



PORTS HARBORS

Official Journal of the International Association of Ports and Harbors

Team talk

Latin American VP to boost regional interest

Yard yield

RTGs are key to port benchmarking study

Silted Santos

Dredging weighs heavy on Brazil's outlook

Past meets present

Smart port talk at Bali World Ports Conference

Buying and selling used heavy duty trucks worldwide



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container handling and port equipment



DK114
Kalmar DRF450-60S5
Year of manufacture: 2014



DK115
Kalmar DRF450-60S5
Year of manufacture: 2013



D3533
Kalmar DRF400-60C5
Year of manufacture: 2013



Dk116
Kalmar DRF450-65S5
Year of manufacture: 2010



D3478
Kalmar DRF450-60C5X
Year of manufacture: 2005



D3490
Kalmar DRS4531S5
Year of manufacture: 2004



D3528
Kalmar DRF400-60C5
Year of manufacture: 2003



D3543
Kalmar DRF100-54-S6
Year of manufacture: 2010



D3512
Liebherr LRS645
Year of manufacture: 2012



D3511
Liebherr LRS645
Year of manufacture: 2011



D3552
Linde C4531TL
Year of manufacture: 2010



DK071
Linde C4540
Year of manufacture: 2008



D3546
Linde C4026CH
Year of manufacture: 2008



D3554
Linde C4535TL5
Year of manufacture: 2007



D3555
Linde C4535TL5
Year of manufacture: 2006



DK112
CVS Ferrari F478
Year of manufacture: 2012



D3553
CVS Ferrari F379.5
Year of manufacture: 2003



D3551
Fantuzzi CS45KL
Year of manufacture: 2004



D3436
Valmet TD4212
Year of manufacture: 1994



DK111
Kalmar DCF100-45E7
Year of manufacture: 2011



D3519
Kalmar DCF70-40E5
Year of manufacture: 2010



D3550
SMV 5/6 ECB100DS
Year of manufacture: 2011



D3514
Hyster H22.00XM-12EC
Year of manufacture: 2013



D3525
Linde C80/6
Year of manufacture: 2001



D3563
Linde H320
Year of manufacture: 2011



D3362
Svetruck 32120-47
Year of manufacture: 1999



D3503
Valmet TD3012
Year of manufacture: 1985



D3560
Svetruck 25120-45
Year of manufacture: 2010



D3535
SMV SL-22-1200A
Year of manufacture: 2005



ML1812R
Meclift ML1812R
Year of manufacture: 2017



D3534
Svetruck 13,6-120-32
Year of manufacture: 2013



D3397
Svetruck 13,6-120-32
Year of manufacture: 2008



D3558
Svetruck 12120-35
Year of manufacture: 2009



D3536
Kalmar DCD120-12
Year of manufacture: 1999



D3547
Kalmar DCE120-12
Year of manufacture: 2005



D3561
Terberg RT282
Year of manufacture: 2004

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



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Tradition met technology at the World Ports Conference as members discussed automation and digitisation in ports, on the cultural and colourful island of Bali

Photo: Courtesy of 30th IAPH Bali 2017

July/August 2017
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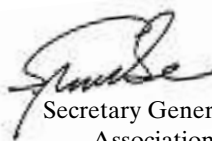
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The next steps

IAPH has ramped up its commitment to more sustainable ports



Susumu Naruse

Secretary General – The International
Association of Ports and Harbors



I am delighted to report that the IAPH World Ports Conference 2017 was a great success. About 650 participants travelled to the tropical island of Bali, a small part of a country that lays claim to the world's fourth longest coastline. With a population of more than 255 million, Indonesia has put a lot of energy and resources into improving its logistics efficiency.

The port of Tanjung Priok has been greatly expanded and modernised in order to challenge Singapore as the regional hub, and at the same time a number of local ports have been developed to better network local regions. This investment has the overall aim of reducing the country's logistics costs. Indonesia hopes these reduced costs will improve competitiveness among local industries and thus, expand its economy.

Following a video message from International Maritime Organization secretary general Kitack Lim, a lot of discussions were made on port efficiency, land connectivity, automation, and

other significant issues. Among them, the concept of a 'smart port' (see page 12) was focused on by many speakers.

They argued that advanced IT use is now indispensable in improving port performance. The environment was never far from agenda, and it was agreed that the battle against climate change might move into a new era as the Paris Agreement came into force at the end of 2016. In line with this progress, IAPH decided to transform the World Ports Climate Initiative (WPCI) that was launched nine years ago into a new scheme, the World Ports Sustainability

Programme (WPSP), which covers a much wider scope. The details of the programme will be worked out by a special team headed by Patrick Verhoeven, the newly appointed managing director of policy and strategy (see IAPH info, p39), and finalised in the second quarter of 2018.

This was the first conference at which IAPH's meetings were run under the new constitution. President Santiago Milà was re-elected for the next term until the Guangzhou Conference in April 2019. The first board meeting, council meeting, and technical committee forums under the new rules took place to discuss the IAPH's strategic and technical issues. And now each technical committee has its own annual goal to accomplish until the Baku Conference next year, information about which will soon be posted on our website, www.iaphworldports.org. **PH**

Details of the sustainable port programme will be worked out by a special team



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Port updates

► BUSAN CAPACITY

The South Korean government has announced plans to construct an auxiliary yard to enable Busan New Port to accommodate more containers. This is part of a wider goal to propel the port to become the world's second-busiest transshipment hub after Singapore. Such a 'buffer container yard' would enable containers to be added from outside the dock and would improve the efficiency of the port operations.

► INDONESIA INVESTMENT

The Japanese government is funding a new port at Patimban in West Java, about 140 km to the east of Jakarta. Construction will begin shortly and a soft opening is scheduled for 2019. It will provide an alternative to congested Tanjung Priok, according to a Japanese government study. The demand forecast carried out as part of the study indicates that Patimban will eventually handle a 36% share of total Jakarta hinterland containerised cargo volumes and a 68% share of the region's automobile-related shipment, with the balance handled by Tanjung Priok.

► CARGO'S NEW MATE

A digital monitoring system for container ship cargo operations being developed by UK tech start-up CargoMate has the aim of tackling port delays from both sides – by empowering the ship to sail as soon as possible and by improving the data that is available to fleet managers. According to CargoMate founder Chris Jones, the system will work in two parts. First, it will provide a real-time view of cargo operations for fleet managers, allowing them to react instantly to problems and issues. Second, the system will improve the crew's situation awareness by giving them the data they need to do their job efficiently.

Chinese company buys share in Qingdao Port



Qingdao Port: 961246

Qingdao Port issued 243 million new shares and China Life Insurance is buying 180 million of them

Chinese state-owned company China Life Insurance has announced that it will purchase 180 million new shares in Qingdao Port for HKD4.32 (USD0.55)/share, with a total transaction value of HKD778 million.

Qingdao Port had issued 243 million new shares at HKD4.32/share to raise working capital as it invests in its offshore project. The purchase accounts for 74% of these shares.

Qingdao Port said the net proceeds from the new shares would be used to provide general working capital to support the overseas development of the company, including a joint venture with COSCO Shipping Ports in which two parties are co-investing in the Khalifa Port Container Terminal project in Abu Dhabi, UAE. COSCO Shipping Ports has signed an agreement with Qingdao Port to buy a 16.83% stake for a total of CNY3.2 billion (USD467 million) to expand its port network.

"The port's dependable performance and sensible price

of shares, and the investment, allow China Life Insurance to expand its international business layout," China Life Insurance said in a statement explaining why it had bought the port's shares.

Although the insurance company is optimistic about the investment, some are still very cautious about the deal. "The industry should focus on its insurance business and regulators should strictly enforce regulation," said the China Insurance Regulatory Commission (CIRC) in a statement. The statement came after the ruling Communist Party removed Xiang Junbo as chief of China's insurance regulator in April as part of an ongoing anti-graft drive.

Qingdao Port reported positive quarterly earnings a month earlier, posting a net profit of CNY395 million, up 4.21% compared with the same period last year. The revenue also increased 5.16% year over year (y/y) to CNY840 million.

The company has seen revenue growth of about 21% annually over the past three years

and has had good cash flow. Cargo volume at Qingdao Port increased 3.1% compared with 2015, with the units carrying 443 million tonnes. Revenue from its logistic business and value-added services benefited Qingdao Port – the two sectors together generate a revenue of CNY3.85 billion in 2016.

Attracted by the high valuations in China's share market, Qingdao Port announced plans on 6 June to issue 671 million shares for an initial public offering on the Shanghai Stock Exchange. The reason the port is returning to mainland China is that the stock market there has been booming, listing rules have loosened, and the financial rewards from being listed in Hong Kong remain lackluster in comparison. The board of directors also believe they will receive a significantly higher valuation listing in Shanghai. Qingdao's counterpart, Port of Dalian, was the first port to be listed on both the Shanghai and Hong Kong stock exchanges.

Heineken brews up plan for sustainable logistics

Heineken is working on a joint pilot with a marine biofuels maker and goods distributor to use low-emission barges for its exports from the Netherlands. The pilot uses an advanced marine fuel in a 104 teu barge carrying beer for global exports from a major brewery in the Netherlands to the deepsea terminals at Port of Rotterdam.

The fuel does not require any modification to vessels and emits 25% less carbon dioxide than standard marine fuel as well as "sharply reducing" harmful emissions of nitrogen oxides and particulate matter, a joint statement from the three companies said. "The project will showcase the possibility of reducing emissions of inland waterway transport without any vessel modification."

The pilot is supported by the Dutch government and will monitor exact levels of emissions reduction compared with fossil fuels in a live environment.

Heineken was the launch customer of a new 120,000 teu capacity inland barge terminal near one of its main breweries in 2010 as it sought to shift more of its export cargo from truck to inland waterway to bring down carbon emissions from its supply chain operations.

"The logistical process is an important part of our sustainability ambition ... we are now taking an important step to realising a green corridor between our brewery in Zoeterwoude and the Port of Rotterdam, from where we transport our beer around the world," said Pieter van Kooten, manager of projects and sustainability for Heineken.

"This initiative paves the way for further shippers like Heineken to make a real, direct impact to dramatically reducing CO₂ and local emissions from both waterway and seaborne maritime transport – sectors where sustainable biofuel has been

earmarked to play a significant role," said Dirk Kronemeijer, CEO of GoodFuels, the marine fuels company partnering with the giant Dutch brewer.

The low-lying Netherlands has a target timeline of 30 years to make its economy and society carbon neutral, and transport systems and assets are a major focus.

At the end of last year, Port of Rotterdam said it would make risk-bearing financial investments in selected companies to help reduce its carbon footprint as part of a strategy to transition the port to a carbon-neutral environment and renewable energy hub.

"The largest investments will generally have to be made by the companies themselves, but the port authority will offer support with attractive accommodation conditions, connecting infrastructure, support with permit applications, and finding financing.

"When it comes to crucial investments to realise the energy transition, the port authority is also prepared to make its own risk-bearing investments or to participate in companies," it said in a statement at the time.

Home to one of the world's largest petrochemical complexes, Port Rotterdam is currently responsible for 18% of the country's total CO₂ emissions.

Recently the port said it was allocating 70 ha of space near its Maasvlakte 2 site for an offshore wind energy centre.

"The creation of wind farms at sea is a huge growth market. This requires a specialised port area for the installation and maintenance of the farms, which we would like to provide," said Allard Castelein, CEO of the port authority. The port said it expected the site to be ready within two years.



Wind turbines at Rotterdam. The port has allocated 70 ha to accommodate an offshore wind centre

Port updates

► XIAMEN SECURITY

China has announced new security and inspection measures for vessels calling at the southeastern port of Xiamen. A notice issued by the Maritime Safety Administration says foreign-flagged vessels need to undergo special safety and security inspections before coming into the port from 1 August 2017 to 5 September 2017. The measures are part of the security system being put in place for the annual BRICS summit in Xiamen in September.

► IMM SELLS NEWPORT

South Korean private equity fund IMM Investment will exit its investment in Hanjin Busan Newport Co after agreeing to sell all its shares to Hanjin Transportation, Busan Port Authority, and several other compatriot entities. In a joint statement, South Korea's Ministry of Oceans and Fisheries and Busan Port Authority announced that the latter would acquire a 12% stake in Hanjin Busan Newport Co just days after Hanjin Transportation, which operates a terminal in Busan New Port, became its controlling shareholder.



► SOUTH KOREA TRADE UP

Foreign trade-related container throughput at ports in South Korea expanded 10.5% y/y in April on the back of the highest monthly growth in the value of exports since mid-2011. The ports handled 1.41 million teu of exports and imports out of a total 2.34 million teu throughput in April as the value of exports from Asia's fourth-largest economy rose 24% on the same time last year.

Port updates

► YANGSHAN DELAYS

Throughput at the main container ports in China's Yangtze River Delta rose by 9% y/y in April, fuelling congestion and delays at Shanghai's Yangshan Deep Water Port. Figures from the Shanghai Shipping Exchange show the world's busiest container port handled 3.27 million teu in April, a rise of 5% on April last year. The neighbouring Ningbo-Zhoushan took in more than 2 million containers the same month, a y/y rise of nearly 17%.

► UKRAINE DREDGES

A Chinese construction company was engaged to deepen the approach channel and alongside depth of the Ukrainian port of Yuzhny, as the government steps up efforts to secure investment under the Belt and Road programme. The deal follows the official adoption earlier this year of an ambitious development plan for the port, which sits on the Black Sea in the southern province of Odessa Oblast. The government is thirsty for funds to transform the port to a regional industrial and transport hub and is looking to China and Dubai for help.

► BRIDGE RESTRICTS

Container industry stakeholders are pressing the Hong Kong government to adjust the air draught clearance restriction of the iconic Tsing Ma Bridge spanning a key shipping channel, which is impacting calls by mega-vessels to the Shenzhen and Hong Kong port cluster. A study commissioned by the Hong Kong Liner Shipping Association said the air draught restriction of 53 m causes problems for vessels of over 10,000 teu capacity and serious transit challenges for 18,000 teu vessels.



Port of Valencia, one of Noatum's ports. COSCO has acquired a majority stake in the company

COSCO Shipping Ports buys majority stake in Noatum

Hong Kong-listed COSCO Shipping Ports has acquired a majority stake in Spanish container and rail terminal operator Noatum Ports for USD228 million. COSCO Shipping Ports is taking a 51% stake in the company, which operates container terminals in Valencia and Bilbao, as well as the Conterail dry port in Madrid and Noatum Rail Terminal in Zaragoza. The deal is subject to approval by shareholders.

The transaction excludes Noatum Maritime, the port services arm of the Spanish group that operates multipurpose, ro-ro, and bulk terminals throughout the Iberian Peninsula. "The new partnership enhances our capacity to increase cargo volumes and reinforces the ports of Valencia and Bilbao, as well as improving service levels to customers," said Douglas Schultz, CEO of Noatum Ports and Maritime.

The two container terminals and two dry ports in the transaction continue to offer their infrastructure and services to all shipping companies calling at the ports of Bilbao and Valencia in accordance with concession

terms and contract commitments, Noatum said in a statement.

COSCO Shipping Ports also signed an agreement with Piraeus Port Authority (PPA), in which it holds a majority stake, and Shanghai International Port Group to strengthen the role of Piraeus port as a China-Europe cargo handling hub. The agreement covers co-operation on boosting shipments between the two ports, staff training, and technical assistance.

"The agreement with the port of Shanghai is very important. It means that through Piraeus huge quantities of goods will be transported from China to the rest of the world," said Greece's deputy economy and development minister, Stergios Pitsiorlas.

COSCO Shipping Ports subsidiary Piraeus Container Terminal has been operating Piers II and III at Piraeus Port under a 35-year concession agreement since 2010. In 2016, COSCO acquired 67% of the shares of PPA, and stated its commitment to turn the port into a key Belt and Road hub at the crossroads of Asia, Europe, and Africa.

Throughput at the facility expanded by 14.4% in 2016 to 3.5 million teu.

COSCO Shipping Ports is a key instrument in plans by China's government to develop transport, trade, and resource interests overseas through its Belt and Road programme.

It was announced in January that, through an agreement with China Development Bank, COSCO Shipping Ports would have access to USD26 billion in financial resources to support Belt and Road projects over the next five years.

In May, COSCO Shipping Ports said it was acquiring a 24.5% stake in a dry port located 15 km from the Khorgos-East Gate Special Economic Zone in Kazakhstan. The company is teaming up with Kazakhstan's national railway company and Jiangsu Lianyungang Port Co for the development, which will serve as a hub for rail cargo shipments between China and Europe.

Cargo from the dry port can reach Europe by rail in about 10 days and Lianyungang in east China's Jiangsu province in 5 days.

DP World in discussions for Lagos development

DP World is in discussions with the Nigerian Ports Authority (NPA) for a multibillion-dollar port infrastructure development close to Lagos. The NPA said in a statement the project would involve greenfield and brownfield container and bulk terminals.

"The plan is to develop a DP World Terminal in the Lagos area and a suitable site is currently being sought," the NPA said. The statement was issued in response to criticism of the NPA after International Container Terminal Services (ICTSI) of the Philippines pulled out of a major development project at Lekki Port, 65 km east of Lagos.

Local media reported the Committee of Maritime Professionals (CMP) as saying the "hard-line posture" of NPA managing director Hadiza Bala Usman was frustrating potential investors in the Nigerian maritime sector.

NPA rejected the criticism and said it would continue to do business with "concessionaires and collaborators whose ethics respect the principles of shared prosperity".

The port authority said it recently concluded the sale of its remaining equity in Lekki Deep Sea Port to China Harbor Engineering Company for USD86 million, and that it was in discussions with Morocco's Tanger Med Port for the building of a greenfield terminal, logistics base, and warehouse in Nigeria.

Manila-based ICTSI recently announced that its local subsidiary, Lekki International Container Terminal Services (LICTSE), had terminated a concession agreement with NPA by mutual consent as a result of delays in the execution of the project at Lekki Port.



Konecranes: 883269

Port of Lagos, Nigeria. DP World plans to develop a new port close to Lagos

The agreement, signed in August 2012, had given LICTSE the right to develop and operate the terminal at the port for 21 years. The terminal was originally due to start operating in 2016.

With a design capacity of 2.5 million teu, it would have been one of the largest container terminals in sub-Saharan Africa.

Corruption in the ports system is widely considered to be the main contributing factor to making Nigeria's ports among the most expensive in the world, while at the same time undermining the significant growth potential of the trade economy.

Illegal payments account for more than half the cost of import and export processes through ports, and delays account for up to 70% of the time required to conduct those processes.

Under the leadership of Bala Usman, the NPA is implementing a series of

reforms and modernisations to eliminate corruption.

An order was issued in early June banning all non-approved government agencies from operating at seaports in the country. The operation of multiple, non-approved government agencies within the port resulted in clashes of interest, touting, bribery, and corruption, Bala Usman said.

"Other agencies that are not on the [approved] list cannot operate inside the ports, but can base their operations outside and interact with the approved agencies. These agencies are aware that they had always been operating at the ports without the necessary approvals."

A port community system is also being developed to allow supply chain stakeholders to interact with agencies and reduce touchpoints that encourage corruption in the ports system.

Port updates

► ETHIOPIA ACCESS

The government of landlocked Ethiopia has secured rights to access and use Somaliland's Red Sea Port of Berbera, where Dubai-based DP World has just started a 30-year concession, according to a spokesman for the president of Somaliland. DP World started its concession to manage the development and operation of the port in March and has allocated close to a fifth of the port's capacity to Ethiopia shipments.

► CHINA TIGHTENS BELT

China has said it will introduce a more rigorous system of auditing overseas investments by state-owned companies in an effort to weed out poor and illegal practices that lead to reduction in state assets. The move will affect port and supply chain investments under the Belt and Road programme.

► BIG BEND FUNDING

Port Tampa Bay will receive USD9 million in federal funds via the US Army Corps of Engineers for the USD55 million deepening and widening of the port's Big Bend Channel to 13 m deep and 76 m wide. CEO Paul Anderson said Port Tampa Bay had already invested USD30 million in infrastructure, with assistance from the Florida Department of Transportation, for the Port Redwing maritime complex.

► TRIUMPH IN HAMBURG

Port of Hamburg received the 20,000 teu *MOL Triumph* to HHLA Container Terminal Burchardkai in May. The new flagship of MOL had already called virtually when a turning manoeuvre in front of the Waltershof basin was practised in the maritime centre's simulator. During its first real call all went smoothly and its containers were handled by the 13 gantry cranes.

Port updates

► KERALA COMMENCES

Adani Ports and Special Economic Zone Ltd (APSEZ) has begun construction of the first berth at Vizhinjam in Kerala, India. It will be the country's "first-ever transshipment port," according to APSEZ CEO Karan Adani. The multi-cargo port "is very strategically located for access to prominent international waterways; this project will enable India to be strategically positioned as a global transshipment hub", he added. Kerala's first-ever deep-water container transshipment port will have 20.5 m depth alongside the 800 m berth allowing it to attract some of the region's one million teu/annum.



► HYBRID ORDER

Port of Virginia, United States, has placed an order with Kalmar for sixteen hybrid shuttle carriers, with an option for 40 more units. The new units will be delivered to the Virginia International Gateway container terminal. The port's order was driven by its low fuel consumption and emissions record, as well as engine noise levels, combined with Kalmar's proven track record "in automation-ready horizontal transport solutions", Kalmar said in a statement.

► CROSS DOCKING

Port of Gothenburg is home to a new container freight station for the transloading of bulk cargoes, such as sawn timber and steel. APM Terminals and logistics company Mimab opened the new facility on 2 May. Goods are taken by road or rail to the terminal where they can be transferred to containers for onward shipment.



Dietmar Hasenpusch: 1023174

Petredec LPG tanker, *Kris Kin*. The company is opening an LPG import terminal in South Africa

Petredec and Bidvest to develop LPG terminal

Petredec Limited announced on 9 June it was developing an LPG import terminal at Richards Bay, South Africa, with Bidvest Tank Terminals. The new facility is expected to be the region's largest pressurised LPG import terminal. It will have 22,600 tonnes in storage capacity, spread out across four mounded tanks, each capable of holding more than 5,500 tonnes of gas.

It will be located at Bidvest's existing site in Richards Bay, which has a storage capacity of 307,000 m³, according to the company website. The facility will be operational from late 2019. Construction is expected to take 27 months, with ground-breaking scheduled for September.

"Dedicated 24-hour road tanker and railcar loading facilities will ensure constant supplies 365 days a year, enabling local LPG marketers to guarantee product availability

to their customers throughout South Africa," Petredec said.

Petredec said the costs of importing LPG into South Africa were typically high, due to small coastal terminals and the distance from major supply hubs. The storage capacity of the planned facility will ensure year-round availability. It will also allow for seaborne re-exports to neighbouring countries, thus lowering supply prices to the local market.

Petredec said it supplied most of South Africa's imported LPG and believes further investment in large, dedicated infrastructure can increase the fuel's popularity while lowering prices to consumers.

Giles Fearn, Petredec's CEO, said, "Our commitment to the development of the southern African LPG market underlines our confidence in the growth potential of this region. Delivering LPG to South Africa

on a previously unprecedented scale brings with it financial savings to our customers that will ultimately benefit consumers with lower gas prices".

David Leisegang, Bidvest's managing director, said the project demonstrated the company's commitment to South Africa's economy. "The new facility will add significantly to the more than 3.5 billion litres of bulk liquid product that is currently handled through our terminals in South Africa each year."

Petredec trades LPG globally, delivering more than 12 million tonnes each year through its fleet of more than 50 gas carriers. It also has downstream presence in LPG terminals, as well as distribution and marketing.

Based in South Africa, Bidvest has three terminals in Durban, Richards Bay, and inland at Isando. Storage capacity at the three sites add up to about 780,000 m³.

Dahej Port diversifies away from coal

Dahej Port, located in India's north-western state of Gujarat, is looking to diversify its cargo profile after coal imports dwindled over the past two years as the country scaled down imports due to increased domestic production.

Dahej is one of the nine ports run by the Adani Group, the country's biggest private port operator. Dahej is small in scale compared with the other facilities in the firm's portfolio, with two berths and a cargo handling capacity of up to 20 million tonnes a year.

With a draught of 15.5 m, Dahej can berth post-Panamax and mini-Capesize vessels with

a cargo carrying capacity of 90,000 tonnes. It can also dock Capes but only after lightering.

Coal has been the mainstay of the port since start of operations in August 2010, but from its peak of 12.4 million tonnes in 2014/15, it almost halved to 6.3 million tonnes in 2016/17.

"Initially, we had heavy reliance on coal imports but with falling volumes, we are in the phase of diversifying," an official at Dahej Port said. "We are venturing into non-coal commodities and in this direction have opened a multipurpose godown [warehouse] for storing agri-commodities, fertilisers, minerals, and steel."

Dahej has about 53,000 m² of open space and about 10,800 m² of covered godown space to cater to non-coal commodities.

One of the two berths at the port is dedicated for handling non-coal cargo and is equipped with shore cranes with hopper facilities. The cargo unloaded from the ship goes first into the hopper, then to the dumper and from there to the yard.

Dahej Port, the only commercial dry bulk port in the state, has two railway sidings, one owned by the port and the other owned by Indian Railways. Dahej is connected by road to the National Highway 8, linking Ahmedabad with Mumbai via a six-lane road.

Container terminals enjoy volume growth

The 4% growth forecast in global container terminal throughput in 2017 is expected to hold into 2018 on the back of a strengthening global economic outlook led by the United States and emerging markets, according to shipping consultant Drewry.

Throughput at a sample of global ports grew 3.6% y/y in the first quarter, a significant pick-up from the 2.1% achieved in the final quarter of 2016.

"We have recently revised upwards our 2017 forecast for global container port throughput to around 4%, and 2018 is expected to be at a similar level," said Neil Davidson, Drewry's senior analyst for ports and terminals.

On a regional basis, ports in Africa and Latin America showed the strongest growth in the first quarter. In Africa, throughput at ports handling more than 125,000 teu per annum rose by about 13% y/y, and throughput at a sample of similar sized container ports in Latin America rose by almost 10%.

The improved numbers for Africa indicate volumes may finally be starting to come back following a lengthy decline mainly due to the low price of oil, which pulled down throughput at the major oil exporting economies of west Africa.

Despite the strong showing since the start of this year, throughput at African ports is still down by 13% since 2014.

"Volumes are slowly recovering and in the medium to long term, it is reasonable to expect good growth in the region," said the senior analyst.

The outlook for business on the continent is further boosted by the increasing size of vessels deployed, which is expected to drive more hubbing in west Africa.

Throughput at North American terminals expanded well above the global average of 3.6% in the first quarter, and the improving volumes are expected to continue with improving economic data from the region.

IHS Markit expects the US real

GDP to rebound from a 0.7% annual rate in the first quarter to 3.4% in the second as consumer spending is supported by rising employment, real incomes, and household wealth.

Brisk sales and rising prices are also expected to encourage more home building, further supporting growth on the trans-Pacific, said Sara Johnson, senior research director, in the company's latest world economic outlook.

The *Journal of Commerce* has forecast the Asia-US teu trade will rise by 6.9% this year.

Oceania and China port volumes also grew above the global average in the first quarter, while growth was more moderate in the recent high growth regions of southeast Asia, the Middle East, and south Asia.

Despite relatively good demand across most major regions, terminal operators said they expect pressure on margins due to the twin impacts of industry consolidation and ever-increasing vessel sizes to continue.

Port updates

▶ EUROPEAN EXEMPTIONS

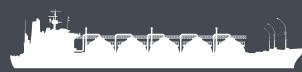
The European Commission has approved new state aid rules that exempt certain public support measures for ports from prior scrutiny. As a result, member states can now make public investments of up to EUR150 million (USD167 million) in seaports and up to EUR50 million (USD55 million) in inland ports with full legal certainty and without prior control by the commission. The regulation also allows public authorities to cover the costs of dredging in ports and access waterways.

▶ PORT UPGRADES

South Korea's Ministry of Oceans and Fisheries has drawn up mid- to long-term development plans for the country's 10 new ports, as part of a wider objective to revitalise the stagnant shipping and logistics sectors. The first of these developments was Busan New Port, which was conceptualised in 1996, followed by similar projects in Gwangyang, Incheon, Pohang, Pyeongtaek-Dangjin, Ulsan, Mokpo, and Saemangeum. Since then, expansion and upgrading works have been under way.

▶ SINGAPORE STANDARDS

Singapore has launched its first standard for liquefied natural gas (LNG) bunkering, bolstering efforts to become an LNG trading and bunkering hub. The Technical Reference 56 (TR56) was launched in April by the Maritime and Port Authority of Singapore, SPRING Singapore, and the Standards Development Organisation @ Singapore Chemical Industry Council. TR56 will provide a safe, efficient, sustainable, and transparent technical framework for conducting LNG bunkering operations in Singapore.





Getty Images: 1017410

Teamwork will make it happen

IAPH's new vice-president for Americas, Central and South, Guimara Tuñón Guerra, tells *P&H* about her plans for IAPH, the importance of fostering opportunities for women in the workplace, and Panama's plans to roll out electronic information exchange systems

Being elected as a vice-president (VP) of IAPH is a great honour for me. I am thrilled to co-operate with such an important organisation to achieve the association's objectives, and happy to engage with the new challenges that the international port industry will face in the upcoming years.

My work plan as VP (see box) includes opening up better channels of communication between ports and other interested parties in my region, and to engage these ports in all aspects of IAPH's activities. To do this, I will engage in teamwork in which I am a staunch believer. Teamwork is the best mechanism to achieve our organisation's goals, and by acting on my work plan we can contribute to the success of the council and the new IAPH constitution.

IAPH has a history of more than 60 years and a membership spanning some 170 ports in 90-plus countries. It is an essential element in maintaining the port industry's global growth and is central to the promotion of modern and efficient services.

It is of utmost importance for the international port industry to be represented through IAPH – given its consultative status in several United Nations International Organisations – which allows the interests of the port sector to be fully represented in each of these organisations. Panama, which is the largest contributor to the International Maritime Organization (IMO), values the role played by IAPH within the IMO as its work and proposals also represent Panamanian ports.

The effort of IAPH technical committees' research work and international co-operation for the protection of the marine environment, the facilitation of maritime trade, and the reduction of emissions from port activities, are inputs that allow us to boost our services on a daily basis.

History shows marginal women's participation throughout the development of the port industry. The performance of women in ports has been mainly in administrative, secretarial, and very sporadically in positions of trust and direction. However, in recent years, we observe a new trend, which is welcomed

with great pleasure. Women are carrying out higher administrative functions and executive positions in the upper levels of port authorities as well as in the various administrations of ports worldwide.

Due to the importance of women's professional empowerment, their leadership is essential to boost competitiveness and development, it is important to encourage their representation in the port sector and make it more visible. This is one of the tasks of the IAPH Women's Forum. It encourages gender equality and the promotion of female staff from across the membership. The Women's Forum is currently implementing co-operation programmes, as well as internships, which undoubtedly contribute to the development of female human resources working in our ports and to a greater presence of women in high positions.

The Panama Maritime Authority (AMP) currently has 1,661 employees; 680 of them are women, representing 42% of the work force. Women at the Panamanian ports play an



The Panama waterway. VP Guerra wants to see more Latin America ports involved in IAPH work

‘Teamwork is the best mechanism to achieve our organisation’s goals’

Guimara Tuñón Guerra

IAPH VP for Americas, Central and South



Panama Maritime Authority: 5048772

important role, contributing day by day with their best efforts, giving outstanding participation, and achieving excellent co-ordinated operations with efficiency and effectiveness in all areas, especially in managerial positions.

Currently women working in Panama’s ports occupy technical positions such as: engineering supervisor, port services inspector, security officer, marine aids to navigation inspector, and officer of prevention and pollutions control, among others.

The maritime industry is undergoing great change. We can observe, today, bigger ships, alliances of shipping lines, changes in logistic patterns, and handling of information. For that reason, the port business must meet the new requirements of international trade through the automation of processes, the

facilitation of maritime trade, and the efficiency of its services.

As we all know, there are many administrative procedures related to ships and ports; therefore, it is important to use electronic information systems (EIS) to manage procedures related to ships and ports to improve facilitation of maritime transport.

For a more efficient operation of our (Panama) ports, the AMP is working on the implementation of a Maritime Electronic Exchange of Information System Project, known by the acronym ‘VUMPA’. This system focusses on vessel arrivals, and will allow the facilitation of the arrival, stay, and departure of vessels in ports, through a single point of entry. It will also allow electronic exchange of all data related to the vessels’ documents and requirements regarding their stays, stopovers, and operations. Data can be sent prior to vessel arrival.

Each authority involved in the VUMPA process will be able to speed up the boarding process of vessels; thus, the vessels’ time in local ports is reduced to a minimum. Nowadays the efforts of the port industry should also be oriented toward achieving the dispatch of

vessels and cargo through fully electronic means, mainly through anticipated electronic messages, prior to the arrival of the vessel.

The AMP has formulated this project and approached the Panama Canal Authority (ACP) in order to work together and unify the country’s maritime and port processes.

The Panama Canal expansion has had a ripple effect on global maritime trade as shipping lines have redrawn their services to take advantage of the economies of scale it offers. We expect that this trickle-down effect will continue for many years to come, promoting economic growth in the Americas and many other areas around the world.

Panama has developed a master plan for transport infrastructure and cargo logistics around the canal that will manifest itself through a high-performance intermodal transport system, including ports, rail, and airports at both entrances of the canal. It will provide a priority logistics corridor, consolidate logistics hubs, and establish integrated port areas.

Under the present structure, the AMP oversees the operations of a number of small domestic ports. However, since the 1990s, Panama’s container terminals have been privately owned and run through long-term concessions. This year, the AMP is moving forward with a major new port project of its own: the construction of a cruise terminal at the Panama Canal Pacific entrance. And after talking with principal international cruise operators, the AMP has decided to administer it and keep it open to all cruise lines without restriction. The new vision of the AMP is to develop an adequate framework and become the administrator of its main resource, its strategic location. **PH**

i MORE INFO: www.amp.gob.pa

New VP’s work plan for IAPH

The new VP for Americas, Central and South has ambitious plans for both the region and IAPH. Whilst in office Guimara Tuñón Guerra of AMP will focus on the following:

- Working hand-in-hand with the IAPH president to raise the profile of the council and to ensure that the organisation’s work is planned and relates to Central and South American

regional interests without compromising the interests of other ports worldwide.

- Creating a strong union between the ports in our region and increasing the presence of Latin American ports in all IAPH activities.
- Establishing a platform to communicate with maritime, port chambers, and organisations in order

to seek opportunities for guidance and technical co-operation to develop ports in our region.

- Providing support to other region’s vice-presidents by creating a highly effective strategic partnership.
- Building strong, co-operative working relationships with the private and public sectors, where the interests of the port industry prevail.



Trade enabler

Ports must take the long view and see themselves as part of a door-to-door network that serves its customers, **Penny Thomas** reports

Those who work for port authorities are “among the bravest people on the planet”, said Paul van Eulem at the IAPH World Ports Conference in Bali, in May, as they are affected by elements often outside their control. The director of Maritime & Transport Business Solutions commented that an increase in freight, technological advances, increasingly large vessels that ports must accommodate, and ports’ interdependencies on other industries and elements of the supply chain, such as special economic zones (SEZs) and transport networks, are some of the challenges ports must overcome if they are to grow. As Jonathan Beard, head of transportation and logistics, Asia, for Arcadis, said, you are “only as strong as the weakest link. Beyond the gate terminal operators have little control.”

But what became clear over the three-day conference was that while certain elements of the supply chain would always be difficult to control, there was a lot a port could do to strengthen its position in the supply chain and make itself even more attractive to shippers.

This sentiment was echoed by International Maritime Organization (IMO) secretary-general Kitack Lim, who

told delegates that ports must think “door-to-door rather than port-to-port”.

How ports will fit into the giant jigsaw of the global supply chain and meet market demands was a central theme at the conference, with the agenda driven by the topics of improved efficiency through automation and connectivity, and gaining access to complimentary businesses and consumers.

The challenges are physical, political, and regulatory. Competition is already rife in certain regions, global trade is subdued, and there is developing anti-globalisation sentiment. There are “perils” associated with not having good hinterland connectivity, even if your terminals are first-class, said Beard. The different players in a port’s hinterland are very influential in how it performs, he added.

One case study put forward was China, which Beard said was seeking greater control of its supply chain. Shippers are led by price and service. Hong Kong is losing some of its market share as Yantian on the mainland offers a similar service and because it

by 2030. At the moment only 8% moves on trains. It also calls for a 12% reduction in road cargo from 52% to 40% by the same year.

Among other projects, it has rolled out a connectivity platform, which offers three interactive tools: maritime connections (arrival and departure list of seagoing vessels); terminal overview (overview of all container terminals in the port); and intermodal connections (information about intermodal barge and rail services).

These types of service and technology lie at the heart of Port of Marseille Fos Authority's Smart Port project. "Every port can be a smart port by using new technology and offer new service to the customer," the port's strategy department director, Frédéric Dagnet, explained to delegates.

IAPH president Santiago Garcia-Milà also said smart port technology could bring about "quick changes" for a port.

IAPH's Trade Facilitation and Port Community System Committee, which Dagnet chairs, has defined the Smart Port concept as a trade facilitation accelerator and a tool for improving innovation in port industry.

He told delegates that to create a smart port, synergies between the pillars of energy, logistics, mobility, environment, and IT had to be found. Marseille looked beyond the port border to the wider metropolitan area with four goals in mind: improve port passage performance; create new sources of value in the digital and logistics arenas; improve the relationship between the port and city; and promote the port as a unique element of the Marseille Fos region.

is hampered by regulatory issues related to truck boundary crossings.

Port of Antwerp also showed the effects of forces beyond the port domain when it sought to improve its connectivity. The port responded to the financial crunch of 2008/09 with the launch of its Total Plan Competitive Port. Eddy Bruyninckx, honorary CEO of the port, explained two main outcomes of the plan, both of which look beyond the port border: the necessity to focus on the total supply chain instead of the port chain; and an understanding of Port of Antwerp's synergies between industries, value-added logistics, and cargo handling. The port decided to focus on collaboration with the private sector and platform strengthening.

The plan includes a hinterland strategy, which could see 12% more rail cargo moving to and from the port

“Ports have to be efficient, cost-effective, sustainable, and responsive to changing markets to deal with challenges”

Santiago Garcia-Milà, IAPH president

Port of Hamburg's location has led it to invest heavily beyond the port and encouraged it to optimise new technology and digitisation.

"Hamburg has a long history of reliable success," Wolfgang Hurtienne, associate partner and former managing director of the port authority, told





Courtesy of the 30th IAPH Bali 2017: 5050728

Baku SEZ expands on Caspian Sea

A special economic zone (SEZ) is the backbone to any logistics development in a region, Taleh Ziyadov, director-general of Baku International Sea Trade CJSC, told delegates in Bali. It's on this premise that the Azerbaijan government is basing its plans to develop a non-oil economy.

Situated on the Caspian Sea and offering access to Turkey and the European Union, central Asia, China and Japan, Iran, India, Russia, and northern Europe, the port wants to position itself as a key node in the regional supply chain.

"European Union bureaucracy is too much," said Ziyadov, adding that Baku "is well positioned to welcome companies".

A free zone law has been established, including a specialist legal regime and tax and customs incentives. The oil sector has already created a de facto SEZ and it has proved very successful, Ziyadov said, pointing out that the SEZ concept was easy to duplicate for other types of industry.

China emission control areas due to come into effect in 2019 represent the way ahead of other countries in region

Jonathan Beard, head of transportation and logistics, Asia, for Arcadis

delegates, and rail transport is key to that success. Hamburg is situated deep in the hinterland, which means it is 100 km closer to inland markets. Reliable hinterland infrastructure is key.

If you want to get goods from Shanghai to Munich, Hurlienne explained to *P&H*, you have to ask if the North Sea is the right decision. His answer is 'yes' if you have good hinterland links. Hamburg's slick operation counteracts the additional three days it takes to get from Shanghai to other North Sea ports.

Many of Hamburg's hinterland links revolve around rail, with 2.36 million teu transported on tracks in 2016. Its rail traffic management systems co-ordinate 5,000 wagons a day, but it has taken considerable investment. EUR450 million (USD507 million) has been invested in Hamburg's infrastructure since 2008.

The success of Hamburg's use of rail to connect it to the supply chain network in the way its customers need is evident. Beard believes the value of rail could be seen more widely, beyond northern European ports such as Hamburg and Antwerp, and believes Australia and China would suit rail logistics, as there is a lot of inland activity in these regions.

Each port's scenario is different, but as delegates were reminded in Bali, the bottom line is that efficiency and price are the key drivers to gaining market share. Ports need to look beyond their own confines to make this happen. **PH**

MORE INFO: www.iaphbali2017.com

Stacking up the case for automation

Yvo Saanen, an executive on the board of TBA, pushed the case not only for automation but also for robotisation, as a good option for brownfield (existing) ports that want to adopt automated elements.

He told *P&H* that stacking was one of the easier areas in which to make use of this technology "as it is very standard, hence [there is] extensive deployment already".

But his argument is geared towards full automation, as the more exceptions (non-automated/robotised elements) that are introduced at a terminal, the more compromised the data becomes, making it more complicated it is to achieve robust automation.

A greenfield site – in this case a fully automated

port development project that will be built from scratch, including hardware and software – also has its sticking points. Saanen said that, unlike a conventional terminal, which can be added to and developed over time, with an automated terminal, "What you build is what you get. They can't be added to like a conventional terminal."

He acknowledged that this lack of flexibility was a downside. But he believes that for small to medium-sized ports that are thinking about introducing automated elements, this will become feasible as soon as the technology matures, meaning that "the level of expertise required gets less on behalf of the operator".

"With an automated terminal, what you build is what you get. They can't be added to like a conventional terminal"

Yvo Saanen, executive, TBA



Courtesy of the 30th IAPH Bali 2017: 5049568

Ports part of sustainable chain

IAPH voiced its views on sustainable ports in Bali, as it broadens the remit of WPCI, sets out its commitments, and co-sponsors a paper to IMO

Ports are just one part of a supply chain that must seek sustainable operations

IAPH members at the Bali conference in May renewed and upped their commitment to the environment and society by taking the World Ports Climate Initiative (WPCI) one step further, by evolving the scheme – launched in 2008 – into a broader knowledge base for not only ports, but the whole supply chain.

To be known as the World Ports Sustainability Programme (WSPS), it will be the “think tank where innovative ideas and philosophies on sustainable ports, including economic and social factors influencing sustainability, are translated into practical ways and methods of port design, management, and operations,” said the chair of the Port Environment Committee, Henri van der Weide, policy adviser safety, security, and environment at the Port of Amsterdam. WSPS will be launched in Belgium on 22–23 March 2018 at an event hosted by the Port of Antwerp.

It will fulfil multiple roles and knowledge centres will be created for all involved in supply chain operations, he added. In 2018, WPCI will be 10 years old, and in that time the global agenda on the environment “will have changed a lot,” said van der Weide pointing to the international targets set by the United Nations 2030 Agenda for Sustainable Development and the Paris agreement of COP21.

“Ports ... play a crucial role in working to improve the sustainable performance of the supply chain on a local as well as on the global scale,” said the IAPH Port Environment Committee in its submission to the board. It added that the Port Environment Committee has been considering broadening the remit of WPCI over

the past couple of years, “to include overall sustainable development and to redefine the objectives originally set regarding climate change”. Also in Bali, members agreed to co-sponsor a submission by Germany and other parties, to International Maritime Organization’s (IMO’s) Marine Environmental Protection Committee to reduce greenhouse gas (GHG) emissions from ships as stated in a resolution (see page 34) adopted at the event. The IMO committee was due to meet on 3–7 July.

This submission calls for a “quantified global emissions pathway for shipping to set the level of ambition of the initial IMO strategy, to be decided in 2018,” IAPH said in a statement. The objective is for emissions to start declining as soon as possible and reduce towards zero in the second half of the century, in line with the Paris climate goals. “IAPH took leadership on climate change early in the process with the World Ports Climate Initiative that was established in 2008,” said IAPH president and deputy executive director at Port of Barcelona, Santiago Garcia Milà, in a statement.

He added, “Ports worldwide are at the crossroads of land-based and maritime industries and are vulnerable to the effects of climate change, such as the rise of sea level and extreme weather conditions. This is why we are keen to see an ambitious IMO GHG strategy in place as soon as possible and want to do everything to help both the shipping industry and the member states in achieving this objective.” The WPCI was launched by IAPH under the Port Environment Committee and 55 ports signed a declaration to undertake action against climate change. Successful projects like the Tool for Carbon Foot Printing, the Environmental Ship Index, LNG as ship’s fuel, and Onshore Power Supply were born. With the change from WPCI to WSPS, the scope will be broadened from environmental issues to overall sustainability projects. **PH**

MORE INFO: www.iaphworldports.org



The evolving industry

What are the next steps for shipping and ports, as ships get bigger and technology becomes increasingly integrated into the supply chain?

Penny Thomas was in Bali to find out

The shipping industry is redesigning itself, Farid Belbouab, president director of CMA-CGM Indonesia, told the IAPH conference in Bali in May. We will see fewer carriers, fewer alliances, and most likely further consolidation, he noted, coupled with less growth than was seen in the previous decade.

He also said that ships are unlikely to be bigger, at least for the time being, as the supply and demand is not currently there to fill those ships.

But in any case, should ports go out of their way to accommodate mega ships of 18,000teu plus? Olaf Merk, ports and shipping expert at the International Transport Forum (ITF), does not necessarily believe so. He believes that ports worldwide should be moving “towards more strategic assertiveness” in shaping the maritime supply chain, rather than “accommodating the whims of the market,” he told delegates. At the IAPH conference in Hamburg in 2015 Merk said these giant ships had knock-on negative effects on the whole supply chain, including ports, such as requirements for increased depth, bigger cranes, and more manpower when these ships are in port. He believes ports should take into account all public interests and question whether accommodating these vessels makes sense.

The same is true for alliances. Merk noted in Bali

that alliances require fewer ports, which will be dependent on fewer lines, placing pressure on port tariffs, against a backdrop of potential port shifts and lower return on port investments. Alliances also offer less choice for shippers.

“Do the advantages of alliances for carriers outweigh the setbacks for the whole transport chain?” he asked. Ports should consider their options, one of which would be to stop allowing alliances calling, Merk asserted. Other options would be to restrict the scope and coverage of alliances, including threshold and relevant market area, no joint bargaining with suppliers, and to allow regulators more active oversight.

“Ports must have a parallel focus on safety, environment, and productivity”

Tino Klemm, *CFO of Hamburg Port Authority*

He also put forward another scenario that would support both ship alliances and port and terminal alliances, through asset sharing agreements between ports and terminals. From a regional perspective ports could develop “leverage vis-à-vis alliances”, he said. But “do not wait for clients to ask for it, because they will not”.

Belbouab believes that regionalisation, as opposed to globalisation, is where the industry has the most scope for development. He said the time these



Courtesy of 30th IAPH Bali 2017: 5050489

Balinese dancing delighted delegates at the conference

regions come to the market could be a competitive advantage and a "key buying factor". He cited Asia as a good example of an intra-region full of potential, noting that "60% of the southeast Asian volumes are purely intra-Asian".

"Digitalisation will change the industry drastically – this will be a challenge and a huge opportunity," said Belbouab. According to Tino Klemm, chief financial officer of Hamburg Port Authority (HPA), "Ports are somewhere between containerisation and digitisation and moving too slowly towards the next stage" and should look to how new digital solutions can be implemented into a port's daily work.

He cited start-ups that bring new ways of working to the supply chain industry, including Google Ventures, Flexport, Freight Hub, and Rocket Internet, which draw on big data and the internet of things (IoT). He also drew attention to HPA's harbor master's division, which uses virtual and augmented reality to visualise traffic through the port. But drawing on this data and using it to be a 'smart port' is only half of the story. "It is time for smart ports to go beyond local borders and connect internationally," he said.

'Chain port' is the concept of thinking 'door to door' as opposed to 'port to port' and was established in April last year by ports from across the globe including in the United States, South Korea, Singapore, and Europe. The idea is to bring together a series of smart ports and create chain ports. Through shared use of intelligent systems and data the chain ports aim is to create a global platform to innovative solutions.

Port of Guangzhou in China is also mindful of the increasing importance of intelligent technologies, and

Benefits all round

"You cannot build a port without impacting the environment," acknowledged René van der Plas, director of Port of Rotterdam International, echoing the views of René Kolman of IADC (see page 20). He agreed that while development projects could bring about benefits for society, they could also benefit nature and the environment.

In the mid-1990s the government of the Netherlands took what van der Plas described as a "visionary step" to improve the port area and its productivity, as well as its social environment.

Since then a 10-year environmental impact study has taken place, the port has been handed over to the Port of Rotterdam to manage under a landlord model, and in 2013 Maasvalakte 2 was operational, according to timetable and within budget.

"In the mid-90s the target market was petrochemicals but later it was decided not to use the area as planned. Plans have to be able handle changes," van der Plas told delegates in Bali.

He identified three lessons learned from Maasvalakte 2:

- Sustainable growth, acknowledging climate change and digitalisation.
- Alignment and engagement with all stakeholders, including governments and community, NGOs, customers, and contractors. "Try to involve stakeholders as early as possible," he said. "We wanted to learn about their interests. It does not cost a lot but will improve the project or it will cost a lot [more] later on."
- Organisation, including strategy, capabilities, quality assurance.

the port's deputy director, Yue Yuan, said she wanted to see technology upgrades to the port to make trade easier for customers. The "internet-plus-port is becoming increasingly important," she said. **RH**



Calais carves out its future

Dredging expert **Bert Visser** met project manager Kurt Levrau and superintendents Sander Franco and Mattias Eysers – all with Jan De Nul Group – to find out how Calais' Port 2015 project will help it keep pace with anticipated demand

Bert Visser: 5047481

Building the breakwater at Port of Calais

Port of Calais' maritime traffic has continued to grow despite the opening of the Channel Tunnel in 1994. Nearly 10 million passengers and 43 million tonnes of goods moved through the port in 2016. At just 42 km from the port of Dover, Calais is the closest continental port to the United Kingdom, making it the main cross-Channel port in terms of traffic.

This cross-Channel traffic is expected to grow by 40% in the near future. If it does, without intervention, port capacity could be fully used by 2020.

The Calais Port 2015 project is intended to address this growth and make the port future-proof. Construction activities started back in July 2016 and are due to be completed in 2021.

The port development is intended to increase Calais' market share for containers, ro-ro traffic, and cruise ships, alongside the ferry traffic for which it is perhaps best known. The port also wants to open up the possibility of new shipping routes, for example between Calais and Felixstowe.

The scope of the project includes the creation of an additional 65 ha of operational land for the port, 45 ha of which will be reclaimed from the sea.

This new land, along with a new ferry terminal on the outside of the existing sea defence wall

and three new ferry slips will be protected by a 3 km-long breakwater, creating an additional 90 ha of navigable port basin. Ferries are at present an average of 213 m long but, in future, vessels of up to 240 m long are expected to berth and will require more space to manoeuvre.

This investment in additional capacity is being supported by several intermodal transfer features to improve integration between rail, road, and sea traffic.

According to a joint press statement from the port and the main players in the development, Calais Port 2015 has been designed to meet requirements for the preservation of local flora and fauna.

"The scheduling, in particular, has been specifically implemented to avoid interventions that disturb fauna during breeding and migration periods, and to preserve nesting areas suitable for birds," according to the statement.

Jan De Nul Group and Sodracco formed a joint venture – Groupement Constructeur – and are carrying out underwater rock work, dredging activities, and land reclamation work. Sous-Groupement Génie Civil (SGGC) has been appointed to carry out rock work above the water level and all activities on land to complete the infrastructure of the new port area, including



**Working nearshore,
self-propelled CSD
Fernão de
Magalhães pumps
sand to the shore**

roads, interchanges, buildings, and cable work.

SGGC consists of several French companies, all belonging to either Bouygues Construction/Colas or to the Spie Batignolles group.

Groupement Constructeur started dredging activities

Regional change

Hauts-de-France, a region in France that was recently formed after 2014 territorial reforms, owns the ports of Calais and Boulogne-sur-Mer. It is a result of the merger of the former regions Nord-Pas-de-Calais and Picardie.

It has entrusted the management, operation, maintenance, and infrastructure/superstructure development for both ports to concession operator Société d'Exploitation des Ports du Détroit (SEPD), also known as Port Boulogne Calais.

SEPD appointed Société des Ports du Détroit (SPD) to finance, realise, and deliver the Calais Port 2015 project.

The Hauts-de-France region includes three main ports: Dunkerque, which, after the French Port Reform of 2007 became a *grand port maritime* (major sea port); the regional ports of Calais; and Boulogne-sur-Mer.

Each has its specific focus and is complementary within the region.

Dunkerque is a large industrial port, handling large ships carrying a variety of cargoes; Boulogne-sur-Mer focuses on the fishing industry; and Calais is the region's main port for ferry and ro-ro services.

with medium-sized cutter suction dredger (CSD) *Hondius*, which moved 800,000m³ of sand by cutting a trench through a sandbar to make way for the breakwater. The sand was reused in land reclamation for the new port area.

Once the trench was completed, the consortium carried out the rock work between September, 2016 and January this year. A supporting embankment was also created using quarry-run stone, which was brought in by split hopper barges.

Then, in March 2017, cutter suction dredgers were brought in to dredge about 3.7 million m³ of material from the seabed and pump it ashore. This not only brought the new harbor basin to its required depth, but also enabled the material to be reused in the reclamation area.

The reclamation requires different strategies for two different areas of the site. At the area closest to the coastline, the presence of a relatively soft layer in the subsoil, consisting of a mix of sand and silt, had to be taken into account. To pressurise this layer and induce settlement, a significant overburden between 2 m and 7 m thick will be applied. It will be thickest where an important interchange will be built.

For the area lying nearest the water, no overburden is necessary but vibro-compaction to densify the applied sand is scheduled. Work on the reclaimed land started in May 2017.

As *Ports & Harbors* went to press, the second phase of rock work – completing the remaining breakwater sections using some 900,000 tonnes of rock – should be taking place. The joint venture's activities on this project are scheduled to take until September 2017.

After that, other joint venture partners will step in to complete the superstructure of the breakwater and the dry infrastructure of the project, and level it at approximately 10 m above chart datum. **PH**





Dredging International: 910957

Dredging insurance laid bare

At the IAPH Legal Committee in Bali the uncertainties around dredging insurance cover were discussed. **Penny Thomas** caught up with Marcus John who attended the event to get clarity on the risks dredging poses to the port authority

There are four different types of insurance about which ports should be aware when carrying out dredging works, according to Marcus John, Australasia managing director of Thomas Miller, which manages TT Club. Many ports believe that general

protection and indemnity (P&I) insurance will suffice when dredging activities take place in a port's domain, but this is not always the case.

The most common type of insurance is liability insurance coverage for ships also known as P&I cover,

Plans based on facts, not feelings

IADC actively promoted the ecosystems services philosophy at the IAPH conference in Bali. The philosophy calls for the benefits the natural world has on humans to be expressed in monetary terms and form part of the business plan. **Penny Thomas** reports

All port infrastructure projects are realised in existing ecosystems. Ecosystem services are the collective benefits of nature on humans. The services delivered by an ecosystem are often not recognised and always taken for granted. International Association of Dredging Companies (IADC) wants to see all impacts on the ecosystem incorporated into the cost-benefit analysis of a project. The monetary value of the globally delivered ecosystem services was USD33trillion in 1996. According to

René Kolman, secretary-general of IADC, very often planners and developers focus on the mitigation and compensation of the negative impacts and forget the positives. A holistic ecosystem services approach contributes to an improved assessment of the impacts of a project. He called for discussions around ecosystem services to be based on arguments and facts, and not gut feelings.

He highlighted the four steps that dredging planners could adopt to incorporate the ecosystem services

**Dredging
International's
cutterhead dredger,
d'Artagnan**

which covers a dredger when it is sailing. All vessels of 500gt or more need P&I cover and dredgers are no exception. If your dredger suffers a collision, damages would be covered under P&I.

But consider if a dredger is carrying out dredging work, noted John, and through its subsea activity, accidentally damages a gas line. In that scenario, P&I would not be sufficient insurance coverage.

John explained to *P&H* that for these types of activities ports need specialist operations coverage, which requires additional premiums. For this the underwriter will make in-depth technical enquiries relevant to the planned works, including environment, tide, activity, and companies involved.

Specialist operations insurance is required for vessels, including cable laying, seismic, offshore support vessels, and construction barges. Activities include dredging, cable laying, pre- and post-lay grapnel runs, stone dumping over exposed cables and pipelines, and the use of seismic streamers on the seabed. .

Professional indemnity (PI) is also relevant as it applies to a mistake that originates at the drawing board by the subcontractor, for example, if the design of a channel in a capital dredging project is wrong and has to be redone. John gave an example, which did not result in a claim, but highlighted the potential pitfalls.

At an Australian port, plans were drawn up for subcontractors to dredge from the main port entrance to the berth – a distance of 25 km. Local environmentalists, however, drove conversation surrounding the planned works, claiming it would damage wildlife.

These concerns were escalated to the local authorities and had to be minimised through the scope of works.

Mitigation plans were put in place at an early stage, with different techniques employed such as hydraulic hammering. Dredged material also had to be disposed in a specially designed bunded area to reduce turbidity. Specific PI insurance had to be drawn up to cover the exact requirement of the project, including protection to the local environment.

The fourth area of risk is covered by general port liability cover and protects ports for liability claims against discrepancies between depths advertised by a port and actual depths following maintenance or capital dredging. If an area is not dredged to the correct depth a ship could touch the bottom or find itself grounded, potentially causing serious damage and delays.

A port's liability to a shipowner for damage to its ship arising in this situation could be passed on to the dredging contractor if it was found to be their fault. Marcus said he worked on a case in New Zealand where a ship touched bottom in the channel and went aground, where water depths were alleged to be less than advertised. The losses that the shipowner sought to recover from the port were in excess of USD20 million.

A lot of ports have a misconception that because they have not had any major claims arising from ship damage they are risk free – a perception that is incorrect. Should such a claim arise it can lead to costly insurance payouts and potentially significant reputational and commercial damage. **PH**

i MORE INFO: www.iaphworldports.org
See chapters on insurance in the recently updated *Introduction to Maritime Law for Port Officials*, found on the IAPH website

philosophy into their projects: step 1, consider the projected changes in habitat and land use before and after a project takes place; step 2, analyse the specific habitats potentially affected by the project in relation to local and international information; step 3, build up a description of the ecosystem services (including biodiversity) during delivery of the project; step 4, carry out qualitative and quantitative assessments, depending on available data on the project's completion.

Kolman considered a 2011 expansion project at Port Botany, Australia, which is described in *Ecosystem services: Towards an integral marine project assessment* – a survey conducted by the University of Antwerp on behalf of IADC. In Bali, Kolman drew attention to not only the 8,000 plus teu increase in capacity, but also the positive impact on local bird populations, increased fish production in nursery areas, an increase in mudflats, saltmarshes, and mangroves, and the impact of rock rubble on fauna. The Demak Ecoshape project (which harnesses the power of natural forces, wherever possible, in the building work), close to Indonesia's

“Often planners and developers focus on the mitigation and compensation of the negative impacts and forget the positives”

René Kolman, *secretary-general of IADC*

Port Semarang, contains all elements for a successful ecosystem services assessment, noted Kolman.

“Get stakeholders involved early,” said Kolman, identifying that as one of the key points in adopting the ecosystem services concept. “It costs more in the beginning, but there are benefits during execution and maintenance.” He added that the positives of ecosystems should be recognised throughout the entire life cycle of the project. **PH**



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Silt weighs heavy on Brazil's prospects

Brazil's port dredging woes are blocking efficiency and limiting its economic growth, reports **Jeb Blount**

Few things better exemplify the inefficiencies choking Brazil's economic potential than the state of its ports. And few things contribute more to those ports' dysfunction than the failure of properly dredging their harbors, shipping channels, and docks.

Brazil may be the seventh-largest economy in the world and a commodities superpower with a broad manufacturing base, but it was placed only 81st out of 138 in the World Economic Forum (WEF) 2016/17 ranking of economic competitiveness. That put it just behind Albania.

Brazil's performance is also the worst among the world's 20 largest economies. In that group, only Iran, at

76th, joins Brazil in the bottom half of the ranking.

The fact that Brazil's port infrastructure is ranked far lower, 114th out of 138 in the same WEF report, is a clear sign of how heavily the country's overloaded, underdeveloped, excessively shallow, and silted-up seaports weigh on Brazil's economic prospects.

Under such circumstances it almost seems a miracle that Brazil is the world's largest exporter of iron ore, sugar, ethanol, coffee, orange juice, beef, chicken, and soybeans, and second-largest exporter of corn.

Brazil's world-beating production costs in farming and mining get eaten up by transport, much of it at the port. Where the United States spends about 8% of gross domestic product on logistics, Brazil's costs are 12%, according to its transport ministry.

"Dredging is not only our most glaring port problem, but perhaps the best example of how our state-dominated port system fails to function properly, putting political goals over economic needs and raising the costs for the whole society," said Wilen Manteli, president of the ABTP, Brazil's association of private port terminal operators.

"This has been a problem for decades and it doesn't seem any closer to getting resolved," he noted.

Brazil has several excellent deepwater ports, such as Rio de Janeiro's port of Sepetiba, and private facilities maintained to high-international standards. Several



Port of Santos offers a maximum draught of 13 m during low tides. Dredging work has been commissioned

private ports run by Brazilian mining giant Vale need little or no dredging to handle the giant Chinamax bulk iron ore carriers, or are maintained to Chinamax standards. But the bulk of Brazilian ports need dredging to increase access for more efficient ships or simply lack maintenance of draughts.

Efforts to dredge Port of Santos, near São Paulo, to a maximum draught of 15 m, capable of handling new-Panamax vessels, has been progressing slowly for more than a decade. However, it has now been going on for so long that some of the new deeper channels are already silting up.

Brazil's government, after more than a year of delay, gave a USD111 million Santos dredging contract to Van Oord of the Netherlands in February, but work is not expected to be complete for two years.

Access to Santos, which is responsible for more than one-quarter of Brazilian cargo by value and is Latin America's most important port, is limited during low tides to ships with a draught of 13 m. The recent grounding of a Chinese grain carrier in a Santos dock is believed to be the result of a leak caused by the ship hitting the bottom when entering the port or as it left its previous Brazilian port.

Port fees collected to expand and maintain access are said to be often used to pay the pensions of non-active workers, reducing access to the port's mix of publicly and privately run facilities.

But even where Santos can handle larger vessels, the limits of other ports, particularly for ships plying the country's important cabotage routes, can force ship operators to only use part of their vessels' capacity for fear they will not be able to enter or leave other ports fully loaded. This drives up costs for producers, consumers, and ship operators.

Manteli, summing up the situation, said, "Brazil's competitiveness is stuck in the mud. **PH**

More pace for privatisation

Brazil port privatisation takes shape and DP World is set to take on Embraport, reports **Rob Ward**

Headway is being made to privatise Brazil's port authorities. In April, the federal government chose Codesa, the port authority of the state of Espírito Santo, as the trial port for the reforms, which will potentially end the system of political patronage that currently defines Brazil's port authorities.

Officials from Programa de Parcerias de Investimentos (PPI), a private-public finance initiative, will work with the Brazilian National Development and Economic Bank (BNDES) to draw up and define the concession model, which will be released within three months.

The federal government said the concession process would be completed before the next round of presidential elections in October 2018.

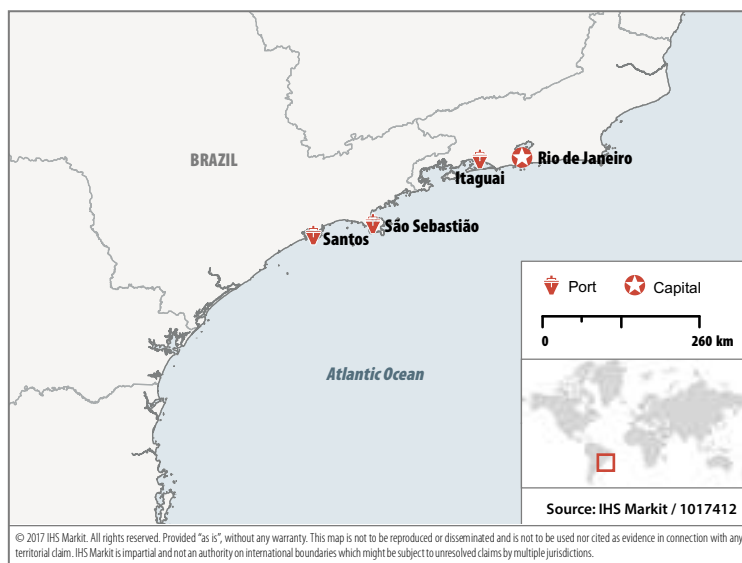
The privatisation effort will decentralise port planning and give more power back to the local port authorities, reversing the policies of the former president, Dilma Rousseff, whose 2013 port law centralised key decision-making powers in the Special Ministry for Ports.

Meanwhile, Dubai-based DP World looks set to take control of the 1.3 million teu capacity Embraport terminal at the port of Santos, which has faced overcapacity for several years.

The Brazilian government announced at the end of May that its competition watchdog had no problem with DP World's purchase of the 66.6% of shares controlled by the Odebrecht corporation in Santos's third-largest container terminal, which handled 664,000 teu in 2016, a decline of 18% on a year earlier. As *P&H* went to press the terms of the deal had not been finalised but, according to a source, it was likely to be completed in early July of this year.

There are six container terminals in Santos, where annual traffic fell 3.4% in 2016 to 3.6 million teu, and the combination of Brazil's economic struggles and the port's overcapacity has caused terminal-handling charges to fall 30%. "I guess now it just depends on price," said the source.

While the terminal has struggled and borrowed heavily since its 2013 opening, it made gains in the first quarter of this year, with traffic rising 4% to 154,300 teu as Embraport and Santos benefited from a surge in exports. Embraport has room to expand to 2 million teu, should more capacity be necessary in the future. **PH**



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An indicator for performance

A study carried out by IAPH Port Operations and Logistics Committee chair Masaharu Shinohara reveals that RTG movements say a lot about a terminal's efficiency

Efficiency and productivity were the watchwords for the IAPH World Ports Conference in Bali and represent a topic that the Port Operations and Logistics Committee has been considering for some time. Two years ago in Hamburg, the committee, chaired by Masaharu Shinohara, executive officer of the Japanese port of Kobe-Osaka, discussed the importance of a set of port performance indicators against which container ports can compare and evaluate their efficiency.

Shinohara, who is tasked with the responsibility of improving port productivity at his own port, picked up the committee chairmanship in 2014 and followed up on the work of his predecessor, who was planning a very broad study on port performance. However, Shinohara decided to run a narrower study, focusing solely on container terminals.

And so it was agreed that a survey would be rolled out among IAPH members. A questionnaire was sent to 47 port authorities. The response was positive, with 18 ports responding, covering 34 terminals. A "very high" response, noted Shinohara, given the proprietary nature of the data requested.

Shinohara told *P&H* that the "severe" level of competition facing container ports these days, increasingly large container vessels, and the arrival of mega-alliances, meant ports had to remain competitive and "meet the demands of shipping lines to increase the terminal productivity of berth moves per hour or crane moves per hour for quick dispatch of container ships.

"It will be valuable information for port authorities and terminal operators to be able to identify their performance against other terminals using these indicators," he added.

In order to make the data as relevant as possible to terminals, Shinohara created two definitions for new indicators: total yard moves and vessel-size coefficient (see box).

Two outcomes from the survey are especially interesting, Shinohara said. The first is the correlation between 'berth container moves per hour' and 'vessel



63.6

Average container moves per berth per hour

size coefficient'. The graph (right, top) shows that larger vessels do not necessarily result in more box moves per hour (BMPH). In fact the data suggest that vessels with a small vessel-size coefficient rating – ie smaller vessels – in some cases score higher.

Shinohara explained to *P&H* that if a vessel is larger, more ship-to-shore (STS) cranes would be allocated to it and thus berth container moves per hour should increase. "But it does not. There are no positive correlations between the vessel size and BMPH."

The second major takeaway was the extent to which the correlation between the number of rubber-tired gantry cranes (RTGs) and the number of yard moves can indicate how efficient a terminal is at moving boxes.

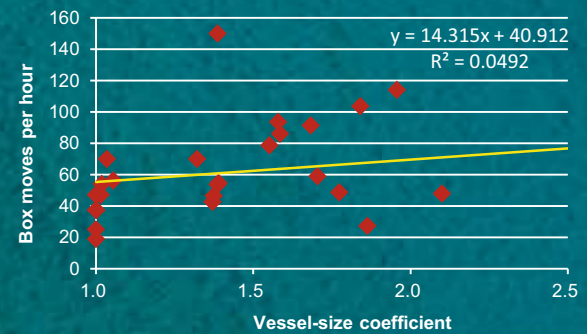
"The correlation coefficient [see lower graph] of $R^2 = 0.9095$ shows very strong positive relationship between these two indicators," said Shinohara. He also noted that "the correlation coefficient between teu throughput and the number of RTGs is much smaller, at 0.8047. This shows that total yard moves (TYM) is a better indicator than teu throughput with regards to yard operations."

The graph also indicates significant differences between ports with a similar number of RTGs. For example, a port can have about 20 RTGs but could move anything between 2 million and 3.5 million boxes a year, representing a different of 1.5 million.

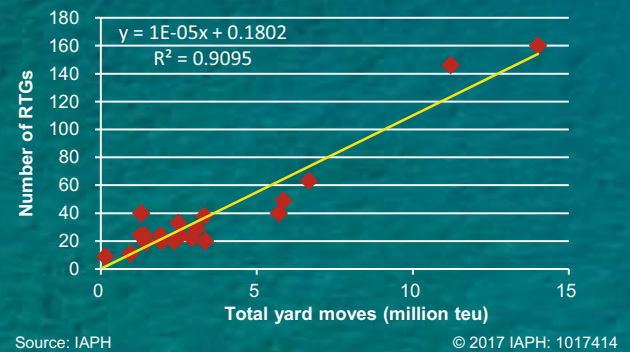
Shinohara was pleased that the study proved that the new TYM indicator better served the purpose of analysing the container terminal productivity, especially in relation to RTG performance. "The very strong positive correlations between terminal yard moves and the number of RTGs speaks for the importance and the usefulness of the TYM indicator."

Given the sensitive nature of the information requested for surveys such as this, Shinohara confirmed that, for the moment, there were no plans to carry out a follow-up study. But he hopes IAPH member ports and terminal operators will

Correlation between vessel-size coefficient and box moves per hour (2015)



Correlation between rubber-tired gantry cranes and total yard moves (2015)



make good use of the data, study the report (found in the IAPH member room on the IAPH website) and "compare their own performances with the anonymous data in the report". [\[8\]](#)

To see the report in full go to: <http://www.iaphworldports.org>

New indicators defined– the theory

Shinohara has created two definitions for new indicators – total yard moves (TYM) and vessel-size coefficient.

With regards to yard moves, cranes such as rubber-tired gantry cranes (RTG), rail-mounted gantry cranes (RMGs), and automated stacking cranes (ASCs) handle loading and unloading of containers, with not only yard chassis but also road trucks.

When thinking of yard equipment moves, it is assumed that:

- One export container move through the port needs three yard equipment moves: lending out empty container, receiving loaded container, loading it on terminal truck.
- One import container move through the port needs three yard equipment moves: receiving loaded container from vessel, loading it on external truck, receiving empty container.
- One transhipped container move through the port needs one yard equipment move: discharging from terminal truck/loading on terminal truck.

And so, TYM is calculated by the following equation:

$$\text{TYM} = \text{throughput (import/export)} \times 3 + \text{throughput (transhipment)} \times 1$$

In order to see how vessel size affects a container terminal's performance,

the vessel-size coefficient is defined and calculated using the following equation:

$$\begin{aligned} \text{Vessel-size coefficient} = & (\text{Rate (\%)} \text{ of vessels smaller than } 3,999 \text{ teu capacity}) \times 1 \\ & + (\text{Rate (\%)} \text{ of vessels between } 4,000 \text{ teu and } 7,999 \text{ teu capacity}) \times 2 \\ & + (\text{Rate (\%)} \text{ of vessels larger than } 8,000 \text{ teu capacity}) \times 3 \end{aligned}$$

For example, if there are many vessels smaller than 3,999 teu, the vessel-size coefficient comes closer to 1. On the contrary, if there are many vessels larger than 8,000 teu capacity, the vessel-size coefficient comes closer to 3.

Chinese investment to facilitate Africa's trade

China's investment in Africa looks secured as it continues to invest in the continent's road, rail, and shipping network, says IHS Markit's **Alisa Strobel**, senior economist for sub-Saharan Africa (Economics and Country Risk)

Getty Images/5049955

The low global commodity price environment brought economic growth in sub-Saharan Africa (SSA) significantly down over the course of the last two years. Real GDP tumbled from 5% in 2014 to 1.3% in 2016. Recent indicators reinforce our expectations of a mild acceleration in the global economy, which will bode well for a moderate economic recovery in the SSA region. IHS Markit forecast SSA real GDP growth to pickup in 2017 to 2.5% with the potential to reach about 4% by 2020. In addition to strengthening external demand in line with rising commodity prices, growth will also be fuelled by a return on both infrastructure investments and sector growth in key areas, such as utilities, communications, IT services, and financial intermediaries. On a regional split, IHS Markit expects, for the near term, East Africa to outperform economic growth followed by West Africa.

South Africa remains the continent's economic giant on a country level despite facing some significant headwinds. Additional SSA countries that are expected to economically outperform in the near term include Côte d'Ivoire, Ethiopia, Ghana, Kenya, Mozambique, Tanzania, and Uganda.

Although the worst is over we continue to see high risk for economic growth in SSA, with these risks fuelled by low commodity prices and slower growth in China. Other identified risks are US policy normalisation (the government raises federal funds rate among other actions), slowing global trade, adverse weather conditions, political instability, as well as further sovereign credit downgrades and declining capital flows.

The region's oil and non-oil commodity resource dependency leaves the current account and fiscal finances vulnerable, while currency depreciation risk remains relatively high. Going forward, the critical element for fostering economic growth is the establishment of adequate infrastructure facilities. However, current public capital spending is too low and domestic finances are lacking to address the region's infrastructure needs for which we see Chinese investments as highly beneficial support.

Chinese Foreign Minister Wang Yi announced on 8 March 2017 at the 12th National People's Congress in Beijing that China's support will not decrease amid a difficult external global environment and faltering of the domestic economy. Wang Yi highlighted during his speech that there is a great Chinese interest in moving China's Africa policy towards deeper co-operation with Africa in modernising the continent's economy. China's Africa policy focus is divided into 10 core areas, including trade and investment facilitation, investing in infrastructure, investing in financial services and renewable energy, and also modernising the agricultural sector whereby supporting poverty reduction. In the past China focused greatly on investing in Africa's extractive sector; currently, China has shifted its investment focus to a broader based, including an increase and emphasis on building the continent's road, rail, and ship network.

Chinese investments in port facilities are estimated to amount about a total of 0.9% of the total bulk of foreign Chinese investment to SSA, excluding construction contracts during 2010–16. This appears to be a relatively



China plans to use the port of Djibouti (pictured) facility as its first overseas base to support military logistics, including anti-piracy operations

small figure at first as past Chinese investment efforts were targeting predominantly the mining sector. Additionally, Chinese port and harbor investments were rather sporadic and concentrated more in West Africa, including countries such as Nigeria, São Tomé and Príncipe, and Togo.

Looking at the last three years of data from the China Global Investment Tracker, Chinese investments and construction contracts in the shipping industry rose on an annual average by 85% in 2015 and slowed to still strong 43% in 2016. These double-digit growth rates suggest a strong accelerating development from a low base in the previous years. Construction contracts value for the shipping industry from 2008 to 2016 witnessed an overall compound annual growth rate of 66%, again coming from a low base. IHS Markit forecasts real construction production levels in the African transport segment to slow down to 1.7% in 2017 before rebounding gradually to 3.9% in 2018, peaking at 4.6% in 2019. China's One Belt, One Road Initiative is an example of Chinese infrastructure and trade facilitation effort on the continent, which is expected to contribute to this infrastructure construction growth.

The One Belt, One Road initiative itself is a development strategy focusing on increasing Chinese presence in Asia and Europe following the ancient Silk Road geographically through the sea. East African countries that are included in the initiative are among others Djibouti, Kenya, and Tanzania. Talks to include Madagascar are also on the agenda. The latest developments on port and road infrastructure on these coastal countries will also have a significant impact on landlocked countries such as Ethiopia, of which about 95% of its trade is handled through Djibouti.

SSA has still one of the lowest levels globally in intra-regional trade with great scope for growth

On 16 January 2017, the president of Djibouti, Ismail Omar Guelleh, formally launched the construction of a project marketed to become Africa's largest free trade zone with Chinese support that covers 48 km². China plans to use its Djibouti facility as its first overseas base to support military logistics, including naval activities such as anti-piracy operations. Djibouti is striving to become a major international port for defence and commercial purposes using its strategic coastal location near the Red Sea and the Gulf of Aden. The importance of regional port hot spots such as the Djibouti facility is increasing as the continent is making headway in fostering regional trade blocks. SSA still has one of the

lowest global levels in intra-regional trade with great scope for growth. Further regional integration leads to the demand for port services in the region will outstrip capacity within the next 10–15 years.

The Lamu Port South-Sudan Ethiopia Transport (LAPSSET) development corridor in East Africa, a major infrastructure project bringing Ethiopia, Kenya, and south Sudan closer in supporting regional trade, is another example of Sino-African co-operation. Lamu Port in Kenya is estimated to cost USD5 billion and dredging began back in October 2016. The first three berths will be financed by the government and the remaining by private sector investors. China Communication Construction Company has been appointed to complete the first three berths, with the first berth projected for completion towards the mid-2018 with a total cost of USD480 million.

Kenya's neighbouring Tanzania is also a beneficiary of Chinese investments in port infrastructure. Furthermore, China is the second largest foreign direct investor in Tanzania, and the country lies along the route of China's One Belt, One Road Initiative. With Chinese support, Bagamoyo Port, north of the capital of Dar es Salaam was supposed to become Tanzania's flagship port and the region's largest. Unfortunately, its construction, with a projected cost of USD10 billion, has for now been temporarily suspended.

Tanzania's president John Magufuli stated that an unspecified number of contracts for infrastructure projects signed under former president Jakaya Kikwete during 2005–15 are "unfair" and begun to fix loopholes in the 2011 Procurement Act to rectify perceived price inflation. President Magufuli will act on the ruling party's demand to prioritise improvements to Dar es Salaam, Mtwara, and Tanga Ports instead, where we mainly see Chinese and Omani companies appointed for construction.

According to IHS Markit Country Risk, a positive indicator for continued development of the current suspended Bagamoyo Port was a USD600 million African Development Bank proposal on 6 March 2017 to renovate roads from Bagamoyo to Mombasa, Kenya.

Growing regional economic integration, which is supported by an expansion of network infrastructure such as rail and road, will be a crucial parameter for economic growth in the near- to-medium term for the African continent. This will also lead to higher demand in accessing port services going forward. Africa's current infrastructure, however, lacks significant progress on this front and requires further foreign investment support.

While investments have scaled down during the last two years amid a weak global economic environment impacting Africa's growth performance, world real GDP growth is now expected to pick up from 2.5% in 2016 to 3.0% in 2017 and 3.2% in 2018. The outlook for capital spending is upbeat, as global businesses respond to strengthening sales, from which Africa will benefit. **PH**

MORE INFO: alisa.strobel@ihsmarkit.com



Engie Zeebrugge conducted its first LNG bunker operation

First operation for Engie LNG bunkering service at Zeebrugge

Engie Zeebrugge, the world's first purpose-built liquefied natural gas (LNG) bunkering vessel, has conducted its first ship-to-ship LNG bunkering operations in the port of Zeebrugge, Belgium.

The vessel delivered LNG as a marine fuel to *Auto Eco* and *Auto Energy* as part of a weekly service. Both vessels are new gas-propelled pure car and truck carriers (PCTCs) belonging to UECC. The LNG bunkering operations and PCTCs' cargo operations were taking place at the same time.

UECC provides short sea roll-on/roll-off (ro/ro) transport in Europe. According to its website, it is the first in the shipping industry to have two dual-fuel LNG PCTCs in its fleet.

Engie Zeebrugge can carry 5,000 m³ of LNG and is jointly owned by Engie, Fluxys, Mitsubishi Corporation, and NYK. The partners also launched 'Gas4Sea' in September 2016, a commercial brand for marketing ship-to-ship LNG bunkering services. Under that brand name, *Engie Zeebrugge* will

service all types of shipping customers in northern Europe.

In a joint statement by Engie, Fluxys, Mitsubishi Corporation, NYK, Port of Zeebrugge, and UECC on 14 June, the parties called the first ship-to-ship bunkering operations a key milestone in the development of the nascent LNG bunkering market.

"The joint efforts of the companies and authorities involved seek to curb carbon and health-impacting emissions in shipping and come in support of the European alternative fuels

strategy for sustainable mobility."

Engie Zeebrugge was delivered in February from Hanjin Heavy Industries & Construction Co Ltd in Busan, South Korea, and arrived in Zeebrugge after a 38-day maiden voyage. It loads LNG at Fluxys' LNG terminal, where the second jetty was recently commissioned and designed to accommodate very small LNG ships.



Notable numbers



650+

Delegates at
IAPH Bali 2017

19

Port authorities
replied to IAPH port
performance study

Proposal to cut carbon emissions

Improving the existing vessel fleet should be considered a means by which shipowners can cut carbon emissions as opposed to being subjected to across-the-board efficiency standards, a group of vessel operator representatives has proposed.

The World Shipping Council (WSC), BIMCO, and the International Parcel Tankers Association (IPTA) submitted the proposal to the IMO for review at the IMO's 71st MEPC (Marine Environment Protection Committee) 71 to be held 3–7 July in London.

The three groups also recommended and proposed that the IMO establish an International Maritime Research Board (IMRB) to fund the research and development of improved marine propulsion systems, electric generation plants, fuels, and ship design, with the goal of making ships more efficient and eliminating or reducing

carbon pollution and increase fuel efficiency at the same time.

"Shipping companies understand and support the need to reduce their carbon footprint. However, shipping operations today are overwhelmingly dependent on the use of fossil fuels," WSC president John Butler said in a statement.

"To reduce carbon emissions for the long haul, new technologies will have to be developed, and the IMO can be a global leader in that effort by including an ambitious research and development programme as a central part of its comprehensive GHG [greenhouse gas] strategy."

That strategy was laid out in October 2016 at MEPC 70 as part of a six-year (2017–23) road map for reducing GHG emissions from ships, with initial goals to be adopted in 2018.

The shipowners' most recent proposal, submitted to the IMO in late April, points out that

some delegates to the IMO have suggested that MEPC develop legally binding, fleet-wide operational efficiency standards. However, WSC, BIMCO, IPTA, and others contend that "it would be extremely difficult if not impossible to develop standards that did not penalise shipowners and operators for variations in fuel consumption that are outside of the ship's control and that are not tied to the ship's inherent design efficiency".

Instead, a proposed 'Existing Fleet Improvement Programme' would establish a system of investments designed to improve the efficiency of the existing fleet as a whole, with the level of investment based on the total fuel consumed by a given ship in a given period.

"It would be necessary to take into account that there are vastly differing levels of consumption among the different sizes of ships, and that for smaller ships

special provisions or more limited improvements may be more appropriate than those that may be undertaken with larger ships," the proposal said.

Efficiency improvements could include propeller upgrades, a reconfigured bulbous bow, advanced hull coatings, and improvements to cargo heating and cooling systems. Investments would be verified by the flag state or its representative.

The shipowner would be allowed to make the upgrades over a reasonable period to accommodate the need to co-ordinate the work with the ship's dry dock schedule and to allow improvements to be carried out in advance with credits applied to future operations.

"Such flexibility provisions would encourage earlier improvements with a subsequent benefit to the environment and to the ship's fuel efficiency," the proposal said.

Astomos Energy to develop LPG bunkers with Statoil

Japan's top liquefied petroleum gas (LPG) importer Astomos Energy has signed a memorandum of understanding (MOU) with Norwegian oil and gas company Statoil to jointly develop LPG as marine fuel.

Astomos Energy, which operates more than 20 very large gas carriers consisting of owned and chartered-in tonnage, intends to develop an alternative fuel

ahead of the IMO implementation of a global sulphur cap in 2020.

The cap limits sulphur content in marine fuels to 0.5%.

Currently, LNG bunkers, distillates, and scrubbers have been frequently discussed as solutions to comply with the sulphur cap.

Astomos Energy, which was formed from the merger of the LPG divisions of Idemitsu Kosan

and Mitsubishi Corporation in 2006, is tapping its expertise in LPG procurement and trading, as well as Statoil's knowledge of blending and refining.

Astomos Energy said, "The LPG bunkering concept was shaped as one of the solutions for the approaching sulphur oxide regulation for shipping fuels in 2020. For the past few years, Astomos and Statoil have been

forming business partnerships in the fields of seaborne LPG trading all around the world. This MOU has made a stronger partnership between the two companies and will contribute to expansion of new business fields."

The company could work with compatriot rivals, such as ENEOS Globe, Gyxis Corporation, and Japan Gas Energy Corporation, to develop LPG as a marine fuel.

8 September Ballast convention enters into force

5,000 m³

Volume of LNG that can be carried by bunker vessel *Engie Zeebrugge*



The industry will spend around USD75 billion to equip their vessels with ballast water treatment systems

Australia ratifies BWMC

Australia has become the latest country to ratify the ballast water management convention when it signed up to the convention on 8 June, three months before it enters into force on 8 September.

Barnaby Joyce, Australia's deputy prime minister and minister for agriculture and water resources, said the government had worked with states and territories, as well as the shipping and maritime industry, including Shipping Australia and Maritime Industries Australia, both of which were integral players in the development of the convention.

"The shipping industry will be required to adopt new, more effective discharge standards in the form of ballast water treatment systems on their vessels within the first few years of the convention being in force," Joyce said in a statement.

Shipping Australia welcomed the decision to ratify the rule, with CEO Rod Nairn saying it brought

Australia in line with global shipping standards, enhancing marine biosecurity in the country's maritime environment.

"The international shipping industry is willing to bear the high cost of installing compliant ballast water treatment systems in order to remove the risk of transferring marine pests through ballast water," Nairn said.

There are estimates that the global maritime industry will spend upwards of USD75 billion on equipping their vessels with ballast water treatment systems. Depending on the size of the vessel, its ballast water capacity, and the type of treatment, estimates show that the cost of implementation of the treatment systems can range from USD500,000 to USD5 million per vessel with 40,000 ships to be equipped. Nairn said the national shipping association expected the reduced risk from implementing the convention would be

recognised by the government through a reduction in international vessel arrival fees for biosecurity compliance.

Joyce said although Australia had regulated the use of ballast water on international vessels arriving in the country's waters since 2001, there was no nationally consistent system for domestic voyages.

"Implementation of the convention in Australia will put these requirements in place to ensure marine pests already established in some parts of Australia are not able to spread to other Australian ports," he said.

He said the ratification of the convention meant that, for most ships, ballast water could not be exchanged within 200 n miles (370 km) of the Great Barrier Reef, as opposed to the current 12 n miles minimal distance.

While Australia and its shipping industry express support for the convention, there is mounting

concern among shipowners trying to retrofit their vessels to comply with the new ballast water regulations.

Dry bulk shipping association INTERCARGO said recently that it was concerned about the practical problems faced by its members trying to retrofit their fleets with the ballast water management systems (BWMS) and would be raising the issues at the forthcoming IMO Marine Environment Protection Committee (MEPC) 71 in July.

The United States has not accepted the convention and has instead adopted its own ballast water regulations in 2012, which has created significant difficulties for the maritime industry. A major issue for the dry bulk shipowners has been the availability of systems approved by the US Coast Guard (USCG). Of the three USCG type approved BWMS available to date, the association said only one system was realistically suitable to bulk carriers for retrofitting.

Bjorn Hojgaard, CEO of Anglo-Eastern Univan Group, said of the 610 vessels managed by the group, 25% had the right ballast water treatment systems installed and he did not expect any disruption when the convention comes into force on 8 September.

"It has been difficult for shipowners to find out how the rules will be enforced, and it hasn't helped that the US has had a different approach to the rules," he said. "But the regulations challenge our industry and move the bar up. The more difficult it becomes to manage ships, the more it requires a proper organisation and scale to do it."

63.6

Average berth moves per hour as recorded in port performance study



4.6%

Forecast real construction production levels in Africa in 2019

Plan ahead for 2020 low sulphur compliance

Compliance with the 2020 sulphur cap will need planning and skills in how to effectively handle all types of fuels, including gas oil and fuel that are borderline compliant, and will need to be developed, said industry commentators.

According to World Fuel Services (WFS), "prudent shipping companies and bunker suppliers

have already been honing their strategies and making their preparations years in advance".

Bunker suppliers' owners will be sourcing low sulphur supplies and developing the necessary skills to handle the new fuels. Shipowners operating in emission control areas (ECAs) will be a step ahead in developing the expertise required to handle the low and

ultra-low sulphur fuels.

Using gas oils could also raise issues in the blending process with a subsequent increase in the use of biofuels blended with the mineral fuel and that could mean more fuels containing fatty acid methyl ester (FAME).

"The new ISO 8217 Final Draft International Standard recognises this with new grades (DFA, DFZ,

and DFB), which allow a FAME content of 7%, while the 'de minimis' tolerance levels for DMA, DMB, and DMZ have been upped from 0.10% to 0.50%. CIMAC [the International Council on Combustion Engines] has said that blends with up to 7% FAME can be used in the same way as conventional marine diesel on board ships," said WFS.

New contracts to aid rapid spill response

Two new contracts developed by Baltic and International Maritime Council (BIMCO) and International Spill Control Organisation (ISCO) should help speed up spill response times, said BIMCO on 15 June, and should "make the task of arranging cleanup services following a spill incident significantly easier to negotiate in an emergency".

Every contractor around the world currently has its own set of terms and conditions, making it difficult and time consuming for someone needing spill response services to distinguish between contractors and conclude an agreement. "Timing is critical for a successful response. To avoid delay, the contract lets the parties sign and mobilise the response while negotiations continue on rates and charges. This means that the contracts can be negotiated in a matter of minutes and personnel and equipment can get to work immediately", Grant Hunter, head of Contracts &



A quick response to oil spills at sea is essential

Clauses at BIMCO, told *P&H*.

One contract is tailored for international use, with the other specifically for use in the United States. A separate spill response contract is needed for the United States because they have a different and more stringent regulatory framework compared with the rest of the world – namely the Oil Pollution Act 1990 (OPA 90), explained Hunter. OPA 90 requires shipowners who are trading to the United States to have in place pre-agreed spill response arrangements with

approved oil spill removal organisations, therefore an emergency contract for spill response is not required, he said. But if a spill occurs and additional resources are required, then shipowners and contractors can use the US version for this purpose, said Hunter.

Tony Paulson of West of England P&I Club, who led the drafting team, commented, "Until now, no single standard contract for the hire of specialised spill response services and equipment has been available. Harmonised

terms and conditions will help speed the process of getting essential spill response equipment on site as soon as possible."

The contracts were written by experts from BIMCO, ISCO, the International Group of P&I Clubs, the International Salvage Union, and the Spill Control Association of America. Other contributors include the International Tanker Owners Pollution Federation and individual contractors.

Hunter said it was important to BIMCO to involve as many of the key stakeholders as possible in the project, because with their buy-in "the contract will most likely achieve good traction in the industry in a short space of time and become familiar and acceptable to the majority of contractors."

"Working with ISCO we have made sure that the basis of the spill contracts is phrased in terms that they are already familiar with – legally and commercially," Hunter told *P&H*.

2.36 mil teu

Transported on rail at Port of Hamburg in 2016

12%

Port of Antwerp plans to move more cargo onto rail by 2030. Much of Hamburg's hinterland links revolve around rail

Award winners announced in Bali

IAPH is delighted to report that 37 entries from its members were submitted across its five awards. The screening process was done by a panel of judges established by and within the IAPH technical committees responsible for administering the awards. The winners were announced and the award ceremony was held on 12 May at the annual general meeting (AGM) during the Bali Conference.



All the award-winning essays and papers are posted on the IAPH website. Go to: www.iaphworldports.org

Akiyama Award

The award is open to young employees of IAPH regular ports in developing countries.



Pramithodha Chiranthaka Halpe, junior manager (Terminal Systems) at Sri Lanka Ports Authority (SLPA) is the winner of this year's Akiyama Award for his paper *Sri Lanka Ports Authority: Moving towards an exemplary green environmental footprint of the South Asian region*.

Halpe's paper is divided into three parts: the first draws on his own experiences and scientific articles as he considers the environmental challenges the industry is currently facing, including noise pollution, oil spills, ballast water, air pollution, and collision between vessel and marine mammals.

Next he considers how SLPA has managed and responded to the port authority's stakeholders' growing awareness of environmental issues. He writes that the "correct moment to involve stakeholders and how to involve them is crucial", and gives practical examples in relation to the Colombo port expansion project.

In the last section, Halpe considers how "going green" has gone hand in hand with improving SLPA's business performance, such as its

double trucking method for inter-terminal trucking. Double trucking requires a truck taking a container from terminal A to terminal B, to return to terminal A, wherever practical, with another container. "This [has] resulted in cost savings, fuel, energy, time, as well as reduced emissions due to trucking," Halpe writes in his paper.

Bali Open Award

The award is open to individual IAPH regular or associate members in any country.



Giyeul Jang, manager (Port Engineering) at Incheon Port Authority, Korea, won this year's Bali Open Award. His paper – *STEP-CAR, Easier and Faster walking down from the Cruise ship* – caught the judging panel's eye.

Incheon has seen an increasing number of cruise ships at its port and the so to make access to the cruise ship more convenient to the passengers it developed the STEP-CAR system. It is a vehicle mounted boarding facility developed especially for the port. Prior to the introduction of the new steps, gangways to the ship were supported by containers which was a time-consuming and costly method.

Jang wrote in his paper that the new access system allows free movement within the berth and can be used on other types of passenger vessels, other than cruise ships.



Courtesy of 30th IAPH Bali 2017: 5049557

Akiyama Award: Martin Byrne, chair of IAPH Communication and Community Relations Committee (judge) and President Santiago Garcia-Milà present the Akiyama Award to Pramithodha Chiranthaka Halpe



Courtesy of 30th IAPH Bali 2017: 5049558

Bali Open Award: Martin Byrne, chair of the IAPH Communication and Community Relations Committee and judge for the Bali Open Award and President Santiago Garcia-Milà hand over the award to Jihye Ha of Incheon Port Authority on behalf of award winner, Giyeul Jang

Port Environment Award

This award is open to any IAPH member – regular or associate – in any country.



Gold

Port of Los Angeles, United States, won the gold plaque in this category for the Clean Air Action Plan (CAAP) it put in place in 2006. The port said in its winning paper that the “far-reaching” strategies put in place under the plan have meant that it has “significantly exceeded its 2014 criteria pollutant emission reduction goals that were developed to assist the region in which it is located to meet USEPA requirements”.

It also noted that many of the activities under the plan “have since been adopted by various regulatory agencies as law and have served as models for ports across the globe”.

The port said that the activities under the plan have not only reduced air pollution and associated health risks, but they have also enabled “port development, job creation, and economic activity to continue.

“The CAAP demonstrates the effectiveness of public-private partnerships to set its ambitious goals for air emission reductions. This partnership must continue as new challenges to reduce harmful greenhouse gas must be faced in the coming years.”

Silver

Bremenports of Germany came second in this category for its paper on the project LUNEPLATE – A unique natural paradise and valuable green port infrastructure.

Bronze

Hamburg Port Authority of Germany won third place with its project *Virtual Depot* in the Port Environment Awards. The project focused on reducing its environmental footprint.



IT Award Gold:

Frédéric Dagnet, chair of the Trade Facilitation and Port Community Systems Committee and judge for the award, presents the Gold plaque to Justine Camoin, who worked on the project, and Dominique Lebreton from MGI

Port Communications Award

This award is open to any IAPH member – regular or associate – in any country.



Gold

Port of Rotterdam Authority, Netherlands, is the winning port for this year for its 12-page tabloid newspaper, *Havenkrant*, or in English, ‘Port newspaper’. *Havenkrant* has a circulation of 530,000, is aimed at all the residents of the Rotterdam port area, and has been published four times a year since 2009. “It’s also available free of charge from several central points in the city,” said the port in its paper. “With the port literally moving steadily away from the residential areas, the purpose of the newspaper is to put the port back on the radar of those living in its vicinity. Initially the newspaper achieves this by promoting the port as an attractive place for both work and recreation.”

The port has carried out independent research that has shown that *Havenkrant* readers “know more about the port and have a more positive attitude towards its developments”.

Silver

India’s Adani Petronet Dahej Port Pvt. Ltd won the silver plaque for its paper *Effective Stakeholder (Community) Engagement – What are the greatest communication challenges your organization has faced when trying to garner support from community stakeholders?*

IT Award

This award is open to any IAPH member – regular or associate – in any country.



Gold

Port of Marseille-Fos and software company **MGI** won the gold awards for its SMART Port 2.0 IT system. The project involved the implementation of a cargo community system (CCS) and port community system (PCS) that not only involved implementation of an IT system that could be shared by multiple stakeholders, but also required a complete “shift in mind to work towards more collaboration and communication in order to improve the port’s competitiveness and productivity”, it said in the winning paper.

It continued, “Today, we are entering a new era for vessels and goods tracking right across the supply chain. Thanks to new technologies vessels and cargo become smart or intelligent and can be tracked wherever it is located in the world. The challenge is how do we integrate and make the best use of these technologies for the maritime transportation?”

Silver

Morocco’s National Ports Agency won the silver plaque for its paper *Safety and Security Management System (SM 25)* and it was received in Bali by Commander M’hammed Atmani representing National Ports Agency, Morocco.

Bronze

Israel Ports Company won the bronze award this year for its paper *Digitalization of containerized dangerous goods declaration process*.

IAPH adopts two business resolutions in Bali

Resolution on “Contribution of ports to the mitigation of climate change and its effects”

Adopted on May 12, 2017 by the IAPH Annual General Meeting of the 30th World Ports Conference in Bali, Indonesia.

RECOGNIZING that the Paris Agreement entered into force on November 4, 2016 that unites all nations in a common cause to undertake ambitious efforts to combat climate change and adapt to its effects;

NOTING that the Marine Environment Protection Committee (MEPC) of the International Maritime Organization at its 70th session in October 2016 has approved the road map for developing a “Comprehensive IMO strategy on reduction of GHG emissions from ships”, which foresees an initial GHG strategy to be adopted in 2018;

NOTING FURTHER that IAPH supported the development of this road map by submission MEPC 70/7/9 and that IAPH will be a co-sponsor for a submission on the level of ambition for the IMO strategy at MEPC at its 71st session in July 2017 submitted by Germany et al (MEPC 71/7/8);

BEING AWARE that;

- 1:** Ports worldwide have a position at the crossroad of the land based and maritime industry;
- 2:** Ports occupy a unique place as key ‘hubs’ in global supply chains,
- 3:** The possible consequences of climate change, such as the rise of sea level and extreme weather conditions may threaten the future of ports and their accessibility;
- 4:** Transport through ports, port operations, and industrial activities at ports contribute to greenhouse gas emission;



IAPH will keep its members up to date on the cyber challenge

5: Ports have many opportunities and a responsibility to contribute to the reduction of greenhouse gas emissions;

6: Measures to reduce greenhouse gas emissions may be effectively combined with measures that reduce emissions of criteria pollutants and operating costs;

7: Developments like renewable energy, low carbon fuels, energy transition, and the circular economy create new markets and possibilities for ports and the maritime industry;

RECALLING that in 2008 the IAPH WORLD PORTS CLIMATE CONFERENCE published the WORLD PORTS CLIMATE DECLARATION;

CONSIDERING that in the light of the developments in Paris in December 2015 and the road map proposed by MEPC, a reconfirmation of responsibility and action with new perspectives for ports might be in place;

IT IS RESOLVED that ports around the world are urged to take their responsibility,

within their respective regional and national conventions and requirements, using amongst others the initiatives of the WPCI program, which are now being redefined and included in the World Ports Sustainability Program, to take action to contribute to the mitigation of climate change and its effects by adaptation measures for port structures and by facilitating the shipping industry and port industry in all possible ways to reduce their greenhouse gas emissions.

Resolution on “Planning cyber security program to reduce cyber risks”

Adopted on May 12 2017 by the IAPH Annual General Meeting of the 30th IAPH World Ports Conference in Bali, Indonesia.

REALIZING that ports are major gateways for international commerce and protecting the confidentiality, integrity, and availability of their data and IT systems are essential to avoid

disruptions not only at local port operations, but also across the global supply chain as a whole;

REALIZING FURTHER that faced with the rapid growth of cyber attacks worldwide, the IAPH, representing the global voice of ports and harbors, considers it essential to raise awareness about cyber risk threats and vulnerabilities and, thus, begin a concerted effort to reduce cyber risks to port data and IT-driven operational systems;

BEING AWARE that some ports already have programs and protocols in place to effectively deal with these threats through, for instance, facilities like Cyber Security Operations Center;

NOTING that installation of such facilities requires a commitment of substantial funds to purchase equipment and, more critically, human capital to pave the way for effective co-ordination and integration with other port IT systems, including port community system, smart port concept, and IoT technologies, etc;

NOTING FURTHER that the IMO, BIMCO, US Coastguard, and other interested parties have published guidelines respectively on the following subjects:

- 1:** Interim Guidelines on Maritime Cyber Risk Management (IMO, MSC.1/Circ.1526, 1 June 2016)
- 2:** Guidelines on Cyber Security on board Ships (BIMCO, CLIA, ICS, INTERCARGO, and INTERTANKO, January 2016)
- 3:** Cyber Strategy (US Coast Guard, June 2015)

IT IS REVOLVED that IAPH will monitor, collect, and disseminate to its members relevant information on cases involving cyber attacks to port facilities as an effort toward keeping ports abreast of cyber-security trends, helping ports ensure safe port operations, and continuing to address cyber-security challenges in consultation with other interested parties in the maritime community and with the IMO.

IAPH welcomes new vice-president to the board

IAPH's new vice-president (VP) for the American central and south region, Dr. Guimara Tuñón Guerra, director general of Ports and Maritime Ancillary Industries at the Panama Maritime Authority, joined the existing IAPH board members on stage for the first time at the World Ports Conference in Bali, Indonesia.

The president and five VPs, including Guerra, were elected and confirmed by members for the 2017–19 term (see below).

Guerra replaces Mauricio Suárez Ramirez, former CEO of Port of Santa Marta, Colombia.

"It is an honour for me to have been elected as vice-president of the America, Central and South region, of such an important organisation like IAPH and to



be able to co-operate with the achievement of the association's objectives and goals, as well as to engage with the new challenges that the world ports industry will face in the upcoming years," said Guerra

(see Open Forum, page 10).

Guerra said that she would serve the association with "enthusiasm and commitment" to create a strong union between "chambers, ports, and maritime organisations" to promote

technical co-operation among ports and to serve as a catalyst and facilitator of new projects beneficial for the development of ports in the South and Central Americas region.

"It is my mission to provide complete support to the president of the association and other region's vice-presidents, in order to create a highly effective strategic partnership in order to strengthen compliance of the new IAPH constitution and to promote adhesion of new ports to this important association.

"Sincerely, I would like to express my gratitude towards you for giving me your vote of confidence and I look forward to meeting and working more closely with you during the next two years."

IAPH board for the 2017–19 term

President – Santiago Garcia-Milà,
Deputy managing director,
Autoritat Portuària de Barcelona, Spain

Vice-president (America, Central and South) – Guimara Tuñón Guerra,
Director general of Ports and Maritime Ancillary Industries, Panama Maritime Authority, Panama

Vice-president (America, North) – Molly Campbell,
Director, Port Department, Port Authority of New York and New Jersey, United States of America

Vice-president (Asia, South/West, East, and Middle East) – Masaharu Shinohara,
Executive officer, Kobe-Osaka International Port Corporation, Japan

Vice-president (Europe) – Peter Mollema,
Senior manager and strategy adviser, Port of Rotterdam Authority, Netherlands

Vice-president (Asia, South East and Oceania) – Martin Byrne,
Chief executive, Port Nelson, New Zealand

The vice-president position for the Africa Region is currently vacant.



The board met prior to the Bali conference opening

Visit Azerbaijan's Port of Baku in 2018

The Port of Baku will be delighted to welcome you to the 2018 IAPH World Ports Conference with the theme 'Ports of future: building hubs, accelerating connectivity'.

The three-day conference, which follows a day of technical

committee meetings, will focus on emerging regional and world transport corridors, the contribution of free trade zones to domestic and neighbouring economies, smart ports, green ports and marine tourism.

The agenda also includes a technical visit to the new Port of Baku in Alat and Alat Free Trade Zone, part of Azerbaijan's grand hub vision.

The conference will be held from 8–11 May and registration is

open. The accompanying persons programme includes a visit to flaming mountain Yanar Dağ, wine tasting, and a master class in pottery.

For more information, go to: www.iaphbaku2018.com.



Members enjoyed traditional Balinese entertainment

IAPH elects new honorary members

Five new honorary members were proposed at the IAPH board meeting on 8 May at the IAPH World Ports Conference in Bali, and then elected by members at the AGM on 12 May. The accolade of honorary member is bestowed on individuals who have given meritorious services to ports administration, development, or IAPH.

Further, they must have been selected to the board, and have severed their ties with IAPH in the last two years, or plan to do so soon. The individuals were proposed and agreed.

The following received their honorary memberships from President Santiago Garcia-Milà at the AGM:

David Padman

Former general manager, Port Klang Authority, Malaysia

For serving as the chair of the Port Environment Committee and as an executive committee member.

Eddy Bruyninckx

Former CEO, Antwerp Port Authority, Belgium

For serving as the chair of the Human Resources Committee and as an executive committee member.

Fer van de Laar

Former managing director of IAPH Europe Office, Netherlands

For serving as the chair of the Port Safety, Environment, and Marine Operations Committee and as IAPH Europe Office managing director. Henri van der Weide of Port of Amsterdam received the award on his behalf.

Garth Cowie

Chief executive, Port of Napier Ltd, New Zealand

For serving as the chair of the Finance Committee.

Wolfgang Hurtienne

Former managing director, Hamburg Port Authority, Germany

For serving as the chair of the Port Planning and Development Committee and as an executive committee member.



Courtesy of 30th IAPH Bali: 5049553



Courtesy of 30th IAPH Bali: 5049552



Courtesy of 30th IAPH Bali: 5049556



Courtesy of 30th IAPH Bali: 5049555



Courtesy of 30th IAPH Bali: 5049554

IAPH president Santiago Garcia-Milà presents honorary memberships to (from left to right) David Padman, Eddy Bruyninckx, Henri van der Weide, Garth Cowie, and Wolfgang Hurtienne

► Women's forum

Winners of IAPH Women's Forum Scholarship announced in Bali

Every two years the IAPH Women's Forum selects two winners from those who applied to the forum's scholarship award scheme. Part of the prize is a paid-for trip to an IAPH event

IAPH has named the two winners of the IAPH Women's Forum Scholarship at its Bali conference in May.

Nitzeira Olivett Watson Stewart, a maritime signalling technician at Panama Maritime Authority, and Ngozi Obikili, assistant general manager for occupational health at Nigerian Ports Authority, have been awarded the funding for 2017–19.

Watson Stewart won the Biennial Training Scholarship of USD15,000 to study a master's course in Maritime Law and Port Management at Polytechnic University of Catalonia in Spain, and to attend the 2019 IAPH Conference in Guangzhou, China. She was chosen from 16 applicants.

She said, "I have a Bachelor's degree in Maritime and Port Administration. As a professional I want to develop my capacities in the industry that actively participates in the international and maritime trade."

When asked how she might support the IAPH Women's Forum in the future, Watson Stewart explained that she would gladly offer free assessments to all members of the IAPH, help to co-ordinate courses in her country using the Panama location favourable to Central America, and ensure other countries could benefit from her knowledge and skills.

Obikili beat eight applicants to win the Annual Meeting Scholarship of up to USD5,000 to travel to the 2018 IAPH Conference in Baku,



Nitzeira Olivett Watson Stewart is this year's winner of the Biennial Training Scholarship

Azerbaijan, and make a presentation at the Women's Forum session.

She said, "To attend the IAPH meeting with this funding will enable me to actualise my aspiration of gaining knowledge and skills, which will empower me to make positive impact in the port industry globally. Funding will enable me to gather the skills required to support IAPH Women's Forum in achieving its set goals and objectives."

Obikili explained that the scholarship



Ngozi Obikili is the winner of the Annual Meeting Scholarship

would also help her gain the exposure she needs to improve her on-the-job performance, which will ultimately impact on port operation globally.

She added, "Funding will grant me the opportunity to network with women from different cultural diversities and perspectives, and share experiences, interaction, and dialogue with a view to problem-solving and formulation of best practices for the port industry."



We value your opinions

Do you have strong views about any of the articles in *Ports & Harbors*?

Are there other industry issues you feel strongly about?

Email your views to ph@iaphworldports.org and we'll be happy to include them

Interested in international port law? Then join the legal committee

The team and the job

The Legal Committee consists of port lawyers from port authorities all over the world.

The focus of the team is on legal subjects, which have impact on the collective interests of ports and are active on global level (IMO, ILO, UNCTAD, etc.).

More precisely the work of the team is as follows:

- Initiate, follow-up, study, and recommend proposed action to be taken on behalf of IAPH concerning any issues in which the collective interests of port authorities are brought into question from the legal point of view.
- Follow and if necessary intervene in international arenas, which produce legal instruments

relevant for IAPH, especially the Legal Committee of IMO.

- Assist other technical committees of IAPH with respect to relevant legal matters and international legal instruments promoted by international organisations.

We are on the hunt for port lawyers with an open mind and orientation to join the team.

What will it involve?

As part of the team you will participate in a once-a-year in-person meeting of the Legal Committee. You will do this by adopting a relevant topic, which will be included in the terms of reference of the committee and will be set every two years.

Next to that you will bring to

the team information on relevant legal developments from your region, which are relevant to share with other ports.

The team also keeps in contact, utilising any other means in place of a physical meeting, especially on questions from other committees and for which support is sought from the legal team.

Who are we looking for?

We are looking for port lawyers who are focused, results driven, and passionate about the worth of working together in an international context on issues of a global level. The right attitude and affinity with relevant subjects is of greater importance than a long-standing legal career.

What do we offer?

We offer direct involvement and engagement to relevant legal topics to make the difference on how these issues are dealt with at an international level. Further the position offers direct access to a great international network of port lawyers all over the world who can function as a collective sparring team.

There are career prospects where the senior ranks of chair and vice-chair of the committee might become vacant in the near future.

More information?

For questions please contact Frans van Zoelen via +31(0)102521495 or fjw.zoelen@portofrotterdam.com

Membership notes

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

Regular members

Port Autonome de Kribi

- Address: P. O. Box 203 Kribi, Cameroon
- Telephone: +237-679424229
- Fax: +237-242653033
- E-mail: pmelom@yahoo.fr
- Website: <http://www.kribiport.cm>
- Representative: Melom Patrice Barthelemy, Director General

Port Authority of Douala (P.A.D.)

- Address: P.O. Box 4020, Douala, Cameroon
- Telephone: +237 33 42 01 33
- Fax: +237 33 42 67 97
- E-mail: pad@portdedouala-cameroun.com
- Website: <http://www.portdedouala-cameroun.com/pad25/site/index.php/en/>
- Representative: Cyrus Ngo'o, General Manager

Associate members

Japan Marine Construction Engineering Association

- Address: 8th Floor YUS Building, 1-3-8 Nihonbashi-Bakurocho Chuo-ku, Tokyo 103-0002, JAPAN
- Telephone: +81-3-5640-2941
- Fax: +81-3-5640-9303
- E-mail: honbu@kaigikyo.jp
- Website: <http://www.kaigikyo.jp>
- Representative: Shigeyuki Yorigami, President
- Nature of Business Activities: Association of companies that specialise in marine construction technology

Proserve Ltd

- Address: Princes Drive, Coventry Road, Kenilworth Warwickshire, CV8 2FD, U.K.
- Telephone: +44 1926 512222
- E-mail: office@proserveltd.co.uk
- Website: <http://www.proserveltd.co.uk>
- Representative: Martin Hawkswood, Director and Principal Engineer
- Nature of Business Activities: Marine Construction Engineers

Updated maritime law guide

An expanded version of the Legal Committee's *Introduction to Maritime Law for Port Officials*, available only to members, is now ready for read and use. Frans van Zoelen, the committee's chair and head of legal at Port of Rotterdam believes the document to be the committee's "jewel in the crown" as it contains a wealth of useful information for port officials, all written in layman's terms.

The document is the culmination of seven years' work aimed at small ports with small or no legal requirements.

Not only has the document been edited, it also contains several new sections:

- Port regulations, by Prof Eric van Hooydonk of Portius
- Ballast Water Convention, by Dr Anthony P Morrison
- The Law of Salvage, by Dr Anthony P Morrison
- Port Related Insurance, by Marcus John of Thomas Miller

"It always felt as a privilege to guide the maintaining and further expanding of the *Introduction to Maritime Law for Port Officials* being a useful and relevant tool for those engaged in the important work of ports and harbors," commented van Zoelen in the preface.

IAPH appoints new managing director

IAPH president Santiago Garcia-Milà announced in May the appointment of Patrick Verhoeven as IAPH managing director – policy and strategy. Verhoeven will begin the role on 1 September 2017.

The managing director – Policy and Strategy will deliver an advocacy function for IAPH, and working closely with the president and board of executive directors (six vice-presidents), will enhance the leadership status and importance of the organisation.

President Milà said, "He has more than 20 years of experience in leading international port and shipping organisations as secretary-general of the Federation of European Private Port Operators (FEPORT), secretary-general of the European Sea Ports Organisation (ESPO), and secretary-general of the European Community Shipowners' Associations (ECSA). He has the required communicative and diplomatic skills and we are convinced that



Patrick Verhoeven joins IAPH on 1 September

he will do a great job for IAPH."

Verhoeven said of his appointment, "I very much look forward to working with old and new friends at IAPH. Moving from a predominantly European to a global community is an exciting prospect. I will do the utmost to ensure that my experience on different sides of the industry will contribute to the positive development of IAPH, its membership, and the wider maritime community."

2017

2018

2019

Dates for your diary

A selection of forthcoming maritime courses and conferences



July

19-27: AAPA Port Security Seminar & Expo Chicago, IL, USA
www.aapa-ports.org

August

1-11: Port Operations Demand Sensing, Deployment & Management, London, U.K.
www.ttpminternational.co.uk

14-25: 'Dry Port' Planning, Operations & Management, London, U.K.
www.ttpminternational.co.uk

September

4-6: Breakbulk Southeast Asia 2017, Kuala Lumpur, Malaysia
www.breakbulk.com/breakbulk-southeast-asia/

4-15: APEC Seminar on Port logistics, Antwerp, Belgium
www.portofantwerp.com/apec

4-15: Strategic Customer Relationship Management in Ports & Maritime, London, U.K.
www.ttpminternational.co.uk

4-27: Seminar on Hazardous Waste Management Delft, Netherlands
www.un-ihe.org/short-courses

5-7: Coasts, Marine Structures, and Breakwaters 2017 Liverpool, U.K.
www.ice-conferences.com/coasts-marine-structures-and-breakwaters-2017/

18-20: JOC Container Trade Europe Conference Hamburg, Germany
events.joc.com

18-21: PIANC-SMART Rivers 2017, Pittsburg, U.S.A.
pianc.sites.usa.gov

19-22: NEVA 2017, St. Petersburg, Russia
www.transtec-neva.com/home/neva/

25-29: ICMA XX 2017, Copenhagen, Denmark
icma2017copenhagen.org/

26-28: Understanding and Complying with the IMDG Code – Safety Courses, Singapore
www.psa-institute.com

Commences 26 Diploma in Terminal Management Distance learning
www.lloydsmaritimeacademy.com



Ulsan Port Authority: 5049877

Ulsan Port's clean and green road map

Jong-Yeol, Kang, CEO of Ulsan Port Authority, a major liquid logistics hub on South Korea's southeast coast, highlights how it is introducing green policies and plans for sustainable growth

“Ports can no longer achieve sustainable growth unless they harmonise with the surrounding environment”

As an industrial trading port, Ulsan Port has been working to boost the national economy since it opened in 1963. Cargo from local industries, such as shipbuilding, petrochemicals, and automobiles helped Ulsan Port achieve a throughput of almost 200 million tonnes in 2016. However, the growing demand for marine leisure and environmental regulations has changed the conventional perception of the port. That is why Ulsan Port Authority (UPA) has established its vision as a 'city-friendly clean & green port', and put in place a series of supporting strategies.

We have adopted the 'three Ps and five Ss' concept. The three Ps stand for proper items, proper quantity, and proper place; and the five Ss stand for sort, systemise, sweep, sanitise, and self-discipline. This is a concept that has been used in the manufacturing industry to improve productivity, safety, and security-efficiency, and Ulsan is the first South Korean port to adopt this way of working.

Other initiatives include:

- Research and development into eco-friendly hopper technology to reduce dust and improve air quality
- Introduction of the international standards

for Energy Management Systems (ISO 50001) – a first for South Korea's ports

- Introduction of Environmental Ship Index to encourage shipping lines to operate eco-friendly vessels
- A more open policy to share our knowledge through specially prepared Port Experience Events, including educational programmes to share our vision for the port with citizens.

We believe that ports can no longer achieve sustainable growth unless they harmonise with the surrounding environment. There are, however, many challenges to creating green policies that integrate successfully into accustomed port industries. To tackle this matter, UPA has established a mid- to long-term road map to implement green port policies through co-operation with port stakeholders.

This road map includes the extensive use of green energy in the port region by 2020; and, the introduction of LNG bunkering systems and electric-powered port equipment to reduce emissions and satisfy international regulations. By 2020, UPA will be the energy logistics hub port in Northeast Asia. **RH**

J. Y. Kang

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