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PORTS HARBORS

Official Journal of the International Association of Ports and Harbors

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Wind turbines, solar panels, shore power, smart systems, and LNG fuel are just some of the ideas generated at the IAPH Sydney conference Photo: Hannah Kidd/Shutterstock

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PORTS HARBORS

Official Journal of the International Association of Ports and Harbors

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EDITORIAL & PRODUCTION

IHS Maritime Sentinel House, 163 Brighton Road, Coulsdon, Surrey CR5 2YH, UK Tel +44 (0)203 253 2100

PUBLICATIONS

Head of Publications: Nick Blackmore Email: nick.blackmore@ihs.com Publications Editors:

Mike Brock, Richard Halfhide, Lisa Maher

CONTENT

Head of Content: Neil Wiese EMEA Regional Managing Editor: Penny Thomas APAC Regional Managing Editor: Crystal Chan Americas Regional Managing Editor: Uchenna Jundu

DIGITAL

Head of Digital: Kate Pain Digital Editor: Yannick Guerry

CHIEF MARITIME ANALYST Richard Clavton

COPY EDITING

Chief Sub-editor: Jonathan Maynard Deputy Chief Sub-editors: Tom Brown, Martin Cooper

DESIGN Head of Design: Roberto Filistad Senior Designer: Hannah Kidd

PRODUCTION Director EMEA, Production Services: David Ward

Production Controller: Sarah Treacy Image Services Manager: Jo Agius

GENERAL

Sr Director, IHS Maritime Insight & Research: Louisa Swaden Director, EMEA Editing & Design: Sara Morgan

ADVERTISING SALES

Advertising and Subscription Sales: Janine Boxall Tel: +44 (0) 20 3253 2295 Email: Janine.boxall@ihs.com

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Port challenges

Secretary General Naruse joined the Ministers' Roundtable on "Mega-ships and their Impact on Port Development and Safety"

Susumu Naruse Secretary General – The International Association of Ports and Harbors



he meeting was attended by the Ministers of Transport from France, Norway and Malta and the vice ministers from other countries along with industrial representatives including the European Shippers' Council, International Chamber of Shipping and IAPH. Although the forum has a long history, it was the first time that it focused on port issues.

As the second speaker of the meeting, I pointed out some challenges that ports are currently facing to accommodate mega ships. Firstly, ports need to develop deep and large container terminals with sufficient infrastructures such as deep approach channels, which require a lot of resources and sometimes financial support from the public sector. Secondly, port operational efficiency needs to be improved because mega ships call on specific ports less frequently but with a larger amount of containers loaded/unloaded for a call. A Port Community System

• Ports need to develop deep and large container terminals

is necessary to smoothly transact port and import/export procedures. Thirdly, ports need to develop efficient hinterland connections in collaboration with other landside authorities. Lastly, ports may need to develop a contingency plan for possible accidents of mega ships since the intensity of the accidents would be much larger and the recovery efforts

would require much more time and resources.

The other issues raised by the ministers included structural weaknesses of mega ships, crew training, insurance coverage and container weight monitoring. While all the participants recognised cost effectiveness and environmental friendliness associated with mega ships, some of them were also concerned about possible mega ship-caused fatal events.

Regarding safety issues, IAPH sincerely welcomed MSC's (IMO's Maritime Safety Committee) decision on the amendment of SOLAS Regulation about container weighing. The amended rule requires shippers to submit verified gross weight of containers before loading onto ships. Without such document, relevant export containers would not be loaded onto ships. IAPH is very happy with this decision because it has been an outspoken advocate on this issue for several years.

IAPH is determined to continue to focus on critical issues surrounding the global port industry in years to come. PH



Bought&Sold

CRANES FOR CHILE

Terminal Pacífico Sur Valparaíso in Chile has purchased three ship-toshore container cranes from Irishbased Liebherr Container Cranes. These cranes have an outreach of 62m and a safe working load of 65 tonnes under the twin lift spreader. These are the largest container cranes that Liebherr has so far manufactured for the west coast of South America.

KALMAR'S DPW CONTRACT

Cargotec subsidiary Kalmar has been awarded orders to supply DP World's Jebel Ali Port in Dubai with 125 terminal tractors and 12 empty container handlers. The orders were booked into Cargotec's 2014 first quarter order intake with delivery of the terminal tractors scheduled to be completed by the end of the third quarter of 2014 and the container handlers by year end.



MOBILE GOES INTERMODAL

Alabama State Port Authority's board of directors has authorised director/CEO James Lyons to acquire two industrial tracts adjacent to the Choctaw Point Complex at the Port of Mobile.

ECO-FRIENDLY FORKLIFT Kalmar has also launched a new environmentally friendly electric forklift truck with a lifting capacity of 5-9 tonnes at May's CeMAT exhibition in Hannover, Germany. The counterbalanced forklift boasts features that greatly reduce the cost of ownership while improving safety.



Turkish operators meet Trieste officials. Trampus (with glasses) is on the left

Trieste discusses ro-ro imports expansion

Trieste port officials met a delegation of Turkish owners and ro-ro operators in early June to discuss an expansion of the highly successful Motorway of the Sea between Turkish export facilities and the Adriatic port. The meeting was to discuss an expansion of the 'motorway' - regarded as the busiest route in the eastern Med and the development of another ro-ro terminal besides the two in operation. Ro-ro traffic at the port of Trieste increased by 28% in 2013 and is expected to show similar growth this year.

The Turkish delegation was led by the owner of one of Trieste's current terminals, Enrico Samer, and included operators such as UN Ro-Ro, Esas and Acteragroup.

As well as plans for a new terminal dedicated to ro-ro, the port also has the option to extend the current free port zone, which has been such a selling point for Turkish exporters. Quotas and tariffs on trucks entering the European Union from Turkey do not apply to trucks arriving at the free port. Granted free port status by a postwar treaty, the port has a natural draught of up to 18m and proximity to and excellent rail links with the emerging markets of eastern Europe.

"Because it was established by postwar treaty before the EU was created, Trieste free port has more benefits and incentives than EU free trade zones, which are generally not very attractive compared with their Middle East and Asian equivalents. But in Trieste, EU state aid rules do not apply," Dr Francesca Trampus, the port's director of port estate management, told *P&H*.

The free port is outside the Italian customs regime so shippers can store goods in its warehouses without paying customs dues. Duties are normally paid six months later at a preferential rate of 50% of the normal tariffs and port taxes are two-thirds less than in the rest of Italy.

But despite its potential as a value-adding processing centre, room for inland expansion is limited. The main container facility, the Marine Terminal, which handled 460.000teu in 2013, has been forced to build seawards to expand its capacity. "Our capacity today is almost 700,000teu, so we have an expansion potential of about 40% and a small amount of extra capacity from dismantling neighbouring warehouses and reorganising the stacking area," Marine Terminal spokesman Marco Zollia told P&H. "We expect to keep growing especially if the P3 network arrives as anticipated." Trieste is one of five core Italian ports identified by P3, which was due to come into operation later this year.

The other ports are Gioia Tauro, La Spezia, Genoa and Naples. As *P&H* went to press it was announced that the P3 network has been rejected by China's Ministry of Commerce. In March this year, the US Federal Maritime Commission decided to allow the P3 Network agreement, and in June the European Commission decided not to open an antitrust investigation and closed its file.

Chiquita back in New Orleans

Container business at the Port of New Orleans is expected to increase 15% as a result of a major reefer operator's decision to relocate there from a rival port on the US Gulf of Mexico.

Chiquita, a \$3Bn banana and fresh-food distributer, announced on 14 May its plans to switch operations to New Orleans from Gulfport, Mississippi, roughly 100km to the East. The change will mean an additional 30,000-39,000teu of inbound and 30,000-39,000teu of outbound cargo for Chiquita's new homeport. Shipments are expected to begin by 1Q15.

The move also marks a return by Chiquita to New Orleans after nearly 40 years. Known as United Brands in the 1970s, Chiquita switched its shipping operations from the Port of New Orleans to the Port of Gulfport in the mid-1970s after calling at New Orleans for more than 70 years.

"This will make Chiquita the biggest single shipper in our port," Port of New Orleans president Gary LaGrange told *P&H*. "We're ecstatic about it."

Chiquita emphasised that the decision to relocate back to New Orleans was based on operational



changes within its subsidiary shipping company, Great White Fleet, rather than dissatisfaction with service at Gulfport. Increased use by Chiquita of third-party container operators could involve larger container ships that the Port of New Orleans is more equipped to handle.

"We are particularly excited about the enhanced service levels to our Chiquita and Great White Fleet customers that will result from this change in our shipping operations and expanded vessel capacity," said Chiquita Brands International senior vice-president Mario Pacheco.

Monetary incentives by the port played a part in securing Chiquita's business. The Port of New Orleans plans to invest \$2M for reefer container electrical infrastructure and rehabilitation of a container freight warehouse to accommodate the project. In addition, the State of Louisiana will provide Chiquita with a performance-based incentive of \$18.55 per teu, or \$1.11M to \$1.45M annually, to offset increased shipping and handling costs at the Port of New Orleans. The state will also invest \$2.2M in a port-owned distribution/ripening facility to be leased to Chiquita.

The new service will strengthen the state's and the New Orleans port's ties to Central America, the port and Chiquita noted, resulting in improved ocean transportation to those countries while further establishing New Orleans as a reefer port. It will also benefit shippers looking to export more cargo to Central America.

The Chiquita contract and accompanying investments are part of an overall strategy to grow the port's container business. The Port of New Orleans is served by some of the world's largest box carriers, including Maersk, MSC, Hapag-Lloyd, CMACGM, ZIM, Seaboard, CSAV and Libra.

The port's Napoleon Avenue Container Terminal currently has a capacity of 640,000teu per year. However, construction is underway on the Mississippi River Intermodal Terminal, a facility that is expected to increase the port's container handling capacity by 30% to more than 840,000teu/year.

Cash&Cargo

MARSEILLE FOS Q1 DROP

A 6% fall (to 18.8M tonnes) in first quarter cargo throughput at the French port of Marseille Fos since last year is attributed to declining oil trades. The port's oil-led liquid bulks slumped 14% to 10.9M tonnes. Agrobulks also declined (8%), but general cargo rose 1% (to 4.3M tonnes), and drybulk climbed 19% (to 3.6M tonnes).

BOX TRADE UP IN LA

Imports and exports of containers through the Port of Los Angeles during the first quarter of this year rose 10.30% (to 537,071teu) on the same period last year (486,910teu). Imports saw the biggest rise, climbing 11.43% to 537,071teu, while exports rose 8% to 172,945teu. The port said "overall volumes" rose 8.21% (2,626,647teu).

▶ BARCELONA Q1 GROWTH Traffic at the Port of Barcelona grew 9% in the first quarter, with increases in all segments of cargo. Containers and vehicles rose by 5% and solid and liquid bulks showed double-digit growth. The Port ended the first quarter having transported 10.7M tonnes of goods, representing a 9% increase in total traffic.



QUEENSLAND PORTS DISPOSAL

The Queensland government has announced that it will seek a mandate at the polls next year to back its plans to sell its ports via an AUD33.6Bn (\$31.2Bn) privatisation plan that includes the long-term lease of both Townsville and Gladstone ports.



Chiquita will return to New Orleans after an absence of nearly 40 years

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Dredging

► US DREDGING CAP LIFTED Legislation passed by the US Senate will allow construction to begin on various port projects, such as the one at Savannah, Georgia. The Federal Water Resources Reform and Development Act 2014 officially lifts the spending cap that was imposed on it in 1999.

PIVOTAL PORT BILL

US President Barack Obama has signed legislation that port officials and the dredging industry believe will jump-start harbour deepening and expansion projects. The Water Resources Reform and Development Act (WRRDA) streamlines Federal permitting for navigational dredging while directing more money towards maintenance dredging.

MEGASHIPS PORT

Australia could have a new 9M teu capacity deepwater port capable of berthing the latest generation of megaships at the Port of Hastings, ensuring Victoria remains Australia's freight and logistics capital, added the Victorian Government, which earmarked about \$102M in the last budget for two-year preliminary studies.



DEEP DREDGING

The Port Klang Authority (PKA) will dredge the South Channel entrance at Pintu Gedong to allow round-the-clock access for larger vessels. The project, due to be completed by April 2015, involves taking the existing 16.5m depth to 18m, with Integrated Marine Works assigned to carry out the works.



Portsmouth International Port (PIP) has benefited from EU funding

Portsmouth talks EU funding

British south coast port Portsmouth International Port (PIP) was recently able to give a number of its peers a first-hand view of some of its achievements in recent years which have been helped by EU Funding.

Some 30 delegates representing small- and mediumsized ports in Belgium, France, the Netherlands and the United Kingdom attended a meeting in Portsmouth to review the role EU funding has played in their recent development and to discuss how they can co-operate so as to be able to continue to benefit from it in the future.

PIP was able to highlight two major projects which have benefited from funding from the European Regional Development Fund via the Interreg IVA '2 Seas' programme.

The aim of this programme, which ran from 2007 to 2013, was to promote cross-border co-operation between EU states bordering on the English Channel and southern North Sea. Thanks to the Ports Adapting to Change (PATCH) project in which it participated with other ports in the 2 Seas region, PIP was not only able to obtain grants for its development master plan but also for the use of an energysaving seawater heat transfer pump in the new ferry terminal which it opened in 2011.

Another Interreg project, Connect 2 Compete (C2C) enabled the port to fund preparatory work for the Trafalgar Gate Link Road, which gives port traffic direct access to the port area without having to pass through the city centre.

Portsmouth International Port assistant harbour master Jerry Clarke told *P&H*, that the two projects which were awarded EU funding were already planned by the port.

"We don't get involved in European projects we weren't going to do anyway," he said, adding that the port was above all interested in obtaining EU financing for development of port infrastructure and facilities.

"We are practical and it is practical things we've done with the money we've got," he said.

Those attending the Portsmouth meeting were able to visit the port's new ferry terminal before being taken to Portsmouth Guildhall for the meeting proper.

The purpose of the meeting was to enable participating ports and their representatives to discuss how they could pursue the co-operation which helped them obtain funding for their projects during the 2007-2013 funding period during the new 2014-2020 period.

Clarke said that PIP and its partners had already begun to work in this direction. Among Portsmouth's priorities in the new funding round, he said, would be support for its efforts to adapt to the increasing size of ships seeking to use the port and to new emissions regulations, particularly those aimed at reducing the sulphur content of marine fuel.

Screen staff to discourage insider crime

Delegates at SMi's International Port Security Conference in London have been urged to establish strong staff-vetting systems in order to discourage insider crime. Martin Dubbey, managing director of Dextera Global, said: "In my experience there is a core of criminality that influences all ports around the world."

He said that low wages, sudden personal difficulties and familial criminal links are among the most common causes of port worker criminality. He said workers' family and social ties make it particularly difficult for security forces to investigate these issues without giving away their operation.

However, ports face commercial and reputation losses if they do not take action, Dubbey noted.

He recommended such actions as monitoring equipment, establishing a live whistleblower policy, conducting annual or two-yearly criminal record checks and forging clear and strong human resources contracts with ethical testing.

"You thus raise the risk and

psychological bar for the criminal, who has to jump higher to commit a criminal act," Dubbey explained.

He cited criminal incidents that include a crane driver taking payment from a criminal gang to move a container to an isolated spot and then onto a truck; and cleaners being paid to pass on information found on the desks of port office workers.

The percentage of container theft is in "single figures, but even that is significant. It should be lower", Dubbey said.

Port updates

PSA ENTERS YANGTZE

LYG-PSA Container Terminal has opened in China's Lianyungang Port, marking PSA International's first venture into the Yangtze River Delta region. The terminal is a joint-venture between Lianyungang Port and PSA, has a designed capacity of 2.8M teu, 1,700m quay length, super post-Panamax quay cranes (23-rows outreach) and a water depth of 16.5m.



AMPT ENTERS STH ANGOLA

APM Terminals' joint venture in Angola, Sociedade Gestora de Terminais (Sogester), has signed a 20 year concession to operate, maintain and develop Angola's Port of Namibe, which serves the hinterland from Namibe to Menongue and the city of Lubango. Namibe is the only port in Southern Angola, with a strong commercial position close to some of the finest quality marble and granite resources in the world.

LONDON GATEWAY EXPANSION

Industrial buildings specialist Prologis and DP World have formed a joint venture to develop a 316,000ft² (29,357m²) distribution centre at London Gateway Logistics Park. The 15m-high speculative development will give flexible distribution space, a 55m yard and room for expansion. The site is within easy reach of the M25 London orbital motorway and is connected to the national rail network.

Seroka to lead Port of Los Angeles

Los Angeles mayor Eric Garcetti has appointed Gene Seroka as the next executive director at the US Port of Los Angeles.

Seroka was most recently head of commercial operations in the Americas Region for APL, the subsidiary of Singaporebased NOL. He had also previously served as the president of the region for the box line.

On 5 June, the Harbor Board of Commissioners unanimously voted to approve Seroka for the executive director's position which was confirmed by Los Angeles City Council on 11 June.

Gary Lee Moore has been serving as the port's interim executive director since October, when former executive director Geraldine Knatz (and immediate past president of IAPH) announced plans to retire.

"The Los Angeles trade gateway is a vital force in our nation's economy," Seroka said. "I am honoured to lead the team dedicated to making this powerful engine the most competitive, efficient and sustainable source of prosperity for the benefit of both our region and US international trade."

Seroka began working for APL after graduating from business school as a sales support representative, and served in a variety sales and marketing roles throughout the United States.

He was appointed as managing director of APL and APL Logistics, based in Jakarta, in 2003. In 2005 he was made vice-president of APL Logistics in Singapore, responsible for the Asia/Middle East and South Asia regions.



Los Angeles is a regional hub



Port **updates**

CORK EXPANSION

The Port of Cork has lodged a planning application to expand facilities at Ringaskiddy Port in the lower harbour. The project includes the provision of new container berths, a multi-purpose berth, yard areas, seabed dredging and container handling equipment at Ringaskiddy East and a 182m deepwater berth extension and dredging works at Ringaskiddy West.

US DREDGING CAP LIFTED

Legislation passed by the US Senate has cleared the way for construction to begin on the Savannah Harbor Expansion Project, designed to enable access by larger vessels. The Federal Water Resources Reform and Development Act 2014 officially lifts the spending cap that was imposed on the project when lawmakers first authorised it in 1999, and enables both state and federal dollars to be used to fund the channel deepening work at the port. The State's share is now \$266M.

LYON GOES PAPERLESS

Lyon Terminal has signed a deal with the logistics expert MGI to implement the Inland+ logistics module into its cargo community system that is used for rail-river shipping. The module will enable paperless procedures and customs clearance during transit from the departure port to the shipper's address, potentially cutting management costs and dockside demurrage fees.

SIPG YEAR END RESULTS According to its 2013 annual report, SIPG posted an 8.1% year-on-year increase in cargo volume in 2013 to 543M tons, of which bulk cargo accounted for 204M tons, up 10.5% year on year; container throughput showed a 3.8% year-on-year increase to 33.773M teu.



A ROPES test site, at Rotterdam's ECT terminal

ROPES results

Wash generated by the wake from passing ships can compromise port safety and damage the environment, a study confirmed. The results of the Bechtel-led project, Research on the Passing Effects on Ships (ROPES), were unveiled at the World Association for Waterborne Transport Infrastructure World Congress in San Francisco on 3 June. The study found that the size, speed and power of ships has increased dramatically over the years, creating larger wash from vessels moving in and out of port areas. This can cause moored ships to come loose and affect the safe loading and unloading of vessels, the study revealed.

The research concluded that the forces from the wash are

directly influenced by the shape of the port basin, the size of the vessel, the passing distance and the passing speed.

Wash from larger vessels can also cause environmental damage and result in financial loss, pointed out Bechtel's Marco Pluijm, who chaired the ROPES project.

A software programme based on the findings has been developed to "improve the safety of ports and create guidelines for use in the planning and design of future ports", said Bechtel.

Denmark makes a stand on emissions

The Danish Maritime Authority (DMA) has revealed its plans to clamp down on shipowners who breach stricter requirements for ships' sulphur emissions that come into effect on 1 January 2015 in the North Sea and the Baltic Sea.

Using both drone and 'sniffer' technology, the organisation will take measurements from the air of a ship's sulphur emissions to check compliance and that a maximum sulphur content of 0.1% is being emitted compared with a level of 1%. Both technologies are being tested this year, and the Danish Environmental Protection Agency has committed \$364,724 to the projects.

The DMA said the initiatives had been borne out of discussions with the Danish Environmental Protection Agency and the Danish Shipowners' Association (DSA).

Speaking last year at the Nor-Shipping exhibition in Norway, shipping companies such as Maersk voiced their concerns about investing significant amounts in technology to comply with regulations and about being put at a competitive disadvantage compared with other companies that failed to do so. The DSA has warned that the price of a single trip across the Baltic Sea will rise by an estimated \$182,362 in low-sulphur fuel costs.

Part of the problem with tougher environmental standards is enforcing them consistently across Europe, particularly with the level of fines that many shipping companies feel are not high enough to discourage operators from ignoring the rules.

"In order to ensure that non-compliance does not pay, another initiative listed in the action plan involves a closer scrutiny of the size of fines, as well as legal prosecution of shipowners not calling at Danish ports," added the DMA.

Data from the DSA suggests that so far, Danish shipping has lowered its total relative carbon emissions by 50% since 2008.

Simulation solution to reduce VTS operator stress

Recent simulation trials with vessel traffic services (VTS) operators have shown that a new advanced automated solution may help shoulder the load that these often overwhelmed personnel carry, while still keeping maritime traffic moving safely in and out of the world's harbours.

The research study, *Designing Dynamic Distributed Cooperative Human-Machine Systems* (D3CoS), which concluded in February 2014, covered findings from the EU Artemis Joint Undertakingfunded project.

The idea of using automation in any occupation is not a new one, but the expectation is that greater automation can further reduce workload and therefore pressure on the VTS operator. While many VTS operators deal with high-traffic volume, some have ever-increasing responsibility, often without an increase in staff. The stress level is somewhat lessened in places such as the Dover Channel Navigation Information Service or the Singapore Port Operations Control Centre, for instance, where a large pool of operators rotate at regular intervals. Other VTS centres, however, may have just one or two operators. In either scenario, the project researchers believe this new technology can help reduce stress and give operators more focus.

The D3CoS project maritime group developed a data-sharing mechanism between a shorebased VTS system and a shipbased system, specifically a portable pilot unit (PPU) supplied by Marimatech.

In addition to the PPU, Kongsberg Norcontrol IT partnered with British Maritime Technologies (BMT) and Marimatech to develop an advanced Vessel Path Planner. This planner enables the efficient automatic sending of vessel conflict data and maritime safety information such as weather data from the VTS to the PPU without the need for the VTS operator to be involved.

During the study's trials, maritime operators – one from Halifax, Canada and one from the Norwegian Coastal Administration – were tested in four 10-minute (audio and video-taped) simulated VTS scenarios where they performed realistic tasks in specific areas, working from normal to overworked workloads. They were also monitored for specific physical responses and had to complete a post-testing questionnaire.

Operators were asked to take ship reports by VHF while managing a traffic separation scheme with crossing ferry traffic as well as a precautionary area. These first experiments also assessed and tested the instrumentation hardware, the software algorithms and the experimental protocol. According to researchers, the results clearly demonstrated the operators' attention became increasingly compromised as stress levels increased, resulting in dangerous situations being missed including in a simulated collision.

Some variability came into play as they looked at deciding if a machine should communicate warnings. In an ideal situation, the operator would signal the vessel if there was the likelihood of a collision. But if the operator's attention is scattered due to hightraffic density or complexity, or being overwhelmed with warnings from the VTS system, it is recommended that using the automated notification to the PPU would be preferable to none at all.

While stress-reduction techniques are covered in VTS operator training and other measures are also sometimes used, for example, the use of ergonomic chairs at the workstation, reducing overall stress and workload pressure for VTS operators is the aim of the co-operative humanmachine system prototype.



Kongsberg Norcontrol's IT training manager Todd Schuett speaking at a 2014 conference in Spain

Port updates

POTI PLANS FOR GROWTH APM Terminals Poti has completed an engineering master plan designed to prepare it for the escalating needs of Georgia and the hinterland countries of Armenia and Azerbaijan. The study outlines plans for increasing water depth and a more efficient entrance channel able to handle container throughput exceeding the port's current 600.000teu capacity by 2017.

AQABA UPGRADE FOR APM

APM Terminals plans to expand its logistics facilities at Aqaba Container Terminal, the key Red Sea Gateway to the Levant region, to meet growing demand from importers and exporters. Aqaba Logistics Village will expand from 13 hectares to 24 hectares and will be open for business by February 2015.

PORT "GREEN BELT" COMPLETED

The Port of Dunkerque has created a 38-hectare "eco landscape belt" as part of the Saint-Georges rail link – a mosaic of natural areas in the territories of Gravelines, Bourbourg and Saint-Georges-sur-l'Aa designed to encourage biodiversity and provide a place for fauna and flora to flourish undisturbed. The project forms part of a Sustainable Development and Action Plan for the port territory, intended to encourage the sustainable development of port activities.

OZ PORT SOLD

A 98-year lease for the Port of Newcastle has been sold by the New South Wales (NSW) government to Port of Newcastle Investments, a 50:50 joint venture between Australia's Hastings Funds Management and China Merchants Group. The deal, valued at about \$A1.75Bn (\$1.64Bn), follows last year's combined sale of NSW's Port Botany and Port Kembla leases.

Beyond the port

David Anderson, CEO of Ports Australia, tells correspondent Zoe Reynolds that his aim is to put ports on the public policy agenda



"Both sides of the political fence now include the support of ports and port accessibility in their infrastructure policies.

"Seaborne trade amounts to one third of Australian GDP and Australia has the fourth largest shipping taskforce in the world. But port gateways have only taken priority in the last five years; now, the focus is firmly on landside connections.

"For over a century, Australia had state and federal planning for roads and rail networks without any reference to future port capacity, which is not smart thinking. The previous [Labor] government took the first step to set things right. It set up Infrastructure Australia in 2008 to address a clear lack of port access and logistics, create a National Port Strategy [NPS] and improve port master planning.

"Here at Ports Australia, we worked with Infrastructure Australia to help develop the NPS. The plan was to move away from ports being treated like islands unconnected to cities and regions.

"The so-called resources boom brought on a lot of export volume in bulk trades. At the same time the strong Australian dollar increased demand for consumer goods, impacting on container volumes. This increased trade highlighted supply chain capacity issues.

"Fixing ports became critical. Not the ports themselves. Billions had been invested in port side capacity, mostly through private investment. This, however, had not been matched landside. In the Pilbara, miners invested in their own rail logistics connecting with stateof-the-art bulk loading facilities. This was also the case for the majority of bulk ports around the coast.

"To this day, none of Australia's five main container terminals is doing better than a 15% share of containers by rail. Bottlenecks are still an issue. While stevedores are investing in automation and first class facilities portside, landside infrastructure is lacking. It is the rail and roads feeding our terminals that now needs fixing.

"To do this we need to focus on rail – on getting freight-dedicated train path infrastructure to take some of the load off roads. Both road and rail need to perform well to ensure the long-term viability of our ports.

"Key to Australia's 'Beyond the Port' concept is developing transport corridors inland from the port boundary as part of state and local





"The previous government injected A\$20 billion [US\$18.5 billion] into the nation's infrastructure. Now the Coalition will inject a

Bottlenecks are still an issue. It is the rail and roads feeding our terminals that now needs fixing

David Andersen

CEO of Ports Australia



further A\$2Bn into port logistics in the coming year. The budget makes special reference to a number of key port access projects. including Brisbane, Botany, Fremantle, Newcastle, and Gladstone. "Ports Australia has lobbied hard to drive home to successive governments the importance of port connectivity in infrastructure spend. Our message is getting through and we are pleased to see that these key parts of our freight network are receiving strong recognition. In June [as P&H went to press] we released: 'Leading practice: port land and supply chain protection'.

"We will work hard to help establish workable funding models with private sector participation to secure the means to further improve our freight networks. We have also developed the planning tools to help ports do their part.

"Australian ports are [sited] hard up against communities. We have large container ports, which, except for Brisbane, are very closely surrounded by urban areas and communities. The bottom line is you need to step in when people propose developments around freight corridors and ports. You need state enforcement so you don't get people building luxury apartments up against an existing freight line – like they did in Fremantle – then complaining about the noise.

"Intrusions such as dust and noise pollution must be carefully addressed. We have to take people along with us and maintain our social licence to operate. We realised if we didn't take action around this issue we were going to have unsustainable ports.

"The National Ports Strategy introduced the notion that port and community planning must go hand-in-hand. It's a difficult gig endeavoring to bring the health of cities, the mobility of people and the movement of freight into one policy mix.

"Ports Australia has developed a planning framework – 'Leading Practice: Port Master Planning' – to help individual ports grapple with the issues. The NPS is not some sort of blueprint for physical ports development; it is essentially a proposition that says to all

governments and industries: 'Our ports are the biggest freight hubs in the country. We need to ensure their efficiency through improved policy and regulatory settings, and that robust trade growth in ports can develop with certainty knowing that land will be available for road and rail corridors as well as freight precincts.'

"Our recent strategy has been to address past planning failures and to elevate ports on the public policy agenda. We continue this endeavour – there's no going back.

"Once port authorities were largely concerned with making sure their channels were maintained, bringing vessels up the channels safely, putting them alongside, and making sure cargoes transferred as efficiently as possible. Now, ports increasingly understand the biggest issue is matching portside capacity with landside capacity – protecting our road and rail corridors and ensuring land use conflicts do not occur around the port." PH

MORE INFO: www.portsaustralia.com.au



Thinking smart ... going green

Wind turbines, solar panels, shore power, and smart systems software are making world ports sustainable, while LNG and sails are touted as future shipping options. *Zoe Reynolds* reports on the latest WPCI initiatives and ideas generated at the IAPH Sydney conference

> he port of Hamburg calls itself the port of the future. It is also a SmartPort, it said, a statement supported by Fer van de Laar, IAPH managing director Europe, who told *P&H*: "On the issue of SmartPort, we have discussed this issue with Hamburg now for some time and they were actually the first ones [ports] to merge all those 'smart' ideas that are popping up everywhere in one really considered plan." So when Lutz Birke, head of strategy, took the stage at the IAPH mid-term conference in Sydney this April, he set out to show how the port is leading the way with emission reduction technology.

> Nicolaj Noes, CEO of Maersk Australia, spruced its Triple E mega ship's 'green' credentials – a cut in CO_2 emissions by more than 50% per container move. Herve Lours, Marine and Shore Connection vice-president at Schneider Electric, spoke on shore power, while van de Laar outlined the potential and pitfalls of LNG as a marine fuel.

Van de Laar is also the director of the World Ports Climate Initiative (WPCI). He briefed the conference

Ports will come
 under more pressure to
 eliminate emission
 Grant Gilfillan
 MPH president, CEO Sydney Ports

April 2008 members qot together with regional port organisations to set up a mechanism to help combat climate change. From this WPCI was born, with the first 55 ports signing up to cut greenhouse gases. Now WPCI has more than 60 members.

on how in

IMO regulations will set a worldwide limit of sulphur content in ships' fuel to 0.5% by 1 January 2025 at the latest. "We already have some changes," said van de Laar. "There are emission control areas [ECAs] in the Baltic Sea, the North Sea, and North America." In these ECAs the sulphur content in ship's fuel will be limited to 0.1% as of 1 January 2015.

WPCI addresses a number of key climate initiatives including carbon footprinting and modelling tools, onshore power supply, environmental ship index, cargo-handling equipment, intermodal transport, lease agreement templates, and liquefied natural gas (LNG)-fuelled vessels. Additionally, Hamburg is one of a handful of ports that brings many of these initiatives together and more.

The Port of Hamburg, which is to host the IAPH world conference in 2015, sits in the middle of the city,

surrounded by residential areas. Birke said the pressure to reduce emissions is paramount. "We want to focus on innovative technology if and where possible," Birke said. "Our dependence on conventional generated energy will decrease by extending the use of alternate energy sources."

The Eurogate container terminal in Hamburg was the first company to install its own wind turbine. The port aims to have seven more by mid-2015, with government approval for a further 10 under way. The port authority is also installing solar panels on rooftops.

Since January 2013, the port has introduced 24 measures achieving 41.100 tonne а annual reduction in greenhouse gases. More is to come. "We have also developed infrastructure for LNG to supply vessels, port traffic, and trucks," said Birke.

Many terminals at Port of Hamburg have embraced automation and it is moving from road to rail and implementing a state of the art traffic management system – hence the term SmartPort.

"Ports have thousands of people and trucks milling about," said Birke. "So we end up with multiple systems that don't communicate with each other. We have introduced 'smart' logistics for intelligent ports offering real-time data to users on smartphones and tablets. This has huge potential for emissions reduction," he said.

It is also an onshore power facility for cruise vessels.

WPCI project port, Los Angeles, found shipping contributed 30% to port pollution.

Over an eight-hour period a 12MW cruise vessel emits 1.2 tonnes of nitrogen oxide – the equivalent to 10,000 cars – and 30 kilos of particulate matter, according to data provided by Schneider Electric.

"Ships generate pollution right in the middle of the city," said Lours. "This must stop one way or another. Shore connection is one way."

California is leading the world with new regulations – 80% of power used by berthed ships must come from shore to power by 2020. This April the European

Parliament legislated that 80 core seaports must have shore power by 2025, Lours reported.

China requires ship-to-shore power to be included in all new container, bulk, cruise, and Ro-pax vessels and terminal construction.

Van de Laar then highlighted LNG as another low emissions alternative for shipping, and outlined the case for and against ships converting to LNG fuel.

LNG had big emissions savings, but must be handled with care. Storage takes three times the space of other fuels, displacing a lot of cargo carrying space. On the flip side, however, particulate matter is reduced to nearly zero, nitrogen-oxide is cut by 80-90% and there are no sulphur emissions, he said.

"For ports it means sustainable development, cleaner local air quality and a licence to grow," he said. LNG, however, is hazardous. Despite this more than 50 seagoing vessels in Northwest Europe have made the conversion – mainly ferries, tugs, and ro-ros.

Van de Laar said there is a growing interest in LNGpowered container vessels, with 53 newbuilds on order. Chinese shipowner Zhejiang Huaxiang Shipping has ordered a 14,000m³ duel fuelled LNG carrier for 2015 for its coastal LNG domestic market. TOTE Maritime, SeaCargo, and UECC also have ships on order.

Others such as MS Viking Grace, MS Stavangerfjord, and Bergensford are undergoing refits.

Ports catering for these vessels will need to consider whether to opt for fixed, floating, truck refuelling, or barge bunkering. Either way, van de Laar stressed, LNG bunkering requires supervision, safety, and training for all concerned. Guidelines for accreditation of bunkering companies need to be developed, he noted.

To date 19 ports in Europe, the United States, Singapore, Japan, New Zealand, and the United Arab Emirates provide LNG bunkering, with Antwerp the WPCI project port.

In January 2013 DNV risk management in conjunction with the Australian Maritime Safety Authority, Ports Australia, and key industry players released nominations for the 10 Australian ports best suited to develop LNG infrastructure by 2016.

"There's a lot of enthusiasm about short-route shipping on the coast moving to LNG," David Anderson, Ports Australia CEO, told P&H at the time of the report's release.

Speaking with *P&H*, IAPH President and SydneyPorts CEO Grant Gilfillan forecast ports coming under more pressure to eliminate emissions.

He pointed out that in Australia vessels can burn fuel with a sulphur-oxide content of 3.5-3.6%. "In America, that's not permitted. I am struggling to run an argument that it's acceptable to do this in Sydney when it's not acceptable in many other parts of the world."

Gilfillan advocated scrubbers on the ships engine to filter emissions, but also shared a bigger vision. "Why not sails?" he asked. "I've seen options [including solar] to augment the power of the ship." PH



Clean diesel tops US green port scheme

Obama administration funding grants used to kick-start initiative helping ports cut pollution on the waterfront, reports **John Gallagher**

Sock stack pollution control equipment Portion Agency (EPA) kicked off the initiative in April at the Port of Baltimore by hosting the Advancing Sustainable Ports summit. The summit served as a venue for professionals from the port and related transport sectors to address opportunities and challenges faced by US ports and their neighbouring communities.

To show its commitment to its new green ports scheme, EPA at the summit awarded \$4.2M in grants for clean diesel projects at six US ports (see sidebar). An EPA spokesperson told *P&H* that the competition for the grants was the first to focus on solely reducing emissions at ports.

Diesel engines emit large amounts of air pollutants such as nitrogen oxides and particulate matter, and are linked to health problems including asthma, lung and heart disease, and even premature death, EPA said.

"Ports are the main gateway for US trade and are critical to our country's economic growth, yet the communities surrounding ports face serious environmental challenges," said EPA Administrator Gina McCarthy in announcing the initiative. "Today we demonstrate that through collaboration and innovation we can achieve the goals of economic growth and environmental stewardship."

As part of the new initiative, EPA plans to work with port authorities to develop emission measurement tools, which will help ports understand better their energy use and environmental impact, the agency noted. The scheme could help US ports make headway in overcoming community opposition to their expansion plans – plans that economists have asserted will be needed for ports to keep pace with increasing demand for freight capacity.

Most of the nation's busiest ports are located in or near large metropolitan areas and, as a result, people in nearby communities can be exposed to high levels of pollution, EPA noted. Diesel-powered port equipment, for example, "can seriously impact air quality for nearby residents and generate substantial greenhouse gas and black carbon emissions", EPA asserted. "Implementing clean air strategies at ports will reduce emissions and provide health benefits from improved air quality for workers and families who live nearby."

Ports are the main gateway for US trade... yet the communities surrounding ports face serious environmental challenges

Gina McCarthy: EPA administrator

EPA has worked with ports in other environmental programmes, the most recent being in 2011 with the launch of the SmartWay Drayage Program, a partnership among the federal government, ports, green groups, trucking companies, and shippers. The goal of SmartWay, according to the Environmental Defense Fund, is to "solve a critical health and environmental challenge: how to reduce harmful air emissions from port drayage trucks".

The programme requires trucking companies to commit to achieving at least a 50% reduction in particulate matter and a 25% reduction in nitrous oxide below the national average within three years. Building on schemes such as SmartWay, one of the goals of EPA's new initiative is to look at ports "as unique places with complex needs and opportunities", EPA stated, which will include supporting operational and technological improvements to pollution reduction methods.

Over the past year, EPA has been hosting themed webinars targeted at port authorities, shippers, and local governments to share information and successes made by ports in reducing emissions and improving environmental performance. Speaking on a panel at the summit in Baltimore, regional EPA Administrator Dennis McLerran pointed out that ports often have many competing interests that require different strategies towards cutting pollution. "There needs to be better alignment across the board – among stakeholders, between governments, and within ports on environmental programmes and objectives," he said. "The webinars and summit are the first step in developing a mechanism to convene and share information and input among all stakeholders."

Some of the success made at individual ports in cutting pollution was featured at the Baltimore summit. Rick Cameron, MD of Environmental Affairs at the Port of Long Beach, California, outlined several pollutioncutting initiatives at the port, including a clean trucks

Green port funding winners

The six ports have been awarded a total of \$4.2M in grants from the US EPA for clean diesel projects to reduce air pollution:

Port of Seattle, Washington – \$1.2M – Drayage Truck Replacement Project: Provides incentives to replace 40 older heavy-duty drayage trucks with them powered by 2010 or newer certified engines. The project will supplement the port's existing truck replacement programme.

www.portseattle.org

Port of Baltimore, Maryland – \$750,000 – Drayage Truck Replacement Program: Provides incentives to replace 35 pre-1997 model year drayage trucks in service at the port with the trucks powered by 2010 or newer certified engines.

Port of Virginia – \$750,000 – Hybrid Shuttle Carrier Demonstration Project: Replaces three Tier 1 shuttle carriers with Tier 4 hybrid diesel-electric shuttle carriers in operation at the Port of Virginia.

www.portofvirginia.com

Port of Tacoma, Washington – \$602,000 – Switcher Locomotive Repower: Repowers a railroad switcher locomotive with an engine equipped with an automatic start-stop system to reduce idling.

http://portoftacoma.com

Port of Hueneme, California – \$500,000 – Shore Power Infrastructure Project: Completes electrification of Wharf #1 and allows the port to supply ship-to-shore power to ocean-going vessels at all three berths simultaneously, thereby reducing emissions from ship idling.

() www.portofhueneme.org

Port of Los Angeles, California – \$469,000 – Cargo Handling Equipment Retrofit Project: Retrofits 14 pieces of cargo handling equipment with diesel particulate filters at the port.

www.portoflosangeles.org

programme that replaced 11,000 container-drayage vehicles, reducing truck-generated air pollution by 90%.

Stephanie Jones Stebbins, who manages environmental programmes at the Port of Seattle, revealed at the summit that between 2005 and 2011 the port cut emissions from ocean vessels at the port by 34%, from harbour vessels by 21%, and by on-dock rail by 14%. Haifeng Wang, a policy analyst specialising on the marine sector for the Washington, DC-based International Council on Clean Transportation, a nonprofit research group, pointed out at the summit that such port environmental initiatives "have been a global trend in improving local air quality".

Input provided by those affected by the schemes play a central role in their success, Wang noted. PH

MORE INFO: www.epa.gov/smartway; www.theicct.org

Biggest ships to bypass fragile Venice

The Italian port of Venice is planning dramatic measures to reduce the impact of increasingly large commercial ships on the vulnerable lagoon city, reports Jem Newton

> s one of the jewels of UNESCO's World Heritage Site List, a recent UNESCO report stated that, besides the visual impact of huge cruise ships passing close to and dwarfing Venice's historic buildings. large vessels have a hydrodynamic impact on the old city and the lagoon itself, not to mention creating atmospheric ship pollution on its priceless medieval architecture.

> The lagoon is increasingly fragile and at risk: the land has sunk an estimated 24cm in the last century due to both natural and man-made causes, including erosion caused by ships of increasing tonnages.

> "The erosion of the seabed triggered in certain areas of the lagoon by the passage of medium to high tonnage ships is also progressively causing the erosion of the sites themselves," according to Venice's Superintendence for Archaeological Heritage. Apart from undermining the foundations of buildings, archaeologists said ship-source erosion was also damaging sites on ancient submerged islands that were once inhabited.

> Partly in response to a study showing the harmful effects of sulphur dioxide on the city's marble buildings, the cruise industry has voluntarily agreed to burn lowsulphur fuels during ship calls. The port authority is also

finalising several projects to use onshore power at the cruise terminal to reduce emissions at berth.

By 2016, the port authority wants to have dredged an alternative route to the terminal to divert large cruise ships from passing close to the ancient buildings of the city centre. A delay in agreeing an alternative solution has raised fears of a repeat of the Costa Concordia grounding in the heart of Venice.

Cruise operators are thought to prefer the northern route since it at least brings cruise ships in via the traditional Lido entrance and gives passengers sight of the historic city. Malamocco is used as the standard access route for cargo vessels, but it skirts the southern edge of the lagoon, far from the city itself.

For the rest of this year and until the alternative route is in operation, the city has agreed with cruise lines a voluntary limit to the number of vessels larger than 40,000gt using the main city centre channel and a ban from 2015 of all cruise ships larger than 96,000gt.

For the long term, however, the port authority is also pursuing a radical solution to confront an anticipated increase in regional cargo volume. Venice is part of the multiport gateway marketed by the North Adriatic Ports Association (NAPA) in response to fast-growing east European markets. In anticipation of a huge increase in regional trade, the EU has designated NAPA ports as core cargo-handling facilities for its priority cargo corridors, two of which intersect in the north Adriatic.

Venice is planning to expand its container handling capacity to 1.9M teu by 2030, when these so-called TEN-T Corridors are due to be completed. However, it also needs to protect the unique heritage of its lagoon, which with a maximum channel depth of 12m is in any case too shallow to handle large container ships. The port authority is planning to build an offshore terminal, whereby the first phase will be the construction of a platform to move containers from deep-sea vessels directly onto large barges, which will then be feedered to Venice's Marghera container terminal and other nearby ports. PH





An artist's impression of a small-scale LNG terminal

Building the gas network

Wärtsilä's concept would suit those who buy LNG in smaller amounts, reports *Crystal Chan*

o address growing demand for natural gas, Finnish engine maker Wärtsilä, having acquired liquefied natural gas (LNG) expert Hamworthy, is developing small-mid scale LNG receiving and regasification terminals.

The Wärtsilä LNGPac design concept includes the bunkering station, LNG tank and tank room compartment, process skid, glycol-water heating unit, and the control and monitoring system.

Small-scale terminals have a storage capacity of 10,000-20,000m³ while mid-scale terminals have a storage capacity of 20,000-160,000m³.

Wärtsilä's business development manager (Middle East, Asia and Australia oil and gas business) Kari Punnonen told *P&H*: "One of the new business opportunities where Wärtsilä is active is small-mid scale LNG receiving and regasification terminals."

Global LNG trade is expected to grow by 30% in the coming few years. In connection to LNG production growth, receiving and re-gasification capacity must grow as well.

A substantial part of this growth will come from the development of small-mid scale LNG receiving and regasification terminals. This demand for LNG terminals is particularly relevant in places where the gas infrastructure is under-developed but the demand for gas-fired power generation and natural gas for other industrial uses is big. LNG has also become a serious alternative fuel for the marine transportation sector.

He continued: "These terminals are especially suitable for feeding natural gas to local industries and in some cases to a single consumer such as power plant for decentralised electricity generation. We have developed standard solutions for receiving and regasification terminals capable of feeding natural gas as a fuel for power plants in a range of 10 to 600 MWe. These terminals range from [a] few thousand cubic meter steel tank configurations to more than 100,000m³ concrete full containment atmospheric storage tank systems."

"There's a growing need for small and medium scale infrastructure to serve local demands. Many countries and customers are looking for ways to get LNG to their power projects to avoid the price volatility of heavy fuel oil."

"Many harbors are also looking for LNG terminals as a strategic investment to keep the harbor competitive after marine emission regulations change."

"We've been looking at the market and splitting it into the receiving terminal sizes in terms of storage capacity. As a rule of thumb, there's a 50MW power plant, 13,000m³ of LNG in one month so that would be an idea of one size of storage capacity. If we talk about small and medium scale, you want to find as many gas consumers in the area as possible."

There are several ways to distribute the gas once it is in the tank. One way is through a regular pipeline distribution to regasify the LNG. Other ways include using smaller ships to distribute the gas to local receivers.

Wärtsilä has signed a turnkey contract to supply an LNG receiving terminal to be built in Tornio, northern Finland. The contract, valued at approximately €100M (\$137M), has been made with Manga LNG, a joint venture between the Finnish companies Outokumpu Group, Ruukki Metals, Gasum and EPV Energy. The main user will be the Outokumpu Tornio steel mill, but also other industries, mines and gas consumers in the region, and will eventually supply LNG to ships.

Punnonen said Wärtsilä is in talks with customers in Asia and Australasia but would not give more details. **PH**

Ports plead for pragmatism on LNG bunkering

The EU wants a viable LNG bunkering network in operation for its main ports by the start of 2020, but there are doubts about the effectiveness of the approach it has adopted to achieve this. **Andrew Spurrier** reports

ill all the European Union's (EU's) key sea ports have liquefied natural gas (LNG) bunkering facilities by 2020?

The question has become an open one since EU member states decided last December to oppose the European Commission's proposal to oblige more than 80 European ports to set up LNG refuelling points by the start of that year.

Member states were not opposed to the commission's wish to kick-start the development of a viable LNG bunkering network in the EU, but took the view that the European Commission's mandatory approach to the question risked turning out to be counter-productive.

As part of the Clean Power for Transport initiative it presented in January 2013, the commission proposed that all 83 sea ports within the Core Network of its Trans-European Transport Network (TEN-T) should be obliged to install LNG bunkering facilities by 1 January 2020.

Member states took issue, however, with the onesize-fits-all approach of the commission, which they felt deprived them of their right to assess and decide on their real alternative fuel infrastructure needs in the light of local conditions and requirements.

They decided that they would rather set their own infrastructure targets on the basis of analysis of their individual situations. The commission would then



publish their national targets and see to it that a "minimum" EU-wide alternative fuel infrastructure was in place for 2030.

In March, following talks between members states, the European Commission, and the European Parliament, a compromise was reached which, in the maritime sector, provided that a "sufficient number" of major European ports that should be in a position to offer LNG bunkering by the end of 2025.

In April, that compromise was given overwhelming support by the European Parliament and is now set for formal adoption by the European Council.

The compromise did not satisfy the European Community Shipowners' Association (ECSA). It took the view that 2025 was too late, taking account of the 0.1% marine fuel sulphur content limit due into force in the Baltic, North Sea, and English Channel on 1 January next year and the 0.5% limit due into force in EU waters generally in 2020.

"Shipowners' hopes for decisive action with regard to LNG refuelling points have been shattered," said ECSA Secretary General Patrick Verhoenven following conclusion of the "tripartite" agreement in March.

ECSA argued that the commission's mandatory approach was needed to get out of the "chicken and egg" situation, in which EU ports were holding back on investment in LNG bunkering on the grounds that demand from the shipping industry was low, while shipowners were avoiding investing in LNG-powered ships because of the absence of viable bunkering facilities in EU ports.

The port sector has taken a less pessimistic view of the compromise, however. The European Sea Ports Organisation (ESPO) told *P&H* that it still considered that an LNG refuelling network needed to be in place by 2020, but said that a pragmatic approach was necessary.

Secretary General Isabelle Ryckbost gave as an example cases where core ports were geographically close and, therefore, did not need to have individual LNG bunkering facilities.

"We like this core port idea and we agree that you need it as a principle, but let's be a bit pragmatic and take into account market realities and also the distances between the different ports. **PH**



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World ports are looking more and more like science fiction, as robotic straddles and shuttles and cranes populate the docks, but people are still important. *Zoe Reynolds* reports

ranes glide gracefully back and forward on rails in a landside operation so compact that a vast expanse of the terminal lies open. At DP World Brisbane semi-automated container terminal there is less noise, less pollution, less clutter, less chaos, and fewer people.

matrix

One lone truck driver gets out and waits as the crane silently drops a container onto the chassis of his vehicle.

Quayside dockworkers are perched high up in the cabins of shuttle carriers darting between the stack operating modules and quay crane above the *Hanjin Florida*. Company executives, dignitaries, and dock workers rub shoulders in a marquee outside the fence.

Sultan Ahmed bin Sulayem, DP World chairman, has flown from Dubai to officially open the AUD250M (\$232.68M) semi-automated terminal.

All three players at Brisbane's Fishermen's Island – Patrick, Hutchison, and DP World – are now automated. Mark Hulme, director and general manager is there, despite three fractured vertebra from a weekend injury on the football field. The ambassador of Finland Pasi Patokallio stands proudly alongside Kalmar President Olli Isotalo. Kalmar boasts its equipment handles one in every four containers shifted landside around the world's box terminals. It provided DP World's 14 automatic 220-tonne stacking cranes and the 50-tonne shuttles that quietly work outside.

A shipowner notes truck turnaround times have slowed. Company executives thank everyone for their patience during the teething problems. It has been five years in the making and three months since the system went live. Champagne flows.

"The investment here is about a big capacity uptake from around 550,000teu pre-automation to 900,000teu," DP World Managing Director and CEO Paul Scurrah tells *P&H*. There were problems at first, he concedes, but that goes with the introduction of cutting-edge technology.

Inside the control room, dockworker and trainer Mick Firmin sits in front of multiple computer panels. This is terminal HQ and command centre. However, the job is much more than flicking a switch.

The equipment control system "is the eyes and hands of the driver put into a computer," according to Dr Tero Kokko, vice-president for Horizontal Transportation at Kalmar. It is also the vessel planning, container inventory, equipment tracking, and work instructions that go with automated stevedoring. DP World uses Navis SN4 terminal operating system software and NOW Solutions Position Detection Systems.

In April, the IAPH Sydney conference devoted almost half its agenda to port automation. "Automation has to be the way of the future," Grant Gilfillan, IAPH president, told conference delegates. "The cost of labour has become increasingly expensive."

Dr Yvo Saanen, managing director and founder of TBA Netherlands, took to the stage in front of a map of the globe that pinpointed 18 automated ports: Abu Dhabi, Algeciras, Antwerp, Barcelona, Brisbane, Busan, Dubai, Hamburg, Kaohsiung, Lazaro, London, Los Angeles, Nagoya, New York, Rotterdam, Sydney, Tokyo, and Virginia. Most, he said, are in locations with high labour costs. There is soon to be one exception: China, where a lack of skilled labour has been put forward as the reason to automate, he explained.

Automation provides more systematic management and less chaotic operation, as well as less lighting, less noise, and fewer emissions. "An [automated] terminal doesn't produce any emissions anymore – only the visiting trucks," said Saanen. Safety is also a factor. In automated ports fewer people get killed or hurt. "You are taking people away from areas where they could get injured," he said. Automated ports across the globe

Driverless cranes at DP World, Brisbane

(irgini:

os Angele

"The majority of injuries are from straddles and lashing," Alistair Field, director for terminals and logistics at Asciano, told the conference. "Straddle injuries have been significantly reduced. We had a 75% reduction in lost-time injuries in year one. Work is more productive. We've reduced operation costs and we've hit 90% of all our vessel windows."

Not all automated terminals are more productive,

Saanan conceded. However, they typically work 24/7, don't have shift breaks, don't take meal breaks, and work at Christmas. Just take out the downtime and maintenance costs and you could get a 10–20% increase in productivity, he said.

Rotterdan twerp Barcelona AUTOMATION/SYDNE

Kaohsiung

Brisb

rce: IAPH / Sydney 2014 / Y.A. Saan

A container terminal is classified as fully automated if both its landside and shipside operations use automation, said Fer Van de Laar, managing director IAPH Europe.

Ship-to-shore (STS) cranes are still operated by people. Dual trolley, single/tandem dual trolley, and semi-automatic quay cranes are in operation around the world, with remote-controlled cranes soon to come.

China-based ZPMC is the biggest manufacturer for STS cranes, with a 60% global share, said Van de Laar. Established electrical suppliers provide the automated parts. Its systems connect the cranes and port gateway, horizontal transport, automated guided vehicles or mobile robots, and follow markers, magnets or wires in the ground, or use lasers, to navigate.

Terminal rail yards are fully automated, with truck drivers are only required for road pickup and putdown. The gates, too, are automated. Semi-automated terminals, on the other hand, are where smaller ports opt for one component. Where space is at a premium, the auto-stacking crane gives the best results, *P&H* learned. Kalmar's AutoStrads require little terminal modification.

"You do need extra land, you do not need grids or drilling holes. The AutoStrads use radar and laserguided technology," said Field.

"In Brisbane, there are no human beings between the crane and the truck driver. The AutoStrads link the Portainer crane and the truck, with nothing in between. When they need maintenance they actually drive themselves to the garage. It's part of their programme."

The AutoStrads too had teething problems during the early days. Bemused dockworkers reporting

collisions and crashes that raised false hopes the machines would never replace workers. However, the systems have proved their worth. Next year Patrick is also automating Port Botany.

P&H learned that Brisbane was first with AutoStrads while Tokyo pioneered an automated warehouse. Rotterdam, the first world port to fully automate in 1993, will now be the first to automate its quay cranes. In October the crane operator will work in an office remotely controlling multiple cranes at once. Next to come, ships will be fitted with 'automatic hatchman' or guiding systems with electronic eyes that help position containers, said Van de Laar.

The equipment control system is the eyes and hands of the driver put into a computer

Dr Tero Kokko

Vice-president for Horizontal Transportation, Kalmar

Technology now in play at world terminals also includes automated gates, auto shuttles, automatic mooring, and auto lashing platforms – a system Kalmar says can fix, remove, and store twist locks automatically – and trip wires that automatically shut everything down if humans intrude into the fully automated areas.

Trapac is fully automating its 1.6M teu terminal at Los Angeles, and will deploy automated shuttle carriers connecting waterside to rail yard. Each block has two automated stacking cranes working 24/7 doing housekeeping ready for delivery or the next ship. The rail connects to national network.

"We have fully automated waterside and landside block operations, with shuttle carriers powered by magnets in the ground," Milind Desai, senior project manager at CH2M HILL, told the conference. "This magnetic system is the first of its kind in the world." Dr Kokko outlined the SmartPort automation terminal logistics system in play in Hamburg dispatching and routing, with monitoring and diagnostic tools. He described the automated terminal as a factory.

"One of the things that automation can achieve is much more systematic, planned operations," he said. He calculates that just three seconds saved on each of 300,000 container moves equates to 10.4 days.

However, automation's proven benefits can come with massive job losses. At the Brisbane opening, DP World thanked the unions for their professionalism and partnership, but no union officials came to the celebration. Unlike Rotterdam or Los Angeles, DP World has not agreed for dockworkers to take all the computerised operational and maintenance work.

"Every company is somewhat different," Scurrah tells *P&H*. "There's a career path here for waterside workers. We'd like to think that someone who joins us as a crane driver can be CEO in 15 years." Only half the positions are going to dockworkers rather than to new employees.

"You need to work with the dockworkers," said Van de Laar, who oversaw automation's first steps at Rotterdam. "We had social dialogue with the unions," he said. "We introduced ILO competency-based training. All the operational jobs at Rotterdam went to dockworkers. Of course dockworkers can be trained to do the job. They do a good job."

Van de Laar questions whether there are really labour cost savings in automation. "You reduce labour cost at the terminal, but the automation company has to be paid to design the system. Then there's all the IT people," he said.

"They've never seen a terminal," said the former sea captain. "They've never smelt a real ship alongside. They need to get down and get the feel of the operation. Then you understand why the ship's master complains he has to be on his feet 24 hours when his ship is in port."

Back at the DP World terminal control room, Mick Firmin says it is "essential" people doing the computer work have had experience of operating the manual cranes. "The best thing about this job is I get to talk to the truck drivers," he said. People, said Van de Laar, are the most important asset of automated terminals. **PH**

Below: Automated stacking cranes, DP World, Brisbane

Alongside the hardware comes the software. Kalmar's





Cracking the US

The automation story sets sail as three ports – New York/New Jersey, Norfolk and Los Angeles – now have semi-automated terminals either operating or in development, reports P&H

Kalmar's automated straddle carriers have been delivered to LA's TraPac terminal A utomation's strengthening foothold at US ports is considered a breakthrough in a country known for high wages and strong unions. Global Terminals (GT) at the Port Authority of New York and New Jersey (PANYNJ), recently joined APM Terminals in Norfolk, Virginia, as the country's only operating automated container terminals.

Upgrades underway at the TraPac Terminal at the Port of Los Angeles (PoLA) will make it the first automated container terminal on the US West Coast, according to the port. However the project, which has an estimated price tag of \$510M, is still several years away from completion. It will eventually include automated gantry

Automated elements at Global Terminals

In the yard:

- Container movement from inside the RMG stack to the waterside transfer zone
- Container movements inside the RMG stack (housekeeping, shuffles, prepositioning)
- Container location tracking to all points of rest, related to vessel operations using DGPS
- Container identification to/from the vessel using OCR

At the gate:

- Identification of containers and chassis entering/exiting the terminal using OCR
- Process flow management as trucks are serviced in the yard using RFID

cranes and automated backland infrastructure.

At the neighbouring Port of Long Beach (PoLB), the \$1.2Bn Middle Harbor project, which is leased to container line OOCL, will be "the most highly automated terminal in North America", PoLB asserts. The first phase of that nine-year project is scheduled to open in 2015.

Moving back to the east coast to New York/New Jersey, April saw the opening of GT's expanded and now semi-automated facility which has more than doubled its capacity to 1.1M lifts annually with the introduction of 20 rail-mounted gantry (RMG) cranes. As P&H went to press, GT was due to start handling its first commercial lift there.

Automation takes place at the waterside and at the gate complex (see box). Rich Ceci, GT's expansion project manager and VP of IT for Global Container Terminals (GCT) USA, told P&H that automation offers increased safety for the workforce, significantly increased security and greater efficiency.

Equipment for the expansion, which has been four years in its development, has been supplied by Konecranes, whose 20 rubber-tyred gantry cranes will work in the yard, along with 17 Terex shuttle trucks. Gate software was supplied by Nascent and gate optical character recognition (OCR) technology provided by Camco. TMEIC provided the RMG crane controls, Navis the terminal operating system (TOS), Now Solutions the differential global positioning system (DGPS), and APS the ship-to-shore (STS) OCR.

The 274m berth extension was completed in May 2013, followed by the automated gate complex in July which is expected to handle more than 5000 transactions a day.

"It is gratifying to see the achievement of the company's vision to develop a safer facility that meets the evolving needs of the industry while providing better working conditions for the workforce," said Jim Devine, president and CEO of GCT USA. "We couldn't have met our target without the skill and dedication of our project team and the support of PANYNJ." PH

MORE INFO: www.global-terminal.com

Gabon's whale-friendly dredging

Members of a recent award-winning Boskalis and Van Oord joint venture project at Port Gentil, Gabon, formed a team to help protect the local fauna. Boskalis explains to *P&H*

B oskalis and Van Oord formed a joint venture (BVO) to carry out second phase 'early works' of a project at Port Gentil, Gabon (see box). The client, Gabon Fertilizer Company (GFC) is setting up a portbased ammonia/urea plant on 80 hectares of reclaimed land at Isle Mandji, Port Gentil, Gabon.

To generate sediment for the reclamation, up to 5.4Mm³ of marine sand was sourced from the port's south bank. The maximum allowed depth for dredging was -15m and the area and the work had to be completed within 120 days of the start date. The project was completed in December 2013.

Boskalis Hydronamic's project engineers for marine environment – Annemiek Hermans, James Brocklehurst and Stefanie Ros – along with the crew of Van Oord's cutter suction dredger (CSD) *Hector* were part of a team that monitored and reported on dredging activities to help mitigate its effects.

"Although short, intensive sounds from blasting or seismic activities have been monitored, the constant, steady sound produced by a cutter suction dredger has rarely been measured," said Brocklehurst.

Hermans noted: "The project is of great economic importance to the country and protecting the existing local marine habitat was one of the key challenges to the project. The bay at Port Gentil is an important breeding area for humpback whales."

The BVO JV's client, GFC is a JV led by agriculture and supply chain company Olam, along with Tata Chemicals and the Government of Gabon. Abdul Khader Kukkady, project director at GFC said that the company "is committed to safeguard the marine mammals in the bay in the vicinity of the project area".

As such, GFC carried out a year and a half of preparations, studies and environmental impact assessments before operations began at the site.

To protect the humpback whales that migrate from the Antarctic to the coast of Port Gentil from June to September, (winter in the Southern Hemisphere), knowledge about underwater sound generation during the execution of the works was crucial. The bay is the breeding habitat for these marine mammals which make song-like sounds to communicate.

The studies carried out revealed that the slopes of the bay are used by humpback whales to give birth to their calves. So it was important to both protect the marine mammals from sound disturbances and preserve the actual shape of the bay itself. During the preparation phase, GFC together with its environmental consultant URS, and JV BVO, developed and agreed on mitigating measures to suit these requirements.

These included shaping the borrow area as an artificial lagoon on the southern shore of the bay. The existing slopes of the bay would be left intact, leaving an outer rim or 'bund' to the borrow area. This bund also acted as a sound barrier between the dredging site and the rest of the bay.

"Because whales vocalise, or call out to each other, we had to know if the sound generated by the dredger would disturb the vocalisations of marine mammals,



such as humpback whales and orcas," explained Hermans. "To determine this we engaged Subacoustech Environmental, a company specialising in analysing underwater sound", as per the client's requirements.

Brocklehurst explained that dredging operations started in late March 2013, "well before the arrival of the whales in June. That gave us a chance to measure the sound levels produced during dredging operations and verify the effect of the artificial lagoon on reducing sound being emitted into the bay."

With the support of Subacoustech Environmental, a three-step campaign was implemented. First, the level of sound of CSD *Hector* working in open water was established to determine the 'source sound'. Based on that, a propagation model was made to predict the effect of the lagoon-shaped borrow area on reducing sound into the bay. Dredging started in late March, allowing sufficient time to measure and verify the artificial lagoon's effectiveness before the whales arrived in June.

"So our models were validated," said Brocklehurst. "The outer rim muffled the sounds of the dredging – even more than predicted – and marine mammal behaviour seemed to be unaffected by the dredging activities. Dredging could therefore proceed without harm to the whales. Additionally, because the natural slopes of the bay remained untouched, the whales should recognise their home."

But another measure was still necessary: the BVO JV instituted the Marine Mammal Observer training programme following the guidelines of the Joint Nature Conservation Committee (JNCC) – a UK-based public body that advises on bio-diversity. Its guidelines were adapted to Port Gentil's circumstances and Marine Mammal Observer training was given to the crew of the *Hector* and all other marine-based personnel, enabling them to spot whales and other marine fauna such as dolphins and turtles.

"The results have been amazing," said Hermans. "The crews were enthusiastic when they saw a whale and they have nicknamed the bund 'the whale hugging wall'. It was real teamwork. When they sighted a whale approaching the lagoon, they warned all the other vessels working there so they could react appropriately keeping their distance till the whale moved away. This ability of the skippers and crews of the auxiliary vessels to respond immediately was essential to the

Port Gentil's free trade zone

Port Gentil is located about 145km south of Gabon's capital city Libreville. It is a bustling seaport and the country's second largest city. In an effort to diversify its oil-based economy, the government of Gabon has designated a 1,500ha area of land near Port Gentil to be developed as the Free Trade Zone of Mandji Island for industrial, commercial and service investments. The Gabon Fertilizer Company (GFC) project is the first development within the zone.



environmental success of the project."

"I have worked all my life in the dredging industry and therefore I can say that my life is closely connected to the sea," said Arie Gorter, dredger master of *Hector*. "I had never worked on a project where marine mammals come this close to the working site; watching whales pass by at such short distance is a privileged feeling. Keeping an eye on the movement of the whales and making sure operations do not disturb them comes automatically in such circumstances; it's a matter of respecting your environment."

Foundation Liambissi, a local NGO, was also engaged in the project as it has been monitoring turtles and other marine life populations along the coast. Head of the foundation, Philippe Du Plessis confirmed that dredging activities carried out by BVO have not impacted the nesting sea turtle population at the site.

Also monitored was the dynamic compaction process – which increases the density of soil deposits – carried out by Boskalis' subsidiary Cofra. This activity was not identified in the environmental impact assessment, noted Brocklehurst, but GFC and BVO decided to examine how compaction sounds affect the whales. "The surveys indicated that dynamic compaction sounds could have an impact on the marine mammals and needed monitoring," he said. This has been one of the lessons learned on the project.

"The operations were completed around the end of September 2013 and, a few months later, the whales migrated back to the Antarctic seas," says Hermans. "The sound data we have collected on the steady sound produced by a cutter dredger, the effects of a 'sound-barrier', as well as the data collected during the compaction activities, has given us a better insight on the level of their impact on the marine environment and will help us on future projects."

The project won the British Expertise Award in April 2014 for the Outstanding International Environmental Project 2013/2014. **PH**

Cashing in on nature

According to IADC secretary-general *René Kolman*, by using ecosystem services, we can have our ports without compromising 'natural capital'

hat could possibly link Kellogg's cornflakes, PUMA sports shoes, and ports and harbours? Eating breakfast cereals before going out to jog around the local port? The answer is ecosystem services (ES).

Kellogg's has recently announced it will buy only sustainably sourced palm oil in an effort to protect tropical forests, peat lands, and endangered species and habitats, as well as respect the rights of indigenous communities in Indonesia, Malaysia and elsewhere. Three years ago, as part of a long-term sustainability plan, PUMA developed an environmental profit and loss account that gives a monetary value to the use of ES in each business across its entire supply chain. In the maritime world, including the dredging industry, a number of actions have been taken to incorporate the concept of ES into the design, planning, and management of port construction.

The ES concept is based on data from a four-year study issued in 2005 by the United Nations, involving more than 1,300 scientists from 95 countries, confronting the issues of climate change and degradation of biodiversity.

The report, *Millennium Ecosystem Assessment* (MA), recommended a new approach: give ecosystem services and nature in general a monetary value. The cash value can then be weighed against that of a port. To some this will sound rather offensive and mercenary. After all, ecosystems and biodiversity are on a higher plane – they are invaluable and cannot be seen in terms of money. But a growing group of economists see it otherwise. By evaluating nature financially,

Hannah Kidd/Shutterstock

we can honestly compare the advantages of port construction with the disadvantages of potential habitat destruction.

The modern reality is that the growth of the world's population has increased the demand for goods and strengthened the need for global approaches to trade, and thus for bigger and better ports. In a market economy, the value of a port is appraised in terms of job creation, gross national product, and importexport trade. These are assets with a clear monetary value. But what about the 'intangible' value of nature? By making nature a cash-based commodity or as economists say, by defining it as 'natural capital', we get closer to comparing apples with apples. By monetising the value of ecosystems near ports, stakeholders, port authorities, maritime developers, and dredging companies can compare the port's value with the intrinsic value of natural assets - fish and animal habitats, as well as clean air and water.

Basically the MA defined four basic categories of ecosystem services:

Provisioning – products supplied from ecosystems, such as food, water and fuel

Regulatory –benefits of regulating water, erosion, flooding, climate, and air quality control

Life-supporting –long-term significance of nutrient cycles, photosynthesis, and crop pollination

 Cultural –educational, spiritual and recreational enhancements.

Using these four categories, the MA provided guidelines to calculate the value of these 'services' and to define how these ecosystems are useful to humans, and conversely, how their loss will harm long-term human well-being.

Taking the lead in applying the ES principles was a global initiative launched in 2007 by Germany and the European Commission and now supported by United Nations Environment Programme known as The Economics of Ecosystems and Biodiversity (TEEB).

Since this initial action, a number of other national reports have been written and in February 2013, The TEEB for Water and Wetlands was launched. TEEB emphasises the global economic benefits of biodiversity, the worldwide impacts of the loss of biodiversity, and the cost to society when ecosystems are degraded.

Rather quickly, this initiative led to the TEEB for Business Coalition, which in early 2014 was rebranded Natural Capital Coalition. The coalition brings together global stakeholders, including the World Bank and the World Wildlife Fund, to study and standardise methods for 'natural capital accounting'. They have recently released two publications, Valuing Natural Capital in Business: Towards a Harmonized Framework and Taking Stock: Existing Initiatives and Applications, in an effort to clearly define 'natural capital' as 'the resources and benefits provided by ecosystems'. When we in the maritime industries think 'ports' we think: shipping is cleaner than road and rail transport, job creation, and bringing more goods to more people, resulting in higher living standards.

When environmentalists think 'ports' they think: dirty water, air pollution, traffic congestion to and from the port, and habitats and ecosystems under attack.

Who is right? Well, the golden mean needs to be found. The ES method of valuation can hopefully provide support to all parties – to port authorities, dredging companies, economists, and environmentalists to help solve some of the differences of opinions that can arise when port expansion demands collide with the need to protect valuable ecosystems.

The major international dredging companies – having historically faced opposition from environmental groups – have long ago confronted these challenges. Investments in 'green', sustainable technologies and designs are the norm. Highly regulated environmental impact assessments are nowadays an integrated part of any maritime construction project.

Most importantly, the dredging industry has also progressed from a simply reactive approach to strong proactive activities. From the EcoShape Institute's Building with Nature programme to World Association for Waterborne Transport Infrastructure's (PIANC) Working with Nature and the United States Army Corps Engineer's (USACE) Engineering with Nature initiatives, the major dredging players have taken full advantage of the technological innovations in monitoring and equipment to pursue sustainable working methods.

An indication of the ecosystem services method taking root among dredgers can also be seen in the Central Dredging Association's (CEDA) information paper, *Ecosystem Services and Dredging and Marine Construction*, IADC's recently-issued Facts About Ecosystem Services and Dredging, and PIANC's call for 'expressions of interest', issued in a workshop on the identification and assessment of ecosystem goods and services for navigation infrastructure projects.

Maritime infrastructure projects are extremely complex, demand years of studies, environmental assessments, permitting, and monitoring. When embarking on these projects, the choice should not be either/or – either economic development or protecting adjacent ecosystems. Using ecosystem services evaluations, we have got the means to do both. Ref

- i MORE INFO: www.iadc-dredging.com; www.dredging.org; www.teebweb.org; www.naturalcapitalcoalition.org; www.ecoshape.nl
- AUTHOR: René Kolman is the International Association of Dredging Contractors' secretary-general

The big debate

Mega ships are creating mega ports and both are only going to get bigger, *Zoe Reynolds* reports. But who will pay for upgrades?

MAERSK LINF

new generation of mega ships is creating a port shakeup, Drewry Maritime Research's Port and Terminals senior analyst Neil Davidson warned. As shipping alliances expand to fill the bigger ships, stevedoring operators too may need to rationalise, Davidson said.

"With the relentless pursuit of economies of scale come the mega alliances," Davidson told the IAPH Sydney conference in April.

The container trade is dominated by the 'big four' shipping companies: MSC, Maersk, CMA CGM, and COSCO. To fill the ships, carriers have to come together.

Davidson also noted the growing pressure for terminals to merge. "Port fragmentation will become an issue," he said. "Many ports might have the 10M teu capacity needed for the mega ships, but it's broken up into different owners. Customers don't want fragmentation, they just want one big terminal." Davidson said ships would grow to 22,000teu by 2020. Maersk's 18,000teu *Triple E* was launched on the Asia/North Europe trade route in 2013 and China Shipping already has a 19,000teu liner vessel coming.

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"It's a herd mentality," said Davidson. "Once one carrier upsizes, all carriers have to follow. Maersk always leads; the other carriers follow. The global container orderbook is dominated by ULCVs [ultra large container vessels]."

The teu capacity for 48% of ships trading the Asia/ North Europe route orderbook is upwards of 10,000teu, with 130 ULCVs already deployed. About 36 ULCVs ply the Asia/Mediterranean trade route, with 14 trading between Asia and the US West Coast.

Bigger ships have less choice of ports and terminals. Ports with smaller, shallow berths will be underutilised, said Davidson. On the other hand, big ports are getting bigger. Mega ships require longer berths – minimum 400m – and 14–17m of deep water. They require more air draft, outreach and greater intermodal capacity. They need mega cranes and berth productivity. "The size of the exchange will rapidly ramp up," said Davidson. "Maersk wants 6,000 moves in 24 hours."

"It [upgrading of ports] can be done, but are you going to pay for it?" he asked.



The 18,270teu Magleby Maersk at **Bremerhaven**

Maersk wants

Davidson said ports catering to mega ships need a different kind of terminal capacity. Even if the volume does not change, the demand changes dramatically.

"Mega ships will make less port calls," he said. "But there is a concentration of port calls, so you are getting greater peaks and troughs, which terminals and ports have to deal with - both shipside and landside."

Ships on the North Europe trade route only made 90 calls per week in January 2014, compared to 100 calls per week in January 2012, he said. World port throughput could reach 1Bn teu by the end of 2020, up from 623M teu today. "The Asian share of the market would increase to 65%, up from 56%. China alone already makes up 30% of liner trade and this is predicted to rise to 40% by 2020," Davidson said.

According to Drewry calculations, if Shanghai Port only performs at the world average growth rate of 5%, this would add almost 10M teu to its throughput by 2017.

"That is more than the entire container port throughput of the UK, India or Brazil," said Davidson. Drewry also predicted that port rotations will be

rationalised with more transhipment, mainline and feeder vessels. Transhipment volumes in 2013 rose 11% at large hubs such as Algeciras, Piraeus, and Port Said, and dropped 5.6% at smaller hubs such as Malaga, Beirut, and Barcelona. While globally, container port growth stands at just over 3% in 2013, transhipment ports grew over 8% on the Mediterranean Sea.

The impact of mega ships is not confined to mega ports that service them. No port will be left untouched. "With all these very big ships comes a huge cascade effect into all other trade routes," said Davidson.

He noted that there are more than 100 vessels of 7,000-10,000teu deployed on the Asia/North Europe (Hamburg, Rotterdam, London) route at the moment.

I If a port is not big enough, we just won't go there

Nicolaj Noes: Maersk Australia CEO

"They will all need to cascade somewhere else because of the new ships [that are] coming," he said. "So that's over 100 very large ships that will have to find another home, another route by the end of 2016."

The North/South trade routes encompassing South Africa and South America have seen the far biggest increase in vessel size since 2006, with 140% growth, he said. "There will be losers," Davidson warned.

While there is much talk about traditional ports being pushed out of the game by bigger ships, Davidson said to date this has not been the case.

"It's amazing how big ships are squeezing into small ports," he said pointing out to a 10,000teu ship in Buenos Aires, one of the most draught-restricted ports in the world.

Big ships have a long list of requirements. Quay walls are the most expensive items on the port shopping list, but so far the new ships are no longer or deeper than current models. That could change.

"It's all very well, saying we need deeper water, we need bigger cranes, we want this, this and this," said Davidson. "Are the shipping lines going to pay?"

P&H put the question to Maersk Australia CEO Nicolaj Noes. He maintained that if Maersk had invested in the ship technology, it was up to the ports to invest. "If a port is not big enough, we just won't go there," he said.

IAPH president Grant Gilfillan had other ideas. "Shipping lines have to come to grips with the concept, there is no such thing as a free ride," he told P&H.

"Just because you want bigger ships, doesn't mean you get access to all ports for nothing. Whether it's higher ports fees or whatever - one way or another you have to pay." PH

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IAPH backs IMO on container weighing

The International Association of Ports and Harbors supports and welcomes the International Maritime Organization's (IMO) adoption at the Maritime Safety Committee (MSC) 93rd session of the Amendment of SOLAS Regulation VI-2 regarding Mandatory Weighing of Gross Mass of Containers before loading onto ships. The committee also adopted relevant Guidelines regarding the verified gross mass of a container carrying cargo.

"IAPH welcomes adoption of this Amendment as the regulation will enhance safety of maritime container transportation," said IAPH president Grant Gilfillan, chief executive officer/director, Sydney Ports Corporation, Australia.

The IAPH has long supported taking action on this issue: at its 27th World Ports Conference in Busan, South Korea, in 2011, it adopted a resolution (see box 1); it carried out an IAPH member survey on container weighing in 2012 (see box 2); and issued a joint press release with other maritime associations in 2013.

"IAPH has been an outspoken advocate on this issue for several years now, because misdeclared or incorrectly declared container weights are one of the major causes of maritime container accidents in ship navigation, road transportation and terminal operation," Gilfillan noted.

The amended rule requires shippers to submit verified gross

weight of relevant containers before loading onto ships. Without such documentation, those affected export containers shall not be loaded onto ships.

The amendment and its guidelines take effect 1 July 2016, once it has been duly adopted by the MSC's 94th session in November this year.

Gilfillan added: "There was only ever going to be one effective solution to this problem and that was to mandate that container weight verification occur at the point of origin, which is an issue requiring international regulation. Within each global jurisdiction there will no doubt be different approaches taken to ensure weight verification. In the interests of port operators, it will be the position of IAPH that weight verification should be completed before a container enters the port precinct. To not do so will continue to allow a significant risk to road users within the port and to terminal operators (stevedores) if they have to handle a container with unverified weight.

"Expecting a terminal operator to verify the weight as part of its handling process is not a complete solution, and the IAPH will be encouraging regulators within governments or port jurisdictions to seek solutions, which verify container weights as close to the point of packing as is practical," he concluded.

Resolution on the Safety of Containers in the Supply Chain

IAPH requested international organisations such as International Labour Organization (ILO) and IMO to adopt requirements for shippers to correctly pack and document cargo in containers including the mandatory accurate weighing at the origin of the shipment; IAPH urged shippers of containers at the origin of transport to apply such requirements to ensure safety in the international supply chain;

IAPH further requested governments and their agencies to establish effective legal requirements and control mechanisms to ensure the correct application of the requirements referred to above;

IAPH further requested parties responsible for road infrastructure to properly designate and promptly develop when necessary, road systems for special and bulky port cargo such as heavy containers and over-sized cargoes.

The 2012 survey questionnaire focused on the following seven items

15%

- Risks due to overweight or incorrectly declared containers
- Current measures taken by ports or terminals to address the risks
- Scaling container weight in terminals
- Taking verified weight certificate
- Future plans to address the issuesProblems arising from compulsory
 - scaling containers in terminals
- Views or opinions on possible IMO new rules

Notable numbers

expected number of transactions a day handled by PANYNJ's automated gate complex

expected increase in New Orleans' container business

Rebounding Somalian pirate activity

A recent upturn in pirate activity in the Bab al-Mandab Strait and off the coast of Oman has called into question the view that Somalia piracy is now a thing of the past. So far this year, nine attacks have been reported to the International Maritime Bureau (IMB) in the area. This figure is already higher than the total of seven attacks recorded in 2013. It would seem that piracy off the coast of Somalia may be on the rebound.

On 17 April, the master of a motor vessel reported being approached to within 150m by five skiffs in the Bab al-Mandab Strait. The tell-tale ladders required to attempt a boarding of the vessel were spotted in one of the skiffs. A flare was fired in the general direction of the potential intruders and the water hoses on the vessel activated. When the on-board security team showed their weapons, the skiffs quickly retired from the area.

Days later, due to the quick intervention of both aircraft and warships assigned to the European Union Naval Task Force (EUNAVFOR), a dhow that had been seized by six pirates to be used as a mother vessel was quickly released.

These two incidents are merely the latest in what is becoming a significant upturn in activity by pirates in the seas off the coast of Somalia. This pattern of activity started to become clearer towards the end of 2013. On 11 October, a fully laden supertanker was attacked by eight pirates around 230 miles off the Somali coast. The armed security team on board the vessel intervened and prevented the pirates from boarding and seizing the vessel.

In November, a potential Pirate Action Group (PAG) was prevented from going to sea by the swift intervention of the German warship *FGS Niedersachsen*. This had followed an incident the day before when a Hong Kongflagged vessel *en route* from Saudi Arabia to Mozambique was fired upon by five pirates in a skiff. Again, after the intervention of the armed security team, the pirates withdrew.

On 2 December at a position around 150 nautical miles south

of Salalah, Oman, a cargo ship called the MV BBC Togo was also attacked by pirates in two attack skiffs. As the master of the vessel took immediate and appropriate actions to counter the attack following the 'Best Management Guides' agreed by the shipping industry, the pirates sailed away. Given the attack occurred so far from the Somali coast it was clear a PAG must be operating in the vicinity. Prompt action by the EUNAVFOR assigned warship HNLMS Evertsen, which had just sailed from Salalah, ensured the PAG was located and neutralised

These incidents in 2013 are a subset of twenty-seven suspicious events and attacks recorded by EUNAVFOR in the region over the year. There was no let-up in this activity at the start of 2014. The first incident occurred on 17 January near to the location where the *MV BBC Togo* was attacked off the Omani coast. Another PAG was clearly operating in the area. Since then a low-level drumbeat of attacks have occurred, one of which is officially recorded by the IMB as

suspicious. It involved an attack on a Ro-Ro cargo ship 15 miles (24km) to the east of Masirah Island, Oman.

On each occasion, the presence of an on-board security team ensured that any attempt to board the vessel was aborted. So far the attempted attacks have all failed. Given that only 40% of the vessels transiting the region actually carry armed guards it can be argued the pirates have been unlucky. Their attacks have obviously been sporadic and opportunistic.

However, if they play the percentages long enough there is a good chance at some point the media will be reporting another hijack. That might just be the stimulus needed for others to try and for a new tipping point to be reached. As far as the shipping industry and their partners in EUNAVFOR are concerned, this is no time to let up in the measures taken to combat piracy. It seems that, far from going away, the Somali pirates have lain dormant awaiting their chance to return to their former activities.

IPCC report due later this year

The decision to prepare a Fifth Assessment Report (AR5) was taken by the members of the Intergovernmental Panel on Climate Change (IPCC) at its 28th Session (9–10 April 2008, Budapest, Hungary). Following the election of the new IPCC Bureau at the 29th Session of the IPCC (31 August–4 September 2008, Geneva, Switzerland) and discussions about future IPCC activities at the 30th Session of the IPCC (21–23 April 2009, Antalya, Turkey), a Scoping Meeting was held (13–17 July 2009, Venice, Italy) to develop the scope and outline of the AR5. The resulting outlines for the three Working Group contributions to the AR5 were approved by the 31st Session of the IPCC in Bali (26–29 October 2009). A Synthesis Report will be considered in Copenhagen, Denmark, on 27–31 October this year.



rise in low-sulphur fuel costs on a single trip across the Baltic Sea



years – the concession licence between AMP Terminals and Angola's Port of Namibe

Change of heart on monitoring of CO₂ emissions in the EU

Previously, the Environment, Public Health and Food Safety (ENVI) Committee of the EP had endorsed Greek Rapporteur MEP Theodoros Skylakakis' decision to extend the proposal scope by including ships of 400 GT or above, as well as more kinds of emissions.

However, the EP then rejected both the extension in terms of GT and additional emissions, thus aligning the scope of its position with the Commission's proposal of solely monitoring CO₂ emissions from ships of 5000GT or above.

"EU shipowners are certainly relieved that the Commission's proposal was finally preserved by the European Parliament," said Patrick Verhoeven, ECSA secretary general, adding: "Not only is this decision sensible, it also allows the two co-legislators to see eyeto-eye on this particular issue, as

the Council has indicated its clear preference for the Commission's initial proposal".

ECSA suggested: "Once the Council adopts its own position on the Commission proposal, the negotiations between the Council and the new Parliament can commence, most probably in Autumn

2014. This will buy the International Maritime Organization (IMO) some time to further develop a global data collection system for fuel consumption on ships, on which promising developments took place during the last IMO Marine **Environment Protection Commit**tee (MEPC) earlier this year.



"The vote, while maintaining the possibility of the establishment of a potential EU measurement, reporting and verification system, also eases the way towards a global solution on CO₂ emissions from shipping," it said.

E EU shipowners are certainly relieved that the Commission's proposal was finally preserved by the European Parliament

Patrick Verhoeven

ECSA secretary general

Alternative fuels infrastructures coming closer

This should ensure the build-up of infrastructure for alternative fuels across Europe and the development of common technological specifications, including shoreside electricity facilities and LNG refuelling points.

The European Sea Ports Organisation (ESPO) advised that the Directive aims to put an end to the current 'vicious circle', where the penetration of vehicles and vessels running on alternative fuels is too low due to the lack of a sufficient fuel supply infrastructure, and vice-versa. Ultimately, it suggested, "the Directive will contribute to the reduction of the Union's oil dependence, and to

the target of a 60% reduction of greenhouse gas emissions from transport by 2050."

The European Parliament's adoption of a compromise text means Member states must set the national targets for the deployment of alternative fuels infrastructure. "Shoreside electricity supply is to be installed as a priority in ports of the TEN-T Core Network, and in other maritime and inland ports, by the end of 2025, unless there is no demand and the costs are disproportionate to the benefits, including environmental benefits," ESPO noted.

Member states must also ensure "through

their national policy frameworks, that an appropriate number of refuelling points for Liquefied Natural Gas (LNG)

are put in place at maritime ports to enable LNG inland waterway vessels or sea-going ships to circulate throughout the TEN-T Core Network by 31 December 2025 at the latest. Intrastate co-operation is expected where necessary.

WPC

Following a vote of the European Parliament, the new rules should be formally adopted by the Council later this year.



of containers by rail by Australian terminal



LNG bunkering RP launched



DNV GL said that, on the basis of International Standards Organization (ISO) principles, it had prepared a Recommended

Practice (RP) for LNG Bunkering, to "establish the guidelines and recommendations required to protect people and the environment during the development and operation of LNG bunker facilities". ISO published a draft guideline on LNG bunkering in June 2013.

Shahrin Osman, DNV GL's regional manager, maritime advisory, Middle East and India, said: "Qatar's entry as a provider of LNG for the marine industry will be a game-changer given that it is the largest single exporter of LNG globally."

DNV GL noted that the development of international standards has lagged behind the market. The shipping industry's attitude to LNG as a marine fuel is changing fast, in no small part due to developments in the Middle East.

"The number of LNG-fuelled vessels around the world – either operating or confirmed newbuilds – recently passed the 100-mark. Qatar and Dubai are both racing to become the first player in the region to construct an LNG-fuelled harbour tug," it said.

Guidelines for assessing environmental effects

The 55-page report provides guidance for conducting an initial assessment of environmental effects of navigation and infrastructure projects. The initial assessment is largely a planning-based activity that establishes the project scope and objectives, gathers existing information needed to perform the assessment, develops the conceptual model and reaches a conclusion about the level of risk and whether more assessment is required.

Projects related to navigation and infrastructure include but are not limited to maintenance and new work dredging, port and harbour development (e.g. terminals, berthing facilities, barge flotilla areas and turning basins) and construction of waterways, locks, canals, quays, breakwaters, jetties and groins.

PIANC notes that: "The approach focuses on the environmental concerns that may arise and is therefore also suitable as a first step in the assessment of potential effects on special protected areas early in the project definition phase."

It is available for €50.00 (\$62) from www.pianc.org

LNG co-operation in European inland

The co-operation includes studies, promotion, knowledge transfer, regulations and bunker infrastructure and the agreements have been set up within the framework of the Liquefied Natural Gas (LNG) Masterplan for Rhine-Main-Danube, a project in which Antwerp, Mannheim, Rotterdam, Strasbourg and Zwitserland are partners. The goal of the LNG Masterplan – to which the European Union's TEN-T programme has provided €40M (\$54M) in subsidies - is to introduce LNG as a fuel for inland shipping along the Rhine-Main-Danube corridor.

This follows the Port of Antwerp's collaboration in January this



Port of Antwerp starting offering truck-to-ship LNG bunkers in 2012

year with classification society Det Norske Veritas (DNV), to make LNG bunkering for barges and seagoing ships as safe and efficient as possible and promote the use of LNG as a marine fuel. DNV has been tasked with developing procedures for LNG bunkering operations, which are specifically tailored to the situation at Antwerp. DNV will also identify the potential risks of several LNG-powered ships being in port needing several LNG bunkering operations to take place simultaneously. The bunkering procedures developed will contain



measures which ensure that the risks are acceptable regardless of the scenario," said the port.

As the first Belgian port to carry out a truck-to-barge bunkering operation, Antwerp plans to make its procedures available to other European ports. It is aiming to offer LNG to ships in port by 2015 – it has published a tender for the design and construction of an LNG bunkering vessel to be operational by then – when the stricter IMO sulphur emission standards come into force.



preliminary studies at Port of Hastings to

Bigger, better and best – IAPH's conference in Sydney looks to the ports of the future, writes **Zoe Reynolds**

World ports of the future, writes Zoe Reynolds SUID OF THE STORE S

IAPH INFO



he world's biggest ports, serving the world's biggest ships and using the world's best technology was the theme emerging from the International Association of Ports and Harbors (IAPH) midterm conference in Sydney, Australia this year.

Also on the agenda were the burgeoning cruise industry, logistics, LNG bunkering, women, sustainability, salvage, safety, the Panama Canal, port interface, port planning and productivity.

Opening the conference, IAPH president Grant Gilfillan told the 200 delegates from 35 nations that big, automated ports were the ports of the future: "Big, bigger and biggest. That's the way we are heading in our industry – everything is getting bigger," he said.

Susumu Naruse, IAPH secretary general, said the conference marked a cornerstone in the organisation's history, streamlining decision making and determining its future course.

Officially launching the conference was Australia's deputy PM Warren Truss: "The Coalition Government's message to the global trading community is that Australia is most definitely open for business," he said. Truss used the occasion as a platform to announce the pending deregulation of Australian shipping. "Too often we hear it is cheaper to ship overseas than domestically," he said.

In the 'Game changer' keynote address, Louis Carlos Ferreira Kam, the Panama Canal Authority's engineer operations co-ordinator, outlined the \$6Bn expansion due for completion in 2015: "We are the belly button of the Americas – 35% of cargo that goes into the US passes through the Panama Canal," he said "But ships are getting bigger. Just 10 inches separates the vessels from the canal wall."

Day one of the conference was

otherwise dominated by port automation with four speakers profiling the latest on how smart technology and software were reshaping the waterfront (see the separate articles on automation on pp20-22).

Murray Vitlich, director of strategy and business development at Asciano, spoke of the challenges peculiar to Australian ports in making the big investments. "We don't get the big ships," he noted. "We get smaller ships sailing from port to port along the coast unloading containers. It's a built-in lack of scale and efficiency we can do very little about."

He also spoke of the challenges a drop in market growth could present with the stevedores still outlaying significant capital investment. "Unless there is industry growth, we will struggle to get adequate return," he said.

Day two of the conference started by highlighting how women can and have done the heavy lifts for Auckland, New Zealand (see separate Womens' Forum on page 37). Then Todd Busch, general manager technical service of Crowley Maritime Corporation (CMC), gave the day's keynote address on the raising of the Costa Concordia.

The US-based CMC subsidiary Titan Salvage worked with Italian company Micoperi on the salvage operation. It took 40,000 hours of engineering, 530 people on site, 55 welders and 130 divers logging 15,000 dives, using just under 20,000 tonnes of cement, 9.3 tonnes of welding rod and "enough steel to build a couple of Costas".

"It took welders working nonstop 24/7 for almost a year," he said, and described how his team meticulously mapped out, relocated and returned indigenous clams and sea grass to the site.

Continued on page 36

Continued from page 35

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From the world's biggest salvage operation to the world's biggest ship – Nicolaj Noes, CEO of Maersk Australia, addressed the conference on the Triple-E – which stands for economy of scale, efficiency and environment - and is designed to slash CO2 emissions per container by 50%. The 'Great Dane' is now calling at 14 world ports where it requires six to eight cranes reaching 30 moves an hour. Busan Port Authority in Korea intends to be added to that list and Eung-hyuk Lee, global marketing team manager there told the conference his port had a \$1.5M budget to prepare for the vessel's arrival. Few ports in the world yet have the means to service the Triple E - even the revamped Panama Canal will not be wide enough for the vessel to transit.

Although Australia boasts two of the world's biggest ports -Newcastle, the world's biggest coal terminal and Port Hedland, the world's biggest iron ore port - it has no port big enough for the Triple E. Neil Davidson, senior port and terminals analyst at Drewry Maritime Research, warned attendees about the impact the new generation of mega ships will have.

Safety also figured high on the

conference agenda with both

speakers Steve Gunn and Shane

achievements (and that of the

Sydney Ports and NSW Ports'

Hobday outlining their

G Big, bigger and biggest. That's the way we are heading in our industry IAPH president: Grant Gilfillan

IAPH) in combating the dangers of overweight containers.

IAPH has played a role on the world stage alongside the World Shipping Council in getting the International Maritime Organization to amend SOLAS. New regulations will require shippers to verify the weight of a container before loading it on board a vessel for export.

Hobday is general operations manager at NSW Ports, which won the 99-year lease on both Port Botany and Port Kembla last year. He described overweight containers as one of the most critical safety issues in the industry: "They pose a safety risk

for the entire logistics chain," he said. "Overweight containers go overboard, are a risk to dockworkers and cause accidents on highways and railways,"

he noted. Gunn is general manager for Port Botany landside improvement strategy at Sydney Ports. He spoke of how the port introduced mandatory weighing of import containers at the terminal gates due to the unacceptable risk to road users.

IAPH's Fer van de Laar, director of the World Ports Climate Initative (WPCI) addressed the dangers and benefits of LNG bunkering while Herve Lours,

Marine and Shore Connection VP, Schneider Electric, spoke about shore power. Lutz Birke, head of corporate and port strategy at Hamburg Port Authority highlighted his port's energy initiatives (see separate Green Ports articles in this issue). Brett Jardine, general manager at Cruise Lines International Association (CLIA) Australia foreshadowed the coming cruise boom and how the world's ports can best prepare for the estimated 2.6M passengers

forecast for 2014 alone (up from 21.3M in 2013), while Santiago Mila, deputy general manager for Barcelona Port Authority gave the Spanish experience - in 2013 alone, 24 new cruise ships came into play.

Conference delegates were invited for a cruise around Sydney Harbour on board the world's only seaworthy barquentine, the James Craig. They disembarked at Sydney's new White Bay Cruise terminal before taking a bus tour of Port Botany. Yet the conference ended with a big bang: a private fireworks display lit up the sky as guests gathered for the Opera House Gala dinner overlooking Sydney Harbour.

Hamburg, the home of Germany's biggest port, will host the 2015 IAPC World Conference.

IAPH Awards 2015 are now open

Entry to a number of IAPH awards is now open. All five award competitions have submission dates of 31 December 2014 and are open to paid-up members of the Association

There are two individual awards - the Akiyama and the Hamburg Open – and three

organisational ones - port communications, port environment and information technology. More than one employee of a member organisation may enter, but only one entry per person is allowed and if you enter the Akiyama Award, you cannot enter the Hamburg Open.

Please note:

For a list of eligible countries, and a full list of the rules/guidelines for drafting and submitting a successful entry – please go to

► Women's forum

Top performers

Women are more than equal to men when it comes to port productivity, **Zoe Reynolds** reports

"Women," Ports of Auckland CEO Tony Gibson said, "make very good business sense."

Speaking at the International Association of Ports and Harbors (IAPH) Conference, Gibson outlined how recruiting women gave New Zealand's biggest port a hefty productivity lift. Crane rates are going up. The port's top performer is a woman achieving 4.43 extra lifts an hour more than the stevedoring average among the traditional workforce.

"On the frontline, our female straddle drivers are leading the way," said Gibson. "Productivity is up across the port because the competitive instinct has kicked in. Men don't want to be shown up by women."

Gibson told the conference that women at the Port of Auckland were contributing at every level. In management, women excel, he said, noting that Dianne Edwards was the first appointment. As general manager for people and processes, "she has played a key role in reshaping the waterfront and championing women".

He added: "By overlooking women we were overlooking the potential of skilled workers by 50%." Currently, 50% of women assessed have senior management potential.

However, the Port of Auckland defies a global trend. While more women than men **G** By overlooking women we were overlooking the potential of skilled workers by 50% 🔊

Tony Gibson: Ports of Auckland CEO

are university graduates (108%), less than a guarter make it to senior positions, Gibson said. Even fewer (12%) make it to CEOs. Women make up 20% of senior positions in the United Kingdom, 22% in Australia, 37% in Eastern Europe, 38% in China and 9% in Japan. Indonesia and the Philippines do best with around 40% of senior positions held by women. New Zealand is somewhere in between sitting on 31%, but on the Auckland waterfront they are aiming for 50/50.

"Ports of Auckland was traditionally a male dominated environment largely due to the very physical nature of the job," said Gibson. "But with new technology, we found statistical, logistical and problem-solving skills in short

supply," he said. "So we sought initiatives to attract and retain the best women. We started selecting managers based on leadership material rather than just experience."

The port underwent a major culture shift. "The first thing we did was to level the playing field by moving from longevity (or seniority) which favoured men, to more skilled-based competency," Gibson said. "This gave women equal opportunity to compete for jobs."

Management questioned whether it was necessary for straddle drivers to first spend several years as lashers. "By adopting aptitude testing for stevedores roles we unearthed some amazing talent," said Gibson.

Jeanine Drummond, marine compliance specialist with Caltex in shipping was next to take the stage. Drummond has worked on crude oil tankers, product tankers and floating production storage and offloading units (FPSOs), tugs and salvage over her 20 years in the maritime industry.

She captained her first ship at age 29 - a 38,000 tonne tanker with a 19-strong crew. "It's

increasingly apparent women change the dynamic in a group and make a better Training webinars workplace," she said.

Planning to progress

The Women's Forum met at the mid-term conference in Sydney to build on the excellent work already done by Naomi Kogon-Steinberg (founding chair) and numerous others, in highlighting the need to promote the interests of women in our industry and establishing the Forum. At the meeting, we drew up a framework to help collate the ideas that had already been put forward on previous occasions, then set some specific goals about what we wanted to achieve before the next International Association of Ports and Harbors (IAPH) Conference in Hamburg.

We decided to progress four ideas:

Web presence – promote use of networking through social media such as Facebook and LinkedIn and develop content for the new in-development IAPH website

- Scholarships put in place a scholarship for women
- Mentoring present a practical framework to give women access to mentors
- Exchange programmes design and pilot an exchange programme



Scholarship

Please join our LinkedIn page to find out how you can contribute to any of these projects

www.linkedin.com/groups/IAPH-Womens-Forum-5035140?home=&gid=5035140&trk



Resolution adopted

A resolution was drafted – based on the outcomes of a special strategy meeting to discuss ways and means of improving the International Association of Ports and Harbors's (IAPH's) relevancy as the global voice of port authorities; empowering technical committees and the secretariat and creating a stronger leadership and a better process of electing leadership – and adopted by International Association of Ports and Harbors (IAPH) board members:

Resolution on Creation of a Council to replace the Board of Directors and the Executive Committee. Adopted on 7 April 2014 by the IAPH Board of Directors at IAPH Mid-term Ports Conference and Board Meeting in Sydney, Australia.

IAPH aims at improving its relevancy as the global voice of port authorities.

Therefore, it is necessary to aim at streamlining IAPH's internal organisation, empowering those who are key in the day to day business of the Association, as well as thinking about creating an updated governance for leadership positions.

More specifically, the attention points are:

Restructuring the governance of the Association by combining the current functions of the board of directors and the executive committee (EXCO) into a single body called a Council.

 Resourcing, supporting, empowering and thereby changing the role of the secretariat to actively and assertively deliver the messages of the Association and to lead and monitor the work and deliverables of the technical committees.
 Resourcing the technical

committees to deliver key

initiatives which are of material impact on port business.

Consider the merits of having senior regional representatives in the Americas, as well as Africa/ Europe and Asia/Oceania.

The board of directors at its regular meeting in Sydney, Australia, on 7 April 2014 decided to:

1. To support the establishment of a Council by merging the board of directors as the policy-making body and the executive committee as the chief executive body. 2. To have the president established a small group of members to prepare and develop the new draft Constitution and By Laws of the Association in this respect. 3. To reaffirm that a draft Constitution and By Laws will be submitted to the plenary session of the IAPH World Ports Conference, Hamburg, Germany, June 1-5,2015 for adoption. 4. To explore an alternative officer election process which provides

for greater continuity of officers as well as new approaches to fulfil leadership positions by those Officers who are best able to direct IAPH as the industry voice into the future. Such election process will specifically seek to move away from the current time based seniority system, and replace it with a more open ended merit system. Considerations may be given to:-

- Frequency of elections
- Eligibility for election

Maximum term(s), if any, of officers.

Maintaining a fair regional representation.

■ How to transition to the new structure - giving consideration to the expectations of existing VP's

Mechanisms for removal of underperforming officers.

Roles and interaction of secretariat, officers and council

Any other matters considered relevant to enhancing the effectiveness of the IAPH leadership group.

Membership notes

The IAPH Secretariat is pleased to announce the following new members have joined the Association

Associate Member

Bart Noothoven Van Goor (Mr)

PO Box 391731 Dubai, U.A.E. +971-504451704 / +31-622971796 bvangoor@yahoo.co.uk Research in the maritime port & logistics sector

Global Institute of Logistics

- Address:
 30 Royal Terrace West, Dun Laoghaire, Co. Dublin, Ireland

 Telephone:
 +353-12301427
- Bax:
- E-mail:

Address:

C Telephone:

E-mail:

Nature of Business:

- Website:
 Represent
- Representative:
 Nature of Business:
- Kierang Ring, CEO Research & Consultancy in the

maritime port sector

ceo@globeinst.org

http://globeinst.org

Regular members

Lastianu Fort Llu.				
Address:	PO Box 1048 Gisborne 4010, New Zealand			
🔇 Telephone:	+64-6-868-5129			
🗐 Fax:	+64-6-867-8084			
🗿 E-mail:	andrew.gaddum@eastland.co.nz			
💮 Website:	http://www.eastland.co.nz			
Representative:	Andrew Gaddum, general manager			
-				
Sierra Leone Ports Authority				
Address:	Queen Elizabeth II Quay Cline Town			
	Freetown PMB386, Sierra Leone			
C Telephone:	+232-79-060-830			
🗿 E-mail:	info@slpa.sl			
	http://www.clpa.cl			

http://www.slpa.sl Abu Bakarr Bangura, general manager

Port of Tanjung Pelepas

Representative:

	Address: Blok A, Wisma PTP, Jalan Pelabuhan Tanjung Pelepas TST 50	
		81560 Gelang Patah, Johor, Malaysia
9	Telephone:	+60-7 504 2222
9	Fax:	+60-7 504 2277
ð	E-mail:	ptp@ptp.com.my
	Website:	http://www.ptp.com.my
Ω	Representative:	Glen Hilton, CEO

IAPH INFO





Masaharu Shinohara: port operations and logistics committee

Martin Byrne: *communication and community relations committee*

New vice-chairs appointed

President Gifillan appointed Masaharu Shinohara, executive officer for engineering and planning, at Osaka Port Corporation, Japan, as vicechair of the port operations and logistics committee and International Association of Ports and Harbors (IAPH) executive committee member Martin Byrne CEO of Port Nelson, New Zealand, as vice-chair of the communication and community relations committee.

Both are longstanding contributing members of the committees and are expected to work closely with their respective chairmen.

Introduction of IAPHapproved training institute

Applications for the IAPH training scholarship are still open. As one of the affiliated training institutes for IAPH, TTPM International Consultants Limited said it was "privileged to have benefited from being a member of this association, as many ports continue to participate in our courses".

It continued: "We are happy to announce that port officials awarded IAPH Training Scholarships will continue to be accepted to participate in TTPM International courses. In addition, a TTPM international bursary is also available to qualified applicants. Early registration to our courses is strongly



www.ttpminternational.co.uk





Do you have strong views about any of the articles in *Ports & Harbors*? Are there other industry issues you feel strongly about? **Email your views to ph@iaphworldports.org and we'll be happy to include them**

4

2016

Dates for your diary

A selection of forthcoming maritime courses and conferences

August

- 4-22: Port Efficiency Management, London, U.K. www.ttpminternational.co.uk
- **25-29:** Safety Management in the Port, Singapore *www.psa-institute.com*
- **25-29:** Current Environmental Issues in the Offshore Oil and Gas Industry, Malmö, Sweden *www.wmu.se*

September

- **1-12:** Port Logistics, Antwerp, Belgium *www.portofantwerp.com/apec*
- **1-19:** Strategic Maritime Policy Management, London, U.K. *www.ttpminternational.co.uk*
- 2-3: Green Port South Asia, Mumbai, India www.greenport.com/congress
- **3-4:** 3rd Black Sea Ports & Shipping 2014, Istanbul, Turkey *www.transportevents.com*
- 8-11: Management of a Conventional Terminal, Singapore *www.psa-institute.com*
- **15-26:** Dredging Technologies, Antwerp, Belgium *www.portofantwerp.com/apec*
- **16-18:** Seatrade Med Cruise Convention (September 15 for IAPH Strategy Meeting), Barcelona, Spain *www.cruiseshippingevents.com/med*
- starts 17: Fundamentals of KPIs for Ports & Terminals, Distance learning www.ibc-academy.com
- Starts 17: Diploma in Terminal Management, Distance learning *www.ibc-academy.com*
- 29- Break Bulk Cargo, Antwerp, Belgium
- October 10: www.portofantwerp.com/apec

October

1-3: TRANSTEC 2014, St Petersburg, Russia http://transtec.transtec-neva.com

November

17: Africa/Europe Regional Meeting (in conjunction with the 10th PAPC Conference), Mombasa, Kenya www.papc2014.co.ke

2015 June

1-5: The 29th IAPH World Ports Conference, Hamburg, Germany www.iaph2015.org



Safety and security issues are given utmost priority in ports

Safe secure ports bolster maritime trade

Capt K Subramaniam, IAPH's port safety and security committee vice chairman and Port Klang Authority's regulatory and operations assistant general manager, said the maritime and logistics industries need to work together to reduce supply chain interruptions caused by accidents and security threats

With over 90% of world trade being carried by ships, ports are a key part of the maritime transport chain. Acting not just as the interface for ship activity in loading and discharging cargo, ports are also focal points for numerous other activities – logistics hub, cargo generation, storage and distribution, trading and adding value, passenger handling, as well as ship repair and maintenance.

Being a place bustling with activities 24 hours a day, safety and security issues are given utmost priority in ports. Anything less may not only result in potential interruption of business and huge financial losses, but also irreparable damage to the reputation and marketability of the port in future.

Ports and ships are intertwined and the relationship between them deeply entrenched, in the sense that how one party handles and manages safety and security issues will have profound impact on the other.

The International Association of Ports and Harbors (IAPH) in this respect works closely with agencies such as the International Maritime Organization, International Labour Organization, World Customs Organization, as well as nongovernmental bodies such as PIANC, to ensure good co-operation in resolving issues related to safety and security.

Recent initiatives on port security's best practices and the issue of overweight containers are examples of such co-operation. The IAPH Port Safety and Security Committee welcomes active participation from member ports, terminals and individuals whose invaluable inputs and contributions are vital in formulating best practices that can be utilised anywhere.

Port customers, such as shipping lines and cargo principals, are always given the highest assurance that their investments and goods are provided with the best care and what better way to do this than to show them that terminal practices are conducted in a safe and secure environment in accordance with international standards.

As Malaysia's premier port and Southeast Asia's growing transhipment hub, Port Klang aims to raise safety and security standards within the industry, and is committed to working with ports, shipping lines and other maritime interests around the world to achieve that.

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Robbert van Trooijen CEO Latin America & Caribbean, Maersk Line



Juan Carlos Hernandez Global Equipment and M&R Manager, Chiquita



Howard Finkel EVP Trade Division, COSCO **Container Lines Americas**



Giovanni Benedetti Commercial Director, Sociedad Portuaria Regional Cartagena (SPRC)



Poul Hestbaek SVP – Latin America West Coast & Caribbean, Hamburg Süd



John Bressi Project Manager - Crane Automation, SSA Marine International



Guillaume Lucci VP& Global Infrastructure Director, ICTSI

Who attends?



Conference sessions include

Jay New

Gulftainer

Commercial Director.

- Port & Logistics infrastructure Could rapid trade growth overwhelm Lain American infrastructure?
- Shipping watch Liner shipping trends, carrier alliances, service schedules, freight rates, ship sizes.
- **Reefer shipping** Perishable cargo trade trends & cold chain logistics.
- Terminal productivity How will terminal operators keep up with the demands of escalating ship size?



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Be part of the global ports' community with an IAPH membership



The International Association of Ports and Harbors (IAPH) is a global alliance representing over 190 ports in 85 countries. Together, IAPH member ports handle over 60% of the world's sea-borne trade and nearly 80% of the world's container traffic. It is a non-profit-making and non- governmental organisation headquartered in Tokyo, Japan.

IAPH provides a platform to develop and foster good relations and co-operation among the world's ports and harbors through forums where opinions and experiences can be exchanged. It promotes the role ports play in waterborne transportation and in today's global economy.

Benefits of membership include:

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