. The Port of Jiujiang, on the Yangtze River in central Jiangxi province, reported an upturn in container throughput in March that has been maintained in following months. Other Yangtze port cities, which tend to be less dependent on foreign trade than their coastal counterparts, have also fared quite well. In April 2009, the proportion of containers sitting empty in Wuhan's Yangsi Container Terminal stood at around 35%, only a little higher than the normal level.

Those emerging ports that can offer a distinct comparative advantage have also proved resilient. The Port of Taicang, Jiangsu province, positions itself as a lower-cost alternative to Shanghai in the Yangtze delta, in the same way that Shenzhen has prospered relative to Hong Kong in recent years. Between 2006 and 2008, Taicang Port experienced a 100% annual growth rate. While it has been affected by the current global economic downturn, the management is still forecasting a 50–60% year-on-year throughput increase in 2009.

With China's economy likely to grow by around 7% in 2009, domestic shipments should continue to hold up well. These routes are particularly attractive to carriers because their ships are frequently fully laden in both directions, in contrast to the imbalanced nature of China's international trade. Ports, too, are keen to allocate more resources to this area. Tianjin Port is partnering with Cosco and China Shipping to open direct shipping routes to Shanghai and Guangzhou. Ningbo Port, China's fourth-largest, has established a domestic business development team to exploit the anticipated growth in domestic container throughput.

Shanghai's leading port operator, Shanghai International Port Group (SIPG), is pursuing a similar strategy in the face of sharply reduced international traffic. Anticipating that it will handle 24M teu in 2009, down from 28M teu last year, SIPG is trying to double its transshipment ratio from the current 5% and bring in more cargo from inland areas to Shanghai. "Shanghai has a huge hinterland that it is only beginning to tap into," said Andrew Milliken, chief executive of Da Chan Bay Terminal One in Shenzhen.

Yantian Terminal in Shenzhen has added a small number of domestic shipping routes, and plans to expand into domestic bulk cargo. "This year is the most difficult one for us and we have been continuously taking measures to stimulate cargo throughput for domestic market," Sun Junmin, public relations director of Shenzhen Yantian Port Group, told *China Daily*.

Another area with growth potential is

direct trade between mainland ports and Taiwan, following the agreement late last year to allow direct transportation between the two. Trade between Taiwan and ports such as Xiamen and Shanghai is developing at the expense of Hong Kong, which was the principal beneficiary of the previous system whereby cross-strait goods could only be transported via a third location. This factor alone will not be the saviour of mainland ports, however, since the overall traffic levels are not huge and the benefits are likely to be spread quite thinly across a number of ports.

Not all ports are convinced of the attractions of domestic trade. "Domestic trade is extremely cheap compared with international rates, to the extent that it's difficult to cover your costs," Milliken insisted.

Da Chan Bay Terminal One is designed to serve the huge number of export-oriented factories in the Pearl River Delta area, but it had the misfortune

## Keeping customers

Port operators in China are shoring up their business by striving to improve customer services and affordability.

Shanghai International Port Group (SIPG) has appointed representatives in each of its terminals, so users have a single point of contact for discussing issues and addressing problems. It has also tried to set up longer-term co-operative contracts with major ocean carriers. In return for guaranteeing minimum volumes, shipping lines receive price incentives. Eligible carriers are not charged storage fees for empty containers and pay only deeply discounted handling fees.

Other port operating companies in Dalian, Tianjin and Ningbo offer similar programmes to important clients. SIPG reported that on average about 350,000 empty containers are parked its terminals at any time. Dealing with such a large number of empties could pose an operational challenge once volumes start to rise again.

For its part, Taicang offers on-dock empty storage to reduce carriers' operating costs and simplify the terminal process – something it says Shanghai has not offered previously because of space constraints. In the current downturn, Taicang is also offering more generous terms for empty containers and longer times for delivery and pick-up of loaded containers to reduce end-user operating costs.



Photo: Joachim Affeldt



## China still does not have enough port centres to truly service the large population and coastline

"When people stop buying things – and we're in the business of exporting – there's not a lot you can do," conceded Milliken. Poaching business from elsewhere is not easy in the current environment. "Customers are wary of moving terminals in the best of times," continued Milliken. "They're even less enthusiastic in the down times."

Controlling costs is a natural move in the current downturn. "We continue to work closely with all shipping lines and end-users to offer competitive prices as well as flexible service offerings to drive costs out of the supply chain," said Taicang's Castonguay. "With the overall market reductions, we have found that manufacturers are very keen to look at every single cost item."

Some operators have consolidated their operations or cut back on planned expansion. SIPG has suspended talks with AP Møller-Mærsk for a 40% stake in the Port of Zeebrugge in Belgium that Mærsk has built. In June, it sold a 25% stake in the Yangtze Port of Jiangyin to port owner/operator PYI.

Having taken whatever measures deemed most appropriate for them, China's container ports are looking for signs of confidence returning to the US and European markets. When the global economy does emerge from recession, China's ports should be relatively well placed and ready to return to their previous growth patterns.

"China still does not have enough port centres to truly service the large population and enormous coastline," explained Castonguay. "Compared with the 350M–400M people living in the NAFTA [North American Free Trade] area where you have at least 18 large port centres, China has 1.3Bn people and significant manufacturing but only really five or six large port centres. So ports will continue to thrive in the near term." **PH**

to start operations just as the world economy sank into recession in the middle of last year. It has gone through the necessary regulatory procedures to be able to handle domestic cargo should the opportunity arise, but there would need to be a marked increase in rates for the terminal to move into this area.

Domestic volume has always been an important part of Taicang's business plan, but the port's managing director, Fred Castonguay, is sceptical about the new-found enthusiasm for domestic trade. He believes that some ports are turning to this market only as a temporary measure to offset the decline in international business; once foreign trade picks up again, domestic carriers will face additional expense and operational restrictions, he suggested.

For ports set up to serve China's export market, there are few radical options open to operators suffering from plunging demand from US and European consumers.

**Shekou Container Terminal at the Port of Shenzhen – one port that has seen a drop in box throughput**



Photo: Peter Newton





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Vietnam has Asia's second-highest growth rate behind China, but it knows that its ports are holding it back. **Dale Crisp** reports for *P&H*

#### Coal-carrying barge in Ha Long Bay, Vietnam

**S**pread along Vietnam's 3,200km of coastline are more than 100 seaports. The three largest – Saigon (Ho Chi Minh City) in the south, Hai Phong in the north and Da Nang in the central region – need investment if they are to match the facilities and productivity of other southeast Asian ports. For container trades in particular, most cargo has had to be transhipped via Hong Kong or Singapore, adding landed costs to goods.

Those 114 seaports – of which 14 are regarded as significant – handled about 154M tonnes of cargo in 2006. The expectation is that by 2010 this will rise to 200M tonnes, then double to 400M tonnes by 2020.

To meet this anticipated growth a new 30-year masterplan for the country's ports has been afforded high priority and was submitted to the prime minister in June. Portcoast Consultant Corporation, a Ministry of Transport offshoot, has prepared the Vietnam Seaport System Master Plan, which envisages 33 major ports serving the country's 31 provinces.

This distribution ensures outlets for industries and commerce the full length of Vietnam and satisfies each province's need and desire for a major port of its own – but avoids what Nguyen Manh Ung, vice-general

director of Portcoast, has termed "fake abundance". The World Bank and the Asian Development Bank are expected to provide much of the funding.

An earlier masterplan was completed in 1999 and updated six years later, but it is widely regarded as having been overtaken by events. The new model takes a much broader approach, incorporating landside connections, power and water systems, logistics terminals and container parks, inter- and intraport connections and an integrated national transportation system.

Taking their cue from successful overseas models, ports will be managed by specific port bodies rather than local authorities. Portcoast believes that this approach will encourage investment – including from overseas institutions – in infrastructure beyond berths and terminals. Development has already begun. Since 2006 the main port of Saigon has been relocated from the congested city area to Cat Lai and Hiep Phuoc, the neighbouring industrial and export zones of Binh Duong and Dong Nai, and Ba Ria-Vung Tau, identified as the centre of Vietnam's modern seaport system.

Hiep Phuoc is designed to cater for vessels of 50,000dwt whereas the Cai Mep port complex and Thi





Photo: Dietmar Haepnusch

Vai International General Port, both due for completion in 2010, will be able to handle 80,000dwt ships.

Although the 2009 masterplan has yet to be formally accepted, work in line with the plan has already begun. This includes the dredging of Soai Rap navigation channel to -9.5m Chart Datum (CD) as the first step towards an eventual deepening to -12m CD.

Local and foreign investment is also being attracted to the country's ports, with DP World, of Dubai, partnering local company Tan Thuan Industrial Promotion Company in Saigon Premier Container Terminal, where the first 500m berth was completed at the end of June. The terminal is scheduled to become operational in October. At the same time, the municipal authorities in Saigon are accelerating the construction

**Port of Saigon is moving out from the city centre to the coastal zone**



Photo: Joachim Affeldt

of the \$337M, 100ha Hiep Phuoc Port Urban Zone.

Work has started on converting the Cai Cui river port in the Mekong Delta city of Can Tho into a major seaport. The \$68.5M three-berth project, covering 37ha, is adjacent to the newly opened Cai Mep-Thi Vai terminal, a joint venture between Saigon Port Company and SSA Marine of the US, Singapore's PSA International and AP Møller-Mærsk of Denmark, costing about \$1.24Bn.

These developments are already showing dividends. Singapore's APL was the first container line to launch a direct service with mainline vessels, with its weekly PS1 service to the US West Coast debuting on 3 June at the Cai Mep Saigon Port-PSA terminal at Cai Mep.

Goh Teik Poh, APL's South Asia region president, said: "It is a credit to the Vietnam government's vision and its commitment to change that a modern, integrated freight transportation system is fast becoming a reality. It is heartening that overseas companies such as PSA and NOL are welcomed here and are able to partner with local leaders such as Saigon Port and Vinalines to create facilities of this calibre."

The new service is said to offer the industry's fastest transit time from Vietnam to the crucial US market – taking just 15 days to reach Seattle and 16 days to Los Angeles. Service partner Mitsui OSK launched its version when the 6,350teu, 73,000dwt *MOL Premium* became the largest ship ever to berth at a Vietnamese port. Almost simultaneously, South Korea's Hanjin SJX service from Asia to the US West Coast abandoned Hong Kong in favour of making direct calls at Saigon New Port, deploying six 4,000teu ships. Hanjin's own deepwater terminal at Cai Mep should start operating in 2011. By cutting transshipment, it is estimated that Vietnamese shippers could save \$3Bn a year.

Sea-side access remains a problem: for example, Hai Phong ought to be able to handle 40,000dwt ships, but access channels restrict navigation to 10,000dwt. However, the new masterplan also pays attention to land links to the ports and support services.

Tran Doan Tho, deputy minister of transport, told local media recently that roads, waterways, railways and ports used to be planned separately, "causing asynchronous and unequal investments". In particular, post-port services zones, including 'soft' and 'hard' logistics, had not been paid sufficient attention.

The most urgent task for local authorities – especially in Ba Ria-Vung Tau province serving the Cai Mep-Thi Vai and Sao Mai areas – has been investing in post-port services zones, inter-port roads and strategic national highway links to enable the port system to operate effectively.

Developments have not been without problems. Environmental and geographic issues have been blamed for delaying the decision to build larger berths for Vietnam's much-vaunted transshipment port at Van Phong in Khanh Hoa province, which is well situated on the main north Asian shipping lanes. Port sponsor and national shipping line Vinalines is said to have decided to build two smaller pilot berths to accommodate 7,000 and 8,000teu vessels, rather than berths for 15,000teu units. **PH**

A close-up photograph of two hands, one from an adult and one from a child, gently cupping a small green seedling with dark brown soil. The hands are positioned in the upper half of the frame, with the seedling centered between them. The background is a plain, light color.

# Going green together

*P&H* correspondent **Neville Smith** reflects on IMO's recent debate on reducing emissions and how this fits in with the global response

**S**eaports are at the eye of an environmental storm. An unprecedented wave of legislation and lobbying means any notion of 'business as usual' as a sustainable strategy has had to be abandoned. But progress being made at ports in Europe and the US provides a template for the management of environmental programmes, not just by reacting to events but also by helping to shape them.

And the ports industry has much in common with shipping when it comes to fielding external pressure. Despite the cheerleading of its advocates, the shipping industry has become a target for environmental groups keen to point out that it has a great deal to do if it is to demonstrate green credentials.

The revisions to Marpol Annex VI in 2005 and 2008 were milestones in moving the industry from one that

burned cheap but dirty fuel to one that can abate its emissions and find alternative fuels. Ceaseless lobbying, research and legal action convinced lawmakers to prioritise the reduction of emissions of SO<sub>x</sub>, NO<sub>x</sub> and particulate matter close to land.

The demarcation of the Baltic Sea, English Channel and North Sea as emission control areas (ECAs) presaged a global regime that will cut permitted levels of sulphur and nitrogen oxide in ships' emissions close to land as well as lowering the global cap.

As a precursor to the 15th conference of the parties to the Kyoto Protocol (COP15) in December, the IMO's Marine Environment Protection Committee (MEPC) met in London in July to push these issues forward. Central to its deliberations was agreement on a new ECA along the coasts of the US and Canada. It also



considered the next phase: how to manage the impact of CO<sub>2</sub> emissions from shipboard sources.

The MEPC meeting generated some useful outcomes while leaving other issues unresolved. Chief among its successes were agreement on voluntary indices for measuring CO<sub>2</sub> emissions from new ship designs, a shipboard energy management plan and an energy efficiency indicator for main engines. Left out of the debate was the question of market-based measures (MBMs) – for example, emissions trading or a bunker fuel levy – that will provide the other half of emissions mitigation.

Contentious and divisive as such measures may be, the IMO has opted to issue a work plan that commits to MBMs being introduced within the next three years. The IMO is working on the assumption that COP15 will continue to agree that it is the appropriate body to make the rules. That is still far from certain, though some crystal ball gazing suggests that, in an ideal world, COP15 will set out CO<sub>2</sub> emissions reductions for shipping then leave the industry to get on with the business of making it happen.

At the ports themselves, progress is driven by many of the same imperatives: a need for uniform legislation, a desire to be proactive in engaging with the issues and greater use of technology.

The resolution on port climate action adopted at the IAPH World Ports Conference in May set out a wide-ranging programme of activity and called for a productive contribution to COP15. And there is plenty of evidence that ports have already taken that message to heart.

Building on the World Ports Climate Initiative adopted in 2008, a group of European ports is in the process of building a web-based information centre for port authorities evaluating use of shoreside power. Led by the Port of Göteborg, the group has sought feedback on current and future projects with the aim of sharing experience about this emerging technology (see page 36).

The development of indices for shipboard SOx and NOx emissions is mirrored by the development of an Environmental Ship Index led by another European port consortium that will seek to take the Green Award concept and apply it to airborne emissions. The aim is to identify ships that go beyond mandated minimums and to charge differentiated port fees based on each ship's emission levels. The current programme is designed to have a measurement structure in place by 2010, which will be followed at a later date by a CO<sub>2</sub> monitoring index (see page 36).

The European Sea Ports Organisation (ESPO) is mid-way through conducting its Ports Environmental Review 2009. Secretary-general Patrick Verhoeven said the process will generate vital data that will help shape priorities for the sector and provide performance benchmarks. He is in no doubt about the attitude of ESPO members to the challenges that lie ahead.

"There is certainly progress since we started looking at this in our own organisation back in the early 1990s," Verhoeven said. "At that time, some ports had a policy, but many did not. Now in most there is an

environmental manager and an environmental plan. There is a holistic approach to environmental issues."

More action is still needed, but, said Verhoeven, the message is clear: "These days, it's the cost of doing business. It is an investment that if you don't make, the cost can be a lot higher. A lot of ports found out the hard way that if you don't take proper care and make investments you end up paying a bigger bill later on."

In the US, agreement on the new ECA was welcomed by the American Association of Port Authorities. Spokesman Aaron Ellis said that the decision means that all ports will be working to the same standard. "We have come out strongly in support because it does not disadvantage any one port and instead puts all of them under the same restrictions. Any ship visiting the US and Canada will have to comply."

For an example of what happens when states set their own rules, he pointed to ballast water management: shipowners that meet uniform US Coast Guard and Environmental Protection Agency standards may still find themselves non-compliant with state regulations.

"Having that patchwork presents a difficulty to the shipping industry from port to port and it could even affect a ship's decision about coming to the

“If you don't take proper care and make investments you end up paying a bigger bill later on”

US altogether. It makes it fair and simple to have a level playing field. The standard can be rigorous, but everyone has to comply."

US ports also benefit directly from EPA subsidies – which Ellis believes are vital in providing funds that can be allocated to environmental programmes while letting the ports take care of their main business. "The value these programmes bring is in making additional money available so that the ports can invest their limited resources in infrastructure. That will result in greater efficiencies in the way cargo moves and that greater efficiency will equate back to reduced pollution."

Ultimately, environmental protection is a virtuous circle: management of environmental resources provides a model for sustainable business, whether engaged in ports or shipping.

Geraldine Knatz – executive director of Port of Los Angeles, IAPH first vice-president and past Environment Committee chair – summarised: "The stars are aligned for innovations in the years ahead that deliver cleaner, cheaper electric and renewable power solutions through a variety of port and maritime-related applications. Coupled with this, we are now seeing technological innovations being developed for ships that are certainly going to be part of the solution in the years ahead." PH

Photo: Fotolia

# Hands up for climate change

It's time for ports to come together and address climate change. What better way than through IAPH's World Ports Climate Initiative (WPCI)?

**A** lot of ports around the world have been engaged in this task [reducing greenhouse gas emissions and improving air quality] at one level or another for quite some time now, but we need to step this up as an industry. That was the message delegates at the IAPH World Ports Conference in May heard from Geraldine Knatz, executive director of Port of Los Angeles, IAPH first vice-president and WPCI chair. Finding a unified way of working seems to be the next step in addressing these issues,

so that, as Knatz said, "[ports] don't have to start their journey with no assistance".

IAPH has made the environment a priority in recent years and it supports and promotes related activities through *Ports & Harbors* magazine, its technical committees and through projects that emerge from the recently formed World Ports Climate Initiative.

The WPCI was created in November 2008 in Los Angeles (see box opposite), where a mission statement was adopted. The first of

this statement's four elements was aimed at promoting action across the port and maritime industries. "Most people might think that this step is complete and over with, but it is not," Knatz told delegates.

The second mission is to initiate studies and strategies to reduce GHGs. The third element is provision of a platform that will draw on the ports industry's collective experience with the aim of helping others – IAPH members and non-members alike – to address climate change.

## Carbon footprinting

Once a port has ascertained its carbon footprint – the amount of GHG emissions released over a measured period – ports can decide how best to reduce it. Ports may then choose to monitor emissions associated with their landside operations or to extend their monitoring zone to include ships and equipment beyond the immediate port boundaries.

The initial goal of the WPCI Carbon Footprinting Work Group is to generate a guidance document that will serve as a reference for those ports looking for ways to determine their carbon footprint.

**Project port:** *Port of Los Angeles*

**Participating Ports:** *Port of Amsterdam, Port of Antwerp, Finnish Port Association, International Association of Ports and Harbors, Port of Houston Authority, Port of Long Beach, Port Authority of New York/New Jersey, Port of Oslo, Port of Rotterdam Authority, Port of Seattle*

## Cargo-handling equipment

Because vessels arrive at and depart from ports around the clock, port equipment and machinery is always operating. Cargo handling equipment at ports and railway yards generally includes yard tractors, cranes, forklifts, container handlers (for example, top picks and side picks), and bulk handling equipment, such as tractors, loaders, dozers, excavators and backhoes. Yard tractors, container handlers and forklifts are the most common types of equipment at ports and railway yards.

To reduce atmospheric pollution emanating from cargo handling areas, ports are beginning to retrofit this land-based equipment with emissions control systems and to replace older equipment with newer, cleaner vehicles. Another option is to use cleaner fuel technologies, such as electric power.

**Project port:** *Port of New York and New Jersey*

## Onshore power supply

Onshore power supply (OPS) replaces shipboard-generated power from diesel auxiliary engines with electricity generated on shore. It is a solution for reducing pollutants and eliminating air emissions such as NOx, SOx, diesel fine particulate matter (DPM) and, when using renewable energy, also greenhouse gas emissions.

The overall goal of the project is to reduce local air pollutants and GHG emissions by stimulating ports, terminal operators and shipping lines worldwide to

introduce OPS technology. This project group is working on the design and construction of a web-based application that will provide practical guidance on OPS. As well as being intended for all ports, the application is expected to contain information for other stakeholders such as terminal operators and shipping lines.

The onshore power supply project group is calling all ports to share their experiences and questions regarding this technology. It invites you to fill in an electronic

questionnaire – you can register your thoughts at the WPCI website. All ports are welcome to take part in the survey and all responses are anonymous. Your feedback will be an important input to the project group's research.

**Project port:** *Port of Göteborg*

**Participating ports:** *Port of Amsterdam, Port of Antwerp, Ports of Bremen/Bremerhaven, Hamburg Port Authority, Grand Port Maritime du Havre*



Finally, the fourth mission is to make available this information so that it can be easily shared and put into practice.

Any port can get involved in the six projects listed below. As a member, you can suggest a new area of research that you would like to have considered as a project.

Knatz told *P&H*: "We hope to create a guidance document that will be useful for ports worldwide to assess their carbon footprinting. Until you assess your emissions, you have no way of knowing how much needs to be done. At Los Angeles, we have prepared a comprehensive greenhouse gas reduction plan and learned that, regardless of what we are able to do at the port, we still will have difficulty meeting standards that are being proposed in the US. WPCI gives us and other ports an opportunity to work together to help find solutions that will aid us all." **PH**

## How it came about

### Houston 2007

IAPH adopted a resolution calling on ports to promote clean air programmes. It also resolved to provide a forum to share best practices and experiences among the world's ports as well as develop guideline and materials

### Dunkirk April 2008

IAPH board of directors adopted a resolution to support efforts of members engaged in the challenges posed by climate change and instructed its Port Environment Committee to develop a mechanism to assist this

### Genoa May 2009

WPCI's website was launched in August providing one location for participating ports to communicate and for new ports to get involved. It's your 'first port of call' to get involved. Gain access through the IAPH website and clicking on the WPCI logo.

More info: [www.iaphworldports.org](http://www.iaphworldports.org)

### Rotterdam July 2008

IAPH was active in the C40 World Ports Climate Conference, where attendees adopted the World Ports Climate Declaration

### Los Angeles November 2008

WPCI was formed at the IAPH Port Environmental Committee meeting. During this symposium a mission statement was drafted and approved, and an organisational structure was developed. The first project areas were also defined

## Lease agreement template

A lease agreement template incorporates sustainability clauses in lease contracts for the ports' tenants and includes the requirements related to control measures for countering climate change. The use of such a template at ports should contribute to reductions in GHG emissions and improve air quality. It also serves to raise awareness in the port and maritime community.

**Project port:** *Montreal Port Authority*

**Participating ports:** *Port of Amsterdam, Port of Houston Authority, Port of Rotterdam Authority*

## Intermodal transport

Intermodal transport enhances the economic performance of a transport chain by using different modes – train, ship, truck – in the most productive manner. It reduces cargo handling, damages and losses and improves security.

**Project port:** *Port of Amsterdam*

## Environmental Ship Index

The Environmental Ship Index (ESI) measures a ship's emissions based on the amount of nitrogen oxide (NOx), sulphur oxide (SOx), particulate matter (PM) and greenhouse gas (GHG) it releases. The index gives a good indication of the environmental performance of ocean-going vessels or ships. Ports can then reward ships that meet or exceed IMO regulations on limiting emissions (see *P&H January, p36*).

This project group met in July to discuss the outcomes of its recent activity. The group agreed that the calculation of SOx within ESI appeared to be more challenging than originally anticipated. A revised version will be formed based on the group's discussion. Another baseline for NOx calculations is also being considered, pending a fuller response from a recently distributed questionnaire. The project group is now ready to start approaching stakeholders that can benefit from ESI. The next meeting will be held in September, in preparation for the regional IAPH meeting in November in Hamburg, Germany.

**Project port:** *Port of Rotterdam Authority*

**Participating ports:** *Port of Amsterdam, Port of Antwerp, Ports of Bremen/Bremerhaven, Hamburg Port Authority, Grand Port Maritime du Havre*

## Next steps

A seventh project, being led by the Port of Los Angeles, is concerned with modifying the existing IAPH Toolbox. Previously, the toolbox simply disseminated information on SOx, NOx and particulate matter. It now offers a platform to share experiences, programmes, projects and regulations, not only on these topics but also on GHGs. You can access the toolbox either through the IAPH website or the WPCI website. Go to: [www.iaphworldports.org](http://www.iaphworldports.org)

The next goal for WPCI as a whole is to increase the number of ports involved from 55 to 75 by 2010. A communications structure is on the agenda, too, Knatz told delegates. Overall, she said: "We would like to maximise the number of ports engaged in carbon footprinting and active carbon management." She concluded: "We need to organise support from the regional and global organisations to maximise the effectiveness of the WPCI and to better let the world know we're taking this seriously."



# Be prepared for a raise

Our climate is changing and evolving and ports must be prepared for the future. *P&H* correspondent **Neville Smith** considers two ports that are leaving nothing to chance

## Rotterdam: the Maeslant storm surge barrier protects the eastern port areas

**T**he effect of climate change on sea levels may still be the subject of debate, but there are ports for which the threat from high water is too great for complacency about the risk of any future rise.

And while working to protect human life and the marine environment, these ports must also manage their day-to-day business, building a solution that also allows port operations to thrive and grow.

The seriousness of the issue in Europe led to the formation in 2006 of the International Network for Storm Surge Barrier Managers, drawing together the work of public agencies from the UK, the Netherlands, Italy and Russia into a grouping that aims to collaborate on issues of common interest and practice.

In the Netherlands, the Port of Rotterdam occupies a unique role: arguably the world's busiest port, it serves a vast hinterland via the European inland waterway network and must manage the climate impact on an area where there is an ever-present risk of flooding.

As port planning and development manager Rinske van der Meer explained, the city is unusual in the Netherlands for being 3–5m above sea level while the rest of the country is below it, protected by a series of ring dykes. Even so, the city completed a storm surge

barrier at the Maeslantkering to protect the eastern port areas and has to consider inland influences too.

"Rotterdam is a hotspot because it sits between rivers and the sea, so we have many years of experience dealing with water from tidal surges and high river discharge. We have to protect ourselves on two sides."

Port development is designed with water levels in mind, so for the second Maasvlakte project land will be reclaimed to a height 5m above sea level. Van der Meer said the port has studied the predicted impact of a permanent water level rise on its terminal operations.

"It is important that we can demonstrate to customers of the port that we are protected. Regulations are being designed to show the level of flood protection in the Netherlands, which we already exceed, but we have to prove to ourselves and the world that this is something we take seriously," she said.

So seriously that the port looks east too, monitoring water levels of the river network that carries so much of Rotterdam's traffic inland. Approval for the Maasvlakte 2 project required a guaranteed percentage of traffic to be distributed via inland waterways, so the port needs to know if the levels are set to fall as well as rise.

If river levels fall, Van der Meer believes that future



strategies could include new shallow-draught designs for barges, real-time monitoring of the river level and perhaps barriers that can help maintain water levels.

"We have to think about what to do to make sure the draught is there. Our inland waterway connections are something we use to sell the port's advantages, so on a scale of one to 10, it's an eight for us."

Venice might not have the traffic levels of Rotterdam, but the need to manage water levels is just as pressing. Its port hosts cruise ship calls that are a vital part of the historic city's tourism industry. Flood defence is the responsibility of Consorzio Venezia Nuova (CVN), working on behalf of the Venice Water Authority. Its MOSE project is a system of retractable barriers designed protect the lagoon and the city beyond.

Since it gained government approval in 2003, the project has seen a two-way flow of knowledge and expertise, according to CVN's Elena Zambardi. "During the phases of study and design, contributions from other countries and technical bodies have been fundamental to maximise know-how," she said. Among the contributing partners were academic bodies in Italy, the US, the Netherlands, the UK and Denmark.

Now, she pointed out, "Venice also exports know-how. With the MOSE project, the international scientific community is looking to Venice, and technicians from all over the world are coming to study how the Venice solution could apply in their countries."

The "Venice solution" is a system of moveable barriers that can temporarily separate the lagoon from the sea. Constructed at the tidal lagoon inlets of Lido, Malamocco and Chioggia, in normal conditions the barrier gates will rest out of sight on the seabed, without affecting the tidal flow. During high water the gates will be raised to prevent the tide from entering the lagoon. This is likely to occur three to five times a year for four to five hours at a time, but it will be possible to raise and lower the gates whenever necessary.

When the barriers are raised, port operations can be maintained using a lock for large ships at the Malamocco inlet. At Lido and Chioggia, harbors have been created for small craft with locks for shelter and access to the lagoon during a high water event.

Once completed, MOSE will protect the lagoon and the city from tides of up to 3m. That is an effective defence against a significant tidal surge, but it has been designed to cope with a 60cm sea level rise

## Going inland

IAPH Essay Contest award winner Caroline Bosschietter entitled her paper *Climate change and inland shipping – to control is to foresee*. Her research looked at climate change at the Port of Rotterdam in relation to the River Rhine. At the end of her paper Bosschietter concluded that changes in river discharge are adversely affecting the accessibility of the hinterland by inland waterway transport. This problem can be limited, she suggested, by using an information management system, such as the emerging river information services (RIS).

She wrote: "Furthermore, it is recommended to keep monitoring the changes of the water discharge under the influence of climate change. Subsequently to start recording the effects of low water levels on the performance of inland navigation, and to anticipate on policy developments on other river-related functions."

She also advised against further increases in vessel size, but instead suggested developing broader, shallower and more lightweight vessels to take account of the effect of climate change on inland waterways.

"Inland navigation will be affected by the impact of climate change; nevertheless the sea ports and inland destinations will remain easily accessible in 2050 if the related sectors anticipate early on the expected climate change effects and the amplified developments. To foresee means able to proactively mitigate the negative consequences!" she concluded.

– greater than current estimates. In the last century, the city lost 23cm to subsidence and 12cm to eustacy (the global rise or fall in sea level caused by change in ocean volume), so a margin for error is essential.

MOSE is designed to be flexible enough to cope with an increase in water heights in various ways including total or partial closure of each inlet barrier. It should be enough to end flooding of the lagoon, protecting Venice from sea level rise. The infrastructure works are just over 50% complete, with the next major job being construction of the gate hinges. The total cost of the work is estimated at €4.3M, of which €3.2M has been secured and €2.2M invested.

"The great flexibility of MOSE is one of its pluses and this is why it was approved at all the technical and institutional steps," said Zambardi. MOSE also has the lowest impact on the environment. "The importance is that the mobile gates usually stay under water without interrupting the link between the lagoon and the sea, which is fundamental to the ecosystem. Moreover, the lock means it won't ever interrupt the business of the Venice Port Authority." **PH**

**Venice: MOSE is being built to protect the lagoon from high waters**

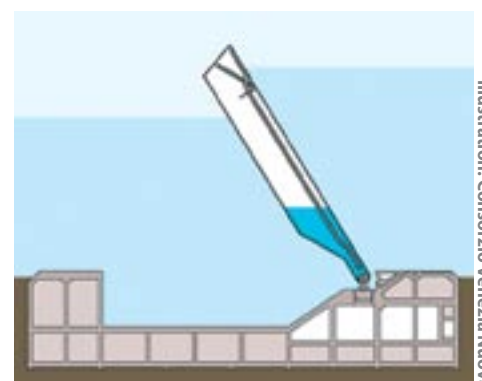
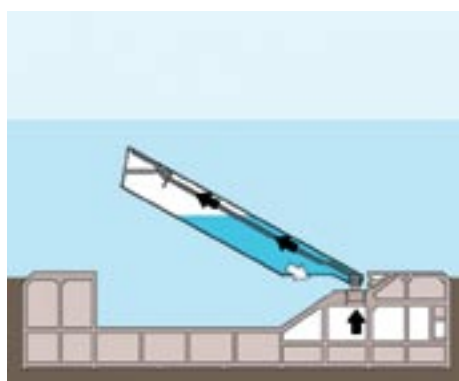
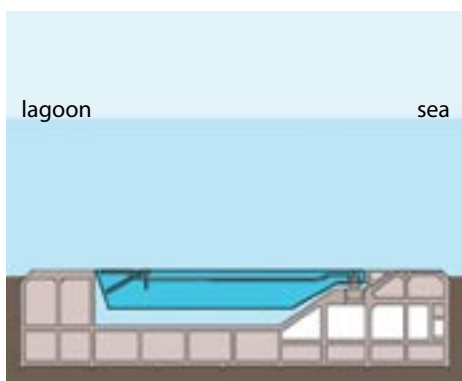
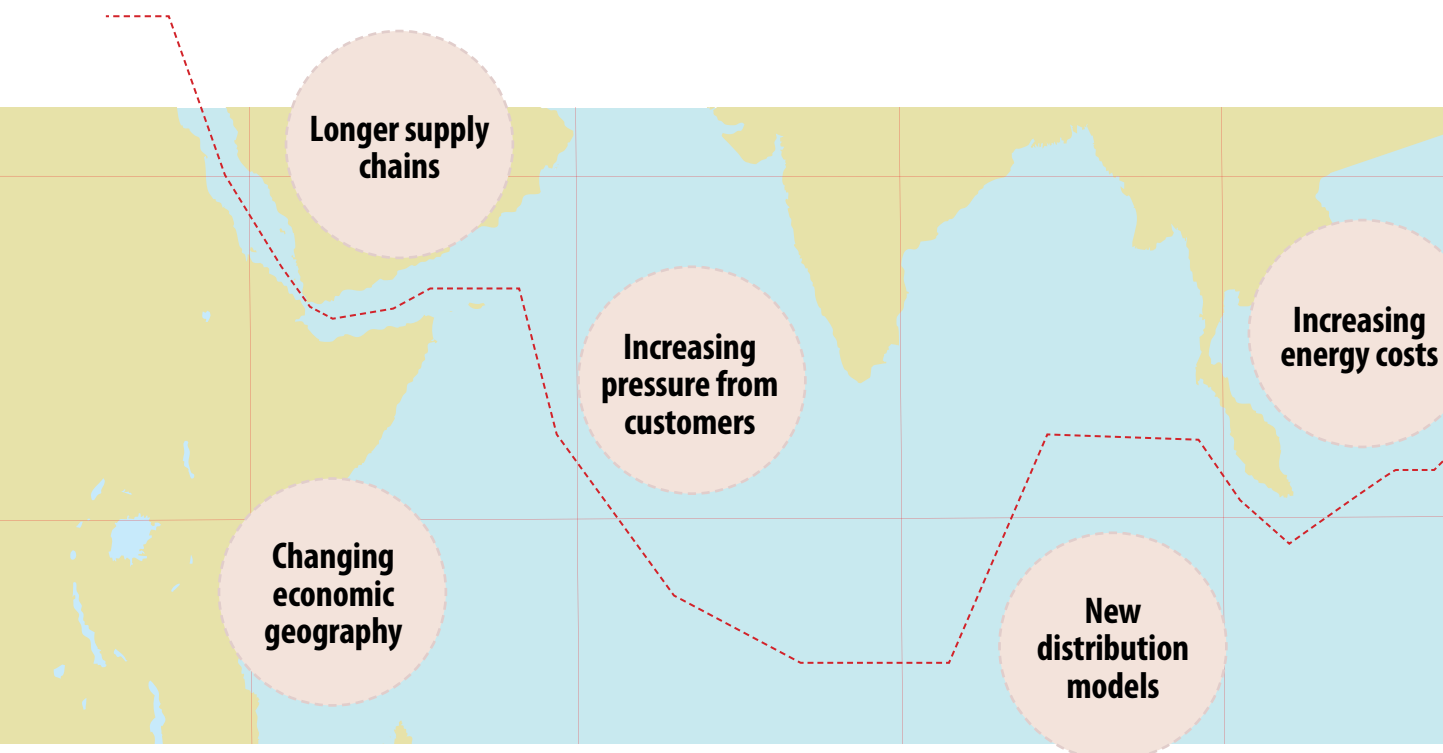


Illustration: Consorzio Venezia Nuova



# Navigating the downturn

IAPH members shared some valuable insight as delegates met in Genoa for the World Ports Conference and discussed the challenges of globalisation

**T**he message to port managers and professionals at the conference in May struck a sombre chord. “A big slump” was how Michel Donner, ports and maritime specialist for the World Bank, described the present downturn, noting that public financing was suffering in line with fiscal revenues.

Bjarne Jensen, vice-president Europe trade for United Arab Shipping Corporation, reported a “significant gap in supply and demand”. All shipping segments have been affected, he asserted, in particular container and bulk shipping. “The current situation could,” Jensen warned delegates, “reshape the liner industry.”

“Spending on services has not been matched by spending on goods,” cautioned Donner. Walter Kemmsies, chief economist at Moffat & Nichol, presented graphs that suggested that demand for services will continue to grow faster than demand for goods because of an ageing population. A second slowdown may occur, he suggested, with recovery occurring slowly through 2011. In his view, however, the long-term outlook is more encouraging. Donner, at least, was confident of an early recovery, but whether we see a smooth transition back to business as usual or experience a bumpy ride along the way, Kemmsies believes “the world really wants to change”.

Irrespective of how or when the economy will level out, ports need to find a way of operating in the downturn while reconsidering their options and readying themselves for the changes a revitalised economy will bring.

Victor Schoenmakers, chairman of the European Sea Ports Organisation (ESPO), is optimistic that port authorities are well positioned to respond to the downturn. He cited what he believes to be the main challenges for a port authority:

- Integration into logistics chains
- Management of powerful and strategic market players, such as global groups, terminal operations and shippers
- Sustainable development, including investment in port facilities, against a backdrop of ever-increasing

## South African response

South African ports are trying to reposition themselves ahead of economic recovery. This will require the upgrading of services, operational processes and visible organisational structures and managerial processes, revealed the CEO of South Africa's Transnet National Ports Authority, Khomotso Phihlela.

“Intermodal solutions are the only sustainable way to meet the future demand for freight,” he told delegates. The majority of the expected future demand on South African ports

is rail-friendly and, therefore, as part of Transnet's five-year capital plan, many existing lines will need improvements. Rail connections between ports and the industrial hinterland are also part of the plan.

Phihlela also acknowledged that qualified and experienced labour – such as marine pilots, port engineers and crane drivers – is in short supply. He said he supports the idea of training and exchange programmes to create interchangeable skills among ports.



social and environmental regulation.

The governance system, he said, gives port authorities the tools to cope with these challenges, and in his view this bottom-up motivation is preferable to “top-down government imposition of port reform.” It is important that ports retain their financial and commercial autonomy and political influence, he said.

The “rapidly changing environment creates lots of opportunities... and lots of uncertainties,” he said, but he believes that social and ecological issues are the key points to address in a time of crisis.

Investment in facilities emerged as a common thread running through the conference presentations. Manuel Gómez Martín, deputy director international affairs at Spain’s Puertos del Estado, developed this theme. “Recovery will come,” he said. “Ports must be prepared as vessels will get bigger. It takes much longer to prepare for infrastructure for a vessel, than it takes to prepare a vessel,” he reminded delegates.

Most ports will be faced with the need to accommodate bigger vessels and, Martín continued: “A lot of people have said that big ships are the origin of problems for companies. But I don’t think it will stop at 14,000teu.” He supported his assertion by quoting statistics from maritime analyst Dynamar showing that, for ships of more than 10,000teu, almost 2.5M teu capacity is on order, compared with just 212,000teu-worth of ships of the same size currently in service. He quoted the same source as saying that there are 17 vessels of more than 10,000teu in service, against 194 on order.

In addition to investment, Martín listed other measures port authorities are and should be taking during the downturn, including reducing port fees, providing bonus incentives to certain trades and customers, and cutting costs.

Although encouraged to invest, ports are sometimes at a loss to know where to find the required funding for such commitments. Speaking from a regional perspective Khomotso Phihlela, CEO of Transnet National Ports Authority in South Africa, believes there to be a grave shortage of available investors. “There is a high regional investment risk,” he said; “the private sector wants a high yield.”

In contrast, Donner, quoting from discussions at

## Trading today

Transnet CEO Khomotso Phihlela highlighted the following effects on world trade:

- Changing economic geography: manufacturers are moving to politically stable countries and low-cost markets for labour
- Longer supply chains: the distance and number of modal links create challenges in information-gathering and translation
- Increasing pressure from customers: both ports and other service providers need to shorten lead times while delivering on time, ensuring transparency and visibility, and reducing costs
- New distribution models: often developed in response to e-trading, encouraging reverse flow plans and longer supply chains
- Increasing energy costs: at an alarming rate in African countries, but year-on-year rises are also evident worldwide.

the World Bank Transport Forum in April on port infrastructure financing, commented that there is an “evolution of good private-public partnerships; there are still private equity investors looking around for good projects”.

But the conditions surrounding these investments often differ from those before the downturn. Donner cited the World Bank Transport Forum debate, which predicted that, to secure funding, “projects will be expected to generate cash flows early on in their lifetime; and those with less than 25% equity investment by the project proponent might not even be looked at”.

Unrealistic and complicated concession terms and processes delay much-needed projects, Donner continued. Picking up on the environmental theme, he commented that governments could also help by “facilitating more agile and simplified environmental approval procedures”.

No one said that surviving the economic downturn would be easy and even the economists and statisticians seem unsure about exactly when and how the global markets will right themselves.

Whatever the outcome, however, port authorities are sure to prove that they are adaptable and ready to play a defining role in the global economy – whatever shape it takes. **PH**



**Kemmsies told delegates: “The world really wants to change”**



**Jensen: “The current situation could reshape the liner industry”**



**Donner: “There are still private equity investors looking for good projects”**

# Harnessing the Vortex

A US port authority is playing a key role in getting a novel alternative energy system off the ground and into the water. **Scott Berman** reports

**D**etroit/Wayne County Port Authority (DWCPA) wants to use a water current energy system to power navigation lights on an offshore wharf being planned a few metres into the Detroit River. This will form part of a \$14M public dock and terminal project being constructed between the city's waterfront landmarks, the Renaissance Center and Hart Plaza. The design process is under way for the wharf itself, comprising a 61m x 12m structure for cruise vessels, tall ships and possibly ferries. The project received a US federal stimulus grant of \$7M in July.

The authority is working with Vortex Hydro Energy, a University of Michigan spinoff venture founded in 2005, which is backed by private investors, contracts and federal grants. CEO Gus Simiao is a young entrepreneur and mechanical engineer in aerodynamics who developed the business idea as a student.

Many ports are looking for alternative energy systems. Plenty of water current energy approaches

are available – by Simiao's reckoning, more than 100 companies offer mostly turbine- and propeller-based systems. These all require more infrastructure than does Vortex, he said, claiming that the vortex drive is both potentially more efficient and addresses growing concern over the impacts of hydro-electric dams.

Simiao explained that the vortex system is designed to work in modest currents commonly found in waterways around the world, is gravity-based, so sits on the riverbed without requiring drilling and is easy to move. All these attributes could make it attractive to river ports in the future, he believes.

Enquiries have come from many quarters, including several municipalities and some private marinas, but Simiao said that the Detroit/Wayne authority is the only port operation that's come forward so far.

The test system scheduled for 2010 will be a first step and is not expected to be fully efficient, Simiao explained. It will be tested for at least three months,

## Making it happen

The state of Michigan is optimistic about the Vortex system's potential. The company projects revenues of \$190M annually, with a staff of 600 within six years – employees that the state views as residents of the economically hard-hit state. From the private sector, DTE Energy Foundation, an arm of a Detroit-based utility company, has chipped in \$50,000 for the test of Vortex's system.

Other project participants have included the University of Michigan's School of Naval Architecture and Marine Engineering, which developed the technology, and NextEnergy – a non-profit organisation that fosters renewable and alternative energy companies and technologies. NextEnergy brought Vortex and Detroit/Wayne County Port Authority

together when DWCPA was seeking innovative ways to power the offshore wharf.

Another funder is the US Department of Defense. According to DWCPA's John Kerr, the 2009 DoD budget appropriated \$1.6M "to demonstrate and test a full-scale project within the Detroit River". The port authority is pursuing permits from the US Army Corps of Engineers and Michigan Department of Environmental Quality, a process that could take between nine months and a year, Kerr said. This is "due to the unique nature of the project and the number of reviews that will take place." As that process unfolds, Vortex is

building and scaling up a laboratory prototype into a full-scale device.

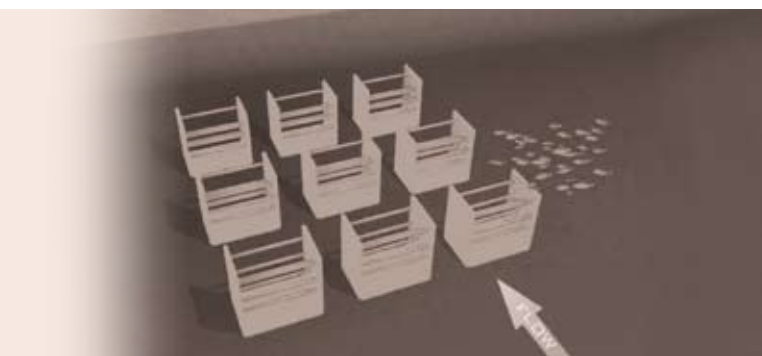




## How it works

The technology used in the power system is called Vortex Induced Vibrations Aquatic Clean Energy (VIVACE). It is based on a module, or 'box', that is about the size of a pick-up truck, which contains eight cylinders, together with magnets, electromagnets and coils.

River current flows past the cylinders, creating vortices, which move the cylinders and the attached magnets. The movement generates DC current, which is then switched to AC and transmitted through a cable to land.



**The Renaissance Center, the tallest building pictured, and the Detroit River front will make an attractive backdrop for the new wharf**

depending on permits. The exact test criteria will depend on the permitting rules that are set by federal and state agencies, including the US Coast Guard.

Vortex estimates that it will cost \$2M to get its system into the water. Exactly how much power the system will be able to generate will depend on many factors. River currents vary widely, and variations in course and underwater symmetry mean that the speed at one point may differ greatly from the rate 100m away. Technicians have measured water currents in the Detroit River from 1kt to close to 4kt. The power generated is in proportion to the speed of the current, and that in turn depends on where the system is deployed. Environmental and navigational requirements stipulated in the permits will dictate the test site.

Locations are being scouted. The original intention was to conduct the test on the Detroit River, but sites on the St Claire River are being considered too.

Power output is also determined in part by the number of modules that are deployed. If several are used together, the group could constitute a water current farm.

A conservative power estimate

for the prototype is 1–3kW, Simiao suggested, although a full-scale device may generate more than this. He expects that once fully tested the system will be cost-competitive with conventional power supplies.

DWCPA's director of economic development and grants management, John Kerr, is also confident about the finished product's capabilities and expressed the hope that supplying power to the navigation lights on the wharf is just the start. "We'd consider this system anywhere throughout the Port of Detroit," he said, citing the port's terminals and bulk storage facilities as possible candidates. He added: "We've been contacted by the Michigan Department of Natural Resources and the Ambassador Bridge, one of our international border crossings, who both had an interest in the system."

Kerr told *P&H* that the port authority got involved with the project because Vortex is "a local company, with a unique, patented system that could have strong global reach". The port is a suitable partner because Vortex has needed permits from many of the same federal and state agencies that DWCPA deals with regularly. Kerr emphasised that the project also furthers Michigan's aim of obtaining a larger proportion of its energy from renewable sources as well as aiding the port's drive to be environment-friendly.

Vortex officials lauded the role DWCPA has played. Getting all the permits "is a complex process for anyone," Simiao admitted, "and we've been very fortunate in that the port authority has really helped us with the process, helped us talk to the right people and get feedback." **PH**



Photo: Fotolia

# Ballast and oil transfer at MEPC

The 59th session of the IMO's Marine Environment Protection Committee (MEPC) focused on the control of ships' emissions (see page 34), leaving the most contentious item on the agenda – deciding whether shipping should trade its carbon emissions or contribute to a CO<sub>2</sub> fund – to the UN Climate Change Conference, COP15, in December.

## Ballast water

Other topics were the subject of discussions and decisions, however. For example, the MEPC approved guidance to ensure safe handling and storage of chemicals used to treat ballast water. It also developed safety procedures to reduce any risks to the ship and crew resulting from the treatment process. This guidance is intended to aid implementation of the International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention), adopted in 2004.

The MEPC also agreed to give final approval to four ballast water management systems that make use of active substances and basic approval to three systems.

The Ballast Water Review Group convened during the meeting to consider the status of ballast water technologies. It was accepted that the installation of ballast water management (BWM) systems might necessitate some redesign work and possible modification of ship design. It was noted that long lead times would be necessary.

Despite these challenges, the committee acknowledged the current availability of ballast water



Photo: Dietmar Hasenspusch

## Treatment of ballast water came under close scrutiny at MEPC

treatment technologies, noting that some ships had already been fitted. It confirmed that sufficient BWM systems would be available to ships constructed in 2010.

The committee agreed to instruct the secretariat to prepare a draft resolution requesting administrations to encourage the installation of BWM systems during new ship construction.

## Pollution during transfer

The MEPC also adopted amendments to Marpol Annex I for the prevention of marine pollution during some ship-to-ship (STS) oil transfer operations.

The amendments are expected to enter into force on 1 January 2011.

The resultant new Chapter 8 'Prevention of pollution during transfer of oil cargo between oil tankers at sea' will apply to oil tankers of 150gt and above. It will require any oil tanker involved in oil cargo STS operations to have on board a plan – the STS Plan – prescribing how these operations should be carried out.

The meeting approved special measures to protect the Antarctic, with a view to these being adopted at MEPC 60 in March 2010. These proposed draft amendments to Marpol Annex I

relate to 'Special requirements for the use or carriage of oils in the Antarctic area'.

## Emission control areas

The committee also approved a proposal to designate specific portions of the coastal waters of the United States and Canada as an emission control area (ECA). The ECA would control emissions of NO<sub>x</sub>, SO<sub>x</sub> and particulate matter, under the revised Marpol Annex VI 'Prevention of Air Pollution from Ships', which was adopted in October 2008 and is expected to come into force on 1 July 2010. Currently, the revised annex lists two areas for the control of SO<sub>x</sub> emissions: the North Sea, which includes the English Channel, and the Baltic Sea.

## Ship recycling

Following the adoption of the International Convention for the Safe and Environmentally Sound Recycling of Ships, at a conference held in Hong Kong in May, the committee adopted guidelines for the development of the inventory of hazardous materials.

## Waste reception facilities

Environmental group Friends of the Earth International invited the committee to consider the findings of various marine litter monitoring programmes with a view to worldwide harmonisation of port reception facility schemes and waste management on board. Committee members considered improving Marpol Annex V in respect of the following:

- Clear rules and strong and clear compliance

## Aid pledge for Malacca Strait fund

Japan's philanthropic organisation the Nippon Foundation has pledged \$2.5M to a Malacca Strait navigation fund.

The announcement was made at the signing of the Nippon Foundation's Contribution to the Aids for Navigation Fund 2009 in Malaysia. Foundation chairman Yohei

Sasakawa stressed the continued importance of financial commitments to maritime safety. The Malacca and Singapore straits, traversed by 94,000 ships a year, are narrow, he said, "with many dangerous places affecting safety of navigation". He urged "preventive measures, rather

than cures after accidents". The aid was meant to spur "well-balanced and sustainable contributions from other users of the straits", Sasakawa added. The foundation expects the fund will be voluntarily supported by the global shipping industry – the strait's users.

- Clear communication to onboard personnel and passengers: zero discharge
- Phase-out of onboard incineration of waste
- Ships required to deliver waste in ports
- Improved management of waste as a business practice.

The Australian delegation recognised that “current measures to prevent and reduce marine debris are inadequate, but also noted that ‘zero discharge’ of all waste from ships is currently not practical or achievable in all parts of the world”.

Australia stressed that active enforcement of Annex V and legal proceedings were needed. The delegation also supported work to improve the provision of reception facilities in port. While it was agreed that high charges act as a disincentive for ships to use facilities in port, the meeting did not support a mandatory no-special-fee system for charging for waste reception facilities.

These issues will be referred to the Correspondence Group on the Review of Annex V for further consideration.

The Nautical Institute’s honorary secretary, Harry Gale, told *Ports & Harbors* that feedback to the institute suggests that, in some cases, port waste management facilities exist only in theory. “You can talk about prosecuting ships and crew for not separating garbage, but there also needs to be pressure on ports too,” he told *P&H*.

A guide to good practice for port waste reception facilities was endorsed by the committee for circulation via the IMO’s GSIS website, to port states and to shipowners and masters.

## Armed guards on board? – Intertanko responds

Proposals from some quarters to allow the use of firearms on ships to protect seafarers have provoked considerable debate within the maritime industry. Intertanko and its members recently set out their position on the issue, which is summarised below:

- The use of any arms carried on board ships will escalate the violence of pirate attacks and armed robberies and increase the risk of loss of life
- Ships’ crews should not be armed. Crew members are not trained in the use of firearms and they should not be required to defend themselves and their ship
- Where a private security service is employed, the personnel should

be unarmed and their role should be an advisory one

■ The risks associated with live firearms on an oil or chemical tanker are evident

■ Private security firms that offer armed guards and escort services should be avoided. There is no accepted quality control process in place, there are inherent problems about legal liability, there are command and control issues regarding the use of lethal force, and there are several insurance-related problems

■ Use of armed guards supplied by a government is a different matter. Where used, guards should preferably be sourced from the ship’s flag state.

## Pirates find new waters

A substantial spike in the numbers of reported attacks on merchant shipping is almost entirely attributable to the activities of Somali pirates, the International Maritime Bureau (IMB) in Kuala Lumpur reported in mid-July.

Most of the attacks took place in the Gulf of Aden – a total of 86 – with the second-highest incidence being other locations off the Somali coast. Patterns of Somali piracy are altering because of seasonal changes in the weather and the increased multinational naval presence, the IMB believes. *P&H* understands that the re-routing of vessels through the International Transit Corridor has prompted pirates to adopt new tactics.

IMB suggested that the

increased counter-piracy measures have been causing some displacement activity. The bureau commented that pirates are seeking new areas of operation in the southern Red Sea and off the east coast of Oman.

Nigeria remains a high-risk area, the IMB stated, with 13 incidents reported in the second quarter.

“The majority of attacks are against vessels supporting the oil industry,” said IMB director Pottengal Mukundan. “There is a need for every incident to be reported and brought to the attention of the Nigerian authorities. This is the only way in which the true risk associated to the area can be determined and accurate advice be given to shipmasters, owners and traders.”

## UN calls for a greener economy

The International Maritime Organization has backed a statement calling for a worldwide transition to a low-carbon, resource-efficient green economy that will be able to deliver multiple economic, social and environmental opportunities in the 21st century.

The IMO is one of 21 United Nations agencies that have put their weight behind the joint statement issued by Achim Steiner, UN under secretary-general and executive director of the UN Environment Programme (UNEP), at the UN High-Level Conference of the World Financial and Economic Crisis and its Impact on Development, which was held in New York between 24 and 26 June.

Among other things, the statement declared: “Investing stimulus funds in such sectors as energy efficient technologies, renewable energy, public transport, sustainable agriculture, environmentally friendly tourism, and the sustainable management of natural resources including ecosystems and biodiversity, reflects the conviction that a green economy can create dynamic new industries, quality jobs, and income growth while mitigating and adapting to climate change and arresting biodiversity decline.”

“Such investments,” the joint statement continued, “should be scaled up significantly in all countries and be supported by national and international policy instruments and incentives such as updating building codes and enforcement of internationally agreed environmentally friendly shipping regulations.”

## EC approves Britain’s shift to water

The European Commission has authorised a new UK government scheme to encourage transferring freight from roads to water and railway transport.

The scheme would offer financial support to intermodal services, provided they generate environmental benefits in the United Kingdom.

Several companies have successfully tested use of inland UK waterways and shortsea shipping to reduce road congestion, the Department for Transport’s Freight by Water office told *Ports & Harbors*. Government support of the approach might encourage private enterprise to invest in permanent

modal shift solutions, including shortsea, the office added.

Initially, the scheme would stretch over five years, with a budget of about £19M (\$30M) for England. For Scotland, an annual budget of £8M would be spent on this programme and on the Waterborne Freight Grant scheme.



## EC to improve the image of shipping

The European Commission has responded to concerns about the poor image of shipping and launched a €3M programme to boost both seafarer recruitment and public awareness. The programme will start in mid-2010, last three years and involve substantial industry participation.

Under the terms of the image framework programme, the EC will call on interested parties at least two or three times a year to submit sets of proposals, which will then be looked at by specially established consortia. They, in turn, will be encouraged to submit their own applications for action.

"The idea is to form large consortia which can cover all facets of a particular area. They will work on key issues and they will have to raise some of the necessary funds, which is a good thing because they will assume some level of ownership," said Dimitrios Theologitis, head of the unit for Maritime Transport & Ports Policy, Maritime Security, at the European Commission's DG TREN.

## Ports in past times

The ports of Hamburg, Antwerp, Oslo and Rotterdam are just four of the 15 ports featured in *Portraits*, a CD and book produced by the European Sea Ports Organisation. This fascinating volume uses visual imagery and accessible text to piece together the changes that ports have undergone in the past century.

It considers how ports have adapted to new technical requirements, such as containerisation. The impact of the cruise industry is explored, commenting that seagoing journeys became a recreation in the late 19th century. The changing role of the port is also discussed. *Portraits* states: "Modern ports were no longer about storage and trading but about getting cargo handled and transhipped out of the ports as soon as possible".



The technology is already there, but there are concerns that not all routes will have chart coverage

## Will chart coverage be ready for mandatory ECDIS?

Making it mandatory for ships to carry electronic chart display and information systems (ECDIS) and bridge navigational watch alarm systems (BNWAS) was one of the biggest decisions to come out of the 86th session of IMO's Maritime Safety Committee in late May. Among a multitude of safety-related matters, it was the adoption of amendments to SOLAS regulation V/19 – agreed at last year's navigational subcommittee meeting, NAV54 – that dominated the agenda.

The expected entry-into-force date is 1 January 2011. ECDIS will be mandatory for new ships and will be phased in for existing ships. A timetable has been drawn up for the legislation to be phased in

according to vessel type and size.

There are no requirements for existing cargo vessels of less than 10,000gt, while flag states may exempt vessels that will be taken permanently out of service within two years of the implementation date. Electronic navigation chart (ENC) coverage is thought to be around 75%, but the International Hydrographic Organization has assured the IMO that all the world's main trading routes will be covered by 2010.

That's a big task, in the view of Jeppesen Marine managing director Tor Svanes. "ENC coverage is not yet up to standard," he told *P&H*. "They promise it will be by 2010, but they have a lot of work to do to make that happen."

Svanes held a seminar about the road to ECDIS at this year's Nor-Shipping. His message of 'be prepared' was prompted by confusion surrounding compulsory carriage of ECDIS. Training is a particular cause for concern.

"There is no synchronised training in a worldwide setting; different countries do their own thing," he pointed out. "The IMO has its reference course, but it's obvious that shipowners are not fully aware what the regulations are, what is available or what is mandatory. At the moment, it's up to suppliers to train people, but that only goes so far." The sheer variety of options that ECDIS and ENC providers offer shipowners is also likely to add to the confusion.

## Ship defects on increase, inspections reveal

Problems and defects in ships inspected by the Paris Memorandum of Understanding (MoU) have soared by about one-third (34%) in the past four years – and one in every 20 ships had to be prevented from going to sea.

These are the disturbing findings of a report on

vessels inspected by the MoU's 27 member states. And between 2007 and 2008 general navigation deficiencies – ranging from bridge radar problems to compressor faults – rose by 29%. According to the MoU's annual report on port state control, there was a jump of 22% in security snags.

# Guide clears supply chain security confusion

The World Bank, in association with IAPH and the World Customs Organization, recently compiled a paper on supply chain security (SCS), which the World Bank published as a guide on 16 July.

*The Supply Chain Security Guide* includes a top-level explanation of SCS and its conceptual, regulatory, technological and procedural elements. It also describes the main SCS components: advance (electronic) cargo information (ACI), risk management, non-intrusive inspection (NII) and operators' certification. In addition, it covers some less conspicuous features, such as mutual recognition, interoperability and layered approach. The guide presents the diverse trends that appeared as the SCS concept unrolled and developed, reflecting different emphases, sensitivities and approaches.

The 11 September 2001 attacks on the US triggered a renewed focus on trade- and transport-related security. The most visible initiatives in this area have been:

- In 2001, the US-sponsored Customs-Trade Partnership Against Terrorism (C-TPAT)

voluntary certification programme

- In 2003, implementation of the 24-hour advanced manifest rule for shipments to US ports

- In 2004, implementation of the International Ship and Port Facility Security Code (ISPS Code) addressing the port and vessel segments of the maritime trade and transport security.

In 2005, the World Customs Organization (WCO) published its *Framework of Standards to Secure and Facilitate Global Trade*. To date, 156 WCO members have signed a letter of intent to implement the framework. With such a heavy-weight prime mover, it is likely that this framework will shape future national SCS programmes.

These are only the better-known regulations and frameworks concerning SCS. When attempting to map out the current status overall, analysts find themselves confronted with a mosaic of initiatives, programmes, codes, solutions, technological applications and regulations, which may be international, national, regional, sectoral, compulsory, voluntary, unilateral, bilateral, multilateral, mutually



Photo: Captain Peter Newton

**Container scanning in Caucedo, Dominican Republic**

complementary or overlapping.

At the IAPH Biennial Conference in 2007 several port and shipping specialists concluded that there is a need to inform all players that come in contact with SCS. These parties include logistics and transport governmental and private decision-makers, stakeholders, practitioners and communities, particularly in developing countries.

"It is recognised that the implementation of the ISPS Code brought undeniable productivity gains in many ports' operations," said Marc Juhel, Transport Sector manager at the World Bank. "While

the need to tighten-up the overall SCS – from producer to consumer – is unquestionable, there are concerns that certain components need to be handled with extra care, lest they introduce or cause artificial distortions in the trade routes or, more generally, run against continued trade facilitation efforts now under way in many developing countries and regions."

He emphasised: "Governance problems will not be solved by technology alone, and, in line with the bank's strategy for the sector, transport, for both passengers and freight, must also remain affordable."

## ICS shows support for carbon reduction

The International Chamber of Shipping (ICS) has produced a new brochure entitled *Shipping, world trade and the reduction of CO<sub>2</sub> emissions*. It explains what the shipping industry and its regulator – the IMO – are doing to deliver a significant reduction in shipping's carbon dioxide emissions.

According to ICS, "The consensus of opinion within the industry is that it may be possible for ships to reduce CO<sub>2</sub> emitted per tonne-kilometre by perhaps 15–20% by 2020, through a combination of technological and operational developments aimed at reducing fuel consumption. In the longer term, advances in alternative fuel technologies may deliver further improvements".

"Shipping is an inherently international industry which depends on a global regulatory framework to operate efficiently. Otherwise there would be chaos and serious inefficiency," declared chamber chairman, Spyros Polemis.

He continued: "The shipping industry believes that the achievement of meaningful reductions in CO<sub>2</sub> emissions will be best achieved if nations agree that the development of detailed measures for shipping should be directed by governments at the International Maritime Organization – but respecting the outcomes agreed for the sector under any new UN Climate Change Convention".

The shipping industry, claims ICS, believes that the current Kyoto Protocol concept of "common but differentiated responsibility" is not practical, without "significant carbon leakage". According to the chamber, only about 35% of the world merchant fleet is registered in Kyoto Annex I countries, which are currently committed to meeting the emissions reduction targets that were agreed in 1997.

"We fear that failure in Copenhagen [in December at the UN Climate Change Conference] by UNFCCC [the United Nations

Framework Convention on Climate Change] to agree that IMO should be given a mandate for delivering a CO<sub>2</sub> reduction regime for shipping will greatly reduce the ability of the shipping sector as a whole to reduce its emissions," said Polemis.

The ICS chairman continued: "International shipping does not lend itself to inclusion in national emissions targets. A ship may be registered in one country while the beneficial owner of the ship may be located in another. The cargo carried by the ship will be of economic benefit to a variety of different importing and exporting nations."

The development of the chamber's brochure is just one component in a wider ICS campaign, and coincided with the next round of pre-conference UNFCCC negotiations that were held in August.

To see a copy of the brochure go to: [www.marisec.org/co2](http://www.marisec.org/co2).

## President Ndua speaks in Yokohama

During his stay in Japan, IAPH president Gichiri Ndua visited the Port of Yokohama to deliver his address at the opening ceremony of the World Ports Seminar 2009. The event was held from 21 to 23 July and organised by the port in celebration of its 150th anniversary of handling international trade.

President Ndua was among three VIPs – including the Honorable Hiroshi Nakada who is the Mayor of Yokohama – invited to address the audience. The event attracted representatives from ports around the world many of whom have sister port affiliation with Yokohama. Several African port executives were also in attendance.

During the course of his speech he promoted IAPH and went on to discuss various hot topics facing the ports worldwide, including the impact of the economic slowdown, container terminal productivity and port development *versus* the environment.

He told delegates: “There is therefore need for a very careful balancing act between sustainable development and societal needs. There can be little development without exploitation of natural resources. However, depletion of non-renewable resources is what is sinful,” adding that society should focus on renewable sources of energy.

# IAPH president urges integrated action

The global economy, environment and African ports were the prominent themes in President Gichiri Ndua’s keynote speech, entitled *The World Ports Industry*.

At the invitation of the Japanese Foundation for IAPH, Ndua visited Tokyo and delivered his speech at the 22nd IAPH Japan Seminar organised by the foundation on 24 July. In his first speech as IAPH president, he began with the main issues that were raised at the Genoa Conference in May. He stressed the importance for the world’s ports to prepare for the economic recovery despite the current downturn, otherwise ports would become a bottleneck once the economy bounced back to health. He highlighted the public sector’s role as a key investor in port infrastructure when private sectors stay away.

Ndua also discussed the association’s commitment to fighting climate change and urged every port to take integrated action through their active participation in the World Ports Climate Initiative (see page 36).

Turning his attention to African ports, he drew attention to the inadequate port infrastructure hampering many countries. “Africa provides an alternative to the emerging economies and its people are hard-working. That is how they have survived the odds, but the modern world calls for seamless service delivery, which is the reason [they are] behind global integration,” he said.

Ndua also commented on the problems ports have faced in relation to public-private partnership projects.

“To address recession, governments and nations are investing more than they ordinarily do with the express expectation of enlisting the

services of their unemployed people who can then enter the market to procure goods and services,” he told delegates. “In essence, efforts are geared towards raising the level of demand.” He explained that for developing countries, it is a trying time because they are dependent on direct foreign investments and capital inflow.

“A good number of developing countries rely on the developed countries to balance their budgets and balance of payment accounts,” he continued. But he cautioned that the current economic circumstances will mean that less capital will be invested, “which will affect adversely the pace of investment and development in the recipient countries”.

Ndua called for continued implementation of projects, stating that this will result in two “noble consequences”, as it will assist countries to recover from the recession and “avail to ports the requisite capacity to meet the demand of the economies as they rise from the slumber which they will do soon”.





# Your views on climate change

How do you view potential climate change impacts at your port? This question forms the basis of a survey being carried out by IAPH, Stanford University in the US and the American Association of Port Authorities (AAPA) – and they welcome your participation.

The survey will explore how port directors around the world view climate change in relation to the risk it poses to their ports and how they will plan for these types of risks. It is being sent to all port directors whose ports are members of either IAPH or AAPA – (so apologies to those members who end up receiving the survey from both organisations).

Your participation in this survey is especially important, because the maritime sector is a critical component of local, regional and global economies.

We anticipate that the survey outcomes will help to inform governments, academics and the world ports community.

The results will be shared through AAPA and IAPH, and it will

continue to be a key component of future research at Stanford. It will also be used to determine future international project and research agendas, such as those emerging from the forthcoming United Nations Climate Change Conference, COP15, in Copenhagen in December.

Your answers to the questions are confidential and will be used only for the purposes outlined above. Your co-operation is, of course, voluntary and no negative consequences will result should

you decide not to participate. The survey should take no more than 15 minutes to complete. Please go to <http://tinyurl.com/q2xygm>.

Should you have any questions at any stage, please do not hesitate to contact Austin Becker (a PhD student at Stanford University), [austinb@stanford.edu](mailto:austinb@stanford.edu).



Photo: iStockphoto

## Sister ports meet up

Wolfgang Hurtienne from Hamburg Port Authority visited the IAPH head office in Tokyo on 21 July. Hurtienne was head of the Port Planning Department, and on 1 August became managing director of the port. He is also the chair of the IAPH Port Planning & Development Committee.

He took the opportunity to represent his port at the 150th anniversary ceremony of Port of Yokohama, which is a sister port of Hamburg.

**Wolfgang Hurtienne, right, with Dr Inoue**



## Membership notes

The IAPH secretariat is pleased to announce that the following four new members joined the association recently.

### Associate members

#### DSM Dyneema

Address: 476 Li Bing Rd, Zhang Jiang Hi-tech Park, Pu Dong New Area, Shanghai, China  
 Telephone: +86-21-6141-8050  
 Fax: +86-21-6171-8361  
 Email: [Edwin.Grootendorst@dsm.com](mailto:Edwin.Grootendorst@dsm.com)  
 Website: [www.dyneema.com](http://www.dyneema.com)  
 Representative: Michael De Kock, vice-president, APAC  
 Nature of business activities: Manufacturer

#### WCN Publishing

Address: Northbank House, 5 Bridge Street, Leatherhead, Surrey KT22 8BL, UK  
 Telephone: +44-137-237-5511  
 Fax: +44-137-237-0111  
 Email: [mfornder@wcnpublishing.com](mailto:mfornder@wcnpublishing.com)  
 Website: [www.worldcargonews.com](http://www.worldcargonews.com)  
 Representative: Mike Forder, commercial director  
 Nature of business activities: Publisher

#### The Port Fund

Address: Hudson House, 8 Tavistock Street, London WC2E 7PP, UK  
 Telephone: +44-207-559-6689  
 Fax: +44-207-559-6681  
 Email: [glorthiois@theportfund.com](mailto:glorthiois@theportfund.com)  
 Website: [www.theportfund.com](http://www.theportfund.com)  
 Representative: Ghislain Lorthiois, principal  
 Nature of business activities: Manages moderate investments in maritime ports, with a focus on brown sites container terminals in Africa, US, Latin America, Asia and Europe

### Regular member

#### Philippine Ports Authority

Address: PPA Corporate Building, Bonifacio Drive, Port Area, Manila 1018, Philippines  
 Telephone: +63-2-527-4436  
 Fax: +63-2-527-4853  
 Email: [gm@ppa.com.ph](mailto:gm@ppa.com.ph)  
 Website: [www.ppa.com.ph](http://www.ppa.com.ph)  
 Representative: Attorney Oscar M Sevilla, general manager

## Tsunamis and logistics

Two IAPH committees recently released reports that are free online and in hard copy to IAPH members.

The report from the Port Planning & Development Committee, chaired by Susumu Naruse, is entitled *Introduction to Port Preparedness for Tsunami*. It was developed in close co-operation with the Port and Airport Research Institute of Japan (PARI). It is intended as guidance for those working at ports in tsunami-prone regions and who are unfamiliar with this kind of natural disaster. The report offers an introduction to port readiness in the case of a tsunami.

Some advice detailed in the report is applicable to ports other than those affected by tsunamis, said Naruse in his chairman's message, and "could be applied to other disasters such as adaptation measures in ports against climate change".

The IAPH Port Operations and Logistics Committee has released its *Report on Logistics and Intermodality Case Studies*. It is a result of extensive study and research initiated and conducted by the former committee chair José-Luis Estrada from Port of Barcelona, who took responsibility for collecting, reviewing and editing the material. The report considers 10 examples of ports that have developed from a land/sea transport interface into a global logistics centre.

"In the era of globalised economy, the port is no longer a mere interface between maritime and land transportation, but rapidly becoming a strategic centre of global and seamless logistics systems," Secretary General Satoshi Inoue wrote in his foreword.

The idea of ports as logistics parks ought to be considered when planning a port development, wrote Dr Inoue. Unlike the business of shipbuilding, he added, ports and port-related infrastructure can take years, even decades, to build, and this factor needs to be considered in any proposal for a port development. "To this end, I am convinced that this committee report will provide all IAPH members with valuable insights and information compiled across the world."

Dr Inoue thanked Estrada for his work on the report and the other committee members for their contributions.

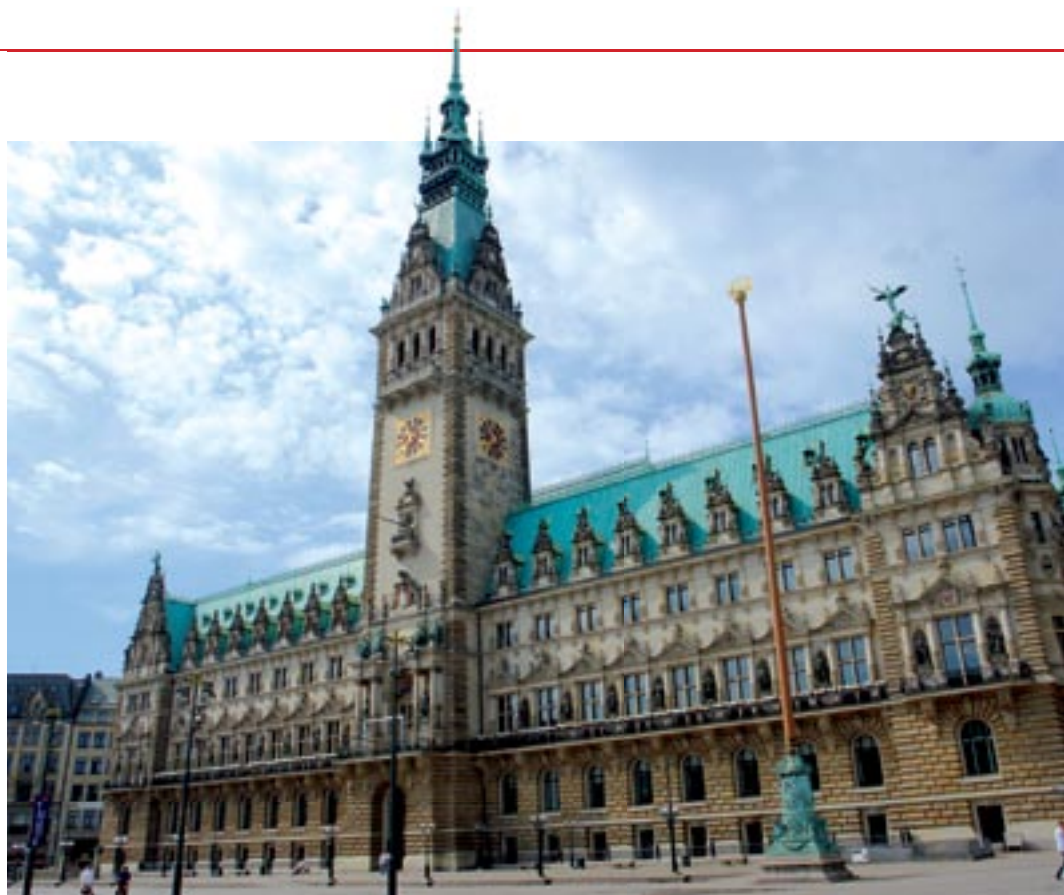


Photo: iStockphoto

**Hamburg's Rathaus is the venue for the opening ceremony of the Africa/Europe Regional Meeting**

## IAPH Africa/Europe Regional Meeting 2009 in Hamburg

The Africa/Europe Regional Meeting will be held from 16 to 18 November in Hamburg, Germany.

The meeting offers professionals from the region an opportunity to exchange views and discuss issues as wide ranging as port financing, port expansion and the environment, including the World

Ports Climate Initiative forum.

The opening ceremony will be held at the historic Rathaus (town hall), and participants can enjoy a tour of the Port of Hamburg – one of the most automated ports in the world. In a history that spans 820 years, the port has developed from relatively modest beginnings

into a cornerstone of northern Europe's maritime trade.

For registration, please contact Birgit.Onnen@hpa.hamburg.de. For the list of recommended hotels and further information, go to [www.iaphworldports.org](http://www.iaphworldports.org). Reservations should be booked before 20 September.

## The technical committees need you!

New work plans for the 2009–2011 IAPH technical committees were set out at the Genoa Conference. In addition, committee chairs and vice-chairs were appointed for the new term.

Each of the eight committees is about to start work on a range of topical and interesting projects that will address some of the most important issues facing ports across the globe. The work plans can all be found on the IAPH website.

The association's technical committees represent the true backbone of IAPH activity. Secretary General Inoue stressed: "Success of the committees deeply depends on active participation of members, regular and associate, with enthusiasm and devotion. Experiences and know-how of members are [the]

wealth of IAPH, which are to be shared among members." He continued: "This is the way members can enjoy most of [the] benefits from joining the world port community."

All members are therefore strongly encouraged to register their interest with technical committees that are most likely to be of value to their business.

The secretary general also called on those who are already serving on the technical committees to renew their membership so they can continue their active participation.

To apply, please download an application form from the IAPH website, [www.iaphworldports.org](http://www.iaphworldports.org). You should return the form to the IAPH Secretariat at [info@iaphworldports.org](mailto:info@iaphworldports.org) or fax: +81-3-5403-7651.

## Former president honored by the Emperor of Japan

In recognition of his long-standing public service, Dr Akio Someya – who served as president of IAPH from 2001 to 2003 – has been awarded the Order of the Sacred Treasure, Gold Rays with Rosette, by Emperor Akihito of Japan.

Someya received his decoration in April and the following month he and his wife Yumiko were invited to the Imperial Palace for the privilege of an audience with the Emperor.

During spring and autumn in Japan decorations are bestowed upon individuals who have contributed to the welfare and development of the people and



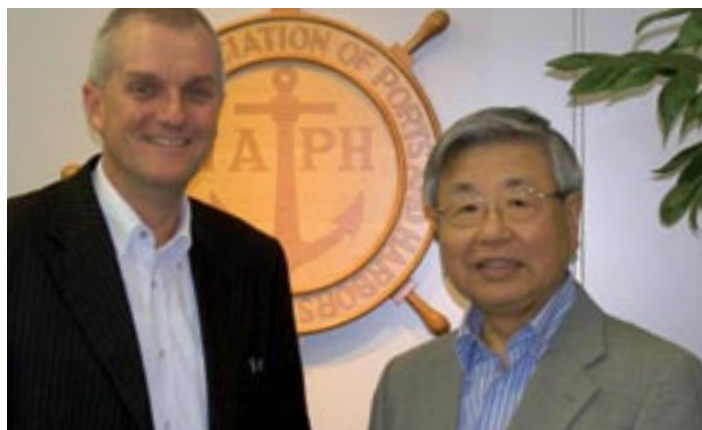
**Dr Someya served as IAPH president from 2001 to 2003**

the country in their public service and voluntary activities.

## 2008–2009 annual report

IAPH has just published its *Annual Report 2008–2009*. It highlights the most important issues facing world ports today – the economic downturn, port climate action, piracy and places of refuge. It also covers the main outcomes of IAPH activity and gives the new line-up of internal and technical committees together with their work plans for 2009–2011.

For extra copies, contact the IAPH Secretariat at: [info@iaphworldports.com](mailto:info@iaphworldports.com).



**Jens Madsen, left, caught up with Dr Inoue in Tokyo**

## New Zealand committee member visits Tokyo

Ports of Auckland's managing director, Jens Madsen, visited the IAPH Tokyo head office on 1 July.

As a newly elected member of the executive committee, Madsen

was brought up to date by Secretary General Inoue on the major outcomes of the Genoa Conference, which unfortunately he had been unable to attend.

## Dates for your diary

A selection of forthcoming maritime courses and conferences

### September

- 20–23** Rotterdam Rules Signature Ceremony – Rotterdam, Netherlands  
[www.rotterdamrules2009.com](http://www.rotterdamrules2009.com)
- 21–25** FIATA World Congress 2009 – Geneva, Switzerland  
[www.fiata2009.com](http://www.fiata2009.com)
- 21–2** Seminar on Inland Waterways Transport – Antwerp, Belgium  
[www.portofantwerp.com/apec](http://www.portofantwerp.com/apec)
- 22–25** NEVA 2009 – St Petersburg, Russia  
<http://neva.transtec-neva.com>
- 23–24** 4th Annual Canada Maritime Conference – Vancouver, Canada  
<http://joc.com/cmc>
- 24–25** 4th Southern Asia Ports, Logistics & Shipping 2009 – Chennai, India  
[www.transporevents.com](http://www.transporevents.com)
- 28–2 Oct** 15th UN/CEFACT Forum – Sapporo, Japan  
[www2.convention.co.jp/uncefact15/](http://www2.convention.co.jp/uncefact15/)

### October

- 5–6** Port and Terminals Management Conference – Dubai, UAE  
[www.jacobfleming.com](http://www.jacobfleming.com)
- 7–8** British Ports Association Annual Conference – Scarborough, UK  
[www.britishports.org.uk](http://www.britishports.org.uk)
- 13–15** Port and Terminal Technology – Antwerp, Belgium  
[www.millenniumconferences.com](http://www.millenniumconferences.com)
- 15–17** PIANC-AIPCN Workshop – Innovation In Navigation Lock Design – Antwerp, Belgium  
[www.pianc-aipcn.be/m3s3E.html](http://www.pianc-aipcn.be/m3s3E.html)
- 20–21** 8th Maritime Security Expo – Long Beach, CA, US  
[www.maritimesecurityexpo.com](http://www.maritimesecurityexpo.com)
- 25–29** 98th AAPA Annual Convention – Galveston, Texas, US  
[www.aapa2009.com](http://www.aapa2009.com)

### November

- 9–11** TOC Americas – Buenos Aires, Argentina  
[www.tocevents-americas.com](http://www.tocevents-americas.com)
- 12–14** Port International India 2009 – Mumbai, India  
[www.portinternationalindia.com](http://www.portinternationalindia.com)
- 16–18** IAPH Africa/Europe Regional Meeting – Hamburg, Germany  
[www.iaphworldports.org](http://www.iaphworldports.org)
- 16–20** 33rd IADC International Seminar on Dredging and Reclamation – Singapore  
[www.iadc-dredging.com](http://www.iadc-dredging.com)





## Demanding future

**Grant Gilfillan**, chief executive officer of Sydney Ports Corporation and newly elected vice-president of IAPH for the Asia and Oceania region, is realigning Port Botany to meet future needs

“We are heeding the call of IAPH to continue with our investments in capacity-generating infrastructure”

At the May 2009 IAPH conference in Genoa a joint communiqué was issued that urged the world's ports, “though in the midst of economic difficulties, to move ahead with continued investments to improve productivity and expand capacity”.

Sydney Ports Corporation contributes more than A\$2.5Bn to the economy of the state of New South Wales (NSW) and handles over A\$50Bn worth of international and domestic trade each year. The recent downturn in global trade has not deterred Sydney Ports Corporation from focusing on our long-term priorities. In particular, we are heeding the call of IAPH to continue with our planned investments in capacity-generating infrastructure for when the economy picks up.

Sydney Ports Corporation is continuing work on the A\$1Bn Port Botany Container Terminal Expansion – the largest port expansion to take place in Australia in 30 years – which will deliver 63ha of new port facility with five new deepwater shipping berths and 1,850m of new wharves.

The creation of a third terminal and operator at Port Botany will create capacity to introduce further competition into stevedoring. We

are also building a new intermodal terminal in western Sydney to facilitate more efficient port cargo movement through the city by railway.

While building this vital infrastructure we are taking a leadership role by focusing on reforms to landside operations at Port Botany. Sydney Ports has identified and recognised the need to address efficiencies and performance standards not just of stevedores, but across the whole landside logistics chain.

That's why we are leading and implementing the NSW Government's landside improvement strategy to deliver efficiency, consistency, transparency and 24/7 operations at Port Botany.

It is the first time in Australia that a port management organisation has become actively engaged in managing, reforming and executing improvements at the port rail and road interfaces.

It is through the implementation of these innovative reforms and construction of necessary infrastructure that Sydney can meet the future needs of the port industry to facilitate growth and international trade well into the 21st century. **RH**

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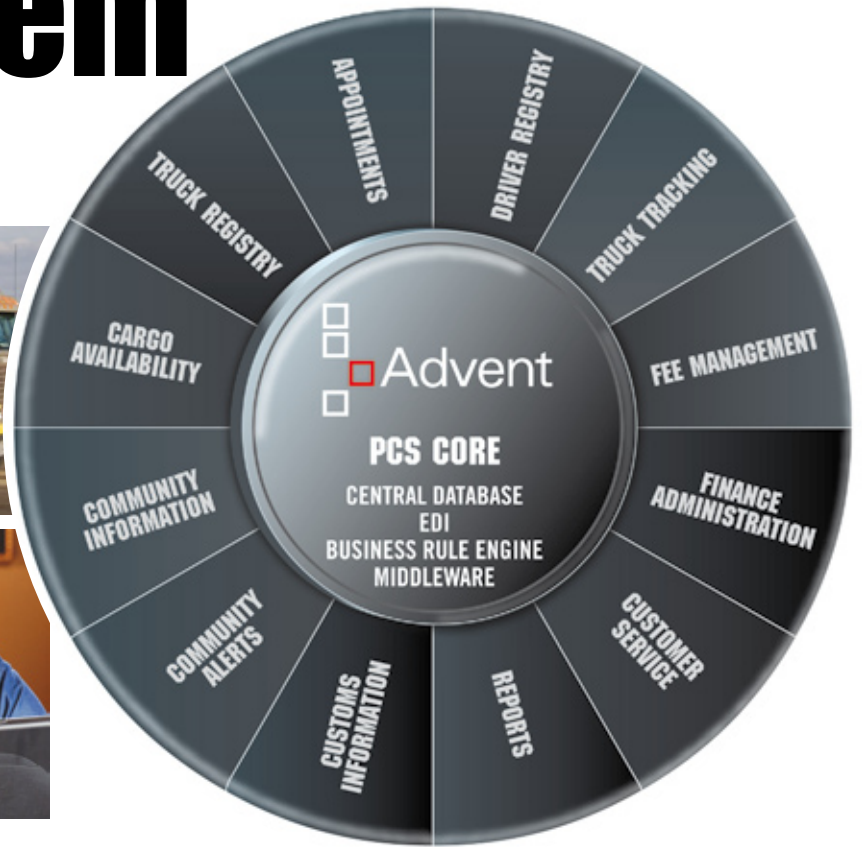
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