

ports & harbors

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Providing thought leadership on the role of ports in a connected world

Time to act

Arsenio Dominguez, incoming
IMO secretary-general, is ready
to push member states on
decarbonization

Official membership magazine of
iaph
international association
of ports and harbors

Charting a new course

Emissions tax reroutes transshipments

Securing the perimeter

North Sea minister combats illicit trade

Expanding horizons

Angola diversifies trade away from oil

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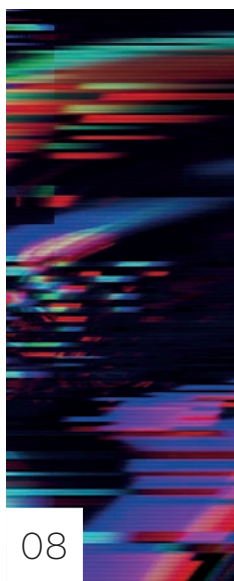
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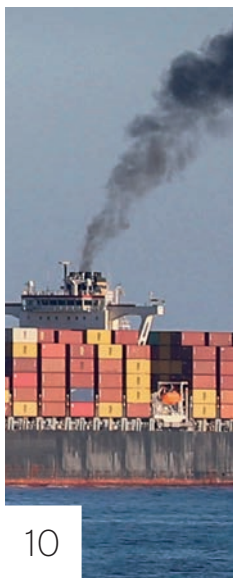
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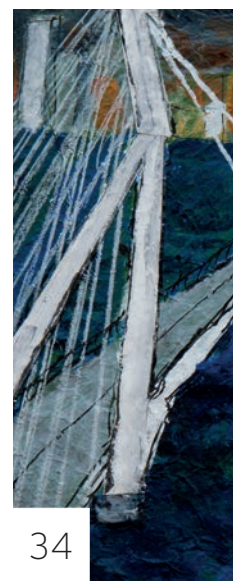
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EDITOR'S COMMENT



INES NASTALI
Editor

The lurking Leviathan

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Freelance journalist

Angola is still reeling from the effects of the civil war destruction that took place between 1975 and 2002. The government is racing to rebuild infrastructure with support from partners such as Japan. The ultimate plan is to recreate a seamless intermodal transportation network by connecting the country's ports with the national rail network. A recently approved public-private partnership policy is winning the attention of some investors from Asia and Europe. ■

A sea monster lurking in the depth of the world's oceans is slowly making its way to the surface: decarbonization is ready to strike the maritime industry, wielding tentacles of emission-trading schemes, global north-south divisions and competition over vital capital investment

Ports can prepare for the imminent attack with a clear-eyed understanding of the nature of the leviathan, as well as their own weaknesses. However, the diversity of port operations systems – spanning varied private, public and hybrid models – presents a fundamental vulnerability. There is no single regulator where ports can come together and strategize, like there is with shipping. Instead, they will look to their governments for support and guidance – or support each other in the form of an association, such as the IAPH.

At the same time, ports are the nodal point where the maritime industry comes together and where this sea monster might show its face from behind the breakwater, trying to break it down.

Ports will need to engage with carriers and cargo owners who are working to reduce their Scope 3 emissions; this will provide the opportunity to align motivation among those hit equally, if not officially a unified strategy. For this, it is vital for ports to prepare baseline emissions data from their operations and their warehousing and hinterland footprint.

While not yet requested by governments globally, the efforts of ports, such as Los Angeles and Long Beach, to comply with court- and state-ordered air pollution improvement plans for two decades can be watched as a bellwether.

Around the same time, when Lloyds-Register-Fairplay, now S&P Global, took over production of this magazine in 2005, “emissions” did not garner a mention in the entire inaugural issue. The focus of articles more lied on expanding capacity at ports to allow larger vessels to call, granted with certain environmental concerns around disturbing ecosystems. Another headline article examined the influence of the then-new IMO's International Shipping and Port Facility Security Code, which had come into force in 2004.

This is still relevant as, in this edition, we have an interview with Belgium's Minister of Justice and the North Sea Paul Van Tigchelt who works on countering illicit trade and drug trafficking, via IMO guidance, that the Port of Antwerp has been affected by.

Regulation can be fluent and flexible and will, for years to come, be amended to better fit changing operations. It is better than no unified path.

On that note, the operations of *Ports & Harbors* are also changing. This is the final edition that was produced by S&P Global.

From the next edition on, the IAPH will work with UK-based publisher Mercator Media to produce the magazine, as well as the annual World Ports Conference.

It has been a pleasure to be the guiding captain of this magazine for some of its journey and I wish you, dear readers, and the association all the best on its continued, sustainable path forward to provide thought leadership on the role of ports in a connected world. ■

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FELICITY LANDON
Freelance journalist

Speaking to Paul Van Tigchelt, Belgium's Minister of Justice and the North Sea, about a crackdown on drug trafficking, human smuggling and wildlife trafficking, I was struck by his conviction that organized crime must be a shared responsibility between the public and private sectors.

Belgium is leading the way, taking up the conversation with source and transit countries, and shipping companies, but warned that various initiatives must be coordinated. ■



CHARLIE BARTLETT
Freelance journalist

Just in case there was not enough to worry about – here comes ETS! I'll be looking ahead with interest to see whether the EU can get the rest of the world on board.

Although given the outcome of MEPC80, that appears a distant possibility, in my opinion. ■



IN CONVERSATION WITH ARSENIO DOMINGUEZ

Windows of opportunities

IAPH managing director Patrick Verhoeven and Arsenio Dominguez, incoming IMO secretary-general, discuss the ship-shore interface and plans to make the maritime industry more efficient, secure and transparent during Arsenio's initial term

INES NASTALI

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The maritime regulatory landscape will change significantly — or at least, take another shape that hopefully leads to meaningful change in 2024.

One, the International Maritime Organization's FAL maritime single window (MSW) regulation will see increased digital transmission of cargo data between ship and land side. The inclusion of maritime emissions in the EU's Emissions Trading System will influence discussions around financing a sustainable low-carbon transition in maritime and therefore also at the IMO.

Overseeing this change will be the IMO's new first man, Arsenio Dominguez, who has started his initial four-year term as the regulator's secretary-general with the beginning of the new year.

Having been the director of the IMO's Marine Environment division since January 2022, he is not the first secretary-general to come from inside the organization.

Efthimios Mitropoulos, who served from 2004 to 2011, and his successor Koji Sekimizu, who served as IMO secretary-general until 2015, worked within several of the IMO's divisions before being elected to head it up.

Arsenio himself first worked within the IMO when he represented Panama in a variety of roles at the organiza-

tion, such as chairing the Maritime Security - Piracy and Armed Robbery Working Group within the organization's Maritime Safety Committee, culminating in 2014 with his appointment as Panama's ambassador and permanent representative to the IMO, a role he continued until 2017.

In those years, he also chaired IMO's Marine Environment Protection Committee (MEPC), after which he joined the IMO Secretariat in 2017, first as chief of staff to the outgoing secretary-general Kitack Lim before being appointed as director of the organization's administrative division in 2020 and then of the environmental division.

Guiding principles

His work within the MEPC is probably what Arsenio is mostly known for within the maritime industry.

One of his goals for his tenure is therefore to see tangible results in the decarbonization of shipping.

In 2023, member states agreed to reach net zero around 2050 through fuel standards as well as economic measures that will enter into force in 2027.

But, "I am not only focusing on the environment, that's the topic that put IMO on the map but we're more than that, including regulating safety and security. I want an organization that is flexible and looking for tangible results and how we can support the green transition, the increasing automation and use of technology as well as with a focus on the human element and diversity," he said. "The younger generation is going to take over from us and so I want an organization that breaks down the barriers like we have been working toward for the past several years," Arsenio laid out his vision for his term in a conversation with IAPH managing director Patrick Verhoeven.

"I am not afraid to shake things up a bit in order to get results," he added.

But that would only be done with the goal to "maintain the relationship between different stakeholders and

"I am not afraid to shake things up a bit"

ARSENIO DOMINGUEZ
IMO



also the capabilities that they all have to implement regulations. It's work we need to do, taking into account the concerns, which are very valid, to reduce the gap between the global North and South, address those concerns and of course that goes through the different projects that we already have in place," he said. One of his priorities is therefore to gather more data and ensure transparency of the effects of decarbonization measures and "focus more on measuring the success of the activities including improving the planning so that we can be more specific in where our assistance is required. In a nutshell, that is the kind of organization I'm looking forward to lead".

Port support

One group of stakeholders that might not being regulated by the IMO but plays a vital connecting role in the maritime supply chain is of course ports. Under the auspice of outgoing secretary-general Kitack Lim, the relationship between port authorities and the IMO has become very close, with several joint efforts to push the incoming electronic MSW facilitation, for example. "We can't really work in isolation because the connectivity between ship and shore is required." Then, there is the green agenda. "And of course, shipping is not going to be able to decarbonize without ports. We need terminals to supply alternative fuels in a safe manner. So, we will be working on the training and safety around alternative fuels required for the seafarers at the terminals but also around the transport and handling of those," Arsenio said.

For him, not only transparency but also standardization will be key in future. "The more logistically efficient a port is, the better the connectivity between the ship and port is. There are plenty of areas where we can actually continue to enhance and standardize some of the aspects between ship and shore. Looking to cold ironing, for example, as of the main aspects that will support this transition, but we do need to work on the standardization of this mechanism," the new IMO secretary-general said.

He is referring to, for example, ensuring that grid electricity for this comes from renewable resources to avoid shifting pollution and emissions from one part of the supply chain to another. "I am looking forward to seeing what ideas the port industry has in this respect," Arsenio said.

Patrick does have an idea. "I think the most important thing we can do is facilitate bunkering of low-carbon fuels. We've already done work on safety in the past years

"We would happily share the tool with the IMO"

PATRICK VERHOEVEN
IAPH

based on the experience with LNG, which you can extend to other fuels. And now the World Climate Action Program, which is a smaller group of leading ports, has developed the Port Readiness Tool. On one hand, this is an assessment tool for the ports themselves to see where we are in the bunkering of low- and zero-carbon fuels in terms of safety, quality and the concessions that they give to bunkering companies. But the idea, on the other

hand, is to develop this as a public tool so the customer can see the status of ports." The tool will be launched in 2024 and that again is, "something we would happily share with the IMO, which will facilitate the decarbonization of shipping next to other measures," said Patrick.

While he agrees that decarbonization rightly has the attention at the moment, he can think of at least one other agenda item that his members want to discuss with the IMO. The IAPH, via its Risk and Resilience Technical committee, recently co-sponsored a submission regarding the impact of illicit trade and organized crime to the 33rd session of the IMO Assembly, which was discussed in early December 2023. The submission, aimed to garner support for an assembly resolution, urged parties to submit proposals to the IMO Maritime Safety and Facilitation Committees to enhance and adapt the existing framework for combating organized crime in the maritime sector. Additionally, the resolution invites IMO member states to share successful strategies in mitigating the impact of organized crime on international maritime traffic and port facilities. "That is a valid point, the more we're enhancing the use of technologies on both sides, the more risk we face around cybersecurity. We started work with the IAPH on cyber guidelines a few years ago and that's something we can continue to look at," Arsenio said, agreeing with Patrick.

Valuable exchanges

Indeed, with the incoming trade facilitation regulation on electronic MSWs, this will be pertinent. "Trade facilitation closely connects to security as well. At the World Ports Conference in Abu Dhabi, we presented guidelines that we developed together with the World Customs Organization. Customs are a key player in trade facilitation. That's the spirit of those guidelines that you do both, make sure that everything is checked as it should be, but at the same time, you facilitate trade," Patrick said. The other element to getting the MSW off to a good start is to ensure ports



in developing and developed states work together. “It is a challenge, in particular for developing states. The good thing is the support from developed countries for developing countries, such as between Norway and Antigua and Barbuda or Singapore and Angola. The idea is that from there is a learning for implementations of those projects and then franchising out to other countries,” said Arsenio.

On the other hand, “the IAPH and IMO symposium on the topic, held in January 2023, showed that establishing a digital infrastructure, which will be the case for more developing states, might be more feasible than adapting existing digital processes that have been in use in ports in developed states,” Patrick said.

Working together

The next step in the decarbonization journey of the IMO will be to hear back on the impact assessment for fuel standards and economic measures of which the interim report will be presented at MEPC81 in spring this year.

The assessment will look at how proposed measures contribute to the reduction of greenhouse gases as well as the impact on states based on how connected they are to the shipping market, cargo types and also food security and socio-economic development.

For Arsenio the support of ports will then be important. “Similar to the single window, we need to look at how we will roll this out because it will not be possible to choose and push every single port in one go, so we need to strategically look into the way we support ports in member states that are developing countries,” said Arsenio.

This is also clear for the IAPH that supports one of the submissions for economic measures. “If there is revenue going to be generated, that should be used for infrastructure in small island states. The ones that are vulnerable

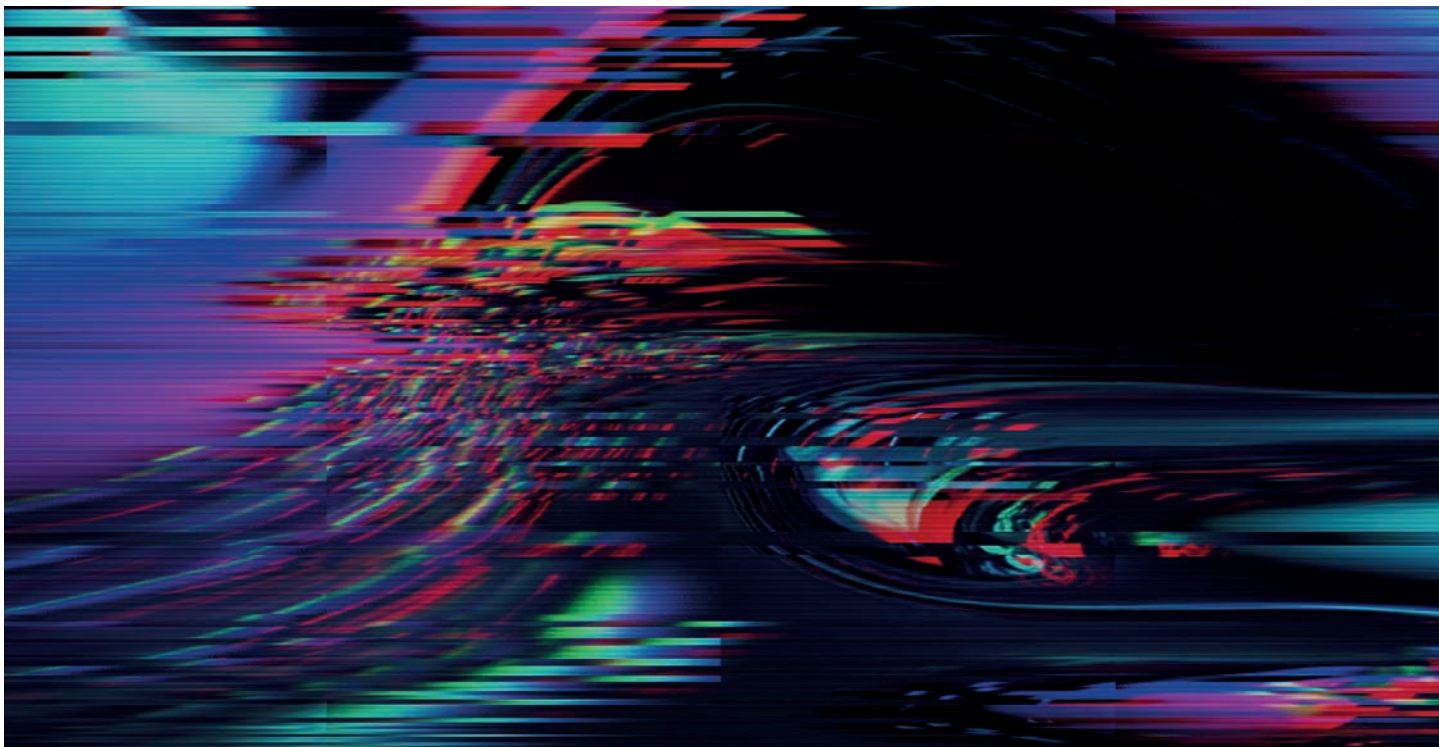
to the impact of climate change, and will need help with infrastructure,” Patrick said.

Arsenio is again open to hear from the IAPH here. “What sort of infrastructure investments and budgets are we talking about? Any projections, scenarios and information that you may be able to provide can assist those conversations because you can look into specific terminals in small island developing states and what the needs are for investment. That would be helpful.”

On the right path

So, what would the new IMO secretary-general like his legacy to be? For the IMO to be “a place that people aspire to work for.” For now, “We are in a good place, looking back to June 2023 and the manner in which the decision about reaching net zero was made, not just unanimously, but in a really good spirit,” he said. “Discussions were open and rich, which allowed member states to agree on a defined timetable to have technical and economic measures in place by 2027.” This will, hopefully, put the IMO on a good pathway to meet the 2030 and 2040 indicative checkpoints that ask for a 20% and 70% reduction of 2008 emissions, respectively. Arsenio is confident. “One of the things I enjoyed the most when I was chairing the Marine Environment Protection Committee was working with member states and to reach an understanding of the actions that have to be taken, how we continue to work together, where we can make progress, where we need to do further analysis and where valid concerns are,” he said.

With this spirit, “We are in a right position to roll out measures and demonstrate that we really are compromising and we’re doing it in a fair manner with all the member states involved,” he said, looking forward to his term as IMO’s newest secretary-general. ■



PERSPECTIVE CYBERSECURITY

Tackling digital corruption

The University of Plymouth, located just a stone's throw from the ocean in the southwest of England, began life in 1862 as a school of navigation.

The sea has therefore always been woven into its heritage, and marine and maritime research, teaching and innovation remain firmly at its heart more than a century and a half later. The university has been awarded two Queen's Anniversary Prizes for Marine Work and was rated the best in the world in relation to the UN Sustainable Development Goal 14: Life Below Water, in 2021. It is also leading the way in maritime cyberthreats research, via a cutting-edge international facility known as the Cyber-SHIP Lab, currently funded by Research England, in collaboration with industry partners.

The Cyber-SHIP Lab

With about 90% of supplies moved via the oceans, the maritime industry is the lifeblood of global trade and commerce.

Cyberattacks are listed as a top-tier threat to international security, yet when it comes to cybersecurity, the sector is shockingly ill-prepared to deal with its own, extremely serious, vulnerabilities.

The maritime industry is poorly placed to detect and mitigate cyberattacks for a number of reasons: briefly, there is a historic, false perception that a vessel out on the ocean is not part of a connected cyber network, there are problems caused by the unusual longevity of legacy maritime operational systems, and there is a lingering but persistent misconception that cybersecurity is purely an IT issue.

All these are proving a considerable barrier to advances in maritime cyber resilience. A critical weakness has always been that cyber vulnerability testing is difficult on active vessels and platforms because of the limits on what can be achieved in short windows of refit time and in circumstances where the scope of testing is often artificially limited, since causing damage to

the systems is costly and would cause unacceptable impact on business operations.

This is where the Cyber-SHIP Lab and the University of Plymouth Maritime Cyber Threats Research Group come in. A world-first, hardware-based maritime cybersecurity research-and-development platform, the Cyber-SHIP Lab brings together connected ships' operational systems, configurable in vessel-specific layouts, as required. The lab can effectively become a physical twin of any ship's operational systems in terms of IT and associated operational technology.

Using this platform, the Cyber-SHIP Lab analyzes cyber-physical security vulnerabilities holistically – at the hardware, software and human levels – to identify, understand and mitigate threats. The team publishes research addressing real-world problems directly affecting the sector and works to develop practical tools and training.

The scope of research is not limited to vessels alone: port operations, ship and port



ABOUT THE AUTHOR

CHLOE ROWLAND is a former commercial litigation lawyer and the maritime cyber projects and key partner relationships manager at the University of Plymouth's flagship Maritime Cyber Security research projects, the Cyber-SHIP and Cyber Resilience of Offshore Wind Networks Labs.

interactions, autonomous and remote-controlled platforms are all considered, enabling the development of secure-by-design maritime systems across the whole supply chain. The research also has wider applications into offshore operations and transport infrastructure via a second research lab, currently under development, the Cyber

Resilience of Offshore Wind Networks, known as the CROWN Lab.

The Cyber-SHIP and CROWN Labs are pioneering capabilities, providing insights that cannot be gained in the virtual world through simulation alone, and are helping empower the maritime sector to improve global shipping security.

What this means for port authorities

Among the many services provided by the Cyber-SHIP Lab team are model-based frameworks for dynamic cyber risk assessment, cybersecurity auditing and test-bedding, policy development, advice on how autonomous and augmented reality technologies may impact cyber-physical risks, to name but a few. The team also provides holistic cyber-physical risk assessment for ports. Port operations are critical to global

supply chains and are increasingly the focus of well-funded, state-level bad actors wishing to cause widespread unrest and disruption. The Plymouth team has researched the cyber-physical vulnerabilities of a number of the world's busiest ports and demonstrated, via detailed and realistic scenario visualizations, how issues such as zero-day attacks,

ransomware, spoofing, phishing, and lack of cyber hygiene and social engineering may all be responsible for significant cyber vulnerabilities affecting ports.

There are also often unexpected vectors, which can have serious cyber implications, rang-

ing from geographic factors, through politics, down to silicon microprocessors, depending on specific port location and operations.

The team's research can also help quantify the econometric impact that a cyberattack could have on commercial activity, not only in the event your own port suffered a direct cyberattack, but also the knock-on effect that a cyber-based attack on a port on the other side of the world could have on your operations. The lab can provide a space for testing, demonstrations and training, enabling the adoption of maritime cybersecurity best

practices, helping to secure international supply chains, economies and protect seafarers' lives.

Riskocity and MaCRA

The Maritime Cyber Risk Assessment framework (MaCRA) has been specially developed by the research team and is a commercial service delivered through spin-out company Riskocity Ltd. A unique solution for maritime cyber risk assessment, MaCRA dynamically responds to changes made within ships' systems and to threats associated with voyage-specific route, port and cargo contexts to provide real-time, operation-specific cyber risk assessment.

This framework represents a real step-change in maritime cyber vulnerability assessments. ■

Get involved

If you would like to know more about the research of the The Cyber-SHIP and CROWN Labs and engage with the work the University of Plymouth Maritime Cyber Threats Research Group is doing, please get in touch with the author of this article, Chloe Rowland, maritime cyber projects and key partner relationships manager, at:

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FEATURE EU EMISSIONS TRADING SYSTEM

Competing efforts

The EU Emissions Trading System now takes shipping emissions into account, a chance for neighboring transshipment ports to gain importance when journeys are diverted to reduce costs

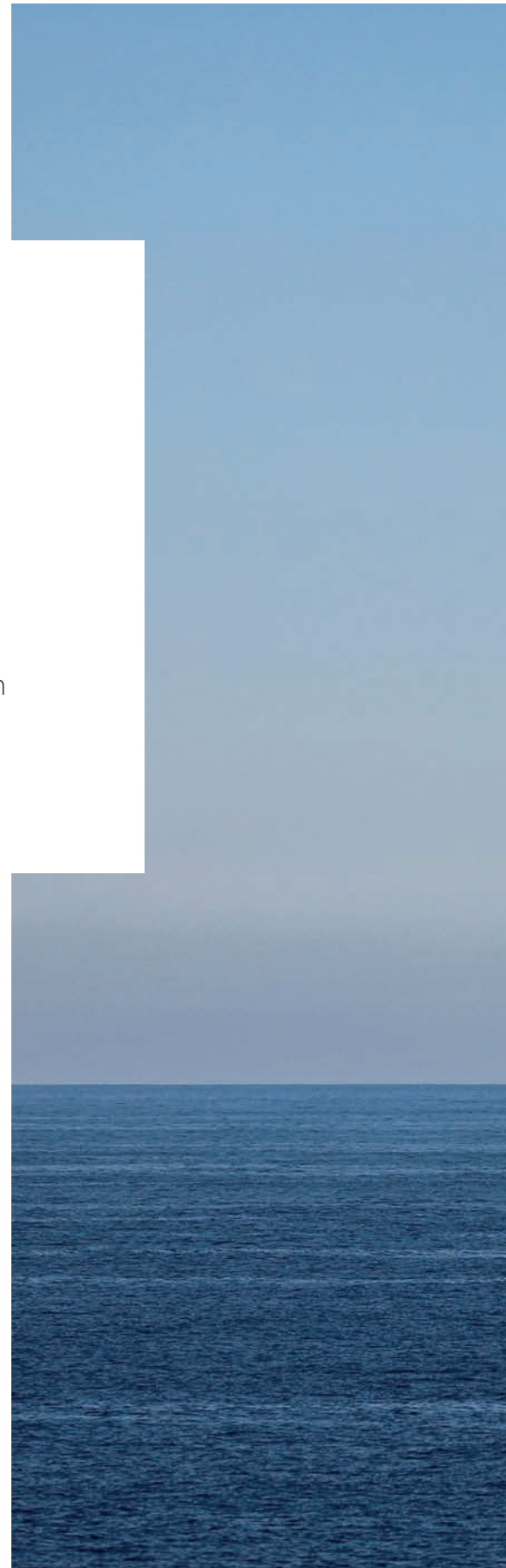
CHARLIE BARTLETT

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s world leaders' private jets descended on Dubai's fully air-conditioned Expo City for COP28 in December 2023, the time had come to face up to something just about everyone has been dreading: Scope 3 emissions. Taking account of the carbon and carbon-equivalent emissions from a company's own offices, even quantifying those from assets, such as bulk carriers and quay cranes, is relatively straightforward. This is in contrast to the likely multi-month slog of chasing emissions down the branches of the organizational chart, from company suppliers who may be uncooperative to open markets for raw materials, which can be completely opaque.

Nevertheless, the importance of Scope 3 emissions cannot be understated. Tesla Inc. recently quantified its own Scope 3 emissions, and the results were harrowing: 30.1 million metric tons of CO₂e, compared with just 610,000 metric tons emitted under Scopes 1 and 2. Ford Motors Co., which makes some electric vehicles but also a number of mega-pickups with V8 engines, has uncovered similar findings, with Scope 3 emissions representing about 97% of the total.

The great hope – and threat – of Scope 3 is to put an end to the practice of offshoring emissions, and to force companies to face up to their true footprint. The carbon-intensive process of assembling computers, for example, occurs





at factories in the Chinese cities of Kunshan and Chongqing, which use Chinese grid electricity and Chinese internal logistics, only to be transported to the US — where the only emissions their owners have had to worry about so far, is the electricity bill.

This phenomenon is known as carbon leakage, and it has allowed politicians from some of the world's biggest polluting nations to decry the world's factory as an emissions menace — often, in the same breath, refusing to reduce their own emissions until mainland China does. In fact, taking into account these emissions-at-a-remove is enough to upend the list of the world's biggest polluters. It doubles, for example, the UK's carbon footprint according to the WWF's 2020 Carbon Footprint report. This might be one reason why the inclusion of shipping in the EU Emissions Trading System (ETS), representing an early attempt to identify the true cost of carrying goods from one side of the world to the other, is so unpopular with the industry that exists to do it.

All the tea in mainland China

In line with criticisms in the past, the International Chamber of Shipping (ICS) said at the opening of its Shanghai office in September 2023 that a lack of global regulation — such as its own suggestions for a carbon-bunkering levy, and a research and development fund — left it open for an undesirable regionalization of emissions regulation. “A legal framework in maritime transport” was desirable, versus the “challenges and risks from other unilateral regulations,” said Simon Bennett, ICS deputy secretary-general.

Shipping giant CMA CGM SA has made an early attempt to quantify the effect of EU ETS on European shipping. Passing on the cost of ETS to its customers — assumed to be €90 per metric ton of CO₂ emitted — would generate a €37 per TEU surcharge for vessels calling between European ports, and a €25 per TEU surcharge on Asia-Europe trades. Intra-European reefer services were hit the hardest, at about €48.

“Some aspects of EU ETS law are yet to be finalized, such as the list of ports considered as transshipment ports that will have been published by the end of 2023, and may be reviewed every two years,” added CMA CGM.

Indeed, it is the thorny issue of transshipment ports that currently exercises officials at the European Commission. For example, if a shipment originating in Shanghai is unloaded in Rotterdam, the vessel operator pays 50% of the cost of the CO₂ generated throughout that voyage. However, if the container is transshipped outside the European Economic Zone, at Tanger Med for example, and carried henceforth to Rotterdam, 50% of the cost of this short voyage would be much more palatable.

This is exactly the sort of carbon leakage ETS is designed to prevent. Indeed, it is a mechanism like this one, albeit in reverse, which benefits European shipowners wanting to skirt EU scrapping regulations by selling to an intermediary.

“In an ideal world IMO would step up ... but they haven't yet”

AOIFE O'LEARY
CEO, Opportunity Green



Ports on the EU's periphery, therefore, stand to make incredible gains in transshipment work at the expense of their European neighbors. As far as the EU is concerned, these ports include Tanger Med, Algeciras' Moroccan counterpart, and Port Said in Egypt, both of which move 65% of their container cargoes in the form of transshipments on an annual basis.

However, the European Sea Ports Organization (ESPO) is unhappy with this, saying, in September 2023, that the EU is being too lenient. “While only a few neighboring ports are reaching the very high transshipment volume thresholds put forward in the legislation (65%), many ports and terminals around Europe have been or are building up transshipment capacity. The commission should therefore not only look at current volumes, but also consider the transshipment capacity in the different ports neighboring the EU.”

Incentivizing shipowners

There are a few eligible suitors, which could be well-served in winning over European shipping.



For example, Türkiye's Port of Mersin has 2.6 million TEU of capacity, about 10% of which is generally used for transshipment each year. But the port is growing, and Phase 2 of its East Mediterranean Hub project is set to be completed soon, adding another 800,000 TEU of capacity.

Although Türkiye generally fosters a collaborative stance with the EU as a potential, and hopeful, prospective addition, there can be no doubt that with more than 600 nautical miles between it and the Greek port of Piraeus, and only a small fraction of transshipment cargo at time of writing, it could stand to benefit considerably. In 2023, Hutchison Ports Ltd. announced it would be making a major investment in Ain Sokhna port, Egypt, adding a new 1.7 million TEU terminal, as well as a new terminal at the Port of Alexandria, for a total of \$700 million.

ESPO insists that moves are being made already by EU neighboring ports to grow transshipment capacity. "We see a real ramping up of investments in additional TEU capacity in ports and new terminals in neighboring countries, including investments realized by major shipping lines in these ports, and we also hear about first rerouting movements outside Europe."

Further afield, should the economics stack up, the Middle East could be in for a windfall, as well.

Recent research by Drewry has average port capacity utilization sitting at 59% in the Middle East in 2022, having fallen lower during the disruptions of 2021. Drewry notes that capacity is set to increase by 3.5% by 2027, with demand likely to trail behind at 2.3%.

DP World Ltd. has long positioned the Port of Jebel Ali, its flagship, as a gateway to Europe, and has for some years been locked in a battle with Khalifa Port in Abu Dhabi, which has seen both add more container capacity than there has, hitherto, been very much need for. As a transshipment hub, though, Jebel Ali is already a roaring success, with these volumes making up generally about two-thirds of its container traffic.

However, this could turn out to stand both ports in good stead. At time of writing, Jebel Ali has almost an entirely new terminal to throw at the problem, Terminal 4, replete with remote-controlled quay cranes and a high-tech BoxBay container stacking scaffold. It will likely be preferable to pay 50% of the cost of a voyage from one of these ports than from Shanghai.

A new world order

ESPO maintains that this will levy costs on EU ports that they can ill-afford. "This reinforces the idea that shipping lines, where relevant, are preparing their way out of the EU ETS maritime," said Zeno D'Agostino, chairman of ESPO. "We recognize the importance of the EU ETS directive and support its aim, but we continue to regret that this legislative framework disadvantages EU ports vis-à-vis non-EU ports, without the expected benefit in terms of emission reduction."

An added attraction of diversion is that vessels calling at non-EU ports will not be bound by FuelEU Maritime, meaning they will not have to worry about plugging into onshore power supply (OPS). The ESPO, too, calls for OPS to be made mandatory and tax-exempted, to ensure a return on infrastructure investment. This would help make it easier for shippers and shipowners to be held accountable, also in the name of social responsibility, and, potentially, fines for not plugging into OPS to be given out.

Putting moral arguments to one side, however, ETS' various loopholes certainly seem to add credence to ICS's argument that a scheme like EU ETS would only work if applied globally. However, in the aftermath of IMO MEPC 80, there seems little prospect of that.

"Hopefully there is such a levy – but it will depend on what happens to the revenues, as to whether it renders the ETS unnecessary," said Aoife O'Leary, CEO of activist group Opportunity Green. "In an ideal world, the IMO would step up and put in global regulations, but they haven't yet – what we have is a revised initial strategy, with targets that are not quite 1.5 degrees C," she added.

"ICS may put forward its own versions of a shipping carbon levy, but quite often these have not covered important details such as the lifecycle of fuels.

A lot of countries really need climate finance, and because shipping has barely paid any taxes, they are the perfect place to get it."

Either way, it seems unlikely that the revisions made to EU ETS will end after its entering into force in January. ■

In a significant move toward industry decarbonization, the EU in 2023 adopted legislative measures to the EU Emissions Trading System Directive for maritime transport emissions to be included in the EU Emissions Trading System (EU ETS) from Jan. 1, 2024. The move will have wide-ranging implications for the maritime industry, particularly on certain ports within and outside the EU.

The port of call

The Directive defines a port of call as “the port where a ship stops to load or unload cargo or to embark or disembark passengers, or the port where an offshore ship stops to relieve the crew.” There are also various exclusions from this definition, including stops for refueling, relieving crew – if not an offshore ship, ship-to-ship transfers, carrying out repairs, dry-docking, emergencies, sheltering from adverse weather and notably also “stops of containerships in a neighboring container transshipment port” (NCTP). The EU has now published an implementing act (Implementing Regulation 2023/2297) listing East Port Said in Egypt and Tanger Med in Morocco as NCTPs. A vessel stopping at these ports shortly before or after entering EU ports will not be able to count their stop as either a beginning or end to the vessel’s voyage. This may have the effect of extending the length of a voyage covered by the EU ETS and, in turn, the quantity of emission allowances that need to be surrendered for the ship’s emissions during the voyage in question.

The designation of NCTPs may have the effect of decreasing vessel traffic at NCTP ports and potentially increase traffic in other non-EU ports in efforts by operators to minimize the length of voyages covered by the EU ETS. However, as noted below, the EU will monitor and review such potential evasive activity.

Furthermore, Articles 12(3-d), (3-c) and (3-b) of the Directive allow member states (by making a request to the EU Commission) to take no action against shipping companies in respect of emissions incurred for certain

voyages to/from certain ports and/or by certain vessel types. These exclusions can apply until Dec. 31, 2030.

These exclusions appear targeted to cover lifeline services operated in remote regions and it remains to be seen how – if at all – these provisions affect port traffic. Operating vessel services to other ports in remote regions not covered by the exclusions may prove more expensive due to the additional costs associated with EU ETS compliance – including but not limited to purchasing emission allowances – which may make calls at ports covered by the exclusions more attractive. Further, as the exclusions are subject to member state discretion, they may be utilized to different extents in different countries.

On the horizon

The Directive itself includes a requirement on the EU Commission to review and report on the effectiveness of the EU ETS provisions for maritime emissions and

considering amending these in light of other global commitments, such as a potential IMO market-based measure on emissions reduction.

Under Article 3gg of the Directive, as part of this requirement to review and report, the EU Commission must consider the risk of an increase in evasive practices. In particular, the Commission must monitor the risk of a “shift of port hubs to ports outside the Union”, which may occur for reasons explained above. The EU Commission will report biennially from 2024 onward and will propose measures “to ensure the effective implementation” of the Directive, taking into consideration in particular possible increases in transport costs, shifts of



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ALESSIO SBRAGA
Partner

Wake-up call

With the EU Emissions Trading System entering into force, Johanna Ohlman, Violet O’Gorman and Alessio Sbraga at HFW, look at its implications for ports

transshipment hubs and changes in port traffic.

Stakeholders should therefore remain cautious if planning strategically or long term to use alternative ports to minimize EU ETS costs, as these practices will be monitored and may be subject to more stringent regulation in future. It is therefore clear that, going forward, the impact of the EU ETS on the maritime industry will be far-reaching. ■



Closing the gaps

With upgrades to port infrastructure needed, HDR Inc. considers investments in resiliency, particularly to mitigate sea level rise, and a focus on digital design vital

Q&A

Q: Please give us a brief introduction of your role and how you interact with ports

A: I serve as HDR's west region maritime lead, working with ports and the wider maritime and freight industries across western North America. Before joining HDR, I served for a number of years as the chief harbor engineer and managing director for the Port of Long Beach, giving me a strong understanding of the operational as well as infrastructure needs of port facilities.

HDR's work with ports is built upon our core value of listening to our clients and understanding their needs at a deep level. We then match our expertise, which covers every aspect of maritime facility planning and design, both waterside and landside, to the requirements of each client.

Q: How do you see the current state of the port infrastructure market in terms of market potential, including bunkering and digital infrastructure?

A: A lot of port facilities are reaching the end of their life, which represents a large need for continued upgrades and rehabilitations. In the United States, the 2021 Report Card for America's Infrastructure compiled by the American Society of Civil Engineers gave the nation's ports a B-minus grade, noting significant needs for dredging and landside infrastructure improvements. The good news is that recent funding from federal and state sources plus private sector investment is supporting much-needed improvements, particularly in resiliency and with projects focused on mitigating sea level rise. We are also seeing innovations such as a bigger focus on digital design. New digital technology is evolving quickly, and digital asset management tools can help avoid or defer costly repairs and expensive downtime.

Across the industry, many different options for bunkering and fuel alternatives



DOUG THIESSEN
West region maritime lead,
HDR

are being studied to reduce carbon emissions and it is difficult at this stage to determine, which will emerge as the accepted solution. In recent work in Hawaii, for instance, we have helped explore different biodiesel bunkering options that may be used on the mainland. The best practice for each port will likely be highly dependent on geographic location, transportation modes and requirements.

Q: What do ports need to do now to prepare for a changing infrastructure landscape?

A: Ports understand their existing clients and customers very well, but it is also important for them to explore new industries and technologies, such as offshore wind and zero-emissions equipment. Planning studies and analyses of their operations can help ports make the most of their infrastructure and growth opportunities.

Embracing new technology such as electrification will require added forethought during facility upgrades and new training for the ports and maritime workforce, but this will also lead to improved efficiencies and productivity. At the Port of Jacksonville, Florida, for instance, a needed wharf rehabilitation not only strengthened the

structure, but also added new electrical infrastructure to support the conversion to electrified cranes, as well as provide cold ironing services to ships in port.

Q: What advice can you give ports to close the gaps in infrastructure?

A: Ports are amazing, complex facilities, but no port can do it all. It is important that ports identify their niche – containers, liquid bulk, break bulk – and excel. Expand strategically, deepen industry connections, continually learn and improve and secure funding tailored to your operations.

Moving forward, a collaborative effort among ports, consultants, industry and academia is crucial to address challenges such as technological disruption and climate changes. One way to facilitate this is through improved data sharing. In a competitive and cybercrime-ridden world, information exchange is key to port success and innovation. After all, a rising tide lifts all boats.

Q: How would you like to further cooperate with ports in future?

A: As a full-service firm with over 12,000 employees and hundreds of offices, HDR has worked with ports on almost anything they need. Our matrix organization allows us to tap into a broad range of global experience that crosses different markets like power and energy, industrial, water resources and more to provide integrated solutions. Similarly, our diversified service capabilities streamline our ability to deliver the expertise needed to move projects forward efficiently and effectively. From small to large, coastal to inland, container to cruise, our experts have experience with every type of port. Our driving philosophy is to be a trusted partner, to listen and understand current needs and work collaboratively to achieve port goals. ■



Paul Van Tigchelt

With support of the IAPH, Belgium is leading proposals at the IMO to target drug trafficking. Belgium's Minister of Justice and the North Sea, Paul Van Tigchelt, told *P&H* why this is a matter close to his heart

FELICITY LANDON

Belgium's drug trafficking is "an even bigger problem than terrorism," reported the *Financial Times*. The illicit drug trade at the Port of Antwerp is "fueling a crime wave," reported France 24. Belgium has become "Europe's port of call for cocaine," reported the European Union Parliament magazine.

It is not difficult to understand the motivation behind Belgium's submission to IMO Maritime Safety Committee 108, scheduled for May 2024.

The proposal is to make illegal actions part of the respective impact assessments and ensure a robust global framework and level playing field.

Do the headlines accurately reflect the situation in Belgium? Paul Van Tigchelt, appointed Minister of Justice and the North Sea in October 2023 after the resignation of Vincent Van Quickenborne, said to *P&H*, "Unfortunately, the facts don't lie. And it will get worse before it gets better. But that it will get better, I have no doubt. We are taking measures in securing our ports and shipping sector. We are seizing record amounts of cocaine. We are convicting hundreds of drug criminals because we managed to hack their SKY-ECC communication platform. And the rollout is gaining momentum. If we can undermine the profit model, we can make a difference."

He explained, "Antwerp is the second-largest port in Europe. There is a lot of drug-related violence. We want to reclaim our ports, and for this, we must use all possible means."

However, he emphasized that shipping is "a global phenomenon". Therefore, "We must be cautious of the waterbed effect. Collaboration between ports within the EU but also, and especially, internationally, is important to maintain a level playing field. By combining the competencies of justice and the North Sea policy, I can work on all fronts on success rates, apprehension rates and conviction rates."

Fighting the good fight

He sees a "unique opportunity" that he is seizing with both hands, seeking to finish the job started by his predecessor. Belgium's proposal is a flexible instrument

to address various threats simultaneously, he said. "You conduct a risk analysis and, based on that, create a security plan to prevent the risks from becoming reality. Belgium is going further, expanding the law to inland vessels and companies with an impact on maritime security, such as shipping agencies. The latter even requested this, according to the minister. "They too, are faced with infiltration from the environment to obtain sensitive information. They also want to put a stop to this."

Van Tigchelt said to *P&H* that he always wanted to fight injustice and make a difference. He studied law and ultimately became a drug magistrate 20 years ago, "constantly engaged in the fight against internationally organized crime and drug trafficking in particular." When he was appointed a drug magistrate, 5 metric tons of cocaine were being seized annually in Belgium.

In 2022, that figure was 110 metric tons.

Securing port operations

Shipping is crucial in contributing to economic prosperity and progress and allow cities such as Bruges and Antwerp to evolve into what they are today, said Van Tigchelt. "However, due to its unique characteristics, shipping is also very vulnerable to various threats. The import and export of goods have been a source of various types of small- and large-scale crimes, such as smuggling, theft and human trafficking." He added, "Ships are in an unprotected environment during their journey, subject not only to the laws of nature but also serving as a target for those with malicious intent, directed at both the cargo and the ship itself."

The changes proposed are simple — to expand the definition of unauthorized action.

"In the risk analysis, in addition to espionage, sabotage and terrorism, we now also consider the risk of drug trafficking, human smuggling or trafficking in wildlife. The necessary measures against these

risks must then be included in the security plan. The fence that stops a terrorist can also stop a drug courier. The camera that detects a human smuggler can also spot a drug smuggler. The best rules are simple; we don't need to reinvent the wheel."

"A message to the underworld that the upper world no longer tolerates being exploited for their financial gain. That the private and public sectors are going to collaborate. From the contacts we have, it is evident that more and more countries are looking at Belgium and internally evaluating what they can do better themselves. That gives me hope."

Belgium is actively engaging with key source and transit countries, having inked agreements with Panama and Costa Rica to prevent drug shipments. The country is part of an

European anti-narcotics coalition and collaborates with the US.

It has also reached an agreement with the Netherlands and five major shipping companies — Mediterranean Shipping Company S.A, Maersk A/S, Hapag-Lloyd AG, CMA CGM and Seatrade — focused on combating vessel misuse. "However, the various initiatives must be coordinated. For example, smart seals are an important weapon in the fight but there are many different types in the field."

In together

Above all, the fight against organized crime must be a shared between public and private sectors. "I am optimistic that the private sector no longer sees this as solely a government problem but is genuinely willing to collaborate, engage in dialogue and take the necessary initiatives."

And he is grateful for the support from the IAPH. "By having the IAPH as a co-sponsor, our proposal to the IMO has the support of 177 ports and 174 port-related companies in 84 countries. The outreach is enormous, and I want to thank the IAPH for that support." ■

"The best rules are simple: We don't need to reinvent the wheel"

INTERVIEW PAUL VAN TIGCHELT

Photo: Wouter Vervaeck

Going steady

Reduced demand makes for improved port efficiency in US ports, while Southeast Asia further emerges as important supply chain partner taking on more cargo

TURLOCH MOONEY, MAX JANTHUR

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he 2023 third-quarter update of the S&P Global Port Performance data focusses on the main US-Asia trade lanes and ports.

During this time, container moves on ocean-going ships declined in all US regions. The average call size, and the quantity of containers loaded and discharged per individual ship call declined by more than 26% at main ports on the US West Coast compared with the third quarter of 2022 – a trend seen in all regions. At the same time, overall vessel calls have been on a steady climb since the beginning of 2022.

In the US, this drop in demand and call sizes also drove further improvement in operational performance during the same time. At Gulf ports, for example, port-moves-per-hour (PMPH), the quantity of containers moved per hour a ship spends in port, increased by nearly 66% year over year in the third quarter of 2023. At the main East Coast ports, PMPH increased by more than 90%. Countering this improved efficiency was a small increase in median export container dwell time at the main East Coast ports. This is the amount of time a container remains in the terminal yard before getting picked up by the importer or before being loaded onto a ship for export.

Yard productivity, however, improved with West Coast ports, decreasing 30% and 45%, respectively, in median import and export container dwell time.

Consequently, ship waiting time continued to fall on all US coasts, with the biggest year-over-year decline at East Coast ports at 78%.

On the other side of the world

In Asia, performance at Chinese ports continued to improve. The main gateways showed a collective improvement of 30% in PMPH compared with the third quarter of 2022.

Ports in Southeast Asia registered growth in container moves on ocean-going ships as the region expands its position as a sourcing destination in global supply chains. Especially, the ports of Chattogram in Bangladesh and Tanjung Perak in Indonesia noted significant growth in container moves. Overall, operational performance continued to improve at the main Southeast Asia gateways with PMPH up by 20% year over year, and yard productivity was ahead of Chinese counterparts during this quarter.

Improving productivity and emissions

Port productivity is directly linked to the decarbonization agenda of maritime. Ships waiting to berth generate excess emissions that could be reduced by quicker berth access.

In 2021, international shipping emissions increased almost 5% compared with 2020. The global port congestion that year was one of the main causes of that steep increase. If everything were to stay the same, the industry could be responsible for 15% or more of global emissions by 2050.

The IMO targets are a 40% reduction in carbon intensity of international shipping by 2030 compared with 2008 and to reach net-zero greenhouse gas emissions by or around 2050. That reduction will come from a mix of design, economic and operational solutions, including optimizing vessel speeds, which depends on better network and port call efficiency to reduce waste in the time for vessels to call at ports.

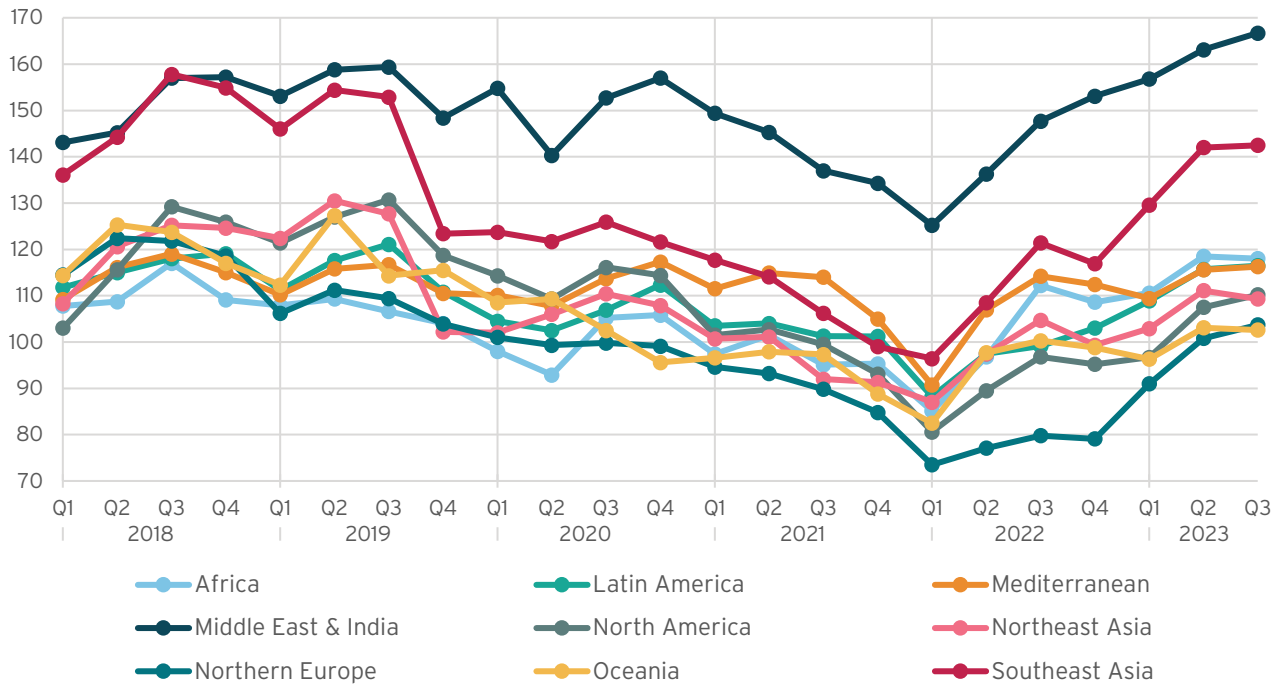
Absence of shared information is one of the primary causes of waste in port calls. Digitization is the antidote to this; it is the key to better efficiency and to the ultimate and highly challenging goal of system-wide just-in-time vessel arrivals. Port operations are very complex and produce large amounts of data. Digitization can ensure these data are recorded and utilized effectively, creating access to critical information at the right time, which in turn drives better collaboration and better synchronization of efforts between the different stakeholders in the port call ecosystem.

There's a direct relationship between port supply chain delays. Conversely, there's a clear link between efficient gateway ports and terminals and efficient supply chains. The supply chain benefits and the reduced risks for the global trading economy are also very evident.

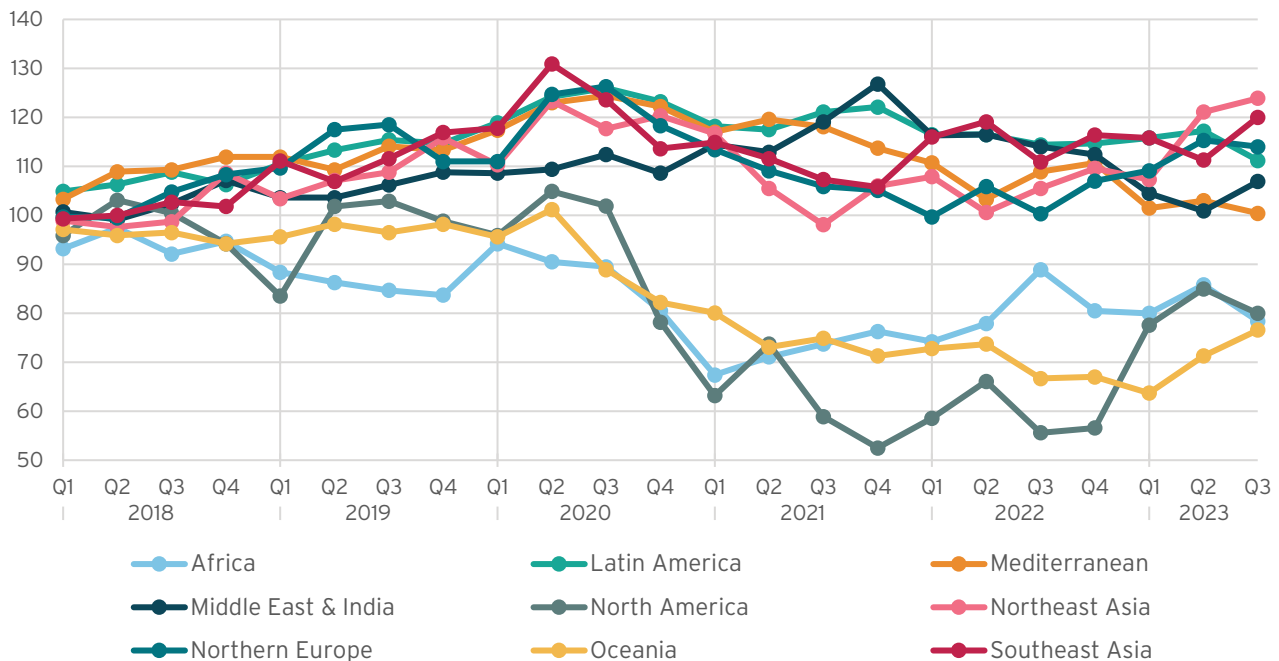
Reducing maritime emissions is an important part of global emissions reduction, especially considering the delays and congestion in ports that we saw in recent years. Making global liner operations more efficient, particularly port calls, is one of the key levers to do that. To achieve these goals, greater focus is needed on performance, including measuring, tracking and benchmarking port call processes. Industry digitization can drive these improvements and enhance collaboration and coordination among the different stakeholders. The good news is that the building blocks are in place and these goals are achievable. ■



Vessel calls per region (index-based reporting with Q1 2017 = 100)



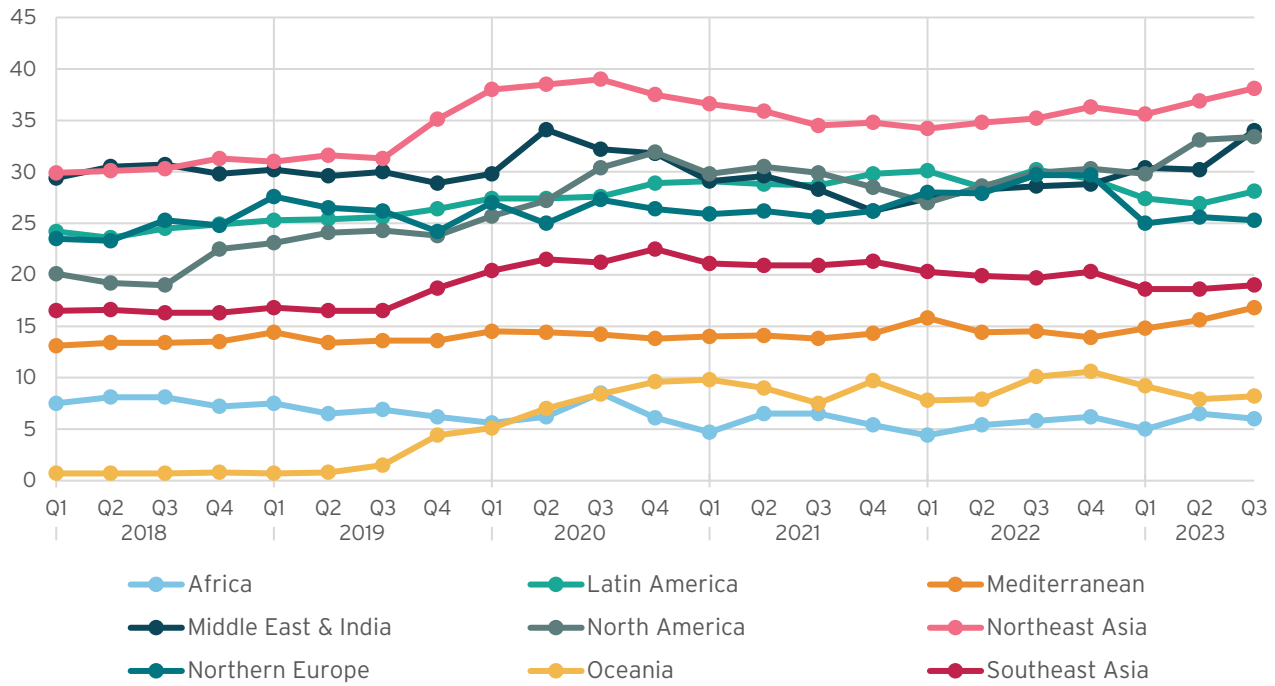
Port-moves-per-hour (total moves divided by port hours) per region (reporting quartile development, index-based with Q1 2017 = 100)



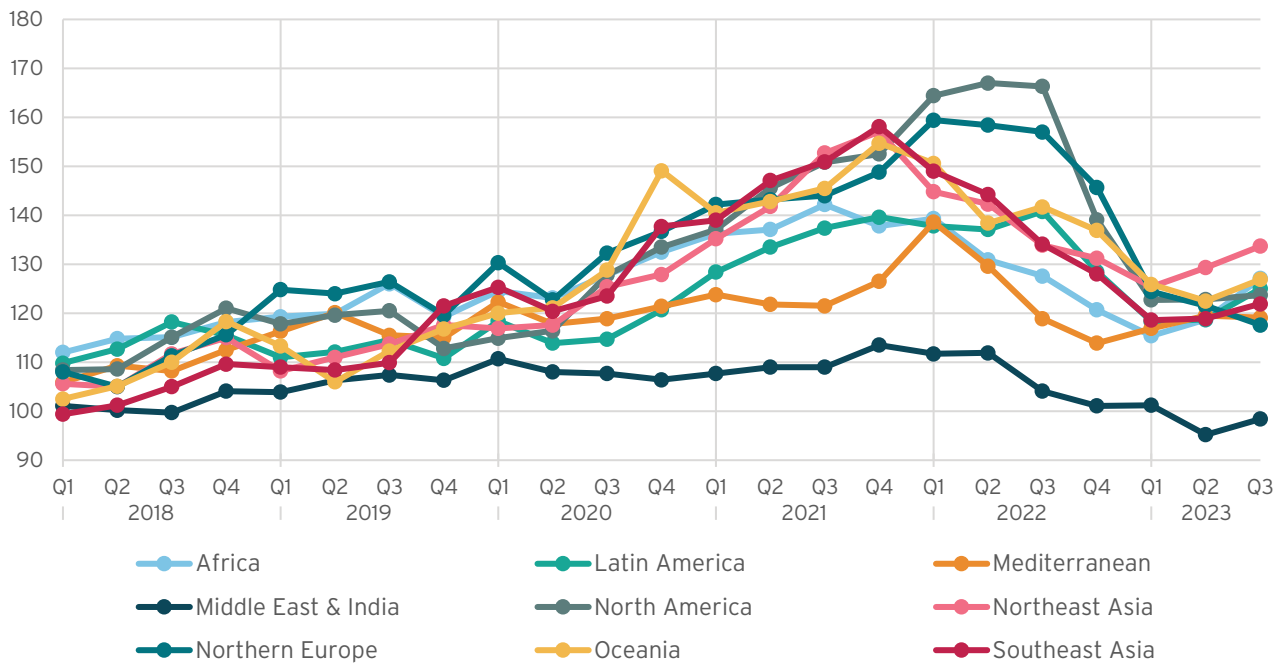
The berth-moves-per-hour (BMPH) boundary was reduced from 15 to 5. Calls with BMPH below 5 are now eliminated, instead of 15.



Evolution of vessel size per region (reporting share of vessels 8,501+ TEU in total vessel calls, compared with Q1 2017)



Evolution of call size per region (reporting quartile development without call size band reference, index-based with Q1 2017 = 100)



The index is created using the average regional values per quarter (total moves/total calls).



PADDY RODGERS

Director, National Maritime Museum, Greenwich, UK

THE COLUMN

Offering the gift of kindness

As the year closes and the next looms into the calendar, one cannot imagine what that year might bring.

Another COP at which national promises accumulate nearly as fast as greenhouse gas emissions? A tanker market that looks set to go from strength to strength fueled by a low order book and increased ton-miles owing to sanctions continuing to disrupt trade. Container and bulk markets looking overbuilt for a recessionary environment and gas markets that really look as if their time has come. None of the shipping markets look like 2024 will see any meaningful shift in emissions from their operations or in the fuel types of new buildings; the very fact they are built has already contributed more carbon than their efficiencies will save during their working lives.

With treasury yield curves inverted, the market watchers are eagerly looking at employment figures and bankruptcies to see if the global economy is in an old-fashioned recession. However, the past is not necessarily a guide to the future. Take for example, any prediction based on the past would have suggested the Russia-Ukraine conflict to be short and successful, rather than prolonged and deadlocked.

The Hamas-Israel war sparked expectations in 1973 by the subsequent oil embargo. A consequent recession followed for shipping that lasted three decades.

The world has, however, moved on. Russia is not the cold war sole superpower outside of the US, as it is now junior to China and buys its military hardware from Iran.

Oil supply no longer sits entirely with OPEC nor does OPEC want to leave oil unsold with so many competing energy forms under development.

Therefore, a tripling of the oil price and a three-day week or inflation at 20% in the west failed to materialize and are unlikely to come now.

Nevertheless, tension from these two conflicts will follow international relations and make resolution of key issues around implementation of measures necessary to halt global warming even more difficult to achieve.

The year 2024 will also see US elections,

which will be driven once again by fear of immigration, just as it has been seen in the elections in the Netherlands.

In none of these discussions will immigration be discussed in terms of global warming, water shortages and crop failures. Right now, the similarity is in crudely simplistic expressions

of complex problems that manifests in public and private conversations, with effectiveness of democracy called into question.

Nowhere does this seem more apparent than in the US as the hopeful candidates look hopelessly ill-equipped for the challenges they will face.

With Thanksgiving and Black Friday behind us and the festive period around, it would be a very good time to make peace and offer the gift of kindness to each other. ■

“However, the past is not necessarily a guide to the future”

ABOUT THE AUTHOR

PADDY RODGERS is the director of the National Maritime Museum in Greenwich. Before taking up this role, he led tanker company Euronav for almost two decades.





PROJECT FOCUS ANGOLA

Intermodal movements

A leading oil producer in Africa, Angola is expanding and modernizing its ports and railway networks as part of a wider economic plan to diversify foreign exchange trade and end dependence on oil revenues

SHEM OIRERE

Angola, located in southern Africa along the Atlantic Ocean, is currently one of the largest recipients of massive foreign direct investment (FDI) within the African continent with US aid estimating investment in 2022 at \$6.2 billion, more than the \$4.4 billion for South Africa. According to the Department for Business and Trade, the United Kingdom's FDI is estimated to have reached \$2.35 billion in 2021.

Overall, Angola anticipates a positive economic growth of 3.2% in 2023, a trend that started in 2022 when growth was estimated at 2.6% after nearly five years of recession, according to the US Department of State.

Pictured: Maritime Port Customs, Luanda, Angola, Africa.

Photo: Getty Images/Frederico Santa Martha

While the International Monetary Fund said there was a decline in both oil prices and Angola's production volumes in the first half of 2023 that led to lower export proceeds and oil revenues, the country is keen on leveraging the 2018 private investment law to woo more investment in the expansion and upgrading of its transport sector to improve business opportunities.

Currently, ports in the country struggle with obsolete infrastructure, clearance of cargo taking, as well as loading and unloading of exports and imports taking too long.

Angola reported an increase in oil revenues as global prices spiked to more than \$100/b, far above the government's conservative price of \$59/b for 2022, owing to Russia's invasion of Ukraine earlier that year.

The subsequent ban of Russia's oil and gas exports resulted in some buyers halting procurement of additional stock while others got caught up in panic-buying and pushing up prices.

The country is the second-largest oil producer in Africa after Nigeria, with an output of approximately 1.16 million b/d. The petroleum industry accounts for up to 75% of the country's total revenues. Production of natural gas from associated oil is estimated at 17.9 Bcf.

Despite the high oil revenue earnings, the government is moving ahead with its plan of reviving other economic sectors such as iron ore trade under the national economic diversification agenda that aims at more private sector investment and efficiency in public asset management.

For instance, Angola, through a public-private partnership, is implementing an investment program that entails the integration of its ports with the railway network to support the anticipated increase in exports and import volumes in the medium-to-long term.

Reviving the iron ore trade

Japan, which has been active in Angola since 1966 through the Japan Bank for International Cooperation (JBIC), leads investments into those upgrades of maritime infrastructure.

In early 2019, Japanese Toyota Group's trading arm, Toyota Tsusho Corporation, signed a two-component contract for the third phase of the expansion and modernization of Angola's third-largest port, Namibe, and the rehabilitation of the Sacomar export container terminal close by.

The \$700 million project, part of an undertaking by Angola to establish logistics bases in the southern part of the country, involves construction of a new jetty and development of the back land at the Sacomar iron ore export terminal and the expansion of the Namibe container terminal, including dredging works as well as supply and installation of container cranes.

"The expansion of Port of Namibe and the rehabilitation of Port of Sacomar in southern Angola will enable the country to diversify its economy, reducing its dependency on oil," said Toyota in a statement. Angola has four other ports across its Atlantic coast including Luanda, Cabinda, Lobito and Soyo, which a World Bank report says are not posing any competitive threat to other ports along the Atlantic coast

such as Walvis Bay port in Namibia in the short term "due to obsolete infrastructure and inefficiencies".

The congestion at the Angolan ports leaves Walvis Bay port in neighboring Namibia as the main gateway for Angola's exports and imports. According to Nampor, Namibia's national port operator, at least 2% of the Walvis Bay port transshipment cargo is for Angola.

Toyota said the expansion of the port, which was built in 1958, and reviving of the container terminal, "will create a strategic port in the southern region of Angola enhancing agriculture, agro-industry, minerals, timber, oil and tourism in the area".

Rebuilding effort

Much of Angola's critical transport infrastructure was destroyed during the civil war between 1975 and 2002, including the destruction of a large part of the Sacomar iron ore export terminal as well as the closure of the Moçâmedes steel plant that relied on the Cassinga iron ore mine as source for its product.

Sacomar export terminal previously handled exports for granite, iron ore, marble and manganese until the 27-year

civil war devastated the mining sector, decimating output volumes and pulling down export levels forcing Angola to transform it into an oil and gas export gateway.

Angola now has moved forward with plans to revive the iron-producing Cassinga mine to the southwest, one of the largest iron ore reserves in the country, which is connected to Namibe port by the Benguela railway.

"There are proven reserves and production will resume soon but the only way we can export the commodity is through the Port of Namibe," Angola's minister for transport Dr.

Ricardo de Abreu told media previously.

He said the entry of Toyota Tsusho into the Namibe and Sacomar expansion and modernization project is good as, historically, "Japan was one of the main importers of our iron."

Cassinga iron ore mine is now part of the integrated iron-steel project by Turkish firm Töşyali Holding. The planned iron project also includes construction of a new factory to process the iron ore into steel.

The Turkish steel company already commenced operations to convert iron ore into steel in January 2020 and was granted the right to use the mining port Sacomar under construction in the Namibe region.

It said in 2021, the company was accelerating its investments in Angola "to operate iron ore mines in the Cassinga region, which has an important place in Angola's history."

Töşyali also won the right to use the 500 km railway between the iron ore mining site and the port.

"With 2 billion tons of iron ore reserves, this project will start with 4-5 million metric tons per year (MMt/y) and we aim to reach 10 MMt of iron ore processing capacity in a short time," Töşyali said in its 2021 sustainability report.

Toyota therefore works on the Namibe port, which is expected to play a strategic role in exporting the anticipated surge in mineral and agricultural exports as well as serving

"The only way we can export the commodity is through the Port of Namibe"

DR. RICARDO DE ABREU
Minister of Transport, Angola

neighboring landlocked countries in Southern Africa such as Zambia, Zimbabwe and Malawi.

Toyota Tsusho added that this is its biggest project in Angola and describes the Namibe port, which has an 875-meter berth and maximum permissible draft of 10 meters that gradually decreases toward the inner bay, as a facility with serious challenges constraining its performance such as lack of ancillary quay facilities for container transportation such as a shallow quay water depth that limits container ships to those with small-scale capacity.

“This project, in which Japanese public and private sectors will work together to develop ports in Angola, has great significance and is expected to strengthen the bilateral relationship between Japan and Angola and be a milestone for Japanese companies to win business opportunities in Africa,” said Nippon Export and Investment Insurance, which is providing insurance for the private sector loans backing the project.

Continued involvement

Already between March 2018 and May 2019, Japan was involved in the first and second phases of the Namibe port expansion under a contract by TOA Corporation, a specialist manufacturer of sound equipment for commercial and professional use as well as video equipment such as security cameras.

“The construction work improved the efficiency and safety of various types of work being carried out in the port, such as increasing the volume of cargo handled, shortening the container handling cycle of loading and unloading work and reducing the number of accidents when vessels are berthing, enabling this project to contribute to the development of the entire country,” Toa Corporation said after completing two phases of the Namibe port project.

Phase three construction work was initially slated to commence in 2022, approximately three years after the effective date of the contract.

“It will be able to compete with the other major ports in Southern Africa, like Walvis Bay in Namibia and Cape Town in South Africa,” a statement by the Angola Ministry of Transport said.

Getting on track

Moreover, Angola has previously expressed interest in develop a 200 km railway line to Namibia to “be able to move cargo by rail from Cape Town to the Port of Namibe quickly and cheaply”.

Financing for the comprehensive Namibe bay project has been provided by both Japanese and South Africa lenders with JBIC and Sumitomo Mitsui Banking Corporation providing 85% of the entire project funding.

Part of the financing will be allocated to the procurement of construction-related works and equipment such as container cranes, work ships, jetty material and steel material equipment from Toyota Tsusho Corporation and Toa Corporation for the Namibe port expansion and Sacomar export terminal rehabilitation.

“These projects will contribute to maintaining and enhancing the international competitiveness of Japanese industry by promoting the export of port-related equipment to the country by Japanese companies,” says JBIC.



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The Development Bank of Southern Africa (DBSA), a development finance institution wholly owned by the South African government, is providing the remaining 15% of the project costs mainly as an “upfront risk capital” to unlock the 85% funding from the Japanese funding.

Namibe port anchors the 905 km, 1905-built Moçâmedes Railway with 56 stations that run between the port and Menongue. The railway line used to transport up to 7 MMt/y of ore during the pre-civil war years.

Additionally, Angola had indicated plans to connect the Namibe port transport system with that of Luanda and Benguela railway lines through the construction of three additional 10,000 km of railway lines.

In 2017, the government announced a project to connect the Benguela and Moçâmedes railways lines with Russian companies, Rail Standard Service and Fortland Consulting Company, signing an agreement with the government to invest in the project.

In the 2022 national budget, the government allocated \$155 million to support the development of the rail sector and other associated economic sectors.

The new phase of the Namibe port and Sacomar mineral export terminal project is expected to be a major boost to the drive by Angola to transform itself into a modern and vast logistics platform for ease of trade within the southern Africa region as well as to support the country’s own domestic economy and fast-track its ambitious national economic diversification program. ■





More than hot air

The maritime industry zoomed in to discussions around emission reduction measures during the two-week long COP28 in Dubai in December 2023. Following the IMO's decision in June 2023 to reduce shipping emissions to net zero around 2050, debates in Dubai focused on how to deliver on this goal.

The difference between intention and reality was somewhat shown by mining magnate turned environmentalist Andrew Forrest, head of Fortescue Metals Group, who wanted to dock one of the world's first ammonia-powered ships, the industrial supply vessel *Green Pioneer*, in Dubai Harbour Marina, but was stopped as the port did not allow this. The ship, with a retrofitted four-stroke engine can run on a blend of ammonia and diesel, but was run on vegetable oil for the trip from Singapore to Dubai, according to Forrest.

During COP28, Forrest met with Sultan Ahmed bin Sulayem, chairman and CEO of DP World to discuss making changes to allow ships running on alternative fuels to call in Dubai as part of this mission to talk to global port authorities.

A Fortescue spokesperson told *P&H*, "The Dubai Maritime Authority was welcoming of the Fortescue *Green Pioneer* coming into Dubai for COP28, however under international regulations there are restrictions on the use of ammonia as a marine fuel in port areas and the work to gain consent from a global network of ports is continuing. International regulations need to change so ammonia is welcomed as a viable and safe marine fuel. We intend to showcase the *Green Pioneer* in other ports to highlight this issue to accelerate the adoption of ammonia as a safe and carbon free fuel."

The IAPH has been working on a Port Readiness Level Tool for Alternative Fuels together with the World Ports Climate Action Program to support ports in their transition and allow ships running on alternative fuels to call at berth. "It is a communications tool which aims to provide transparency about the capacity of ports to be alternative fuel ready", said IAPH managing director Patrick Verhoeven. "This covers all relevant aspects, including safety procedures." The tool is expected to be launched in 2024. ■

Pictured: An activist dressed in a robe imprinted with the picture of forest fire performs at the UNFCCC COP28 Climate Conference on Dec. 11, 2023 in Dubai, UAE.

Photo: Sean Gallup/Getty Images



PERSPECTIVE TOWAGE SECTOR

Cultivating global partnerships

Port communities occupy an important and influential position in the global maritime industry. This position offers organizations within these communities many opportunities to influence change across the sector, through decisions they make to invest in and support developing low-carbon technology and fuel supply chains, for example.

For example, operators of small vessels in ports face minimal regulatory obligations to reduce carbon emissions from their operations, thus making a modest contribution to global change. While support vessels frequently mobilized in ports are required to reduce their emissions of local pollutants, such as nitrogen and sulfur dioxides, there is currently no global regulation supporting their decarbonization. By taking steps to reduce emissions locally, the port community can positively impact the industry.

Contrary to this, the pathway to decarbonization for vessels over 5,000 gross tonnage is well-defined.

The IMO has set out clear targets and ambitions for how decarbonization will be realized for the global fleet. Its revised strategy aims to deliver net-zero emissions near to 2050, and for the carbon intensity of shipping to decline rapidly. By 2030, shipping's regulator wants to see the industry obtaining a minimum of 5% – and ideally 10% – of its energy from near-zero greenhouse gas emissions technologies and fuels.

One theme across the decarbonization strategy is that the IMO sets out minimum targets and asks the industry to surpass them. The minimum goal is a 20% reduction in total GHG emissions by 2030 compared with 2008, but the IMO challenges the industry to strive for a 30% cut. In the 2030s, when the industry will benefit from wider availability of decarbonization technologies, the IMO encourages the industry to go beyond the indicative outlined checkpoints. But again, the IMO's GHG reduction strategy only applies to ships above 5,000 gt – leaving a gap in the market in terms of regulation.

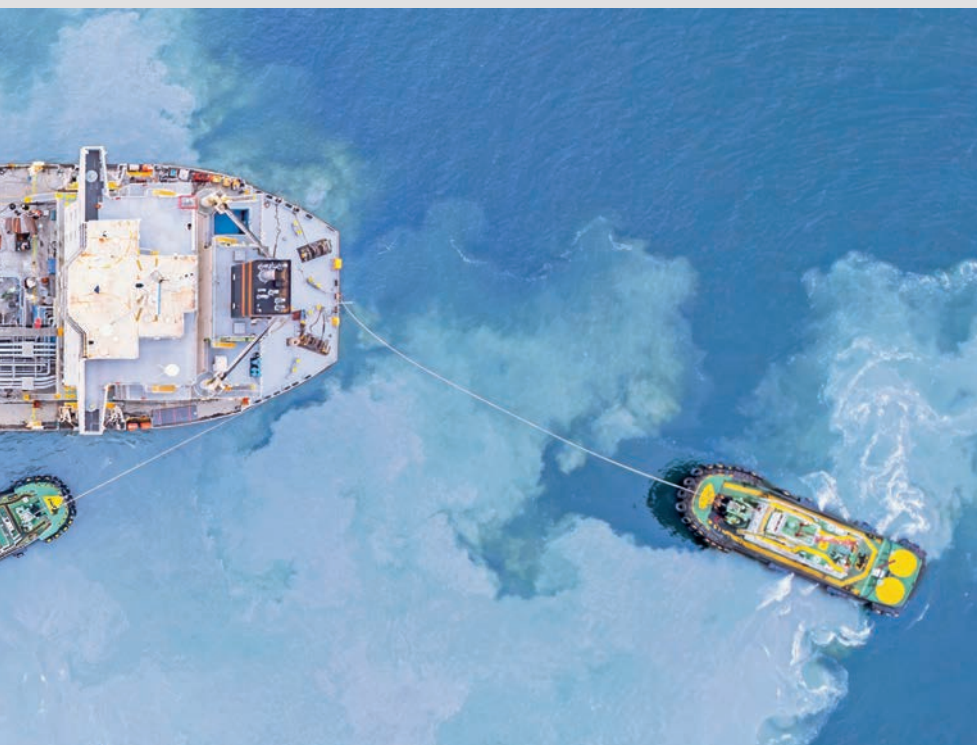
Small but mighty

The status quo means that operators of smaller vessels in the port environment – towage operators, service vessels and other workboats – operate without international constraints. There is no global mandate compelling these operators to address the carbon emissions from their activities.

While the EU requires vessels over 400 gt entering its ports to provide monitoring, reporting and verification (MRV) data on their carbon emissions, there is no existing plan to integrate these vessels into the Emissions Trading System that relies on the vessel MRV data.

Port communities should not allow this regulatory gap to hinder their progress in decarbonization and engagement with the energy transition. The towage sector is an important energy off-taker in ports and from this perspective, can play an important role in supporting efforts.

The towage sector can, therefore, be a potential anchor client for many developers



ABOUT THE AUTHOR

GARETH PROWSE serves as the head of decarbonization at Svitzer A/S, a global towage operator that is part of A.P. Moller-Maersk A/S. In this role, he leads the company's global sustainability strategy. Prowse, who joined Svitzer in September 2021, holds a PhD from the University of Plymouth, UK.

of low-carbon fuels and technologies. This means that towage operators are well-placed to support developing supply chains for these technologies, and in doing so, support the wider decarbonization of the maritime industry.

At the end of many supply chains, consumers are demanding greater transparency around our efforts to decarbonize and deliver goods sustainably, which is driving the demand for low-carbon technology and fuels. Faced with this pressure, conscientious first movers are prepared to back the development of commercial supplies of low-carbon fuels and equipment to realize carbon-saving benefits for themselves as well as their customers.

However, bringing the benefits of decarbonization within reach of the whole port community will require a partnership approach that involves operators from across the supply chain.

Ready to engage

Alternative fuels offer a clear example of how the sector should work together to deliver a low-carbon solution for the industry. For example, low-carbon fuels like

green methanol need a route to market. Suppliers of methanol need to know that there will be demand for their product. But for most potential users, a switch to using vessels powered by a low-carbon fuel will only happen when there is a steady supply at a reasonable price. Breaking free from this supply and demand trap is essential for the industry to adopt alternative fuels at the scale needed to decarbonize.

“Port communities should not allow a regulatory gap to hinder their progress in decarbonization”

GARETH PROWSE, Svitzer

In collaboration with naval architect Robert Allan, Svitzer A/S is designing the world's first tug powered by a methanol hybrid-fuel cell. Scheduled for operation in 2025, this tug has the potential to generate a level of fuel demand in its operating

ports, thereby substantiating the need for local methanol supply growth. Such support for the supply side enables suppliers and terminals to develop their products and services with confidence. By acting as an anchor client for local methanol supply, the towage sector, in partnership with the port community, could expedite the development of infrastructure for methanol production, distribution and bunkering.

Looking across the broader fuel landscape, Svitzer has realized a similar model in

the United Kingdom, where it converted its fleet of tugs to run on low-carbon hydro-treated vegetable oil (HVO). This initiative created a demand signal, supporting the growth of the HVO value chain. As a result of these developments, Svitzer has reduced the carbon intensity of its operations by 18%. Svitzer worked with the Roundtable for Sustainable Biomaterials and the International Sustainability & Carbon Certification to quantify and document the carbon savings from each HVO-powered operation and provide well-to-wake emissions savings certification. Svitzer also collaborated with its global customer network to help them realize the Scope 3 emissions benefits that these savings bring. These agreements played a pivotal role in garnering commercial support for the evolving low-carbon HVO value chain.

A partnership approach to adopting low-carbon fuels will enable port communities to test and demonstrate the feasibility of the fuel supply chain. A key goal of each port community should be to drive momentum for low-carbon fuel supply that can then be embraced by the wider shipping industry. Local knowledge, combined with global reach and strength, can initiate change that extends from the port sector to the broader shipping industry, surpassing the IMO's established targets for decarbonization. ■



IN COURT DIVERSITY

Norton Rose Fulbright has seen several gender diversity-linked financing plans come into fruition in 2023

CASE

Linking ship finance to diversity

NORTON ROSE FULBRIGHT

G

lobal law firm Norton Rose Fulbright has advised Citibank NA and BNP Paribas as global coordinators, initial mandated lead arrangers and bookrunners on a \$2.8 billion sustainability and gender diversity-linked facility to GasLog Ltd.

The revolving facility is secured on GasLog's fleet of LNG carriers and incorporates key performance indicators linked to both carbon emissions and female representation in the company's cadetship program.

The Norton Rose Fulbright team was led by co-head of EMEA Asset Finance and head of Greece, Yianni Cheilas.

DNB Bank ASA functioned as agent for the deal, while ABN Amro Bank NV took on the role of sustainability coordinator.

Cheilas said, "We are delighted to have been able to support our clients with this \$2.8 billion facility, which appears to be the largest ever commercial debt financing recorded in the global shipping space. The deal highlights the growing importance of ESG [environmental, social, and corporate governance]-linked transactions within the industry, and features a novel gender diversity initiative.

He added, "It is a transformative transaction for GasLog and reinforces the trend of a significant return of large-scale commercial bank debt in shipping, which we have been witnessing in the past couple of years, especially for prime global operators. It is also indicative of the favorable LNG market

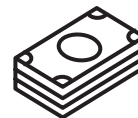
outlook, despite turbulent times and geopolitical crises, with new regions expected to add to the demand for LNG vessels as the global LNG supply continues to grow."

Earlier in 2023, Norton Rose Fulbright advised the creditors of GasLog and GasLog Partners Group – led by DNB Markets Inc. – on GasLog Partners' take up of private transaction by GasLog.

Gender diversity-linked loans are still a new development in the shipping sector. Also in 2023, Norton Rose Fulbright advised ABN AMRO as the documentation agent and sustainability coordinator for a syndicate of lenders, on one of the industry's first gender diversity-linked loans to Navigator Gas LLC for the refinancing of 10 LNG carriers.

The deal, which was completed on March 28, 2023, incorporated key performance indicators linked to both the environmental performance of Navigator's fleet and – in what is a new development for the shipping industry – the number of women holding leadership roles at Navigator.

The Norton Rose Fulbright team was led by partner and global co-head of shipping Simon Hartley, with support from associate Oliver Webber and trainee Maria-Christina Papoulia. Hartley commented, "This was a highly innovative form of financing; it is great to be able to see and play a part in the emergence of new forms of financing, knowing that they will help to support the development of future diversity in leadership within the sector." ■



\$2.8 billion

For a sustainability and gender diversity-linked facility to GasLog Ltd

"New forms of financing will help support diversity in leadership within the sector"

SIMON HARTLEY

Partner and global co-head of shipping, Norton Rose Fulbright

EXPERT

Incentivising diversity

ELEANOR MARTIN | Partner, Norton Rose Fulbright
OLIVIA CULLEN | Counsel, Norton Rose Fulbright

There has been increased pressure on the shipping industry to decarbonize, which has resulted in shipping loan agreements addressing sustainability aims. The Loan Market Association published the first iteration of the sustainability-linked loan (SLL) principles in 2019, which established the principles for classing a loan as an SLL. The essence of an SLL is that an economic outcome – generally a margin adjustment – is linked to the sustainability performance of the borrower.

While the key performance indicators (KPIs) in shipping loans have generally focused on energy efficiency and carbon emissions, we have started to see KPIs relating to gender diversity. While gender diversity KPIs have been seen in corporate finance documentation in other industries for several years, they are novel for the shipping market. This is a significant change in an industry that has historically lacked female representation.

The SLL principles advise that for KPIs to be credible they should be relevant to the borrower's business, measurable and is able to be benchmarked. Where gender diversity KPIs have been used in corporate finance loan agreements in other industries, these have often used one of two methods of measuring diversity: the number of women as a percentage of the workforce or the number of women in senior positions.

However, one concern is that simply measuring a percentage of the workforce does not recognize there are differing skill levels of the roles within organizations. Can it be considered progress if a high percentage of women are employed in lower skilled roles without any women in management?

Equally, it is possible that requiring certain numbers of women to hold management positions could encourage quota-filling rather than meaningful development of female leadership. Perhaps the KPIs and associated sustainable performance targets need to reflect both issues, or maybe it comes down to the nature of the business of the company and the composition of the roles within the company to dictate the best measurement. For example, the demographics of the workforce of a cruise ship operator differs drastically from that of a floating production storage and offloading vessel owner.

While the composition of a company's employees can be measured, financial institutions will need to think about how ambitious to be in terms of setting targets and applicable benchmarks. The SLL principles' guidance is for a target to apply during the life of the loan, to be meaningful and ambitious. For example, would it be realistic to set requirements for the percentage of female crew employed by a group by basing the calculation on the number of female

captains, which is likely to be few, within that group's fleet? Benchmarking across the shipping industry can be difficult, because of the private nature of the syndicated loan market. However, it might be possible to benchmark statistics on gender diversity in the industry measured by an independent third party.

Looking to the future, could financial institutions go further than just gender diversity and look at setting KPIs and sustainability performance targets relating to criteria related to LGBTIQ+, disability, race, ethnicity and culture?

What is clear is that with a focus on gender diversity, the first steps are being made to ensure the shipping industry will become a more diverse and progressive industry. Until recently, little progress has been made in identifying and addressing social measures; however, in 2023, we have started to see, for the first time, financial incentives related to gender diversity being included in ship finance documentation. While some may question whether linking gender diversity to sustainability-linked loan provisions is the right approach to addressing the lack of diversity in the maritime industry, it is undoubtedly an important first step in the process. ■

This article was first published in Riviera Maritime Media.



ABOUT THE AUTHOR

DR JO NORTH is the director of technology and transformation at the Port of Tyne, UK. She also leads the UK's Maritime 2050 Innovation Hub.

5:00



8:30



10:00



12:30



Nine to five

Dr Jo North takes us through a day working as technology and transformation director at the Port of Tyne, UK. Here she focuses on driving innovation within the port's supply chain including 5G rollout, green shipping corridors, and port automation.



After waking up to my alarm and getting ready for the day, I work on some writing while it is still quiet and my brain is fresh. I am currently working on a book called *Leading Sustainable Innovation: A Roadmap for Technical Environments* for global publisher Kogan Page. It is about the strategies, methodologies and tools essential for fostering sustainable innovation in technical programs and projects. I really enjoy writing and doing it first thing each day helps me to make the time for it.



It is just a short journey up to the Port of Tyne from where I live for a few online meetings with 2050 Maritime Innovation Hub collaborators. I took the lead in setting up the hub in 2019 at the request of Matt Beeton, the CEO. The maritime hub unites key industry players such as the Port of Tyne, Drax Group Plc, Off-shore Renewable Energy Catapult, Nissan Motor Co. Ltd, Connected Places Catapult and Accenture plc, to address digital and decarbonization challenges on a national and global scale.



Next, I am facilitating an in-person innovation sprint in the hub. This focused event gathers all the right people in the physical or virtual room to collaborate on a significant challenge or opportunity. The theme for today's sprint is loss of connectivity in autonomous shipping, and my team and I are working closely with the Department of Transport on this sprint series. Multidisciplinary experts have traveled far and wide to be here, and participation and engagement levels are superb.



A quick lunch and catching up on emails before I hop back into sprint facilitation mode again for the afternoon. We have a graphic illustrator capturing the conversations as we go. He is really creative and I am super impressed watching his work evolve in real time as our sprint progresses.



We have a team retrospective to review the sprint and agree next steps, before everyone heads off.



Time for some one-on-ones with my team. We have some great catch-ups on the innovation projects they are working on. Dr. Eleni Bougaioukou has some exciting developments with green shipping corridor feasibility study. Ian Blake is launching our port-wide 5G private network, working with BT and Ericsson. Tamsin Warren and her team are driving our data strategy and port automation projects. Fantastic progress!



An informal catch-up now with the three graduates in the Technology and Transformation team, Steven, Jack and Rhys. They have been with us for just a few weeks and are already doing really well, starting to lead projects of their own and making a difference already. We have graduates working in all areas across the port. Our 2023 cohort is our third graduate program. Of course, we have apprentices, too. They all bring really good ideas for improving what we do, especially using new technology.



I finish a few emails and calls for a while. I am planning the Maritime Innovation Week 2024, which the Port of Tyne hosts, so I check in with the team for an update on speakers, attendees and other plans. This will be our second year running the event. It takes place at the port and at BT Tower in London, and will be livestreamed.



I head for a swim at my gym on the way home. I find it really relaxing at the end of a busy, productive day, especially now it is winter and always dark when I leave work. I have a 30-minute swim or so, not thinking about much at all! Then I head home for dinner and I do some work prep for tomorrow.



The evening finishes with me reading some of *A Year in Tokyo* by Christy Anne Jones. A nice, light, entertaining and informative read before bed. As always, I read the hard copy book rather than an e-book to have a break from screen time.

O

ver the past 10 years, Aafke Steenhuis, a Dutch writer and painter, and Jan Joost Teunissen, founder and director of international policy research center FONDAD that focuses on the global financial system, went to explore the world as part of their project "The big, rough sea – World ports and globalization". They cycled along the many harbor basins of the Port of Rotterdam, bumped around a rickety bus to Shanghai's ultra-modern Yangshan port, sailed through the labyrinthine harbors of Hamburg on an old-fashioned ferry and drove past the closed terminals of the Port of Singapore in a special van.

"We like the open, adventurous atmosphere of port cities," the couple wrote on their project website.

Together, they have traveled to 17 ports and penned their impressions in their book *De grote wilde vaart – Wereldhavens en globalisering*. Steenhuis also prepared numerous paintings of the ports and her impressions of the people living in the port cities, some of which are included in the book.

"Some of them are ports of ancient civilizations, such as Shanghai, Piraeus, Marseille, Genoa and Alexandria; some of them are ports connected with medieval Northern European trade, such as Rotterdam and Hamburg; some of them are former European colonial ports, such as Singapore, Hong Kong, Mumbai, Los Angeles, Valparaíso, Santos, Cape Town and Sydney; and some of them are 20th-century ports that deal with the rise of fossil fuels, such as Murmansk with coal and Dubai with oil," they said in a statement preceding their book release.

For the book, Steenhuis and Teunissen talked to harbor experts, economists, sociologists, writers and businesspeople to answer questions, such as "What happens in world ports?", "How did they originate?", "How have they developed?", "How did China's ports expand so dramatically?", "Can ports continue to grow indefinitely, or not?", "What are they doing about the climate and the energy transition?" and "What will the maritime world look like in the future?".

Following their return home and the publication of their book in the Netherlands, "The next steps of our project are to get the book published in English and organize exhibitions to show Aafke's paintings," Teunissen said to *P&H*. ■

You can relive Teunissen and Steenhuis's big wild journey at www.degrotewildevaart.nl/eng.

Pictured: Rotterdam painted by Aafke Steenhuis.

Photo: Aafke Steenhuis

A different angle







Gerd Rahmdor to lead finance committee

We are delighted to announce the appointment of Gerd Ramdohr, who heads the financial services at the Hamburg Port Authority, as the chairperson of the IAPH Finance and Audit Committee. ■

We value your opinion

Would you like to share your views about any of the articles in *Ports & Harbors*? Are there other industry issues you feel strongly about? Email us and we will be happy to discuss if and how to include them.
@ ph@iaphworldports.org

Photo: Hamburg Port Authority

Membership notes

We are pleased to welcome as new regular and associate members of the association:

Regular member

Penang Port Sdn. Bhd.

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- 🌐 www.penangport.com.my
- 👤 Suhailawatie Ramli, head, corporate communications

Associate members

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- ✉ info@shiplog.mr
- 🌐 www.shiplog.mr/who-are-we
- 👤 Meissara M'Reizig, communications officer

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- 👤 Rodrigue Bijlsma, managing partner and president

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- 🌐 www.portchain.com
- 👤 Craig Halford, vice president, sales

Klaus Faber AG

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- ✉ akeunecke@faberkabel.de
- 🌐 www.faberkabel.de
- 👤 Alexander Keunecke, head, cranes, mining and tunneling

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- 📍 India
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- 👤 Shankar Shinde, chairperson

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- ✉ david@yejidalab.com
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- 👤 David Lederhendler, CEO

Cable Factory BITNER

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- 🌐 www.bitner-cablefactory.com
- 👤 Zbigniew Eichler, product director, handling, mining and tunneling cables

EVENTS TIMELINE 2024

11

MARCH 11-15

IMO GHG Intersessional Working Group 16
Decarbonization discussions at the
IMO in London
🌐 www.imo.org

18

MARCH 18-22

IMO MEPC 81
Decarbonization discussions with
IMO member states in London
🌐 www.imo.org

25

MARCH 25-27

IAPH Technical Committee Days
IAPH meeting in London
🌐 www.iaphworldports.org



Gene Seroka, newly elected IAPH vice president for North America, outlines priorities to ensure ports are a reliable part of the supply chain

Q: Can you introduce yourself and discuss the importance of IAPH?

A: First and foremost, I am honored to serve as the vice president of the North American region with IAPH. I am also deeply grateful to my colleagues for electing me and trusting me with this responsibility.

With more than 30 years in the maritime industry, my first two decades focused on shipping, global logistics and executive management in the private sector. This experience provided me the opportunity to live and work in more than 50 countries. In 2014, I took the helm at the Port of Los Angeles, the busiest container port in North America, focusing on major port capital projects, cargo volume growth and sustainable practices.

Throughout my career, I have advocated for international cooperation, aligning with IAPH's mission since its inception in 1955. IAPH has served as a crucial venue for the port industry to develop common interests and foster positive change. As the role of ports has evolved globally, this demands a new level of problem solving and cooperation, a challenge that IAPH is well-positioned to tackle.

Q: What will be the strategic focus areas for your work as IAPH North America vice president?

A: Through enhanced collaboration and communication facilitated by IAPH, I believe we can make significant progress in sustainability, workforce development and innovation.

On sustainability, I believe IAPH must actively encourage the sharing of best practices and push toward a unified framework for creating green shipping corridors (GSCs). Leveraging the political and economic resources for these corridors can facilitate the transition to cleaner fuels and advanced technologies for maritime transport. Strengthening partnerships with stakeholders and governments is key to accelerating decarbonization, reducing air pollution and minimizing the industry's overall environmental footprint.

Furthermore, recognizing that the success of any industry lies with its people, IAPH must prioritize the wellbeing and development of its workforce. By fostering greater inclusivity and engagement, IAPH can cultivate a skilled and diverse workforce capable of driving innovation.

Finally, acknowledging ports as catalysts for technology development, I stress the importance of IAPH serving as a connector within the port industry, nurturing an environment that encourages the sharing of best practices and supports innovation in coordination with the private sector. By collaborating with technology providers, research institutions and policy makers, we can effectively address challenges in digitalization, decarbonization, cybersecurity and beyond.

Q: What are the current challenges faced by the port sector in North America?

A: As the global trade rebounds from the pandemic-induced cargo surge, we have the opportunity to convert lessons learned into strategies and best practices. Infrastructure remains a key focus, requiring continuous improvement in terminals, rail systems and roadways, particularly in critical freight gateways and corridors that connect to consumer markets and production centers.

By necessity, our thinking should encompass a broad definition of infrastructure, including digital, energy and workforce. We must continue to build our portfolio of supply chain data-sharing and cybersecurity initiatives that increase fluidity, resilience and competitiveness. We seek to advance our shared decarbonization goals through coordinated development of GSCs, ensuring the decarbonization of the world's busiest shipping lanes. Ocean carrier and cargo owner leadership is critical to meet and even exceed the goals set in the IMO's Revised GHG Strategy.

Q: What cooperation with other IAPH regions and committee are you looking for?

A: If we are to solve the enormous challenges facing our industry – many of which extend beyond borders and require international cooperation – collaboration across all IAPH regions will be essential. I believe IAPH is the ideal platform for collective problem solving and sharing best practices within the port industry. Under the visionary leadership of incoming IAPH president Jens Meier, CEO of the Hamburg Port Authority, I have no doubt that IAPH can be the driving force for industry change and cooperation on a worldwide scale. ■

Q&A

GENE SEROKA
Executive director, Port of Los Angeles

IAPH INFO

Photo: Port of Los Angeles

8

APRIL 8-12

IMO Facilitation Committee 48
Meeting focused on trade relations at the
IMO in London
www.imo.org

22

APRIL 22-26

IMO Legal Committee 111
Regulatory meeting in London
www.imo.org

8

OCTOBER 8-10

World Ports Conference
Annual IAPH conference in Hamburg
www.worldportsconference.com



IAPH INFO Q&A PORT ENDEAVOR GAME

Playing to learn the trade

The IAPH's Antonis Michail and UNCTAD's TrainForTrade Mark Assaf tour global ports to teach the intricacies of supply chain operations in a playful way through the Port Endeavor game

Q: Question **A:** Antonis Michail **M:** Mark Assaf

Q: What is the latest with the IAPH and UNCTAD Port Endeavor game?

A: The World Ports Sustainability Program (WPSP) was established in 2018, having as its main aim to assist ports in integrating the 17 UN Sustainable Development Goals (SDGs) into world port governance and practice. Port Endeavor is a business game that serves this purpose by training port managers in making the link between UN SDGs and port practices.

The game was launched back in 2021 as part of a wider partnership agreement between IAPH, UNCTAD TrainForTrade and the port training center of the Port of Antwerp-Bruges.

Port Endeavor participants are assigned port management roles and are divided in teams of fictitious ports. In each round, teams are phased with a sustainability challenge and are asked to select their preferred

response option between four different alternatives. Through team debate and exchange, participants must identify the more suitable and sustainable solution for their port, meaning the one that will reward them with the higher number or more suitable SDGs badges, while paying attention to their budget constraints.

Disruptive events, such as oil spills, cargo handling accidents or even hurricanes, may occur during the game based on luck – roll of a dice – making things more interesting and unpredictable. At the end, the most sustainable port, the one that collected more in game points, wins the game.

M: From the inception, we could sense the formidable potential of this very innovative and exciting board game. It comes as a perfect tool to enhance the learning experience of port managers and foster relevant exchanges on UN SDGs integration into port

strategies. This is why at TrainForTrade, we decided to fully integrate Port Endeavor into our renowned UNCTAD Port Management Program. It is part of our training and capacity building activities we organize in our three linguistic networks around the world, targeting senior port managers.

Q: What has the feedback to the game been?

A: Port Endeavor has been played by over 1,000 port professionals around the world with an outstanding satisfaction rate of more than 90%. Participants are praising the methodology and value of the exercise. This role-playing game enhances critical thinking, facilitates benchmarking, fosters soft skills and above all, teaches participants to see their job through the SDGs lenses.

An important success factor highlighted by the participants is the realistic look and feel of the game. This is largely a result of

Port Endeavor testimonials

Port Endeavor is currently available in English, French and Spanish. Dedicated training sessions have been so far delivered by the three partners in 16 countries around the globe.

"The game is fun, and we found it very helpful in terms of decision making. The team had to discuss and choose the best options and also explain why we choose that strategy."

Russel Jay Paca, director, Paca Training and Management Systems in Cebu, Philippines

"It is not just a game. It gives you the opportunity to think, to know what decision to take, and how effective it is. The process depends on critical thinking."

Adelaide Panford, learning and development manager, Port of Takoradi, Ghana

"In our daily work, all decisions have consequences – good or bad. Problems arising in the game must be solved and they have a cost. Nothing could explain better how consequential our decisions are."

Esteban Pisani, Exolgan Container Terminal, Argentina

"The game allowed us to tackle many issues that port professionals experience every day. When facing disruptive events, we must apply teamwork and make decisions aligned with our corporate strategies and organizational objectives. Ports must develop sustainability plans and base their decisions on the SDGs."

Jacqueline Paredes Corrales, Terminal Internacional del Sur, Peru

ABOUT THE AUTHORS



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the real-life examples of port practices that form the core content of Port Endeavor. Sustainability challenges and disruptive events are all based on reality, while the response options that participants are asked to choose from are real-life projects that world ports are implementing and sharing through the WPSP projects database. Thanks to this, Port Endeavor is constantly evolving. Cases are added periodically to the database to create new game content.

"A primary aim is to make Port Endeavor broadly available"

MARK ASSAF
UNCTAD TrainForTrade

IAPH and UNCTAD will continue building on their well-established cooperation. During the past five years, we have had numerous joint activities, such as participation in expert meetings, reporting, technical committees, peer reviews, projects, port statistics data sharing, WPSP and Port Endeavor. Challenges and opportunities from ports and the maritime world are numerous and with innovation and passion, the two teams will be able to do more to serve

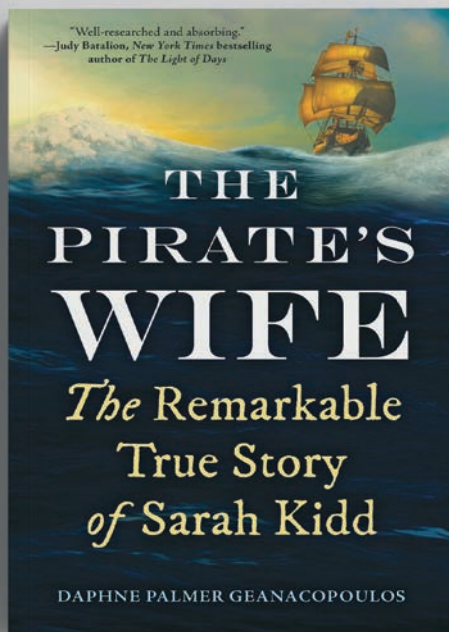
port members and member states.

On SDGs, the clock is ticking as we have fewer than 2,200 days to reach the goals for the planet and prosperity of all. UNCTAD's TrainForTrade program will continue to develop and use the Port Endeavor game in partnership with the IAPH and APEC, enhancing the dedicated platform and digital features to expand its outreach and speed up the implementation of SDGs. Port Endeavor, the WPSP database of projects, and the annual IAPH Sustainability Awards are leading the way in boosting sustainability in ports and serving the UN 2030 Agenda for Sustainable Development. ■

Get in touch with the Port Endeavor team:
🌐 www.portendeavor.unctad.org

Q: What is planned next for the game and future cooperation between the partners?

M: The three partners – IAPH, UNCTAD TrainForTrade and APEC – meet regularly to address all aspects of further development of Port Endeavor, including content, game dynamics and overall strategy. A primary aim is currently to make Port Endeavor as broadly available as possible globally. For that we look at options to scale up the delivery of the game by developing a respective business case and attracting additional partners that will contribute to increasing its current outreach. At the same time, we are also enhancing the dedicated platform and embedded digital features to further improve user experience.



BOOK AUTHOR

DAPHNE PALMER GEANACOPOULOS is a historian, journalist, and author. Before *The Pirate's Wife*, she published another account of wives of historic pirates.

THE REVIEW

The Pirate's Wife – The remarkable true story of Sarah Kidd

INES NASTALI



In *The Pirate's Wife*, historian, journalist and author Daphne Palmer Geanacopoulos charts the life of Sarah Kidd, an English expatriate who immigrated to New York at the age of 14.

I was quite excited to review a book that features a female protagonist – hard to come by in maritime history. The book, written based on information from historical US and UK library and archive records, draws you into the life of 17th-18th century New York with the author adding her own thoughts as well as details to the narrative; from popular drinks to traditions around the birth of a child, or the quest by then-British colony New York to brighten up dark nights with lamps in the windows of the now mega city.

One can only imagine what uproar it would have caused if Sarah Kidd had gone after unearthing Kidd's lost treasure. Maybe an idea for a fictitious follow-up. Meanwhile, this book underscores the restrictions women faced.

After her arrival in New York, Sarah's father marries her off to what would nowadays be a property mogul. They benefit from an early Johns Act on flour production, but the husband dies soon in an accident. The resilient Sarah takes decisive actions to secure her rightful inheritance and marries again soon after. By the time Sarah meets Captain Kidd in her late 20s, she is twice widowed. Again, the book is enriched by what Sarah might have thought in various situations, envisioning the response of her father and siblings upon learning of the tragic passing of her first husband, or commenting on what her room in the house looked like based on detailed archive descriptions. The book also weaves in the historical backdrop of the era, illustrating an economy under the Crown that "continued to flounder. The climate was ripe for piracy." Not dissimilar to today, pirates still plunder owing to the lack of viable economic alternatives and helped by corrupt governments.

"And merchant sailors were given pitance for pay. Given the appalling conditions of merchant ships, piracy was an attractive alternative," Geanacopoulos explained. While contemporary seafarers no longer battle conditions such as starvation and a disregard for personal safety, it is still not considered a desirable job. Kidd was executed for plundering vessels beyond his privateering contract targeting French enemy ships. Again, a reminder that captains today get prosecuted for much less than piracy. His confiscated assets were partly used to fund the National Maritime Museum in Greenwich, UK.

Meanwhile Sarah remarried again and even learnt to write. "This extraordinary achievement, between the ages of 38 and 62, shows just how ambitious and determined she was to be more than an ordinary colonial woman. Her successful undertaking completed her transformation from "SK" to Sarah Rousby," the author writes. ■

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- CONSIDERABLE WORKING KNOWLEDGE AND EXPERIENCE IN ADMINISTRATION AND MANAGEMENT OF MARITIME AND PORTS AFFAIRS;
- A SOUND UNDERSTANDING AND KNOWLEDGE OF THE MARINE AND PORT FUNCTIONS AT LOCAL, REGIONAL (E.G. ASEAN AND BIMP-EAGA) AND INTERNATIONAL (E.G. IMO) PLATFORMS;
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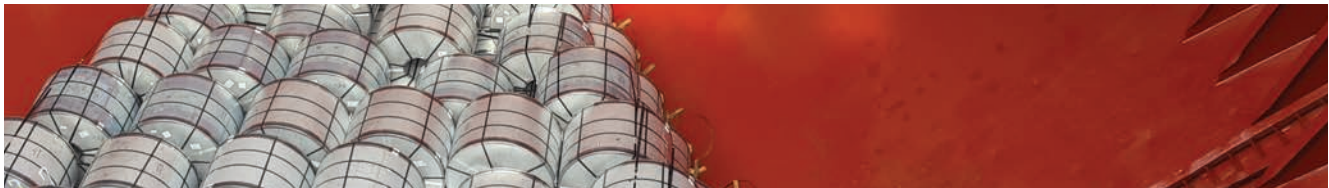
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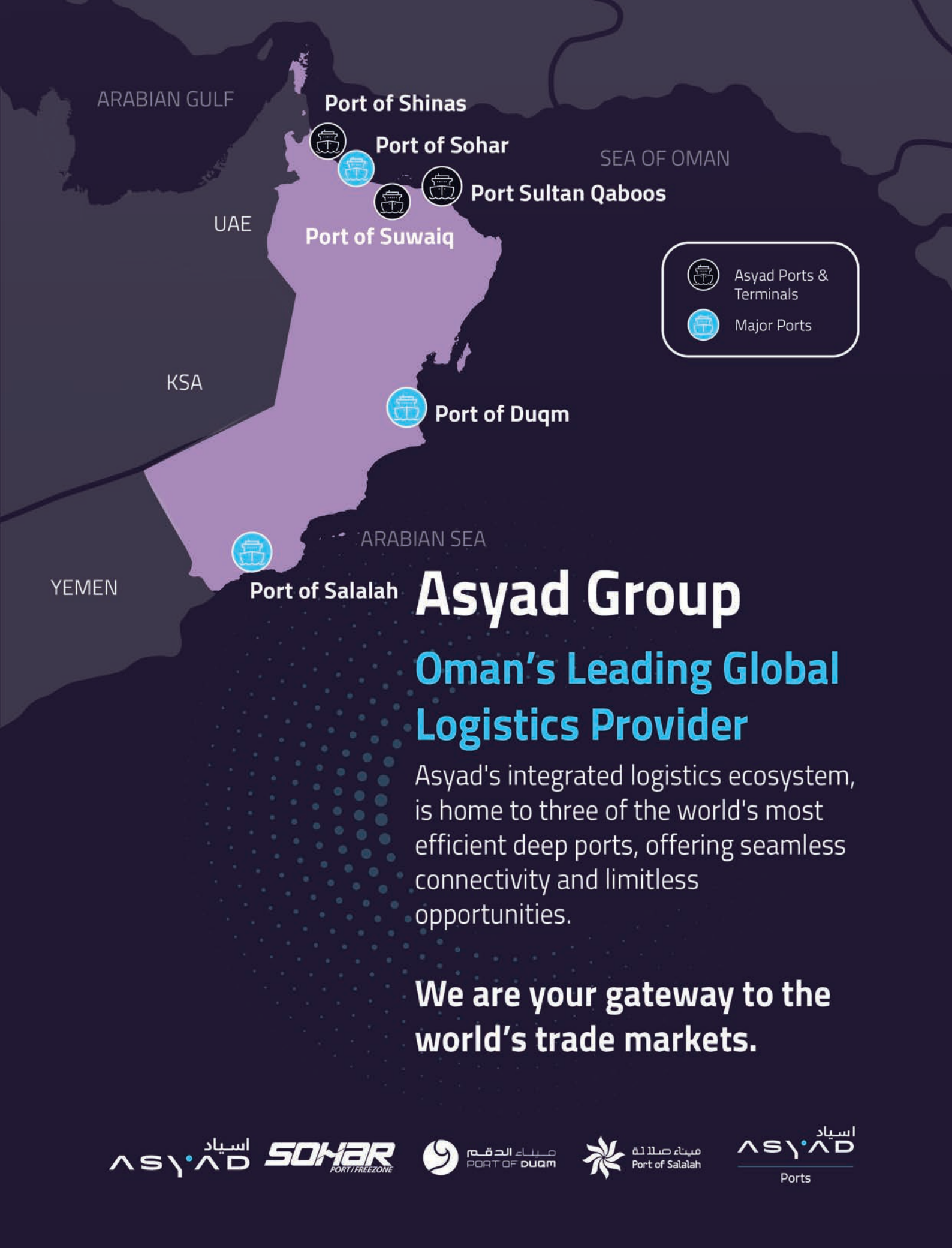


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