



PORTS & HARBORS

Official Journal of the International Association of Ports and Harbors

All on board

Advantages of a diverse workforce

Adani acquisition

Krishnapatnam port changes hands

On the up

Middle Eastern ports push for business



United front

CLIA head calls for collaboration by the cruise,
port and government sectors



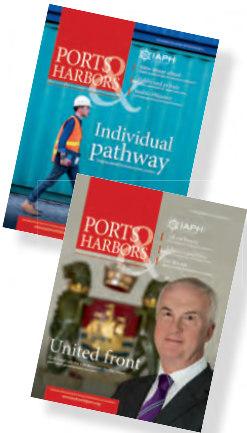
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The cruising and ports sectors must work together with local governments to educate the public about the economic benefits of vessel calls.

Photo: CLIA

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Published bi-monthly by the International Association of Ports and Harbors (IAPH), edited and produced by IHS Maritime & Trade.

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Printed by Warners Midlands plc

The Maltings, Manor Lane, Bourne, Lincolnshire PE10 9PH ISSN 0554-7555



Reinvent yourself

This year, IAPH turns 65. No age for an association that evolves with the changing ports industry

Santiago Garcia-Milà
IAPH President



I wish all our Ports & Harbors readers a very happy and prosperous 2020! This year will be rather special for us as it is the 65th anniversary of IAPH. It was indeed in November 1955 that our founding fathers gathered in Los Angeles to formally establish a world ports organisation.

Interestingly, several months before our first conference, the Oscars were being given out in a ceremony in LA. The big winner that year, with eight Academy Awards, was 'On the Waterfront', the Elia Kazan movie about life on the New York docks, starring Marlon Brando. That classic film shows how different ports were back then. It was still the heyday of conventional cargo and labour-intensive stevedoring operations, which were dangerous, as the movie so well illustrates.

Change was on the horizon though. Trucker Malcom Maclean frequently visited the New York docks and concluded that cargo handling operations could become more efficient and safer if cargo was transported intermodally in a box. In 1955, he bought a shipping company and two years later the first regular container service operated between New York, Florida, and Texas. Several port managers thought at the time that Maclean's innovation was just a novelty that would never catch on. How wrong they were! His container service revolutionised port operations and logistics at large.

Today, we are witnessing another revolution in maritime logistics. This is all about making use of smart containers, ships, vehicles, and other transport systems to create a fully networked supply stream that offers shippers, freight forwarders, port operators, and other stakeholders the necessary visibility to route transport and optimise other logistics tasks.

Amid this technological blaze, we cannot lose sight of the essence. Data collaboration is the essential element in making digitalisation work. It means partners in the supply chain need to trust each other and be willing to share information. Not surprisingly, data collaboration is one of the main themes of this year's World Ports Conference, alongside energy transition, reducing risk, and innovating business in an inclusive and collaborative way.

I look forward to welcoming you to Antwerp on 17–19 March therefore and raise a glass on our common past and future. **PH**

“We’re witnessing another revolution in maritime logistics”

Port updates

► DREDGING WILL CONNECT SIBERIA WITH THE NSR

Russian officials are discussing some big dredging projects on the Ob River to connect the biggest Siberian ports with the Northern Sea Route (NSR).

At a length of 3,650 km, the Ob is the world's seventh-longest river. It flows from southern Siberia to the Gulf of Ob, which is a part of the NSR.

The government of Novosibirsk Oblast is seeking funding from the federal budget for the dredging on the Ob River, Andrey Travnikov, governor of the region, revealed at a press conference in the city of Tomsk, Russia, on 21 November 2019.

"It's important to establish a connection between the Novosibirsk Oblast and northwest Siberia, where cargo carriers are delivering non-metalliferous goods for local oil and gas companies," Travnikov said.

► PORT OF MOSSEL BAY READY TO SERVE OIL & GAS

An extensive maintenance dredging campaign is under way at South Africa's Port of Mossel Bay in anticipation of an increased volume of shipping serving the offshore oil and gas exploration sector. In February 2019, global energy giant Total announced a gas-condensate find with a potential yield of up to 1 billion barrels in its Brulpadda (Afrikaans for bullfrog) deepwater field, 175 km southeast of the port.

"The platform supply vessels [PSVs] used by Total require a specific under keel clearance. That clearance should be sufficient to allow ship's floatability in most unfavourable hydrological and meteorological conditions," said Shadrack Tshikalange, Port of Mossel Bay's port manager.

"Therefore, the quaysides that will be used by the PSVs must be dredged to their maximum depth to allow berthing of such vessels in any condition."



Bremenports/Wolfgang Scheer/5131271

Bremerhaven container port

Bremenports reduces emissions by 70% since 2011

Over the past eight years, the ports of Bremen, Germany, have significantly improved their carbon footprint by reducing emissions by 70%. The ultimate goal is to make the port infrastructure completely CO₂ neutral by the end of 2023. The senator for science and ports, Dr Claudia Schilling, said, "The ports are the engine of the Bremen economy. Every fifth job in the federal state depends on them. So, I'm pleased that we are also succeeding in promoting the ports in terms of climate policy."

In 2009, the port management company, Bremenports, was the first company in the German port landscape to design a sustainability strategy titled Greenports. Since then, an action plan has been drawn up for the sustainable and resource-efficient use of energy. The proportion of renewable electricity increased to more than 90%; in addition, 67 harbor tower lighting pylons were equipped with LED technology.

The Greenports programme is bearing fruit in other areas as well. The dredged material from the ports has been considerably reduced and the Luneplate has created a Europe-wide important nature reserve. Bremenports managing director, Robert Howe, said, "We've already made good progress on the way to the green port. Our strategy has succeeded in bundling efforts for climate protection and sustainability. This now contributes significantly to the positive image of the ports of Bremen."

The current research project, Smart Harbor Application Concept for the Integration of Renewable Energies (SHARC), will also contribute to reducing emissions. Since the beginning of 2019, Bremenports, Siemens AG, the German Research Centre for Artificial Intelligence (DFKI), the TU Berlin, and the Institute for Circular Economy at the University of Bremen, have been working on the renewables project. The

conception phase ends in September 2020. The concrete implementation is planned from 2021 to 2025.

The shipping companies have also been urged to reduce emissions. As an incentive, Bremen has been granting tariff discounts for environmentally friendly vessels since 2012. "The Environmental Ship Index, which allows ships to be assessed for their emissions, has enabled us to do this. Bremen participated in its development 10 years ago. Over the course of the year, 197 discounts were given. Ships fuelled exclusively by liquefied natural gas or methanol can benefit from a separate incentive system; they receive a 20% discount per call," Howe said.

A central issue in the future will be the provision of shore power. Schilling said, "For inland navigation, there are now shore power connections at almost all berths. It is planned to make the use mandatory in future."

Public container entities catch privatisation bug

Since economic liberalisation in the 1990s, India has been able to build ample port capacity through awarding concession contracts. The country is now preparing to relinquish what could be the last remains of public control in container transportation, over land and sea.

After years of debating the issue, the Indian government approved the sale of its entire 63.75% stake in the Shipping Corporation of India (SCI), the national shipping line, in November 2019, and to the pare down of its ownership in the Container Corporation of India (Concor), to 24% from a majority 54.8% at present. Concor, an offshoot of the Indian Railways, controls about 70% of the Indian containerised rail market.

The divestment programme is part of the government efforts to reduce debt and muster the financial resources needed to pull off large-scale infrastructure investments under way and lined up for rollout.

Furthermore, Concor is a strategic investor in two of the country's top container terminals – a 26% stake in APM Terminals' Gateway Terminals India at Jawaharlal Nehru Port Trust (JNPT) and 15% of DP World's International Container Transshipment Terminal (ICTT), also known as Vallarpadam Terminal, at Cochin port.

Given that context and with evolving competitive dynamics of the logistics market amid government prioritisation of road-to-rail conversions for greater port fluidity, Concor could have more allure than SCI for foreign and domestic investors looking to cement their presence in the relatively buoyant Indian market.



DP World Cochin

“The resources unlocked by the strategic disinvestment of these central public sector enterprises would be used to finance the social sector and developmental programmes of the government benefiting the public,” the government said in a statement, announcing the privatisation.

“The unlocked resources would form part of the budget and the usage would come to scrutiny of the public. It is expected that the strategic buyer may bring in new investment for the growth of these companies and may use innovative methods for their development.”

In the absence of any significant expansion plans and being dogged down in the red amid tight market conditions, there had been a lot of speculation about SCI's future. Further, in 2010, the government offloaded a 10% stake in SCI that was to have yielded some USD300 million.

The carrier plunged to negative territory last fiscal year (2018–19),

losing INR62.6 crore (about USD8.7 million) on a consolidated basis, after a positive performance in the prior year, according to the company's earnings statement.

SCI's fleet size is currently pegged at 60 ships, involving a total carrying capacity of 5.4 million deadweight tonnes – mostly tankers and bulk carriers, with just two mid-sized container ships.

In contrast, Concor has been enjoying steady, healthy growth in its market share and profitability. Despite general lacklustre demand, the company reported an 8% increase in freight volume and an impressive 20% gain in net profit in fiscal 2018–19, year over year. When the loss-sustaining public sector undertaking was common in India, Concor closed its very first year of operations on a high note. It posted a pre-tax profit of INR10 million. Concor is also driving growth by venturing into integrated logistics solutions, including coastal shipping.

Port updates

► INDIA'S DIGITAL FREIGHT PLAYERS

As Indian traditional freight forwarders face the impending reality of a more regulated market environment under whirlwind government reform initiatives, homegrown technology-enabled logistics start-ups are aggressively selling their offerings designed around the much-hyped planks of transparency and visibility. Leading that digital shipping race are Shipwaves, Cogoport, FreightBro, and FreightCrate. “Technology is the core of innovation and the only means to devise solutions to all industry-related inefficiencies,” Raghavendran Viswanathan, CEO and co-founder of FreightBro, told *P&H*.

“Given the fragmented nature of the industry, inefficiencies are abundant. For instance, in processing a single sea shipment as many as hundreds of mails are exchanged between numerous parties involved in the process,” Viswanathan said. “These inefficiencies are attractive to problem solvers and thus, technology has a key role to play.” That said, the Indian business culture and mentality are typically conservative and relationship-oriented and, as such, a radical departure from the traditional freight forwarding practice to a digital mode is still away from reaching any sizeable scale, notwithstanding the inexorable tech march into Indian logistics verticals at large.

At the same time, digital brokers are sending out resilient and optimistic sound bites. “The year 2019 has been a witness to an unprecedented shift in the logistics industry as digitisation gained momentum and customer expectations evolved. With technology, we can aim to consolidate the industry into a self-sufficient ecosystem,” Mohammed Zakkiria, co-founder of FreightBro, said.

Port updates

▶ WORK ON SOUTH KOREAN LNG TERMINAL FINISHED

Work has been completed on an LNG terminal in Jeju Island, South Korea, the fifth terminal to be operated by Korea Gas Corporation (KOGAS).

Previously, Jeju was the only metropolitan organisation in South Korea unable to supply natural gas, KOGAS president Chae Hee-bong explained. "We have now started a nationwide natural gas era by constructing an LNG terminal in Jeju Island." The KR₩542.8 billion (USD460 million) construction comprises two 45,000 kL LNG storage tanks and 80 km of gas pipelines. Jeju LNG terminal joins Pyeongtaek, Incheon, Tongyeong, and Samcheok terminals, which are located elsewhere in South Korea, holding a combined 11.47 billion kL of LNG.

▶ DUNDEE GETS METAL RECYCLING PLANT

John Lawrie Metals plans to begin construction on a 8,094 m² metal recycling facility at the port of Dundee, UK, valued at GBP5 million (USD6.5 million), for decommissioning offshore oil and gas projects and metal processing, in January 2020.

The new facility will use equipment to cut large metal structural components into small pieces, so that they can be used in foundries. "We will be able to take all types of metal to be recycled," explained John Lawrie Metals managing director Dave Weston. "We've to make sure it's compliant and there's no contamination in it – if there is, we have to clean that up."



Concentrated solar thermal pilot plant in Antwerp

Port of Antwerp trials solar reflectors on 1,100 m²

The first solar concentrator farm in the European process industry was launched in the Port of Antwerp, Belgium.

Energy company Azteq has installed the solar reflectors for the logistics company Adpo. The installation forms part of a trial project with the support of the Flemish government.

During the past few months, Azteq has installed 1,100 m²

of parabolic reflectors at the site operated by logistics company Antwerp Distribution and Products Operations in Beveren. Adpo will use the heat, generated by sunlight, from the reflectors to generate steam, which will be used to clean and heat containers and tanks.

The installation is expected to replace gas consumption equal to 500 MWh annually.

The installation is the first industrial project for concentrated solar thermal energy (CST) in the whole of Europe.

The reflectors track the movement of the sun to concentrate the sunlight on collector tubes, generating temperatures of up to 400°C.

To enable the heat to be used even at night, Azteq has installed insulated storage tanks.

Queensland's new bauxite terminal

Rocktree Consulting has completed the front-end engineering and design (FEED) on a new floating transshipment terminal for Australia's Bauxite Hills Mine, for the export of Bauxite to China.

The terminal will be used to increase Metro Mining's bauxite exports from 3.5 million tonnes to 6 million tonnes annually by 2021. FEED work comprised the

development of the new terminal using simulation and design software to mimic the operating conditions in the region to maximise efficiency and minimise the need for maintenance. On completion, the terminal will be 100 m long, 30 m wide, and 5.5 m in draught, with a maximum loading capacity of 3,000 tonnes of bauxite per hour. It will be used to load vessels with the help

of a telescopic ship loader and array of transshipment systems, including two heavy duty four-rope grab cranes, and a materials handling conveyor and stacker system comprising two twin large hoppers with feeder belts and conveyors to transport bauxite. It will be assisted by an 8,000 tonnes buffer storage capacity, as well as power generation, workshops, and accommodation.

Seine-Scheldt project works planned for 2020



Entrance to the Dutch Canal Ghent-Terneuzen at the River Scheldt

There will be further development of the long-planned Seine-Scheldt inland waterway project in 2020. Under way intermittently since the 1990s, the project aims to unite a network of 1,100 km of high-gauge inland waterways between the Seine basin and the Scheldt and Maas basins in Belgium. This will enable access for modern river convoys of more than 4,000 tonnes to drive forward the modal shift from road transport towards the waterways.

It will also open a new gateway for the ports of Antwerp, Dunkerque, Ghent, and Le Havre.

Plans for 2020 include territorial planning, environmental authorisation, and towards the end of the year, the start of the main works for a 107 km European Vb gauge, connecting the Oise to the Dunkerque-Scheldt canal, as

part of the Seine-Nord Europe canal from Compiègne to Aubencheul-au-Bac.

The Vb classification will allow ships of about 12 m width and 185 m length to transit the canal.

The project will have 57 million m³ of material dredged and displaced without impacting the traffic of the side canal of the Oise and the Canal du Nord during these works.

Another industry that has traditionally used and relies on inland waterways is the chemical sector. However, 85% of chemical products being transported in France are transported via roads, so the project aims to raise the current 6% rate that makes up the inland waterway transport.

The construction industry will also benefit from the upgraded network. In recent years,

underground projects – such as Crossrail in the UK that used the River Thames for materials transport and the Greater Paris project that used the Seine – made use of rivers to efficiently move sediment without blocking roads. In the spirit of the circular economy, this has led to an increase of immediate reuse of those transported materials within the project. Part of all maintenance and upgrade works includes measures to combat climate change and to create fishways around locks and embankments.

The Seine-Scheldt project is co-ordinated by the Voies navigables de France, the Public Service of Wallonia, and De Vlaamse Waterweg. Further measures have been allocated until 2027. Click here for a detailed timeline.

Port updates

► PARADIP TO SERVE IRON ORE INDUSTRY

India's JSW Infrastructure has commissioned a 370-m long iron ore terminal at the port of Paradip, on India's East Coast, bringing online a capacity of 18 million tonnes per annum (MTPA).

Developed by JSW as part of a 30-year build, operation, and transfer agreement, the new terminal can load iron ore and pellet exports at a rate of up to 100,000 tonnes per day, which JSW claims will decrease waiting times at the port. The installation comprises two ship loaders of 7,000 tonnes per hour, and an 800,000-tonne storage yard width.

"Paradip remains an attractive location for iron ore movement by sea," explained Arun Maheshwari, joint managing director & CEO of JSW Infrastructure. "With the commissioning of this terminal, India can now offer capesize shipments.

"This modern, fully mechanised and environmentally friendly terminal will enable minimal handling loss for our customers with faster turnaround. This will help boost competitiveness of customers as well as Paradip port. This terminal is part of our broader strategy to achieve 200 MTPA cargo handling capacities in next three years. We will achieve our capacity target through a mix of greenfield and brownfield expansions."

► WORK STARTS ON DURBAN'S NEW TERMINAL

Construction has started on the port of Durban's new USD13.5 million passenger terminal to cater to the city's burgeoning cruise industry.

The project is a partnership between Transnet National Ports Authority and the KwaZulu Cruise Terminal consortium – in which MSC Cruises holds a 70% stake with Africa Armada Consortium as the minority partner.

Record fine for open loop scrubber use

The port of Hamburg has imposed a record fine of EUR50,000 (USD55,000) on a Marshall Islands-flagged tanker that breached its open loop scrubber ban. A routine check by the local water police found that the vessel was equipped with an open loop scrubber and had already discharged 2,300 tonnes of wash water in the port. Currently, under the relevant CDNI

convention, the discharge of wash water from such a scrubber into the river Elbe and into the port of Hamburg is banned. Vessels with open loop scrubbers must switch to low-sulphur fuel in these waters. The disposal of closed-loop wash water and solid scrubber waste is possible for a fee at the port reception facilities in Hamburg.



Cerby/Imagem/OpPhoto: 5131728

United front

Tom Boardley, Cruise Lines International Association's secretary-general in Europe, and IAPH managing director Patrick Verhoeven discuss the best ways of balancing and aligning the sometimes disparate interests of cruise lines, ports, and municipalities, reports **Ines Nastali**

Cruise travel has reached unprecedented levels of popularity over the past years, and has evolved from an industry that used to be associated with a more seasoned clientel into a popular to a convenient and affordable way to enjoy a holiday and see parts

of the world that might not be easily accessible by other means of transport. This development has drawn greater attention to the shipping industry, which, as a whole, generally flies under the general public's radar – unless a cargo ship is involved in a major incident and makes newspaper headlines.

"Some people in the cargo sector feel that cruise ships bring unwanted attention to shipping, whereas cargo shipping often seems hidden," Tom Boardley, Cruise Lines International Association's (CLIA) secretary-general in Europe tells *P&H*. "Therefore I feel that within the maritime community, there is a sense that the cruise industry brings this unwanted attention to the environmental performance of ships – which is not as good as, let's say it is, for cars in places like Europe."

Patrick Verhoeven, managing director of IAPH, has overheard similar concerns. "People say things like 'we have to come into town with cleaner cars! Why can this ship call here!' And that's where you get this very controversial discussion between people saying maybe the value-add for cities is not high enough in terms of



“There is a sense that cruising brings unwanted attention to shipping”

Tom Boardley
*Cruise Lines International Association's
secretary-general in Europe*

“Cruise calls are the best way to make people aware of a port.”

Patrick Verhoeven

IAPH managing director, policy and strategy



ECSA 5048774

Cruise ships anchored in the bay of Dubrovnik and Lokrum Island, Croatia

cruise passengers' spending, while the environmental impact on historical cities is much higher.”

Although cruise ships don't require much different or additional infrastructure in ports as compared to cargo vessels, both Boardley and Verhoeven acknowledge that planning for cruise calls is much more complex than for cargo ships as there are more stakeholders involved. Additionally, demonstrating the economic benefits of cruise calls for cities to the local municipality is not as easy as with cargo ships. Many port measure success in terms of tonnage throughput, which is an easy and very tangible indicator of economic impact. Finding an appropriate method of measurement for the economic impact of cruise passenger tourism is harder.

However, Boardley says there are ways to establish cruise passenger spending: “For instance, credit card companies can track spending and provide aggregated data. For a transit call we think that passengers spend between USD90–100. For a vessel in its home port the number can be higher.” These metrics could make for a good way to measure the economic impact.

“There has been some negativity around this topic and the only way to solve this is to work very hard with the local community and the traders, the hoteliers, and try to get them to see the same big picture as that of the cruise lines,” he argues. For example, local businesses should aim to increase the rate of follow-up stays in city after the cruise has come to an end.

“Cruise calls can benefit ports, but only if they're part of a social contract between the cruise line, the port, and wherever the passengers will go – such as the municipality and the surrounding area,” Boardley adds.

A good example of such a social contract is the stance taken by the Croatian port of Dubrovnik, which struggled to balance its growing influx of tourist with efforts to preserve its heritage. The City Government took the lead with cruise lines and established a limit on the number of ships and passengers in port at any given time. This has been a great success in reducing peak congestion and bottlenecks in the city and other ports with similar issues would do well to mimic this co-operative model.

Given that larger cruise ships, and their guests, are not unconditionally welcomed around the world, CLIA is working on improving relationships with stakeholders from different sectors, including those outside maritime. Both maritime veterans agree that the public perception of cruise travel has only shifted in recent years. “Cruise calls are the best way to make people aware that there is a port. Let's take Hamburg: when the first large cruise ships came to call, there was a big party every time,” Verhoeven reminisces.

It is possible that the sight of a mega-cruise ship in port, especially within a city centre landscape, could give the impression that these huge vessels are invasive. Additionally, the environment is a subject that is in the global spotlight a lot more than in the past.

Educating the general public about cruise and port benefits is a work in progress. “What's happening now is that cruise lines, in conjunction with the ports, are hosting open days and allow key stakeholders to visit the ships,” Boardley says, spotlighting Norway as a place where CLIA has successfully engaged local stakeholders.

He believes that cruise lines and ports are dependent on each other for their success. “I see our relationship with ports in Europe as essential because a port is the cruise lines' ambassador, and often it's the ports that can tell of the benefits that the cruise ships bring to the local community.”

Japan and Scotland are examples of destination countries where the cruise lines, ports and local governments are collaborating extensively to reap the extended benefits from cruise calls. Japanese authorities have spent a significant amount of public money connecting vessels with ports in rural areas, which is bringing the dual benefits of enriching the regional economy through tourism and port employment, and also creating a desire to cruise in the local populace.

In Scotland, cruise lines are being welcomed with open arms, particularly in the north of the country, which doesn't ordinarily get many tourists. Once local businesses such as distilleries are added to the official itinerary of a cruise call, they can see demand spike for offerings such as tours or whisky tastings. Boardley explains that having unique experiences and sights for passengers also benefits cruise lines as they constantly strive to remain attractive to passengers.

However, long-term growth for cruise lines and ports hinges on their ability to assuage the concerns of environmentally-aware populations, which are increasingly engaged in public debate on social media.

Verhoeven believes that increasing transparency about industry efforts is important, as is making this information easily accessible. “A lot of people don't even realise that we have a low emission zone in Europe, and soon this will be all over the world. At IAPH, we started a project to measure the emission of ships at berth and we're working on having real-time information that we can share with the local government and we hope to expand that in 2020, hopefully with CLIA,” he says. **PH**



Getty Images/kalig/5131727

Ports champions

Alison Rumsey, Associated British Ports' chief HR officer, discusses the company's commitment to building and growing a diverse workforce in 2020

The UK maritime industry plays a vital role in powering the economy, providing a sea of job opportunities on and offshore. As the biggest ports operator in the UK with a network of 21 ports stretched from Scotland and the Humber to East Anglia, Wales to Southampton and Devon, Associated British Ports (ABP) plays an important role in

keeping the UK trading. That is why we strive to attract the best people who can bring and develop their talent and work with us to help the UK economy prosper.

A vital part of success is championing diversity and inclusion, which is of paramount importance to ABP. We fundamentally believe that organisations are much stronger when

different voices are heard, and alternative points of view are listened to.

As part of a wider push to become a more diverse and inclusive employer, we have been working on improving the gender balance and we are working hard to attract more women into our apprenticeships and graduate training programmes, not just within our organisation, but throughout the entire maritime industry. Our strategy for this is based upon three guiding principles: recruit, respect, and reward.

A great resource available to all employees is the ABP Academy, an internal training centre, which helps equip our people with the right skills to succeed. Over the past 12 months, the academy has welcomed many new apprentices, bringing the total number



‘The UK maritime industry plays a vital role in powering the economy’

Alison Rumsey
Associated British Ports' chief HR officer



ABP 5131694

We are working to establish a strong talent pipeline with our ABP Academy, which underpins ABP's strong learning culture and helps us foster an environment where all colleagues can achieve their full potential so that ABP is a great place to work for everyone.

One example of how ABP has been investing in training is when we launched an enhanced hiring manager recruitment training programme, with an emphasis on how to avoid conscious and unconscious bias. We are planning to extend this programme to include a greater number of colleagues at all levels within our organisation to share valuable techniques of how employees can work to recognise and avoid it.

In 2020, to support our industry colleagues, some of our female employees will be trained to be part of an interviewing pool made up of women working within the maritime industry. This pool is used for smaller companies, within the industry, that have limited or no female interviewers available for when an interview occurs. Please do watch this space as we have also a few exciting things planned for National Apprenticeship Week 2020.

Besides implementing diversity and inclusion initiatives within ABP, we also work with partners in our supply chains, advisers, and government and local authorities to share ideas and achieve a more balanced workforce.

As part of this, we worked with Maritime UK to launch the Women in Maritime Taskforce in September 2018, which currently includes signatures from more than 110 companies, pledging their commitment to achieving greater gender diversity within maritime. In 2020, we are aiming to achieve Charter status for some of our ports to underpin the work they are doing locally on gender diversity.

ABP achieved another important milestone in 2019 during London International Shipping

Week (LISW): we collaborated with the Women in International Shipping and Trade Association (WISTA UK) to organise a reception to promote diversity across the maritime industry. The event celebrated the progress made to date since LISW 2017, when we had partnered on a similar event to promote diversity. The reception had also provided a forum to discuss ways to accelerate this momentum in 2020.

I was proud to give a keynote speech and was grateful to Petra Wilkinson CBE, the deputy director for maritime strategy and programme, and WISTA UK president Sue Terpilowski for joining me in addressing the audience. During the evening, guests also enjoyed the opportunity to see a stand exhibiting the new range of exclusive women's personal protective equipment (PPE), which ABP became the first operator to launch in July 2019.

Anchor Safety, the company that worked with ABP to design and produce the new PPE range, attended the event and were able to answer any questions as well as share advice and best practices with other companies interested in following ABP's example. Launched in Maritime Safety Week in July 2019, the new gear is an important milestone in our efforts to support the role of women in maritime, while also further improving safety standards and choice for its workforce. This new range of specially designed protective clothing is lightweight, includes maternity-focused products, and further improves safety while also promoting greater inclusivity across the business.

Looking back at our achievements, I think we can be proud of the positive changes we have championed. Nevertheless, I believe that there is more work to be done to build a more diverse and inclusive industry in 2020 and beyond. **PH**

across the business to over 60. ABP has seen an increase in the number of female apprentices from 11% in the 2018 intake to 16% in the 2019 intake. These figures indicate we have more work to do, and our apprentices have been involved in a number of engagement activities encouraging females into entering the maritime sector. Moreover, we now have three women members of the executive team, which is a positive step on the journey to making sure women are represented at all levels of the company.

Our goal is to create a great place to work for all employees regardless of gender or background. One of the ways we do this is by emphasising the importance of training and providing resources available to employees through our academy.

Leading the charge

With climate change impacting port operations, projects to reduce the environmental footprint of ports are underway, **Charlie Bartlett** writes

In 2019, a survey of the IAPH membership found that one in five respondents had reported clean-up or out-of-the-ordinary maintenance costs above USD100,000 for their port infrastructure.

Looking into the reasons behind those, more than half of the survey's respondents regarded extreme-weather induced lost-time incidents to be significant or critical.

Indeed, while most envision ports' interactions with climate change as merely a matter of rising

water, those with an interface with the ocean now intrinsically understand that ports will pay for the government inaction in other ways as well.

"Last year, the Navigating a Changing Climate partners identified that a lack of data on the consequences of inaction is a potential barrier to justifying investment in improving climate resilience," Jan Brooke explained, who is the lead survey co-ordinator and representative of The World Association for Waterborne Transport Infrastructure (PIANC), a partner in the survey. She added, "So, we devised this survey in order to gauge just how much impact extreme weather and oceanographic events are having on ports around the world."

Antonis Michail, the IAPH World Ports Sustainability Programme's technical director, added, "The survey also deals with the question about how ports can step up their plans to minimise the impact of these events, and how they can share their experience on how to cope in the aftermath of a specific event."

With an unenviable undertaking ahead of them – and various facilities likely to be tasked with fending off climate refugees in the future – it is no wonder that port operators are taking a lead in making a difference where they can. Since the 2000s, urban ports have made improvements regarding air quality and human health in their immediate surroundings.



Port of Antwerp
uses renewable
energy to power
the port



However, initiatives at reducing carbon dioxide (CO₂) emissions are still relatively new.

Switching from diesel to liquefied natural gas (LNG) for port vehicles is one way to cut emissions, amounting to roughly 20% decrease in CO₂ emissions per vehicle. At APM Terminals (APMT) Barcelona, a diesel-electric straddle carrier is being converted to run on LNG, with the retrofit of two 500 litre LNG tanks and conversion of its engines to run the new fuel. The trial, due to take place in 2020, will decide whether the model is practical enough to be spread across Barcelona's range of straddle carriers. "The engine prototype has been successfully tested at IDIADA's installation," APMT Barcelona announced in a statement. "In the following weeks, this motor will be installed in the straddle carrier, along with sensors and other elements needed."

Last year, Hamburger Hafen und Logistik AG (HHLA) achieved its ambitious aim of reducing emissions on a per-container basis well ahead of schedule, with the original deadline planned for 2020. For operations involving static infrastructure powered by the grid, HHLA uses renewable energy, powering its facilities through industrial waste heat from the nearby sewage disposal facility. It is also developing a battery management system in order to harness solar and wind powers.

Right now the port is embarking on a far more ambitious plan, which will incorporate its mobile infrastructure. "We are now setting new targets. We are working on halving our absolute CO₂ emissions by 2030, compared to the figures from 2018. The aim is to make the entire HHLA Group climate neutral by 2040," said HHLA executive board chair Angela Titzrath.

In a sign of what is to come, the port deployed 25 lithium-ion battery-powered, automated guided vehicles (AGVs) developed by Konecranes in 2018.

“We are working on halving our CO₂ emissions by 2030 compared to 2018”

Angela Titzrath, HHLA executive board chair

HHLA intends to continue introducing the new electric versions until its fleet of 100 AGVs is entirely electrically powered.

The all-electric models can fully recharge in 1.5 hours. Although they require large battery packs, which are easy to accommodate within the cuboid framework of an AGV, they use less energy. Electric motors have an efficiency of more than 90% compared with diesel engines, which waste around two-thirds of the energy they generate as heat.

The new AGVs yield another potential benefit for the surrounding community as well. Recharged using six stations, the vehicles could serve the secondary



purpose of stabilising the local energy grid in their downtime, in a similar fashion to electric cars. Once all of Hamburg's AGVs have been replaced with electrified models, they could theoretically provide 4 MW of electricity to the grid. Though beneficial, HHLA has insisted the upgraded AGVs are entirely secondary to the efficient handling of cargoes, and for the next two years the port will be undertaking a project with virtual power plant modelling company Next Kraftwerke, OFFIS information technology institute in Oldenburg, and Göttingen University to establish how this process could be optimised to benefit the grid without impinging on port operations.

"Capacity utilisation at the terminal determines whether AGV capacities are free. These, in turn, depend on such factors as ship schedules, weather and tide conditions, traffic volume, and loading cycles of the AGVs," said HHLA project manager Boris Wulff in a press release in 2019. "All these parameters would have to be incorporated to develop automated processes, so that predict quite precisely when and for how long AGVs can dock at the electricity filling stations to either deliver or receive electricity – if the energy network requires it."

Wulff later added, "This energy delivery is, of course, not their primary purpose – container transport is. But in less busy times, free AGVs could provide battery capacity as mobile power stores to safeguard grid stability."

In October 2019, the German government gave the go-ahead for a EUR76 million (USD84 million) expansion of shore power supply in the port of Hamburg, which would be used to supply cruise vessels and container ships alike from 2022.

"Expansion of shore-based power supply units in



Port of Rotterdam; 5/13/2015

The Port of Rotterdam signed an MoU for a feasibility study to produce hydrogen by water electrolysis

the port represents a significant and tangible step towards greater climate and environmental protection in Hamburg,” said Hamburg Mayor Peter Tschentscher. “Use of regenerative power from these units will totally eliminate existing CO₂ and pollutant emissions from vessels during lay times.”

Some would call the Hamburg initiative a mere relocation rather than elimination of CO₂ emissions. Germany’s grid energy is still only 35% renewable, and renewables cannot provide enough for purely green shore power. Furthermore power plants, even coal-fired ones, can produce electricity at almost double the efficiency that a small diesel generator can, compounding the CO₂ reduction from Germany’s various renewable sources.

When it comes to air quality and human health, shore power is making a huge difference. The US’ Environmental Protection Agency (EPA) points to the operation of cargo handling equipment at the Ports of Los Angeles and Long Beach as the culprit for an annual contribution of 500 tons of nitrous oxide (NO_x) into the Pacific air basin, despite halving NO_x emissions there since 2005.

Nonetheless progress has been made on reducing sulphur, with a 97% reduction of emissions in port thanks to the North American Emission Control Area zone, which stipulates emissions of less than 0.1% sulphur when calling at US ports, as well as shore power facilities. Particulate matter (PM), too, is down by 85% in the last 15 years.

HHLA’s plan to be carbon-neutral by 2040 is one thing; aiming to be carbon-negative is quite another. That is the goal of the ports of Rotterdam, Antwerp, and North Sea, which aim to capture CO₂, send it along an offshore pipeline to the depleted P18 gas

field off the Netherlands, and store it underground for the rest of time.

Under the CO₂TransPorts project, Rotterdam and Antwerp would be connected by a purpose-built CO₂ pipeline, enabling 10 million tonnes of potential carbon emissions to be mitigated entirely by 2030. Thereafter, the project’s partners will examine the possibility of constructing more pipelines to offset greater quantities of CO₂.

“Of course I would prefer to see investments in renewable energy, but you have to be realistic: as long as we as a society remain dependent on fossil fuels, underground CO₂ storage may be a crucial lever for achieving our climate targets,” said Ghent University professor Mark Saeys in an interview with Belgian newspaper *De Morgen*. He works at the university’s Laboratory for Chemical Technology.

Meanwhile, a much smaller-scale but no less promising trial concluded in France earlier in 2019: The Vasco 2 experiment, at Marseille Fos, tested the feasibility of using CO₂ emissions from the nearby Fos-sur-Mer industrial site to produce viable biomass fuel. Bubbled through growing tanks, CO₂ is used to cultivate algae, which can be dried and converted into synthetic fuels. While the initiative does not stop CO₂ emissions per se, it allows them to be reused, such that – if the industry were scaled up – the synthetic fuel they produce could reduce humanity’s overall consumption of virgin hydrocarbons.

Ports will have an increasingly difficult time maintaining their operations in the coming decades. That said, with an indispensable position in the value chain of almost every industry, they also have strong bargaining power, and are well placed to take the lead in transforming the world economy for the better. **PH**

Hydrogen: Avoiding an unnecessary catastrophe

In April 2019 BP, Nouryon, and the Port of Rotterdam signed a memorandum of understanding for a feasibility study into generating hydrogen via renewably fired water electrolysis instead of fossil fuels, generating 45,000 t of green hydrogen.

“Development of large-scale electrolysers connected to offshore wind farms is vital for making solid progress with the new energy system in order to realise our climate goals,” said Port of Rotterdam CEO Allard Castelein. “This 250 MW electrolyser is a key proof point that Rotterdam has the ability to be a front-runner in the energy transition, which is an important differentiator for the port industry.”

Currently only 2% of hydrogen is generated through electrolysis of water. When powered by renewables, it is inefficient with conversion losses of about 30%, but clean. If hydrogen is to make a positive contribution to

fighting climate change, governments must avoid ring-fencing new renewable energy capacity for its production, since providing power through electricity is much more efficient for offsetting CO₂. Hydrogen is also an attractive amortisation option for wind or solar farms, where surplus power that would otherwise be wasted can be converted into usable hydrogen.

In the last five years, more attention has turned to hydrogen-powered ships. Such a development would necessitate fast construction of port infrastructure altogether more complex than LNG; liquid hydrogen must be stored and handled at almost 100° C colder than LNG and ignites in ambient air.

If that were not complex enough, hydrogen entails an altogether different infrastructure concern. So-called brown hydrogen is refined using natural gas, oil, or coal and makes up the other 98% of all production in

2019. Unfortunately, the steam-reforming process is extremely carbon-intensive; in fact, according to DNV GL’s 2019 *Assessment of Selected Alternative Fuels and Technologies* paper, if a ship were to be fuelled by steam-reformed liquid hydrogen, its well-to-tank carbon footprint would be considerably worse than a heavy fuel oil-fuelled ship, even though its exhaust emissions are completely clean.

Mass adoption of hydrogen as a fuel source could be utterly catastrophic for the environment, worse even than the much-feared RCP8.5 (business as usual) carbon emissions scenario, which relies only on continuing use of coal, oil, and natural gas. The infrastructure for generating hydrogen, therefore, requires greening at an unprecedented pace – orders of magnitude faster than that of overall power generation – to avert disaster.

Major ports roll out LNG bunkers

As the IMO's low sulphur rule kicks in, major ports and refineries step up capacity, **Martina Li** reports

As the International Maritime Organization's 0.5% sulphur cap has entered into force with the beginning of the new year, major ports have made efforts to ensure sufficient availability of low-sulphur fuel oil (LSFO) and other compliant bunkers.

To comply with the sulphur cap, shipowners can choose to burn LSFO, liquified natural gas (LNG), liquefied petroleum gas, or other alternatives such as methanol. Many shipowners are also retrofitting vessels with scrubbers.

The world's largest bunkering port by sales volume, Singapore, has taken the lead to make ample LSFO, which has sulphur content not exceeding 0.5%, available.

In mid-2019, Singapore's Maritime and Port Authority (MPA) listed licensed bunker suppliers of low-sulphur fuels on its website. At the same time, several physical bunker suppliers, such as BP, ExxonMobil, and Shell, indicated that they were prepared to supply LSFO.

For some time, the MPA has been working with the Singapore Shipping Association to prepare for the transition to cleaner fuels, resulting in the publication of guidance booklets and technical advisories relating to scrubbers.

ExxonMobil's vice-president for Asia Pacific fuels business Matt Bergeron said that the US oil major will make LSFO available in Singapore, Hong Kong, and Laem Chabang in Thailand, which he described as three key Asian bunkering centres.

ExxonMobil will also make LSFO available in some European ports, including Antwerp, Genoa, Marseille, and Rotterdam. "While ExxonMobil anticipates that the vast majority of the industry will initially choose low-sulphur fuels, there is no single route to compliance," the company advised.

ExxonMobil's offerings to meet 2020 compliance will include low sulphur distillates, such as marine gas oil (MGO) new low-sulphur fuels, premium emission control area (ECA) fuels, the continued use of high-sulphur fuel oil in conjunction with a scrubber and LNG.

To meet the demands for 0.5% sulphur-compliant fuels and MGO, ExxonMobil has undertaken a USD1 billion upgrade of its Antwerp plant in Belgium and is reviewing a major upgrade in its Singapore and UK refineries. The Singapore refinery is the company's largest, processing 592,000 barrels a day.



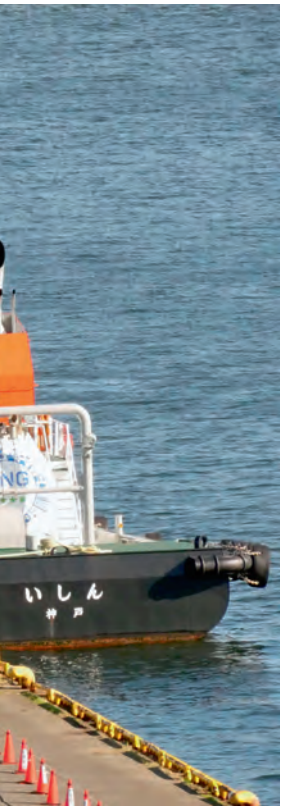
On the other hand, Shell has made very-low-sulphur fuel oil (VLSFO) available in New Orleans, Rotterdam, and Singapore.

Shell's global sales and marketing manager for marine fuels Melissa Williams said, "We are giving customers an opportunity to test the new fuel to become more familiar with how the fuel performs in their vessels. We will work with end users during the trials to assist them in handling VLSFO."

Singapore has initiated efforts to launch LNG-based marine fuels. The MPA and other stakeholders of Maritime Singapore pledged to support the development of LNG bunkering and other alternative marine fuels. Global demand for LNG bunkers is estimated to reach 20–30 million tonnes by 2030, and Shell estimates that LNG bunkers may capture a market share of 20–30% of the marine fuel segment by then.

Registered vessels that are serviced by harbor crafts and are powered by alternative or cleaner marine fuel during their port stay stand to receive a 10% port fee concession under the Maritime Singapore Green Port Programme.

Under the MPA's LNG bunkering pilot scheme, Sinanju Tankers Holdings, a physical bunker supplier, is building an LNG-fuelled bunkering tanker at Keppel Offshore & Marine's shipyard in Nantong, China. On the vessel's delivery in the first quarter of 2020, it will be on long-term timecharter to ExxonMobil, which will use the vessel to deliver LSFO.



Mitsui OSK Lines: S130376

Ishin being bunkered with LNG

Ju Kai Meng, Sinanju's managing director, said, "We are stepping up to promote the use of LNG as a sustainable alternative marine fuel to reduce greenhouse gas emissions, and we encourage more of such bunker tankers to operate in Singapore."

Sinanju has also entered into a ship management tie-up with Japanese shipping group Mitsui OSK Lines to charter another newbuilding LNG bunkering vessel to a business unit of Pavilion Energy, one of two companies licensed to supply LNG bunkers in Singapore.

Through the same MPA scheme, PSA Marine, a subsidiary of Singapore's main port operator PSA International, built and deployed two dual-fuelled tugs that can run on diesel and LNG in August and October 2019.

"The valuable knowledge and hands-on experience on LNG operations will enable us to contribute towards the ongoing industry-wide discussions on LNG bunkering as well as evaluate potential business opportunities in this space," PSA Marine managing director Peter Chew said.

For a start, the MPA has issued LNG bunkering licences to Pavilion Energy, established by Singapore's sovereign wealth fund Temasek Holdings and FuelNG, a joint venture between Keppel Corporation and Shell.

Quah Ley Hoon, who is MPA's chief executive, assured that Singapore is committed to providing a range of bunkering solutions to meet future energy needs of the global shipping industry.

Meantime, Singapore's neighbour Malaysia is upping its game, with its national oil company Petroliaam Nasional (PETRONAS) providing LNG bunkering services at the start of the year. Necessary infrastructure was set up in Pengerang, Johor and Sungai Udang, Malacca. PETRONAS has converted all of its 22 LNG carriers to run on compliant fuels and is upgrading its regasification terminal in Sungai Udang as to perform LNG reloads by the first quarter of 2020.

In Japan, port authorities have been working with ship operators to offer LNG bunkering services.

In February 2019, Yokohama-Kawasaki International Port Corporation, trading group Sumitomo Corporation,

and shipowner Uyeno Transtech formed a joint venture, Ecobunker Shipping, to order an LNG bunkering tanker from shipbuilder Japan Marine United Corporation.

The bunkering tanker will supply LNG within Tokyo Bay and will be Asia's first vessel that can supply LNG fuel and compliant marine fuel oil. Its LNG tank capacity will be 2,500 m³, or equivalent to about 1,500 tons of marine fuel oil, making it possible to supply the LNG needed for a round trip between Asia and North America. The oil tank will have a capacity of 1,500 m³, making it one of the largest for a bunkering vessel operating in Tokyo Bay. The oil tank will be converted to an LNG tank, depending on the demand for LNG bunkers in Tokyo Bay.

In November 2019, MOL collaborated with gas supplier Toho Gas to carry out a test LNG bunkering operation on an LNG-powered tug, *Ishin*, in Nagoya port. The truck-to-ship bunkering operation showed that LNG bunkering could be safely implemented in Nagoya.

MOL said, "Based on the findings of the demonstration test, Toho Gas and MOL will continue working to reduce the environmental impact of the maritime industry by promoting the use of LNG fuel by vessels calling at the Port of Nagoya."

In South Korea, state-backed Korea Gas Corporation (KOGAS), the country's main LNG importer, is spearheading a push towards LNG bunkering. KOGAS has recently built an LNG base in Aewol Port on the resort island of Jeju, facilitating the receipt of LNG transported from Tongyeong port on the mainland. In addition, an LNG bunkering facility is being constructed at Busan New Port. The port of Ulsan, which caters mainly to the refining cluster, is also planning to build LNG bunkering facilities.

An exception to the Asian array of emission reduction measures is Indonesia. The country will allow locally flagged ships to continue burning marine fuel with a maximum sulphur content of 3.5% in domestic waters beyond 2020. This is because of the high cost of cleaner fuel and installing scrubbers. **PH**

Establishing more emission control areas to fight sulphur

Using the 2020 deadline to jump-start emission control measures, China went ahead by implementing ECAs in the Yangtze River Delta, which have been in place since 1 October 2018. A coastal ECA, covering all of China's seaports, was implemented on 1 January 2019. The measures catalysed Chinese state-owned refiner Sinopec to start producing LSFO and the refiner has installed desulphurisation units in some of its coastal refineries. Further measures followed and from

1 July 2019 all ships, except tankers, capable of receiving shore power have been obliged to run on onshore electricity if the vessels are berthed for more than three hours in the coastal ECA.

Determined to fight pollution, China has mandated emission limits that are more stringent than the IMO's. From 1 January 2020, vessels entering inland ECAs – the Yangtze and Xijiang rivers – must use fuel with a sulphur content not exceeding 0.1%. The Ministry of Transport has also stipulated that

from 1 January 2022 vessels must use fuel with a sulphur content not exceeding 0.1% while operating within the Hainan coastal ECA.

Taiwan, from 1 January 2019, imposed a sulphur cap of 0.5% on ships calling at its ports. Taiwanese state-owned refiner CPC Corporation began producing and selling VLSFO in the ports of Kaohsiung, Taichung, Keelung, Suao, and Hualien. Formosa Petrochemical, followed suit in July 2019, producing LSFO for ex-wharf sales from its refining facility in Mailiao.

Boosting the bottom line

Many successful companies regard diversity and inclusion as a source of competitive advantage, writes **Katerina Kerr**

Diversity and inclusion (D&I) initiatives are topping the lists of forward-thinking companies' priorities, and numerous studies on the subject show the self-explanatory reason: companies simply perform better.

While social justice, legal compliance, or maintaining industry-standard employee environment protocols are typically the initial impetus behind these efforts, many successful companies regard D&I as a source of competitive advantage, and specifically as a key enabler of growth.

McKinsey's 2018 *Delivering Through Diversity* report found that corporations that embrace gender diversity on their executive teams were 21% more likely to experience above-average profitability. They also had a 27% likelihood of what the report calls "superior value creation". The research is based on a more extensive data set of more than 1,000 companies covering 12 countries and using two measures of financial performance, profitability and value creation. The former is measured within the average earnings before interest and taxes margin, while the latter is measured as economic profit.

Meanwhile, a recent Boston Consulting Group (BCG) study also suggests that increasing the diversity of leadership teams leads to a better innovation and improved financial performance. It found companies that reported above-average diversity on their management teams also reported innovation revenue that was 19% points higher than that of companies with below-average leadership diversity – 45% of total revenue versus just 26%.

"Specifically, companies need to approach diversity as they would any other business imperative. The CEO must own this agenda and visibly lead it," it is stated in the BCG study.

There has long been anecdotal evidence supporting the idea that diversity fosters innovation and benefits the bottom line. Now there is a data-based case as well. The BCG study surveyed employees at more than 1,700 companies in eight countries across a variety of industries and company sizes. It looked at perceptions of diversity at the management level



across six dimensions – gender, age, nation of origin, career path, industry background, and education.

The analysis produced clear evidence that companies that take the initiative and actively increase the diversity of their management teams – across all dimensions of diversity and with the right enabling factors in place – perform better.

“These companies find unconventional solutions to problems and generate more and better ideas, with a greater likelihood that some of them will become winning products and services in the market,” said BCG. “As a result, they outperform their peers financially.”

The maritime industry is no exception to this development and wanting to benefit from it. Much is being done to draw attention to D&I initiatives in the maritime and port sectors.

Numerous activities in recent years have helped support the message that, for sustainability and success in the modern world, empowering those that are underrepresented makes sense.

Support for this comes from the International Maritime Organization (IMO), which has its own Women in Maritime programme. “Shipping needs diversity in the workforce,” it stated.

The programme supports the empowerment of women in the maritime sector in years to come, through gender-specific fellowships, by facilitating access to high-level technical training for women in the maritime sector in developing countries, by creating the environment in which women are identified and selected for career development opportunities in maritime administrations, ports, and maritime training institutes, and by facilitating the establishment of professional women in maritime associations, particularly in developing countries.

“Gender equality has been recognised as one of the key platforms on which people can build a sustainable future. It’s one of the 17 goals that underpin the UN’s Sustainable Development Agenda, which countries all over the world have pledged to implement,” said IMO secretary-general Kitack Lim.

“Experience tells us that diversity is better; it’s better for teamwork, better for leadership, and better for commercial performance.”

AP Moller Maersk kicked off its focus on gender

targets in 2012 with a strong attention on data analysis. In 2014, the head of D&I was appointed, and a global D&I strategy was initiated.

“Our values have remained the same for decades, they are the foundation of Maersk. However, our approach to D&I has changed over the years,” explained Rachel Osikoya, head of D&I, Maersk.

“When we kicked off our strategy in 2014, the focus was very much at the top of our organisation, how do we increase the number of women at the top five levels and how do we make sure we have a healthy mix of nationalities at those levels? This was reflected in the fact that we set targets for those particular levels. The push was driven from the top, insisting on gender and nationality diverse slates for these levels both internally when it comes to managing talent but also externally when hiring into Maersk.”

Since then, and after seeing progress, Maersk continues to drive its D&I agenda forward with the same amount of focus. “While also gaining a much deeper understanding its internal pipeline of talent, we see that at more junior levels especially for women we need to do more to unlock the talent pipeline,” Osikoya said.

For Maersk, its D&I evolution has meant that it needs to keep its foot on the accelerator in driving gender diversity at all levels and also focus on inclusion, which includes building a culture where all employees have the ability to thrive. This means understanding what keeps employees at Maersk and what engages them, and this is not only targeted at women.

“Our overarching goal is to build a culture where people feel able to speak up, to contribute, and to be the best they can be,” explained Osikoya.

Maersk is now looking at the wider agenda, LGBT+, mental health, parents at Maersk, among others. It believes building an inclusive and engaging culture at Maersk will help the company to attract the very best and diverse talent and retain and develop that talent. “With this type of competitive advantage, we will be much better placed to realise our strategic priorities and transform the company.”


McKinsey notes in a recent study that it is not just gender diversity that brings companies positive results. Companies in the top quartile for ethnic and cultural diversity on executive teams were 33% more

Join IAPH’s mentoring programme

IAPH also supports a diverse workforce. A part of this is the Women in Ports Mentoring Program, which is a specifically designed mentoring software tool. It matches mentors and mentees, provides resources, education, training, and tools to assist mentors with how to mentor, as well as deliver a systematic package to continue to improve the quality of the mentoring relationship, as well as deliver specific and measurable reporting performance indicators.

In the programme, the mentees and mentors will basically all come from IAPH

member ports, however, some mentors from outside of IAPH member ports may come from unique sectors of maritime. For example, recently the programme was opened to members of the International Harbour Masters Association. There are still opportunities for more women in IAPH member ports to join the programme. Further information can be obtained from:

 www.iaphworldports.org/womensforum page or email to womeninportsmentoring@iaphworldports.org

Our approach to D&I has changed over the years

Rachel Osikoya
Head of D&I, Maersk



Maersk: 513040

likely to have industry-leading profitability. This strong relationship suggests that inclusion of highly diverse individuals – and the myriad ways in which diversity exists beyond gender, such as LGBTQ+, age, generation, international experience, can be a key differentiator among companies.

Historically, Maersk has driven its D&I initiatives centrally, but more recently, it has begun taking a regional approach as well as a functional one.

Its D&I strategy outlines five priority points. First, engaging employees in the D&I agenda, by empowering employees to drive the topics they feel the business should address. This is carried out through employee networks across all Maersk business units.

The company is also focussing efforts on building its inclusion capabilities. This is driven at the top of the organisation through workshops and even across the company where it is rolling out e-learning on inclusion and unconscious bias.

It also has a lead-led agenda where it encourages leaders to set out their own priorities for their own business areas or locations and champion the change locally. Another priority point is embedding D&I into people processes. This means that throughout the employee life cycle from attracting talent to developing and retaining talent, D&I must be considered.

Last, driving diversity. Maersk achieves this by establishing global programmes such as its women's development programmes, which to date more than 1,000 women have attended. Each programme is assigned global and functional targets.

"To set our targets, we focus on historical data such as recruitment, promotions, and attrition so we can understand our current rate of progress and then recommend stretch targets to push progression," said Osikoya. In its 2018 sustainability report, Maersk stated that it was not satisfied with its 2018 progress and expected its investments in the agenda would positively impact the results in the future. The current targets are not seen as end points, but as steps along the way.

"We aim to create more micro targets for specific parts of the employee life cycle," it said. These include gender recruitment targets, balanced with hiring the best person for the job, and a target maternity return rate of 90%, which is currently at 73%.

"Attracting females to what is a traditionally male industry is our biggest challenge," said Osikoya.

"Diversity is not just about having more women on teams, but about having an inclusive culture where everyone feels welcome, is treated with respect, receives equal pay for equal work, and is given equal opportunities," said Höegh Autoliners.

"Our industry has not been good enough to market all the opportunities we can offer talented people, and it hasn't done enough to attract a diverse workforce. If the shipping industry doesn't step up the game, other industries will attract the talent we need, and our industry will not succeed to innovate and transform at the speed we need."

But increasing diversity is only one part of a solution to encourage broader equality. A company can build diversity, but if it is unable to retain the talent within the organisation, then it is wasting its energy on any type of diversity strategy.

For port operator Associated British Ports (ABP), several initiatives to encourage women to consider all roles available or future career opportunities are continually taking place. They include working in the local community to increase education, offering work experience placements, hosting school visits and port tours to encourage girls into STEM, and encouraging young women to join its apprenticeship programme. To support these initiatives, ABP introduced diversity workshops to reinforce expected behaviours.

"As well as a series of initiatives that we've chosen to implement ourselves, we will work with our supply chain, advisers, government, and local authority partners to achieve a more balanced workforce," said ABP. "Encouraging diversity and equal opportunity across all levels is not just morally the right thing to do; it's better for business," said the company. D&I is still largely unmapped territory for many businesses. In 2019, ABP announced it had become the first UK port operator to provide employees with an exclusive range of women's personal protective equipment.

The new range of specially designed protective clothing, which also includes maternity-focussed products, is lightweight and improves safety, while also promoting greater inclusivity across the business and encouraging more women to consider a career in maritime. You can read more about ABP's efforts on diversity on page 10.

"In an increasingly dynamic business environment, that kind of turbocharged innovation means that these companies are better able to adapt to changes in customer demand quickly," the report said. BCG said, "For management teams, there are few slam dunks in the business world. This is one of them." **PH**

Adani Ports empire

Krishnapatnam port in India is facing a change of ownership from CVR Group to Adani Ports, writes *Shirish Nadkarni*

Krishnapatnam Port Company (KPCL), arguably India's largest deepwater port in Andhra Pradesh's Nellore district, is being sold by the CVR Group to the Ahmedabad-based Adani Ports and Special Economic Zone (APSEZ), India's largest private port operator. CVR was forced to part with management control due to burgeoning debt.

Adani will pick up a 72% equity stake in KPCL for an estimated INR55 billion (USD770 million). Chinta Sasidhar, managing director of the Hyderabad-headquartered CVR Group (also known as Navayuga Group), holds 28% of the equity in KPCL. It is understood that the present management will continue to run the port's operations and that Sasidhar will continue in his current position.

CVR owns a 90.6% stake in KPCL. It has a highly diversified business portfolio with a turnover of more than USD1 billion and an order book of USD10 billion, with interests in power, steel, construction, port establishment, metro rail, bridges, information technology, exports, and spatial technology and applications.

The remainder of the shares is owned by London-based private equity company 3i Group,

which invested USD161 million in the operator through its India Infrastructure Fund and took a 26% stake in 2009. 3i's stake has, over the past decade, dropped to 9.4%, which is currently valued at INR8.04 billion due to changes in valuation and rupee depreciation.

Moreover, the CVR Group had approached potential investors last year to raise up to INR20 billion in structured debt to buy out 3i's stake. However, legal issues prevented a deal, and relations between CVR and 3i deteriorated further after the group's flagship company, Navayuga Engineering, lost the INR45 billion Polavaram irrigation contract and the Machilipatnam port project.

In 2019 CVR Group got into financial trouble when the Andhra Pradesh state government cancelled the huge Polavaram Hydel power project. This reversal, coupled with the general economic slowdown, hit the group's operations and forced the promoters to look for a buyer for KPCL to bail them out.

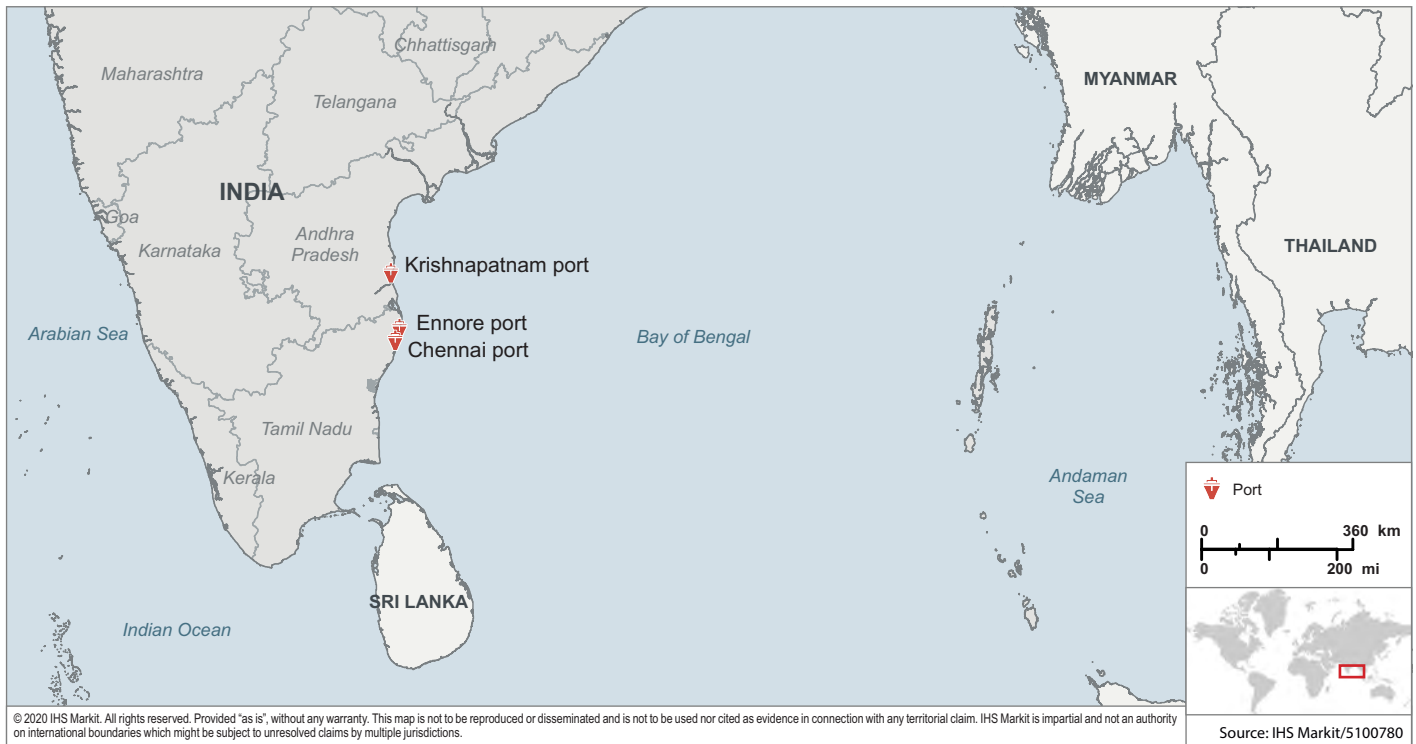
"The APSEZ transaction consideration will mainly go towards settling the bank dues; Krishnapatnam port is burdened with huge debt which has become unsustainable," a person familiar with the deal said, requesting anonymity. "The deal will also give 3i an exit route for its investment over which it has been wrangling with the CVR Group for quite some time."

It is understood that the long-drawn process of due diligence and valuation, which has been ongoing since mid-August 2019, was completed at end-November; and the nitty-gritty of the sale was ironed out in early December.

KPCL started operations in 2008 on the country's largest waterfront area of 161 km². Located about 180km north of Chennai, it is a deep-draught,

KPCL started operations in 2008 on the country's largest waterfront area of 161 km²

KPCL: 5131693



all-weather port with modern facilities, and operates 365 days of the year. It thus has an edge over the century-old Chennai port and the more modern Ennore port, attracting dusty cargo such as coal and iron ore.

The port has a depth of 20.5 m, an alongside draught of 18.5 m that can accommodate fully loaded Capesize vessels of 200,000 tonnes capacity, and a transit storage area of 6,800 acres (27.5 km²).

KPCL was originally owned by the Andhra Pradesh state government but was given to the CVR Group for development and operations on a 30-year build-operate-share-transfer concession beginning September 2004. The contract can, at the request of the concessionaire, be extended to 50 years. The port, which is being built in three phases, currently has a capacity to load 40–45 million tonnes of cargo from 10 berths, including a 1.2 million teu capacity container terminal. Of note, the container terminal handled more than 500,000 teu in the financial year (FY) that ended 31 March 2019. The total amount invested thus far for the development of the first two phases of the port stands at above INR80 billion. (USD1.1 billion)

“The cargo handled by Krishnapatnam in fiscal 2018–19 was three times more than Kakinada port, as our port services a vast hinterland of eastern and northeastern Indian states,” said KPCL’s director and CEO Anil Yendluri.

It is worth noting that regional competitors Kakinada and Chennai handled 18 million tonnes and 53 million tonnes respectively in 2018–19. That said, KPCL had a throughput of 54.4 million tonnes,

including 41 million tonnes of dry cargo. Also, about 55% of the cargo revenue of Indian Railways in the zone came from this port.

KPCL had registered a 7% growth in its transshipment volume last year, in comparison with its performance in 2017–18, making it the largest transshipment port on the east coast of India. The Navayuga Container Terminal (NCT) handled: 118,000 containers in 2015–16, 255,000 teu in 2016–17, 481,000 teu in 2017–18, and 501,000 teu in 2018–19. Its target was to exceed the 65.3 million tonnes of cargo handled by Visakhapatnam, one of India’s 12 major ports, in the ongoing year.

In order to enhance its transshipment service offerings, KPCL had undertaken a 2018 expansion programme for NCT, involving the addition of a 250 m length to the existing 650 m berth and erecting three more quay cranes.

“We had some ambitious plans for Krishnapatnam,” Yendluri said. “We had planned 42 berths with an aggregate capacity of 200 million tonnes per annum; a dedicated container terminal in a 600-acre area, a dedicated liquid bulk terminal, a hub port for coal, agri-commodities and fertilisers, an offshore base set up, and a bunkering facility.”

The CEO further revealed, “In addition, we had planned a liquid cargo terminal, with two dedicated 17.5 m draught liquid cargo handling berths at south port – one for liquefied petroleum and natural gas ships, and the other for petroleum, oil and lubricants, chemicals and specialty chemical ships. We had also budgeted for four single point mooring locations for

very large crude carriers; and a large dedicated roll-on, roll-off car terminal.”

It is against this backdrop that the CVR Group’s move to offer the Adani Group a majority stake in KLCP raised many eyebrows. CVR aggressively pushed for the Adani deal after Andhra Pradesh Chief Minister Y S Jagan Mohan Reddy met Prime Minister Narendra Modi in early August 2019. Reddy had requested the central government to build a port at Ramayapatnam as part of fulfilling the assurances given to the state during bifurcation.

Ramayapatnam port is close to KLCP and a rival port nearby would hurt the latter’s cargo flow and revenues. Given the current economic environment, the centre may not find it attractive to invest government funds in such a risky venture.

“A competitor to Krishnapatnam can adversely impact the profitability and revenues, if not viability, of the port,” said the same anonymous source familiar with the KLCP situation. “Once the Adani Group acquires Krishnapatnam, it is unlikely that Reddy can convince the centre to create a competitor for Adani at either Ramayapatnam or Duggarajapatnam.”

Politics might not be the only reason behind the latest decision of the CVR Group, which had successfully resisted the Adani Group’s overtures for the past couple of years. They could well be divesting, keeping cash flows and have other financial and business interests in mind.

“At present, the port is in a mess, and this could continue till the new management takes over,” a top KPCL official confided on condition of anonymity. “Export and import activities are on at the port, but in a somewhat haphazard manner. Normalcy will return soon, now that the due diligence is over.”

He further explained, “Over the past month, since the due diligence process began in early November, we have been asking our customers and visitors to postpone their trip, since the port does not have a competent authority at the top to grant permission for large groups to enter the port at this point of time.”

Once the deal goes through, APSEZ, which owns the fast-expanding Mundra port on the northwestern

Indian coastline, will become even more powerful in the ports and shipping sectors. KLCP will be APSEZ’s third acquisition on the eastern coast, following the purchase of Dhamra port in 2014 and Kattupalli port in 2016.

APSEZ now has nine strategically located ports and terminals: Mundra, Dahej, Kandla, and Hazira in Gujarat; Mormugao in Goa (these five are on the western coast); Dhamra in Odisha, Visakhapatnam in Andhra Pradesh, Kattupalli and Ennore in Tamil Nadu (these are along the eastern coast). The east coast ports have the capacity to handle a combined 395 million tonnes of cargo, accounting for 24% of India’s aggregate port capacity.

APSEZ is also developing a transshipment port at Vizhinjam in Kerala. It signed a deal in May 2019 to operate a container terminal at Yangon, Myanmar, and is in the home stretch of the process to acquire the heavily debt-laden Dighi port in Maharashtra on the Konkan coast.

The purchase of the Vijay Kalantri-led Dighi port was done under the bankruptcy law after a lenders’ panel approved APSEZ’s bid of USD91 million, which was roughly 78% of the USD432 million debt Dighi owed to a 16-member lending consortium. The consortium is led by Bank of India and Central Bank of India. Adani Ports being the winning bidder spelt relief for the lenders, as the previous bidder, Jawaharlal Nehru Port Trust, had walked away from the deal at the last minute.

For the Adani Group, worth USD13 billion, the KLCP takeover has come less than three months after it snapped up GMR Chhattisgarh Energy’s 1,370 MW plant for USD673 million outside the insolvency process, and within months of the group’s winning the rights to run six airports across the country.

The KLCP deal will help APSEZ’s main promoter Gautam Adani – who is known to be close to Modi – to expedite the group’s vision of handling 400 million tonnes of cargo by 2025, and expanding its market share further.

In FY 2018–19, APSEZ loaded a combined 207.7 million tonnes of cargo, clocking a growth of 15% over the previous financial year. The stand-alone port business earned USD1.2 billion in 2018–19 and a net profit of USD563 million.

In May 2019, APSEZ had unveiled plans to invest USD81 million to further expand the capacity of the jewel in its ports crown, Mundra. “We will pursue both organic and inorganic growth opportunities to achieve our vision,” said APSEZ CEO Karan Adani.

“The way we are progressing and positioning ourselves, we should have no difficulty crossing 400 million tonnes of volumes by 2025. We are looking at close to INR25 billion of capital expenditure every year,” he predicted. “This takes care of the 400 million tonnes, which I talked about, and does not include any acquisitions that we may be planning for. We are continuously on the lookout for stressed assets that are available at discounted rates.” **PH**

Our port services a vast hinterland of eastern and northeastern Indian states

Anil Yendluri
KPCL director and CEO



Shishir Nandanani/5130477

Standing strong

Ports in the Middle East do not let overcapacity issues ruin their growth plans, **Peter Shaw-Smith** reports

Port of Salalah
in Oman



The growing port overcapacity conundrum in the Middle East seems to leave terminal operators there with few options: ride out the storm, mergers and acquisitions, selling out to a major player – DP World being the obvious candidate – or letting assets wither on the vine. Yet it appears that its port operators continue to blithely take a positive medium-term outlook, despite the current US-China trade war, and seem to believe they are the axis around which global container handling revolves.

Neil Davidson, senior analyst, ports and terminals, Drewry Maritime Advisors, takes a more chastened view. In summer, he forecast growth of 5.1% a year over the next five years for the Middle East and South Asia region, noting that within that area, there was a significant contrast.

“South Asia is well above this, at 7.5% a year, and the Middle East is well below, at 3.1% a year. In fact, in our most recent forecast, we have reduced this slightly to around 3% a year for 2018–23,” he said.

News reports in the Saudi Gazette in July said that King Abdullah port, located on the kingdom’s west coast, 120 m north of Jeddah, took delivery of 28 Liebherr cranes as part of a new container terminal expansion. Operator National Container Terminal was said to be assembling the cranes, expected to begin operations in early 2020, bringing the port’s annual capacity to 5 million teu. This amounted to a 25% increase in capacity from the 4 million teu per year announced in 2016. UAE ports, such as Abu Dhabi, continue to be the bellwether location for port activity in the Gulf, with DP World reporting a slight improvement in the third quarter of 2019, after a torrid first half, that reflected the pressures it faces in the Gulf from the rise of Hamad port in Qatar, the loss of cargoes to Iran, such as to Bandar Abbas port, and the pressure coming from Oman, where Sohar and Salalah continue to make inroads into its performance.

In the first half of 2019, DP World’s gross UAE volumes fell to 7.74 million teu, a decrease of 7.4% on the year earlier half. The company claimed an improved performance in the third quarter, with Jebel Ali’s gross volumes stabilising slightly, falling only 1% to 3.56 million teu. Although nine-month gross performance was still lackluster, down 5.5% to 10.72 million teu, this underlines the likelihood that the world’s 11th largest port could once again turn in a sub-15 million teu performance for the full year.

Qatar’s Hamad port (see boxout) continues to perform strongly, reporting an 11% rise in container volumes to 1.11 million teu in the first nine months of the year versus the year earlier. The expectation is that throughput could reach 1.50 million teu in full year 2019.

“Qatar’s major trade partners include China, the United States, Europe, and Japan. The world’s largest shipping companies and other mainline operators now call directly at Hamad port, and many are



King Abdullah Port-5130474

King Abdullah port, Saudi Arabia

expanding their existing routes. New routes include services from China, the Far East, and Bangladesh, and established routes that have expanded include the Far East, India, Pakistan, Oman, and Europe, as well as the Mediterranean,” QTerminals CEO Neville Bissett said.

Natural disaster is another cause that braces throughput, apart from trade wars. Salalah port continues to recover from the effects of Cyclone Mekunu, which struck the south coast in May 2018, causing a drop in volumes for the year to 3.39 million teu. As a result, throughput was 3 million teu for the first nine months of the year, up 17% on the year earlier. Port of Salalah cited the “strong support from one of our major customers despite the very challenging business environment”, without specifying the line’s identity, for the improved performance.

Also in Oman, port of Duqm’s container facility was expected to start full operations in late 2019, with a handling capacity of 1.5 million teu, along with intermodal capabilities for cost-effective transportation.

“Dry bulk handling capacity is expected to be expanded substantially in line with future requirements

in the phase two area of the port. The port’s first major customer is expected to be the upcoming Oman Oil Refinery with a capacity of 230,000 barrels per day. Further, the port shall offer heavy fuel oil and marine diesel oil bunkering services from various bunker service companies,” it said.

Earlier in 2019, the port received Duqm Refineries’ first containerised cargo, shipped by Korean container line Hyundai Merchants Marine and Oman Shipping Lines. “The container terminal at the port of Duqm has a total capacity up to 200,000 teu and fully ready to serve the Duqm projects and its hinterland. Port of Duqm will accommodate all imports for the Duqm Refinery project during its construction that will take approximately 36 months till completion,” it said.

To strengthen business, mergers are on the cards. In January 2019, the Saudi Ports Authority (Mawani) and Saudi Industrial Services (SISCO) subsidiary Red Sea Gateway Terminal (RSGT), signed a memorandum of understanding to acquire the neighbouring North Terminal Container, currently operated and managed by Gulftainer subsidiary, Gulf Stevedoring Contracting Company (GSCCO), once its concession expires in January 2020. RSGT has set its sights on using its gateway power to steal transshipment volumes from King Abdullah port, located 120 km to the north.

“Merging of both RSGT and North Container Terminal will create the largest container terminal operator in the country and enable Jeddah Islamic Port to become a key enabler for the kingdom’s objectives; to become a

UAE ports, such as Abu Dhabi, continue to be the bellwether location for port activity in the Gulf

Qatar's major trade partners include China, the US, Europe, and Japan

Neville Bissett, CEO of QTerminals

key logistics hub in international trade," SISCO said.

"This will also provide seamless operations and capability to ever increasing shipping alliances and their mega vessels in one location dealing with a single terminal operator instead of forcing them to split their services with multiple operators, costing them time, money, and loss of efficiency. The negotiations for the binding terms and a new concession terms are currently ongoing between Mawani and RSGT."

In response, GSCCO announced plans to manage and operate King Fahad Industrial Port (KFIP) in Yanbu in June. Current infrastructure at KFIP allows the handling of vessels up to 8,000 teu in size, P&H understands. However, Yanbu's high petrochemicals output should lead to expansion of facilities at the port, enabling larger vessel calls. In addition to containers, GSCCO expects to handle ro-ro, breakbulk, and bulk cargoes.

Two ports outside the Gulf, but which belong to the Middle East and North Africa region, also hold out great promise, but are still in the early stages of development. Morocco's Tanger Med facility has within the space of a decade become a world-class facility, allowing one operator, APM Terminals, to switch loading and unloading of boxes between it and Algeciras at will. But the port will have to add just over 1 million teu of throughput in 2019 if it is to reach even 50% utilisation.

"With a total capacity of 9 million containers and connected to more than 180 ports worldwide and 70 countries, Tanger Med is now the reference hub in the Mediterranean, serving the competitiveness

of African logistics corridors," the port's October 2019 newsletter said. Egypt's Port Said facility has suffered the consequences of a successful move by China's China Ocean Shipping Group Company into Piraeus in Greece, which led to the diversion of a good deal of transshipment away from the complexities and costs of operating within the Egyptian setting.

Operator of Suez Canal Container Terminal (SCCT), APM Terminals, said that the Egyptian government had responded to the need to reduce liner costs when making calls at the facility. "Port tariffs were relaxed in November 2018, but SCCT is currently working closely with the Egyptian government to achieve further incentives that would restore the terminal's competitiveness in the region and attract higher volumes," APM Terminals said.

"Around 95% of SCCT's traffic is currently made up of transshipment volumes. Located at the northern entrance of the Suez Canal, SCCT is the best transshipment hub for ships moving from Southeast Asia to the Mediterranean and Europe, as well as serving feeder lines in the Mediterranean and the Egyptian market. The terminal's strategic location provides lower bunker costs for shipping lines calling at SCCT, compared to others in the region."

With regard to the capacity overhang in the Middle East, Davidson concludes that regional port assets need to be looked at on a case-by-case basis, with a focus on the ports and terminals that had the biggest issues in this respect, and their ownership status.

"If they are state-owned and -backed, then they are unlikely to change. The parent, assuming it's wealthy, as most Middle East nations are, will likely keep it going despite low utilisation, as these facilities are regarded as a national asset, and closure would mean loss of face too. If it's privately owned, it may be a different story, but even then, a severely under-utilised asset is going to be a hard thing to sell – who would want it?" PH

Boycott effect

With the visit of the Qatari foreign minister, Sheikh Mohammed bin Abdulrahman Al Thani, to Saudi Arabia in October 2019, expectations were growing in the Gulf Cooperation Council (GCC) region that an end to the boycott of Qatar by Saudi Arabia, the UAE, Bahrain, and Egypt could be in sight. However, if the boycott is lifted, much in the region will be changed irrevocably. Ports and shipping are two of the areas where a return to the status quo ante is unlikely.

Hamad port should clear the 1.5 million teu mark for 2019, and anything in excess of that figure would put it in a position to challenge for a ranking in the region's top 10 ports as early as 2020. The facility has established itself as a viable transshipment alternative to Khalifa bin Salman port (KBSP) in Bahrain, which saw volumes fall 7.8% to just

under 204,000 teu in the first half of 2019. KBSP's transshipment ambitions also cratered, falling 80% off a negligible base, also in the first half.

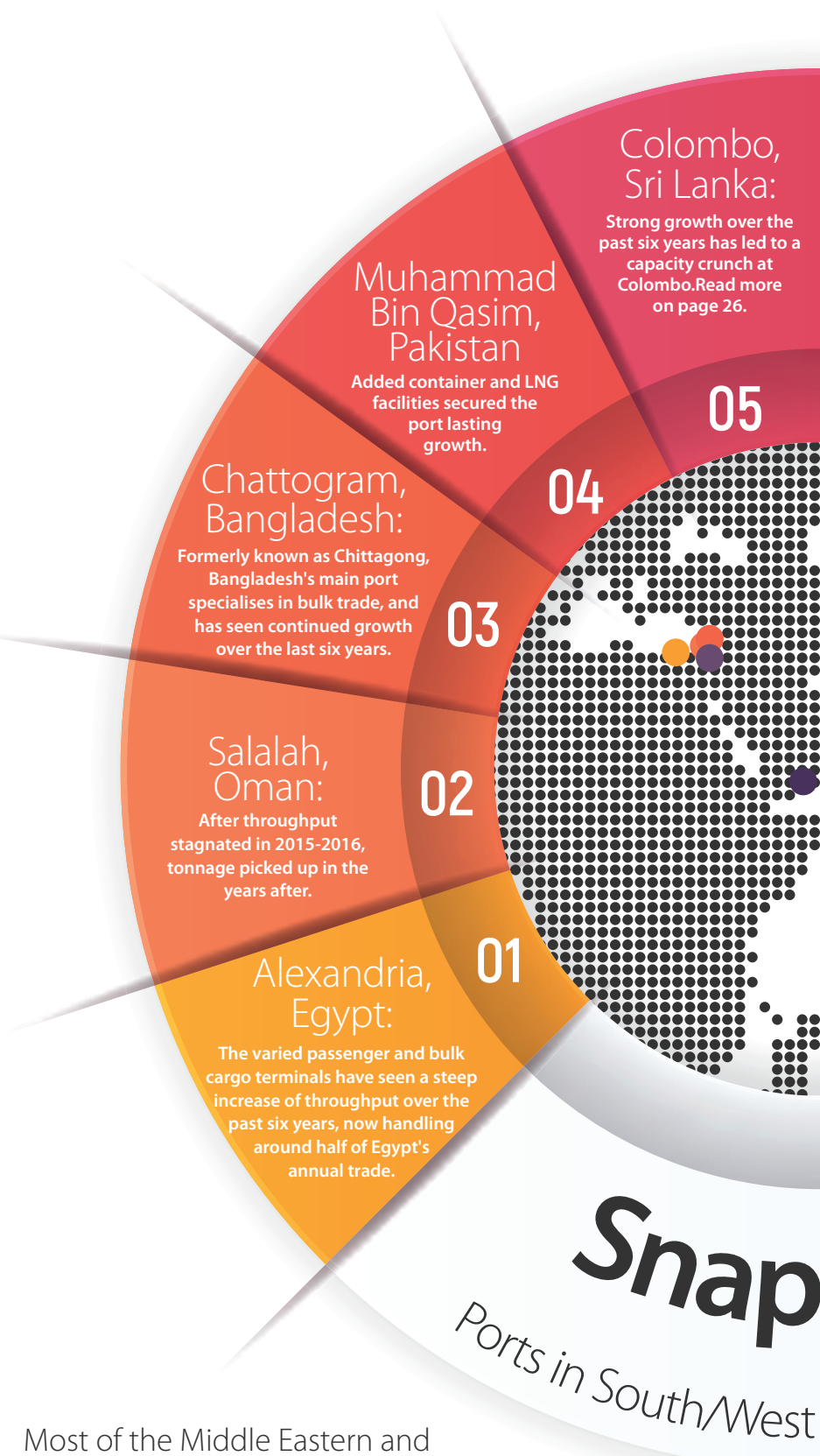
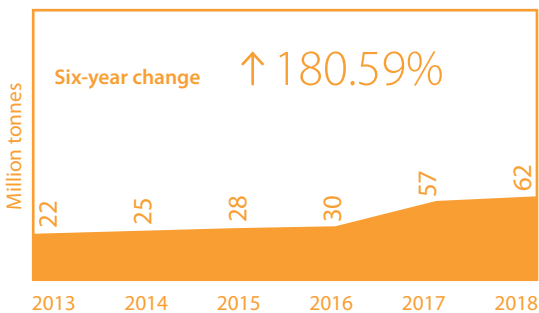
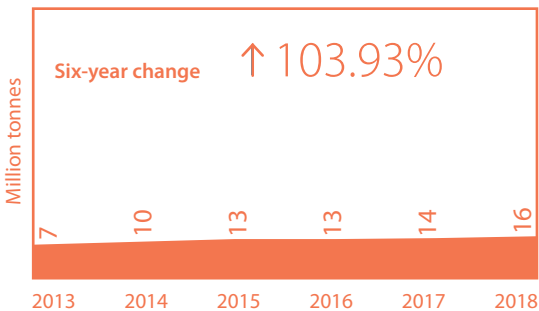
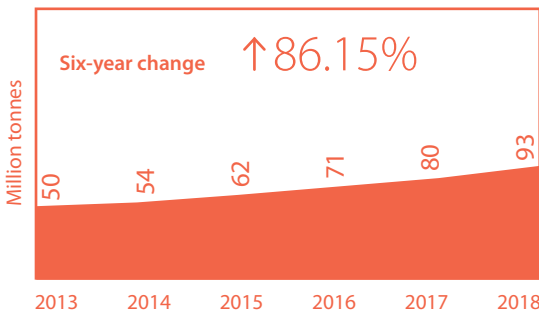
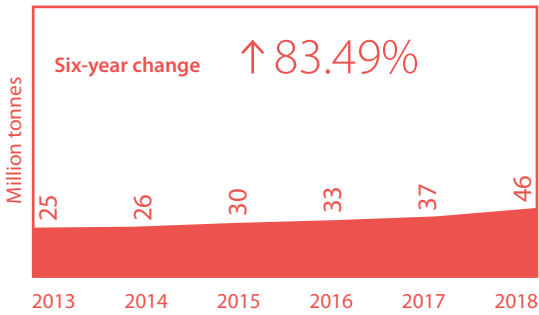
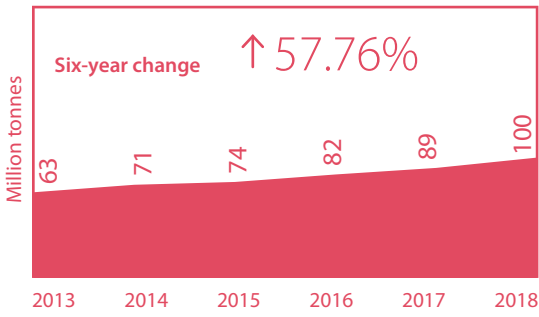
Even Dubai's enormous Jebel Ali facility, whose throughput is more than three times bigger than any regional rival's, is anecdotally feeling the effects of the loss of transshipment cargo to Qatar, although statistics to prove this are difficult to obtain.

"Hamad port's strategic geographical location offers opportunities to create cargo movement towards the upper Gulf, supporting countries such as Kuwait and Iraq, and south towards Oman. In support of our ongoing efforts to attract other shipping lines to the port, we're positioning Hamad port as a transshipment hub for the upper Gulf and

Oman," Bissett said. A direct Qatari service between Hamad port and Sohar port was announced in June 2017.

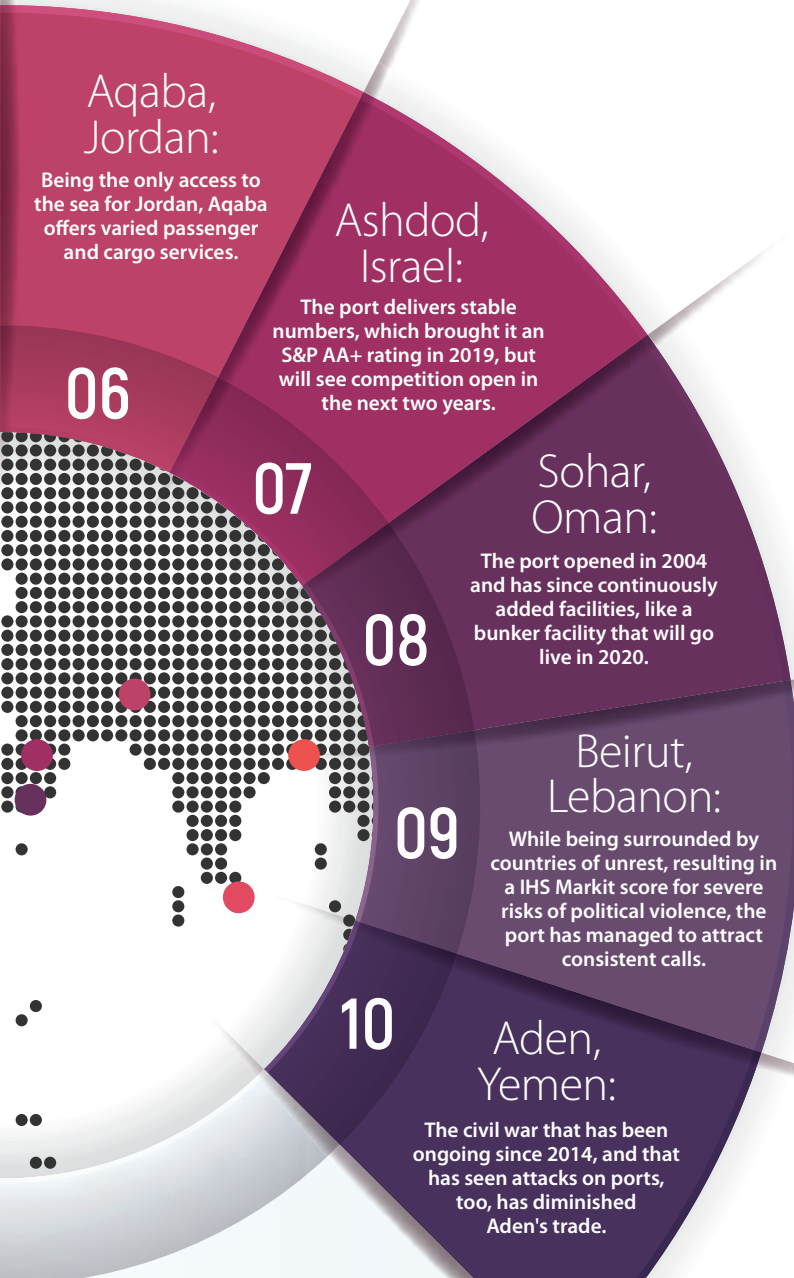
QTerminals was awarded a concession for the design, development, and operations of Hamad port's Phase II in November 2018 by Qatar's Ministry of Transport and Communications. Bissett said development of the new terminal was well under way. "QTerminals is also actively pursuing opportunities in ports and terminals outside of Qatar and will establish a portfolio of overseas assets over the next three to five years," he said.

"Our objective is to optimise capacity and maintain the highest service levels, thereby driving the expansion and diversification of trading partners for the benefit of Qatar's economy and trade."

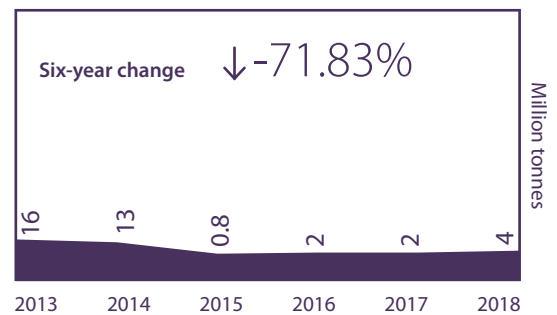
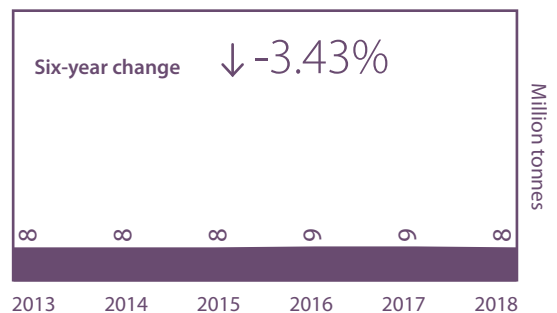
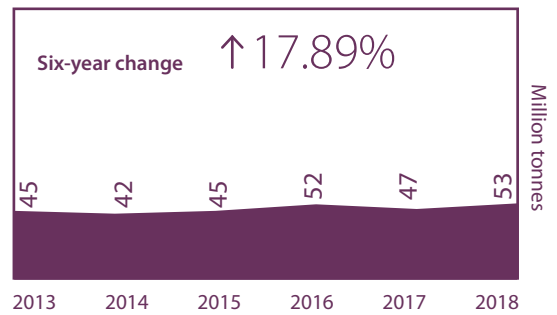
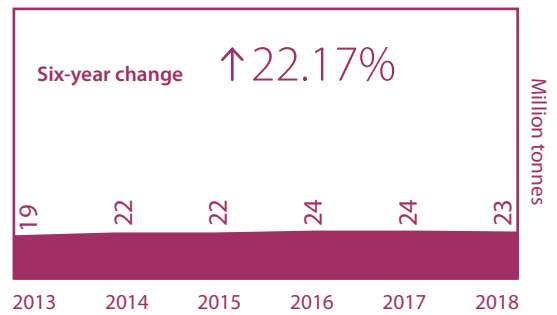
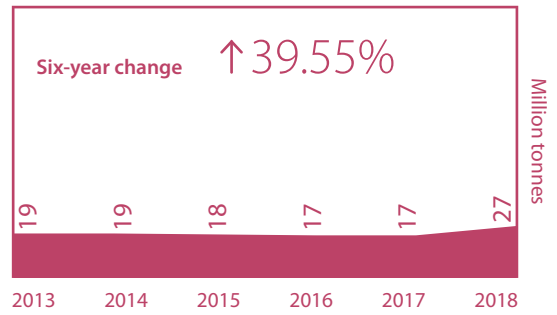


Snap
Ports in South/West

Most of the Middle Eastern and South/West Asian ports were able to grow their annual throughput over the past six years. Exceptions are ports in Yemen and Lebanon



shot
Asia and the Middle East



Note: all volumes displayed in metric tonnes

Source: IHS Markit – Ports and Terminals © 2020 IHS Markit/Shutterstock: 5100778



51313065: Roamline

IAPH WPSP trials innovation accelerator PortXL at WPC

World Ports Sustainability Program (WPSP) has set up its Port Innovation Atlas, where ports can launch online challenges to start-ups and scale-ups and then meet them in person



In November 2019, IAPH signed an agreement with PortXL, one of a growing number of accelerators that are being established in port communities. The agreement has effectively opened up a portfolio of port and maritime start-up innovators to member ports of the WPSP.

PortXL has centres in Rotterdam and Antwerp, with an additional one planned with a partner in Singapore. It has already supported more than 72 start-up and scale-up innovators located worldwide to engage in over 150 paid pilot contracts in the maritime sector. PortXL has additionally accumulated data on 2,300 start- and scale-ups in its database and assisted the Italian Port of Taranto in setting up its own innovation hub.

PortXL co-founder and director Carolien Vat-Sandee said, “Port industry activities impact the environment. If we want to sustain the growth of the economy, we should look after our ecology. And innovation is actually the answer for both.”

This need to “grow the economy, while sustaining the ecology” is being encouraged by PortXL and is supported by corporate partners that include Boskalis, DEME, MSC, Shell, Van Oord, and Vopak.

PortXL scouts more than 1,000 start- and scale-ups and selects up to 20 for each of its locations every year. Those selected at “shakedown” events then gain access to hands-on mentorship, training and are given the chance to pitch to organisations to implement paid-for pilots and proof-of-concepts to demonstrate their innovations in a live environment.

As the agreement was signed between IAPH and PortXL to develop an innovation platform, where ports can engage in pilots and partnerships with start- and scale-ups, the short-term plan to bring IAPH members into contact with the network of innovators is now under way via this link: www.portinnovationatlas.com.

The process will culminate in face-to-face meet and match encounters between port project sponsors and innovators to discuss concrete pilots and trials at the IAPH World Ports Conference (WPC) in March 2020.

“The plan is to create viable matches by allowing port authorities to connect their own major stakeholders and companies operating at their port with the PortXL-endorsed innovators,” PortXL director Cees-Willem Koorneef said. “Port authorities know which of their customers and stakeholders might be best equipped to

trial and use these innovations. A coastal port location of any size, anywhere in the world could in theory benefit from the innovations on offer.”

With plastic debris in the ocean being a major challenge for the maritime and port industries, some innovations are aimed to clean up the oceans. One such example is a South African company called Ranmarine, which manufactures the WasteShark. This is a floating autonomous collector of plastic waste, which is also capable of collecting data on water quality. This remotely operated vehicle has been tested with pilots in the city and Port of Rotterdam, and the company has taken its WasteShark to other countries, including Denmark, India, Panama, Turkey, the UAE, the UK, the US, and Vietnam.

The WasteShark is an autonomous floating device to collect plastic waste

Another example is Eco Wave Power, which has developed floaters attachable to man-made structures that are capable of generating grid-connected electricity power from ocean and sea waves. Various tests are under way, with one project in Gibraltar, which is actually connected to the country’s electricity grid.

Italian start-up WhaleWashing is seeking to launch its first car wash for ships in the port of Rotterdam in late 2020. This is an ambitious project which involves a ship hull being cleaned, removing biofouling while at berth instead of when it is in drydock, thus making it a potentially much cheaper and a more sustainable alternative for the environment.

Essentially, the basic design concept is based on a car wash turned upside down, with brushes and water jets moving from front to rear of vessel hulls while an array of advanced sensors monitors the state of the hull in real time and controls the robotic arms of the brushes. A double inflatable barrier will also be added on both sides of the device. Whalewashing will also be equipped with powerful pumps and auto-cleaning filters to recycle all the water in the cleaning chamber and to prevent any waste residue entering the surrounding waters. A first pilot is earmarked for the end of 2020, at the Rotterdam port.

In the meantime, the Antwerp Beacon hub is the base for Romware, which has developed a worker wearable module that can be carried as a smartwatch or installed in a helmet, belt, or safety vest.

This device is packed with different technologies and can be used for verifying if a safe distance is preserved between man and machine; triggering an alarm when certain objects get too close to others; and avoiding personnel from entering restricted or hazardous areas, as well as many other safety-related functionalities. Several trials are under way in the Antwerp port community. IAPH member ports attending the IAPH 2020 WPC in Antwerp next March are encouraged to either declare their interest or submit specific challenges to the PortXL network, in order to make initial contacts prior to the conference. This will ensure participants can return to their ports with pre-agreements on pilot projects. **PH**

WSPSP themes to feature in four WPC streams

The World Ports Sustainability Program’s (WSPSP’s) five key topics of climate and energy, resilient infrastructure, community outreach and port-city dialogue, governance and ethics, and safety and security will be debated at #IAPH2020 under the following themes:

Energy transition

- How ports can best support investment in and operation of the refining, manufacturing, and distribution of energy products amid the macro-energy transition
- The role ports can play in facilitating shipping to achieve IMO de-carbonisation targets while meeting sustainability demands of their communities
- How ports can become trusted centres of carbon-neutral energy creation and consumption for themselves, their clients, investors, cities, and communities

Data collaboration

- How to accelerate efforts to create successful data collaboration between ports and their customers and stakeholders, especially in port call optimisation
- How ports can navigate potentially sensitive competitive issues and how to prepare for unintended consequences of the digital environment, with existing roles being potentially disrupted

Risk and reputation

- How all port stakeholders can collaborate to prepare for and recover from threats that compromise their business continuity, safety, reputation, and ability to serve customers, as well as how to build and maintain reputation and trust before, during, and after a crisis
- How ports can prepare themselves for high-impact weather events that can disrupt operations, create safety hazards, and damage cargo and infrastructure
- How ports can embed an unwavering safety mindset embracing all aspects of work and operations
- How to avoid corruption that undermines port security, business confidence, and trust

Business innovation

- The kind of business climate that needs to be fostered for port cities to become reliable partners for the maritime industry, foster innovation together
- How ports can maximise sustainable value from port land
- How to get beyond ‘sister ports’, with commercial port networks really taking off and claiming their place in global supply chains
- To question whether current port governance models are still fit for purpose

In addition, a new training tool will be showcased by the WSPSP team at the conference, which is being produced for IAPH members to increase their knowledge and ability to apply the most relevant 17 UN Sustainable Development Goals in practice at their ports.



TNPA-5131160

The sky is not her limit

Zuziwe Mkhabela is a firm believer in grabbing opportunities when they present themselves, and that is exactly how the 29-year-old became one of the first female marine helicopter pilots in South Africa

Zuziwe Mkhabela made the cut from about 6,000 candidates for the national pilot training programme with the TNPA

When the South African Transnet National Ports Authority (TNPA) introduced a national pilot training project in 2012, Zuziwe Mkhabela was selected as one of the 16 successful candidates out of about 6,000 applicants. It was the start of an exciting time.

The programme is designed to address the legacy of South Africa's apartheid past by training and developing aviation pilots and engineers from disadvantaged backgrounds – particularly young black females – who would never ordinarily have the means to enter the profession.

Mkhabela wants to be a voice and a pioneer for equal opportunity in the aviation industry, which she says tends to be male-dominated, closed, and selective. "Transformation is at that point of equality and equity. I applaud Transnet for the opportunities they have created. They have not only changed the lives of individuals, but of families and even whole communities," she said.

Now based at the port of Richards Bay, which is also her home town, Mkhabela loves that her job is so varied. "You do not know what kind of vessel you will be flying to, what kind of hoist it will be, or what the weather will be like, but you do always have the most beautiful view," she explained.

"You may only fly for 30 minutes in a 12-hour shift, but it is challenging. People's lives are involved, so your decision making has to be spot on. You may be taking a surveyor to a ship for an inspection, sometimes it is a rescue of a sick or injured crew – which can take a lot from you emotionally – or on other occasions it could be an aerial photo shoot of the port."

Although she had researched aviation as a career choice, Mkhabela ruled it out because the training is costly and she knew her parents could not afford it. So, she studied for a commerce degree instead. It was while she was interning at the KwaZulu-Natal Provincial Treasury and looking for a permanent job in the accounting field that she came across an advert calling for applicants for the pilot training programme.

"I was hungry for something that challenges me. But the email address looked dodgy. I thought it might be a job scam," she recalled.

Even after she applied, and was invited for an interview, Mkhabela was still sceptical. Not wanting to waste money on the 608km trip from Richards Bay to Johannesburg only to find the whole thing was a hoax, she phoned the supplied contact number and will never forget the words of the recruiter who picked up, "This is a once-in-a-lifetime opportunity." That was enough reassurance for her.

After completing two interviews – one with the flight school and one with Transnet's human resources department – and a medical check-up, Mkhabela was accepted for the course. "From there it was a real roller coaster," she said. In December 2012, she was thrown headlong into a gruelling training programme, earning her wings in 2014.

The pilot training programme has to date produced 20 helicopter pilots, 50% of whom are women, as well as 14 helicopter maintenance technicians. Unlike when Mkhabela did her training, the programme is now in-house, meaning that all helicopters, facilities, and operating licences belong to the TNPA, which also employs all the aviation personnel. In addition, all operations are conducted by and under the auspices of the port authority.

TNPA has also invested ZAR500 million (USD34 million) into the programme, which includes two Leonardo AW 109SP helicopters, with a total value of about ZAR250 million.

Currently, Durban and Richards Bay are the only two South African ports that use helicopters for port operations. The service will be extended to the port of Cape Town when a helicopter is delivered in 2020, potentially enabling more young and ambitious marine pilots to join the industry. **PH**



IMO 5130431

MEPC74 meeting in May 2019 at the IMO's London headquarters

IAPH continues to work with IMO on GHG reduction

The sixth meeting of the IMO Intersessional Working Group on Greenhouse Gases (ISWG-GHG) took place in London, United Kingdom, 11–15 November 2019. ISWG-GHG provides technical advice to the IMO Marine Environment Protection Committee (MEPC) to support the IMO strategy to reduce GHG.

During the meeting, there was an overall constructive attitude from the IMO member states to adopt measures before 2023. Most of the submitted proposals were introducing a goal-based approach, setting improvement targets, and leaving a certain flexibility for compliance methods

to the industry, as opposed to prescriptive ones such as setting speed limits for vessels.

While there were no direct measures discussed for ports, approval was voiced to develop national action plans, which would include finding means to reduce emissions in port and investigate how to reduce the methane slip in liquefied natural gas (LNG) propulsion to further push this fuel as a heavy fuel oil (HFO) alternative.

The emerging draft proposal text, which also maintains IAPH suggestions such as including the Environmental Ship Index as a best practice example of

voluntary action and better co-ordination between shipping and ports, will be submitted for adoption at MEPC 75. The 75th session will take place from 30 March to 3 April 2020.

Other issues discussed at the ISWG-GHG included as port call optimisation and plans for onshore power supply in ports.

In terms of port call optimisation, the just-in-time arrival guide will be published by the IMO Global Industry Alliance in January. IAPH has been invited to join a stakeholder meeting of the Global Industry Alliance on 8 January to discuss a draft version of the document.

In addition, on 15 January, IAPH will be joining an industry input workshop of the International Task Force Port Call Optimisation. At the same time, a correspondence group of the IMO Sub-Committee on Ship Systems and Equipment (SSE), which reports to the Maritime Safety Committee (MSC), is preparing a set of guidelines on the safe operation of onshore power for ships.

Currently, the draft guidelines focus on operational safety to avoid duplication with existing international standards. The work of the correspondence group, co-ordinated by China, will be presented to the 7th SSE session, which will be held from 2 to 6 March 2020.

Another group working on cutting GHG is the Getting to Zero Coalition. It counts 102 members, with IAPH being one of the supporting organisations. The coalition aspires to have the first zero-emission vessels on deep-sea trades by 2030. The initiators of the coalition – the Global Maritime Forum, Friends of Ocean Action, and the World Economic Forum – outlined different workstreams: 1. Fuels, technologies, and transition pathways; 2. Motivating first movers; 3. Closing the competitiveness gap; and, 4. Global opportunity for zero-emission fuel exports. The coalition will be presenting its plans at the World Economic Forum in Davos, Switzerland, in January 2020.

In addition, a workshop is planned for 25 February in Copenhagen, Denmark, pulling in all inputs received and for all those involved in the coalition to get a sense of community.

Notable numbers

102

Members have joined the Getting to Zero Coalition, wanting to see zero-emission vessels sail in 2030

10mt

The amount of CO₂ the ports of Rotterdam, Antwerp, and Ghent want to bury in a carbon capture project



Getty Images/mrcaurdo:5131274

The port of Lagos in Nigeria

Q&A with Anthonia Ohagwa

Anthonia Ohagwa, who won the IAPH Women's Forum Scholarship, talks about making the management culture of the Nigerian Ports Authority more inclusive

Q1. What did it mean to you to win the IAPH Women's Forum Scholarship?

I felt highly elated and empowered at the news of my selection as the winner of the IAPH Women's Forum Scholarship. I became confident of taking up greater challenges and winning those as well. It has motivated me to aim for greater heights of success. It has also become an energiser and source of inspiration and encouragement to aspire to the highest level of excellence at the work place.

It serves to promote the lofty ideals of IAPH in women empowerment in the port and maritime sectors to those unaware of its importance and roles. It has widened my horizon to a great extent.

Q2. Why did you decide to study mastering trade policy at Harvard Kennedy School? How are you going to make use of these experiences in the Nigerian Ports Authority?

As a public servant in the employment of the Nigerian Ports Authority, working within the port industry where trade is facilitated, I wanted to beef up my rudimentary knowledge of trade from high school economics to a deeper understanding of how best to act in today's economy.

You will recall that globalisation has

projected trade policy to the elevated, important and conspicuous sphere of public policies. I wanted to be able to understand and discuss trade at a higher level.

I decided to study at Harvard because I personally perceive Harvard to be the number one institution of learning globally. Taking the Trade Policy master's programme at the school of Management of Harvard Kennedy School teaches you to analyse, formulate, negotiate, and implement effective policies in your own field of endeavour. The programme offers a practical approach, highlighting the harmonised combination of multiple resources and skills of gallant practitioners, laced with current political and policy development in the field.

Most importantly, I had always nurtured this lofty dream of being a Harvard scholar, so winning the IAPH Women's Forum scholarship offered me the golden opportunity to fulfil a lifelong desire. My heartfelt appreciation goes to the IAPH Women's Forum.

The course afforded me the opportunity to acquire an advanced skill set in negotiations, which I will greatly utilise in managing ICT projects, stakeholders, and running the Network and Communications Department, which I head. Furthermore, I will also deploy my knowledge on policy analysis, formulation, and implementation.

Within the ICT Division, I focus on the automation of the authority's business processes, which is currently being carried out.

Q3. When you applied for the scholarship, you presented a case study about a balanced gender workforce in the Nigerian Ports Authority. Could you explain a little more about it? Does the Nigerian Ports Authority have any programmes in place to advance a gender-balanced workforce?

“ I wanted to be able to understand and discuss trade at a higher level ”

Anthonia Ohagwa

Assistant general manager at Nigerian Ports Authority



Reduxnet Photography:5131722

There is a national policy on gender affirmation, which led to the appointment of the first female managing director, chief executive officer, for the Nigerian Ports Authority after one century. In addition, women are now being appointed port managers and heads of operation and departments. For instance, the Nigerian Ports Authority has two female port managers out of six slots.

Six women occupy general management positions out of the available 21, while another six have the role of assistant general manager (AGM) out of 31 positions. I am fortunate to be one of the six female AGMs.

There is a government-conscious effort to ensure all government agencies and parastatals have a gender-balanced workforce in recruitment, promotion, and capacity building.

However, the Nigerian Ports Authority has modified the conditions of service to advance a gender-balanced workforce, as stated below:

There is a provision of a crèche in the workplace for nursing mothers to drop their babies during the working day.

Nursing mothers used to be allowed to leave two hours earlier than others, while starting work at the same time as others. Now it has been modified to allow nursing mothers to start the day an hour later and finish an hour earlier.

We have also suspended disciplinary action of pregnant women, which will be carried out only after the delivery of the baby. In addition, there is maternity leave of four months instead of the previous three months.

Traditionally, women were required to be legally married to earn their maternity leave. Today, the narrative has changed as single mothers are now entitled to enjoy their maternity leave, too. Women were also required to be the biological mother of a child before they could earn their maternity leave. Today any woman who legally adopts a child is entitled to maternity leave.

Women usually are the worst hit in the event of any bereavement and, as such, management has approved bereavement leave of 10 days at the demise of a loved one such as a spouse, parent, spouse's parent, or children.

Sexual harassment in the workplace has been identified as a vice and is now criminalised.

Furthermore, National Maritime Day is now being celebrated with the theme 'Women Empowerment in Nigerian Ports Authority'.

All in all, there are more appointments of female port managers and heads of department.

Lastly, a married woman has the liberty to assume the state of origin of either her spouse or that of her parents. **PH**

Achieving a gender-balanced workforce

A case study of the Nigerian Ports Authority by
Anthonia Chinelo Ohagwa

One of the major issues confronting public service organisations in Nigeria concerns how to achieve gender balance in the workplace. Although women constitute 50% of the global population, there is a large gap between the male and female presence at the top echelon of management in the port industry. This problem has remained in most organisations because of the dominance of male individuals at various levels of control and governance.

The situation is no different for the Nigerian Ports Authority where I currently work. The root of this problem can be traced to both the historical and human desire to achieve dominance over individuals or groups of persons. Women in the port industry often have to contend with a plethora of challenges. These range from the absence of female role models or a female mentor – and until recently when a female chief executive was appointed managing director/CEO the very first time in over a century – discrimination over leadership positions that favoured male colleagues, and gender bias/stereotypes.

There is also the problem of non-recognition of female efforts. A female employee has to be four times better than her male colleague to be recognised. Additionally, they are the victims of sexual harassment and they get discriminated against because of their family responsibilities, which is particularly challenging as 95% of the female work force in the port authority are breadwinners. This

Diverse benefits

This will lead to the following benefits:

- Enhanced productivity
- Peace and harmony at the workplace
- Increased motivation and job satisfaction
- Elimination of prejudice and discrimination
- Builds strong institutions and enhances good corporate governance
- Increases employee retention as employees feel valued and respected
- Enhanced collaboration

has led to less leisure time than men to network and build contacts.

In the wake of the appointment of a female managing director/CEO in recent times, giant strides are being taken in gender balance in most of the essential areas and headship of strategic departments within the Nigerian Ports Authority.

Notwithstanding the aforementioned noble efforts, to achieve gender balance there is a need to have a holistic policy that would address the root of the problem from recruitment, training, disposition, promotion, and succession planning among others.

I strongly believe that implementing these recommendations will produce a workforce where all employees are treated fairly with equal access to all opportunities. **PH**

Measures to make ports more inclusive

In order to achieve inclusiveness and gender balance, there must be a conscious effort to promulgate policies at each of the following stages via:

- Creating female mentorship programmes
- Re-orientation of cultural/traditional beliefs, religious beliefs and gender stereotypes, and prejudices
- Ensuring gender balance at entry level of recruitment
- Disposition to various departments and divisions
- Succession planning
- Strategically structured training
- Leveraging ICT to improve business outcome and enrolling female employees in ICT-related courses



IAPH's Clean Marine Fuels working group meeting with the IAPH sustainability flagship project, the Environmental Ship Index, working group in Yokohama

IAPH working groups agree on synergies in Yokohama

IAPH's Clean Marine Fuels (CMF) working group recently had a joint meeting with the working group in charge of its Environmental Ship Index (ESI) sustainability flagship project. This was held in conjunction with the Yokohama Maritime Forum (YMF), which took place between 21 and 25 October 2019 and was organised by Yokohama Kawasaki International Port Corporation

(YKIP). The event also marked the 160th anniversary of the port of Yokohama, one of Japan's largest maritime trading centres.

Given the direction set by the IMO greenhouse gas strategy (GHG), the IMO resolution on co-operation between shipping and ports, and the Getting to Zero Coalition to reduce maritime emissions, a bundling of resources was decided to be essential to

adequately address the safety and commercial viability of alternative fuels bunkering alongside other measures to facilitate the decarbonisation of shipping, such as onshore power supply, incentive schemes, and port call optimisation.

In Yokohama, the ESI group made good progress in finalising the project's 2.0 version, which will go live early in 2020. Eight

years after its conception, the index has successfully outpaced its original configuration, both in terms of IT infrastructure and management. Apart from a new, user-friendly website and underlying database infrastructure, version 2.0 forecasts a professional full-time administration and audit scheme. The financial model will also change, with shipowners contributing to the budget and a beneficial membership for port authorities that are members of IAPH. Finally, the governance structure will be streamlined to allow more efficient decision-making. The index will gradually extend its coverage of ship emissions. Next to air, research is currently done to include noise emissions.

It was the first time IAPH had paired the CMF and ESI working groups together and sought synergies.

On behalf of IAPH, Masahiko Furuchi, secretary-general of IAPH, and Patrick Verhoeven, managing director of policy and strategy of IAPH, voiced their appreciation to the meeting host, YKIP.

i MORE INFO:
www.ymf2019.com

Digital port strategies in the spotlight

On 19–21 November 2019, the first Smart Ports Summit was held during the Smart City Expo World Congress in Barcelona. The congress attracted 25,000 visitors and more than 1,000 exhibitors from 150 countries.

Under the auspices of the port of Barcelona, a dedicated two-day symposium took place for ports to showcase their most advanced digital transformation and sustainability projects. The Smart Ports: Piers of the Future event notably brought the ports of Antwerp, Barcelona, Hamburg, Los Angeles, Montreal,

and Rotterdam together for the first time in setting up a dedicated smart ports exhibit booth, with each port presenting the most advanced projects they are currently working on. IAPH was one of the supporting organisations of the event, represented by president Santiago Garcia-Milà and vice-president Europe Jens Meier. Garcia-Milà gave a keynote presentation on defining ports in the digital age.

i MORE INFO:
www.iaphworldports.org/news/6902



IAPH's Santiago Garcia-Milà talks about ports in the digital age

IAPH website with your own language

From 1 January 2020, IAPH members can access the association website in your own language. In order to do this, just click the 'Translate' tab on the screen where you will find a selection of

languages to choose from. You can see a screenshot of the tab on the right.

If you have any questions or requests, please contact the IAPH secretariat at info@iaphworldports.org.



2020

2021

2022

Dates for your diary

A selection of forthcoming maritime courses and conferences



January

13–27: IHE Delft: Port Planning and Infrastructure Design
Delft, Netherlands
<https://www.un-ihe.org/port-planning-and-infrastructure-design>

14–16: 23rd Intermodal Africa
Dar es Salaam, Tanzania
<http://transportevents.com/ForthcomingEventsdetails.aspx?EventID=EVE168>

27–07Feb: APEC's Course on "Health, Safety, and Security"
Antwerp, Belgium
<https://apecporttraining.com/course/health-safety-security/>

Commences 27: Lloyd's Maritime Academy: Certificate in Ballast Water Management Distance Learning
www.lloydsmaritimeacademy.com/event/ballast-water-distance-learning

February

3–7: IPER Seminar: Economie Portuaire
Le Havre, France
<https://www.em-normandie.com/fr/economie-portuaire-lessentiel-pour-les-decideurs>

3–13: TTPM: Strategic Port Logistics and Global Supply Chain Management
London, UK
<https://ttpminternational.co.uk/port-logistics-and-supply-chain-management-course/>

10–21: APEC's Course on "Legal Aspects in Port Operations and Trade & Concession Policy"
Antwerp, Belgium
www.apecporttraining.com/course/legal-aspects-in-port-operations-and-trade/

10–20: C-MAT Specialisation Course: Maritime Economics and Business
Antwerp, Belgium
www.uantwerpen.be/en/centres/c-mat/programme/specialisation-courses/maritime-economics-and-business/

Commences 12: Lloyd's Maritime Academy: Certificate in Container Terminal Operations & Management Distance Learning
<http://www.lloydsmaritimeacademy.com/event/container-terminal-operation-and-management-distance-learning-course>

17–27: TTPM: Strategic Port Concession Policy, Operations & Management
London, UK
<https://ttpminternational.co.uk/strategic-port-concession-policy-operations-and-management-course/>

19–21: Cartagena Cruise Dialogue 2020
Cartagena, Colombia
www.cruisedialogue2020.org

25–27: 18th ASEAN Ports and Shipping
Jakarta, Indonesia
<http://transportevents.com/ForthcomingEventsdetails.aspx?EventID=EVE163>

March

2–6: IPER Seminar: Management de la qualité
Le Havre, France
<https://www.em-normandie.com/fr/approche-processus-mise-en-place-systeme-management-qualite>

2–13: APEC executive course: Ports on the road to achievement of the UN SDGs
Antwerp, Belgium
<https://apecporttraining.com/executive-courses/>

17–19: 2020 IAPH Conference
Antwerp, Belgium
www.worldportsconference.com



Port of Açu © 2019

Uniting port operations with conservation efforts

Supported by a unique and innovative private model, Port of Açu aims to be the best Brazilian energy port complex, based on high efficiency and long-term resilience, according to chief commercial officer **Tessa Major**

Strategically located in the heart of Brazil's economic centre and at the closest coastal area for the main offshore oil and natural gas production fields, the port of Açu became operational in 2014. Since then, this port rapidly became the preferred support base for major international oil companies operating in the country.

With state-of-the-art infrastructure and a strong focus on operational excellence, sustainability, and innovation, Açu is becoming the largest energy hub in Brazil, integrating the oil, gas, naval, and petrochemical industries.

Such synergy will boost competitiveness, leveraging facilities that support the entire oil and gas chain.

Furthermore, with Port of Açu being the gateway to Minas Gerais, one of Brazil's highest producing states, makes it a prime location for new terminals and industries following Brazil's economic growth.

One of the main challenges for a sustainable port development in developing countries is to ensure that development is carried out in a responsible manner and will effectively bring prosperity for everyone, including the communities where we operate at.

Therefore, we are fully committed to develop a long-term, shared value proposition with all our stakeholders, particularly on issues central to the world's future prosperity.

We believe that an open, permanent, and transparent dialogue between the port and our stakeholders is essential, with special attention to the surrounding communities, driven by educational and biodiversity protection initiatives.

Following the guidelines of the UN Sustainable Development Goals, and inspired by IAPH's World Ports Sustainability Program, our port strategy encompasses a broad and diverse approach towards a sustainable port growth.

One of our main contributions to this end is the creation and maintenance of the Caruara Reserve, the largest private reserve dedicated to the conservation of the restinga forest vegetation, which has been highly affected by human development in Brazil. Caruara plays an important role in the preservation of the remaining areas of the forest found in the country.

Since 2012, more than 1 million seedlings have been planted in our reserve, allowing the recovery of 9 km² of the ecosystem. Caruara also hosts the only restinga seedling nursery in Brazil, where more than 85 flora species are managed.

In addition to our role in the development of the largest energy port complex in Brazil, we seek to be at the forefront of sustainable development, with an effective impact on biodiversity conservation. Port activities can and must be carried out through a virtuous synergy towards a sustainable future. **RI**

Açu is becoming the largest energy hub in Brazil, integrating the oil, gas, naval, and petrochemical industries





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