

ports & harbors

March/April 2022
IAPHworldports.org

Vol 67
Nº 2

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

Fostering prosperity

UNCTAD secretary general Rebeca Grynspan shares her agency's plans to create equitable financing opportunities for the port sector



Official membership journal of

iaph
International association
of ports and harbors

Connecting the dots

Establishing a single window in East Africa

Getting it right

Balancing taxation for new fuels

Sharing the load

Port work conditions over time



WORLD PORTS CONFERENCE 2022

REGISTER TODAY

16 - 18 May 2022 | Vancouver, BC

A world-class, in-person event in Vancouver bringing together leading port stakeholders to close the gaps in global seaport competitiveness **#CloseTheGaps**

Register today: worldportsconference.com

CONTENTS

EDITOR'S COMMENT & CONTRIBUTORS | 02
Visibility means accountability

PERSPECTIVE RISK AND RESILIENCE | 08
Extreme weather plays havoc in ports

THE DEBATE | THE POLL | 14
Diversity in C-level positions

PROJECT FOCUS LAMU PORT, KENYA | 18
The port positions itself as transshipment hub

04 | IN CONVERSATION WITH REBECA GRYNSPAN
The UNCTAD sec-gen discusses collaboration with the IAPH

10 | FEATURE NUCLEAR SHIPPING
The UK prepares to take in nuclear-propelled vessels

16 | INTERVIEW AMOS WANGORA
Establishing a single window in East African ports

22 | LOOKOUT HUMANITARIAN AID
Mercy Ships' newest vessel visits Antwerp and Rotterdam



10



16



18



22



24

PERSPECTIVE MITIGATING DISRUPTION | 24
Digital tools to minimize disconnection in ports

NINE TO FIVE TAMAR IOSELIANI | 28
A day in the life of the Georgian maritime authority head

IAPH INFO | 34
News and events from your association

26 | IN COURT IAPH LEGAL COMMITTEE
A tribute to the parting chair

30 | VIEW FROM ASTERN PORT WORKERS
How safety culture changed port operations

36 | THE REVIEW THE SALVAGE OF THE EVER GIVEN
The Suez 5's report on freeing the container vessel in 2021

PORTS & HARBORS

Published bi-monthly by the International Association of Ports and Harbors (IAPH), produced, edited, and printed by IHS Markit.
ISSN: 0554-7555

PUBLISHER

MASAHIKO FURUICHI

IAPH secretary general
E: info@iaphworldports.org

PATRICK VERHOEVEN

IAPH managing director
E: patrick.verhoeven@iaphworldports.org

PRODUCTION

IHS Markit Maritime and Trade
5th floor Ropemaker Place,
25 Ropemaker Place, London,
EC2Y 9LY, UK
T: +44 (0)203 253 2100

EDITORIAL

INES NASTALI

Principal journalist
E: Ines.Nastali@ihsmarkit.com

ADVERTISING AND EVENT SALES

JOHN KNOWLES

Sr sales executive - EMEA
E: John.Knowles@ihsmarkit.com

CONTENT EDITING

TORI HILL

Director, editorial and publishing

CONTENT EDITORS

IRENE SOO

NATALIA NGUI

REBECCA LYDIA VEGA

YOGES PALANIAPPAN

DESIGN

HANNAH KIDD

Associate director design

MATT RAMSDALE

Principal designer

WYMAN CHOO

Designer

PRODUCTION

KENLYN FLEARY

Production controller

IHS MARKIT MARITIME & TRADE

EDITORIAL AND PUBLISHING

MANAGEMENT

PETER TIRSCHWELL

VP editorial and publishing

MIDGE REGESTER

Executive director
editorial and publishing



When you have finished with
this magazine please recycle it.

SUBSCRIPTIONS

INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS

IAPH members enjoy a free subscription to P&H. If your organization is not a member and you would like a paying subscription to the magazine, please contact the IAPH for more information at:

7th Floor, South Tower,
New Pier Takeshiba

1-16-1 Kaigan, Minato-ku

Tokyo 105-0022, Japan

T: +81 (0) 3-5403-2770

F: +81 (0) 3-5403-7651

E: ph@iaphworldports.org

W: www.iaphworldports.org

COPYRIGHT

© 2022 IHS MARKIT.

ALL RIGHTS RESERVED.

No part of this publication may be reproduced or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, or be stored in any retrieval system of any nature, without prior written permission of IHS Markit.

Any views or opinions expressed do not necessarily represent the views or opinions of the International Association of Ports and Harbors (IAPH), IHS Markit or their affiliates.

DISCLAIMER OF LIABILITY

Whilst every effort has been made to ensure the quality and accuracy of the information contained in this publication at the time of going to press, IAPH, IHS Markit, their affiliates, officers, employees and agents assume no responsibility as to the accuracy or completeness of and, to the extent permitted by law, shall not be liable for any errors or omissions or any loss, damage or expense incurred by reliance on information or any statement contained in this publication.

ADVERTISEMENTS

Advertisers are solely responsible for the content of the advertising material which they submit to us and for ensuring that the material complies with applicable laws. IAPH, IHS Markit and their affiliates are not responsible for any error, omission or inaccuracy in any advertisement and will not be liable for any damages arising from any use of products or services or any actions or omissions taken in reliance on information or any statement contained in advertising material. Inclusion of any advertisement is not intended to endorse any views expressed, nor products or services offered, nor the organisations sponsoring the advertisement.

THIRD-PARTY DETAILS AND WEBSITES

Any third-party details and websites are given for information and reference purposes only and IAPH, IHS Markit and their affiliates do not control, approve or endorse these third parties or third-party websites. Further, IAPH, IHS Markit and their affiliates do not control or guarantee the accuracy, relevance, availability, timeliness or completeness of the information contained on any third-party website. Inclusion of any third-party details or websites.

EDITOR'S COMMENT



INES NASTALI

Editor

Dangerous approach

CONTRIBUTORS



FRANK LENNOX-MILLARD

Freelance journalist

The lives and conditions of port workers through history have been remarkably under-researched, and port-side working comes a poor third after ships and crew in studies. Although conditions differed according to location and the types of goods coming in and going out, the origins of ports and harbors, and their relationship with natural topography and tides were not so different and one suspects the same about the types of people drawn to and utilized by ports. ■

M

ore than 100,000 people live streamed planes landing in gale force winds in London on 18 February. I was one of them.

While I was fascinated by the sheer force aircrafts endured, and the expertise shown by the pilots, two incidents that also took place on that day involving another form of transport closer to home caught my attention.

Earlier, Boskalis was called to provide emergency response assistance for two ships that had caught fire – car carrier *Felicity Ace* near the Azores and Grimaldi-operated *Euroferry Olympia* near the Greek island of Corfu.

These incidents also caught the public's interest, mainly due to the precious cargo of the car carrier including Bentleys, Audis, and Porsches.

However, under different circumstances, many of these incidents happen out at sea where there are no livestreams and ongoing media coverage.

That said, some ports such as Amsterdam, Miami, or Helsinki offer livestreams of operations in port to show off the skills of pilots – another beloved procrastination pastime of mine is to watch compilations of harrowing pilot transfers – as well as tug operators navigate to put ships in place.

I would therefore argue that visibility creates accountability. Hence, these incidents caught my attention for another reason.

The news of the fires on board *Felicity Ace* and *Euroferry Olympia* made me think of how resilient the maritime transport sector is.

Firstly, they are another reminder to the industry that fighting for resources between tugs needed to guide ships in ports and firefighting is inevitable, resulting in disruptions of port operations should the ships be brought into ports (read more on this on page 26).

Secondly, the issue with car carrier fires is how inaccessible the vessel is once it is fully loaded.

In this context, with more electric vehicles (EV) being produced and shipped, another issue presents itself. "In the event of a lithium-ion battery catching fire, it is important to note that such a fire reaches very high temperatures, produces toxic gases, and is inextinguishable," the German Federal Ministry of Transport warned as far back as 2013. While the cause of the aforementioned fires has yet to be determined, any lithium-ion batteries of onboard vehicles would keep the fire alive for days.

It is therefore pertinent for ports to prepare to tackle potential incidents as I fear it is just a matter of time until a car carrier carrying EVs will go up in flames in a port – and that might not go unnoticed by the public. ■

@ ines.nastali@ihsmarkit.com @InesNastali



SHEM OIRERE
Freelance journalist

Kenya's fast-growing economy, with an anticipated gross domestic product increase of nearly 5% in 2021 comes with the East African country's desire to design and deploy modern logistical technology and gateways that ensure faster, uninterrupted access to the international market for its exports and imports as evidenced by two new key projects. ■



STEPHEN COUSINS
Freelance journalist

Backers of advanced nuclear propulsion have built a compelling case for the wider use of atomic ships, including more stringent safety and security measures designed to address the risks associated with existing technologies. Are ports and wider supply chains ready or indeed willing to accept these vessels as part of a low-carbon future? ■

Fostering prosperity

Six months into her role as secretary general of the UN Conference on Trade and Development, Rebeca Grynspan catches up with IAPH managing director Patrick Verhoeven on trade facilitation and financing

INES NASTALI

R

ebeca Grynspan has been the UN Conference on Trade and Development's (UNCTAD) eighth secretary general since 13 September 2021. The Costa Rican is the first woman to lead the organization.

Over the past six months, Grynspan has set out her plans for the organization's path forward, one of which is to reduce transaction costs for trade in developing states and ease trade facilitation. This is something that the member states, especially small island states, have asked for.

Second on the list is to strengthen UNCTAD's statistical work. "Part of my message is that UNCTAD is a statistical powerhouse. And I will establish an independent statistical unit in UNCTAD within the division of trade and logistics," Grynspan said to *P&H*.

Such news is welcomed by IAPH managing director, Patrick Verhoeven, who remarked that the maritime industry is "notorious" for its lack of statistical and comparable data. "I think UNCTAD is one of the few institutes that collects more than just cargo statistics," he said.

Fittingly, the IAPH has its own ambitions to increase the amount of port operational data via its World Ports Tracker, which will officially be launched during the World Ports Conference in Vancouver from 16 to 18 May.

Dual shock

The COVID-19 pandemic also brought to light "the asymmetries in this area. We know how important the efficiency in ports is for development. On one hand you have modern

infrastructure and in developing countries, in least developed and small island states, they don't have strength in volume. So, the gaps are widening. But how can we close those gaps?" asked the UNCTAD secretary general.

In addition, those countries have faced steep price hikes owing to inflation rates as well as scarcity issues because of the lack of volume being transported. This makes not only trade development and competitiveness difficult, but also the lives of citizens in those countries.

Showing how important access to data is show the projections of the UNCTAD Maritime Review, published in November 2021. Based on the collected trade data, the review sets out a forecast for maritime trade. "Unfortunately, we came very close to reality with our projections. We projected a general price rise of 1.5% because of maritime transport costs. But for small island developing states, the figure was five times higher, so 7.5% due to the disruption of global value chains," Grynspan explained.

Consequently, in addition to the initial shock caused by the disruption of the pandemic, developing states were hit with another caused by the supply chain crunch. She added, "How do you counteract something like this?"

Grynspan's experience as an economist, politician, and special adviser will help her answer this question. She holds degrees in economics from the University of Costa Rica and the University of Sussex, UK.

Prior to her career at the United Nations, Grynspan served as the vice president of Costa Rica from 1994 to 1998. She was also minister of housing, coordinator of economic and social affairs, and deputy minister of finance.

In 2021, she was named the special international adviser to the newly created Economic and Social Council of Argentina and was invited to join as a member of the G20 High-Level Independent Panel on Financing the Global Commons for Pandemic Preparedness and Response.

"We need to prepare for the next wave and how to be more resilient in terms of infrastructure and logistics and take advantage of the experience we have gathered over these terrible times," Grynspan said.





This, again, mirrors the approach the IAPH is taking with its pre-World Ports Conference workshops that take place between February and March to discuss priorities in the different IAPH regions.

The association also works to #CloseTheGaps – the theme it has chosen for the upcoming conference – around efficiency, digitalization, or connectivity.

United with one voice

This regional approach is echoed by Grynspan. “This is one of the tendencies we have seen. More regional and shorter value chains and diversified sources of goods. Those will be part of the new trends.”

UNCTAD’s research already showed that regional agreements were more resilient during the pandemic. “Regions were able to react more quickly and take advantage of the collective strength to react to the crisis,” Grynspan said.

However, this regionalization comes with its own challenges, she said, a fact she learned during her time as a politician. “You have to bring financial models forward and distribute costs in terms of infrastructure,” she explained.

The UNCTAD secretary general would therefore like to bring another line of partners into this discussion – the development banks. “They have to change their financing models to be closer to the needs of the infrastructure and

Pictured: (L-R) The World Tourism Organization secretary general Zurab Pololikashvili, Grynspan, and Inter-American Development Bank president Mauricio Claver-Carone participate in the Future of Tourism World Summit in Barcelona, Spain, on 26 October 2021.

logistics of different governments,” Grynspan said.

“I come from Central America so I know what we’re talking about. The good thing in Central America is that you have Panama,” she added, laughing.

Prior to her UNCTAD appointment, Grynspan headed up the trade support agency Ibero-American General Secretariat from 2014 to 2021, again the first woman to lead the organization.

In 2010, she was appointed the under secretary general of the United Nations and associate administrator of the United Nations Development Program (UNDP), and prior to that she was the UNDP regional director for Latin America and the Caribbean.

In addition to her experience as a lecturer and adviser to several international organizations, she has been involved in UN initiatives, such as the Millennium

Project’s Task Force on Poverty and Economic Development and the high-level panel on financing for development. To her, working with stakeholders on financing is a vital key.

“You need collaboration and the development banks

“The short term and long term start at the same time.”

REBECA GRYNSPAN,
Secretary general,
UNCTAD



are very well placed to try and innovate and bring out different models of financing. We have to make an effort together to bring this to their attention,” she called on the IAPH for support.

Citing the Trans-European network as an example, Verhoeven sees supra-national cooperation as a way to define priorities – albeit having to fight interests from a number of countries with maybe conflicting opinions on what those should be.

For him, it would also be key to offer the ultimate port customer a seat at the table. While relations with shipping companies and terminal operators are good, he would like to reach out to freight forwarders, and those that “ultimately decide where the cargo goes,” he said.

Distributing power

To make trade relations between all these stakeholders easier – and affordable – Grynspan also looks to remove trade barriers, lower transaction costs, and set up national single windows and cooperation with customs unions. She sees UNCTAD as ideal facilitator to foster this.

Using the example of updating the UN Automated System for Customs Data program for import and export to include an electronic single window system in Barbados in October 2021, 30 institutions and departments had to sign transaction papers – a bureaucratic feat in such a small place. The updated system is hoped to bring those stakeholders together, virtually.

“In many countries, I think it should be port authorities that have a central role to connect the different actors in the port community, but it’s not always evident that they have that competence and are allowed to,” Verhoeven added.

Grynspan agreed, saying, “Who is the final authority to decide, that is always a problem.” During her time working in the finance ministry of Costa Rica, Grynspan tackled exactly those issues, enabling more efficient trade and reducing customs costs.

Remembering those times, she laughed, “I understand. I’ve suffered personally. There was nothing more difficult than customs works.”

Building on this momentum, in 2021, the IAPH picked up work with the World Customs Organization to establish common guidelines on cooperation between port and customs authorities.

“I expect that those guidelines will come out in the second half of this year,” Verhoeven said.

“A global measure is the way forward”

PATRICK VERHOEVEN,
Managing director,
IAPH

Pledging her agency’s support, Grynspan said, “I think UNCTAD can do more to bring all actors together, to strengthen the opportunities at the global level.”

Bridging short and long term

Apart from digitizing trade, the other big focus area of every global industry is of course decarbonization. The UNCTAD secretary general also hopes to establish programs that are not just seen as “another non-tariff trade barrier,” which

some developing states have warned of.

“The development of the industry into a sustainable one is an agenda we cannot avoid and that we have to work on together,” Grynspan said.

Verhoeven, in response, warned of the gap between developing and developed states that has been seen within IMO discussions on the topic and especially when it comes to allocating funds from potential market-based measures.

“We had some controversial proposals in the IMO. It doesn’t make sense to set up a tax for money that will go to you when the problem and environmental damage is done somewhere else. You have to invest where the damage is done,” Grynspan said.

Consequently, when the damage is done in developing states or ports, investments need to be done there. “If you put a tax in Europe and the money stays there, what good does that do?”

Responding to this thought, Verhoeven said that a global measure is therefore the way forward. However, progress on this level is slow.

“I have been very frank with the European countries on this issue and from an economic point of view, they cannot dispute it. They understand but they don’t have the solution as it’s very easy to put a tax on foreign goods than to give more money for the transformation of other countries. So, if we’re talking about a global public good, you have to finance it accordingly,” Grynspan said.

Citing another lesson learnt from her time in government, she added, “The short and the long term start at the same time. Sometimes, people look at the long term as a successive cycle, but you have to think about both at the same time. Here, this would be the financing model.”

Hence, she calls on developed states to support the transformation and prevent further environmental degradation in developing countries. “That’s self-defeating in the end,” she concluded. ■



PERSPECTIVE RISK AND RESILIENCE

Adapt and prepare – weathering the storm

When it comes to the risks associated with climate change and extreme weather, ports, marinas, harbors, and shipyards face a multitude of challenges. Because of their locations along open coasts or in low-lying estuaries and deltas, they are exposed to various natural hazards, such as rising sea levels, storm surges, waves, and winds. Combined with the pandemic, an ever-increasing drive to improve sustainability, and the need to adapt to the physical impacts of climatic changes, ports and harbors are now facing a plethora of challenges across every aspect of their operations.

In recent years, global changes in climate and weather extremes have had a measurable impact on the economic effectiveness of vital maritime hubs. In October 2021, cargo ship *Zim Kingston*

lost more than 100 containers overboard in gale force conditions off the coast of British Columbia. Meanwhile, a new study by the US National Center for Atmospheric Research predicts that if greenhouse gas emissions are not reduced, 90% of ports will be facing severely increased economic pressures by 2100. The study highlights the most affected ports are likely to be in the Pacific Islands, Caribbean, and Indian Ocean, followed closely by ports in the North African Mediterranean and Arabian Peninsula, covering the vast majority of essential global maritime hubs.

Keeping trade moving

When port operations are halted or delayed, the resulting effects are felt across the entire supply chain. This was recently highlighted by lengthy port delays caused by a

combination of factors, including COVID-19 and staff shortages, which then had a measurable economic impact across the global logistical supply chain, threatening the delivery of goods and services across the world.

Extreme weather risks

The challenge for ports and harbors is to plan for climate risks that could threaten operations. For example, frequent and more severe storms can cause damage to infrastructure from erosion and storm surge inundation. This can be costly, with operators having to increase maintenance or replace key elements of the port itself, particularly where existing coastal defense structures are no longer fit for purpose. Additionally, significant long-term increases in water levels could lead to navigational constraints and could render berths unusable or unsafe, which in turn could mean limited port capacity, affecting business performance and continuity of ports. However, adapting to changes in water levels is difficult given the unpredictability surrounding the rate of sea level rises, as well as the practicalities of replacing or updating the infrastructure.

Considerations must also be made for wider port operations outside of vessel management processes. For example, threats related to higher temperatures can create new challenges within port-side operations,



with the thermal impact to load-bearing equipment and paved surfaces creating the risk of equipment failures or unusable roads and railway lines.

Knowledge is power

For port operators, effective preparation and risk management should therefore center around the ability to bridge data and knowledge gaps. They need to understand every aspect of the operational management of vital equipment and infrastructure, giving them the ability to plan and create effective risk-management strategies.

Key to enabling this will be the application of reliable, cost-effective technologies, combined with knowledgeable consultancy that can support operators in applying technologies and newer ways of working in an efficient and effective way. By accurately assessing their operations and equipment and making informed decisions, ports and harbors can build resilience against climate change and extreme weather, thereby protecting the future of their operations.

Effective and accurate monitoring of assets and infrastructure allows operators to conduct detailed vulnerability assessments. This allows for accurate maintenance, adaption, and risk management planning through identifying and gathering critical information needed for informed decision making. As a key part of this, it is essential

to ensure staff have the training they need to enable them to create frameworks that will ensure compliance without affecting operations. Ports and harbors should carry out thorough risk assessments across their assets and operations, allowing operators to create management processes that best meet the needs of the business. This way, potential risks will be identified and planned for, while cost and operational impacts can also be forecast and understood.

While climate change and the escalation of extreme weather events have long been on the agenda, recent storm events and the impact of COVID-19 have placed a new emphasis on the scale and breadth of the challenges port operators are facing. With the increased likelihood that these extreme weather events will continue to intensify in frequency and severity, and with the regulatory drive continuing to place growing pressures on budgets and operations, ports and harbors must plan and protect their assets, people, and infrastructures. However, this does not have to mean a major shift in operational practices. Effective adaptation to climate change and extreme weather risk can be achieved by taking a holistic approach to asset and infrastructure monitoring and maintenance. This way, port operators can adapt to quickly evolving conditions and prepare effective risk management strategies. ■

ABOUT THE AUTHORS



GREG FISK is the global lead for climate risk and resilience at BMT. He has been an accomplished climate change planner with BMT's climate and environment business since 2017. He holds a bachelor's degree in marine science affairs and a master's degree in marine policy.



SHIVAPRAKASH RAO is the head of Engineering and Consulting, Asia, at BMT. He is a chemical engineering graduate from the National Institute of Technology Karnataka, India, and a recipient of an executive MBA in finance from the Singapore campus of SP Jain's School of Global Management.





FEATURE NUCLEAR SHIPPING

Emerging technology

Regulations being introduced in the United Kingdom could lay the groundwork for a new era of nuclear-powered merchant vessels, but before that, longstanding safety and security concerns need to be addressed to see what are the implications for UK ports, most of which have no experience of nuclear vessels

STEPHEN COUSINS

N

o nuclear-powered ships currently sail under the UK flag or visit UK ports – with the exception of submarines – but that could change with the introduction of a legislation to facilitate the uptake of the clean-burning but

environmentally damaging and controversial fuel.

In early 2022, the UK government consulted on the proposed Merchant Shipping (Nuclear Ships) Regulations 2021, which will transpose Chapter VIII of the SOLAS convention into UK law. The intention is to establish a legal framework for nuclear ships, which could open the door to a new generation of nuclear-propelled merchant vessels.

The argument for introducing zero-emissions nuclear energy into the fuel mix is compelling. Shipping is one of the world's biggest polluters and more progress needs to be made to cut pollution, particularly in the United Kingdom, which has set the ambition to hit net zero by 2050.

This case study is therefore applicable to ports around the world, which are looking to establish similar regulations in the near future.

What's out there

LNG, currently the sector's most strongly supported alternative to polluting heavy fuel oil, is only capable of a 23% reduction in greenhouse gases, compared with current oil-based marine fuels.

Meanwhile, other zero-emissions fuels face technical hurdles, such as the need for a reliable source of renewable power for their manufacture and the need for investment in technical development.

Nuclear power, by contrast, has been in use for decades in vessels such as ice breakers, aircraft carriers, and submarines. The fuel is so long lasting, it can power vessels for years without refueling, removing operational cost and delays associated with doing so for conventional fossil fuels.

Launch code

However, mention the words nuclear power to many people and it will trigger thoughts of global disasters, such as Chernobyl and Fukushima, and a legacy of radioactive waste that could remain for thousands of years.

Environmental campaigners have expressed concern over the safety and security risks posed by the widespread use of nuclear vessels, and an incident in a port could endanger the local population and poison the water.

Jan Haverkamp, nuclear expert at Greenpeace Central and Eastern Europe, explained to *P&H*, “The use of nuclear reactors at sea has the same drawbacks as nuclear reactors used on land for electricity production. There are waste problems, risks of accidents, and the risk of nuclear proliferation if the technology gets beyond the five nuclear weapons states.” He added, “The sea is inherently more unpredictable than land and problems seen with nuclear icebreakers or submarines would also apply to merchant vessels.”

However, the case for nuclear-powered ships has grown in recent years as a response to climate change, escalating fuel costs, and advances in technology that promise to make reactors less dangerous and their waste less toxic.

In addition to incorporating Chapter VIII of SOLAS, which sets out the basic requirements for nuclear-powered merchant ships with especial attention to radiation hazards, it will recognize the IMO’s Code of Safety for Nuclear Merchant Ships (the Nuclear Code) adopted in 1981.

The Nuclear Code places particular importance on the approval of nuclear reactor installation on ships, its suitability for use on board, and the safety assessment of the nuclear plant to prevent unreasonable levels of radiation.

The government consultation on the regulation ended in October 2021 and the finalized legislation was to be introduced in December 2021; however, this was delayed to an undisclosed date later this year. The consultation document puts an emphasis on the potential role for nuclear as a zero-emissions fuel. In the UK, domestic shipping emitted 5.4 million metric tons of CO₂ in 2019, equivalent to 1 % of all domestic emissions – the UK does not measure emissions from international shipping. However, the consultation also states that nuclear power is not currently listed in the UK Clean Maritime Plan for future decarbonization, and its relatively high costs and unique features mean it is “not expected to be widely rolled out for traditional shipping.”

At the same time, the nuclear route promises to deliver attractive time and fuel cost savings over the long term. Reactor cores produce a significant amount of power and can operate for years without refueling.

This is an immediate advantage over next-generation fuels, such as ammonia or LNG, which are designed to run in regular diesel engines, as well as hydrogen or battery-powered ships.

Professor Michael Fitzpatrick, pro-vice-chancellor for Engineering, Environment, and Computing at Coventry University, UK, and an expert in the field of nuclear energy, said, “Nuclear is ideal for vessels that need to travel very long distances, or even for ferries where regular refueling is considered a hassle.”

Molten middle

Nuclear is a decades-old technology, but new entrants into the market are spearheading advanced small modular reactors (SMR) designed to enhance operation and cost-effectiveness, as well as address safety concerns. Compact SMRs were initially conceived as an alternative to traditional nuclear power stations and can be combined in different configurations to match specific power demands. Factory manufacture would eradicate the need for major construction projects.

The UK’s new nuclear regulations were devised, in part, to take the latter into account, explained Gwilym Stone, assistant director for ship standards at the Maritime and Coastguard Agency.

He said, “Previous international regulations were entirely based on the assumption that any maritime nuclear reactor design would be a form of pressurised water reactor. This then excluded recent

developments in nuclear technology that may provide better solutions.”

Danish firm Seaborg Technologies is currently adapting SMR technology for the maritime sector and is planning a series of modular power barges with reactors based on molten salt technology designed to generate between 200 MW and 800 MW of electricity.

A consortium involving UK-based Core Power and nuclear innovation company TerraPower, chaired by Microsoft founder Bill Gates, is creating a prototype marine-molten salt reactor for use in merchant ships and other applications. The reactor contains chemically purified salt that is melted at a very high temperature and blended with an oxide powder containing non-weapons grade fissile material enriched from uranium-235. This makes it capable of exceptional fuel efficiency, claims Core Power, with over 95% of energy in the fuel consumed, versus less than 1% in a conventional reactor.

Loss of coolant in a conventional reactor can cause accidents, leading to a chain reaction that generates explosive heat. If an m-MSR malfunctions and the temperature starts to rise, drain plugs melt and the entire load of liquid core fuel is poured into passive drain tanks linked to an ultimate heat sink, keeping them cool and unreactive.

“Nuclear is ideal for vessels where regular refueling would be considered a hassle”

PROF MICHAEL FITZPATRICK
Coventry University, UK



Above: A nuclear-powered icebreaker sailing on a river in Russia.

Mikal Bøe, chairman and CEO of Core Power explained to *P&H*, “The fuel is locked into the coolant, so you can’t have a loss of coolant without stopping the reactor.”

He said, “In other words, you can’t have a loss of coolant accident, that is physically impossible.”

The reactor’s high fuel efficiency also minimises the amount of radioactive waste generated and it can be configured to run on spent nuclear fuels. Turning waste into clean energy closes the fuel cycle and would solve the issue of what to do with nuclear waste, said Bøe.

“When a vessel is decommissioned after more than 30 years, the fuel in the reactor could be used again and again in next generations of reactors,” he added.

“Theoretically if there were 1000s of ships installed with these reactors, the fuel would continue to operate in subsequent generations of ships, significantly reducing the need to keep mining for more uranium.”

Not convinced

However, anti-nuclear campaigners remain unconvinced by the safety claims coming from tech disruptors in the nuclear power market.

“Improvements to nuclear technology remain on paper and are not making me very optimistic that the risk will ever be at an acceptable level,” said Haverkamp.

“If the UK is embarking on the commercial use of nuclear in the shipping industry, it will take at least a decade before ships become available, whereas we already have a head start with alternative clean fuel technologies, such as electric propulsion and ammonia. There really isn’t a reason to say we have to do this, we have to take these risks because there is no other way.”

Risks for ports

The advent of nuclear merchant shipping would also force ports to reassess their own risks and modes of operation before giving the thumbs up to being visited. There are implications around safe navigation, as well as the infrastructure needed for safety inspections, or for when ships arrive with a problem that needs investigation or repair.

However, the lack of refueling could free up berth capacity much quicker.

Ports may also have to look at their legal powers in relation to nuclear ships, explained Mark Simmons, director of Policy & External Affairs at British Ports Association. “UK ports are legally obliged to accept ships carrying legal cargo so we would probably need to look in some detail at what powers harbor masters have regarding nuclear ships – do they want these vessels coming in and do they have any choice?” he asked. The fact that most ports are close to centers of population raises clear safety concerns if an incident or leak were to occur, port would also need to respond to the concerns of local communities. “Ports would have to think about how they communicate with local people to ensure they know it is safe and that people are getting the right information because I imagine there could be a lot of misinformation circulating about the dangers of nuclear ships,” Simmons said.

These concerns and the stigma associated with nuclear power will need to be sufficiently addressed if the technology is to play a more significant role in the UK, and beyond, in the years ahead. ■



It was through my father, who was a shipping agent and forwarder, that acquired my affinity for the harbor. I studied maritime law and worked for a private company in the port. As a member of the Flemish parliament, I committed myself to the port committee, although the old boys club preferred to gently push me toward softer subjects.

It is no secret that the position as alderman for the port is a dream come true. And yes, I am the very first female port alderman, nonetheless I am certainly not the only woman who has made her ascent within the harbor in recent years. More and more women are doing so in all kinds of domains.

Many think of the port in terms of the stereotypical image of men lugging around heavy bags. Our port workers are crucial, of course, but the port is so much more. Furthermore, the jobs are diverse – commercial positions, operators, lab technicians, IT experts, customs personnel, and drivers.

We emphasize the versatility of our port to attract more women and this approach works. We have the numbers to prove this. At the Port of Antwerp itself, the male-female split is now 73-27%, but by



2022, we will see an increase in new employees that will shift the split to 69-31%. There will also be a slight increase in the number of operational personnel.

Remarkably, if you do not include those numbers, the proportion of women at the Port of Antwerp is 61%. If you look at the extended leadership team, the distribution is 59% men and 41% women. The board of directors of the Port of Antwerp, which I chair, has seven men and five women. In other words, the concept of the male bastion is also fading out in leadership positions.

At the same time, I emphasize that I do not like to underline male-female differences. In 2022, I believe that gender or any other distinguishing factor should not play a role in the assessment of an individual's skills or capabilities.

Fortunately, this evolution has been set in a large part of the Port of Antwerp, which I consider as a good thing.

A healthy representation of women at all levels seems to me as something that should be obvious in 2022. Everybody should be evaluated on their own merits. The right person for the right position in the best of the sectors – that is what it is all about. ■



THE DEBATE

Have you seen women occupy senior C-level and board member roles in your port or port-related organization in the past three years?



DR. PHANTHIAN ZUESONGDHAM | Head of division, Port Process Solution, Hamburg Port Authority



Yes, it becomes better! Yes, we can do more! These are my answers to the questions around diversity and equal chance for all. Elisabeth Marvel once said, "If you can see it, you can be it."

This quote applies to everyone and yet in an unequal society, women are still underrepresented in many crucial and decisive functions, especially in business and politics.

In Germany promoting women in leadership roles has been a challenge over the decades. However, emerging regulations such as equal care for children, partnership bonus programs, flexible working models, and temporary pause on executive mandate, has opened many possibilities of how family life could be organized without sacrificing women's career development.

There was a long debate for many years about the mandatory quota of women executives. Since the willingness of companies on a voluntary basis is low, the German government has mandated that all DAX-companies appoint at least one-third of women board members at the executive level. Additionally, the potential of women who pursue their careers can be nurtured via good platforms to grow and opportunities to show their capabilities like significant projects or lead responsibility in organizations; followed by mentors and



promoters; and of course their own strong wills.

At the Hamburg Port Authority (HPA), we recognize these key success factors and have been implementing different measures within the organization to sustainably develop our female staff. With great support from the executives – Jens Meier, CEO of the HPA, IAPH vice president

for Europe, and interim vice president for Africa, the HPA has initiated many programs to promote diversity across the organization. There are many initiatives and networks at the local and international level that help navigate and mentor women who strive for management positions within our industry like Women's International Shipping & Trading Association (WISTA), Women in Mobility, or the Women's Forum of the IAPH. As an active member of such networks, I realize that there is still a lot of room for improvement, starting with tasks like the selection of participants in a panel discussion for conferences, appointment of top management positions in a company, countering the stereotypical image when selecting professions such as captain, technician, or engineer. Women are not in by default, regardless of quota.

The status of real equality of chance for diversity is still a vision. Let us work further together to make it reality. ■

SEVENTY FIVE

Readership results: Have you seen women occupy senior C-level and board member roles in your port or port-related organization in the past three years?

75%

25%

MARCH/APRIL | DIVERSITY

POLL RESULTS

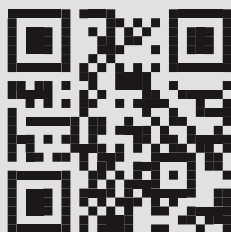
Three quarter of all respondents to our diversity question on women occupying C-level and board member roles in ports agree that in the past three years, they have indeed seen more women in those.

The recently published Women in Maritime - IMO and WISTA International Survey 2021 showed that of the more than 259 board members, from around 36 port operations and services companies that participated in the survey, around one-fifth were women.

Of the women that occupied C-level positions within port operations and services companies, most were chief human resources, followed by chief financial and chief marketing officers. ■

MAY/JUNE | OPERATIONS

THE POLL



Which focus area do you consider to be the most important one that needs to be improved?

In the run-up to the annual World Ports Conference, the IAPH and IHS Markit have organized regional workshops that aim to set the agenda for the conference.

These workshops aim to identify gaps in port operations, with the conference aiming to #CloseTheGaps and issue a call of action.

To identify the main priorities of ports and their clients, the next magazine poll therefore asks which of the suggested focus areas do readers consider the most important one in need of improvement. ■

Either scan the above QR code or use the web link below to submit your answer to this month's reader poll:

🌐 bit.ly/3uz0PFR



Amos Wangora

Kenya Trade Network Agency CEO Amos Wangora tells *P&H* about the benefits and challenges of implementing a single-window system in East African countries

SHEM OIRERE

The implementation of the IMO Convention on Facilitation of Maritime Traffic (FAL Convention) is gaining pace in East Africa as more countries launch national electronic single-window systems (e-SWS) that consequently will, for example, improve maritime business at the region's biggest port — the Port of Mombasa.

Kenya, Uganda, and Rwanda have recently completed the implementation of their e-SWSs, while Burundi and South Sudan are at different stages of implementation with expectation that the use of technology in lodging trade documentation and clearance of shipping information would result in improvement of the turnaround, cargo dwell, and ship waiting times at the Port of Mombasa.

Setting up

Kenya launched the e-SWS project in 2012, a year before the platform went live in 2013 with several government agencies on the platform. It became a one-stop shop for lodging of all trade permits and approvals.

Initially, the platform had 21 modules and could receive all applications for trade approvals before routing them to relevant government regulatory agencies for approval.

"Once the approvals had been made by the government agencies, the applications were routed back

through the electronic single window to facilitate customs clearance processes," said Amos Wangora, CEO of the Kenya Trade Network Agency (KenTrade), a state agency under the National Treasury that facilitates trade through automation of the processes with the use of the e-SWS.

KenTrade has partnered with Kenya Maritime Authority (KMA), in establishing, implementing, and managing the e-SWS mainly at the Port of Mombasa that is operated by state firm Kenya Ports

Authority (KPA). "The Kenya Customs Department is able to validate all the pre-clearance trade permits through the single-window system that has also integrated the department and various government agencies with the Port of Mombasa. Although the customs department and e-SWS have distinct roles, we are slowly moving toward having one big system that combines both of them," explained Wangora.

Swift work

With the introduction of the system, there has been a notable "decline in the time taken in processing documents, an increase in compliance, revenue collection, and visibility of documents across the supply chain," said Wangora, who is also a fellow of the UK Institute of Chartered Shipbrokers and a certified information systems auditor.

He said previous studies have shown the automation of trade procedures with tools such as the e-SWS reduces the business processes by nearly 50% as government agencies are able to approve trade documents continuously.

Furthermore, maritime lawyer and Kenya's shipping and maritime principal secretary Nancy Karigithu added that the e-SWS "shortens the time vessels, passengers, and cargo take at the port."

She added, "The longer a ship stays at the port, the more it costs and there is a trickle-down effect of the expenses at the port to the local economy."

Karigithu, who is also a former director-general and chief executive of the KMA said the new system ensures "all the agencies, governments or private people, who have something to do with the vessel have one single place that becomes the single point of truth for all the processes and the information that is needed."

Coming together

However, the e-SWS is no panacea in achieving efficiency in cargo and container clearance at the port of Mombasa.

"One of the challenges we have has been the sheer number of government regulatory agencies that we need to bring on board," said Wangora, adding that "The number of government agencies is not even an issue but the multiplicity of roles by these regulatory agencies is."

Some of the government regulatory agencies connected with operations at the Port of Mombasa include the KMA, Kenya Revenue Authority, KPA, State Department of Immigration, Port Health, National Environment Management Authority, Kenya Plant Health Inspectorate Services, and Kenya Coast Guard Services.

He said since Kenya commenced implementing the e-SWS, "there is a duplication of processes and regulatory responsibilities where government agencies sometimes demand to regulate the same commodity several times." This is compounded by "the fact that each of these regulatory agencies is levying a fee, increasing the cost of doing business and hence the need to streamline business process by relooking entirely at the mandate of the regulatory agencies."

Moreover, the KenTrade CEO said there is still a reliance on manual procedures for some of the trade processes at the Port of Mombasa and Kenya's borders.

"The reason we still have manual processes is because many government agencies have no way in the e-SWS to make approvals," explained Wangora.

"It is only the e-SWS cargo release module that will facilitate those approvals to be done online especially once the integration with the new customs system is fully complete," he added.

Wangora also said, there is some disconnect between the documentation handled through the e-SWS and the status in the movement of the actual cargo.

KenTrade has introduced a platform "where one can subscribe to a given number and be able to tell where a lodged document is being held and the same thing needs to happen on the logistics side".

Despite the teething problems, Kenya's transport cabinet secretary James Macharia is optimistic the e-SWS "will modernize and automate data collection, which will improve dashboard administration and enhance performance monitoring and evaluation by the public and private sector agencies". ■





PROJECT FOCUS LAMU PORT, KENYA

First call at Lamu port

The construction of the \$5 billion Lamu port – deemed to be the largest, deep sea port with viable transshipment capabilities on the East African coast – has seen one berth in operation, others delayed, and faces disruption through terror threats and environmental NGOs

SHEM OIRERE

The new berth in the Port of Lamu, with a length of 400 m, width of 800 m, and draft of 17.5 m can accommodate Panamax and new Panamax vessels with a capacity of over 10,000 TEU.

It became operational on 5 May 2021 after having been commissioned by Kenya's President Uhuru Kenyatta.

The inaugural call was made by the Maersk-operated *Cap Carmel* on 20 May 2021.

The Singaporean container ship was on its way from the Port of Dar es Salaam in Tanzania to Port of Salalah in Oman.

Pictured: The *Cap Carmel* calling at the port of Lamu, Kenya.

Photo: Getty Images/Dihoff Mukoto



Pictured: Kenya's president Uhuru Kenyatta opens Berth 1 at the Port of Lamu, Kenya.

Photo: State House

Seago Bremerhaven, which was carrying fruit exports from Kenya to France was the second vessel to call at the new port on the day the first berth was inaugurated.

Targeting transshipments

Lamu port, located about 240 km north of Mombasa city along the Indian Ocean's coastline, is being developed as a component of the larger \$25.5 billion Lamu Port-South Sudan-Ethiopia Transport (LAPSSET) corridor, an infrastructure project proposed to interconnect Kenya, Ethiopia, and South Sudan. The port targets transshipment business particularly cargo destined for Tanzania, Mozambique, and the Indian Ocean islands of Zanzibar, Seychelles, Comoros, and Madagascar.

The two other berths under phase one were initially to come online in October 2021, but the deadline lapsed with no official statement yet on why.

They are likely to be operational, it is therefore forecast to be any time in 2022.

"The port has been designed to world-class standards, and with modern facilities, it is expected to be fully automated making port processes efficient as well as streamlining cargo handling and clearance procedures," said Maina Kiondo, the acting director general, CEO, and secretary to the board of LAPSSET Corridor Development Authority (LCDA). Chinese firm China Communication Construction Company (CCCC) and project supervision consultant Yashoon Engineering are in charge of the construction of the three berths over a four-year period at an estimated cost of \$689 million, largely financed by the Kenyan government.

The contract dredging and reclamation, construction of berths and yards, construction of revetment, causeway,

road, buildings, utilities, and procurement of equipment as well as tug boats.

Kenya Ports Authority (KPA), the owner of the port, said operations of the three berths are likely to be granted concession to a private operator while the remaining berths are to be financed by private sector investors. However, they have yet been identified under public-private partnership model. It is envisaged by 2030, the berths will have been expanded to 24 to include 4 for bulk, 6 for container, 10 for cargo, and 1 for oil. An additional three berths, one each for oil products, coal, and LNG would be constructed at Pate Island in Lamu area.

The new port is expected to handle imports from the East African region, particularly bulk and break-bulk cargo such as grain, steel, and transport equipment while serving as one of the region's export gateways, handling agriculture products and primary industrial products such as processed wood and livestock products.

Cutting congestion

Originally, the development of the Lamu port was to address the congestion at the Port of Mombasa, the biggest port in Eastern Africa, which provides a gateway for exports and imports from and to landlocked Uganda, Rwanda, Burundi, and South Sudan in addition to serving eastern Democratic Republic of Congo, southern Ethiopia, and northern Tanzania.

When KPA signed the contract for the three berths at Lamu port with CCCC in 2014, Mombasa port had reported phenomenal growth in total cargo throughput and container volumes over a five-year period.

Total cargo throughput had increased on average of 7.6% annually from 19.95 million in 2011 to 26.73 million in 2015 while container volumes had grown on average of 8.7% per year to 1,076,118 TEU in 2015 from 770,804 TEU in 2011.

Additionally, KPA has partnered with Kenya Revenue Authority, the state tax collector, in unveiling various discounts on marine, stevedoring, shore handling, and wharfage

services for international vessels calling at the Lamu and Mombasa ports.

"Shipping lines using the port for transshipment shall be charged marine call-based dues once at the first port of call in the country, on a specific voyage, at either Lamu or Mombasa," KPA said in a statement in May 2021.

"For the second port call at either Lamu or Mombasa, they shall be charged 50% of the gross tonnage-based dues," the port operator added.

KPA said customers at the two ports will also enjoy a 40% discount for stevedoring services and a 30-day free storage period.

"Similarly, a 40% discount for wharfage and shore-handling services shall be offered for transit cargo for both loading and discharging," KPA added.

"Our current focus is to make Lamu a free port for both domestic and transshipment purposes in addition to establishing a disease-free zone in Lamu to support export of live animals and processed meat," said Ukur Yatani, Kenyan cabinet secretary for the National Treasury.

"The two other berths under phase one were initially to come online in October 2021 but the deadline lapsed with no official statement yet on why"

Earlier, Yatani had announced the government is allocating \$65 million for the LAPSET project including the remaining phases of Lamu port in the current financial year.

More throughput for the new Lamu port is expected with the full implementation of the other six LAPSET corridor project components, including a high-speed standard gauge railway linking Lamu to Juba, with links to Addis Ababa and to Gulu in Uganda, a super-highway network linking Lamu to southern Sudan, Ethiopia, and the existing road network in Kenya and Uganda, and an oil refinery.

Environmental versus economic benefits

Construction of Lamu port has raised concerns from NGOs that argue the siting of the gateway at Manda Bay, close to the tourist-destination Lamu Old Town, would compromise the status of the world heritage site.

According to United Nations Educational, Scientific and Cultural Organization (UNESCO), Lamu Old Town "is the oldest and best-preserved Swahili settlement in East Africa, retaining its traditional functions and is built in coral stone and mangrove timber, characterized by the simplicity of structural forms enriched by such features as inner courtyards, verandas, and elaborately carved wooden doors."

Although Kenya hopes to inject between 2% and 3% of gross domestic product into its overall economy with the implementation of the port project, it is estimated that figures are likely to increase to between 8% and 10% when all investments will finally come on board. The NGOs claim the negative effects of the project are yet to be effectively mitigated. "The LAPSET project has affected the fish habitat and the mangrove forest that provides breeding ground for fish has been largely cleared to pave way for ports, depleting the fish population," said Salome Nduta, a senior program officer at Kenya's National Coalition of Human Rights Defenders during a previous media interview.

Moreover, Save Lamu, a local environmental rights group that has been spearheading campaigns to protect local fisheries and communities, said the port project has displaced several fishers who have not been compensated despite a directive by the High Court in Kenya to pay them.

"Three years down the line, Lamu fishermen have yet to be compensated for the losses they have incurred from Lamu Port," the NGO said ahead of the commissioning of the first berth at Lamu port in May 2021. The High Court ruled in favor of the fishermen's compensation in April 2018 saying their livelihoods had been disrupted by the dredging at the sea to pave way for the Port of Lamu.

"Despite the High Court ruling, construction has continued unabated even as the community's traditional fishing rights and rights to protect their cultural identity have been violated – not forgetting the right to a clean and healthy environment," added Somo. M. Somo, head of Lamu County Beach Management Unit. Nonetheless, the government of Kenya considers Lamu port a critical pillar of the LAPSET corridor project connecting the country to landlocked South Sudan and Ethiopia that are currently utilizing the ports of Sudan, Massawa, Assab, and Djibouti.

"Eventually, it will connect northern Kenya to the Middle Belt of Africa, which runs from Dakar, Senegal in the west to Lamu in the east," said Kenyatta during the commissioning of the first berth.



© 2022 IHS Markit. All rights reserved. Provided "as is", without any warranty. This map is not to be reproduced or disseminated and is not to be used nor cited as evidence in connection with any territorial claim. IHS Markit is impartial and not an authority on international boundaries which might be subject to unresolved claims by multiple jurisdictions.

"With one of the deepwater harbors on the east coast of Africa, Lamu Port has the potential to become a premier transshipment hub for all cargo destined for the continent," he added. Kenyatta noted with Lamu port joining Mombasa port as a key entry and exit point of cargo, deep into and out of Africa's hinterland, Kenya is looking forward to the next phase of the LAPSET corridor project connecting the new port and northern Kenya by rail and pipeline links to neighboring Ethiopia, South Sudan, and other regional states.

"Lamu port is intended to serve the upper northern region of our country and the whole objective is to ensure the issue of marginalization is dealt with once and for all," he added.

Meanwhile, security remains a key issue in the construction and operations of the new port as the threat of terror attacks loom large especially in and around Lamu area.

In early 2020, CCCC suspended the construction works after an attack by suspected members of the Somalia-based and Al Qaeda-linked Al Shabab group at a military base housing US troops in Manda Bay next to the new Lamu port. "All employees are to leave the site and go home immediately and wait for the notice to open the site," said a memo by the Chinese contractor to its staff after the attack.

As Lamu port is strategically in the middle of major shipping routes for global trade, Eastern Africa has the chance to establish itself as the region's biggest shipping hub after the completion of the multi-billion-dollar project. ■





LOOKOUT HUMANITARIAN AID

Moving ahead

G

Global Mercy, the latest ship to join the fleet of hospital charity Mercy Ships later this year, has left the Port of Antwerp for public showcasing in Rotterdam. Here, the large civilian hospital ship will be open to visitors for a first look until mid-March.

While the ship was docked at the Port of Antwerp over the past six months, it was fitted with essential equipment and internal furnishings, and was prepared for crewing.

"This includes the installation of medical equipment and IT systems, as well as the supply and crewing of the ship for its first mission," the Port of Antwerp stated in a press release.

Global Mercy is a unique ship in the passenger class; it is 174 m long, 28.6 m wide, and has a gross tonnage of 37,000. It has 6 operating rooms, 200 beds, a laboratory, general outpatient clinics, and eye and dental clinics. The total area of the hospital department is 7,000 sq m.

"There is still a bit more to do before the ship's crew can finish all the technical kitting out, so the ship will sail to south Tenerife for a couple more months and then should arrive for joint celebrations with the *Africa Mercy* in May," media relations manager for Mercy Ships Diane Rickard told *P&H*.

The first placement of the new ship will be in Dakar, Senegal.

Mercy Ships is an international medical aid organization providing free medical care and development projects since 1978. Ships are staffed by volunteers from over 60 countries, with an average of 1,200 volunteers per year. ■

A virtual tour of the ship can be accessed via the Mercy Ships website:

🌐 www.globalmercy.org

Pictured: *Global Mercy* berthed at the Port of Antwerp for fitting works. Photo: Jonathan Ramael



PERSPECTIVE MITIGATING DISRUPTION

Handling a digital disconnect

For operations managers, dealing with disruptions is a critical part of their responsibility. A situation that might start with a delayed arrival or occupied berth can further escalate until it impacts across a port's activities. This could lead to congestion ashore and various supply chain problems that have occurred in many important trading hubs in recent months. Increasing traffic, the pandemic, and the general unpredictability of weather are contributing to conditions that can lead to disruptive events and are acting as catalysts prompting ports to adopt digital technologies to help mitigate their effect on operations and their bottom lines.

One of those ports is Singapore – the world's second-busiest container port in terms of container throughput handled, according to the World Shipping Council, owing to its connections to around 600 ports worldwide. It is also the world's leading bunkering port. Well-connected ports such as Singapore provide nodal points in a connect-

ed maritime ecosystem, making it particularly vital that they minimize disruption and ensure decongested harbors. This enables on-time arrivals and departures, reduces anchorage time and fuel waste, and increases sustainability of the whole supply chain.

Leading the way

However, it is not just large ports that face disruption. According to *Smart ports in the Pacific* report, published by the Asian Development Bank in November 2020, when some of the smaller ports in the region were studied, it was found that "the implementation of digital systems to measure performance and identify bottlenecks contributes to efficient and cost-effective port operations, especially in the Pacific context." It added that natural hazards also "lead to disruption of vessel traffic and significantly impact the reliability of the logistics chain."

Although disruption is a universal problem, digital systems and connectivity offer solutions. As more ports get connected, the

uptake by shipowners and vessels operators benefiting from those connections will grow, optimizing their operations and cascading the positive effect of this evolution across the whole shipping industry.

Hence, the Maritime and Port Authority of Singapore (MPA) has been leading the development and implementation of digital port clearance technology to improve its efficiency. In November 2021, it signed a memorandum of understanding (MOU) to create a strategic partnership with Wärtsilä Voyage – a company with a mission to use data and artificial intelligence to improve vessel performance and efficiency – to use a core Wärtsilä Voyage technology alongside its own maritime digital platforms and ship-board systems.

Wärtsilä Voyage's Navi-Port technology is being used for just-in-time (JIT) planning and coordination via MPA's digitalPORT and digitalOCEANS platforms, which have been established to offer a one-stop port clearance portal for ships calling at the port. By linking



ABOUT THE AUTHOR

CHRIS CHUNG, director of Digital Innovation and Strategic Projects at Wärtsilä Voyage is based in Singapore. His focus areas include intelligent vessels, connected smart ports, cybersecurity and data analytics. Before joining Wärtsilä, Chris held leadership roles in Lloyd's Register, British Gas and Telstra.

that portal to services such as Navi-Port, the platform is now used to coordinate vessel calls throughout the port for optimal passage planning. When the partnership with Wärtsilä Voyage was signed, MPA's acting director for IT, Chin Yong, said that it "further solidifies our commitment towards digitalization to support port-to-port optimization and maritime decarbonization." The organizations will identify synergies between Navi-Port solution and, in particular, digitalPORT to co-develop next-generation safer and greener smart port solutions.

The project has some ambitious objectives: to initiate, develop, and promote innovative solutions that accelerate digitalization; to foster interoperability in e-navigation and ship-to-shore secure data communications to enable port-to-port optimization; and to establish reliable, cybersafe, and cost-effective information exchange pathways between ecosystem partners to increase operational efficacy.

Surrounding those main goals, Navi-Port will provide strengthened secure data exchanges between the Port of Singapore and participating vessels' shipboard systems to further support digitalization in the maritime industry. The collaboration will also foster

Pictured: Mirroring port operations digitally will improve efficiency. Photo: Getty Images/sezer66

interoperability in e-navigation and enable marine autonomous surface ship concepts to be tested. In fact, Wärtsilä already has experience of operating those in Singapore, having conducted trials of its IntelliTug in cooperation with the MPA in 2019.

Get involved

It is important to note that participation is voluntary so Wärtsilä Voyage is working with industry stakeholders, such as its customers whose vessels would be calling at the Port of Singapore, to encourage them to participate.

Subject to their consent, Wärtsilä Voyage will use their vessels' nautical data to test-bed reliable and secure information exchanges using Navi-Port. This will help implement standard application programming interfaces between participating vessels and MPA's systems to enable optimal arrival

and departure of vessels from the port.

The MOU enables Wärtsilä Voyage and the MPA to assess data and cyberthreats to vessels' shipboard systems, ship-to-shore

communications system, and MPA's JIT operations. This relationship with the MPA follows other successful applications of Navi-Port in ports that have made Wärtsilä Voyage their partner of choice. At Tanger Med in Morocco, for example, Wärtsilä Voyage is a joint partner in developing a port management information system, whereas in Germany, the Hamburg Vessel Coordination Center and Carnival Maritime worked with Wärtsilä Voyage to implement a JIT sailing solution.

Back in Singapore, Wärtsilä Voyage and the MPA have a long-standing relationship with this MOU following a series of commercial and research-and-development initiatives over the years, such as the aforementioned IntelliTug project. More recently – shortly before the Navi-Port MoU was signed – Wärtsilä Voyage was selected to deliver a navigational simulator for Singapore's Center of Excellence in Maritime Safety, which is a collaboration between the Singapore Maritime Institute and Singapore Polytechnic, supported by the MPA.

Underlying all these applications is a common thread; improving ship-to-shore coordination. If this can shorten port stays by as little as 10%, allowing ships to reduce their transit speed, this will lower fuel consumption significantly. Wärtsilä Navi-Port has made it possible with its smart port technology and JIT solutions. ■

“Wärtsilä Voyage uses data and AI to improve vessel performance and efficiency”

CHRIS CHUNG
Director, Wärtsilä Voyage



With Frans van Zoelen, long-serving chair of the IAPH Legal Committee, retiring in April, it is time to look at ports' legal past, present, and future

Time to reflect

INES NASTALI

Frans van Zoelen's involvement with the IAPH started in the 1990s when he attended the 1997 annual conference in London, UK.

The Port of Rotterdam's lawyer promptly got involved with the association's legal committee, and eventually became its chair in 2004, serving in this role until the end of April 2022.

Having also worked extensively with the IMO's Legal Committee, it is only fitting that the committee's meeting in March at the organization's headquarters in London might be his final outing as the IAPH's legal advisor – should COVID-19 restrictions allow him to travel to London in person.

But the parting legal chair also fondly remembers the December meetings of the IAPH Legal Committee in Paris, hosted by the French Port Association and his IAPH legal committee chair predecessor Bruno Vergobbi, then director of the Port of Marseille. Those were lavishly set in the beautiful antique building of the French association at the Place Général Catroux.

On the safe side

In the 30 years that Van Zoelen has worked with the IAPH Legal Committee, he has seen and advocated for some important changes that make it easier to protect the legal interest of ports.

Namely, making shipping more safe, secure, environmentally friendly, and protecting the legal interests of ports in case of damages, through the Bunker Convention, the Nairobi Wreck Removal Convention, and the preservation of the Civil Liability Convention and International Oil Pollution Compensation Funds.

"The IAPH pushed those instruments for its members to mitigate the effects of the limitation of liability of ship operators," Van Zoelen said.

Other feats of the committee according to Van Zoelen include, "the creation of the legal database for relevant instruments and conventions, and of course the guide *Introduction to Maritime Law for Port Officials*, designed to provide an introduction to this complex and specialized area of law".

In this regard, he would still like to see one important legislation to come into force. The International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS) Convention is an IMO convention created in 1996 and amended by the 2010 HNS Protocol. This instrument would be vital for ports to be compensated for damages caused by hazardous and noxious substances during maritime transportation.

However, it has not yet entered into force. Eight member states – Canada, Denmark, France, Germany, Greece, the Netherlands, Norway, and Turkey – have signed the 2010 HNS Protocol, subject to ratification.

Currently, Canada, Denmark, Norway, South Africa, and Turkey are the first states to have consented to be bound by the convention. A total of 12 member states are required to ratify before the convention enters into force. Progress has been reported by several EU states and it is anticipated that a number of those states will ratify soon, according to the IMO.

Van Zoelen therefore calls on more IMO member states to ratify or accede to the HNS Protocol 2010.

Another issue he has worked extensively on is the discussion around ships in distress and places of refuge.

"The concept of places of refuge has gradually changed. The humanitarian element is now different as crew can be rescued via helicopters. Ships have become much larger with correspondingly, more cargo and potentially more harm for the environment. Therefore, it is essential to keep the IMO Guidelines on Places of Refuge for Ships in Need of Assistance up to date," Van Zoelen explained.

These guidelines are aimed to help steer one of the biggest conundrums ports could face. If an ultra-large container ship caught fire at sea and would need to be brought into port, the availability of an adequate and fair decision-making process is crucial. Further it is very much about critical de facto circumstances as if there are indeed resources in the neighborhood to cater for that situation, to provide adequate and available resources.

This is also a reason why the HNS Convention would be helpful to rely on for ports, to have the confidence that they can seek compensation for damages following an incident.

Work to protect the legal needs of ports therefore has to continue. Van Zoelen foresees cybersecurity as one crucial element that will need to be addressed, for example, by promoting and updating the IAPH Cybersecurity Guidelines for Ports and Port Facilities. Other elements are new fuels and digitalization in general.

With those corresponding to the focus areas of the IAPH, Van Zoelen commended the collaborative approach the IAPH has taken by reshaping its technical committees



“Work to protect the legal needs of ports has to continue”

FRANS VAN ZOELLEN
IAPH Legal Committee
chairman

to center around risk and resilience, climate and energy, and digitalization.

For this collaboration to continue, an active and creative legal committee is needed.

“I was always amazed by the possibilities the IAPH committee work offers to learn about new avenues and legal experiences in other ports in other parts of the world, next to serving a bigger cause,” the parting chair said.

“IAPH as an association has professionalized in recent years, and therefore it is quite logical that earlier hesitating ports are now becoming a member of the IAPH.”

He added, “The potential of what ports can get out of it is enormous. Furthermore, a strong collective voice for the ports sector requires engagement and commitment of individual ports. It would neither be sensible nor fair to remain an outsider and leave this important work to others,” he told *P&H*.

Van Zoelen will likely watch these developments from close sidelines as he is planning to stay connected to the association as well as the world of ports through different projects. ■

A tribute to Frans

SUBRAMANIAM KARRUPIAH | IAPH president

It is hard to think about the Port of Rotterdam Authority and the IAPH without thinking about Frans van Zoelen. His name has been intrinsically linked with the development of both organizations for several decades.

As head of the Port of Rotterdam’s legal department, Frans is at the heart of the process that transformed the port authority from a semiautonomous municipal department to a corporate entity, a very complex process that took more than a decade to materialize. The final product has however inspired reform processes all over the world, shaping port authorities as hybrid entities that proactively generate business opportunities while keeping the public interest in mind. Providing inspiration and sharing knowledge with other ports is what Frans has been doing at IAPH, as chairman of the Legal Committee. In addition, Frans also took on the responsibility of being our legal counsellor. This brought another transformation process on his plate, turning IAPH into the professional voice of the world ports’ community it is today.

Having had the privilege of working closely with Frans for several years, I truly appreciate his diplomatic skills, resourcefulness, reliability, and commitment to the common good. These have been proven time and time again to be essential to the operations of IAPH.

On behalf of all members, I want to express my sincere gratitude to Frans and wish him, his wife Thea, and their son Morris a wonderful and rewarding new chapter in life! ■

Tangible achievements

After the IAPH Legal Database on international maritime conventions impacting on ports was completed in 2005, Frans van Zoelen realized the need for a more general introductory guide to various subjects of maritime law that is often complex and difficult for those working in a port to understand. This initiative resulted in publishing the Introduction to Maritime Law for Port Officials, which was constantly updated and expanded until January 2020.

As chair of the IAPH Legal Committee, he wrote and spoke for IAPH in international maritime fora, including the IMO and the French Comité Maritime International. He attended numerous meetings of IMO’s Legal Committee to represent IAPH views and positions on issue such as places of refuge and hazardous and noxious substances. For the former, he wrote a very comprehensive and insightful paper entitled *Places of Refuge from a Ports’ Perspective*, which remains IAPH’s firm position on the topic and his pleading to the international maritime community for ratification of the HNS convention led to its successful entry into force.

He also orchestrated, in a tireless effort, the rewriting of the IAPH Constitution in 2016. ■



ABOUT THE AUTHOR

TAMAR IOSELIANI is the first female maritime leader in the Black Sea region. She joined the maritime transport sector in 2011 at the age of 22, and in 2018, took on the director position.

7:30



9:00



10:00



10:30



Nine to five

Tamar Ioseliani, director of the Maritime Transport Agency of Georgia, takes *P&H* through a busy day preparing for future projects and coordinating current ones



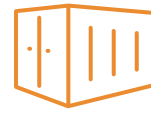
For a year now, my day, in any weather, starts with Lilibet. Walking with her in the morning charges me with energy, positivity, and motivation, which really help me to cope with the challenges of my daily work.

After that, I check my emails and start preparing for the new working day. Years of experience have prepared me for any situation with a short notice, such as a television interview or an important meeting.



I am at work. The Maritime Transport Agency is currently working on several projects in different areas, such as digitization of services and port community system integration, for example, waste management and the employment of Georgian seafarers.

The agency also works on seafarers labor reform while improving the level and quality of education in maritime educational and training institutions, and increasing access to maritime education, including for girls.



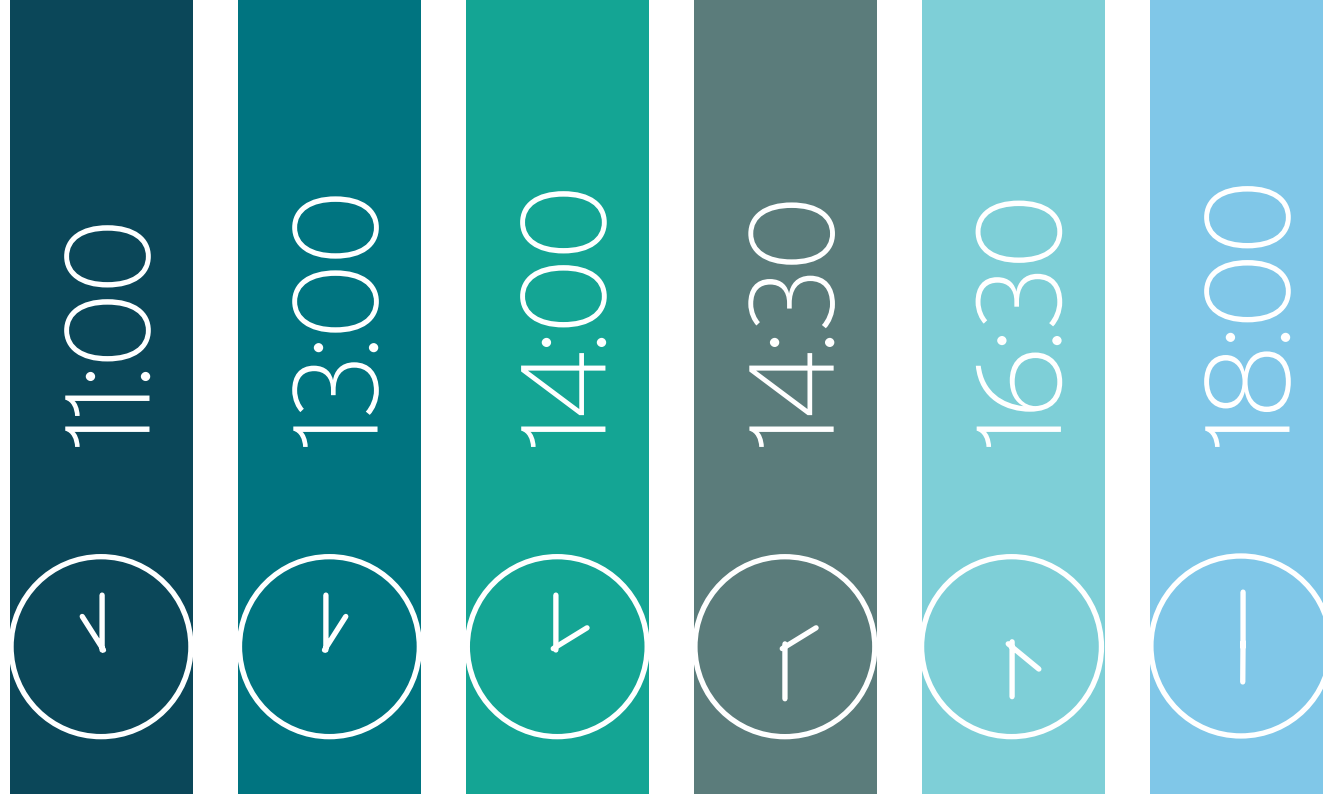
I attend a short meeting with the top management. We pass updated information in different directions on the challenges we face and what is being done to solve standing issues.

I enjoy this process – crisis management is one of those challenges I had to master in the past 10 years.



I meet with a working group that will monitor the European Maritime Safety Agency audit in May 2022. This process is very important for us, so I am personally involved in this group.

I am like this generally; always giving 100%. Without maximum effort, it is impossible to reach the goals that are set for Georgia.



I am in an online meeting with the shipowners employing Georgian seafarers and discussing a joint initiative.

By 12 pm, we start the meeting with the ongoing reforms and projects in the port sector. Private sector operators who operate in ports are also often involved, as they also need to be part of this system to get the best results.



Lately I have been trying to communicate with my friends or family over lunch, but it often does not work out. Time is the most valuable resource in my life.

If I manage to communicate with my loved ones, it is a bonus because by changing the atmosphere, we recharge and get back to work refreshed; otherwise people just burn out in their routines.



Strengthening the Georgian flag and participating in a working group to plan and implement our activities for the development of international maritime businesses in Georgia is one of our priorities.

In 2020, Georgia introduced significant tax breaks for international companies related to maritime businesses.



We work on the reform of seafarers labor and the implementation of the Maritime Labour Convention in Georgia together with the legal and seafarers departments, which oversee the maritime education and seafarers certification system.

Georgia has significantly moved closer to European standards in the maritime field and the ratification of this convention will fulfil the obligations under the agreement between Georgia and the European Union.



I discuss staff-related issues with the HR manager. In 2021, we introduced a new system of self-assessment and evaluation and discussed its impact on employee performance and outcomes.

Afterwards, we have a short briefing with the port captains, and we listen to information about the current issues in the Georgian ports, and then I sign important documents, check analytical documents, and plan for the next day.



I remind myself that it is time to go home!

However, sometimes it does not work out like that – the lives of maritime sphere representatives change according to the ocean's waves.

Handle with care

Conditions of port workers have changed since the 13th century. What started with manpower to unload ships, developed into well-organized operations

INES NASTALI AND FRANK LENNOX-MILLARD

W

hen looking at the past doings and living conditions of port workers, there is a lack of research and insight.

Radhika Seshan, retired professor from the Department of History at the Savitribai Phule Pune University and a visiting faculty member at the Symbiosis School for Liberal Arts, Pune, India, said to *P&H*, “First, we find almost no information about port workers and their lives of the kind that you get in Europe. What we get instead is information about workers from the caste perspective.”

It seems that in India, the job as dock worker developed from several different ones. “In Fort St George, for instance, we find mentions of the caste of boatmen – possibly fishermen, or, more likely, groups that were both fisher-folk and marginal peasants, working mostly with coconut. As part of the caste system, their skills would have come through family teaching only,” said professor Seshan.

Further proof that the job as dock worker developed from working with the produce that is being shipped is shown in English and Dutch records, particularly of the Coromandel coast. “It appears that this group of people were also employed to handle the lading and unlading of ships – a typical feature of this coast is that there is always high surf, and a continental shelf that prevents large ships from anchoring close to shore. So, goods were taken off and put onto ships via smaller boats that moved from shore to ship. Again, the references are to the broad category of boatmen,” explained professor Seshan.

However, from there, the first structural organization emerged, according to the retired professor. “Each group of workers was organized within the caste framework. So, we have indications of the caste of fishermen, of messengers, and of watchmen, and of course castes of weavers, merchants, and so on.”

Pictured: Cattle being unloaded near London Docks, 19th century.
Photo: Alamy/World History Archive







Pictured: Workers hoisting up goods at a wharf by the Thames near Tower Bridge, London, in order to clear merchandise and perishable goods before a threatened dock strike.

In uncertain times

This line of work was during good times. During bad times, an additional group of people joined the work in ports. Often, not by choice. “At times of famine, a larger number of people made their way to the ports, often to sell themselves as slave labor. Unfortunately, we don’t get any information on where they went after they were sold as slaves – whether inland, or overseas to one of the many areas, which the coasts had contacts,” said professor Seshan.

Here, we again encounter a lack of information into the lives of those souls. “Therefore, we don’t know what kind of work they were made to do as slaves.”

Meanwhile in Europe, there is more information on how the start of the triangular trade also facilitated slave trade, peaking in 1792 during Britain’s busiest slave trading year with more than 400,000 people carried to the island state. Together with Portugal and Spain, both well-known seafaring and exploring nations, England was the main destination for slaves in Europe, but accounted only for about 5% of slaves destinations, same as North Amer-

ica. More than half of the slaves were taken from Africa’s western coast to Brazil and Jamaica, and 35% were taken to the West Indies.

Business opportunities

Interestingly, the same lack of data rings true for the history of port workers in Europe. Taking England in the time from 1300 to 1600 as example, the attention – maybe not surprisingly – centered around another group of

stakeholders, according to Dr Craig Lambert, associate professor in Maritime History at the University of Southampton, UK. “Not much research has been undertaken on port workers as most of the literature centers on shippers.”

Dr Lambert’s work focuses on the study of maritime communities, merchant shipping, and naval logistics between 1300 and 1600.

However, some facts are known. Similar to the situation in India, many ports had wharves, watchtowers, and buoys. Equally, in many places, such as Southampton, there was also a lighter

service in which several small boats would unload larger vessels and ferry the cargo to the shore. Here, equipment was established. “On the quay side, there were hoists, cranes, pulleys, worked by people and animals.

"Maritime trade in England was regionalized. Shippers tended to trade with adjacent places"

DR CRAIG LAMBERT

Associate professor,
University of Southampton

Comparatively to today, “there was a lot of legislation focused on cargoes and port workers would have to be aware of this. Each port had two or three customs officials who checked the cargo and ensured the merchants paid the correct taxation on the goods they imported and exported. Merchants would also fund the use of a crane,” said Dr Lambert.

Other than the crown’s customs officials, there would be local officials, such as water bailiffs and others, who collected local charges for using the crane and the wharf. When a ship arrived in a port, it would often have to be piloted into the harbors and then the process of unloading or loading would begin.

The port operations system in England during pre-industrial times, was already quite evolved. “There would be weigh houses, which checked weights of goods as they were loaded, manned by customs officials. There would also be warehouses, which would be used to store goods.”

One such good that one nowadays does not find anymore in warehouses around the country was ivory. However, during peak times in the 19th century, 200 tons of ivory were stored in what would later be known as Ivory House in St Katharine Docks in central London. The city was the principal importer of ivory from the coasts of Africa, dating further back than slave trade.

Making use of ever extending business opportunities, some ports would be extended so that they contained docks, shipbuilding facilities, and defense works.

“In 15th century Southampton, for example, William Soper built a dock and storehouse to construct ships for Henry V. Often, docks were temporary structures but under Henry VII, Portsmouth was developed into a naval base and Henry VIII added Woolwich and Deptford in the 16th century,” explained Dr Lambert.

Working relationship

In terms of who else England traded with, Dr Lambert said, “Maritime trade in England was regionalized. Ship-tenders tended to trade with adjacent places.

For example, most of Bristol’s overseas trade was with Ireland, Spain, and Portugal. However, the vast majority, at least 75% of trade, was coastal. The Newcastle coal trade, for example, employed hundreds if not thousands of ships: moving coal down from Newcastle.”

Trade relationships, just as today, could be impacted by things such as the Anglo-Spanish war (1585–1604). “In such cases shippers had to expand existing routes, forge new ones, or trade with the enemy. The latter was possible by running goods through the Channel Islands or through French ports,” Dr Lambert explained.

Another challenge that today is more familiar than any other was environmental change. “Europe underwent a period of climate change known as the Little Ice age between 1300 and 1850. This cooled temperatures but also created a series of extreme weather events and storms.”

Like today in European ports, silting was a problem, Dr Lambert said. Henry VIII and Elizabeth I built a new harbor at Dover because of silting, and this employed 800 men. Dredgers were employed to keep channels open and sometimes ports would bring in outsiders especially engi-

neers from the Low Countries to construct sluices. To this day, the Netherlands and Belgium are known to be home to four of the five top dredging companies.

Safety and security

Expertise was also sought when it came to loading the ship. While materials and design work have considerably changed today, the balance of a ship has always been of utmost importance.

“Each ship would usually carry the goods of dozens of merchants, so all these had to be unloaded and marked. Loading was quite technical as the port workers had to make sure the vessel was loaded correctly: for example, the most common type of container was wood casks or barrels – such as food, wine, oil, fish, cloth etc. – and these would be placed in the bottom of the ship,” Dr Lambert explained. He continued, “On the second level, boxes were stored and on the third level sacks and canvas bags used to transport flour were stored. Finally, came ceramics such as container jars. This was an extremely important job that required the goods to be loaded and packed with great care.”

And just like today, responsibility lay on one person’s shoulders. “Mariners on each ship would usually be responsible for bringing the cargo on deck, but it was the shipmaster who was responsible for ensuring the safe movement of the cargo from the ship to the shore.”

Workers’ rights

Even after the industrial revolution that brought on more equipment to handle the goods, and carts, horses, and manpower was replaced by more and heavier cranes, there were no unions and because of high unemployment rates, workers could easily be replaced.

Accidents, common in an area where there were no safety goggles or wear such as helmets and full body suits, happened and no compensation was paid to the workers.

In India, “payment was fixed, but was negotiated with the head of the caste, who was paid, and who then distributed the money among his people. There was a fair degree of unity, and of sharing of knowledge,” professor Seshan said. “For example, there was one case in Chennai where the boatmen said that they were paid less by the English, because their fellow caste members who worked for the Dutch got a higher payment.”

Today, computers calculate the load and stability of the ship and automation has taken on the heavy lifting of equipment that has changed in size, material, and weight.

However, the captain is still liable for how port workers’ have loaded the vessel that he oversees. His and the rights of port workers today are being defended by the International Transport Workers’ Federation as well as the International Labour Office, which publish guidelines and determine the appropriate standards that should be in place to ensure safe port operations. ■

Read professor Seshan’s latest book that she co-authored with Jan Lucassen, *Wage Earners in India 1500-1900: Regional Approaches in an International Context*: bit.ly/WageEarnersinIndia1500-1900

Membership notes

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

Regular member

SAQR Ports (RAK Ports)

- United Arab Emirates
- +9717 202 5100
- info@rakports.ae
- www.rakports.ae
- Roger Clasquin, CEO

Port Saint John

- Canada
- +1506 636-5377
- pcopeland@sjport.com
- www.sjport.com
- Craig Bell Estabrooks, CEO

NSW Ports

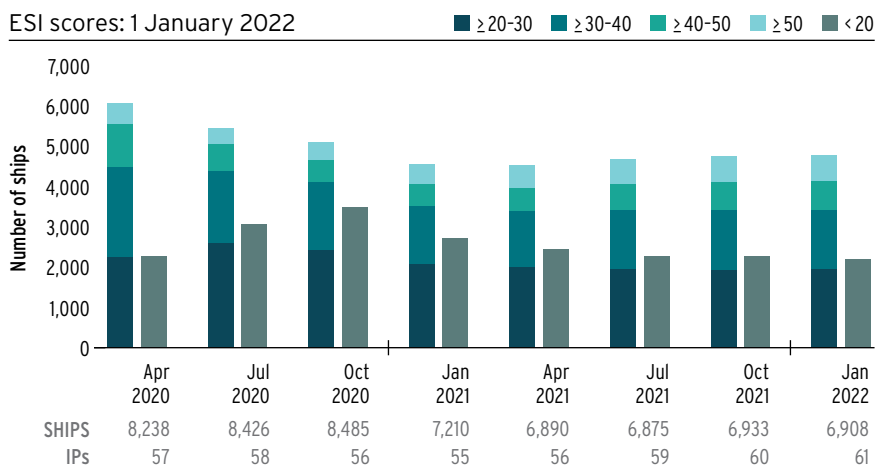
- Australia
- +61 417 273 423
- marika.calfas@nswports.com.au
- www.nswports.com.au
- Marika Calfas, CEO

Port of Brisbane

- Australia
- +61-7 3258 4888
- info@portbris.com.au
- www.portbris.com.au
- Neil Stephens, CEO

For a full list of new members, including associate members, please go to:
iaphworldports.org

ESI scores: 1 January 2022



Note: Stacked bars show ESI scores above 20 points, single bar shows ESI score below 20 points

Source: IAPH | © 2022 IHS Markit

ESI scores updated and work on berth module launched

As of January 2022, 6,903 vessels have been registered with the Environmental Ship Index (ESI). Compared with the last update from October 2021, 35 fewer vessels are now registered.

Most of the newly added ships score high between 40 and 50 points. In the attached infographic, the vessels that score above 20 points have been visualized. With 4,731 vessels, this makes up most of them.

Recently, the Port of Long Beach, United States; the Tomakomai Port Authority, Japan; and the Port of Açú, Brazil have joined the program as incentive providers.

The ESI identifies seagoing ships that perform better in reducing air emissions than required by the current emission standards of the IMO. The ESI evaluates the amount of nitrogen oxide and sulfur oxide that are released by a ship and includes a reporting

scheme on the greenhouse gas emissions of the ship.

In February, the IAPH also commenced development plans for an at-berth module focussing on the environmental performance of, initially, cruise ships, at berth.

All stakeholders in maritime transport can use the ESI to improve their environmental performance and as an instrument to reach sustainability goals. ESI has become the standard tool used by the world's ports to reward and incentivize shipowners meeting and exceeding IMO emissions standards.

If your port is not yet participating in the ESI, find out more about the incentive program on the dedicated ESI website or contact the team.

Environmentalshipindex.org
admin@environmentalshipindex.org

EVENTS TIMELINE 2022

15

MARCH

IAPH pre-conference workshop Africa
 Agenda-setting meeting in preparation for the World Ports Conference
worldportsconference.com

16

MARCH (16-18)

SELA Meeting of Port Logistics Communities
 Status of port activities in Latin America and the Caribbean in the context of the pandemic
sela.org/en

22

MARCH

WPC pre-conference workshop South America
 Agenda-setting meeting in preparation for the World Ports Conference
worldportsconference.com



The vice chair of the IAPH Risk and Resilience committee, Niels Vanlaer takes *P&H* through the 2022 priorities of the committee

Q: Which areas will the IAPH Risk and Resilience committee focus on in 2022?

A: We will be concentrating on developing a set of guidelines for ports on business continuity and risk preparedness within 2022 and overseeing the launch and follow-up of the World Ports Tracker starting with the basic elements of Pillar I in March 2022.

Regarding the guidelines, a first, generic part targeting the management components that need to be in place to address risk and resilience, will be investigated. As far as I am concerned, this boils down to understanding the threats that ports face but also to be aware of what is unknown. Second, we are looking into a practical, case study-focused part that would highlight how ports responded to real challenges and the lessons learned. This is part of our mutual learning, and moving toward a culture of sharing lessons learned would benefit us all. We will also elaborate on the draft self-assessment tool that was developed in view of several surveys that we ran on the resilience level of ports. We hope to share several questions and good practices with our IAPH regular port members so that they can assess themselves on their level of resilience and identify their gaps and strengths.

Additionally, we also want to concentrate our efforts on climate resilience. To that end, we will continue our support to the Navigating a Changing Climate (NaCC) initiative under new leadership, by Resilience4Ports. Capacity building on climate resilience will be part of the work of NaCC going forward.

Finally, the Maritime Anti-Corruption Network (MACN) is working on developing a Global Port Integrity Platform, with the contribution of the academic members of PortEconomics team.

Q: What are common issues that ports face?

A: Over the past decades, our industry has become increasingly complex, interdependent, and efficient. Despite its benefits, from a system perspective, ports are also more vulnerable. Furthermore, with the supply chain situation as it is, any event that

10 years ago would have been a *faits-divers*, can now lead to further congestion. Aside from that, we have the usual suspects of cybersecurity (with the same dependence issues), navigational incidents and, lest we forget, the effects of climate change that we have already seen on the supply chain as a result of storms, hurricanes, floods, and droughts. I would argue that resilience and minimizing risk is also about sourcing competent staff to man our ports, ships, and the wider industry. It is not unlikely that this too will be a major challenge sooner than we think.

Q: How do you expect the outcomes of the World Ports Conference to shape the agenda of the committee?

A: The committee had agreed on its previous meeting that supply chain resilience would be one of the topics to be addressed as part of the committee's work program for 2022-23.

With the 2022 World Ports Conference (WPC) in Vancouver focusing on closing the gaps on global ports connectivity, efficiency, and competitiveness, IAPH will have obtained input from a series of regional online workshops in collaboration with the World Bank to address specific factors that cause gaps in these fields per region. Any identified gaps, including on supply chain resilience, will then be addressed at the WPC in Vancouver and followed up by each of the technical committees.

Q: What kind of risk and resilience projects does the Port of Antwerp focus on?

A: The problem with risk management is that it often takes the flavor of the day: today it is pandemics, yesterday it was cyber, and the day before it was terrorism. In reality, it is supply chain and pandemics and cyberattacks and security risks and navigational hazards and extreme climate events. So, I am wary of focusing too much on one or the other. It is situational awareness really that lies at the foundation of resilience.

Q: What kind of collaboration would you like to see between the different IAPH committees?

A: Aspects of risk and resilience overlap with many of the activities of our other two main committees on climate and energy, such as energy transition and alternative fuel risk management, among others such as legal aspects of risk, diversity in staff, and recruitment policies. There are overlaps also with the many best practices cited in the projects covering risk and resilience in the World Ports Sustainability Program. Due to these overlaps, the technical committees of IAPH are exchanging and using each other's expertise as required. ■

Q&A

NIELS VANLAER
Business continuity manager, Port of Antwerp

IAPH INFO

Photo: Port of Antwerp

24

MARCH

WPC pre-conference workshop Middle/South Asia
Agenda-setting meeting in preparation for the
World Ports Conference
🌐 worldportsconference.com

29

MARCH

WPC pre-conference workshop East Asia
Agenda-setting meeting in preparation for
the World Ports Conference
🌐 worldportsconference.com

16

MAY (16-18)

World Ports Conference Vancouver
The annual IAPH conference taking place in
person in Canada
🌐 worldportsconference.com



THE REVIEW

The salvage of the Ever Given, Boskalis

INES NASTALI



You would think by now we know most details about the incident that took place on 23 March 2021 in the Suez Canal when container ship *Ever Given* got caught up in a sandstorm and ran aground in the vital trade lifeline.

However, more was going on behind the scenes than what was publicized.

Dredging company Boskalis, heavily involved in those efforts through its Smit Salvage company, has now written up reports from what its team, which it internally called the Suez 5 – a team of two naval architects, a commercial manager, master, and a salvage superintendent.

The book summarizes the events in diary form, including the thoughts and challenges that the salvagers had, and combines those with general information of the Suez Canal and vessel. This results in not only a very informative, but somewhat emotional book.

The infrastructure and equipment involved in getting the ship out of the canal

– while also planning for ways to do so had Plan A, pulling the ship out after making it lighter, not worked – is impressive.

While Boskalis acknowledged that “The Egyptians tackled the situation in a resolute way,” the sheer force needed for the operation outweighed the performance of their equipment. Most of the Suez Canal Authority’s tugs have a bollard pull of no more than 45 to 65 metric tons. Boskalis’ CEO Peter Berdowski later revealed that a bollard pull of 10,000 metric tons was needed.

Another interesting insight into the operation had to do with communications around the incident. Once Boskalis confirmed it was involved in the salvage, its PR department got inundated with calls from global media mostly interested in knowing when the vessel will be free again.

Apart from getting the heavy-duty equipment to the Suez Canal and vessel designs from the ship owner to create a 3D model, the salvager also had to ensure

its crew can depart from the Netherlands – not easy during a global lockdown, while running against the time of the tide.

Even Boskalis CEO Berdowski needed a written permission slip to justify why he once was out after 9 pm when returning from a live interview. One that he “was quite nervous,” about given the media scrutiny.

With the vessel owner’s chosen media agency in the United Kingdom overwhelmed with the press influx, Boskalis became the voice of the operation. The company estimated that the incident created free publicity worth approximately EUR250 million in media campaigns.

It is such insights into the workings of the salvage operation that make the book a suspenseful page turner, although we already know the outcome of the drama. ■

Buy *The salvage of the Ever Given* here:
shop.boskalis.com



WORLD PORTS CONFERENCE 2022

Why sponsor?

Sponsorship of the IAPH World Ports Conference places your company in a position of authority and enables you to build and strengthen your relationships and increase visibility to global stakeholders including shipowners, ports, logistics providers, local communities, regulators, equipment providers and related third parties.

16 – 18 May 2022

A world-class, in-person event in Vancouver bringing together leading port stakeholders to close the gaps in global seaport competitiveness
#CloseTheGaps

For sponsorship:
events.worldportsconference.com/iaph2022

To register and view the agenda visit:
worldportsconference.com

Engagement

Generate new business prospects and deepen existing relationships with direct access to established industry leaders and new personnel.

Visibility

Benefit from the extensive range of marketing and public relations carried out before, during, and post event, all incorporating your brand.

Alignment

Align your brand with the global reach of the International Association of Ports and Harbors and gain exposure to shipowners, ports, logistics providers, local communities, regulators, equipment providers, and related third parties.

Thought Leadership

Highlight your expertise and show your in-depth understanding of the industry through this global port event.

Maritime Portal

The Only Source You Need for Maritime and Ship Tracking Intelligence.

“What if you could access market-leading maritime solutions in one place?” We are uniquely positioned to provide a platform which combines data from our two flagship online products: AISLive and Sea-web™. By connecting Sea-web’s comprehensive ship and ownership data with AISLive’s terrestrial and satellite ship movement intelligence, the Maritime Portal delivers a powerful market-leading solution.

Benefits

- Integrated products and business intelligence
- Actionable maritime information and insight
- Global picture of the world fleet, that companies that manage them, the ports they call at, and their movements and trading history
- Designed to streamline your operational workflows
- Access to world leading forecasting tools
- Only source of unrivalled maritime intelligence you need

Visit ihsmarkit.com/MaritimePortal to enjoy a no-risk trial of the Maritime Portal