

ports & harbors

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

A close-up portrait of Christiana Figueres, a woman with short, dark, wavy hair, looking directly at the camera with a slight smile. She is wearing a dark blue top and a pearl necklace. The background is a blurred, abstract pattern of green and brown.

Firm stance

Paris Agreement architect Christiana Figueres
urges maritime industry to commit to
low-carbon future



Sustainable evolution
Ports support fashion industry shift

Going head to head
T&E and ICS debate regional carbon rules

Decoding global free port hubs
IHS Markit trade and facility data visualized



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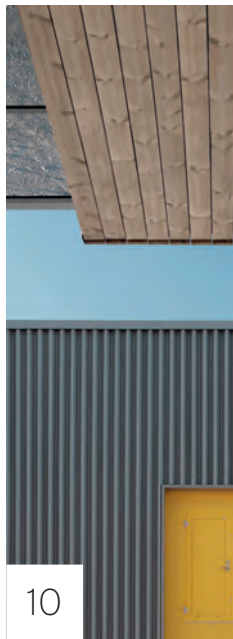
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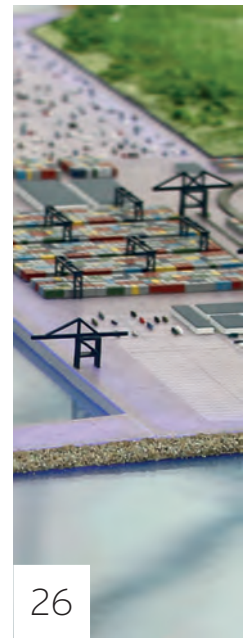
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EDITOR'S COMMENT



INES NASTALI

Editor

Talk is cheap

W elcome to not only a new year but also the first edition of *P&H's* latest evolution. Over the past six months, the team at the IAPH and IHS Markit have worked together on a new vision for this magazine. You hold the rebranded product of our labor in your hands, and we look forward to receiving your feedback on it.

As you know, foremost, we strive to be a tool for fostering discussion and thought leadership — not only among stakeholders within the ports' sphere, but also from throughout the supply chain.

To this end, we have increased the number of opinion pieces in a new section called Perspective. We know that, in negotiations, the strongest position often comes from having a clear understanding of the goals and motivations of everyone at the table.

The importance of this was recently confirmed for me personally, when I listened to the MEPC75 discussions that took place in November. They left me baffled and partly disappointed.

To explain, let's recap events leading up to these discussions. When the COVID-19 pandemic started, devastating lives and economies all over the globe, something happened in the maritime industry: collaboration of never-seen-before levels was sworn and testified from ship to shoreside. Organizations and companies worked in a newly created digital environment. One of the most analog industry I can think of jumped headfirst into the stream of digital meetings and conferences, propelled by a fresh breeze of community feeling and renewed vigor. In addition, while everyone was certain that times are tough, the maritime industry would still be able to make inroads in carbon emission reduction and progress sustainability efforts.

We don't need to relive the past year further, so fast forward to the aforementioned MEPC75 meeting in November.

I must admit, I too fell for the early proclamations of engagement and left the meeting wondering where the COVID-19 community spirit had gone. Instead of pulling together, some member states showed a complete lack of urgency for the matter and solidarity toward, for example, small island states that are concerned about the drastic change to their coast that the future will undoubtedly bring.

This destruction is caused by climate change, which the maritime industry contributes to by continuing to burn the — slightly improved — bottom-of-the-barrel sludge of the refinery process known as heavy-fuel oil. The fourth International Maritime Organization greenhouse gas emissions study revealed in August that, “emissions from maritime shipping rose about 10% from 2012 to 2018. Most striking were the increases in short-lived climate pollutants, also known as climate super pollutants, including a 12% increase in black carbon emissions”.

So how come, instead of committing to let emissions peak as soon as possible and bring shipping in line with the Paris Agreement, the member states agreed to compromise short-term measures without carbon targets. This could instead lead to a 15% increase of emissions by 2030, according to data analysis by *Forbes*. Therefore, the Intergovernmental Panel on Climate Change recommends halving emissions by 2030 to keep in line with the Paris Agreement. That would have sent a message of commitment to the world.

Yes, the shipping industry is more efficient than other transport but that doesn't release us from striving for more and, for once, be seen as a leader for change. In my opinion, the chosen compromise does not match the sentiment of the maritime industry we briefly saw blossom in the pandemic spring of 2020. Instead, the latest MEPC meeting makes the earlier grand proclamations of enthusiasm look pale and nothing shy of lip services.

Fittingly, for this edition's cover story, Patrick Verhoeven and I spoke to the architect of the Paris Agreement, Christiana Figueres. During our conversation, she admitted, she was disappointed by the lack of commitment shown by the member states during the meeting to reduce emissions. However, she explained that all is not lost in the endeavor and detailed what needs to be done now to bring about future change. Read more on the next page.

You can also read the magazine online via our new page turner at issuu.com/portsandharbors. This offer is part of our efforts to have more people join the crucial discussions that we feature in this magazine. I also invite you to follow *P&H* on Twitter @PortsHarbors, to receive news and updates in between press dates. Throughout the year, we will launch sections to offer a new perspective on the evolution of our industry. But for now, I leave you to explore the new magazine. We look forward to ongoing dialogue — not just with the wider industry but also with you — our valued readers. ■

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STEPHEN COUSINS
Freelance journalist

As a long-standing journalist in the maritime and built environment sectors, I've always had an interest in port projects, particularly those that push boundaries of aesthetic and technical design. The projects detailed in my report on page 16 tick boxes for visual flair and, perhaps most importantly, efforts to integrate local communities. As a UK citizen, I've additionally been fascinated by the Brexit process and the impact on our society, economy, and relationship with the rest of the world, which is how the idea for my second feature, on new UK free ports designations and their impact on wildlife habitat, was born. ■



VLADISLAV VOROTNIKOV
Freelance journalist

For the past few years, the Black Sea has been among the world's regions where the economy is largely determined by the political agenda.

New port projects are no exception to this pressure, especially since there is not enough room for all planned ventures. Therefore, investors urge local governments to support them, citing matters of national importance. So, the big question is — who will eventually succeed? ■

No time to waste

The recent MEPC75 meeting was “deeply disappointing”, the architect of the Paris Climate Agreement Christiana Figueres told *P&H* during a conversation with IAPH managing director Patrick Verhoeven. However, there is still cause for optimism in the fight against maritime emissions

INES NASTALI

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ive years after the Paris Climate Agreement was signed, *P&H* has caught up with the architect of the agreement.

Christiana Figueres is a Costa Rican citizen and an internationally recognized leader on climate change.

She was executive secretary of the United Nations Framework Convention on Climate Change (UNFCCC) from 2010 to 2016.

During her tenure at the UNFCCC, Figueres brought together national and sub-national governments, corporations and activists, financial institutions, and nongovernmental organizations (NGO) to jointly deliver the historic Paris Agreement on climate change, in which 195 sovereign nations agreed on a collaborative path forward to limit future global warming to well below 2°C and strive for 1.5°C to protect the most vulnerable. For this achievement, Figueres has been credited with forging a new brand of collaborative diplomacy and received multiple awards.

Famously, the shipping industry is not specifically mentioned in the climate agreement as governments are called to support a clean transport industry instead.







However, the IMO is tasked with regulating the maritime industry and following the Marine Environment Protection Committee (MEPC75) meeting, which took place in November 2020, the implementation of the initial IMO Greenhouse Gas strategy was met with substantial criticism. The strategy demands to reduce shipping's carbon footprint by 2050 by 50% compared to 2008 levels.

NGOs, such as the Clean Arctic Alliance and Transport and Environment, criticized that new short-term measures agreed in November are not sufficient to reach this goal. They said, the lack of ambition and carbon intensity targets agreed in November would not let emissions peak as soon as possible but allow for a weakened energy efficiency index of ships. This could instead lead to a 15% increase of emissions by the end of the decade, according to data analysis by *Forbes*.

The Intergovernmental Panel on Climate Change therefore recommends halving emissions by 2030 to keep in line with the Paris Climate Agreement.

In December, UN secretary-general António Guterres also implicitly voiced disappointment in his own agency. "Current policies are not in line with the pledges made by the Getting to Zero Coalition. We need to see enforceable regulatory and fiscal steps so that the shipping industry can deliver its commitments. Otherwise, the net zero ship will have sailed," he said.

"I was also deeply disappointed," Figueres commented. Instead of sending a strong message of commitment, the adopted revision, "has no carbon intensity targets but loopholes for non-compliant ships," she told *P&H*.

"The recent decision is concerning and backtracks on the original agreement," she added. Figueres therefore questioned, "How is the industry going backwards, when the rest of the transport industry walks forward? Even the oil and gas industry has woken up to the fact that there are weighted expectations that sectors actively contribute."

IAPH managing director policy and strategy, Patrick Verhoeven, agreed that, "The compromise reached at MEPC 75 on the short-term measures indeed favored the less ambitious options and could have been better."

At the same time, he wants to "give credit to the industry. The International Chamber of Shipping has for instance played a very proactive role in the IMO and been more forward-thinking than many member states. Some shipowners are now even willing to accept

"I've seen a much more engaged industry"

PATRICK VERHOEVEN
IAPH MD policy
and strategy

regional measures to reduce emissions, which I would have never imagined a few years ago", he said. "The mindset is changing," Verhoeven added.

Figueres agreed with this perception and also knows how it came about. "Citizens in Europe are particularly informed about climate issues and customer expectation is so high in Europe, that is what is moving the needle," she explained.

During her varied career, Figueres worked in European countries, first during her studies in the UK and then for the Costa Rican embassy in Germany. Verhoeven agreed. "This is illustrated by charterers who have made their own proposal for a carbon levy," he said, adding that he has seen a much more engaged industry attitude than, for example, five years ago.

Work to be done

Ensuring that global emission targets exist, and everyone is on the same track, is the logical but hard first step on the decarbonization journey. The second is to ensure efforts are being made. However, the crucial third step is to figure out who is in charge of regulating those. "We do have a regulator for that, the UNFCCC, and that is covered in the Paris Agreement, so that is where I see a case for optimism," said Figueres. "What we don't have is a specific initiative for green capital," she added. Meaning, companies need to be encouraged to move capital away from assets with a high carbon intensity. "It's important to get collaboration between the main bunkering hubs going," Verhoeven said.

"According to OPEC, ports in six regions – Singapore, mainland China, the United States, the United Arab Emirates, the Netherlands, and South Korea – account for 60% of global bunker sales. These ports clearly have a leadership role when it comes to the transition to clean marine fuels."

The moral argument

Therefore, while 2020 was probably nothing like anyone had imagined it to be, Figueres would like to see COVID-19 as an opportunity. Since she helped to orchestrate the Paris Agreement, she has continued to accelerate the global response to climate change. Today, she is the co-founder of Global Optimism, co-host of the podcast "Outrage + Optimism" and is the co-author of the recently published book, *The Future We Choose: Surviving the Climate Crisis*.

Hence, seeing challenges as opportunities comes naturally to Figueres. "So, we didn't ask for either



Pictured: Christiana Figueres, former executive secretary of the UNFCCC; Ban Ki Moon, former secretary-general of the UN; and president-designate of COP21, Laurent Fabius, celebrated after the Paris Climate Agreement was reached in 2015

COVID-19 or the economic, racism, and biodiversity crisis in 2020,” she said. However, “as disastrous as COVID-19 is, and we should not underestimate the impact, it’s small compared to other zoonotic diseases that could break out because we are encroaching on areas that we shouldn’t. The lion share of diseases that could come are zoonotic and we need to be careful”, she urged.

Consequently, the question is, “How do we dig ourselves out of this?” she asked. One tool to enable this has already been agreed — the recovery packages that numerous governments have launched following the economic hit that the pandemic has caused. “We have agreed on packages that won’t be possible again,” said Figueres. These should go to create jobs in the industries of the future. “This is a decisive decade and we absolutely can’t afford to waste this crisis,” she warned.

She wants to remind readers of why this opportunity needs to be taken. “My generation won’t pay for this, my children will. So, we better make sure this is invested in contributing to a thriving future,” she urged. For her, this is “the moral argument” of the debate.

What we can do

Not only governments are tasked to act. Professional organizations, such as the IAPH, are part of the solution, too. For the IAPH, Figueres recommended, “clear deadlines and measurements that set out ambitious goals for 2050 but it is

also very urgent to set out 2030 targets. “There is no way that we can get anywhere without them,” she urged, adding that this is why associations are important. “You can learn from each other,” she said.

For Verhoeven, there is another plus side: learning from the past. “One advantage that ports have is that they had to deal with setting up infrastructure for LNG bunkering,” he said. The same issues, for example, around health and safety, will pertain to hydrogen or ammonia, therefore bunkering ports can draw from lessons learned around LNG as a fuel. “These ports will have an advantage over others from that experience,” he said.

As with everything in life, balance is key. Translated to professional associations, there are the frontrunners and late adopters. “We need to give room to leaders but the difficulty for an association is that it needs to cater to every member. The ones behind say, ‘you go too fast for us,’” Verhoeven said. This is what he has learned from leading several professional associations.

They “are under pressure with innovative companies and coalitions that should not be held back. Instead,

you need to enable successful joint cooperations between all stakeholders within the supply chain”, he said.

The IAPH has the World Ports Sustainability Program that aims to do exactly this: highlight efforts that not only pertain to reducing emissions, but also sustainability as a whole with its social and economic components.

Speaking about concrete projects in the shipping industry that excite her, Figueres — not surprisingly — lists emission-neutral vessels. “There are several efforts under way to introduce carbon-neutral vessels by 2030, which hopefully will lead to a raise to the top,” she concluded. ■

“This is a decisive decade and we absolutely can’t afford to waste this crisis”

CHRISTIANA FIGUERES



PERSPECTIVE SEA LEVEL RISE

Invest into the future

Climate-induced sea level rise is widely recognized as a challenge for ports and harbors around the world, especially with the increasing risk of floods and damage during natural disasters such as hurricanes and cyclones. As this threatens the lifelines within the global economy, it is often raised as a major concern. Besides existing ports, the implications for new ports and harbors also need to be considered. Global trade and the requirement for port areas have expanded significantly over the past few decades.

This could lead ports around the world, especially in the global south, to continuously extend their areas farther.

Looking at the numbers

To understand these important issues, we conducted an analysis examining four consistent and plausible global scenarios of sea level rise and changes in trade. Two scenarios are broadly consistent with a 2°C global rise in temperature in 2100, while the other two are broadly consistent with a 4°C global rise in temperature in 2100.

These scenario pairs can be considered as the Paris Agreement (2° C rise) and no climate policy (4° C rise), respectively.

Our trade scenarios have taken the effects of climate policy on trade volumes and types into account. In all four cases, trade expands significantly, representing the growing global economy; however, the goods being traded differed.

For example, under the Paris Agreement fossil fuel trade diminishes and biomass trade increases. The estimated trade growth varies from about a twofold to fourfold.

These scenarios show the largest increase occurs in a world with no climate mitigation.

Adapting the existing port infrastructure to rising sea levels can be achieved by simply raising the port operating areas in tandem with sea level. This is estimated to cost between \$8-18 billion globally until 2050 and \$12-63 billion globally in 2100: the largest costs are associated with the higher warming. Additional adaptation costs such as upgrading harbor breakwaters and other infrastructure, not included here, mean actual costs could be considerably higher.

Therefore, the financial benefits of reducing the impact of climate change are clear and these benefits increase with time.

At the same time, port areas will need to expand substantially to handle the increase in trade. Globally, this could quadruple. Our estimates show port areas expanding to around 5,000km² by 2050 under an unmitigated scenario. Even following the Paris Agreement, we estimate port areas could redouble to about 2,500km² by 2050.

How to cope

Could this demand for port areas be reduced by increasing handling efficiency? Containerized consumer goods, such as electricals, will change but the storage and operational facilities required in ports are unlikely to reduce the container throughput per unit area that is attained in the most efficient ports.

Even if all ports achieve maximum efficiency for containers, we estimate that this would have a minimal effect on global area demand and substantial port expansion would still be required.



Photo: Getty Images/epol

ABOUT THE AUTHORS



PROF ROBERT NICHOLLS has been the director of the Tyndall Centre, UK, since 1 October 2019, and a member of the Tyndall Centre since its founding, researching the consequences of climate change for coastal areas.



SUSAN HANSON is a visiting senior researcher within the Engineering and Physical Sciences department of the University of Southampton, UK. She is also a member of the Southampton Marine and Maritime Institute.

For any significant reduction in area requirement, there will be a need to focus on reducing the handling areas for the wide range of bulk commodities, by type and quantity. For example, under the Paris Agreement, a decline in fossil fuel transportation may mean that Australia is oversupplied with coal ports with no alternative goods to handle, while Africa may lack sufficient port biomass handling provisions. Innovation here is possible, but is unlikely to avoid the need for substantial new port areas.

As for existing handling efficiencies, the investment in port expansion dwarfs the cost of adapting current port areas to sea level rise. We estimate that constructing the required port areas will be between \$290 billion and \$750 billion globally across the four scenarios to 2050.

These costs will include an anticipatory allowance, albeit an almost negligible proportion of the overall amount, for sea level rise. By being proactive, this adaptation is also achieved when it is most simple to undertake and shows the benefit of factoring in sea level rise in the initial port design.

Limited land availability owing to competition with other coastal land use,

Pictured: More frequent storms will come in the future: big waves in the port of Liverpool, UK

especially in urban areas and small islands, means other ways of increasing available handling space may become appropriate in some locations. These include adopting extensive land claim, construction of nearshore islands and offshore ports, or national hub and spoke systems.

Such approaches would likely raise

greater investment needs compared with those we have estimated here.

In conclusion, while keeping track of global climate policy discussions may not appear to be the most immediate priority for port owners or

managers, this is more useful than they may expect.

Their consideration in longer-term strategic planning processes offers ports the opportunities to explore adaptation options and for potential fundamental trends in the types of goods traded.

This way, ports would be better prepared to anticipate the positive and negative consequences of climate change, potential operational implications, and financial and investment commitments. ■

“Even following the Paris Agreement, we estimate that port areas could redouble to about 2,500 km² by 2050”



A big welcome

Great architecture has the power to inject new vitality, investment, and footfall into ports and terminals, while delivering on sustainability targets and catering to the needs of the local community

STEPHEN COUSINS

Q

uality modern architecture has a power of attraction and ports, which are often key gateways into cities, provide an opportunity to showcase design talent and deliver iconic buildings that spark peoples'

imaginations, draw in tourists, and fire up commercial opportunities. The late great Zaha Hadid put port architecture firmly back on the agenda in 2016 with her extraordinary design for the new headquarters of the Antwerp Port Authority. The repurposed derelict fire station is oversailed by a giant faceted glass structure shaped like the bow of a ship. This project set the ball rolling for several other impressive buildings in ports that redefine the traditional approaches to design.

When considered in the context of a municipality or a region, with its own unique climate, relief, and skyline, powerful architecture can evoke the local setting, culture, and values. Recent designs have made efforts to connect into and extend the wider urban fabric. For example, Zaha Hadid Architects' masterplan for the Port of Tallinn in Estonia includes public parks, recreation areas, and even new residential neighborhoods.

Community engagement has become an increasingly vital consideration, particularly in urban locations where port operations impact more directly on residents. For example, the concept design for the port of Montreal's Grand Quay cruise terminal was drawn up by Canadian architectural company Provencher_Roy, following several

open houses and meetings with key partners from the economic, tourism, and political sectors, plus other stakeholders committed to the city's harmonious development.

Buildings do not have to be big to be beautiful, take for example architectural firm SANAA's playful, cloud-shaped 8-m high passenger terminal, located on the Japanese island of Naoshima. The facility shelters passengers waiting to disembark the island. It also gives them a place to park bicycles or motorbikes, or use the restroom before their journey. Spaces can function as a catalyst for experience, exploiting the complex combination of form, while the materials and lighting stimulates the users' emotions and mental states. In the context of a cruise or ferry terminal, this can augment the excitement and anticipation tourists seek out on a vacation.

Current issues

Perry Ip, partner at UK architectural firm Foster + Partners, which designed the revamped Ocean Terminal in Hong Kong, told *P&H*, "It's not just about the experience on the cruise, it starts from the moment you set off, getting your ticket, waiting for the cruise, going through customs and immigration, and finally boarding. All these will form impressions of the trip, so it's important to design each of these spaces sensitively."

Sustainable development has risen up in the ports' agenda over the past few years, putting greater emphasis on reducing building operational emissions, for example, by plugging into renewable energy sources and cutting emissions associated with new construction. The latter could mean reusing the existing structure, if it is a refurbishment, or incorporating salvaged products instead of those made from virgin materials. Improving social sustainability may mean adding new public spaces, public art, or green spaces.

Concerns around COVID-19 are now foremost in the minds of design consultants and engineers keen to implement the latest thinking around safe circulation, ventilation, and the impact of fixtures that people frequently touch, such as grab rails and door handles. In one example of good practice, the design for a new 72-m tall observation tower at Montreal Grand Quay was revisited during construction to adapt certain components to minimize the moments when users have contact with the environment.

With so many factors at play, it is a challenging task to find the right formula for port architecture. *P&H* highlights three recently completed projects that got the balance right. ■



Project:

Montreal Grand Quay

Architect: Provencher_Roy

Client: Port of Montreal, Canada

Size: 38,000m²

A steady rise in cruise ship passengers, from 35,000 in 2007

to about 127,000 in 2018 was the key driver behind the Can\$78 million (\$60 million) facelift of Montreal's historic pier, which dates back to 1900.

Provencher_Roy's brief was to upgrade the pier and create a terminal building that would complement the unimposing Old Port skyline and function more than simply as a tourism infrastructure.

The solution is a very long, linear, low-rise terminal with sleek white cladding and structure, and lots of glass. The roof of the lower level is covered by vast timber walkways and more than 30,000 flowering and aromatic plants, which becomes a thriving esplanade during the summer. In the winter, the pier blends into the snow and ice of the riverbanks.

Sophie Wilkin, architect at Provencher_Roy, told *P&H*, "We worked closely with the Montreal Port Authority to ensure that we delivered, not just a maritime terminal upgraded to meet the operational needs of cruise lines, including security and customs issues, but also a terminal that is open to the city, to its citizens and visitors, and which integrates into the urban fabric. The idea that 90% of the time the site is accessible to the public makes the project much more integrated than terminal projects of the past."

The promenade completes a network of pathways and public spaces in the Old Port. A large wooden staircase at one end leads the public to the Commencement Square, a green meadow that gently slopes down toward the river that can be used as a place for reflection, sunbathing, or events. The landscaping enables a more fluid circulation, simplifying vehicular access to port facilities and parking spaces in the large building that runs parallel to the terminal that was reappropriated from former hangars.

A mixed-use approach ensured that parts of the site can be used for other activities. For example, a spacious pavilion at the southern end of the cruise terminal that people could rent for events or activities such as private parties. The front portion houses a maritime museum. These aspects could be an important commercial fallback if the cruise sector continues to flounder as a result of COVID-19. ■



Project:

Ocean Terminal Hong Kong

Architect: Foster + Partners

Client: Harbor City Estates, Hong Kong

Size: 9,300m²

Intended as a new gateway to Hong Kong for international cruise line passengers, the expansion of its existing pier, originally built in the 1960s, features a series of cascading outdoor terraces that provide panoramic views of Victoria Harbour.

At the southern end of the pier, the site for the extension was a former luggage-handling area left vacant for 10 years owing to improvements in passenger management and lower demand for handling large-sized luggage.

Foster + Partners' sleek design transformed an ordinary cruise terminal into a vibrant entertainment hub with new outdoor spaces for alfresco dining, indoor retail, plus dining and lounge facilities. Other facilities include baggage handling, a customs and immigration hall, and a ticketing office.

The building's layered white architecture not only mimics the distinctive front of cruise vessels, it is a direct response to the climatic context. The wide cantilevered terraces shade the lower levels to protect them from the harsh tropical sun. The angled balustrades extend downward to function as louvered shading screens for the terrace below.

An atrium bridges the old terminal and the extension via a series of escalators and balconies and connects all floors visually and physically. A cascade of grand steps on the roof doubles up as a skylight, bringing natural sunlight into the space.

Perry Ip, partner at Foster + Partners, told *P&H*, "The pier is seen as an integral part of the city. It's vital to have good circulation to create a seamless connection from the terminal to the retail or entertainment portion within the site as well as the other parts of the city."

Sustainability, now a key concern for ports as they strive to meet sustainable development goals, was integral to construction. The 60-year-old pier structure was retained at deck level with the areas of critical loading fortified. The building is designed to be as lightweight as possible to limit the number of new piers required and minimize disturbance to marine life. The facade is fully operable with large format sliding doors that capture the sea breeze and promote natural ventilation. ■



Project:

Holmøy Maritime Headquarters

Architect: Snøhetta

Client: Holmøy Maritime, Norway

Size: 6,000m²

Norwegian architecture company Snøhetta is turning heads on the global architectural scene with its imaginative designs, which include a recent extension for the San Francisco Museum of Modern Art, and 'Under', Europe's first underwater restaurant.

This more understated complex of buildings, located on the archipelago of Vesterålen in northern Norway, combines facilities for trawling, fish farming, and fish processing, with a new corporate headquarters for Holmøy Maritime.

Fishermen's houses in the region are traditionally colorfully painted and the development's bright yellow, red, and orange facades are designed to provide a pop of color on the horizon to lift seafarers' spirits and help them navigate home in the winter when daylight all but disappears. The colors also function as a wayfinding tool within the complex, which extends into the building interiors. Fishing is a one-billion-dollar business in Norway and the sophisticated hub will support local aquaculture by servicing a deepwater quay connected to the Norwegian Sea.

Knut Tronstad, senior architect at Snøhetta, said, "Holmøy for a long time wanted to build their own harbor for their boats, a beacon on land for the people at sea. The site lies along a beautiful fjord, which acts as the main shipping channel from the ocean to Sortland harbor, so it's a good strategic location."

The buildings are huddled together on a clearly defined footprint, similar to traditional Hanseatic bryggen buildings (dockside commercial buildings), with the quay in front and a designated traffic area for trucks at the rear. This ensures that the facility does not dominate the beautiful mountainous landscape.

The industrial aesthetic, characterized by steel frames, corrugated or flat metal walls, and concrete floors, reflects the need for robust and durable materials in the harsh conditions.

One notable flourish is the glass and steel from the office building, which cantilevers from its entrance stair tower and appears to hover over the quay. The elevated position improves the view across the fjord, especially when a large boat is moored at the quay. The large windows maximize daylight and reduce the need for artificial lighting and heating. ■



Kristian Ruby

The Eurelectric secretary-general wants to join forces with ports to ensure carbon policies are steered from within industry

INES NASTALI

Europe aims to be a carbon neutral continent by 2050. Are you going to ignore that?"

Kristian Ruby, secretary-general at European energy provider body Eurelectric, questioned decision-makers who fail to commit to low-carbon targets.

"Nobody is going to throw money out of the window," Ruby said when being asked about the willingness of companies to invest in low-carbon technology. However, "The world is on a one-way street toward decarbonization. Yes, there are some laggards, but you saw China also announced it wants to be carbon neutral by 2050, so this is really only going one way," Ruby added.

Investment vs cost

Therefore, the mindset should be, "If we're going there, what rules should be in place and how do we make this a viable business case," Ruby said.

To kick off discussions about decarbonization with ports, which according to Eurelectric and classification society DNV GL, can play a key role on this journey, the two partners have published a guiding report. It is titled *Ports: Green Gateways to Europe* and discusses transition strategies to turn ports into decarbonization hubs. It also includes recommended policies to accelerate the process by equipping ports with onshore power. "Sometimes we need some regulation for these business models to take-off and we're seeing some countries that already have rules on shore power and these regulations can make sure that there is a certain return on investment," he said.

For Ruby, the above-mentioned mindset is also a key and a red flag when it comes to working with others. He explained why, "If you had this idea maybe this blows over, this won't hit us and we mustn't take any risk. That's basically a major staller of these projects. This might sound intangible, but it's really about seeing: this is coming whether you like it or not, so embrace rather than fight it.

"I think many businesses in this space have been too comfortable for too long. When I look at what's happening in the maritime industry right now, there's the

provision to half admissions by 2050. Inevitably, this will impact ports."

Staying with the example of decarbonization, he asked, "How are you going to reach 50% emission reductions by 2050? There's no way that you're going to do this purely through efficiency. You need to change the vessels and the fuel. Knowing the lead times and lifetimes of vessels, this action needs to start now."

Recently, the European Commission's plan to include maritime in its emission trading scheme has caused waves in the maritime industry as such regional regulation is said to undermine the globally planned IMO efforts. Ruby urged, "there is going to be a fuel switch in maritime and a discussion about how to decarbonize operations. There is a legally binding law on the way to make Europe a carbon-free continent by 2050, which means you can't ignore it."

While saying that the electricity sector has realised that this would not blow over, at the same time, "we've a lot of companies that have been slow in adopting and investing in new solutions. They are now facing the consequences of a higher carbon price for every time you emit and you can see how that will impact your business model.

"I would just caution against this kind of complacency. We expect that more regulation will come in, which will require ships to do cold ironing."

Change of direction

For ports, the energy transition should therefore be considered a business opportunity, as not only ships will be charged onshore in future. "Many of these investments happened because of the electrification of passenger cars. They will typically be waiting, just as other types of cars, to be transported to the retailers. You need to charge those cars beforehand. That's why you're beginning to see the installation of multiple hundreds of charging points for passenger cars at select ports in Europe," Ruby said.

A port that says, "We don't have charging stations and we don't believe in electric cars. You're not going to choose this port in 10 years if you are exporting cars in Europe," Ruby warned.

Staying on course

For Ruby, another reason why urgency is of essence is to avoid a "recipe for disaster". Having worked in media, politics, and trade associations, he has seen projects stalled owing to people not having the right mindset, but also because of "fragmentation, or lack of coordination".

He added, "Ports are big infrastructures, we need to rewire those and reconnect the energy systems and industrial clusters in ports. If every company goes to the regulator with a different set of recommendations, the regulator will not know what to do. If you get a working community with a joint plan to agree this is the way forward, then you have something to present to the regulator."

While the initial feedback to the DNVGL-Eurelectric report was positive, Ruby would further like to "have a top-level discussion with some of the leading port associations to say, we are going to

see radically changed value chains, how are your members going to deal with this and how can we work together? Because this is business for us, our customers demand us to provide

solutions, we believe they will ask this from you, too. So how can our experience help you and once we have that alignment, we can talk to policymakers".

Envisioning this meeting to take place in early spring 2021, he would also like to see the CEOs of port authority and shipping company attend. Otherwise, "eventually the EU Commission may do something that neither agrees with".

The second exercise Ruby would like to do is meetings with the around 20 major industrial ports in Europe, "where we talk to the key port authorities and maybe they bring in some of the politicians regulating those areas. We bring some of the other industrial players to the table and I think that would be hugely valuable", he said. From there, Ruby would like to ensure that ports around the world are also included in these discussions given the global nature of the maritime industry. ■

"I would just caution against this kind of complacency"

INTERVIEW KRISTIAN RUBY

Photo: David Plas



"It's not a question of whether the EU will introduce an emissions trading system [ETS] for shipping, it's a matter of how." This could very well be a quote from an environmental NGO, but it is actually Lasse Kristoffersen, the CEO of a major Norwegian shipping company, Torvald Klaveness, speaking. His statement is testimony to the paradigm shift we have seen in the climate agenda for shipping. After years of being the only sector not subject to emission-reduction targets or measures in Europe, the European Union is now working on a range of measures: from including shipping in its ETS carbon market to mandating the uptake of zero-emissions fuels to carbon efficiency quotas for ships in operation. All of these upcoming initiatives provide chances for ports to become frontrunners in the battle against climate change.

About 12,000 ships of more than 5,000 gross tonnage call at EU ports annually. While at berth in EU ports, they emit even more carbon pollution than airliner easyJet, as well as causing a massive air pollution problem. By introducing a zero-emissions standard at berth, the EU can limit the impact of harmful pollutants in those places where the shipping industry comes closest to home: our ports.



Ideally, we would see a phased approach to stop ships from polluting in EU ports, starting with ships that have the highest energy demand at berth. Such an approach would mimic existing regulation along the coast of California, where at-berth mandates will result in a 55% reduction in potential cancer risk for local port communities.

It would also benefit the public image of ports, as there is an increasing scrutiny over city-wide low-emission zones applying to cars, but not to ships. The COVID-19 lockdown has resulted in a cleaner environment, thus this could be a way for ports to answer the call of EU citizens not to go back to business as usual. In fact, a Transport and Environment poll in May 2020 across six EU countries showed that about two in three people did not want to go back to pre-pandemic pollution levels. Thanks to the introduction of shipping in the EU ETS, ports will be eligible for financial aid to make investments in shoreside electricity. The European parliament has proposed the creation of a so-called Ocean Fund that would recycle the revenues of a maritime ETS back to the sector to help ports decarbonize their infrastructure and bridge the price gap between fossil fuels and sustainable alternatives. ■



THE DEBATE

How ports and regulatory measures can incentivize shipowners to reduce emissions



SIMON BENNETT | Deputy secretary-general of the International Chamber of Shipping



A good student sticks to the title of his assignment, but rather than simply extol incentives for carbon-efficient ships – albeit ships that will probably continue to use fossil fuels for the next 20 or 30 years – I will focus on how the port sector can truly help shipowners decarbonize completely. By this I mean co-operation at the political level.

Eliminating carbon dioxide (CO₂) from shipping is the technical challenge of our age. However, success will depend on a number of important political decisions, which are about to be taken by governments globally. These are major questions that will affect the operation of shipping and ports throughout the 21st century. Most importantly, it will be helpful if ports and their trade associations can be fully aligned with shipowners in supporting a global approach to the regulation of CO₂ emissions and the strategy agreed by the International Maritime Organization (IMO).

Ports carry significant political influence locally and will hopefully make it clear to governments that they are opposed to any unilateral regulations being applied to ships, nationally or regionally, at variance to what has been agreed by the IMO.



This means opposing regional initiatives such as the extension of the EU ETS to international shipping. This will be a disaster for maritime transport, derailing further progress of the IMO to reduce global CO₂ emissions. Furthermore, extending the ETS to international shipping will create market distortion, exacerbate trade tensions, and cause economic damage to ports. Those economic

repercussions will not just affect ports in Europe, but globally because of the extraterritorial reach of this unwelcome EU initiative. Nevertheless, shipping is not afraid to debate the use of market-based measures (MBMs) if it can genuinely be shown to incentivize the transition to zero-carbon technologies. However, the forum for this debate must be the IMO, and any MBM adopted must be implemented globally.

Discussions about a global shipping MBM should begin in earnest at the IMO in 2021, and the clear preference of the shipping industry is for a global levy linked to fuel consumption.

If an IMO MBM is developed, it could create the possibility of finance becoming available in the 2030s, to support the expensive new bunkering infrastructure that will be required in ports for new fuels such as hydrogen and ammonia. ■

FIFTY FIFTY

Readership results:

Should regional rules be in place to regulate shipping's greenhouse gas emissions?

50%

50%

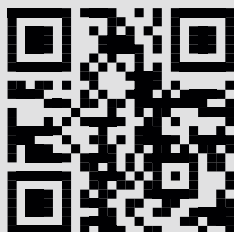
JAN/FEB | REGIONAL VS GLOBAL

POLL RESULTS

Environmental NGOs and several governments expressed disappointment about the compromise reached at the IMO MEPC 75 meeting in November 2020, which has made the push for regional measures stronger, especially in the EU. On the other hand, shipping organizations, such as the ICS, continue to support international measures through the IMO as the sole way forward, given that shipping is an international business. The result of our poll reflects this split image. For every yes vote, we received a vote against regional measures. ■

MAR/APR | DIVERSITY

THE POLL



Should ports have a diversity quota for roles within their management teams?

Maritime has long been a male-dominated industry.

Long, this was based on anecdotal evidence as not much data on the status of diversity in maritime was available.

Until 2019, when the Diversity Study Group was co-founded by Heidi Heseltine, Halycon Recruitment, Ardmore Shipping, and Peninsula Petroleum.

The first step of the group was to launch a diversity survey, to which readers can still contribute. Preliminary insights, published in May 2020, revealed, "Strikingly, 95% of respondents working in senior management roles are male." The results also show a lack of ethnic diversity at C-suite, director, and head of department level, with respondents identifying as white comprising by far the largest proportion of these roles. Hence, *P&H* asks, do port management teams need a diversity quota to help establish a diverse maritime workforce? ■

Either scan the above QR code or use the web link below to submit your answer to this month's poll:
bit.ly/34y19lv

IN NUMBERS FREE PORTS

Mapping the DNA of free ports

With the United Kingdom having opened a bidding process for port operators that want their location to be designated as free ports in late 2020, *P&H* looks at the biggest free trade zones around the world and their throughput

INES NASTALI

Free ports are uncommon within the European Union and thus, one part of the UK's plan to prepare for its exit from the group was to look into and establish free ports to secure valuable trade deals that would not be affected by customs tariffs and complicated trade regulations. The first of 10 free ports are currently slated to open at the end of 2021.

Globally, there are about 140 countries that have free trade zones (FTZ). A US Congressional Research Service report, *US foreign trade zones: background and issues for Congress*, published in 2019, estimated that there were around 5,300 free ports worldwide with over 400 in development.

Looking at the global top 25 ports with FTZs by throughput using IHS Markit Ports and Terminals data - as seen on the map - all ports feature breakbulk, dry, and liquid bulk facilities. Except for Saldanha Bay, all have container terminals. Beaumont, Bremerhaven, Guangzhou, Long Beach, Saldanha Bay, Tangshan, and Trieste ports do not have gas facilities. Meanwhile, Richards Bay, South Louisiana, and Bahía Blanca ports do not have ro-ro terminals.

However, many of the featured ports have manufacturing zones, which play host to manufacturers that assemble cars and other equipment. They benefit from the relaxed tariff rules within the FTZ when relying on different parts to be imported. ■



East Asia

Δ15% 16,830

Five-year throughput change and total in million metric tons

North America

Δ1% 4,800

Five-year throughput change and total in million metric tons

Europe

Δ7% 1,821

Five-year throughput change and total in million metric tons

Africa

Δ15% 1,330

Five-year throughput change and total in million metric tons

Latin America

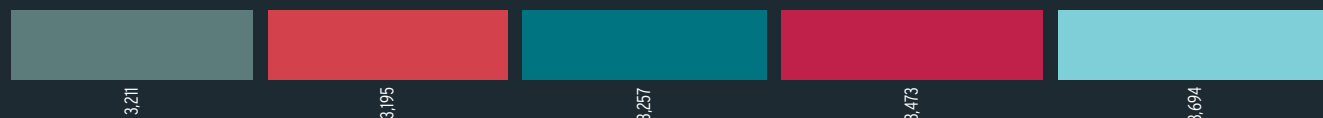
Δ14% 527

Five-year throughput change and total in million metric tons



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Guangzhou, Jingtang (Tangshan), Ningbo, Shanghai, Singapore



Beaumont, Houston, Long Beach, Los Angeles, Port of South Louisiana



Barcelona, Bremerhaven, Constanța, Duisburg (Ruhrort), Trieste



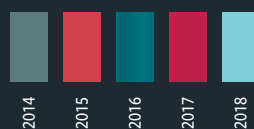
Alexandria, Durban, Mombasa, Richards Bay, Saldanha Bay



Bahia Blanca, Coatzacoalcas, Lazaro Cardenas, Montevideo, Suape



Top 5 free ports per region by total throughput in million metric tons, 2014-18



While Singapore is known as a bunkering hub, Asia's "Fort Knox", which is how the local artwork storage facility within the FTZ has been dubbed, made headlines in 2020 following a failed attempt to sell it. Founder Yves Bouvier filed a lawsuit against a prospective buyer. Asia's top 5 also includes Jingtang, mainland China's fourth largest port, and Shanghai, which opened its FTZ in 2013. The South African zones have all been setup in the past 10 years. In 2020, the port of Mombasa, Kenya, also made the news - over discussions with Chinese lenders on repayment terms for a port expansion, and local politicians wanting to revive the FTZ.

In Latin America, Bahía Blanca's latest major client, Amazon Web Services, invested \$800 million in a new data center in the Argentine FTZ. Meanwhile, in Europe, two ports report record-breaking numbers: the German port of Duisburg is the world's largest inland port; and the free port of Trieste in Italy was founded by Austrian Emperor Carlo VI in 1719 and is thus one of the oldest in the world - read more on the next page.



State/country		Total throughput, 2014-18 (in metric tons)	Throughput change, 2014-18 (5-year change)	Port facilities						
				Breakbulk	Container	Dry bulk	Gas	Liquid	Ro-ro	
	Guangdong, Mainland China	2,718,900,000	▲23%	✓	✓	✓	✗	✓	✓	
	Nanjing, Mainland China	2,712,100,000	▲27%	✓	✓	✓	✗	✓	✓	
	Zhejiang, Mainland China	4,782,755,000	▲24%	✓	✓	✓	✓	✓	✓	
	Shanghai, Mainland China	3,610,200,000	▼3%	✓	✓	✓	✓	✓	✓	
	Singapore	3,006,705,800	▲8%	✓	✓	✓	✓	✓	✓	
	Texas, US	416,276,119	▲27%	✓	✓	✓	✗	✓	✓	
	Texas, US	1,184,827,366	▼14%	✓	✓	✓	✓	✓	✓	
	California, US	837,363,127	▲10%	✓	✓	✓	✗	✓	✓	
	California, US	928,700,000	▲10%	✓	✓	✓	✓	✓	✓	
	Louisiana, US	1,433,755,668	▼6%	✓	✓	✓	✓	✓	✗	
	Catalonia, Spain	266,701,572	▲42%	✓	✓	✓	✓	✓	✓	
	Lower Saxony, Germany	312,037,000	▼5%	✓	✓	✓	✗	✓	✓	
	Constanța, Romania	291,086,431	▲10%	✓	✓	✓	✓	✓	✓	
	North Rhine-Westphalia, Germany	653,600,000	▼3%	✓	✓	✓	✓	✓	✓	
	Friuli-Venezia Giulia, Italy	298,155,020	▲10%	✓	✓	✓	✗	✓	✓	
	Alexandria, Egypt	146,052,246	▲32%	✓	✓	✓	✓	✓	✓	
	KwaZulu-Natal, South Africa	213,454,191	▼5%	✓	✓	✓	✓	✓	✓	
	Mombasa, Kenya	140,079,854	▲24%	✓	✓	✓	✓	✓	✓	
	KwaZulu-Natal, South Africa	488,925,710	▲13%	✓	✓	✓	✓	✓	✗	
	Western Cape, South Africa	341,624,712	▲23%	✓	✗	✓	✗	✓	✓	
	Buenos Aires, Argentina	71,134,143	▲2%	✓	✓	✓	✓	✓	✗	
	Veracruz, Mexico	142,036,665	▲3%	✓	✓	✓	✓	✓	✓	
	Michoacán, Mexico	142,689,814	▲11%	✓	✓	✓	✗	✓	✓	
	Montevideo, Uruguay	66,840,267	▲14%	✓	✓	✓	✓	✓	✓	
	Pernambuco, Brazil	104,805,881	▲54%	✓	✓	✓	✓	✓	✓	

History of free ports

From fee to free port

According to *The Free Ports Opportunity*, a white paper authored by UK Chancellor Rishi Sunak and published by the UK Centre for Policy Studies in 2016, “Around 2,500 years ago, the triremes – a historic vessel with three banks of oars – of the ancient Mediterranean, piled high with traders’ wines and olive oils, found safe harbor in the free port of Delos, a small Greek island in the waters of the Aegean. Offering respite from import taxes in the hope of attracting the patronage of merchants, the Delosian model of a free port has rarely been out of use since.”

If Greece is the birthplace of not only modern civilization but also of ancient free ports, then Italy is considered the birthplace of modern free ports, according to the Global history of free ports research working group of the University of Helsinki, Finland. Starting in the Renaissance period of the 16th century, cities such as Genoa and Livorno became famous spots for free ports. “Between the late 18th and the 19th century, the existence of free ports – as specific fiscal, cultural, political, and economic entities with different local functions and characteristics – developed from an Italian and European into a global phenomenon,” the research group stated on its website. From there, free ports were established in the United Kingdom and the United States in the 20th century.

The university’s conclusion on how free ports came about does not differ from today’s ideas. “Free ports often were established to promote certain political objectives, but between the political drawing board and the reality on the ground there could lie a great distance. Sometimes free ports developed local practices and cultures that started from improvised responses to sudden situations.”

With free ports about to be established by the end of 2021, the UK ports industry will be living through a free port renaissance once again in the 21st century. ■

FEATURE FREE PORTS

The trade-off

The UK government wants to create at least 10 free ports to bolster post-Brexit trade, but in the push to fast-track development, will important habitat and wildlife protections be swept aside?

STEPHEN COUSINS

A

s the end of the Brexit transition approached and the UK prepared to reforge its future as an independent trading power, free ports are being positioned as an important catalyst to shore up the economy.

The government has opened a bidding process to establish 10 free ports across the country to increase trade, attract inward investment, and promote manufacturing.

Already successful in the US, but mainly banned in the EU, these free trade zones would allow goods to enter and leave the country without being subject to certain procedures or tariffs.

However, the potential for large-scale development in coastal and inland areas has caused alarm among environmental groups concerned about the potentially disastrous effect on animals, such as birds, seals, and whales, and habitats across the UK. The free ports project is tied to fundamental post-Brexit reforms to the planning system and there are concerns that legislation drawn up to protect the natural environment will be swept aside in the drive to fast-track expansion.

Richard Benwell, CEO of Wildlife and Countryside Link, told *P&H*, “Many of our coastal sites feature vulnerable and distinctive habitats, designated as European-protected sites. Any direct or indirect effects on those important habitats should continue to be subject to careful environmental assessment. The government has signaled that it will review how the environmental impact assessment is applied and potentially test reforms in free port areas. These rules, previously protected by EU law, are a fundamental defense for habitats and species, so any weakening would be of significant concern.”

Pictured: Male northern harrier hawk. Humber ports are surrounded by bitterns, marsh harriers, and grey seals

Photo: BrianEKushner/GettyImages





FEATURE FREE PORTS

Protected landscapes and species in decline across Europe

The European Environment Agency has revealed that only 15% of protected landscapes across Europe have a good conservation status, while 81% of key habitats are rated as being in poor or bad condition.

The State of Nature in the EU 2013-18 assessment is based on data gathered by member states under the EU Birds and Habitats Directives.

The study found that the share of habitats with a bad conservation status has increased by 6% since the last reporting period (2008-12) and just 6% of all habitat assessments, representing 105 habitat types, demonstrated any improvement to conservation status and/or trends.

About 36% of habitat assessments that previously had poor or bad conservation status have continued to deteriorate at the EU level. Grasslands, dunes, and bog, as well as mire and fen habitats showed strong deteriorating trends, while forests showed improvements.

Approximately a quarter of species in the EU were found to have a good conservation status, an increase of 4% than the previous reporting period. Reptiles and vascular plants have the highest proportion of good conservation status, which is 35%. Mammals showed improvement but about half of fish species had an unfavorable and deteriorating outlook.

Only 47% of all bird species are thriving, which represent a decline of 5 percentage points since the previous period from 2008 to 2012.

On a positive note, some bird species, such as the black guillemot, crane, red kite, and the ruddy shelduck have improved markedly. The horseshoe whip snake, Italian wall lizard, hairy agrimony, and the great yellow gentian were also highlighted as conservation success stories. ■

The UK government also hopes free ports will generate jobs and stimulate economic activity. In addition to zero tariffs, they will introduce other benefits such as low taxes and loose regulation, providing a major draw for companies and vessel calls.

Rishi Sunak, Chancellor of the Exchequer, is a long-time supporter of the idea and revealed that the first UK sites will be set up by the end of 2021.

More than 20 ports have expressed an interest in taking part, many of them represented by members of the Port Zones UK, an umbrella group led by the British Ports Association (BPA). Associated British Ports (ABP) has also been a stalwart supporter of the policy and contributed to Sunak's paper, *The Free Ports Opportunity*, that was published in 2016.

A spokesperson for ABP told *P&H*, "Ports offer prime locations for generating new economic activity and manufacturing. Southampton is the UK's number one export port, handling £40 billion [\$52 billion] of exports every year on behalf of UK manufacturers. Elsewhere in ABP's network, ports on the Humber and in South Wales are ideal locations for port-centric manufacturing because of the access to development land close to deepwater with excellent road and rail connections."

They added, "Free ports could become ideal locations for new investment in manufacturing, logistics, and innovation. This could lead to the creation of thousands of quality long-term, high-skilled jobs in coastal communities, which have been left behind recent economic development."

Fast-tracking the free ports programme aligns with Prime Minister Boris Johnson's vision for Project Speed, a UK-wide masterplan designed to accelerate the delivery of key infrastructure projects to turbocharge the economy.

The government wants to remove planning obstacles so that key infrastructure, including free port projects, can be built more easily than under current legislation.

The overhaul of policy will include an extension of permitted development rights, so that port areas automatically gain consents for a wider range of development and operational activities. The government has said it will amend these regulations to align them with the approach applied to airports by April 2021.

Among a range of proposed reforms to the planning system, contained in the new government white paper *Planning for the Future*, which was published in August 2020, is a proposal to introduce a quicker and simpler framework to assess environmental impacts.

In addition, the government said that free port locations will act as a test bed for planning reforms, such as zoning land for development and reforms to digitize the planning system.

Vital protections

The proposals have been met with a collective shudder of disapproval from environmental campaigners and non-governmental organizations concerned that vital protections will be set aside in the race to build.

UK coasts support large populations of seabirds and migratory wading birds of Europe-wide importance.

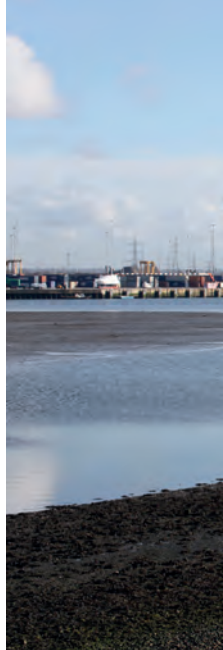




Photo: Metliff/Getty Images

Pictured: Southampton's container terminal from Goatee Eling

Unsustainable use of these areas could have knock-on effects for marine biodiversity at a time when a quarter of UK native mammals are at imminent risk of extinction, according to the International Union for Conservation of Nature's Red List of Threatened Species. Some of the most distinctive and vulnerable habitats are located where fresh water and saltwater ecosystems meet, including in estuaries where many ports are located.

Increases in vessel traffic and construction activity are a particular concern for whale and dolphin populations around the coastline, said Danny Groves, communications manager at the global charity Whale and Dolphin Conservation. "Port expansion and creation in certain areas could cause issues for whales and dolphins in terms of increased traffic, such as collisions with vessels; noise pollution, including underwater noise level increases from construction work. We know that man-made noise has a considerable negative impact on whale and dolphin behavior," he said.

Protections in the UK are provided under national Birds and Natural Habitats Regulations, which derive from two EU directives. Given that the UK and EU share many ecosystems, a misalignment of legislation could have damaging consequences.

In an interview with the *Guardian* newspaper in July 2020, Andrew Dodd, head of casework for the UK Royal Society for the Protection of Birds, said, "Removing those protections would be disastrous for the wildlife in those areas and a massive backward step in the way the UK looks after its most important wildlife places. It would undo a lot of the positive work that the ports sector has done with major environmental organizations over the last 20 years."

Ports are understandably keen to exploit the unprecedented opportunity to boost trade, stimulate investment, and increase local employment through free ports; many also support the need for continued strong protections for the environment in the planning process.

ABP's spokesperson said, "We don't expect environmental legislation to change because of free ports, and our response to the government's free ports consultation made it clear that we're not seeking any dilution of standards."

In its response to the consultation, the BPA expressed the need to fast-track planning decisions and limit the impacts of environmental designations on free ports.

Special protection area (SPA) and special areas of conservation (SAC) are strictly protected sites designated under the EU Birds and Habitats Directives and they frequently infringe on port land and impact on planning approvals. According to a research by the BPA, about 70% of British and Welsh ports are in or very near to an SAC or an SPA.

Mark Simmonds, head of policy at BPA, told *P&H*, "For years, UK courts allowed some sort of de minimis development in protected areas. So for example, if your development encroached one inch into an SAC it might still be allowed to go ahead."

He added, "But this approach was effectively wiped out in 2018, as a result of one controversial court judgement, and there were huge problems for some developments in an SAC or an SPA."

Simmonds said the BPA wants to see a "more dynamic system of protections, which recognizes that development doesn't necessarily always have to have a negative impact". Under certain conditions, both EU directives allow ports to carry out projects that have an adverse impact on nature, provided that compensatory measures are taken to ensure the survival of protected species.

ABP has said it wants to see the government adopts a more flexible approach to determining requirements for compensatory measures. "The current guidance on compensatory measures is very prescriptive and can produce unfavorable environmental outcomes," the spokesperson told *P&H*.

A more streamlined approach to planning for free ports could help the UK reach its target of net-zero carbon emissions by 2050. Sea freight has a lower carbon footprint than air freight and could support the drive to decarbonize transport. More effective planning could help deliver renewable energy projects with greater scale and efficiency in ports.

However, any benefits for decarbonization would need to be clearly demonstrated and weighed against other environmental effects when assessing free port proposals, said Benwell. "If the UK is going to have a green recovery, it needs to cover both nature and climate. Speeding ahead with developments shouldn't be justified on the basis of climate change mitigation without first proving a compelling carbon case, which includes an assessment of damage to blue carbon and other habitat sinks. These must be considered alongside potential ecological damage. It's no use tackling one environmental issue at the expense of another," he said.

With Brexit negotiations stuck at the time of writing (end of December) and a deal with Europe seemingly out of reach, it remains to be seen what role free ports will play in driving the UK's future regeneration and growth. ■

A scale model of a port terminal, likely for the Taman dry bulk terminal. The model shows a large, rectangular pier structure with a yellowish-brown top surface, extending into a body of water. Several small model ships are visible in the water, including a red and white container ship, a white cargo ship, and a small tugboat. The water is a light blue color. The background shows a hazy, distant shoreline with some greenery and buildings.

PROJECT FOCUS BLACK SEA RIVALRY

Rushing to the ports

Georgia, Russia, and Ukraine harbor plans to build new big ports along the Black Sea coast. Although these projects have not yet commenced, they already compete with each other

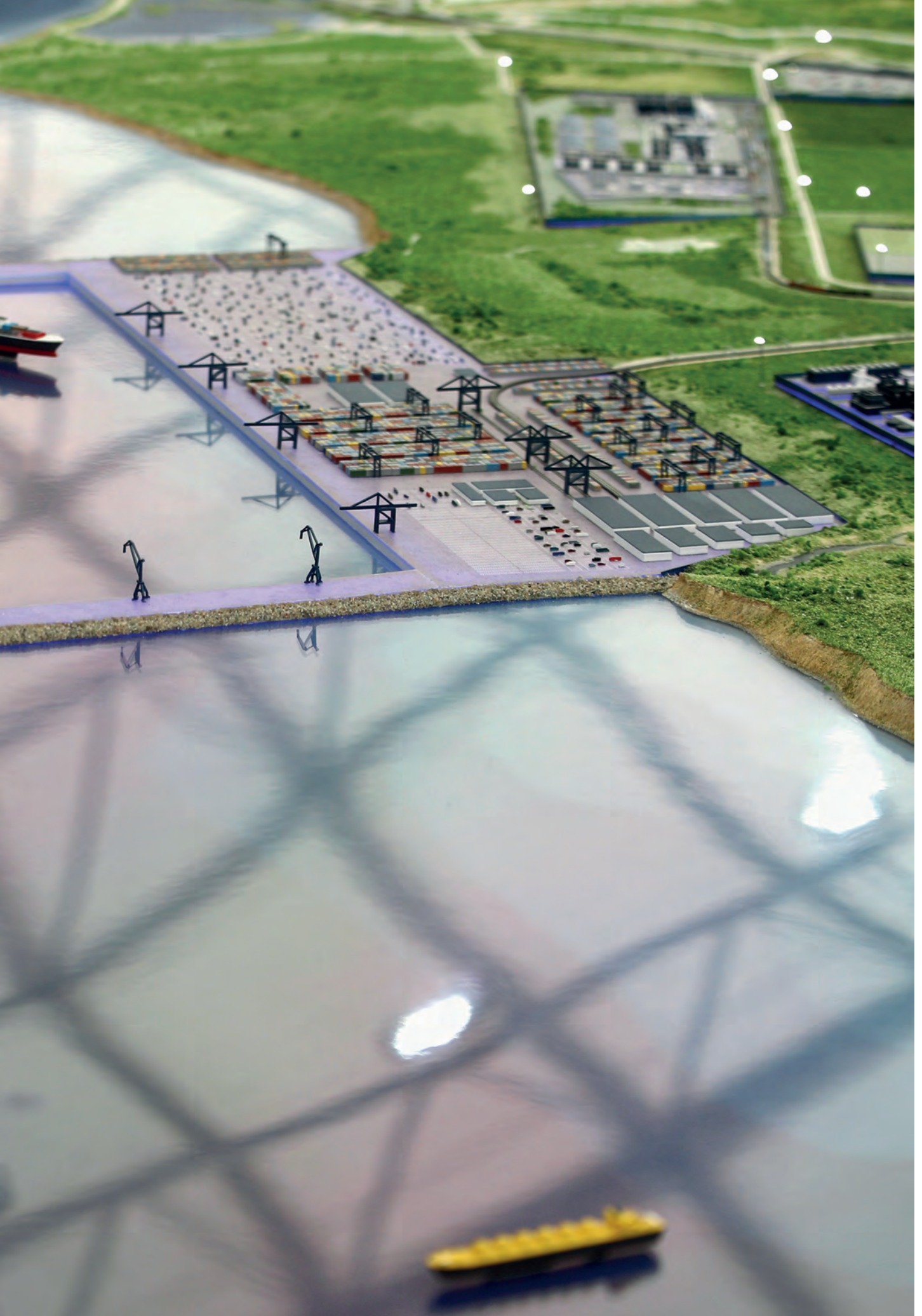
VLADISLAV VOROTNIKOV

Russia will heavily invest in seaport infrastructure on the Black Sea, the Russian Transport Ministry stipulated in a comprehensive plan for port infrastructure modernization on 14 September 2020. The ministry said two new berths are to be built in the Port of Novorossiysk by 2024, to boost the annual capacity of grain terminals by 11.6 million metric tons and ramp-up the capacities for containers and metal transshipment by 15.5 million metric tons.

The investment cost for the construction is yet to be disclosed, but Russian authorities make no secret that with

Pictured: A scale model of the Taman dry bulk terminal, a planned bulk goods terminal on Russia's Azov-Black Sea Basin coast.

Photo: Sergei Bobylev/TASS via Getty Images





— International boundary - - - Subject to claim or dispute

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this project, they want to redirect some cargo flows toward the Black Sea.

"The project's target is to return Russian cargoes from the Ukraine seaports," the ministry stressed.

The second big project included in the ministry's plan is the Taman port construction by the OTEKO group of companies with the overall investment cost of \$8 billion. The new terminal's transshipment cargo capacity is expected to be about 14.5 million metric tons per year. However, the overall capacity is expected to grow from 15 million metric tons in 2019 to 93 million metric tons per year in the future.

Fierce competition

Meanwhile, a group of Ukrainian companies has announced plans to build a major deep-sea port in Ochako, Mykolaiv Oblast. The project is planned as an intermodal hub involving the seaport and railways, a river terminal, and a cargo airport. The investment cost is \$5 billion, and the entire project is based on competition with the foreign seaports, the investors said in a statement posted by the Ukraine Center for Transport Strategies on 23 June 2020.

"The construction of the new port is needed for successful competition with the Russian and Romanian seaports, and to use Ukraine's transit opportunities to the maximum possible extent," the investors claimed.

According to the statement, the investors have already prepared a preliminary design of the seaport and conducted a feasibility study on the project with Jan De Nul having

completed an assessment of the dredging works needed.

The transshipment capacity is set at 120 million metric tons of cargo per year. The construction should take three years, although there is no information when it is slated to begin.

There has been conflict around the new port infrastructure between Russia and Ukraine. In 2019, the Russian government had to make several adjustments to the Taman project to avoid trespassing the Russia-Ukraine sea border as it was before the Russian annexation of Crimea in 2014. Without that adjustment, the Ukrainian government would have formal grounds to impose sanctions against Taman port.

"The introduction of sanctions by Ukraine can create risks in terms of reducing the volume of cargo, primarily oil products, and coal, supplied to this country from Taman," said Pavel Ikkert, a partner of NAFCO.

"However, a much greater threat to the project would be the introduction of sanctions by the United States and the European Union. Suppose Taman, which is planned to become Russia's most important international port on the Black Sea, ends up under Western sanctions. In that case, this will lead to the project losing its attractiveness for such potential investors as SUEK, Rosneft, and other companies," he warned.

In the meantime, the Ukrainian government has warned that repeated Russian inspections of merchant ships in the Black Sea strangled operating ports in the area and drove away potential investors from new projects.

Georgian seaports keep up

The Taman modernization project also caused significant concerns in Georgia, where there is still no clarity regarding the Anaklia port construction project.

After the Georgian government in January 2020 announced it was looking for a new investor to construct the Anaklia deep-sea port after the Anaklia Development Consortium (ADC) contract was canceled, the ADC responded and said it was "ready to restart work promptly," in a statement released on 15 May.

However, in October, the Georgian government said it supported an expansion at Poti. "In other words, an alternative to Anaklia," the ADC commented.

Additionally, the Russian seaport project might jeopardize the Anaklia plans. In a statement posted on his Facebook page on 2 July, Mamuka Khazaradze, one of ADC's main investors, claimed that the delay in the Anaklia port project by the Georgian top government officials "was a task given to them by Russia" to get rid of competition for Taman.

This statement was in line with earlier criticism of the Georgian government voiced by ADC representatives.

"The Georgian government's duplicitous and unlawful actions in relation to the Anaklia project has caused considerable financial losses for its US, European and Georgian investors and unfortunately now led to international arbitration proceedings against Georgia, which create a considerable financial risk for the state and will serve to discourage foreign investment in Georgia at a time when Georgia most needs it," the ADC said in a statement on its website on 13 November 2020.

"The construction of the Taman seaport is a vital issue for Russia, and the Russian president would do everything for the Taman construction. In light of this, the Anaklia deep-sea



port project would become a serious obstacle for Russia," Georgian political analyst Vakhtang Maisaya said.

"The energy and geopolitical role of Russia in the Black Sea will sharply increase, both in terms of oil transportation and gas supply, which is why Russia never wanted the Anaklia seaport to be built," explained Maisaya.

According to him, the new seaport project will compete for the Belt and Road Initiative for new cargo flows. This relates to the so-called North branch of the New Silk Roads, which would go through Central Asia and Russia to Europe.

Hence, there is no surprise the Anaklia seaport not only competes with the Taman seaport, since the Georgian seaport projects are competing among themselves.

Other business

In early 2020, APM Terminals filed an application to build a deep-sea water terminal in Poti, Georgia. The first stage's investment cost is estimated at \$250 million, and it is slated to be completed by the second quarter of 2022. The project's eventual target is to establish infrastructure capable of accommodating Panamax-class merchant vessels and boosting the seaport's transshipment capacity by 9 million metric tons of bulk cargoes and 500,000 TEU per year, the company estimated.

This was the second attempt by APM Terminals to build a deep-water terminal in the Port of Poti. The company filed a similar application to the Georgian government on 2 May 2019, but the construction permit was canceled shortly after issuing, following pressure from the ADC.

"With the Poti project up and running, the Anaklia seaport project would be suspended," the ADC warned in a statement.

Tightening competition

There is a clear rationale behind building new seaports in the Black Sea region with cargo turnover on the rise. In 2019, the Ukrainian seaports' turnover amounted to 160 million metric tons, which was 18.4% more than the

previous year, the Administration of the Sea Ports of Ukraine estimated. Those dynamics have been seen in all major ports. Yuzhny handled 53.9 million metric tons of cargoes, up 26.1% compared to the previous year; Nikolaev 33.4 million metric tons, 14.5% more than 2018; Chornomorsk 26.2 million metric tons, an increase of 21.4%; and Odesa 25.3 million metric tons, or 16.8% more than 2018.

In 2019, overall Russian seaports' cargo turnover dropped by 5.2% to 258 million metric tons. While the turnover for Novorossiysk port increased by 1.3% to 156 million metric tons, other seaports were not so prosperous. Port Kavkaz's turnover dropped by 30.6% to 20.92 million metric tons; Yeisk's dropped by 5.9% to 4.28 million metric tons; and Azov's by 21.9% to 8.24 million metric tons.

For 2020, Russia had planned to ramp-up turnover by 330 million to 1.3 billion metric tons. Ports' turnover on the Black Sea is poised to rise by 50 or 60 million metric tons.

The past influences the future

Further anger is caused by Russian companies transporting cargo through Ukrainian seaports. In 2019, Poltavsky mining and processing plant complained to the Georgian government that Ukraine Railways, transports large quantities of iron ore from Russia to Ukrainian seaports, creating bottlenecks that affected local companies. The government was called to limit Russian cargo transit, specifically iron ore, to 300,000 metric tons per month.

"There is no room for all seaports project announced on the Black Sea. The cargo turnover in the region is poised to grow. Still, the competition between the projects is extreme, and there is a lot of uncertainty where tariffs would be most competitive, and where the cargo would flow," commented a source in the Russian transport industry who wished to be anonymous. "I would say that the Russian port projects have the highest chances to see the light, because the authorities recognize not only their economic importance but also geopolitical value," the source added. ■





LOOKOUT ANTI-DRUG CAMPAIGN

A painful lesson

With ports being the gateway to the world, they sometimes open traffic to illegal cargo such as drugs. The employers' association of the port of Antwerp (CEPA), port community federation Alfaport VOKA, and the Common Trade Union Front of the port have therefore launched a video campaign, titled *Snel bijverdienen* (making a quick buck), to raise awareness and make sure that staff do not get tempted to becoming accomplices.

The port regularly makes headline news with dock workers finding metric tons of cocaine or even helping the police by trapping smugglers in containers. "The port of Antwerp is strongly connected with South American ports in its general trade, such as fruits, but unfortunately together with the general trade, the drugs are smuggled in," Yann Pauwels, director of CEPA, told *P&H*.

Following shootings and violent incidents in Antwerp in fall 2020, which called a police operation into action, Antwerp's mayor, Bart De Wever, told local newspaper *De Morgen*, "There are indications that these conflicts arise in the context of the import or sale of large consignments of drugs."

From dock workers to managers, staff might have been approached by smugglers in the past or are being targeted now. "Drug criminals seek contact in person and via social media. They ask you questions about your job in the port. They then try to seduce you by offering large sums of money in exchange for information," CEPA warned.

How should one react to such approaches, "Short and sweet, say no interest. Cooperation in drug trafficking always ends badly. The video is based on true events and shows the consequences: violence, threats, severe prison sentences. So, don't be tempted." ■

Pictured: A still from CEPA's campaign film: vimeo.com/483539422
Illustration: Studio Fluxi

PERSPECTIVE FASHION SUPPLY CHAIN

Slowing the fast fashion frenzy

The global pandemic has affected, shifted, or disrupted nearly every aspect of our lives, and our closets are no exception. Working from home has eliminated any need to update our wardrobes – apart from the athleisure boom, of course. Virtual learning means there is no need to shop for back-to-school clothes and shoes for children and teenagers.

COVID-19 has been a wrecking ball for many major retail brands, including J Crew; Neiman Marcus; J C Penney; Brooks Brothers; Lucky Brand; and even the US oldest departmental store, Lord & Taylor. However, members of the fashion industry were, in fact, already on wobbly footing before the pandemic, with some companies even destroying millions of dollars' worth of their own merchandise – typically to prevent it from being sold at discount prices to maintain a reputation of exclusivity.

The question now is: will the global pandemic finally prompt the end of over-consumption and over-production while underscoring the need for more sustainable business practices?

Not long ago, physicist Richard E Crandall offered an interesting idea in *SCM Now* magazine. He stated, "Perhaps one day consumers will no longer view apparel buying as an exciting and fulfilling activity and instead will choose only quality items that they really like and keep wearing them for years to come. If this happens, supply chains can relax their speed and focus on delivering quality items within a reasonable timeframe."

Although COVID-19 was not the natural shift in perspective he suggested in the article, it amounts to the same thing: it is time for a change.

The challenge, of course, is that making the fashion industry more sustainable is an intricate and multifaceted problem that affects every aspect of supply chain.

Of course, transport is a huge piece of this puzzle. In fact, according to the World Resources Institute, transport is the fastest-growing cause of greenhouse gas emissions. The organization believes emissions from international shipping could grow a whopping 50-250% by 2050. Because ports are essential connection points, advancing their sustainability will positively influence every aspect of the fashion supply chain.

"The success of today's global economy means we rely on ships, and therefore ports, more than ever to get goods from point A to point B," Isabela Brown, a graduate student pursuing her MSc in Sustainability Science, wrote in a Columbia University blog post. "By assessing port sustainability, we can identify which parts of the chain need fixing."

In her article, Brown pinpoints and identifies the characteristics of a

sustainable port, including:

- Offering waste facilities for garbage, sewage, oil seepage, chemicals, and ballast water
- Using clean power alternatives, such as low-sulfur fuels and electric onshore power supplies, to protect near-port communities
- Decreasing ship fuel usage by implementing virtual arrival software that tells when ships should slow their speed, arrive later, and lower congestion

"By assessing port sustainability, we can identify which parts of the chain need fixing"

ISABELA BROWN
Columbia University
blog post

"By simply slowing down, ships can cut the amount of total fuel they would normally use over a journey, saving themselves money and reducing their carbon footprint," Brown said, adding that these efficiency programs have been shown to drastically reduce overseas

emissions – sometimes by up to 50%.

To become attractive supply chain partners for retail brands, ports would be wise to view COVID-19 not as an unprecedented disaster, but as a valuable opportunity to advance, transform, and set a course for sustainability. The pandemic and resulting shutdowns offer a clear opportunity to be proactive, recommit to sustainability, and become leaders in environmental stewardship as we work together to rebuild better than before. ■



ABOUT THE AUTHOR

ABE ESHKENAZI currently serves as the CEO of the Association for Supply Chain Management. He has provided business, operational, and compliance consulting to a range of professional service organizations.

QUICK 10



GRIFF LYNCH
Executive director,
Georgia Ports Authority,
United States



N°1

Favourite app and why.
Spotify. I was able to throw out all my eight track and cassette tapes and have any music I want to hear at my fingertips.



N°2

Something unexpected that brings you joy.
High productivity anywhere that I can find it, whether it be a container vessel or a quick-moving grocery checkout line.



N°3

Proudest achievement.
My family; blessed to have an incredible wife and six wonderful children.



N°4

An item you cannot live without and why.
Reading glasses! No explanation necessary.



N°5

A quality that impresses you in a business partner.
Someone who keeps to their schedule because I have yet to conquer this elusive challenge.



N°6

A job that does not exist but should.
Eliminate automated telephonic customer service and replace it with people!



N°7

Who would you like to trade lives with for a day and why.
I would not trade with anyone.



N°8

Dream dinner date and why.
Dinner with Pele (soccer player). I am moved by his story.



N°9

Best advice ever received.
From my daughter, "Dad, be where your feet are."



N°10

Time travel destination.
1998: Would not have locked keys in the running car when picking up my wife and new baby girl. 2001: Fourth child - would not have left my wife in the birthing room for a cup of coffee.



ABOUT THE AUTHOR

JUSTIN NEWELL is the COO of INFORM Software Corporation with experience in logistics, project management, supply chains, distribution management, inventory optimization, and operating systems.

How to

improve port and terminal operations through real-time intermodal operations

Global economies rely heavily on seaports as vital gateways for the global supply chain. According to the American Association of Port Authorities, US seaports support some 31 million jobs, handle goods valued at over \$6 billion each weekday, generate annual tax revenues of \$378 billion, and are involved in economic activity totaling an estimated \$5.4 trillion annually.

Despite this and the criticality of their infrastructure's condition and process efficiency, around \$66 billion is needed for ports-related infrastructure projects over the next decade. This is also true for other nations. While infrastructure needs must be met, there are solutions that are less costly, but equally powerful in helping ports deal with limited capacity, heavy congestion, supply chain disruptions, throughput delays, and less-than-optimum operations. Optimization software and predictive analytics can help to resolve these issues.

Following are 10 ways that show how ports and terminals can optimize their intermodal operations and the benefits they yield. ■

N°1



Enhanced management of infrastructure and assets

Within the port, various assets, including trucks, trailers, other equipment, and workers, must be efficiently managed. Sophisticated yard management systems (YMS) deliver real-time visualization of all assets with one click, thereby facilitating the efficient location, allocation, and prioritization of yard assets. Incorporating advanced optimisation algorithms and using intuitive interfaces, a YMS supports intelligent digital decision making regarding assets so that potential problems can be intercepted and optimally managed. By reducing unnecessary asset movement and associated staff, costs are reduced. Among the other functions of a sophisticated YMS are: digital gate management, which replaces manual processes using Excel spreadsheets, paper-based logs, and countless phone calls; door dock management using dock information displays at doors and accessible on the staff's mobile devices, which can assist to make better decisions; automated communications whereby the system manages transport orders. Once an asset is allocated, the order is sent to the optimal yard resource for implementation.

N°4



Intelligent truck supply control

To better manage truck operations, intelligent supply control solutions automatically address unexpected workflow disruptions such as trucks arriving too early or late at loading areas not in service. These solutions, encompassing intelligent optimization algorithms, assess vehicle time slot schedules after each truck event and make real-time adjustments via a web portal displaying carriers and locations. They complement time slot management systems to support logistical transparency. When disruptions warrant, the software can calculate a revised schedule to reduce potential throughput times and congestion.

N°5



Maximising the value of a terminal operating system

By using a terminal operating system (TOS) to collect data and then applying that data, ports can better manage their assets.

Today's volatile market conditions, however, require a higher level of support. One that enhances the functionality of a TOS, delivers agile, real-time decision making to enhance the management of the yard and assets such as cranes, vehicles, containers, and related processes such as planning, container handling, work order assignments, and real-time load adjustments.

N°7



Improved workforce management and safety

By applying optimisation software, ports can also better manage their staffing resources, improve staff assignments and schedules, and reduce idle labor. In addition, greater worker safety is derived from a yard management system's ability to better manage assets, including damaged ones, and ensure staff are not in harm's way. In turn, this supports a port's compliance with worker safety regulations.

N° 2



Better container terminal processes

By applying agile optimisation software modules, ports can improve the movement of containers and assignment of equipment. Real-time optimization can be achieved across a variety of processes. These include: assignment of each container's position in the yard or staging area to a corresponding load unit to maximize the use of space; reduction in the number of container handlings; assignment of work orders to cranes to facilitate efficient sequencing, reduce travel distances, and meet schedules; real-time vehicle transport order assignments; development of multiple transport chains to reduce waiting times and unnecessary vehicle travel; improved train loading plans for expedited, on-schedule train dispatching and higher train load capacities; and calculation of the optimum sequence for loading and unloading points for trucks, as well as the automatic assignment of required handling equipment to promote faster turnaround times.

N° 6



Delivering end-to-end transparency for vehicle handling and logistics

Applying an intelligent IT system, port management and its customers, third-party logistics partners, and custom authorities gain a real-time view of all processes in the supply chain. They can track the transport and delivery status of vehicles through a web portal. Using real-time data, port managers can improve their decision making, planning, and processes. Through digital decision making, work orders can be automatically generated and optimized in real time to facilitate improved operations, better handle changing vehicle priorities, and to assure key performance indicators per customer are achieved. This, in turn, also supports improved terminal capacity and storage space allocations.

N° 8



Customer service improvements

Improved asset management and process optimization inevitably lead to higher customer service quality. Not only are ports better able to meet their own KPIs, but also the terms of their contractual agreements. When disruptions are quickly managed, bottlenecks reduced and capacity constraints relieved, ports are better prepared to meet customers' demands and scheduling requirements. With ports planning more effectively, the supply chain performance is improved.

N° 9



Greater ROI on port infrastructure

Any investments a port makes to improve its infrastructure will be boosted when complemented by the optimisation of its intermodal yard operations. The ability to enhance a port's existing TOS and optimize its yard space and facilities such as gates, door docks, and vehicles supports a higher return on capital improvement investments relating to its facility infrastructure and land-side port connectors.

N° 3



Time rail operations

Using train load optimisers, rail schedulers, and vehicle optimisers, ports can significantly improve their rail operations. Train load optimisers function by choosing the rail containers designated for train stowage to reduce yard work, increase productivity, and accommodate double-stacking, while adhering to regulatory guidelines. Rail schedulers optimise train loading/unloading processes between the port and rail tracks, in both directions. To achieve this, real-time adjustments are made to crane schedules, which reflect a job's progress in conjunction with a crane's position to keep distances short and streamline container handling processes. When possible, double-cycling is suggested, which further improves handovers and equipment transfers. Where multiple cranes are being operating, additional benefits are derived from the software's ability to assign cranes dynamically and prevent handling bottlenecks. The rail scheduler's functionality also includes adjusting workload for planned breaks, maintenance tasks, and disruptions, as well as prioritising load movements for enhanced on-time performance.

N° 10



Reduced costs of operations

By supporting optimal asset allocation, improved yard footprint utilisation, enhanced staff communications and productivity, optimization software also drives measurable cost efficiencies and savings.





Look behind the scenes

CREATIVE SIDE TENET & TALLINN

C

Christopher Nolan's latest movie *Tenet* features heaps of maritime infrastructure and a special free trade zone (FTZ) that deals with artworks.

In autumn 2020 – after months of closed cinemas and limited possibilities of indoor entertainment due to COVID-19 – Nolan's big picture, *Tenet*, arrived in theatres.

It lured the masses back into the cinema to learn if actors John David Washington and Robert Pattinson – playing secret agents – could prevent World War III by manipulating the flow of time. As of December, it has made more than \$350 million in the box offices.

Washington – only referred to as the Protagonist in the film – arrives in Estonia via a stop at the Nysted Wind Farm in Denmark to start his deployment for a secret agency called Tenet.

Part of the time-twisting plot are scenes shot in the port of Tallinn, Estonia, and Kumu Art Museum, also located in Tallinn. The latter plays host to a fictional FTZ, in the film located within Oslo airport, Norway.

This FTZ is a tax haven where precious artwork can be stored – to explain why this is relevant would be a spoiler so you have to see for yourself.

Although the FTZ in Oslo is only fictional, these zones, which specialize in duty-free artwork deals, exist in New York, Singapore, and the US, and are used by, for example, auction house Sotheby's.

Sotheby's even went so far to create a masters program in art logistics, based at its in-house Institute of Art in London, UK, which will run from January to December 2021. For \$41,733, students will "explore operational approaches toward art objects and the logistical issues related to moving art from one location to another" in the year-long course, the institute stated in the course description.

With cinemas in lockdown in many countries, *Tenet* has been available on DVD since 14 December 2020. ■

Pictured: Actor John David Washington and cinematographer Hoyte van Hoytema on the *Tenet* set
© 2020 Warner Bros Entertainment Inc. All rights reserved.
Photo: Melinda Sue Gordon

Membership notes

We are pleased to welcome a new regular and one associate member of the association:

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Shogo Miyajima, professor

IAPH speaks your language

Since 1 January 2020, the IAPH website can be accessed in different languages. Just click the 'Translate' tab in the top right of your screen and a selection of languages will be provided.

If you have any questions, please contact the IAPH secretariat

info@iaphworldports.org

Committee chairs appointed

The IAPH board confirmed the appointments of the following members as chairs and vice-chair for the three new IAPH technical committees and the subsidiary body of IAPH.

The newly established IAPH technical committee meetings were held in November 2020. The IAPH board also approved that the Environmental Ship Index will be managed by the IAPH from January 2021 onward.

We welcome the following to the council and wish them every success:



Chair of Climate and Energy Technical Committee

PETER W MOLLEMA, strategic advisor environmental management,
Port of Rotterdam Authority, Netherlands
(IAPH membership: 1963-present)
Photo: Peter W Mollema



Vice-chair of Climate and Energy Technical Committee

EDVARD MOLITOR, head of sustainability, Port of Gothenburg, Sweden
(IAPH membership: 1968-present)
Photo: Edvard Molitor



Chair of Risk and Resilience Technical Committee

TESSA MAJOR, director of international business and innovation,
Porto of Açu, Brazil
(IAPH membership: 2019-present)
Photo: Porto of Açu, Brazil



Chair of Data Collaboration Technical Committee

PASCAL OLLIVIER, president, Maritime Street, France
(IAPH membership: 2019-present)
Photo: Pascal Ollivier



Chair of Environmental Ship Index

ERIC VAN DER SCHANS, director environmental management,
Port of Rotterdam Authority, Netherlands
(IAPH membership: 1963-present)
Photo: Eric van der Schans

EVENTS TIMELINE 2021

11

JANUARY (11-22)

Port Economics and Business course –
Centre for Maritime and Air Transport
bit.ly/cmatcourse

28

JANUARY

3-4.30 PM IST (GMT+5.30)
Regional IAPH webinar Indian Subcontinent
(organized with the Indian Ports Association)

4

FEBRUARY

11 AM-12.30 PM WAT (GMT+1)
Regional IAPH webinar West and Central
Africa (organized with the Port Management
Association for West and Central Africa)



IAPH vice-president for Europe and HPA CEO Jens Meier organized a regional member meeting in December 2020. *P&H* asked Meier about its outcome and cyber focus as well as cooperations he would like to see within the IAPH in 2021

Q&A

JENS MEIER
CEO, Hamburg Port Authority (HPA), Germany

Q: What were the main issues discussed at the meeting?

A: Over the past few months, internal changes have taken place in the organization, both in the structure of the board of directors and in the field of work. I considered it important to provide information on all these to keep members informed and let them know about the advantages and opportunities that the organization offers them. The second item on the agenda, but no less important, was to raise awareness and to give members impulses to take action to avoid cyber attacks and ensure a better response to them.

Q: How was the decision made to focus on cyber security?

A: I wanted to prioritize an issue that puts not only all of us at risk, but also the entire supply chain, and which I have addressed on several occasions in recent years. Cyber risks have been increasing continuously for years, and the world's four largest shipping companies as well as the International Maritime Organization (IMO) have been hit by cyber attacks since 2017, so it is an issue that requires immediate response and must be given the importance it demands. In addition, remote working as a result of the current pandemic is another contributing factor to a business's vulnerability to cyber attacks.

Q: What was Catalina Grimalt Falco's and Tom Koehler's main advice for ports in terms of safe cyber operations?

A: Apart from mentioning how they dealt with the cyber attack suffered by the port of Barcelona in September 2018, Catalina's main message was to emphasize the vulnerability of the systems and the impact that ports have on the entire supply chain when they are hit by cyber attacks. Although measures were being taken to control attacks, they were

not able to prevent it. In relation to this, Tom Koehler mentioned that despite investments in cyber security, current governance, risk, and compliance tools often fall short in delivering the correlated insights required by business. Practices are often isolated and make it difficult to explain connected risks. In addition, he advised seaports to enhance their capabilities to map critical data flow processes with their threat intelligence management to increase their supply chain resilience against sophisticated cyber attacks.

Q: How do you see the cooperation between the chainPORT network and the IAPH Data Collaboration Committee?

A: In the past decade, it has been highly recognized that data-sharing will improve users experience for logistics services through better coordination. Therefore, there are many initiatives among seaports and along the supply chain to encourage stakeholders to take advantage of this. As the chainPORT initiator and vice-president Europe for the IAPH, I highly appreciate all efforts that contribute to increasing the spirit of data-sharing in a trusted manner or what I call digital trust. Many chainPORT members are also members of the Data Collaboration Technical Committee. I am sure that the colleagues will join forces and align their activities so that true data collaboration will take place in maritime logistics.

Q: What are the next steps for the IAPH European region?

A: Based on the input I have received from the IAPH's assessment and the information gathered from the meetings conducted with members, I would like to focus the next steps on the following topics: IMO calibration, decarbonization of ports and supply chains, maritime stakeholders' round tables, and digitization and innovation in port cargo handling.

Q: Are you looking at a specific area of cooperation in which you would like to involve other member ports?

A: My belief is that, especially in the case of cyber resilience, good solutions must be developed in powerful, agile working groups and should be shared with all partners. Collaboration is then something beyond a buzzword – it represents a state of mind. The IAPH has long had an open networking culture. I do encourage ports to further imbue this with life by keeping with the wise saying, "If you want to go fast, go alone. If you want to go far, go together." And, as we all know, cyber resilience is not a sprint but rather a marathon. A long-term perspective and a strong expertise are key factors for success. ■

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FEBRUARY

11 AM-12.30 PM EST (GMT-5)

Regional IAPH webinar Central and South America (with the Inter-American Committee on Ports, Organization of American States)

17

FEBRUARY

(time tbc)

World Ports Conference webinar on data collaboration: public-private partnerships in digital transformation

21

JUNE 21-25

(times tbc)

World Ports Conference



BOOK AUTHOR

MAGALI GEERTS holds a PhD in applied economics from the Solvay Business School at the Free University of Brussels, Belgium. Her expertise lies in project, strategic, and stakeholder management.

THE REVIEW

The Implementation of Sustainability Strategies in Ports

PATRICK VERHOEVEN



In 2018, the IAPH set up the World Ports Sustainability Program as a platform to help ports worldwide contribute to the UN SDGs. Those are based on the triple bottom line – economic, social, and environment – principle that Magali Geerts presented in this PhD dissertation as one of the best markers to operationalize sustainable development. Geerts' research, which won her a doctorate at the Free University of Brussels, Belgium, in 2020, will help ports adopt an integrated sustainability policy in line with the UN SDGs.

Her work provides insight in the behavior of port authorities or port management bodies as they are referred to in the dissertation. The hybrid nature of port authorities makes them, in principle, well-placed to raise the sustainability performance of their ports, involving business and societal stakeholders.

The solid empirical foundations of this dissertation enabled the author to identify

institutional factors that may limit port authorities in practice from assuming their responsibility as community builders.

The governance of ports is one of these factors. Compared to fully privatized and hybrid structures, government-controlled port authorities would recognize less the value-added of the triple bottom line principle, Geerts argued. This conclusion may appear counter-intuitive, but it does make sense. The pressure from shareholders and stakeholders on a corporatized port authority to perform sustainably tends to be higher and those port authorities will value sustainability more. This conclusion forms a strong additional argument as to why port management reform schemes should aim at creating independent port authorities. It will not just increase their ability to influence the logistics chain, but improve sustainable performance. Management leadership is another factor. Geerts correctly pointed out that to get sustainability initiatives

embedded in the general strategy and vision of port authorities, support of general management is vital. Read in combination with the institutional environment, we can identify an extreme variant in which port authority CEOs – especially of larger ports – make sustainability the pinnacle of their personal agenda. While positive as such, it may become counterproductive if that ambition stands in the way of the cooperation between ports. Decarbonization of shipping is a case in point. It makes no sense for a port authority to invest in shoreside electricity or introduce strict emission rules if neighboring ports do not.

Understanding these and other factors is of great practical value to port managers, policymakers, and sector organizations. That is the strength of this PhD dissertation, which is anything but an ivory tower product. ■

🌐 **Download or buy the PhD thesis here:**
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