



PORTS & HARBORS

Official Journal of the International Association of Ports and Harbors

Cuba's waiting game

Mariel sits tight for power shuffle

Each to its own

Shipping alliances seek hub security

A tale of two coasts

Panama Canal expansion gives lines options

Blocking tactics

When to fight sea-level rise

Buying and selling used heavy duty trucks worldwide



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container handling and port equipment



DK086
Linde C4540TL
Baujahr: 2013



D3470
Linde C4234TL
Baujahr: 2011



D3479
Linde C4531TL
Baujahr: 2009



D3458
Linde C4535TL
Baujahr: 2008



D3494
Kalmar DRF450-65S5L
Baujahr: 2012



D3435
Kalmar DRF450-65S5L
Baujahr: 2011



D3445
Kalmar DRF450-60S5
Baujahr: 2010



D3478
Kalmar DRF450-60CSX
Baujahr: 2005



D3490
Kalmar DRS4531S5
Baujahr: 2004



D3493
Kalmar DRD450-70CSX
Baujahr: 1998



DK102
SMV SC4542TA5
Baujahr: 2004



D3448
CVS Ferrari F479.5
Baujahr: 2008



D3436
Valmet TD4212
Baujahr: 1994



D3453
Steinbock Boss G4212CH/MKIVA-2
Baujahr: 1990



DK038
Herbst - ATAIR HFH ATAIR IX D620
Baujahr: 2008



D3454
Kalmar DCF420-1200
Baujahr: 2008



D3362
Svetruck 32120-47
Baujahr: 1999



D3456
Kalmar DCF100-45E7
Baujahr: 2008



D3455
Kalmar DCE100-45E7
Baujahr: 2008



D3460
Kalmar DCE100-45E7
Baujahr: 2008



DK089
SMV 5/6 ECB90
Baujahr: 2007



D3464
Hyster H18.00XM-12
Baujahr: 2008



D3397
Svetruck 13,6-120-32
Baujahr: 2008



D3255
Svetruck 13,6-60-30
Baujahr: 1996



D3442
Svetruck 1260-30
Baujahr: 2011



G0848
Hyster H9.00XMG
Baujahr: 2002



D3500
Kalmar DCE90-6
Baujahr: 2004



GK072
Hyster H7.00FT
Baujahr: 2007



D3472
Linde H70D-01
Baujahr: 2010



E4620
Hubtex EKS110
Baujahr: 2000



D3176
Hubtex MQ90D
Baujahr: 2005



EL4785
Combilift ESL6000
Baujahr: 2010



E4773
Still RX60-50
Baujahr: 2011



E4770
Still RX60-50
Baujahr: 2007



E4775
Toyota FBMT50
Baujahr: 2007



D3477
*Sonstige DH 60 - 105 Minilok
Baujahr: 1979

Pics, details and video: www.hinrichs-forklifts.com



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Breakwaters and other sea defences can protect against sea-level rise, but at a cost. We find out when that investment is justified

Photo: Shutterstock

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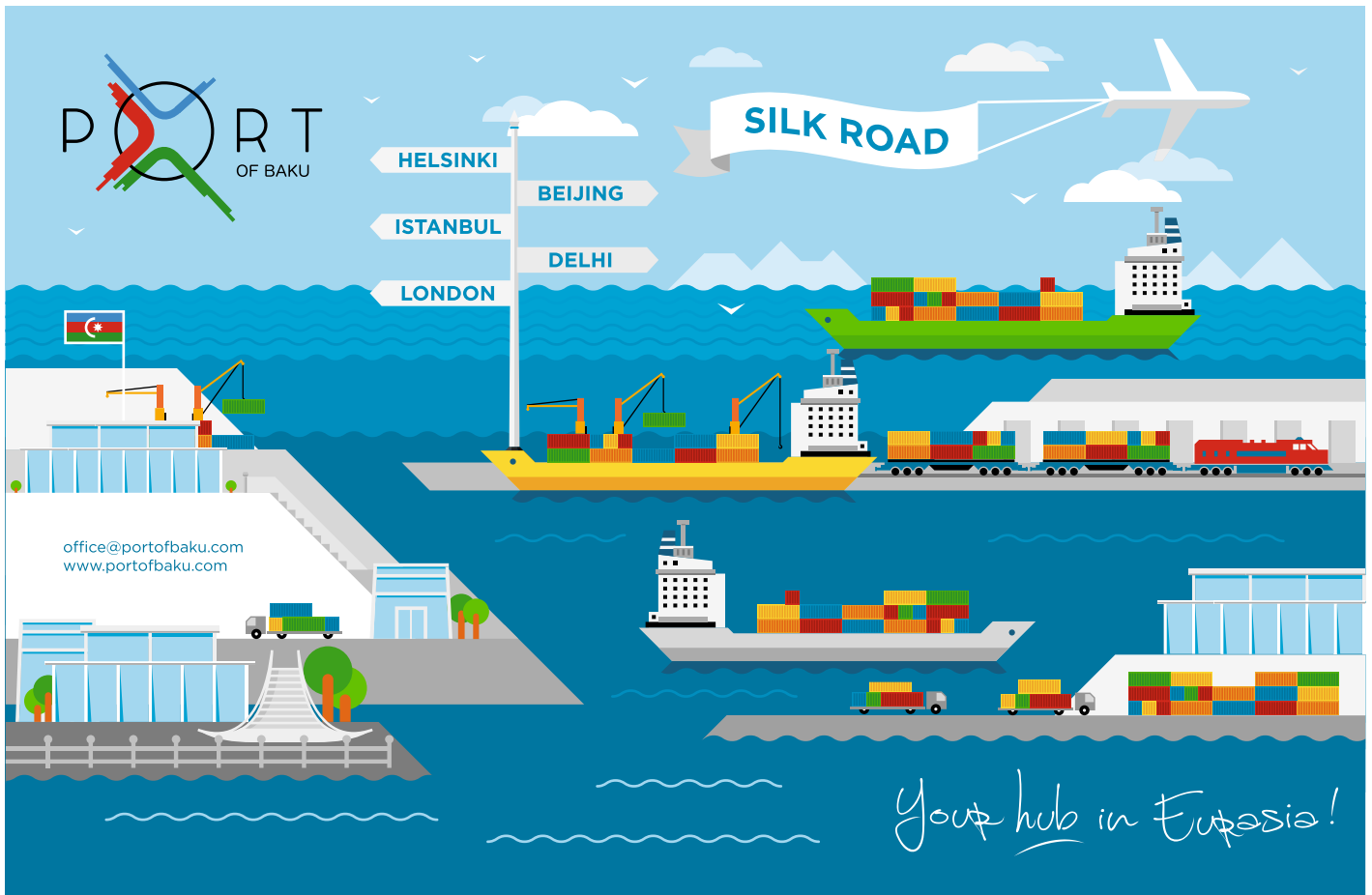
17



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Port power

A journey to Russia highlights the importance
of a sound regulatory framework



Susumu Naruse

Secretary General – The International
Association of Ports and Harbors



I recently visited some ports in the Russian Far East region, where I witnessed the challenges they have faced, and which I believe may be common to ports in emerging and developing economies. The Russian currency has been devaluated to a great degree. Its value has fallen over the past three years to one-third of what it was against the US dollar, due to falling oil prices and economic sanctions against the country.

As its container transport industry is largely geared towards imports, its throughput in 2015 decreased by about 30% against 2014 because consumers and industries didn't want to buy expensive imported goods. The strong dollar against the ruble means Russia's raw material exports are inexpensive, which has led to a slight increase in exports. But this increase is not significant due to the slowdown of the global economy, in particular the Chinese economy. As a consequence, the monetary value of their exports has largely decreased, which has resulted in the market pessimism.

Unlike in the Soviet era, Russian ports or terminals are

completely privatised. However, one current problem is a lack of regulatory power that port authorities usually have in other countries. Each of the many terminals in a port is managed and operated independently by a private entity, without clear regulatory power of the port authorities.

As a result, the container terminals at the Ports of Vladivostok and Vostochny have started handling coal

to compensate for the revenue loss from the container segment. These terminals, however, are located very near to the downtown area. I agree that private operators should strive to maximise their profit by using their resources but it should be done under a proper umbrella of regulatory rules. Without those in place, it is difficult to meet industry requirements such as controlling the impact on the local environment and securing port safety.

These challenges coincide with some of 'Trends that will shape the global maritime industry for the coming decade', which *IHS Fairplay* published at the end of 2015. Since the forecast growth rates of the world economy and global trade this year were revised down to 3.1% and 1.7% by the IMF and WTO respectively, I think the industry needs to adjust to the "new low normal" as many suggested.

Since this is the last issue of *Ports & Harbors* for 2016, I hope the year ends without any further disastrous events and wish you all joyful holidays and a happy new year. **PH**

Without regulatory rules, it is difficult to meet industry requirements

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Port updates

► DP WORLD IN UKRAINE

DP World has recently signed a memorandum of understanding with the government of Ukraine to collaborate on matters of mutual interest, including the development of logistics capability in the country. It was signed during a visit to Ukraine, where DP World also delivered a letter of intent for its P&O Maritime subsidiary to develop the tug and pilot boat services of Odessa port on the Black Sea.

► GEORGIA NUMBERS UP

Georgia Ports Authority achieved an August 2016 throughput of 330,846 teu, a 5% increase on August 2015. "August container unit volumes were the third-highest in the authority's history, behind April and May 2015 at the height of diverted cargo from the west coast," according to its COO, Griffith Lynch.

► CEMENT PORT REVITALISED

A loss-making Chinese port has been given a new lease of life after being acquired by Pan-United, Singapore's largest supplier of cement and ready-mixed concrete. Changshu Changjiang International Port (CCIP) in Changshu in China's Jiangsu province was making losses when it was acquired by Pan-United in March 2014. Pan-United had already acquired the neighbouring port of Changshu Xinghua (CXP) and looked to synergies between the two ports.

► ICO ZEEBRUGGE EXPANDS

International Car Operators (ICO), owned by NYK Line, is expanding its Zeebrugge, Belgium, terminal to increase its ro-ro handling capacity. In Zeebrugge, ICO has three terminals – Bastenaken, Northern Inlet, and Hanze. The site of the Bastenaken terminal will be expanded from 7 ha to 17 ha.



Thoai / Shutterstock

The new port at Lien Chieu would relieve congestion at Da Nang Port

Vietnam plans port at Lien Chieu

Vietnam is planning a major port facility to alleviate congestion at the Da Nang Port complex, the country's third-largest port system, located in its central region.

A pre-feasibility study for the project at Lien Chieu, which would cost about USD1.48 billion, is under review by Da Nang city officials who want to solve capacity problems at the port's busy Tien Sa terminal.

The study, prepared by port engineering consultancy Tediport, which also worked on Cai Mep, details a construction project in three phases, with the first costing USD332 million and creating 1.87 million tonnes of capacity by 2020. Two additional construction phases, costing USD353 million and USD792 million, will take capacity to 17.53 million tonnes by 2030 and 46 million tonnes by 2050.

The existing Tien Sa terminal is operating at maximum capacity with shippers reporting delays as well as overloading at storage warehouses. In July, a USD49 million project was launched to raise the capacity of Tien Sa to 12 million tonnes of cargo and enable it to handle 70,000 dwt

container ships and 100,000 gt cruise ships within two years.

Official figures show terminals at Da Nang Port handled a combined 146,000 teu in the first half of the year, a rise of 19% year on year. A record 6.5 million tonnes of cargo and nearly 120,000 cruise passengers passed through the port in 2015.

The pre-feasibility study proposes that the new Lien Chieu project is developed on a public-private partnership basis with funding from the Da Nang city budget, bank loans, and overseas development assistance (ODA). It is not clear which country would provide the ODA for the project.

The Japanese government invests heavily in Vietnam. Its agency for co-ordination of overseas aid, the Japan International Cooperation Agency (JICA), signed an agreement in April for the provision of more than USD781 million for additional port and road infrastructure in the rapidly growing southeast Asian nation.

The loans are for the development of the deepwater port at Lach Huyen to the east of Haiphong, the country's third-

largest city, located in the north of Vietnam, together with supporting hinterland road and bridge links. The port is scheduled to be operational by May 2018, a delay of five months on the original project plan.

Vietnam's northeastern coastal area, extending from Hai Phong and Ha Long City to Hanoi, is home to numerous Japanese and foreign-invested manufacturing facilities. The region's seaborne trade is currently served by Hai Phong Port and Cai Lan Port.

As well as addressing increasing demand for containers in northern Vietnam, the new port would reinforce the international competitiveness of the entire northern region, JICA said.

Vietnam is expected to continue to lead Asia's trade growth over the coming decades. IHS Markit forecasts it will book annual average growth in trade of about 7.8% up to 2035, compared with 6.1% for India and just over 4% for China. Average growth among ASEAN (Association of Southeast Asian Nations) countries is also expected to be just over 4%.

Despite the strong outlook for trade growth, industry commentators have questioned whether sufficient cargo volumes will be available to justify the large infrastructure and port investment projects taking place in the country.

Port of Busan adds depth to stay competitive

The water depth of Busan New Port will be further deepened to 18 m under Phase 2–4 of the ongoing development of South Korea's biggest port.

Initially, South Korea's Ministry of Oceans and Fisheries (MOF) had planned for the waters to be 17 m deep. However, in view of the steady increase in the size of container ships and considering Busan's ambition to consolidate its status as the largest transshipment port in northeast Asia, the ministry has decided to increase the depth by 1 m.

This would pre-empt the challenges that mega container

ships could face when berthing. At present, while the main container terminal of Busan New Port has a water depth of 16 m, major ports around the world are studying the further deepening of water depth as liner operators build ever larger vessels.

Under Phase 2–4, three berths spanning 1.05 km on a 630,000 m² area, would be built. Twenty-three of the 45 new berths in Busan New Port were completed in earlier phases. The entire Busan New Port, comprising 34 container terminals, four feeder terminals, one ro-ro terminal, and one

multipurpose terminal, will be completed in 2021, adding 6.21 million teu of capacity.

To improve Busan New Port's competitiveness, the MOF has decided that two of the three berths will have their depths extended from 17 m to 18 m. Busan Container Terminal, a consortium comprising Hyundai Merchant Marine and Hyundai Development, is in charge of the project. Work on Phase 2–4 began in February and is expected to be completed by 2021.

The MOF's director of ports, Park Seung-gi, said, "We look forward to Busan making a leap towards becoming a global logistics hub. In order to boost the competitiveness of Busan port, there will be no let-up in our support."

Hanjin terminal operator sale goes ahead

Hanjin Shipping said it is moving forward with the sale of Total Terminals International, which runs a container terminal in Long Beach. The company, which went into receivership on 1 September, made the announcement on 21 October during a Korea Exchange filing.

The announcement came a day after Hanjin Shipping said it would lend KRW21.6 billion (USD19.9 million) to the terminal operator over the course of five years, to strengthen its financial situation.

The company, once South Korea's flagship carrier, explained, "In order to secure liquidity for the rehabilitation process, we have been pushing for a sale of Total Terminals International and we have received permission from the court to appoint a professional consultant in this respect."

Hanjin Shipping is scheduled to submit a rehabilitation plan on 23 December. The company owns 54% of Total Terminals International, with the remaining stake held by Swiss-Italian liner operator Mediterranean Shipping Company.

Just two weeks before Hanjin



Hanjin Dallas at the Hanjin terminal, Long Beach

Shipping filed for receivership, it had said it was considering selling Total Terminals International to its associated logistics provider Hanjin Transportation.

However, as with Hanjin Shipping's similar plan to sell its intra-Asia shipping business to the same affiliate, the transaction was blocked by its transition into receivership, as all deals must now be approved by the courts. The company had also been looking at the refinancing of Total Terminals International as an option to raise liquidity, prior to the loss of its banks' support.

The Long Beach terminal, which Total Terminals International operates, can process more than 3 million teu/year and can service vessels of more than 10,000 teu.

Many industry observers doubt Hanjin Shipping could ever be revived, following the total shutdown of its business after the 31 August filing for bankruptcy protection. It would involve a monumental effort to restart the network, get vendors paid, and retain key staff, not to mention win back customers. An executive at one of the THE Alliance carriers said, "There is virtually no chance of a Hanjin revival."

Port updates

► COSCO KHALIFA DEAL

COSCO Shipping has agreed with Abu Dhabi Ports to build and operate a new container terminal in Khalifa port. COSCO Shipping expects to pay USD738 million to operate the terminal for 35 years. To be called KPCT2, it will have a quay length of 1,200 m and a water depth of 18 m, with channel depth of 16.5 m. The first 800 m of the quay will begin operations in 2018 and the remaining 400 m will operate from 2020, when it will have a capacity of 2.4 million teu.

► PRODUCTIVITY DOWN

Productivity levels at the world's top 30 container ports have shown little sign of improvement over the past two years and ports in several world regions are showing productivity decline, according to an analysis of port call and ship tracking data by IHS Markit. Port call data indicates that productivity among these ports increased by just 2% between the first half of 2014 and the first half of 2016.

► INDIA OIL

Visakhapatnam port is planning to significantly upgrade its oil-handling facilities for an expected surge in Indian demand for oil and oil products and is seeking environmental clearance to invest about USD30 million to upgrade its oil refinery berths I and II to handle vessels of up to 85,000 dwt. The planned development would increase capacity to 9.81 million tonnes/year.

► SINGAPORE LNG

US oil major ExxonMobil will work with Pavilion Energy, an LNG investment firm backed by Singapore's sovereign wealth fund Temasek Holdings, to develop LNG bunkering in Singapore. This was revealed by Pavilion Energy CEO Seah Moon Ming at the CWC Asia Pacific LNG conference in Singapore on 21 September.

Port updates

► ALGERIAN PORT PLAN

Algeria's government has launched a USD3.5 billion project to bring down the comparatively high transshipment costs for container imports from its neighbours. A proposed new port is scheduled to begin commercial operations in 2021 as the country strives to expand its maritime infrastructure to ease congestion and bring down the cost of doing business at its ports. Central New Port in El Hamdania will be larger than any of the existing 10 ports on the country's 1,400 km Mediterranean coastline.

► MELBOURNE LEASE

A consortium has paid a higher-than-expected USD9.7 billion for a 50-year lease on Port of Melbourne, Australia's busiest trade gateway. The Lonsdale Consortium comprises the Future Fund, Queensland Investment Corporation, Global Infrastructure Partners, and OMERS.

► IRAN EXPORTS UP

Iranian ports are showing clear signs of benefiting from the relaxation of sanctions. Government figures indicate year on year throughput growth of more than 16% for the first eight months of 2016. Throughput at the 28 ports included in statistics from Iran's Ports and Maritime Organization stood at 191.86 million tonnes at the end of August, a rise of 26.9 million tonnes, 16.3% higher than volumes in the first eight months of 2015.

► ANTWERP IN AFRICA

The Belgian port of Antwerp is to invest in expanding, training, and promoting the west African port of San Pedro in Côte d'Ivoire, its first ever financial investment in the region. Antwerp Port Authority and its consultancy and investment subsidiary, Port of Antwerp International, have been working with San Pedro since 2011.



Infrastructure investment needed to move commodities such as iron ore

India reforms port investment rules

India is taking measures to reform its terminal bidding process as it seeks to attract more private investment to the sector. The government released details of a proposed model concession agreement (MCA) that it says addresses the ambiguities in the existing model agreement and provides for a more equitable allocation of project risks.

The proposed changes include for the first time taking into account tariff discounts offered by terminal operators to keep charges competitive and retain customers. Under the current system, revenue share is payable on gross revenue

calculated with tariff bands and does not take into account any discounts offered to customers.

The draft MCA also provides compensation for the operator in the event of changes in laws, including those relating to the environment and labour, as well as the imposition of new taxes and duties that affect the financial viability of projects. This excludes what is termed 'new direct tax'.

"This will help the concessionaire to get compensation for all material changes in law," the shipping ministry said in a statement.

A key proposed change to the current model agreement is to

give investors the possibility to exit projects earlier. Concession holders currently have to maintain an equity holding in project special-purpose vehicles for six years, but the new MCA would allow them to exit after just three years if performance parameters were already achieved.

"The bidder shall be entitled to approach the port proposing a new entity/consortium meeting the eligibility criteria as prescribed in bid documents for the project," the draft MCA says.

The proposed reforms are aimed at bringing more private investment to ports, as required by the country's Sagarmala development initiative. Sagarmala is centred on the modernisation of the ports and provision of infrastructure that can move goods to and from ports quickly, efficiently, and cost-effectively.

Under the plan, the port hinterlands are to be industrialised and lead economic transformation of the country's coastal regions.

The programme envisages spending between USD10 and USD11 billion on port upgrades in the coming five years, adding up to 1,500 million tonnes/year in capacity and including the development of several greenfield ports. A further USD3 billion is to be spent on dozens of last-mile port-rail links to increase the efficiency of delivering cargo to and from the ports.

Iron ore exports out of Pilbara rise steadily

Shipments out of the world's biggest iron ore exporting port in Australia's Pilbara region, Port Hedland, continue to climb, despite weak commodity prices.

Pilbara Ports Authority monthly shipping figures for September showed Port Hedland had a monthly throughput of 42.4 million tonnes, 6% up on September 2015. Iron ore exports totalled 41.8 million tonnes, also a

6% increase on a year earlier.

Export growth is unlikely to falter, with the recent addition of Roy Hill's two new berths in South West Creek in Port Hedland, bringing the total number of berths in the inner harbour to 19. "This will increase tonnage through the port by 55 million tonnes/year once Roy Hill's operations reach full capacity," said Roger Johnston, CEO.

Of September's Port Hedland exports, 95% were iron ore, with 35.5 million tonnes of that going to China. South Korea took the second-highest amount, 32.5 million tonnes, while Japan received 18.2 million tonnes. Imports to Port Hedland, mostly fuel from Singapore and Indonesia, totalled 170,000 tonnes, an increase of 46,000 tonnes or 37% on September 2015.



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Port updates

► PAKISTAN DRY BULK

Pakistan's first dry bulk cargo terminal built to international standards to handle non-food cargoes is due to be operational by early next year after a project delay of more than a year-and-a-half, according to the company that holds the concession to develop and operate the facility. The Pakistan International Bulk Terminal (PIBT), under construction at Port Qasim, is a central element in Islamabad's plans to fuel the country's rising energy needs, and will have an initial handling capacity of 12 million tonnes of coal.

► US COAL FUNDING

US west coast bulkier trades specialising in coal are facing yet another hurdle with a decision by California to ban state funding of new coal terminals. Californian governor Jerry Brown, who signed the legislation into law on 26 August, said the action was necessary to help move away from fossil fuels towards renewable energy. "Last year, coal exports from California ports declined by more than one-third, from 4.65 million to 2.96 million tonnes," Brown said on signing the act. "That's a positive trend we need to build on."

► STOCKHOLM EXPANDS

Ports of Stockholm has expanded Stockholm by 85,000 m², and built a new pier and passenger terminal. It also opened its new Port of Värtahamnen and Värta Terminal on 18 October. Värtahamnen has been under reconstruction since 2013, as part of the development of a completely new city district in Stockholm, Stockholm Royal Seaport. Ports of Stockholm has built a pier and passenger terminal, which the ferry operations at Värtahamnen have now moved to.

Mombasa vows to rebuild transshipment volumes

Kenya Port Authority (KPA) has set up a task force to arrest the decline in transshipment volumes at the Port of Mombasa by the end of the year.

The task force, which was set up following publication of official figures showing a year-on-year decline of close to 10% in transshipment volumes at the port during the first half of 2016, has been ordered to investigate and implement an action plan to address the fall in the sector the port has been specifically targeting for growth.

"Transshipment traffic is a key segment of cargo that any port would strive to capture. We at Port of Mombasa have been making efforts to attract this business in the past few years," KPA managing director Catherine Mturi-Wairi told a meeting of high-level port stakeholders in Nairobi.

"KPA is cognisant of the decline in volumes and towards that end a multi-agency task force has been formed to look into ways of revamping transshipment traffic through the Port of Mombasa."

In early September Mombasa inaugurated the first phase of its second container terminal, one of a series of major projects aimed at improving the port's competitiveness to capture a larger share of east Africa's transshipment and gateway business. Phase one increased the container capacity of the port by 550,000 teu. Two more phases are planned to eventually take the total capacity of the port to 2.5 million teu.

Mombasa is moving ahead with the relocation of Kenya's main oil trade terminal, Kipevu Oil Terminal, which will expand capacity by a factor of four. A tender document is being



Mombasa has seen a decline in volumes

prepared for shortlisted bidders for the project, which include seven Chinese companies.

The project involves the decommissioning of the existing terminal and the construction of an offshore jetty near Dongo Kundu. Oil pipeline capacity between Mombasa and Eldoret, a major city in western Kenya, is also being expanded.

Mturi-Wairi said moves by authorities to improve ship turnaround times and cargo dwell times at the port are proving fruitful. Average container dwell time has dropped by 1 day to 4.3 days so far this year compared with 2015, and average ship turnaround time is 3 days compared with 3.7 days last year, she said.

The efficiency of the port is expected to improve further with the development of new landside links including a six-lane highway and standard gauge railway from Mombasa to the capital Nairobi. The two cities are currently linked by a two-lane highway that is subject to high levels of congestion, particularly at weighbridge stations for cargo vehicles along the route.

While Mombasa continues to

take measures to consolidate its position as east Africa's primary sea gateway, corruption remains a major challenge. Kenya's Ethics and Anti-Corruption Commission (EACC) recently sought the help of Interpol and the UK's Scotland Yard to assist in breaking corrupt cartels at the port.

Hundreds of cases are being investigated, including the disappearance of containers and a major luxury car smuggling operation with links to the United Kingdom.

"We are working with the governments of other countries, like the UK, and other security agencies including Interpol and others, which will be of value to us in unmasking the cartels and the domestic perpetrators. We are working with all those agencies so we put a stop to these kinds of incidents," said EACC chief executive officer, Halakhe Waqo.

Mombasa has had a difficult 2016 so far in terms of throughput volumes. The latest official figures show total cargo throughput at the port grew just 1.4% to 13.406 million tonnes in the first six months compared with the same period last year and container traffic fell 0.6% to 527,523 teu.

Guangzhou to widen access for bigger vessels

The Port of Guangzhou has begun a major project to widen the stretch of water linking its container terminals at Nansha to the main east-west shipping lanes. This would allow larger vessels to use the channel in both directions at the same time.

The USD415 million project will widen the waterway known as the Guangzhou Port Channel to 345 m and, after completion, is expected to save about three hours in the time it takes container vessels to reach Nansha.

The project is one of a series of infrastructure and facilities upgrades taking place at Nansha as the Guangzhou Port Group gears up for a planned listing once approval is given by the

China Securities Regulatory Commission. Funds from the listing, which could take place as early as the first quarter of next year, will be used to accelerate the development and optimisation of port infrastructure and further increase the competitiveness of the port.

Guangzhou is the fastest growing container port in southern China. In the year to August, throughput stood at 11.8 million teu, up nearly 5.5% on the first eight months of 2015 and well ahead of the average throughput growth of 2.4% at China's top eight container ports.

August monthly throughput grew 7.5% year on year to 1.57 million teu while volumes at

the other main Pearl River Delta ports of Shenzhen and Hong Kong fell by 2.2% and 2.9% respectively, according to the latest figures from the Shanghai Shipping Exchange and the Hong Kong Maritime and Port Board. According to the Guangzhou Port Group, foreign trade-related container throughput at the Nansha terminals grew by 5.9% to 2.31 million teu in the first half of 2016.

The Guangzhou government has allocated some USD45 million in cash and tax incentives to attract new liner services and increase container volumes over the coming two years. This is on top of USD6.7 million already given out over the past year.

The third phase of Nansha International Container Terminals, which will take capacity to more than 6 million teu, is set for completion by end of November.

Port updates

► PORT ELIZABETH DREDGED

Global port and terminal operator APM Terminals (APMT) is to invest USD70 million in its container port in the American city of Port Elizabeth, New Jersey, to prepare it for 13,000 teu ships travelling via the expanded Panama Canal. APMT's facility handles more than 500 vessel calls annually. It will be dredged, gain a berth, and throughput will be expanded from 1.5 million to 2.3 million teu.



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Corozal concession a first for ACP

The Panama Canal Authority is diversifying its portfolio as it becomes a port operator. **Alex Kyriakoulis** and **Joseph Botham** from law firm Holman Fenwick Willan explain the concession process so far

Bridge of Americas looking towards Corozal: the terminal could expect a combined total throughput of about 5 million teu per year when the first two phases are complete

The Panama Canal Authority (ACP) has issued a request for proposals on 7 October 2016, for the award of a 20-year concession, with a 20-year extension option, to design, develop, finance, construct, operate, and maintain the Corozal Container Terminal in the area of Corozal.

The terminal is, and will operate as, an integral part of the Panama Canal and ACP's Panama Canal Diversification Strategy. It aims to contribute to additional port capacity on the Pacific side of Panama to attract and support the transshipment needs of larger vessels travelling through the new sets of Panama Canal locks.

ACP controls the administration, operation, conservation, maintenance, and modernisation of the Panama Canal and its related activities. The new terminal, however, will be the first port developed and administered by ACP as a port authority and concession grantor.

A project's implementation depends on the interplay between stakeholder roles, and on the legislative and regulatory backgrounds, and the services needed at a port – marine, cargo handling, and safety – and who provides them. Challenges and risks, and their allocation among stakeholders, will depend on how these factors are approached.

The terminal is intended to be a common user container transshipment terminal distributing cargo to the region, providing services for the repositioning of empty containers and handling local cargo. It will aim to serve competitively, non-exclusively, and efficiently, all interested carriers and all routes, particularly Asia and North America – South America services and regional feeders.

It will be located in the last available land plot on the east bank of the Pacific entrance to the Panama Canal, adjacent to the trans-isthmian rail track and main highway, comprising 69 ha and 4,689.40 m² of land and 7 ha and 9,650 m²



Holman Fenwick Willan

“A major challenge is the identification of an appropriate concession model”

Alex Kyriakoulis
Holman Fenwick Willan



of seabed – with an option for further land and seabed. Upon completion of the second phase of its development and operation, the terminal could expect a combined total throughput of about 5 million teu per year.

A major challenge for such a project is the identification of an appropriate concession model. To be attractive, it should strike an optimal risk/reward balance between public (port authority) and private (port industry) interests. This will typically include an analysis of different operational, financial, and administrative scenarios, including various concession fee structures, port authority and terminal operator investment levels, anticipated returns, and other scenarios. The extent of each will vary throughout the different phases.

In general, there are three distinct phases in port and terminal projects, each with risks, rewards, and issues: the preliminary phase, which includes the tender process; the construction phase; and the operations phase.

Risks in the preliminary phase can include third-party challenges to the project, potentially causing lengthy legal proceedings.

The grantor must ensure that the project is attractive to potential tender participants. Terminal operators will consider the terms of the concession agreement, the concession's fee structure, and any incentives available, among other factors.

Administrative issues may need to be addressed before and during the tender process. In some countries a law must be passed enabling the port authority to grant a concession or for the government to ratify the grant.

With regards to interface risks during the construction phase, various contractors can be responsible for different aspects of construction, such as dredging, quay wall

construction, the construction and installation of gantry cranes or fixed cranes, the construction of buildings, and warehousing. Each party may face liabilities for delays, accidents, and malfunctioning construction, depending on how construction is allocated.

These liabilities may manifest themselves as liquidated damages or penalties, forfeiture of performance bonds or guarantees, and/or significant legal costs. A relevant party may be liable to pay any or all of these as a result of delays in the completion of construction of the port, contractor interface issues, disputes, or accidents.

The relative cost of the construction of a container terminal will depend on the structure or business model applied. The cost may include the capital expenditure for which a party is responsible, but also legal costs.

The opportunity cost of investing in one port project as opposed to another should be considered in a cost analysis. ACP will contribute approximately USD70 million by undertaking a large part of the capital dredging along the proposed 1,350 m of berths.

During the final operational phase, financial rewards will come down to the concession's fee structure, the attractiveness of the project to terminal operators, and operational success. The request for proposals for the port project includes the terms and conditions of the concession agreement – the pre-qualified parties have to propose an up-front fee, a concession land area rate, a per-movement fee, and guaranteed annual container movements.

The responsibilities of the relevant parties and associated obligations during the operations phase will exist together with related potential risks and issues. For a grantor, obligations can include provision of rail and road access to the terminal, the availability of public utilities, arrangements to ensure access by customers, and those within the remit of the port authority role. **PH**

i MORE INFO: Alex Kyriakoulis is a partner and Joseph Botham is an associate at law firm Holman Fenwick Willan www.pancanal.com; www.hfw.com

“The grantor must ensure that the project is attractive to potential tender participants”

Joseph Botham
Holman Fenwick Willan



Holman Fenwick Willan

When to heed the long-range forecast

The engineering techniques used to protect against climate change are not new. The challenge is understanding how much protections is needed, **Turloch Mooney** discovers, with additional reporting by **Penny Thomas**

Climate change is a growing concern for port and terminal stakeholders who are struggling to assess and adequately prepare for its impact on port structures, facilities, and operations.

The impacts are not yet severe enough to require immediate changes in the design, construction, and operations of ports, but there is a clear expectation of serious future consequences, and a lack of consensus on how the issue should be addressed.

Port Canaveral on the eastern seaboard of the United States was in the process of reopening its facilities, following a visit from Hurricane Matthew. Further up the coast, Georgia Ports Authority sent out an advisory notice to its customers about the clear-up and reopening plans that it was rolling out at its ports of Savanna and Brunswick as a result of the same hurricane. These areas, along with others such as Miami, are familiar with the destruction and devastation storms and hurricanes can bring, but climate change is a slow-moving phenomenon and the impact is very location-specific, therefore, the key challenge is to quantify its potential impact.

"There is a perceived increase in inclement weather but nothing to a degree that would impact current

operations," according to Jeroen Overbeek, Ports and Marine leader in Asia, with consulting engineers Aurecon. "Owners, operators, and authorities are starting to think seriously about the issue and trying to define how to take it into account."

Increases in the power, reach, magnitude, and duration of storms, and bigger waves and rising sea levels have the potential to seriously affect ports by degrading structures and equipment. Higher levels of hinterland flooding, changes in ocean salinity levels, and higher temperatures will also have an impact on ports, experts believe.

"Ports are built for the long term and can typically handle two or three extreme events, even in succession. The question is how much more extreme and how much more frequent these events will become," said Overbeek. In Asia, the expectation is that it will be ports in eastern-facing countries and on eastern seaboard that will be most affected by climate change. Increases in the number and magnitude of typhoons in the region would result in significant swells across the South China Sea as far as Vietnam, the Gulf of Thailand, and the Andaman Sea.

National governments, including in Singapore and Indonesia (see page 14), have commissioned studies on the potential impact of climate change, including on their ports. Supra-national bodies such as the United Nations Conference on Trade and Development and industry groups, such as IAPH and the World Association for Waterborne Transport Infrastructure (PIANC), are also increasing their focus on the issue.

Ports are intrinsically linked to urban developments and industrial estates, and Overbeek noted that ports

should consider any climate change mitigation and adaptation plans in a holistic way and in co-operation with local governments and businesses. "As engineers we can solve it. But, it should not be in isolation," he said.

Adaptation measures include increasing quay heights, moving the lowest points of buildings to higher levels, building stronger and higher saltwater corrosion-resistant bridges, and increasing the maintenance of infrastructure and facilities. "The technology to build or upgrade a facility to [handle] climate change is not new and is well understood. The scale may be large and of a different magnitude," noted Overbeek, "but, the big issue with climate change [adaptation] is justification."

Projected environmental conditions rely on the examination of past data from which it is possible to extrapolate forward, Overbeek explained. But, that data does not often exist much beyond 30 years ago and certainly not for the past 100 years, he said, noting that adopting this method for climate change also presumed, for example, that sea level rise would continue at the same rate, and did not take into account a shifting baseline. These two factors indicate that the projected increase in sea level rise "is certainly not well qualified," said Overbeek.

"[But] if you can quantify the impact, then mitigation in the case of greenfield developments

is straightforward enough – you build higher and you build stronger. Brownfield mitigation is more complex, but you can take measures, such as building dykes, bigger wave walls, and temporary dams, as well as allow for more downtime in operations."

"A key question," he said, "is how much do you invest in something you cannot yet accurately predict. In certain cases the costs of upgrading will not be worth it, and you will likely see some facilities abandoned."

Future sea level rise levels may not be easy to assess but, according to Overbeek, it is easier to protect against other aspects of climate change. An increase in storm and waves, the number of waves, and height of waves have a greater impact on developments.

Waves "really pack a punch," said Overbeek, whereas sea level rise is more linear. "Ports historically susceptible to waves will see more, whether higher or more powerful, or a combination of the two." He also predicts that ports on the periphery of these areas might start to see more impact.

The Intergovernmental Panel on Climate Change (IPCC) report suggests a worse-case scenario of a water level rise of 60–70 cm in certain parts of the world by end of century. "This is significant, don't get me wrong, but it is manageable," said Overbeek, adding that there were quite a few ports where these levels would be manageable with existing facilities. Ports are built conservatively with these scenarios in mind, he said. It is "not a big issue in my view."

Looking forward, Overbeek believes any shift in the port landscape will not be due to climate change alone. Some regions may have to be abandoned, he predicts, but any changes will be determined by a combination of climate change, infrastructure demand, size of ships, and economic activity. "It's not an easy topic."

The main challenge for now, as Overbeek has observed, is how to quantify and qualify what to do and where. "As an engineer I can give you nuts and bolts. We can work out the problem." But, noting that without being sure of exactly what is required, he added, "It is the definition that's the real problem." **ENR**

As engineers we can solve it. But, it should not be in isolation

Jeroen Overbeek

Ports and marine leader, Asia, Aurecon



Aurecon

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Jakarta rises above the tide

Jakarta is rolling out two separate projects for its port and city to protect it against sea level rise.

Zoe Reynolds reports

Jakarta is fast becoming the Atlantis of world ports. Seas are rising as the ice caps melt and oceans warm due to climate change. The Indonesian capital, like the lost mythical city of old, is sinking below the ocean. While seas are predicted to rise by 3.4 mm annually, according to scientists, the low-lying areas of the Indonesian metropolis of about 10 million people are sinking up to 140 mm a year.

Monsoon rains combined with the peak tide most years cut off the roads feeding the congested Port of Tanjung Priok. In 2007, the first major ocean flood topped the sea walls in north Jakarta at peak tide with waves of up to 1.5m gushing through the streets, flooding 70,000 homes, displacing 500,000 people, killing 80, and shutting down the port.

Carmelita Hartoto, who chairs the Indonesian National Shipowners' Association, told *P&H* that while quayside operations continue, flooding disrupts land transport going in and out of the port. In 2015, 28 ships were held up because flood waters blocked truck deliveries, according to local media.

Some areas of Jakarta are already below sea level. Local surveys from 2013 revealed that more than 40% of coastal flood defences were unable to withstand the highest level the spring tide reaches in a cycle of 18 years. Present scenarios for Jakarta suggest that within 50 years the oceans will rise to 3–5m above street level, leaving 80% of the city below sea level.

Much of Jakarta is built on swamp land. During the colonial period, the Dutch built dykes and canals to regulate the waterways. But, as the city swelled and drew on groundwaters, land subsided. Now, 71 years after independence, the Dutch masters of land reclamation are back with a grand plan to hold the sea at bay, while extending the city into the ocean.

The National Capital Integrated Coastal Development (NCICD), better known as the Giant Seawall, is a joint Indonesian/Dutch government-sponsored project. A consortium headed by engineering company PT Witteveen Bos Indonesia includes engineering consultancy company Grontmij and consultants KuiperCompagnons, Deltares, Ecorys, and Triple-A.

"The Indonesian government asked the Dutch, 'What are we going to do about the flooding?'," Sawarendro, deputy director at PT Witteveen Bos Indonesia and lead consultant for the NCICD master plan, told *P&H*. "We realised the land was sinking and the seas were rising. We aren't just looking at coastal defence, but how we can integrate flood management with other issues like transportation."

Under the plan, rather than relocate people or raise the land, Jakarta and its ports will be extended 7 km out into the bay. The USD40 billion project will be divided into two phases. First, sea and river defences are being reinforced and heightened by at least 1.5 m to provide protection until 2022, "allowing time to develop more robust solutions".

The second phase is the construction of parallel seawalls in the western part of Jakarta Bay adjacent to the new port at Kalibaru. The main wall will stretch 32 km across the bay. Land reclamation will provide 400 ha for the new city centre, housing 300,000 residents and 600,000 workers, industrial complexes, parklands, a giant dam, and, potentially, further port expansion.

"We decided on the urban development to help attract private investment," Sawarendro told *P&H*. "Why try to use public funds for such a large project?"

The seawall will take the shape of the Garuda, a large mythical eagle and Indonesia's national

The new port development sits to the right of the city, next to the Garuda protecting the bay

NCICD



symbol. The Garuda, visible as you fly into Jakarta, will protect the city, bringing prosperity to the national capital, the master plan says.

However, port development will remain autonomous at least until 2030. The government port authority, Pelindo II (Indonesian Port Corporation), has already begun expanding its container terminal out over the ocean. Stage one opened in September 2016, with two or three ship visits each week on average.

Pelindo II New Priok Container Terminal One (NPCT1) is the first of three offshore container terminals. "We built the elevation high enough to be above the spring tide," a Pelindo II representative told *P&H*. "It's well above the water for now," he said, but conceded that future sea rises or climate change effects were not part of the equation.

New toll roads feed terminals and tower above the flood-prone coastline. The shipping industry is confident it will not be affected by flooding in the short term. The new terminal should cut logistics costs by up to 30% and triple capacity, with the whole USD2.5 billion project due for completion by 2023.

Dutch project management and engineering consultancy Royal Haskoning DHV won the contract to supervise the construction of the extension of the main port, which is modelled on Rotterdam. NPCT1 is owned by four shareholders: Pelindo II, Mitsui & Co, PSA International, and NYK Line. Its green credentials include on-shore power.

This facility may not form part of the business case for the NCICD master plan, but the Giant Seawall aims to assist port development by providing greater flood-proof access. A freight railway in the east of the coastal zone and toll roads along the seawall will connect the port with the hinterland. The master plan also

allows for integration of additional port expansions after 2030.

Reinforcement of the city seawalls began in October 2015 with the official launch of the NCICD. However the plan, which incorporates a 2013 local government dredging proposal to contract Van Oord of the Netherlands to construct 17 residential islands, sparked outcry from environmentalists and the maritime minister. This led the national government to implement a six-month moratorium in March to review environmental impacts. A cabinet meeting was scheduled to look at the issue on 27 October.

Sawarendro told *P&H*, "Our plan includes mangroves and fishing communities. We started out with three plans; now we have integrated the island project under the NCICD. But, for the time being, the port expansion will remain a separate project."

Jakarta's most pressing problem is to stay above water. Future port scenarios are far from the minds of the Indonesian maritime community and ports and shipping bodies were not prepared to speak on the issue. However, climate change and rising seas are integral to the NCICD's master plan. *RH*

 **MORE INFO:** www.indonesia-investments.com;
www.indonesiaport.co.id





Beyond Rotterdam: Changing industry everywhere

Rotterdam has commissioned a study that reveals three scenarios, all of which would make a huge dent in its carbon emissions

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The Rotterdam Port Authority has made a huge commitment as it wants to become the world's most sustainable port. The drive was prompted by the treaty of the Paris Climate agreement, which came into force at the beginning of November.

The Rotterdam region produces 19% of Dutch emissions, much of which is from electricity generation by the city's industrial cluster. Therefore, the port commissioned a study from German's Wuppertal Institute to explore the consequences of global decarbonisation for the port's industrial cluster.

The result is a report of various scenarios and mitigation strategies, Caroline Kroes, strategy adviser at the port, told *P&H*. The report focused on the industrial cluster, which includes five refineries, the chemical cluster and power plants. The shipping industry was not within its scope so it does not take into account emissions from vessels calling at Rotterdam, but the port addresses these with initiatives such as offering LNG as a fuel (see *P&H* September/October issue, page 36).

The report offers three scenarios, all of which would lead to at least an 80% cut in CO₂ emissions by 2050.

The first focuses on carbon capture and storage for power plants and refineries. Scenario two concerns biomass and biofuels and requires some traditional structures to be replaced by or retrofitted into bio-based power plants. The third scenario is a closed carbon cycle that still uses fossil fuel-based chemicals but in a closed loop. The energy system is mostly based on renewable electricity. This scenario creates a lot of heat, which could be reused through heat grids in the port or local

housing areas. "All scenarios have energy efficiencies as a major [method of CO₂] reduction," Kroes noted.

All three scenarios are technically plausible, but Kroes believes the final outcome will probably involve a selection of initiatives from across the three scenarios.

The report has yet to be delivered to Rotterdam Port Authority, which has already implemented projects that align with the three scenarios.

A pilot project aims to capture carbon and pipe it to empty nearby gas fields (the ROAD project). Last year, offshore company Sif Group and logistics company Verbrugge International announced they would build an offshore terminal at the Maasvlakte 2 terminal as a dedicated production site for the monopiles used to build the turbines to generate offshore power. Other companies, including Neste, have replaced fossil fuels with bio-fuels such as biopropane, which can be used in power plants and as a transport fuel.

The Rotterdam municipality, industry, and non-governmental bodies have helped identify the scenarios. A Rotterdam representative said it was a road map and still needed detail. "We would like to work with companies to realise [the] road map," he said, but did not yet know how that would be facilitated and how the projects would be financed. Company involvement is essential. The representative noted, "If we [make the] transition and no one else does, it will not make a difference."

However, the Port of Rotterdam sees itself as a pioneer, believing it can facilitate and be a cluster for future types of industry, with a plan that is "broader than the port and will change industry everywhere". **PH**



Cuba positions itself for transshipment success

The Caribbean port of Mariel believes it can offer customers a cost-effective container hub solution, saving US ports from expensive dredging bills. **Greg Miller** reports

Port of Mariel
started commercial
operations in 2014

The long-term goal of the container terminal in Mariel, Cuba is to offer transshipment services to the US and Caribbean, but that strategy will have to wait until US laws on trade with Cuba are changed.

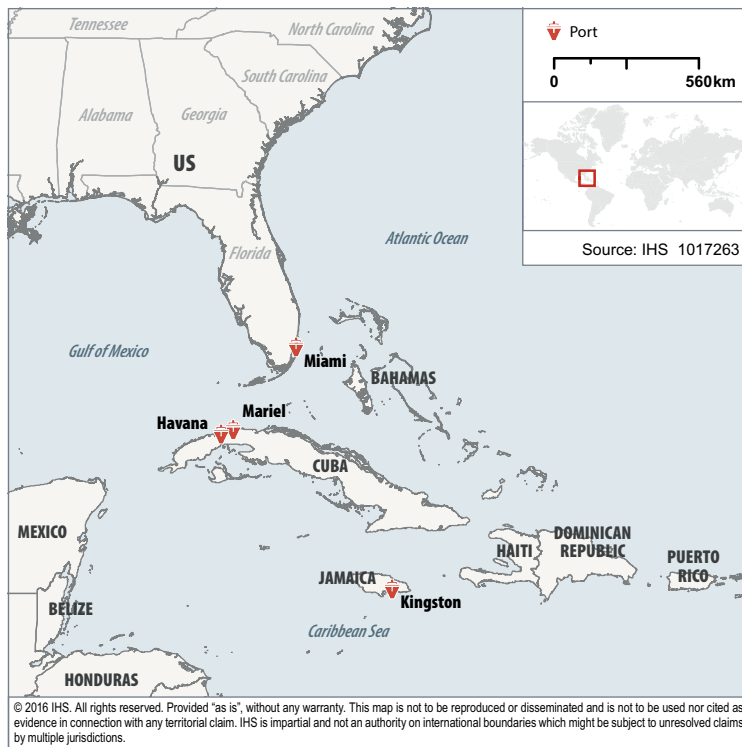
Since December 2014, US president Barack Obama has used his regulatory powers to ease restrictions on US business ties with Cuba. However, only the United States Congress can clear the way for Mariel's cargo business, and it is now believed that Congress will not move forward with changes until 2018 at the earliest.

"The legislative efforts have been almost a waste

of time," said US-Cuba Trade & Economic Council president John Kavulich in an interview with *P&H*. "You have a lot of inspiration and a lot of aspiration chasing very little reality."

Volume gains for commercial shipping will hinge on the lifting the embargo on trade with Cuba and the repeal of the '180-day rule', which prevents ships without a waiver from calling at a US port within 180 days of visiting Cuba.

Commentators have focused on the potential for a policy overhaul after a new US president is inaugurated



PSA International-operated terminal in Mariel, and then continue on their front-haul voyages to final destinations in the United States.

The challenge facing this lobbying effort is that US business interests would not necessarily benefit. In fact, some could be harmed.

Repealing the 180-day rule would allow no additional US export volumes to Cuba beyond the currently permitted cargo categories. But Mariel would be enabled to develop a transshipment business to serve Caribbean islands in direct competition with US exporters and US-based carriers sailing out of ports in Florida and along the US Gulf of Mexico coast. "For US ports, having Mariel as a receptacle for US exports is great, but having Mariel as a potential competitor is not. That's where the challenge is," said Kavulich.

Baker takes a different view. In his opinion, transshipment is not a key business to the US, and Mariel would instead compete against hubs in places such as Kingston, Jamaica. He also believes Mariel would provide more "more efficient service" to US-based companies importing non-Cuban cargoes.

"If you allow transshipment to take place from Mariel to US ports, you could open up service to Tampa, which is the closest port to Orlando, which is of course a huge area for distribution centres serving the state of Florida. Supply chain costs would be reduced and you'd also get the cargo closer to the distribution centres, so you could reduce emissions from trucks that would otherwise have to run the cargo up from Miami or Fort Lauderdale," said Baker.

He noted that Mariel was already increasing its channel depth to enable it to receive bigger vessels [see box] and maintained that US Gulf and east coast ports using Mariel for transshipment could save hundreds of millions of dollars that would otherwise be spent on dredging. "We would argue that you could actually save capital investment dollars in US ports by handling transshipment in Mariel," he said.

Prior to the necessary legislative changes in the US, the Mariel terminal remains focused on its domestic cargo business. It handled about 160,000 teu in 2014, its first year of operations, then 330,000 teu in 2015.

In May, Charles Baker, the general director of the Mariel terminal, predicted that throughput for this year would rise to about 360,000–370,000 teu. However, he has since told P&H that throughput would be similar to last year's. "After a very, very good start, the situation that the country faces economically has become much more challenging," he explained. "What we saw in the second quarter was a slowing down of traffic. What we're now predicting is that our figures for this year will be close to last year's. It's not the end of the world, but it's not as exciting as it looked at the beginning of this year."

Melfi, the Cuban government-owned container line, is the port's main customer and represents about 30% of the business. "Then following it, roughly in order,

“For US ports, having Mariel as a receptacle for US exports is great, but having Mariel as a potential competitor is not. That’s where the challenge is”

and a new Congress is convened in January 2017, yet Kavulich views that timetable as over-optimistic. "Cuba is not going to be a priority on the list of issues facing the new president," he stressed. "Nor should it be, because no one [in the US] needs Cuba. Cuba is not China, where if a company doesn't have China it can put the company in jeopardy."

According to Kavulich, any political momentum for ending the US embargo will be focused on a later date: 24 February 2018. "That is the date when [Cuban president] Raul Castro has said he's going to retire, so members of Congress on both sides of the aisle will look at the process and say, 'We should hold back on making changes because we want to have something to either use as bait for Raul's successor or to reward Raul's successor. Let's not give everything now to the old guy. Let's try to enhance the new people.'"

Hopes have also been raised in maritime circles that Congress could repeal the 180-day rule before the trade embargo is lifted. If the 180-rule is removed, container lines could use New-Panamaxes to drop off Asia-sourced transshipment cargo at the

would be Maersk Line, MSC, CMA CGM, Hamburg Süd, COSCO – and now China Shipping after the merger – and then Hapag-Lloyd, Zim, Evergreen, Nirimt, and Crowley,” said Baker.

Since its opening in 2014, Port of Mariel has faced issues including long dwell times because of lorry unavailability and a lack of warehousing. Baker said the first problem had been solved through the addition of about 200 new trucks. New warehouses have also been opened up near the port, meaning that containers don’t need to be trucked all the way to Havana.

“I’d also say that some aspects of Cuban logistics are pretty antiquated,” said Baker. “Warehouses are not open even 16 hours, let alone 24 hours a day. They also do a lot of cargo inspections – there are probably not enough inspectors and too many inspections.

“There is also the fact that we are obliged to offer 15 days of free storage and, in my experience, anywhere in the world, if you offer it, people will take it. There is a programme to reduce the amount of free time over the course of the next two years and bring it down to seven days.

“All of these things are going to take time to get sorted out. We’re talking about a wide modernisation process for the whole logistics and supply chain system in the country.”

Baker added that the port now had two new rail-mounted gantry cranes “that will give us more than enough rail capacity for the foreseeable future. We’re handling an average of one train a day and there is more demand for rail. This is a very long, thin island, so it lends itself to rail transport. The challenges involve the efficiency of the country’s rail network: how quickly those trains can be discharged and reloaded and how quickly the trains can get back here. There is also a need for more investment in wagons and locomotives. That is under way, so there should be additional wagons and locomotives arriving in 2017.”

Mariel currently has an 800,000 teu/year capacity, with four gantry cranes and 700m of quay. The next phase of development would feature 300m of additional quay. Baker said plans for this expansion are under discussion. “That means it wouldn’t be [coming online] until some time in 2019,” he said, explaining that “the ‘crystal ball gazing’ element we’ve got to consider is how quickly and far-reaching any changes to US legislation vis-à-vis the embargo and the 180-day rule will be. If those rules disappear, then we’re in the game and very well positioned geographically, so we may want more than another 300m.”

Mariel has an additional 1,400m that could be developed, bringing the total potential quay length to 2.4km and the total future capacity potential to 3 million teu/year. “That’s a long-term project,” Baker said, confirming that this larger expansion area was earmarked for development in the post-embargo era. **PH**

i MORE INFO: www.apn.transnet.cu

Dredging Mariel

Shortly after the debut of the expanded Panama Canal in June, 10,000 teu New-Panamaxes began traversing the Caribbean.

Mariel, Cuba, is positioning itself to service these larger ships. Although it currently has a Panamax access channel, it is the process of upgrading.

“Dredging is ongoing with a view to completing a Neo-Panamax-dimension channel some time in 2017,” said Charles Baker, the general director of the PSA International-operated TC Mariel terminal.

Dredging has already expanded Mariel’s capabilities. The government published new navigational regulations in August for Mariel “that represent the culmination of the investments in dredging” to date, said Baker.

“These regulations allow for vessels of up to 295 m length overall, 32.3 m beam, and up to 12.1 m draught,” he explained. “There’s probably about 15 m of actual water depth in the channel and the channel itself is somewhat wider than it would need to be under international guidelines for a Panamax vessel, so they’re also now reviewing whether or not that [vessel allowance] can be increased.”



Mariel: increasing draught to enable it to handle the New-Panamax vessels now calling in the region

Steady as she flows

The all-water route from Asia to the US east coast offers even cheaper options through New-Panamax vessels

It's only been a few months since the expanded Panama Canal opened and already shifts in trade flows are being observed.

With 60 % of traffic transiting the canal beginning or ending its journey at a US port, competition between east and west coasts continues, with 40% of US-bound cargo going through either Los Angeles or Long Beach. Most US east and Gulf of Mexico coast ports are being dredged in preparation for the New-Panamax ships and are upgrading their equipment, although each is at a varying degree of readiness.

More and larger ship-to-shore cranes are required to handle increased container volumes. While Panamax ships can be worked by four or five cranes, larger ships will need to be worked by at least six cranes.

"Cost, consistency and capacity will determine the gateways through which Asian imports enter the US," Rick Gabrielson, vice-president of transportation at home improvement retail company Lowe's, told the South Carolina International Trade Conference in September. According to Gabrielson, the initial competition for US business has not been west coast versus east coast, but rather with the Suez Canal route from Asia. He noted that two Suez services shifted to the Panama route. In addition to being a shorter distance to the east coast from important loading centres in Asia, the Panama Canal route is considered more efficient, with fewer intermediate stops.

It takes 10 days longer for a box to travel from

a major Chinese port to the US east coast via the Panama Canal than it does if it were to go through the more expensive option of a west coast port, such as Los Angeles or Long Beach, and then via intermodal shipment. But for low- and mid-value shipments where transit time is not critical, the cheaper all-water route is the obvious option for the shipper.

Ports on both coasts face the challenge of providing sufficient marine terminal and infrastructure capacity and efficient handling processes to manage the cargo surges from today's mega-ships.

Mike White, president of Maersk Line North America, expressed optimism that ports would adjust to the new level of cargo surges through improved cargo-handling processes, extended gate hours, and investment in larger, more efficient cranes.

White therefore predicted there would be "no dramatic shift" from west coast to east coast following the Panama Canal expansion, but rather a new set of challenges in efficiently handling the mega-ships so that each coast retained its market share.

The day after the canal opened, Maersk Line said it would send more vessels through it and that they would be larger than those that previously passed through. The company expects its vessels to make more than 400 transits this year, an increase from 313 in 2015 and 268 in 2014. The fees the company will pay for the passages should rise to more than USD100 million this year, from US\$80 million last year and USD62 million in 2014.

In a statement, Anders Boenaes, head of network at Maersk Line, said, "The expansion provides us with more options, most notably [on] our Asia to South America and Asia to US east coast routes. It is likely that Maersk Line will make increased use of the expanded Panama Canal and adjust one or more services with [the use of] larger vessels to begin sailing through its new locks."

Commenting on the development, Eirik Haavaldsen, a shipping analyst at Pareto in Oslo, said Asia to South America and Asia to US east

Los Angeles
Long Beach

New York
Newark

Savannah

Houston

Panama Canal

coast services could see larger vessels being used to replace smaller tonnage currently employed on the services.

"Overall this is in line with the long-term trend we continue to see in [the] container segment, with gearless smaller vessels continuing to struggle as larger vessels replace them," he said in a daily market report.

Supply of capacity in the container shipping industry has increased enormously in the past decade, with large vessels leading the growth.

The fact that the expanded Panama Canal can handle much larger tonnage than before means opportunities arise for operators to cascade vessels on services that also use the canal. In principle, this should mean an improvement in employment opportunities for vessels of up to 14,000 teu capacity. On the other hand, given the fact that supply growth is also likely to exceed demand growth in 2016, this creates problems as owners will struggle to find employment for the vessels that have been replaced on the Panama Canal trades. **RH**

New Jersey plans for New-Panamax

Global port and terminal operator APM Terminals (APMT) is to invest USD70 million in its container port in the American city of Port Elizabeth, New Jersey, to prepare it for 13,000 teu ships travelling via the expanded Panama Canal.

One of the earliest, and largest, container terminals in the port complex, APMT's facility handles more than 500 vessel calls annually. It will be dredged, gain a new berth, and throughput will be expanded from 1.5 million to 2.3 million teu.

An APMT representative explained the scope of work to *P&H*. The construction upgrade will include 762 m of existing berth, with an existing alongside depth of 12.2–13.7 m. "After dredging, the future depths will be 45 and 50 ft [13.7 and 15.2 m] – roughly 1,250 ft [380 m] of quay at each depth," he said.

"We are considering crane investment, depending on demand,

but the container yard is already capable of handling the increase in throughput from 1.5 million to 2.3 million teu."

APMT plans a private tender for the work later this year.

The major restriction on handling 13,000 teu ships at the port is the current 46 m air draught restriction imposed by the Bayonne Bridge, which spans the Kill Van Kull access channel. The Port Authority of New York & New Jersey is spending USD1.3 billion to raise the bridge and give it an air draught of 65.6 m, but this could be seen as a problem in terms of APMT's timescale to complete the expansion.

"It will take roughly 12 to 18 months to complete the expansion," the APMT representative said. "And yes, for 13,000 teu vessels to call, work on the bridge will need to be completed first. But this is anticipated at the end of 2017."



Kingston hub transforms

Olivier Tretout, CEO of the Kingston transshipment hub in Jamaica, sees a bright future

Maiden call of New-Panamax CMA CGM Magdalena in Kingston on 25 August

Kingston, Jamaica, offers a perfect example of how ties between container lines and transshipment hubs are on the rise (see pages 26-27). French carrier CMA CGM first signed a memorandum of understanding to invest in the Kingston terminal back in August 2011. It took half a decade, but the deal is finally done and the upgrade of the facility is in progress.

On 1 July this year, a CMA CGM-led consortium, Kingston Freeport Terminal Ltd (KFTL), began a 30-year concession for the development and operation of the property. The goal is to transform a previously underperforming hub into a regional powerhouse.

Throughput at the terminal was declining in the months prior to KFTL's concession, with year-on-year transshipment volume down 9.4% in the first half of 2016. Now that CMA CGM is at the helm, this negative trend is expected to reverse.

The Jamaican terminal's throughput should grow as CMA CGM "progressively concentrates its volumes in Kingston" by shifting services away from other hubs such as Cartagena in Colombia, explained KFTL CEO Olivier Tretout. In addition, "there are [service] moves expected by APL and others" and "the upgrade in the size of vessels [in Caribbean services] will be an important factor for our future growth", he said.

When *P&H* interviewed Tretout in late August, he was very bullish about the prospects for Kingston. "I am personally very confident that we will experience a growth in volume – a very significant growth in volume – over the next six months to one year," said Tretout, although he acknowledged that "if CMA CGM

transferred its volumes too early, we would be facing challenges. It has to be quite gradual."

Phase one of construction, which will bring capacity from 2.8 million to 3.2 million teu/year, is expected to be completed by mid-2017. A total of 1.2 km of new quay wall will be built in front of existing quay walls. To avoid disruption to cargo services, work will begin on a 600 m stretch that is not currently used and then move to the next 300 m, then to the final 300 m. KFTL has ordered additional straddle carriers and two ship-to-shore cranes, plus two options, with the first pair of cranes due for delivery in 2017 and the second pair in 2018.

A Navis terminal operating system is scheduled to go live in mid-2017. In preparation for the new system, KFTL is overhauling its entire IT infrastructure. "We need a new network of fibre-optics, a new data room, a new everything," said Tretout. The IT overhaul contract was scheduled to be signed by the end of October and the contractor was expected to complete the work within eight months.

The dredging contract was won by a consortium comprised of Belgium's Jan De Nul and France's VINCI. Dredging was scheduled to begin in November and to be completed six months thereafter. The draught will be increased from 12.5–13 m to 14.5–14.7 m. In the future, dredging could take the port's draught to 17 m.

Prior to its privatisation, the terminal was a subsidiary of the Port Authority of Jamaica (PAJ), which provided the terminal's marketing, asset management, IT oversight, and legal services. KFTL is now "handling this full scope of activities" in-house and is very focused on



recruiting additional employees for a wide variety of port functions, Tretout explained.

KFTL has also reached a deal with the labour force. Under the agreement, salaries remain relatively unchanged but benefits are increased and KFTL is committed "to focus on improved working conditions,

such as air conditioning in the equipment and more shelter to do maintenance work. It's a full package of actions", Tretout said.

Another focus during the months since the handover has involved relations with shipping customers. *P&H* spoke to several sources who claimed that tariffs charged to some carriers had increased significantly following the shift in control to KFTL.

According to Tretout, "Zim and CMA CGM have terminal service agreements. They are committed to bringing volumes and face penalties if they don't reach their targets. As for the other lines, our approach was to have a single tariff for domestic imports and exports, which is close to the average of all of the tariffs that were enforced by the previous operator [PAJ]. For some lines this increased the tariff, for others the tariff decreased.

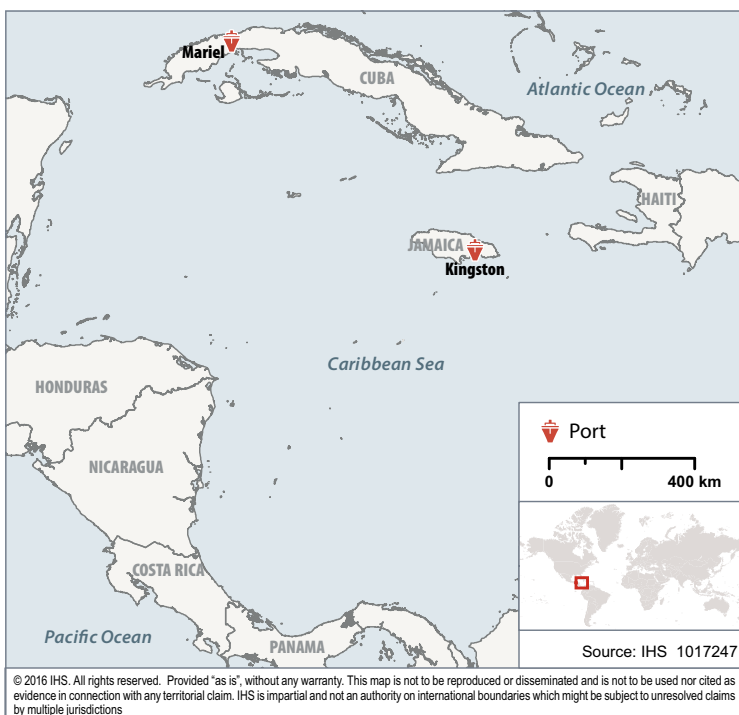
"As for transshipment, it is very simple: the more volume, the lower the tariff," he explained. When KFTL took over operations, it found out that PAJ had left volume deals in place for customers that no longer had those volumes. "We came up with a new approach from scratch; a more logical approach. For some it may be a bit more expensive, but if they want to bring more volume, they can lower the tariff." KFTL has had multiple meetings with customers, and as of late August, Tretout said, "We consider that this issue is stabilised."

According to one source who declined to be identified, KFTL's tariff decision "caused a big stink, but you can't blame the new management for what they did. There has to be some relationship between rates and volumes." According to another source, "Some customers accepted the low productivity at Kingston because they were paying low rates. Now that Kingston wants a higher rate, customers are going to want to see higher productivity in return for that added expense."

In fact, higher productivity is yet another central focus of KFTL. On 25 August, the terminal received its first call by a New-Panamax container ship. The 9,288 teu *CMA CGM Magdalena* is part of a CMA CGM/Hapag-Lloyd/Hamburg Süd/COSCO Asia-Caribbean service that increased vessel size following Panama Canal expansion. KFTL successfully serviced the larger vessel at a rate of 40 moves/hour/crane. "The teams performed quite well," Tretout said.

Following the completion of phase-one expansion at Kingston's south terminal, phase two calls for additional dredging and equipment to bring capacity up to 3.6 million teu/year. Beyond that, Kingston has significant room for even more growth.

"Kingston is quite large and it is quite empty today. You have a lot of space available," said Tretout. "There is room in Kingston to add another 1.7km of berths. That would be a major investment, done step by step in different phases, and for that to happen, we would need a new shipping line that would want to develop its transshipment here. The future development of the infrastructure in Kingston will need to match the needs of a new customer – a big one." **PH**





Van Oord – BAM International consortium

Building in paradise

The container terminal at Moín, Costa Rica, is two-thirds of the way through its three-year construction. *P&H* talks to Van Oord about building in the tropics

Currently under construction, Van Oord is responsible for the breakwater, dredging, and land reclamation at Moín container terminal, while BAM International is focusing on the civil works and utilities

Two years ago, Moín in Costa Rica was a small port town. Today, it is still surrounded by sandy beaches and rainforest, but is being transformed into a major terminal for pineapple and banana exports, and it is anticipated that it will bring long-term economic prosperity to the region.

APM Terminals (APMT) won the concession from the Costa Rica government in March 2011 and is now in the middle of developing the terminal facility. Costa Rica is the world's biggest exporter of pineapples, about half of which go to the United States, and is the third-largest exporter of bananas. Sugar, coffee, and beef are also major exports for the country.

APMT intends to make use of economies of scale and is dredging the waterways and berths to 16 m so 12,500teu vessels can call at the port. These Post-Panamax vessels will bring cargo to this remote terminal, which will be capable of handling 1.3 million teu/year. As much of the terminal's planned export cargo will require temperature-controlled conditions, 60–70% of storage at the Moín terminal will be for refrigerated cargo.

The work is being carried out by a consortium

comprising dredging company Van Oord and construction company BAM International. Referred to as VOBAM, it won the project in October 2013 through an early contractor involvement process.

In addition to dredging 6.5 million m³ of sand and 3 million m³ of other material, work includes construction of a 2.2km breakwater, 650m quay wall and pavement, and reclamation of 40 ha of land (see box). Van Oord is realising the breakwater, dredging, and land reclamation, while BAM International is focusing on the civil works and utilities.

Mark Roelofs, area director for America and Africa at Van Oord, said nothing of this scale and size had been done before in Costa Rica and that "improving the local economy is a key driver of the project, both during execution and completion".

The consortium was given three years to deliver the project to APMT after the bid was won. Construction started on 1 January 2015 and is scheduled for completion by the end of 2017. These time constraints have created important interdependencies between activities, Roelofs explained.

Costa Rica is known for its dedication to the environment

Mark Roelofs

Area director, America and Africa,
Van Oord



Van Oord - BAM International consortium

Leo van Druenen, area director for the Americas at BAM International, explained, "Multiple activities are taking place simultaneously as the partners in the VOBAM consortium are working around the clock in a fully integrated approach in order to complete the container terminal on time and within budget.

"Currently, the construction of the quay wall is in full swing. Eventually the quay will be ready for six new ship-to-shore cranes and 29 rubber-tyred gantry cranes that have already been ordered for operation in 2018."

The consortium has been presented with many challenges, including varying soil and sea conditions, existing subsoil conditions, and strict construction requirements. Roelofs explained that the weather in Moín, with its tropical storms, was a serious factor to take into account.

In order to install the breakwater in a secure manner, only a short length of core is allowed to be left exposed to the weather, which poses an interesting logistical challenge.

That weather can have adverse effects on the building process, as became clear in December 2015 when severe storms caused the loss of a lot of sand that had been placed for the quay wall construction.

The armour units deployed in the works comprise 2.5 m-high, 4.5 m³ Xblocs that are cast on site using locally sourced materials.

Dredged material from the turning basin and channel is being used to build the terminal area. Here, the landmass is deposited on top of the seabed, the composition of which is such that at certain depths, clay layers require consolidation. In order to accelerate this process of consolidation, vertical drains rapidly drain excess pore water from the clays. This is further assisted by placing additional temporary surcharge material on top of the reclamation.

Roelofs is proud of the level of corporate social responsibility being shown on the project. "Costa Rica is a country known for its dedication to its population and the environment. The location of the Moín container terminal is no exception to this rule," he said.

Local employment is important to the project. Out of a total of just under 600 people working on it, about 400 are locals. About half of these travel to and from the site on a daily basis.

"As the focus of the project shifts from land reclamation to construction, the numbers will rise by another 300," Roelofs explained. "In order to control traffic flows and parking capabilities, we made special arrangements with local public transport and we deploy a secondhand school bus."

APMT requires all contractors to perform on-the-job training in construction work and health and safety standards. This is essential for the long-term running of the terminal, he noted.

These courses are given by professionals, either on site or in the country's capital, San José. Lectures on the project are given by site staff at local universities. "Such investments pay off. Last summer, we celebrated 2,000,000 man-hours without a serious work-related injury," said Roelofs.

Special toolbox meetings are organised to "make sure that everybody on site is fully aware of the procedure when encountering fauna on site, for example, turtles", which use the area to nest, Roelofs said. "To achieve this, we carefully select the colour, intensity, and the direction of the construction lights," and have set up a secure hatching area. "In order to avoid illegal hunting, we collect and transfer the eggs to this area. When the eggs hatch, the baby turtles are taken back to the beach, where they start their journey to the ocean. Each turtle nesting season, around 10,000 turtles are born and released."

The project is well under way and Roelofs is positive about its success, citing the early contractor involvement as an important reason for this. The project is in the spotlight within Costa Rica, he noted. "The local community and businesses alike realise this project will materialise and bring new opportunities to this part of their beautiful country."

Roelofs may well be right when he said, "Costa Rica really needs this project." **PH**

Construction of a terminal

Van Oord's responsibilities:

- Construction of a 2.2 km rock breakwater, consisting of:
 - 1.8 million tonnes of rock
 - 16,000 concrete elements (Xblocs)
- Dredging of 3 million m³ of material of various types to create the access channel and turning basin
- Reclamation of 40 ha of land, for which some 6.5 million m³ of sand is needed, extracted from the access channel and turning basin
- Soil improvement works, both in-house and

with a specialised subcontractor, including:

- Vertical drainage
- Vibro compaction
- Vibro replacement
- Cement/soil blending techniques

BAM International's responsibilities:

- Construction of the 650 m quay wall
- Construction of pavement
- Construction of associated buildings and all utilities
- Electrical installations
- Producing Xblocs

Carriers plant more flags at hub ports

Container lines are increasingly willing to favour stability over flexibility as they tighten ties in order to gain more control at transshipment terminals



SPRC

SPRC, which operates the Contecar terminal in Cartagena (pictured here), has received multiple offers from carriers

As container line alliances grow ever more dominant, the relationship between carriers and ports is evolving. According to port representatives speaking to *P&H*, the emerging trend is for carriers to seek tighter contractual ties at their transshipment hubs. This could take the form of a joint venture (JV) terminal operating company, a long-term partnership arrangement involving berths dedicated to a specific alliance or carrier, or equity-for-volume structures in which a carrier's stake in a terminal is tied to its throughput.

UK consultancy Drewry predicts "more joint ventures, co-shareholdings, and more complex inter-linking of terminal ownership" in the years ahead. If so, this could have a major impact on the business model of independent global terminal operators and could introduce major challenges and complications if carrier alliances prove unstable.

"The rules of the game are dramatically changing. Carriers are saying, 'We want to be with you, the volumes are going to be large, we can commit for the long term, but we need to change the rules of the customer-provider relationship,'" according to Giovanni Benedetti, vice-president of Colombian port company Sociedad Portuaria Regional Cartagena (SPRC).

SPRC operates the highly successful Contecar and Manga multi-customer terminals in Cartagena, but Benedetti believes that "the idea of having a multi-

customer terminal is coming to an end". In August he reported that SPRC had received multiple offers from container lines.

"Because these services are getting so large, the alliances' concern about their hubs is understandable," said Benedetti. "If they are at a single hub, they think, 'If these guys collapse, my system collapses.'"

Olivier Tretout, CEO of Kingston Freeport Terminal Ltd, agrees that carriers are striving to put down more roots at transshipment hubs. "When you [a carrier] are a shareholder in a terminal, you can negotiate some commercial conditions and are represented in the management, so you can see what the numbers are," said Tretout. "It is logical for a shipping line to elect a domicile, to be at home, and the strongest long-term commitment you can have is equity."

Morten Johansen, executive director of DPW Caucedo in the Dominican Republic, also believes the alliances are looking for longer-term hub deals. "It's very obvious, especially in the Caribbean," he said. Johansen declined to comment on whether Caucedo had been approached by carriers, but he did say that the port remained committed to the multi-customer model. "We still see the value in being an independent operator," he said. "If you [a terminal] get into co-operation with a specific alliance, you may limit yourself."

According to Charles Baker, general manager of the PSA-operated TC Mariel terminal in Cuba, whether or

not tighter carrier-hub ties represent a trend depends upon “the local dynamics”.

“If you’ve got a port with a strong local cargo base and a good geographical location where transshipment is also a viable issue, it’s not so much of an issue,” said Baker. The areas of the world that will see increasing pressure for port ties with carriers are those that are “very exposed to transshipment and the local market is not particularly large and is not growing”. In other words, regions such as the Caribbean.

Juan Carlos Croston, marketing vice-president at Panama’s Manzanillo International Terminal (MIT), said “the alliances are now driving the decision-making process” in the transshipment market. “This decision-making process is not necessarily based on which terminal is providing the best service, but on which of the partners [in the alliance] has equity in which of the terminals,” he added.

This dynamic could create more pressure on unaligned terminals to partner with carriers, with such terminals being driven by a fear that they would be left off future service maps. “You could see more terminal operators allowing shipping lines to take stakes in their facilities in exchange for volume,” said Croston. “If you’re a hub and you’re seeing volumes being driven somewhere else because of equity, you may try to find a partner.”

If alliances do move forward with a strategy of increasing ties with hubs, they will face several challenges. The first is that container lines are in the midst of a severely depressed rate environment. In past slumps, carriers have sought to divest non-core assets such as terminal interests to raise cash, not increase their non-core investments.

“The curious thing is that these terminal facilities cost a lot of money and container lines supposedly don’t have a lot of money,” said Benedetti.

Carlos Urriola, senior vice-president of port holding group Carrix, speculated that carriers would push for volume-for-equity deals that did not involve major cash investments. “The problem with equity-for-volume deals for terminals is that you get hit twice: you give equity away for free and then you get hit again because the carrier wants a lower rate,” he explained.

The next challenge to the alliances’ hub strategy involves conflicts among alliance members about



FCI

which hub to use. One such conflict is already apparent in the Caribbean market between Ocean Alliance members CMA CGM and Evergreen. CMA CGM has just begun a 30-year concession at the terminal in Kingston, Jamaica, while Evergreen owns the Colon Container Terminal in Panama.

The third challenge to longer-term contracts between alliances and hubs is the inherent fragility of alliance membership.

Ownership consolidation poses a major risk to alliance stability – and merger and acquisition (M&A) activity in the container shipping sector has been frenetic. The initial line-up of alliances – 2M, CKYHE, Ocean Three, G6 – owes its demise to M&A, specifically the takeover of APL by CMA CGM, the takeover of UASC by Hapag Lloyd, and the merger of COSCO and China Shipping.

Yet another threat to alliance stability is the failure of individual member lines. This concern was recently highlighted by the collapse of South Korea’s Hanjin Shipping, which resulted in severe customer-service complications for Hanjin’s partners in the CKYHE alliance and left a gaping hole in plans for THE Alliance, which is set to debut in April 2017. There were reports in October that Hanjin might be expelled from the THE Alliance.

“Alliances don’t last more than a few years, so I expect that these deals [with terminals] would be subject to the alliance still being together,” said Urriola. “In other words, if the alliance is broken, the deal is broken.”

In a volume-for-equity deal, this could take the form of an agreement wherein an alliance that pulls back on promised volumes would lose a commensurate amount of its joint-venture equity and decision-making power. According to Urriola, this type of arrangement would not provide much assurance for the terminal partner. “It would be like marrying a sailor,” he said. “You know that six months after the wedding, he’s going back to sea and you’ll probably never see him again.” **PH**

Freeport Container Port in the Bahamas has strong ties with container line MSC

Carrier-terminal ties

Carrier	Terminal
COSCOCS	Acquired 35% stake in Hutchison’s Euromax terminal in Rotterdam
COSCOCS	Created JV with PSA in Singapore for development of new berths
CMA CGM	Has 30-year concession for container terminal in Kingston, Jamaica
CMA CGM	Formed JV with PSA for operation and use of four berths in Singapore
Evergreen	Owns Colon Container Terminal in Panama
MSC	Reported to have equity or equity option in Freeport Container Port in the Bahamas



Beauport expands to bring prosperity

The Canadian port of Québec is competing for funding to increase its capacity and capability, reports **Scott Berman**

Port of Québec is embarking on its Beauport 2020 project to create a deepwater multipurpose wharf. Situated on the St Lawrence River in eastern Canada, Québec is mainly a bulk transshipment and cruise hub, currently operating at maximum capacity. In order to remain competitive with other east coast North American ports and exploit further economic opportunities it plans to attract more and different trade, traffic, and larger ships.

The project involves dredging, reclamation and construction to create a “multifunctional deepwater terminal” alongside its bulk and break-bulk business. Renderings of the project depict storage, transfer, rail components, and containers, on the reclaimed land.

A ships-at-port listing on a day in September revealed that it already handled a host of liquid, dry and breakbulk, crude oil, salt, and cruise vessels. But it is in the market for a wider variety of cargo. “The key word is diversification,” said Alain Sans Cartier, director

of public affairs and communication at the port, which is located in Québec City.

The Beauport 2020 project is expected to cost about USD146 million, with the port authority required to contribute USD100 million and the Canadian government in 2015 conditionally agreeing to provide an additional USD46.3 million, pending environmental and other approvals.

The build-out costs to develop and equip the facilities on the newly developed land are projected at USD307 million, which is coming from private investment, according to the port authority.

The scope of the project includes additional rail lines and overall capacity to handle anything from containers to solid or liquid bulk. The new facility will build upon the existing 90ha Beauport sector, which handles dry and liquid bulk, breakbulk, ores, coal, scrap metal and other cargoes, Cartier explained.

The investments are expected to generate about USD 77 million annually in economic benefits, the port argues, and 1,100 jobs, all coming out of a new port sector with new berths and 18ha of covered storage.

In addition, a major renovation of the port’s Ross Gaudreault cruise terminal is being prepared. Québec’s cruise sector is growing, with passenger numbers quadrupling in the past 14 years. About 200,000



Port of Québec, with the planned Beauport 2020 project shown

passengers a year now use the port and this is expected to double by 2025.

Construction of the developments – the cruise terminal renovation and additional terminal at Beauport – has yet to begin and a start date has yet to be made public. However, an environmental study is well under way and, according to Cartier, that has been the largest challenge of the initiative. But the formidable goal of 2020 looms.

Québec is just one of a number of ports in eastern Canada along the St Lawrence River corridor and elsewhere that are keen to capture investment opportunities and reap the potential benefits of cargo and traffic growth. Montréal, Trois-Rivières, Sept-Îles, Melford, and Sydney in Nova Scotia, and Port Saint John in New Brunswick are responding by building, devising or proposing significant, disparate cargo and passenger projects.

All the moves come as a national Canadian infrastructure initiative unfolds.

At Québec City, “we want to expand our horizon by diversifying the cargo types we handle. We want more trade, more traffic, larger ships,” Cartier explained. The port boasts a 16m depth at low tide at the Beauport 2020 location, as well as rail connections and well-established transshipment operations back and forth from eastern Canada and throughout the Great Lakes.

Yet, as the port authority puts it, “The Port of Québec is operating at full capacity, with 100% of its spaces used and traffic at its wharves at a critical business threshold.” So, to help get overall numbers up, the port is expanding.

A breakwater will be constructed near a public beach beside Beauport, to stem sediment flow into a bay with aquatic life, with some 220,000m³ of sand pumped from the bay to the beach behind the breakwater. The port’s director of engineering, Éric Martineau, explained that additional volumes, making for an expected total of about 1 million m³ of dredged sand for the overall project, will be either mechanically or hydraulically placed for backfill behind a new section of quay 610m in length.

As the public beach and bay component indicate, this project is about more than expanded marine operations; it’s also about the port’s relationship with its local environment. This environment is changing and, as a sign of the port-city connection, the port authority is proposing the mixed-use development of its Louise Basin property, the old port sector. There, a series of public amenities is possible, along with an area of private development.

In another marker of the port’s interaction with the city, the new cruise terminal, like the current one, also serves as an event space, with a nearby passenger facility being proposed in the form of an inflatable structure that can also host events, increasing options for profitable operations during off-season, Cartier said.

It’s a move, said Cartier, that has manifested itself in



part through a strategy consisting of public meetings, a “port-city committee, social media information, pamphlets distributed through the region” and “project days where our experts welcome visitors to the port”.

Driving it all is an understanding by the port “that growth is based on the social acceptability of Beauport 2020 and of the very existence of the port itself,” Cartier said. In other words, it’s an outreach effort not only intended to explain what, why, and how this urban port should be expanded, but also why there’s a working marine port in the urban area in the first place. It’s a well-directed effort, given that there are local concerns about the construction works ahead, as there are with so many major port and other infrastructure initiatives in Canada, the Americas, and around the globe. And like such projects, Beauport 2020, to become a reality, must not only comply with various regulations and a series of approvals, but also address any public concerns.

All told, it’s a bold vision, with potential impacts on several fronts. There is a long way to go before this port is remade. Still, one thing is certain. As Cartier added about Québec, “The port has a lot of ambition.” **PH**

i MORE INFO: www.portquebec.ca

Port of Québec is operating at full capacity, with 100% of its spaces used and traffic at its wharves at a critical business threshold



Prescription for dockers' welfare

A study of health and safety at container ports reveals that workers experience more injuries and health problems than appear in company data and that they are dissatisfied with company policy. **Stephen Cousins** reports

The first systematic study of health and safety practice at container ports, *Global Container terminals – arrangements for health, safety, and welfare*, was published in September. It was commissioned by the Institution of Occupational Safety and Health, a British organisation for health and safety professionals, and the International Transport Workers' Federation, and carried out by Cardiff University, Wales, between 2013 and 2015.

It examined the governance and management of health and safety at 11 container terminals, operated by six large companies in four countries in Europe and the Asia-Pacific region. Researchers analysed company documents and interviewed company and terminal managers. This was supplemented by a questionnaire, completed by 1,849 workers.

Analysis of company procedures revealed many examples of good practice in managing health and safety. However, the survey of workers indicated considerably higher levels of work-related 'harm' –

typically injuries and adverse health effects – than were measured by company data and "substantial" dissatisfaction with the nature and operation of arrangements for managing health and safety.

Significantly, 70% of respondents to the questionnaire felt their safety was at high risk and 40% felt these risks were ineffectively managed. One-third reported some kind of injury at work in the previous year. In addition, the number of respondents reporting other occupational health-related issues was especially high: 60% of workers said they experienced stress, 65% experienced mental fatigue, and 41% experienced other work-related illnesses.

Emma Wadsworth, one of the two Cardiff academics who wrote the report, told *P&H*, "The findings clearly indicate a shared commitment among the major operators to address the management of safety in container terminals globally. However, perhaps of most concern were the significant gaps between operators' expectations of the effectiveness of these



11 container terminals across four countries were analysed during two years of research

Shutterstock

arrangements and experiences reported by those working in the terminals.”

Wadsworth continued, “Terminal operators’ data focused, in particular, on safety outcomes – injuries and fatalities. These are central to measuring safety performance, but they are only part of the whole picture. Workers were also concerned about the effects of their employment and working arrangements on their health and wellbeing. The study’s findings suggest that occupational safety and health (OSH) management systems and arrangements have substantially less focus on addressing, controlling, and monitoring these aspects of dock work.”

The dominant approaches to health and safety by the container terminal companies were elaborate behaviourally focused OSH management systems with limited worker involvement. The data revealed that 70% of respondents had no health and safety representative or had difficulty accessing one.

The report says behavioural-based systems allow only low engagement with preventive occupational health measures and are relatively unresponsive to changes in technology and work organisation.

These approaches contributed to the major disconnect/cognitive dissonance observed between management and worker perceptions of occupational health and safety.

In addition, there was a strong association between negative health, safety, and welfare effects and evidence of poor work organisation, high work

intensity, and poor OSH management, says the report.

The report makes a series of recommendations on key areas that should be addressed by container ports. These include:

- Inaccurate reporting of health and safety outcomes, particularly under-reporting of levels of injury and risk
- The lack of provision for gender, as the study found very little attention being paid to the specific needs of women workers
- The limitations of behavioural management systems, considered inferior to participative systems that emphasise worker involvement as partners in health and safety management
- The focus on immediate safety risks at the expense of longer-term effects on health.

Wadsworth commented, “The first steps would include a more holistic approach to what constitutes OSH management, and the measurement of OSH performance by affording workers’ health and wellbeing the same priority as safety. Key to this is improved communication, and participative approaches are most effective when they include arrangements for the autonomous, trade union, representation of workers on OSH.”

It is understood that the study will inform discussion on the draft *Code of Practice on Dock Work*, which is being prepared by the International Labour Organization. **PH**

i MORE INFO: www.iosh.co.uk

European, Asian and US ports collaborate on LNG bunkering



Antwerp Port Authority

Port of Antwerp started offering bunkers in 2012

A number of maritime and port authorities from Europe, Japan, Singapore, South Korea, and JAX Chamber of the US, signed a memorandum of understanding on 6 October to collaborate on the introduction and promotion of LNG bunkering.

The signing took place at the opening of the biennial Singapore International Bunkering Conference and Exhibition (SIBCON).

LNG bunkering is gaining impetus worldwide with growing awareness of the need to reduce emissions of greenhouse gases. Ports in Australia, China, Japan, Singapore, and South Korea plan to roll out LNG bunkering in the short term.

Singapore has issued LNG bunkering licences to a joint venture between BG Group (now part of Shell) and Keppel Corporation, as well as to Pavilion Energy. By 2017, the city-state hopes to introduce LNG bunkering.

In Australia, EVOL LNG has announced that it has been approved to provide truck-to-ship LNG bunkering in the port of Fremantle, while Japan plans to start LNG bunkering in the port of Yokohama.

Rotterdam, Europe's busiest port, carried out its first LNG bunkering operation in August, and aims to be the LNG hub of the continent.

Neighbouring Antwerp has

appointed French energy group Engie to build and operate an LNG bunkering station that began operations on 1 October, while Zeebrugge is due to host Europe's first multi-user LNG bunkering vessel by year-end.

South Korea's Ulsan port, which aims to be the oil hub of northeast Asia, has signed an agreement with public institutions and private companies in a bid to become the country's first LNG bunkering port.

Nevertheless, the Ministry of Oceans and Fisheries recognises that LNG bunkering infrastructure and expertise is generally lacking in the Asia-Pacific region.

"LNG bunkering is fuelling LNG propulsion in ships, but the operations of LNG bunkering

vessels is very much limited to European ports. However, from 2020, LNG bunkering is expected to strengthen worldwide due to more stringent international ship emission regulations," the ministry said. The IMO regulation stipulates a 0.5% cap on sulphur oxide in ships' emissions by that year.

The lack of knowledge and infrastructure related to LNG bunkering therefore, led to the collaboration between Antwerp, Japan, South Korea, Singapore, Rotterdam, and Zeebrugge.

The South Korean attendees at the ceremony for the signing of the agreement included representatives from the Ministry of Oceans and Fisheries, Ulsan Port Authority, Korea Gas Corporation, and Korean Register of Shipping.

The representatives of the respective ports will meet every year to discuss the building of LNG bunkering networks and a roadmap to the introduction of LNG bunkering.

The Ministry of Oceans and Fisheries' manager for port policy, Nam Jae-hun, said, "Worldwide, competition between ports is intensifying. Through the signing of the memorandum of understanding, there will be more concrete discussions with regard to developing LNG bunkering"

i MORE INFO:
www.lngbunkering.org/lng ;
www.wpci.iaphworldports.org

Notable numbers



4,610

Ships with an ESI score of 20 on 1 October



6 Authorities that signed up to collaborate on LNG bunkering

Lower piracy figures prompt cautious optimism

Dryad Maritime has said there are grounds for some cautious optimism as the company released its crime figures for the first nine months of the year. The chief operating officer of the maritime operations firm, Ian Millen said that overall the level of maritime attacks had continued to fall.

However, he cautioned against complacency as maritime companies and crews must ensure they are aware of threat levels and take the necessary precautions to stay safe.

According to Dryad, in the first nine months of the year 81 seafarers were kidnapped, of which 51 are still being held. The company has a high level intelligence capability and its figures have been collected from publicly available information as well as its own intelligence.

The Gulf of Guinea remains a crime hotspot, although the number of attacks aimed at kidnapping crew from commercial vessels in the Nigerian Economic Exclusion Zone fell sharply in the third quarter of 2016 in comparison with the first half of the year.

Millen attributed the decrease to the use of citadels and increased training of crews in the event that their vessel is boarded.

"These criminal gangs look for the opportunities that have least risk and the potential for the highest reward and, as such, the threat of kidnapping of crew remains real," he said.

In terms of southeast Asia, Millen said Dryad recorded 24

incidents of piracy or maritime crime across the region during the third quarter, taking the total for the first nine months of the year to 69. This is a reduction of 65% on the total amount of reported crime for the first nine months of 2015.

The most significant incidents during the third quarter have been kidnappings in the Sulu Sea off the east coast of Sabah, Malaysia. There have been four incidents, accounting for the kidnapping of 11 personnel. No vessels were hijacked, however, armed pirates boarded a tanker and a bulk carrier and assaulted the crew, and stole cash, personal belongings, and equipment. Petty theft of stores from

vessels at anchor or alongside accounts for 72% of incidents during the third quarter.

Millen said issues with the Abu Sayyaf group or gangs associated with it had this year resulted in the kidnap of 40 crew from vessels. At present, 11 seafarers are still being held hostage in the Philippines and, despite attempts by security personnel to find them, their location remains a mystery. A Norwegian hostage, Kjartan Sekkingstad, was released in September after a year in captivity. Abu Sayyaf executed two Canadians taken hostage at the same time.

"The authorities have been making efforts to track these hostages but at present are

having little success and the death of two hostages highlights the danger that those still held face," he said.

With the exception of the Sulu Sea, maritime crime levels across southeast Asia are at their lowest levels since 2009. Dryad attributes this decline to the arrest in late 2015 of criminal gangs responsible for boarding and robbery incidents in the Singapore Strait, as well as those responsible for hijacking and cargo theft from small local tankers in the region in 2014 and early 2015.

Millen said, "There is cause for some optimism but there remain areas of the world that are dangers for vessels and their crews. We need to ensure we do not overcook the threat levels but vessels need to be aware of the potential threats in the areas in which they are operating and ensure they take the necessary precautions."

He added that apart from the threat of crime and piracy the ongoing migrant crisis in the Mediterranean was a concern.

"The maritime sector has done a tremendous job in rescuing many migrants who have run into serious problems as they attempt to cross the Mediterranean," he said. "I think it is a cause for concern and in my view we will still be talking about this in five years' time. Governments have been working hard on tackling the symptoms the crisis has caused but more needs to be done to tackle the cause if the issue is to be effectively managed."



The decrease in piracy incidents is part the result of increased crew training and anti-piracy drills



2023

Date Jakarta's sea wall is scheduled for completion

400,000 teu/year

Additional capacity first phase expansion will bring to Kingdon

Ballast water systems reviewed

The US Coast Guard (USCG) has asked three ballast water equipment manufacturers to submit additional information to their pending applications, which is likely to delay a US type-approved system.

"For each of the systems, we have requested additional information from the manufacturer and/or the independent laboratory," said John Mauger, commanding officer of the USCG's Marine Safety Center, which reviewed the applications in Washington, DC, on 18 October. "While we are committed to completing our review as quickly as possible, our primary focus is verifying that each submission meets the US Coast Guard requirements."

The three manufacturers awaiting US-type approval of a ballast water management system (BWMS) – Norway's Optimarin,



Dietmar Hasenpusch

Finland signed the Ballast Water Convention in September

OceanSaver, and Sweden's Alfa Laval – were the first to submit formal applications to the USCG. When the Marine Safety Center

confirmed on 20 September it had received Optimarin's application, the stated goal was to review it and respond within 30 days.

But the USCG also cautioned that the time from initial receipt to final approval would take longer "where additional information is required". The agency was not immediately available to comment on what additional information it was seeking or how much of a delay the request would cause.

Pressure on foreign shipowners looking to trade in the United States with a legal BWMS on board their ships increased when Finland became the 52nd country to sign the Ballast Water Management Convention on 8 September. That provided the required tonnage to put the convention into force one year later, on 8 September 2017.

The longer the delay to a US-type approved system, however, the greater the chance that shipowners investing in ballast water equipment in time for next year's enforcement date may install a system that is not certified for use in the US – potentially requiring another estimated USD1–5 million investment for a US-certified system.

China and Hong Kong get tough on marine emissions

China's Ministry of Transport aims to cut SOx emission from ships by 65% in the Pearl River Delta, Yangtze River Delta, and Bohai Sea by 2020.

The move, announced on 8 September as part of the implementation plan for the Special Campaign to Prevent Ship and Port Pollution (2015–20), aims to enhance regulations on prevention of ship and port pollution, emissions reduction, and clean energy usage.

According to the plan,

emissions of NOx and other particles discharged from ships in the Pearl River Delta, Yangtze River Delta, and Bohai Sea must be cut by 20% and 30% respectively, and 90% of working vessels should use shore power when berthing.

The plan also requires 50% of container, ro-ro, and cruise terminals in these areas to provide shore power, and all coal and ore depots to have wind-dust prevention facilities or enclosed storage. The ministry also plans to promote the use of LNG fuel



Shutterstock

Hong Kong is targeting a sulphur cap of 0.1% by 2019

and shore power in these areas.

In June, the government released its limits and measurement methods

(second version) standards for exhaust pollutants from marine compression ignition engines (marine engine

Notable numbers

24 Feb 2018

Date Raul Castro is to retire, which should see US embargo against Cuba lifted

3

Years that Van Oord Bam had to realise the Moin terminal

On 19 October, Panama became the 53rd country to accede to the Ballast Water Management Convention, bringing the proportion of global shipping tonnage covered by the treaty to 53.28%.

IMO secretary-general Kitack Lim said, "I now encourage other states which have not yet ratified the treaty to do so as soon as possible, in order to ensure that the greatest percentage of the world fleet as possible will be subject to the treaty's terms upon its entry into force in September 2017."

Optimarin said it had received approximately 500 orders for its equipment, which uses a combination of filtration and powerful ultraviolet lamps to treat ballast water.

The company's recent orders include 10 units for Atlantis Tankers, 15 systems for Vard Shipyards, three for Saga Shipholding, two for Solvang ASA, and an agreement with Carisbrooke that could lead to retrofits on 46 bulk and multipurpose vessels.

EU transport alliance calls for increased spending

A large group of ports, shipping, and other transport bodies have called on the European Parliament and European Council to back a European Commission proposal to increase European Union transport infrastructure spending by EUR1.4 billion (USD1.52 billion) over the coming four years.

Thirty European transport bodies, including the European Sea Ports Organisation (ESPO), the European Community Shipowners' Associations (ECSA) and the European Shippers' Council (ESC), have signed the call for the budget increase, which they say is needed to improve the EU's chances of completing its planned TEN-T key

infrastructure network.

They say public and private investment totalling EUR500 million is required to complete the network as planned by 2030 but that EU funds available for investing in TEN-T projects are running out.

After investing EUR12.8 billion in 2014, they say, the Connecting Europe Facility (CEF), which is the network's "financial lifeline",

only has EUR2 billion left to contribute to transport infrastructure projects between now and 2020.

"Due to an insufficient EU budget for transport and a

significant reduction in national public investment, a large number of high-quality projects in the transport sector had to be, and will continue to be, rejected," they say.

They are hoping to be able to take advantage of a current review of the EU budget (Multi-Annual Financial Framework – MAFF) to obtain additional funding for transport infrastructure in line with a proposal from the European Commission.

The additional EUR1.4 billion proposed by the Commission would help the transport sector to boost growth and job creation, they say, but would not be enough to complete the TEN-T network.

They call for greater attention to be given to the transport sector's needs in the 2021–27 budget, taking account of a review of progress on implementation of the TEN-T network due to be completed by 2023.



standards) for public opinion.

SOx and NOx emissions from ships amounted to 8.4% and 11.3%, respectively, of the country's total emissions, according to data released by the Ministry of Environmental Protection.

Meanwhile Hong Kong is targeting a fuel sulphur cap of 0.1% by 2019. Speaking at the biennial Singapore International Bunkering Conference and Exhibition, Hong Kong Shipowners Association (HKSOA) managing director Arthur Bowring said the special administrative region had been working with China, which is implementing domestic emissions

control areas from 2015–20.

In December 2015, the Chinese government announced that from 1 April 2016, ships berthing at ports in the Yangtze River Delta, including Shanghai, had to use fuel with sulphur content not exceeding 0.5%.

This regulation has been extended to the port of Shenzhen, although other Pearl River Delta ports will not implement the policy until 1 January 2017.

By the end of 2019, the domestic emission control areas, as these have been termed by the Chinese authorities, will be reviewed to

determine if the sulphur cap should be reduced to 0.1%.

"The 0.1% sulphur cap makes sense if the global sulphur cap is to be in place by 2020," said Bowring. "The Chinese government has been impressed with the work Hong Kong has done to reduce pollution. We have developed links with China's MSA [Maritime Safety Administration] and various provincial governments to ensure that their policies are close to what we have in the world. It's important to ensure we don't have fuel that's not required in many parts of the world."

The IMO's Marine Environment

Protection Committee was about to start when P&H went to press in late October. At this meeting delegates will decide whether to impose a global cap on sulphur oxide emissions from 2020 or 2025, with the aim of reducing sulphur emissions from the current maximum of 3.5% of fuel content to 0.5%.

Bowring acknowledged that while shipowners were concerned at the cost of burning cleaner fuel, the impact of carbon emissions, climate change, and air pollution was too serious to ignore. He said regulations would produce a level playing field.



USD146 m

Projected cost of Beauport 2020 project

70%

Percentage of port workers that feel their safety is at high risk, according to study



IMO secretary-general Kitack Lim and chairman of the IMO's marine environment protection committee (MEPC) Arsenio Dominguez at the MEPC 69 meeting in April

Sulphur caps and ballast water on MEPC 70 agenda

More than a dozen items were on the agenda for the 70th session of the IMO's Marine Environment Protection Committee (MEPC) taking place on 24–28 October, as *P&H* went to press. But setting deadlines for applying global caps on sulphur used in marine fuels and implementation of the Ballast Water Management Convention may be highest on owners' and operators' list of concerns.

"A lot of this is just politics, but many of us in the industry want deadlines we can begin planning for that ensure a level playing field where there's no cheating going on under the radar," according to Chamber of Shipping of America

president Kathy Metcalf.

Deciding, for example, whether to make 2020 or 2025 the deadline year for marine fuel sulphur limits of 0.5% from the current 3.5% will be crucial, given that the rule will add an estimated USD15,000–30,000 in daily operating costs for ships that burn 100 tonnes of fuel or more per day. BIMCO, the World Shipping Council (WSC), and six flag states cautioned the IMO in July that this could add annual costs of USD5–30 billion for the container ship sector alone.

With the ballast water convention now set to come into force on 8 September 2017, there is uncertainty as to whether

there will be ballast water filtering equipment available by then that meets IMO and US standards. That has prompted Liberia, the world's second-largest ship registry, with a fleet of more than 4,000 vessels, to push the IMO to allow operators more time to invest up to an estimated USD5 million in compliant systems.

In a 21 October announcement of plans to petition MEPC on the matter, the Liberian Registry's David Pascoe pointed out that compliance was linked to the date a ship's International Oil Pollution Prevention (IOPP) certificate is renewed after 8 September 2017.

"In order to allow more time

for new systems to become available and for shipowners to decide which system to invest in and install, Liberia has proposed that shipowners may decide if they wish to renew a ship's IOPP certificate earlier than scheduled in order to have an additional four to five years to see if new equipment becomes available," Pascoe said.

Liberia's proposal follows a call in August by the WSC, BIMCO, Intertanko, and other vessel owner groups to extend ballast water management system compliance dates for operators.

Shipowner representatives will also lobby the committee for more clarity on timelines and next steps for meeting stricter CO₂ emissions standards.

A joint submission by WSC, BIMCO, Intercargo, Intertanko, and the International Chamber of Shipping has called on IMO member states to finalise the adoption of a global emissions data collection system as a precursor to considering next steps to address greenhouse gas pollution in the maritime sector.

In particular, the groups will be requesting that the MEPC agree to develop a roadmap for "determining a 'fair share contribution' towards reducing the world's total CO₂ emissions, of which international shipping is currently responsible for about 2.2%."

P&H will update readers on the outcomes of MEPC in the January 2017 issue.

USD500,000

In unpaid wages secured by ITF

7.8%

Vietnam's projected annual trade growth to 2035



Past president Grant Gilfillan hands out an award at IAPH 2015

IAPH Awards 2017

The association's five awards celebrate best practice and give your port the chance to showcase its achievements

IAPH recognises and honours excellence in port management and operations through its biennial awards programme. If you have a good idea that you wish to share with the world ports community, don't delay in sending your entry (in Microsoft Word format) by email to the IAPH secretariat at info@iaphworldports.org

The deadline for entries for the IAPH awards is 31 December.

All entries should be submitted in English.

The five competitions give members the chance to promote their ports at next year's Bali IAPH World Ports Conference.

Essay contest – Akiyama Award and Bali Open Award

Do you have an original and unique solution that is practical and applicable to your port in such areas as safety, recruitment

and training, technology adoption, environmental impacts, and stakeholder communications?

IAPH members are invited to submit their entries for the essay contests, organised by the Communication and Community Relations Committee.

There are two awards – the Akiyama Award and the Bali Open Award. Prizes for the overall winners include USD1,000 and an invitation to the award ceremony at the 30th IAPH World Ports Conference in Bali in May 2017.

In addition, the Akiyama Award winner will receive a round-trip air ticket, accommodation in Bali, and free entry to the conference, while the winner of the Bali Open Award will have free entry to the conference. A merit prize of USD500 for either category may be given if the judging panel believes there is a second outstanding entry that just falls short of the top prize.

Communications, Environment and IT Award

Don't miss the chance to showcase your port's excellence in port communications, port environment, and IT capabilities.

The Port Communications Award, which is also organised

Awards schedule

31 December 2016:

Deadline for receipt of entries

January-February 2017:

Initial screening and shortlisting

March 2017:

Final decision

Awards presentation:

Will be at the 30th IAPH World Ports Conference (7–12 May 2017, Bali, Indonesia)

by Port Communication and Community Relations Committee, is given to IAPH member ports that are able to demonstrate a case study or project that has been planned and implemented successfully over the past two years by choosing one of three themes. It may be your innovative communication strategy, marketing strategy, or human resources development, for example.

The Port Environment Award, which is organised by Port Environment Committee, is presented to an IAPH member port that can demonstrate an excellent case study in environmental management, environmental protection, or sustainability that has been successfully planned and implemented over the past two years, by choosing one of 12 topics.

The IT Award, which is organised by Trade Facilitation and Port Community Systems Committee, is given to IAPH members' ports that recognise the benefits of innovative IT in relation to the port itself, its customers, and the logistics chain by choosing one of nine topics. Gold, silver and bronze plaques will be presented to the top three award winners.

MORE INFO:

www.iaphworldports.org/award

Awards and criteria

Award

Akiyama Award

Bali Open Award

Information Technology (IT) Award

Port Communications Award

Port Environment Award

Who can enter

Individuals belonging to IAPH regular member ports in developing countries

Individuals belonging to an IAPH regular or associate member in any country

Any IAPH member organisation (regular or associate)

Any IAPH member organisation (regular or associate)

Any IAPH member organisation (regular or associate)



America, Central and South Region: Mauricio Suárez Ramírez



America, North Region: Molly Campbell



Europe Region: Peter Mollema

Port of Santa Marta

Port of New York and New Jersey

Port of Rotterdam

IAPH vice-presidents

As a result of the elections held in August under new IAPH constitution, the following individuals were elected as vice-presidents representing the three regions and joined the IAPH management team on 8 September

America, Central and South Region:
Mauricio Suárez Ramírez, CEO, Port of Santa Marta, Colombia

Remarks on the appointment:

"I would like to express my gratitude, as a Colombian and on behalf of all the team members of the company I represent, for the honour that has been given to me by my colleagues from South and Central America in selecting me as vice-president of the IAPH for the region.

I will work in a co-ordinated way with my peers in the continent, seeking synergies that allow us to keep pushing forward on all the decisions that benefit port activity and the cities and populations where they are located, with a focus on environmental protection and working responsibly with the communities around us.

You can count on me to use all my

efforts and to collaborate in approaching the different meetings and conferences with a permanent and constant voice on all the issues you consider important, and so consensus and agreement will be the greatest virtue of ports in the region.

Thanks very much to all of you who placed your trust in me."

America, North Region:
Molly Campbell, director, port department, Port Authority of New York and New Jersey, USA

Remarks on the appointment:

"As the Port Authority of New York and New Jersey port director, I am excited for this opportunity to serve the IAPH as the new vice-president for the America, North region.

I oversee the management and

operations of the major marine terminals within the Port of New York and New Jersey, which is the largest port on the east coast and third-largest in the country that serves as the gateway to one of the most concentrated and affluent consumer markets in the world.

Prior to my 2015 appointment at the Port of New York and New Jersey, I previously served at the Port of Los Angeles for more than 14 years, as chief financial officer and then the deputy executive director.

I believe my experience at these two ports gives me a unique perspective into marine transportation issues, especially the challenges faced by container ports from the continued growth in container vessels.

Container ports' reliance on imports makes it particularly important to have a good understanding of the worldwide market, trade lanes and the global impact of changes in the shipping industry.

The IAPH is a strong forum for sharing ideas, best practice and advancing new ideas that can help us all better serve the maritime industry.

I look forward to working with fellow members and providing leadership as we all work together to improve port operation, efficiency and continue to provide the highest level of service to our customers and our home communities."

Europe Region:
Peter Mollema, senior manager and strategy adviser, Port of Rotterdam Authority, Netherlands

Remarks on the appointment:

"I thank the members from the European region for the confidence they have placed in me by asking me to serve IAPH as vice-president Europe and look forward to a fruitful co-operation to contribute to the success of the association"

Training scholarship on offer

The IAPH training scholarship is an exciting opportunity for two members of staff from IAPH regular member ports in developing countries to attend advanced short-term port training programmes, a week or so in

length, so they can gain the latest knowledge in port management and operation and expand their network of contacts.

For each calendar year, USD10,000 is budgeted to fund two scholarships, each of

USD5,000, which should be used to cover tuition and course fees and, if deemed necessary, economy international air travel.

The approved applicants are requested to make all necessary arrangements by themselves,

including registering on the approved course and payment of the tuition fees. If international travel is required, the applicant is recommended to seek support from his/her port, including permission for leave and obtaining and the necessary visas.

i MORE INFO:

www.iaphworldports.org/award

IAPH Annual Report 2015/16

The 2015-2016 *IAPH Annual Report* has been published in digital format. It contains the association's major outcomes and activities over the past year.

These include: the 2016 Mid-term Conference in Panama, introduction of major changes of new IAPH constitution, the IAPH technical committees and

Women's Forum, World Ports Climate Initiatives (WPCI), and financial status of the IAPH, and more.

MORE INFO:

www.iaphworldports.org/news/2899









Membership notes

The IAPH Secretariat is pleased to announce that the following have joined the association







Regular members

Yokohama-Kawasaki International Port Corporation







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-  Masamichi Morooka, president

Associate members

Seafarers' Rights International

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-  +44 207 7940 9252
-  d.fitzpatrick@seafarersrights.org
-  www.seafarersrights.org
-  Deirdre Fitzpatrick, executive director
-  An independent centre dedicated to advancing the rights of seafarers through research, education, and training in issues concerning seafarers and the law.

Bureau de Universidades Internacionales

-  Av Bracamonte, Edif Le Mirage, N 2-3, Barquisimeto 3001, Edo Lara, Venezuela
-  +58 -414- 222 8522
-  info@bureaudeuniversidades.com
-  www.bureaudeuniversidades.com
-  Daniel E Bohorquez, general director
-  Non-profit educational organisation dedicated to giving specialised courses in the area of petroleum cargo terminals, marine cargo ports, chemical and petrochemical terminals, and raw mineral cargo terminals.

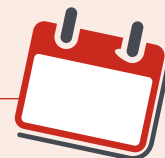
2016/17

2018

2019

Dates for your diary

A selection of forthcoming maritime courses and conferences



November

- 11:** IHS DPC Innovation Awards, London, UK
www.ihsdpcawards.com
- 14-25:** Port Operations Demand Sensing, Deployment and Management, London, UK
ttpminternational.co.uk
- 15-17:** Intermodal Europe 2016, Rotterdam, Netherlands
www.intermodal-events.com
- 17-18:** 16th Intermodal Africa, Mombasa, Kenya
www.transporevents.com
- 27 Nov- 1 Dec:** PMAESA 2016 Conference, Sea Port Sudan
www.pmaesa.org
- 28 Nov- 9 Dec:** APEC Seminar on Tasks and Responsibilities of Forwarders, Agencies and Shipping Lines, Antwerp, Belgium
www.portofantwerp.com/apec
- 29 Nov- 2 Dec:** AAPA XXV Latin American Congress of Ports, Merida, Mexico
www.aapa2016mexico.com
- 29 Nov- 1 Dec:** APEC Executive Course: CSR in a Maritime Environment, Antwerp, Belgium
www.portofantwerp.com/apec

December

- 6-7:** TOC Middle East, Dubai, UAE
www.tocevents-me.com
- 6-7:** JOC Port Performance North America Conference, Iselin, NJ, USA
events.joc.com/port-performance
- 7-8:** Second Annual Free Trade Zone & Special Economic Zone Summit, Shanghai, China
chinaoutboundevents.com/index.php/en/

January 2017

- 2-13:** 'Port and City' Community Relationship Management, London, UK
ttpminternational.co.uk
- 9-14:** International Trade, Policy and Maritime Logistics Management, London, UK
ttpminternational.co.uk
- 16 Jan- 3 Feb:** Port Planning and Infrastructure Design, Delft, Netherlands
www.unesco-ihe.org/short-courses



Port of Amsterdam

Sustainability is in our DNA

Port of Amsterdam's interim CEO, **Koen Overtoom**, tells *P&H* why and how the port is improving air quality

“Port of Amsterdam is committed to being faster, smarter and, above all, cleaner”

‘A better environment starts with you.’ That was the slogan the Dutch government used in the late 20th century to make the country's population aware of the impact energy consumption has on people: global warming, soil depletion, and poorer air quality.

I took the message of that campaign from the 1990s to heart. I started cycling more often, taking the train more frequently, putting a sweater on instead of turning up the heating, and turning off lights when I wasn't using them. Before long it simply became second nature. Thirty years on and I'm now leading a large energy port that is part of the Amsterdam metropolitan area and uses sustainability as a compass for all its activities.

Port of Amsterdam is committed to being faster, smarter and, above all, cleaner. This is why we will invest in energy transition and install solar panels and use more wind turbines in our port. We aim to bring about a circular economy both by attracting companies that play a role in this field

and developing initiatives ourselves by joining forces with game-changers.

Investing in sustainability projects that make the port region more attractive for its residents and users is another priority for us. For example, we have installed eNoses, which detect aberrant odour patterns and consequently enable us to find the source in a targeted manner.

We are also ensuring that ships use shore power whenever possible and, together with our clients, who are also our partners, are installing vapour return systems.

And last but not least, we have incentive programmes aimed at making inland navigation and sea shipping more sustainable. One result of these measures is air quality that is improving annually and is above the EU norm. We develop all our sustainability initiatives at three levels: the individual organisation, the port area, and as an engaged partner in the trade chains. Sustainability is in our DNA and a better world really does start with you. **P&H**

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Guarding the environment

More often we're working in ecologically vulnerable areas. Therefore it's important to prevent and mitigate undesirable environmental effects. Van Oord's Guards programme includes several promising environmental innovations. During pile-driving operations for the Gemini Offshore Wind Park, we proactively used the FaunaGuard to prevent potential permanent hearing loss in porpoises, a protected species.

vanoord.com/sustainability