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# IF SMA

## NEWSLETTER

The Shipmasters' International Voice

Tall Ship *Statsraad Lehmkuhl*

The One Ocean Expedition. Illustration per DEME Group ©

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Readers are reminded that the opinions expressed in the IFSMA Newsletter are those of the various authors and providers of news and are not necessarily in accord with IFSMA policy.

## Secretary General's Message

I am afraid that there is no reduction in security levels in either the approaches to the Straits of Hormuz or the Red Sea. *MSC Aries* was seized by Iranian Revolutionary Guard Corps Navy forces on 13 April 2024, in a position fifty nautical miles north of Fujairah.

*MSC Aries* ship and crew remain in captivity, although one female cadet has been released. The International Chamber of Shipping condemned the attack immediately, and along with sixteen other associations, including IFSMA, co-signed a letter to the UN Secretary General calling for the release of the ship and crew. No response has been yet been received. At the IMO Legal Committee meeting in the last week of April, over thirty statements were made in condemnation of the ship seizure. Iran responded that they were in contact with the Portuguese ambassador, as well as the embassies of the other nationals held captive, and that the crew were being looked after and would be repatriated to their home countries based on minimum safe crew manning standards.

There had been no further incidents in the Red Sea until 24 April, when two missiles were targeted at *Maersk Yorktown*. One missile was shot down and the other went astray. Following this the Philippines has banned all Filipino seafarers' employment on passenger/cruise vessels traversing the Red Sea and the Gulf of Aden.

Following the recent capture of mv *Abdullah* by Somali pirates a 5m ransom was paid for the release of the ship and crew. There has been no other incidents as yet to provide an indication as to whether this will encourage further acts of piracy in the region.

This month will be extremely busy at the IMO when the Joint Working Group on MASS convenes in the second week of May and then directly after the Maritime Safety Committee. These will be key meetings for the continued development of the new MASS Code which is due to be completed by the end of this year. IFSMA is heavily involved in this as one of the lead NGOs on the topic. There are a number of key issues that have to be resolved including the very limited number of ships that this will affect and only on international voyages. I will of course keep you informed as this develops.

The instability of this troubled world of ours right now shows no signs of improving, so wherever you are keep safe and enjoy fair winds and following seas.

### Remembering the punkah-louvre

From Seaforth Publishing has come *Blowing Hot and Cold: Thermotank and the Story of Air Conditioning at Sea* by Ian Johnston, 144 pages with 80 colour illustrations, 100 mono illustrations. ISBN: 978 1 0361 0769 7. Price £15.99.



Air-conditioning is one of those universal modern conveniences whose origins are entirely unknown to the general public and maybe some marine engineers. Online sources credit the first commercial system to the American Willis Carrier in 1902 – but this is not true. Of course Carrier is now as commonplace on food trucks and ship systems.

The first workable machine was patented four years earlier by Alexander Stewart, a Scottish marine engineer, who called his invention the Thermotank. It offered a massive improvement in comfort for passengers and was rapidly adopted by the shipping industry, eventually equipping many of the greatest liners of their day including *Lusitania* and *Mauretania*.

From these beginnings Alexander and his brothers William and Frederick Stewart built an immensely successful engineering firm with subsidiaries in America, Africa, Australia and Europe.

Based on Clydeside, Scotland's shipbuilding and marine engineering centre, its fortunes were always closely linked to that industry, but with the slump at the

end of the First World War, the company was forced to look to other markets.



*The Thermotank unit came in various configurations.*



*Top, is a 'top suction deck type' as fitted on the SS Heliopolis of 1907.*

*Middle. Painted in a light colour and fitted on either side of the deck hatch, is a 'bottom suction deck type'.*



*At bottom is a 'tween deck type' on the RMS Lusitania. Note the scale of the trunking above and to the side of the Thermotank.*

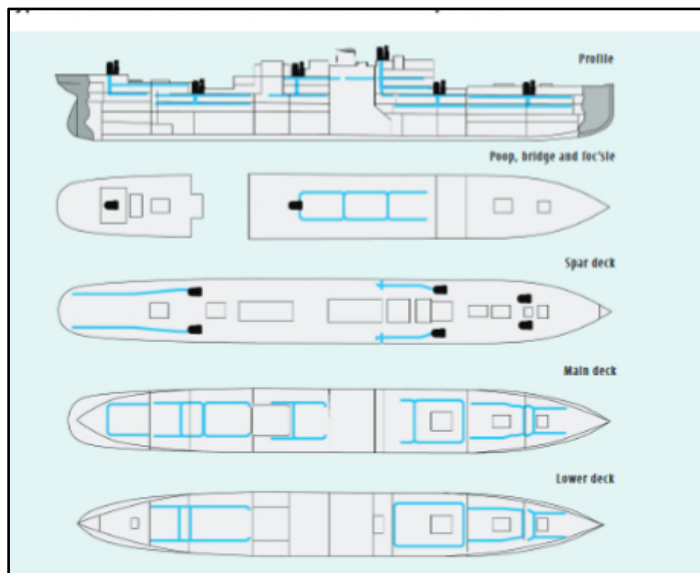
At this point Alexander came up with a second world-beating invention, which he called the Punkah Louvre – the swivelling nozzle most familiar today as the source of ventilation in airliners. This made it easier to apply the Thermotank system to other forms of transport and even buildings, greatly expanding its sales potential.

By the 1950s some fifty million tons of British and foreign shipping and warships had Thermotank heating, air conditioning and fans on board.

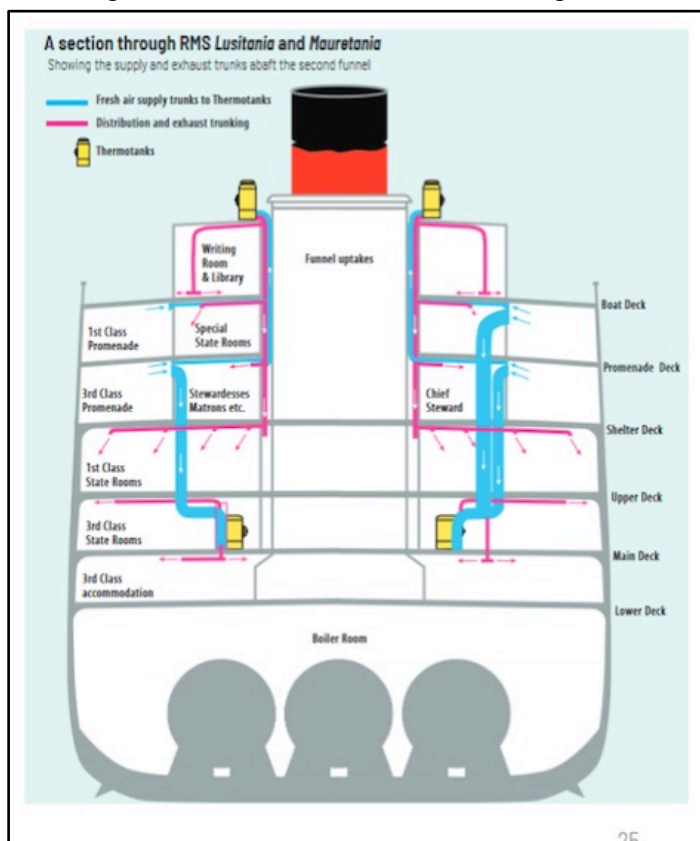
Still largely a family concern, the business remained innovative and competitive until the 1960s, when the decline in British shipbuilding and the beginnings of globalisation led to amalgamation, restructuring and eventually the demise of the Thermotank name. In the process, most of the company records were dispersed or lost so this book is a particularly valuable testimony to a great British – specifically, Scottish – success story. Although almost unknown today, Thermotank was a business that changed the world.

J&E Hall, a subsidiary of the P&O Line, was a long-established company based in Dartford on the Thames, specialising in refrigeration plant and with whom Thermotank had considerable dealings, particularly as suppliers of refrigeration plant for air conditioning systems. In 1959 the Boards of Thermotank and J&E Hall agreed to a merger from which a new company, Hall-Thermotank Ltd, would be formed. The merger brought together two companies with complementary skill sets across refrigeration, air conditioning and ventilation. To further increase market dominance of the new company, the merger

was contingent on the acquisition of highly profitable Vent Axia Ltd, makers of portable ventilation fans.



This simplified drawing of an emigrant steamer is based on a Thermotank drawing which appeared in the 1908 'Thermotanks' brochure. There are eight Thermotanks in total (shown here in black), installed at three deck levels, which distribute ventilation, heating and cooling to four decks through trunking or ducting (shown here in blue). The drawing shows the extent of the work involved in manufacturing and installing the Thermotanks and the trunking.



A section through RMS Lusitania and Mauretania Thermotanks showing the supply and exhaust trunks abaft the second funnel.

There is virtually nothing left of the Thermotank name in Glasgow, let alone the company where the original business began and flourished for six decades. The amalgamation with J&E Hall probably sustained the business for longer than might otherwise have been

the case given the collapse of Thermotank's core market, but even here, corporate acquisitions and globalisation sealed the fate of manufacturing in the UK even by Hall-Thermotank's successor companies. And so the name Thermotank, once associated with an innovative company that captured a world-wide market, was no more.



This device was given the name Punkah Louvre. Punkah was an Indian term applied to a ceiling-mounted canvas-covered frame operated by a cord to waft air. Known the world over.

J&E Hall has been more fortunate, with its name fully restored under McQuay. It is this name which, in 2022, appears on the small office in Hillington Industrial Estate in Glasgow. Alexander Stewart's invention, which he called the Thermotank, has been replaced by ever more sophisticated appliances although the fundamentals of his system remain.

This a valuable marine engineering history which tells the story of invention, success, world wars (making munitions in WW1 and 400 miles of fan trunking in WW2), worldwide marketing, slump, change in fortunes and rescue.

## The IMO Digest

A summary of some of the news received with grateful thanks from the excellent IMO Media service in recent weeks.

Illustrations per [www.imo.org](http://www.imo.org) ©

## IMO and future marine fuels and technology

### New website launched

Access to the latest information on zero and near-zero marine fuels and technologies, including pricing information and the latest research, can be found on the website: <https://futurefuels.imo.org/> This was reported by IMO on 2 April.

The website has been developed by the Future Fuels and Technology Project (FFT Project), a partnership project between IMO and the Republic of Korea, supporting the development of new regulation within the possible IMO Net Zero Framework<sup>1</sup> to achieve the targets contained in the 2023 IMO GHG Strategy<sup>2</sup>.

## Information

The website includes sections on:

- Latest information: current data on alternative fuels and supply, up-to-date indicative prices, information on the IMO Data Collection System (DCS)<sup>3</sup>.
- Future Insight: insights into the readiness, scalability and sustainability of new marine fuels and technologies, including fuel price forecasts, R&D and demonstration projects, as well as information on relevant initiatives in the shipping and energy industries.
- News and Events: a selection of global news, information resources (including reports and journal papers), and information on IMO events related to GHG emissions reduction in international shipping.
- Training and Cooperation: training materials and useful tools on alternative fuels, energy efficiency technologies and other GHG reduction measures.

Technological innovation and the global introduction and availability of zero or near-zero GHG emission technologies, fuels and/or energy sources for international shipping are integral to achieving the overall level of ambition identified in the 2023 IMO GHG Strategy.

## Data providers and collaborators

Data providers and collaborators involved on the Future Fuels website to date include the Ammonia Energy Association, Argus Media, DNV's Alternative Fuels Insight, IAPH, Ipicca, Korean Maritime Cooperation Center (KMC), Methanol Institute, OECD, SEA-LNG, SGMF, Zero Emission Shipping Mission and ZESTAs, and the IMO partnership projects GHG-SMART, GreenVoyage 2050 and Next-GEN.



Current information on the website is understood to be sourced from a range of stakeholders and data providers who have joined the initiative in its early

stages. Other data providers are invited to join this collaboration, it is reported.

## Enhanced access to information

The FFT project's website aims to enhance access to information for all stakeholders involved in IMO's climate change discussions and to facilitate relevant information sharing. Inclusion on the website does not imply endorsement or expression of any opinion on the part of IMO regarding the data or the data sources.

For queries, including from other entities who wish to get involved, readers are invited to contact: [futurefuels@imo.org](mailto:futurefuels@imo.org) (Project Manager: Mr Ji-man Seo, Project Analyst: Mrs Laura Mateos Moya).

1. <https://tinyurl.com/3ptztcxe>
2. <https://tinyurl.com/323uf55z>
3. <https://tinyurl.com/mwat7rf4>

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## The green shipping training programme

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### IMO and emerging leaders

Maritime professionals from fourteen small island developing states (SIDS) and least developed countries (LDCs) are to join IMO's flagship training programme this year to promote the global transition to net zero shipping. This was reported by IMO on 4 April.

### GHG-SMART

The IMO-Republic of Korea Sustainable Maritime Transport Training Programme (GHG-SMART) aims to build the capacity of SIDS and LDCs to decarbonise their shipping sectors, by training professionals in the industry to develop and execute national-level strategies, as well as raise finance for green shipping projects.

### Broad participation

This year twenty-three participants, including twelve women, have been enrolled from the following countries: The Bahamas, Cook Islands, Fiji, The Gambia, Grenada, Lao People's Democratic Republic, Mozambique, Nauru, Palau, Papua New Guinea, Saint Lucia, Samoa, Senegal, and Timor Leste.

GHG-SMART is designed to support and respond more directly to the needs of SIDS and LDCs, as they implement the IMO 2023 Strategy on Reduction of Greenhouse Gas (GHG) Emissions from Ships<sup>1</sup>. Many SIDS and LDCs bear the brunt of climate change impacts, while relying heavily on the maritime sector.

### Broad range of facilities; scholarships

The year-long programme includes online courses, field visits, webinars and one-week practical training in the Republic of Korea, combined with industry

engagements. Each year, two of the trainees are awarded fully-funded scholarships to study at the World Maritime University<sup>2</sup> in Malmö, Sweden.

### Feedback from alumni

Previous GHG-SMART participants have welcomed the support provided to them through the programme. Several alumni recently represented their countries as official delegates at the 81<sup>st</sup> session of the Marine Environment Protection Committee (MEPC 81)<sup>3</sup> in London, held from 18 to 22 March. MEPC is IMO's decision-making body that addresses environmental issues under IMO's remit.

### Meeting parallel with MEPC 81

During a GHG-SMART Project Steering Committee meeting held in the margins of MEPC 81, current and former trainees highlighted how their experiences enabled them to follow the debates more effectively and make stronger interventions.



Richmond Basant, Maritime Administrator at the Ministry of Works and Transport of Trinidad and Tobago and 2022 GHG-SMART alumni, commented: *'The programme has been of great benefit to myself and my colleagues, coming from a Small Island Developing State. It has allowed me to understand the latest emission regulations in shipping, new standards as well as the current and forecasted technologies that will drive the change in shipping to net zero.'*

Funded by the Republic of Korea, GHG-SMART was launched in 2020 with an initial budget of \$2.5 million. In July 2023, it was extended for three more years until 31 December 2026, with an additional budget of \$2 million.

### To learn more

More information about the IMO-RoK GHG-SMART programme is to be found here: <https://tinyurl.com/52zmqwph6>

<sup>1</sup> <https://tinyurl.com/mr2ne2bm>

<sup>2</sup> <https://www.wmu.se/>

<sup>3</sup> <https://tinyurl.com/23xs22yf>

## IMO Facilitation Committee (FAL 48)

### 8 to 12 April. S-G welcomes delegates

IMO Secretary-General Arsenio Dominguez gave a welcome message to delegates at the opening session at IMO HQ on 8 April and we are privileged to publish highlights below

He said: *'Welcome to the forty-eighth session of the IMO Facilitation Committee.'*

*'I would like to take this opportunity to reiterate my call for the immediate release of the Galaxy Leader and its crew, as well as the 23 crew members of Bangladesh nationality aboard the MV Abdullah, who remain hijacked since November 2023 and March 2024, respectively.'*

*'The global economy depends on international shipping and seafarers, and therefore they should not be the subject of any type of attacks.'*

*'I also wish to express my deepest sympathy to the people of the United States of America for the major accident that occurred on 26 March in Baltimore, when the container ship Dali collided with a pier on the Francis Scott Key Bridge. Our thoughts are with the victims, their families, and all those impacted by this unfortunate event. We expect that an investigation report will be submitted to IMO in due course.'*

*'Unfortunately I have also been informed about an incident involving a passenger ship off the coast of Mozambique.'*

*'This year's World Maritime theme is: Navigating the future: safety first! This theme is a pledge to uphold the highest standards of safety in every aspect of this Organization's regulatory work while facing the challenges of a fast-changing world, challenges such as climate change; developments in technology, artificial intelligence; and new threats faced by the shipping industry.'*



*'In reflecting on our journey towards digitalization, a significant achievement emerges: the decision by this Committee in 2022 to make mandatory the implementation of maritime single windows in ports worldwide from 1 January 2024. This decision from FAL 46 represents a major stride for the maritime community. It simplifies the clearance processes for ships, cargo, and people, reducing the administrative*

burden on our crews and stakeholders, thereby increasing the efficiency of our ports.

*'The Organization has successfully conducted technical cooperation activities to assist countries in deploying maritime single windows, often in collaboration with donor countries. I commend Norway and Singapore, for their contributions to projects in Antigua and Barbuda and Angola in recent years.*

*'As we embark on the work of FAL 48, among other things, you are expected to finalize the new version of the IMO Compendium on Facilitation and Electronic Business, with the inclusion of new data sets. The Compendium is a critical instrument to accelerate digitalization in shipping business and in the ship/port interface, and I would like to thank Finland, Germany, Kingdom of the Netherlands, and the port of Rotterdam for the contribution of funds to the IMO Compendium project, to ensure its sustainability.'*

## Facilitation Committee FAL48

8-12 April 2024

The IMO Facilitation Committee met in person at IMO HQ in London for its forty-eighth session (FAL 48) from 8 to 12 April 2024 (with hybrid participation). The session was chaired by Mr Watchara Chiemankulkit (Thailand).

### FAL 48 highlights

- Autonomous ships - revised roadmap for MASS approved.
- Approval of revised *Guidelines for the Prevention and Suppression of the Smuggling of Wildlife on Ships Engaged in International Maritime Traffic*.
- New version of the *IMO Compendium on Facilitation and Electronic Business*.
- Sharing experiences on the Maritime Single Window.
- Safeguarding the cybersecurity of the Maritime Single Window.
- Industry survey on the current state of digitalization within ports and new output on IMO's digitalization strategy.
- New *Guidelines on Port Community Systems*.
- New version of the *Explanatory Manual to the FAL Convention* approved.
- New outputs on key workers designation; cyber risk management; drug trafficking; Joint FAL-LEG-MEPC-MSC guidelines on electronic certificates; and updating the Guidelines on minimum training and education for mooring personnel.

### Maritime Autonomous Surface Ships (MASS) - revised roadmap approved

The Committee approved the revised road map on addressing Maritime Autonomous Surface Ships (MASS) issues related to the Convention on Facilitation of International Maritime Traffic (FAL Convention).

Under the revised roadmap, the Committee is expected to:

- By FAL 49 (Spring 2025): assess the finalized non-mandatory MASS Code.
- By FAL 50 (2026): assess the adopted mandatory MASS Code and consider proposed amendments to the annex to the FAL Convention.
- By FAL 51 (Spring 2027): adopt amendments to the FAL Convention.

The Committee considered the report of the MSC-LEG-FAL Joint Working Group on Maritime Autonomous Surface Ships (MASS-JWG), which met for its second session in April 2023.



The Committee concurred with a number of elements contained in the report, including on the role and responsibilities of the MASS master, MASS crew and remote operation centres. Among these, the Committee concurred, in principle, that:

- There should be a human master responsible for a MASS, regardless of mode of operation or degree/level of autonomy.
- The master may not need to be on board, depending on the technology used in the MASS and the human presence on board, if any.
- Regardless of mode of operation or degree or level of autonomy, the master of a MASS should have the means to intervene when necessary.
- Only a single master should be responsible for a MASS at any one time, although several masters could be responsible for a MASS on a single voyage, under certain conditions.
- A detailed discussion is needed about the circumstances where a master of a MASS could be responsible for several MASS.

The third meeting of MASS-JWG will take place from 8-10 May 2024.

### Approval of revised *Guidelines for the Prevention and Suppression of the Smuggling of Wildlife on Ships Engaged in International Maritime Traffic*; new e-learning course

The Committee adopted resolution FAL.17(48), containing the revised *Guidelines for the Prevention and Suppression of the Smuggling of Wildlife on Ships Engaged in International Maritime Traffic*. The revision includes minor modifications and editorial changes, with links to new joint industry guidelines added as a useful resource.

The new e-learning course, *Introduction to counter wildlife trafficking in the maritime supply chains*, developed jointly by IMO, the World Maritime University (WMU) and the World Wildlife Fund (WWF), equips Government Agencies and maritime supply chain operators with actionable insights to effectively combat wildlife trafficking at sea, empowering them to proactively prevent and suppress such illicit activities. The e-learning course on illegal wildlife trafficking will be officially launched in May 2024.

### **New version of the IMO Compendium on Facilitation and Electronic Business**

The Committee approved a new version of the *IMO Compendium on Facilitation and Electronic Business*. The IMO Compendium aims to harmonize the vast array of electronic data exchanged between ships, ports and other stakeholders. It includes IMO data sets and IMO reference model which provide a common format and semantics for such data.

The new IMO Compendium (sixth version) includes the following new and updated data sets:

- New data set on Noon report.
- Revised data sets on *Maritime Declaration of Health*, *Ballast water report* *Advanced Passenger Information*, and the updated Just In Time (JIT) sub-model.
- Amendments to the IMO data set to improve consistency in the naming and definition of IMO data elements.

### **Sharing experiences in the Maritime Single Window**

Since 1 January 2024, all IMO Member States are required to use a single, centralized digital platform or Maritime Single Window (MSW) to collect and exchange information with ships when they call at ports. This streamlines procedures to clear the arrival, stay and departure of ships and greatly enhance the efficiency of shipping worldwide.

The Committee heard from Member States who shared their experiences in implementing the MSW, including Antigua and Barbuda, Brazil, Indonesia and Togo.

Angola and Singapore shared their experience of implementing a MSW system under the SWiFT Project in the Port of Lobito, Angola. The SWiFT project, financed by Singapore, seeks to assist IMO Member States with implementing MSW systems in their ports. The lessons and experience gained from the SWiFT project are expected to contribute towards the implementation of MSWs globally. The Committee expressed deep appreciation to Singapore for assisting fellow IMO Member States with implementing MSW systems in their ports.

### **Safeguarding the cybersecurity of the Maritime Single Window**

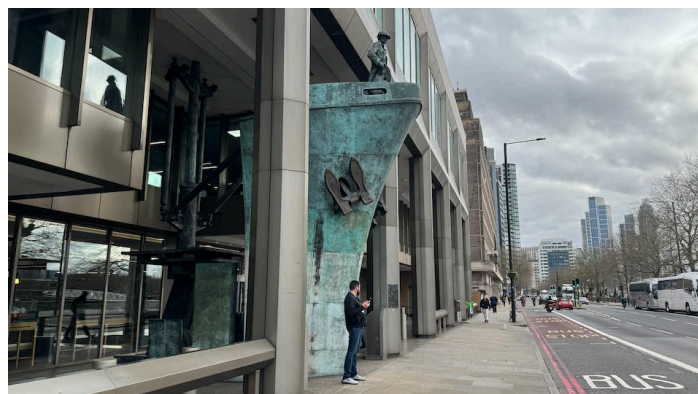
The Committee discussed the issue of cybersecurity in relation to MSW and called for Member States to

develop and operate their MSWs in a cybersecure and resilient way.

The Committee invited interested Member States and international organizations to contact the International Association of Ports and Harbours (IAPH) to prepare the proposal for a new output on the issue to be considered at FAL 49 which could include proposed amendments to the FAL Convention to establish mandatory cybersecurity measures when developing mandatory Maritime Single Windows and the development of a model law on cybersecurity with an explanatory note.

### **Industry survey on the current state of digitalization within ports and new output on IMO digitalization strategy**

The Committee noted the findings of an industry survey on the current state of digitalization within ports. Of the total respondents, 40% were unaware of the IMO regulations in the FAL Convention mandating MSW systems worldwide. In 64% of the port calls made by the respondents, port authorities were still requiring either paper submissions or a mix of paper and digital submissions. On average, respondents spent more than three hours (191 minutes) preparing and submitting the necessary documents required at every single port call.



The survey indicated a need for standardized and harmonized digital systems across ports globally, given the wide range of different port call interfaces and documentation among Member States, as well as the lack of IT infrastructure on many ships that would enable more efficient data exchange with ports.

The Committee agreed to continue discussions on the development of an overarching IMO strategy on digitalization at the next session, under a new output at FAL 49 (subject to Council's endorsement), and the recommendations from the survey will be discussed under the new output on IMO digitalization strategy.

### **New guidelines on Port Community Systems**

The Committee approved new guidelines on Port Community Systems. Port Community Systems (PCS) serve as a complementary instrument to the Maritime Single Window (MSW) system. Both are digital IT platforms used to collect and exchange data between stakeholders, streamlining operations and enhancing competitiveness. PCS facilitates the



exchange of information between public and private stakeholders involved in port and terminal operations.

The PCS guidelines provide common understanding of PCS, the role of PCS within harmonization, standardization and interoperability, interaction between PCS and MSW environments, as well as provide baseline considerations for PCS development.

### **Approval of a new version of the *Explanatory Manual to the FAL Convention***

The Committee approved the revised *Explanatory Manual to the FAL Convention*. This manual provides guidance on interpreting the legal text of the Facilitation and its provisions and gives examples of best practices for implementing Standards and Recommended Practices. The review of the manual commenced after the revised FAL Convention was adopted in May 2022.

The revised explanatory manual now includes guidance on the new global standards on illicit activities, maritime corruption and the response to a public health emergency of international concern, amongst others. It includes also guidance on major updates of the last amendments to the FAL Convention on standards as well as recommended practices related to issues such as stowaways, electronic transmission of data between ports and ships, and various procedures for arrival and departure of ships and passengers.

### **New outputs on key workers; maritime cyber risk management; drug trafficking; Joint FAL-LEG-MEPC-MSC guidelines on electronic certificates; and updating the Guidelines on minimum training and education for mooring personnel**

The Committee agreed to include, in the 2024-2025 biennial agenda of the FAL Committee and the provisional agenda for FAL 49, the following outputs:

- Amendments to the FAL Convention to review the provisions of a key worker during a public health emergency of international concern, with a target completion year of 2026. This aims to review the definition of key workers and develop appropriate provisions in the FAL Convention, to ensure the flow of maritime traffic and protect human rights during any public health crisis, such as a pandemic.
- Revision of the *Guidelines on maritime cyber risk management (MSC-FAL.1/Circ.3/Rev.2)* and *identification of next steps to enhance maritime cybersecurity* with a target completion year of 2025.
- *Development of amendments to the Revised guidelines for the prevention and suppression of the smuggling of drugs, psychotropic substances and precursor chemicals on ships engaged in international maritime traffic* (the last version was issued in 2007 in resolutions FAL.9(34) and MSC.228(82)), with a target completion year of 2027.
- *Development of joint FAL-LEG-MEPC-MSC guidelines on electronic certificates*, with a target completion year of 2025.

- Updating the Guidelines on minimum training and education for mooring personnel (FAL.6/Circ.11/Rev.1).

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## **IMO regional seminar**

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### **Domestic ferry safety in Africa**

African countries have been urged to develop and update national legislation to include adequate measures to ensure domestic ferry safety.

It was reported from IMO on 17 April that a regional seminar had been held on 16 and 17 April organised by IMO and Interferry (<https://interferry.com/>). The event took place in Dar es Salaam, United Republic of Tanzania, and was aimed to address the frequent high number of ferry casualties in the region.

This event was hosted by the Tanzania Shipping Agencies Corporation (TASAC) with the support of the Ministry of Works, Transport and Communications of Tanzania.

### **Fifteen African states represented**

Up to 120 decision makers and industry experts from Cameroon, Cabo Verde, the Democratic Republic of the Congo, Ethiopia, Gabon, Ghana, Kenya, Madagascar, Morocco, Nigeria, Senegal, South Africa, Togo, Uganda, as well as the host country, the United Republic of Tanzania, took part in discussions.



Participants represented maritime administrations, ferry shipping company operators and finance and insurance providers. They explored a range of safety considerations, focusing on common problems such as ticketing and overcrowding, loading and stowage, design and construction failure, as well as a lack of insurance and political will.

### **Funding for new builds**

Challenges identified by the panellists and participants during sessions included the lack of resources, such as funding of new builds, training of crew and maintenance of ferries. To address some of these issues, IMO has been offering training and capacity building activities through its Integrated

Technical Cooperation Programme (ITCP), and projects and partnerships.

## Recommendations

The meeting outlined several recommendations urging participating countries, in collaboration with relevant national stakeholders and interested parties, to develop, review and update their national legislative and administrative requirements and practices relating to the operation of domestic vessels and passenger ferries. The aim is to ensure adequate safety measures are included in national legislation and practices.

Hon. Khalid Salum Mohamed, Minister of Infrastructure, Communication and Transport for Zanzibar welcomed the joint initiative of IMO and Interferry to address these critical issues.

## Dar es Salaam port terminal visit

As part of the event, participants visited a port terminal in Dar es Salaam to gain practical insight into the daily ferry operations of some ferry services in the country.

## IMO's work on domestic ferry safety

This regional seminar was part of IMO's technical assistance to establish effective global safety standards for domestic passenger ferries. Domestic ferries serve as the primary means of transportation in many parts of Africa, including some landlocked countries where they are used to cross inland waterways and lakes.

## Safety concerns

However, there are safety concerns. Accidents involving ferries often have severe consequences. Since the 1960s, an estimated 1,000 people per year have died in the global passenger ferry industry, with more than 90% of fatalities occurring on domestic routes.

In recent years, the IMO Secretariat has carried out extensive work to enhance domestic ferry safety, leading to the adoption of the Model Regulations on Domestic Ferry Safety (Resolution MSC.518(105))\* by the Maritime Safety Committee at its 105<sup>th</sup> session in April 2022.

## Future IMO plans

It is reported that the outcome of the seminar will contribute to guiding IMO plans for further technical assistance on domestic ferry safety in the region.

## For more information

To learn more about the event readers are invited to see here: <https://tinyurl.com/3uu3rxnx>

There are two IMO You Tube videos on ferry safety here: <https://tinyurl.com/3j68wcyc> and here: <https://tinyurl.com/2tujpve8>

\*scroll down here: <https://tinyurl.com/3jxvh6hc>

## IMO and port security training in Kenya

### Tackling maritime security threats

What do port security personnel do in the event of a bomb threat or spillage of dangerous goods at the port?

These are the kind of scenarios explored in a recent inter-agency workshop held in Mombasa on maritime security. The joint training exercise aims to train law enforcement officers and Port Facility Security Officers (PFSOs) on how to manage security incidents within the port.



Running from 16 to 18 April, this was the latest in a series of IMO maritime security workshops on control and compliance, delivered under the EU-funded project\* on Port Security and Safety of Navigation in Eastern and Southern Africa and the Indian Ocean.

### Inter-agency participation

Seventeen Designated Authority (DA) personnel from Kenya took part in the workshop, co-organized by IMO, the United Nations Office on Drugs and Crime (UNODC) and the International Criminal Police Organization (INTERPOL).

### Potential cyber-security threat

Participants have been able to increase their capacity and knowledge about the inter-agency coordination through national tabletop exercises. These included simulations and drills of various scenarios, from cyber-security and bomb threats to drug smuggling in ports.

The training was in line with the International Convention for the Safety of Life at Sea SOLAS Chapter XI-2 and ISPS Code on special measures to enhance maritime security.

This national workshop also encouraged knowledge sharing and exchange of best practices to promote joint working and a whole of government approach.

Under the port security project, IMO aims to assist nine participating countries, including Kenya, to

enhance maritime security and safety within the region, in line with the 2050 Africa's Integrated Maritime Strategy\*\*.

\* <https://tinyurl.com/2p8bk47n>

\*\* <https://tinyurl.com/ybp9fvt4>

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## IMO S-G addresses the Legal Committee

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### Call for release of seized seafarers

On 22 April IMO Secretary-General Arsenio Dominguez addressed the 111<sup>th</sup> meeting of the IMO Legal Committee at HQ in London.



We publish below a few highlights of his opening remarks with particular regard to seafarers who have yet to be released after hijack or seizure of their vessels.

*'Unfortunately, I am compelled to once again address the pressing concerns that continue to afflict our maritime community. The safety and well-being of seafarers remain of utmost importance to us, especially considering the ongoing challenges highlighted by recent distressing events in a particularly worrying geopolitical context.'*

*'I would like to take this opportunity to reiterate my call for the immediate release of any seafarer who has been hijacked or seized, particularly the crew of the Galaxy Leader who remain hijacked since November 2023.'*

*'I would also like to make a call for the release for the MSC Aries and its crew members, captured on the 13 April in international waters. Representatives of the international shipping industry have expressed their concern to the Secretary-General of the UN and on my part I am continuing to have conversations with the UN and stakeholders in a constant search for solutions.'*

*'The plight of the seafarers affected by these incidents must not be forgotten and it is incumbent upon us to pursue every available avenue to secure their safe return to their loved ones and their livelihoods.'*

*'International shipping must not be targeted and used as a means of exerting pressure in geopolitical crises. And I call on you here to continue your efforts to return to normalcy and for ships and seafarers to continue doing their work without threats and interruptions.'*

Members may access our report for the meeting on our website next week, login required.

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## IMO-IMLI

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### Thirty-five years of training success

The IMO International Maritime Law Institute (IMO-IMLI)\* celebrated its 35<sup>th</sup> anniversary with testimonies from alumni and discussions about how to shape its future.



IMO-IMLI was founded in 1988 in Malta, and began its first programme in 1989. Its aim is to strengthen the capacity and expertise of Member States in all aspects of international maritime law. This includes legislative drafting techniques aimed at incorporating international maritime instruments into national law, supporting the implementation and enforcement of the vast body of IMO rules and regulations.

During a special anniversary event in the margins of the 111<sup>th</sup> session of the Legal Committee held in week commencing 22 April in London, IMO Secretary-General Mr Arsenio Dominguez stated: *'Over the past three decades, IMLI has played a key role in providing unparalleled legal training to more than 1,700 maritime professionals from 160 States and Territories. These people, from very diverse backgrounds, have become invaluable assets to their countries and to the global maritime community.'*

IMO-IMLI Director Prof. Norman A. Martinez Gutierrez said: *'I am proud to note that many hold the highest positions in their respective countries. IMLI graduates are able to provide a unique level of legal expertise that is hard to come by elsewhere.'*

He added that IMO-IMLI alumni have gone on to become Heads of State, ministers, diplomats, chief justices, attorney generals, legal advisers and university professors in various parts of the world. While the programme originally targeted government

officials from developing countries, graduates have also attained success in the private sector and international organizations, including IMO.

Following interventions from by the Permanent Secretary of the Ministry for Foreign and European Affairs and Trade of Malta Mr Christopher Cutajar, and Chair of the Nippon Foundation Dr Yohei Sasakawa, a panel of international maritime professionals discussed IMLI's legacy and future trajectory.

Panelists included the Alternate Permanent Representative of Nigeria to IMO Mr Abdul Dirisu and Technical Adviser to the Philippines Coast Guard Commander Mary Leizl Barbero (both IMO-IMLI alumni), as well as Senior Lecturer, Ms Elda Kazara-Belja. The discussion was moderated by IMO Director of Legal and External Relations Division, Ms Dorota Lost-Sieminska, who also studied at IMO-IMLI.

Speakers shared their experiences in applying the specialized knowledge gained at IMO-IMLI to developing and implementing key regulatory frameworks and legislation in their own countries, to benefit their communities. They highlighted the IMLI 'family' feel, which allowed them to build networks and shared experiences with other future leaders, laying the groundwork for maritime diplomacy and cooperation.

In the words of Commander Mary Leizl Barbero (Philippines): *'All of us here are testimonies that IMLI has achieved its purpose. In my own capacity, in every aspect of safety administration in my country, particularly in law enforcement as well as port state implementation, the training I had at IMLI was very important for our leaders to notice the importance not only of an IMLI graduate, but also a woman in the maritime sector.'*

The Institute's policy to reserve 50% of places for female candidates has helped to promote women's empowerment in a male-dominated industry.

Finally, the panel thanked the wide range of Governments, companies, foundations, and international development assistance organizations\*\* that support IMO-IMLI through voluntary contributions.

\* <https://imli.org/>

\*\*<https://imli.org/donors/>

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## Port State Control Officers

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### IMO boosting maritime security skills

These questions were recently asked in an IMO news service item: Where do you start if asked to inspect a ship? Does the ship conform with IMO treaties? Does it require an expanded inspection? Should the ship be detained?

Those are the types of questions that port state control officers must answer to ensure adequate security and safety standards are met.

Increasing regional instability, conflict, piracy and transnational organized crime endanger the freedom of navigation of vessels and limit investment into port infrastructure and maritime commerce.

### Regional Programme for Maritime Security in the Red Sea Area

To address those challenges, the Regional Programme for Maritime Security in the Red Sea Area, funded by the European Union, has been holding a series of training activities to support countries to improve port security and safety of navigation in the region.

### Regional participation

Participants from Djibouti, Somalia, Sudan and Yemen met in Mombasa from 22-26 April to increase their capacity and knowledge about the application of control and compliance measures under the International Convention for the Safety of Life at Sea (SOLAS), specifically Chapter XI-2 on special measures to enhance maritime security (SOLAS XI-2).

This event was hosted by the Kenya Maritime Authority.

It is understood that this style of workshop will encourage knowledge sharing and exchange of best practices to promote proper understanding of what an effective and adequately staffed control and compliance regime entails.



As part of the programme, participants were able to board a ship at the Port of Mombasa to observe a mock inspection focusing on control and compliance of maritime security measures.

### The Red Sea Project: EU funding

The Regional Programme for Maritime Security in the Red Sea Area (otherwise known as the Red Sea Project), is funded by the European Union and was launched in February 2021.

## Inter-agency activities

Under this programme, IMO works with the International Criminal Police Organization (INTERPOL), the United Nations Office on Drugs and Crime (UNODC), and the Intergovernmental Authority on Development (IGAD), in support of participating countries: Djibouti, Ethiopia, Somalia, Sudan, and Yemen.

## Regional dialogue encouraged

The programme aims to develop capacities and promote adequate security and safety standards for maritime, port and land-based law-enforcement authorities. In addition there is encouraged regional dialogue at the operational-level based on sound maritime domain awareness (MDA), in line with the objectives of the 2050 Africa's Integrated Maritime Strategy, the AIM.

At 32-pages the publication: *2050 Africa's Integrated Maritime Strategy (The 2025 AIM Strategy)* is available to download here:

<https://tinyurl.com/ybp9fvt4>

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## IMO CARES project

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### Maritime Technology Global Challenge

#### Solutions for decarbonisation

According to IMO on 25 April funding is being released to develop detailed technical proposals to help accelerate decarbonisation of selected domestic vessels and ports in Africa and the Caribbean.

This will be as part of the Maritime Technology Global Challenge, under the IMO CARES (Coordinated Actions to Reduce Emissions from Shipping) project.

The IMO CARES Maritime Technology Global Challenge was launched in November 2023 to identify technology solutions to accelerate decarbonisation in domestic shipping and ports in target regions.

#### Judges' recommendations

A judging panel recommended three specific solutions: (i) wind turbines, (ii) shore to ship power supply and (iii) port call data sharing. It is understood that these would lead to development into detailed technical proposals and possible demonstration in four target countries (a) Namibia, (b) Mauritius, (c) St Kitts and Nevis, and (d) Trinidad and Tobago.

The final choice of solutions was made by the governments of these countries, taking into consideration their needs and the technical specifications of selected ports and vessels.

#### Dedicated effort required

Anton Rhodes, IMO CARES Project Manager commented: *'Combating climate change through emission reduction requires dedicated effort at every port and for even the smallest vessels throughout the*

*world. It is vital to support developing countries, in particular the small island developing states and least developed countries, in this journey and to help facilitate access to technologies.'*



A total of twenty-one companies from across the globe entered their solutions into the IMO CARES Maritime Technology Global Challenge. Given the technology-neutral nature of the contest, entries spanned the technology spectrum, ranging from wind turbines and kites; carbon capture, artificial intelligence and data sharing systems; to hull coatings and fuel emulsifiers.

#### Broad judging panel

The judging panel, which included government representatives from the beneficiary countries, academia, industry associations and Maritime Technology Cooperation Centres (MTCCs), assessed the technologies against a set of common criteria focused on the needs of domestic shipping and ports in all four countries. The IMO CARES Project played the role of neutral facilitator for the Global Challenge.

Funding will now be provided to help develop the proposed solutions into in-depth technical proposals with guidance from the regional MTCCs in Africa and the Caribbean.

#### Funding

The IMO CARES project is funded by the Kingdom of Saudi Arabia.

To learn more about the IMO CARES readers are invited to see here:

<https://imocares.imo.org/>

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## Outcomes of IMO Legal Committee

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### 22-29 April 2024

IMO's Legal Committee met in person for its 111<sup>th</sup> session at IMO HQ in London from 22 to 26 April 2024.

This Committee deals with all legal matters within the scope of IMO, including issues relating to liability and compensation, fair treatment of seafarers and the fraudulent registration of ships. The session was chaired by Ms Gillian Grant of Canada.

## LEG 111 highlights

1. Guidelines on the fair treatment of seafarers detained on suspicion of committing crimes finalized.
2. New Task Force to review abandonment database established.
3. Fraudulent registration and fraudulent registries of ships - work on due diligence in ship registration continues.
4. New output on guidelines or best practices on the registration of ships to be developed.
5. Revised Guidelines for accepting Insurance Companies and Certificates approved.
6. New information brochure on the Athens Convention approved.
7. Measures to assess the need to amend liability limits approved.
8. Autonomous shipping – a roadmap on LEG's work on MASS approved.
9. Facilitation of the entry into force of the 2010 HNS Protocol.
10. Piracy and armed robbery.

### **Guidelines on the fair treatment of seafarers detained on suspicion of committing crimes**

The Committee finalized guidelines on the fair treatment of seafarers detained on suspicion of committing crimes. These are to be applied where seafarers may be detained in a jurisdiction other than that of the seafarers' nationality on suspicion of committing crimes during the course of their employment on board a ship.

The objective is to ensure that seafarers are treated fairly during any investigation and detention by public authorities, and that detention is for no longer than necessary, in accordance with the laws of the port or coastal States. The guidelines contain guidance for port States, flag States, coastal States, States of which the seafarer is a national, shipowners and seafarers.

The finalized guidelines will be submitted as a base document to the Joint IMO-ILO Tripartite Working Group (JTWG) for further refinement. The JTWG will then submit the guidelines to the Legal Committee and to the ILO Governing Bodies for endorsement.

### **New task force to review abandonment database**

Seafarer abandonment happens when shipowners fail to fulfil obligations to seafarers related to timely repatriation, payment of outstanding wages or salary, and even the provision of basic necessities such as food, accommodation and medical care.

The Committee noted the alarming rise in the number of cases of abandonment reported via the IMO/ILO abandonment database, including a considerable number that remain unresolved. In 2023, 142 new cases were reported, compared to 109 incidents in 2022, 95 in 2021 and 85 cases in 2020. Previously, between 40 to 55 incidents were reported each year between 2017 and 2019, while a range of 12 to 19 cases were reported per year between 2011 and 2016. In first four months of 2024, a further 100 cases were reported. Thus, the numbers are likely to

surpass last year's record of reported cases of abandonment.

The Committee agreed that reporting information in a timely manner is critical to resolving cases. Both flag States and port States play an important role in verifying financial security for abandoned seafarers on board their vessels and in their ports.

The Committee established a new Task Force to review and update (or redevelop) the joint ILO/IMO abandonment database, including all procedural, policy, financial and technical aspects. Created in 2004, this database contains regularly updated information on vessels and seafarers that have been reported as abandoned worldwide. An upgrade of the system would enhance data accuracy and monitoring capabilities and support the swifter resolution of abandonment cases.

The Task Force will submit a report for further consideration by the Joint ILO/IMO Tripartite Working Group to identify and address seafarers' issues and the human element (JTWG). The JTWG will conduct a final review and subsequently provide a clear report to the ILO Governing Body and the IMO Legal Committee for endorsement.

The updated database will support the implementation of the Guidelines on how to deal with seafarer abandonment cases, adopted at LEG 110.

### **Fraudulent registration and fraudulent registries of ships - work on due diligence continues**

The Committee agreed to continue its work to address the fraudulent registration of ships and the fraudulent use of the IMO identification number schemes. This includes addressing measures to be exercised by flag State administrations, in line with their obligations to have adequate control over their ships.

The Committee re-established the Correspondence Group on Due Diligence and IMO Identification Number Schemes, to continue to define and develop the elements of "due diligence" to be exercised in the process of registration of ships under the flag of a State. This pertains to vessels in the IMO unique company and registered owner identification number scheme. The Correspondence Group will report back on progress to the Committee at LEG 112.

### **New output to be developed on guidelines or best practices on the registration of ships**

The Committee tasked the Correspondence Group on Due Diligence to work inter-sessionally to develop a draft proposal for a new output on guidelines or best practices on the registration of ships, for consideration at LEG 112.

This follows recommendations made in the final report by the Study Group on Fraudulent Registration and Fraudulent Registries of Ships, which was considered by the Committee. The Study Group was established at LEG 109 to initiate a comprehensive study to address all issues arising in connection with fraudulent registration and fraudulent registries of ships, and possible measures to prevent and combat them. It was composed of the World Maritime University (WMU), the IMO International Maritime Law Institute (IMO IMLI) and the United Nations Conference on Trade and Development (UNCTAD).

In addition to the development of guidelines or best practices for the registration of ships, including stringent measures to deter fraudulent ship registrations practices, the final report by the Study Group recommended a number of actions. These include, amongst others, enhancing existing tools to counter fraudulent ship registration; development of harmonized procedures for registration; addressing current loopholes; conducting awareness campaigns; and making improvements to IMO's Global Integrated Shipping Information System (GISIS) – specifically the database on ship particulars, which contains information on individual ships (IMO number, flag etc.,) and indicates when a ship is identified as “false flag” or “under UN sanctions”.

The Committee agreed that the recommendations contained in the report should continue to be considered.

### **Revised Guidelines for accepting Insurance Companies and Certificates approved**

The Committee approved the revision of the Guidelines for accepting insurance companies, financial security providers and the International Group of Protection and Indemnity Associations (P & I Clubs) (CL No.3464). The updated Guidelines will be issued via a LEG circular.

The purpose of these guidelines is to provide State Parties to conventions covering liability issues with guidance for accepting insurance companies and certificates or similar documentation from insurance companies, financial security providers, International Group (IG) P&I Clubs and P&I Clubs outside the IG. Relevant conventions include:

- The International Convention on Civil Liability for Oil Pollution Damage, 1992, as amended (1992 Civil Liability Convention).
- The International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001 (2001 Bunkers Convention).
- The Nairobi International Convention on the Removal of Wrecks, 2007 (2007 Nairobi WRC).
- The International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, 1996, as amended by the Protocol of 2010 to the Convention (the 2010 HNS Convention).

The revised Guidelines include a list of definitions and a new section on ‘Criteria for accepting Insurance Certificates’. The criteria and documentation for accepting insurers and insurance certificates have also been modified and expanded.

### **Information brochure on the Athens Convention approved**

The Committee approved the text of an information brochure on the Athens Convention relating to the Carriage of Passengers and their Luggage by Sea, 2002. The brochure is intended as a guide for claimants on claims for death or personal injury to a passenger, or for the loss of or damage to luggage or vehicles during carriage by sea under the Protocol. The brochure will be made available on the IMO

website, with regular updates to be made by the IMO Secretariat, as necessary.

Information brochures currently available online include:

- Bunkers Convention.
- Civil Liability Convention.
- Nairobi Wreck Removal Convention.

### **Measures to assess the need to amend liability limits approved**

The Legal Committee deals with issues related to liability and compensation for damage caused by ships, such as pollution.

The Committee approved the following methodologies to transparently assess the need to amend liability limits:

- Methodology for the collection and reporting of experiences of incidents and resulting damage.
- Methodology for assessing changes in monetary value.

These methodologies will be issued as an annex to a LEG circular. This completes the work under this output.

### **Revised roadmap for Maritime Autonomous Surface Ships (MASS)**

The Committee approved a revised road map for addressing legal issues related to Maritime Autonomous Surface Ships (MASS) - commercial vessels that can operate (to varying degrees) independent of human interaction.

Under the revised roadmap, the Committee is expected to:

- In LEG 112 (Spring, 2025): assess the finalized non-mandatory MASS Code and consider a need for amendments to, or interpretations of, treaties under the purview of the Legal Committee based on the outcomes of the MASS-JWG, MSC and FAL; consider proposals to develop guidelines on the implementation of LEG instruments by MASS.
- In LEG 113 (Spring, 2026): assess the approved mandatory MASS Code and consider a need for amendments to, or interpretations of, treaties under the purview of the Legal Committee.
- In LEG 114 (Spring, 2027): adopt or approve amendments to, or interpretations of, treaties under the purview of the Legal Committee.

The Committee approved the report of the MSC-LEG-FAL Joint Working Group on MASS (MASS-JWG), which held its second session in April 2023.

The Committee supported the actions outlined in the MASS-JWG report, concurring with key elements related to the role and responsibilities of the MASS master, MASS crew and remote operation centres. Among these, MASS-JWG had agreed that:

- There should be a human master responsible for a MASS, regardless of mode of operation or degree/level of autonomy.
- The master may not need to be on board, depending on the technology used in the MASS and the human presence on board, if any.
- Regardless of mode of operation or degree or

level of autonomy, the master of a MASS should have the means to intervene when necessary.

- Only a single master should be responsible for a MASS at any one time, although several masters could be responsible for a MASS on a single voyage, under certain conditions.
- A detailed discussion is needed about the circumstances where a master of a MASS could be responsible for several MASS.

The third meeting of MASS-JWG will take place 8-10 May 2024.

### **Facilitation of the entry into force of the 2010 HNS Protocol**

The Committee welcomed the progress towards the entry into force of the International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, 2010 (2010 HNS Convention). The Committee noted that the 2010 HNS Protocol needed only four more ratifications with the required contributing cargo, and is thus significantly closer to its entry into force.

The Committee noted that France had deposited an instrument of ratification in October 2023 and Slovakia in November 2023, bringing the number of Contracting States to eight. Five of these Contracting States had more than 2 million units of gross tonnage each.

The HNS Convention is the last major IMO Convention involving liability to come into force. It is key to ensuring that those affected by incidents involving hazardous and noxious substances (HNS) carried on ships have access to a comprehensive and international liability and compensation regime. This is particularly relevant given the increasing amounts of chemicals and new fuels being transported in bulk in ships.

A workshop on the HNS Convention was due to be held on 1 and 2 May at IMO HQ, hosted by the International Oil Pollution Compensation (IOPC) Funds.

### **Piracy and armed robbery against ships**

The Committee noted key developments in legal issues related to piracy and armed robbery of ships since the previous session (LEG 110). Proposals regarding the work programme of the Committee as well as urgent measures to address Somali piracy in the Gulf of Aden were discussed.

The Committee noted that the Maritime Safety Committee is the principal organ at IMO for discussing maritime security, but that the Legal Committee has a role in the consideration of associated legal issues. The Committee noted support for the submission of concrete proposals on these issues at LEG 112, with the possibility of developing a new output.

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## **Swedish accession to NATO**

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### **Warships showcase ironclad alliance**

#### **First port visit in Stockholm**

Following Sweden's historic accession as NATO's 32<sup>nd</sup> Member State on 7 March warships assigned to Standing NATO Maritime Group One (SNMG1), to include flagship ESPS *Almirante Juan de Borbon*, conducted a port visit to Stockholm on 19 March.

Sweden was one of NATO's closest partners, sharing the same values and facing many of the same challenges as NATO Allies. Swedish forces have trained together with NATO for almost thirty years. This event was reported by SNMG1 and Public Affairs at NATO's Maritime Command, MARCOM, based in Northwood, NW London.

Sweden's membership in NATO boosts transatlantic security, enhances NATO's ability to reinforce Baltic Allies, and significantly enhances the defensive posture in the High North.



*HNoMS Otto Sverdrup photographed from a Swedish warship.*

*Illustration per NATO MARCOM Public Affairs ©*

Deputy Commander, Allied Maritime Command, Vice Admiral Didier Maletierre of the French Navy commented: 'Sweden's accession comes at a critical moment for the NATO Alliance. With a persistent Russian threat and the ongoing war in Ukraine, there has never been a more important time to reinforce our system of collective defence.'

Rear Admiral Joaquin Ruiz Escagedo of the Spanish Navy is the commander of SNMG1, which includes flagship ESPS *Almirante Juan de Borbon*, FGS *Bonn*, FS *Normandie*, HNoMS *Otto Sverdrup*, ITS *Luigi Rizzo* and FS *Aquitaine*. FS *Aquitaine* remained at sea to conduct Maritime Exercise Spring 24 led by the Swedish Navy, while the remainder of the group was in Stockholm.

These warships were visiting Stockholm having just completed the maritime phase of exercise Steadfast Defender 24, NATO's largest multi-domain exercise since the Cold War.



SNMG1 participated, along with Swedish units and troops, in an scenario in which NATO European forces, with a transatlantic reinforcement, stood up to recover NATO territory after simulated aggression toward a NATO member nation.

Escagedo added: *'Each NATO exercise is a further step in unity, integration and interoperability among 32 nations' armed forces that are capable to operate as one single entity that leverages on the capabilities of them all.'*

Deputy Chief of the Royal Swedish Navy Brigadier General Patrik Gardesten reflected on the significance of the port visit and the enduring relationship Sweden shares with NATO. He reflected: *'This is an important and historical day for the Royal Swedish Navy and I am very proud and honoured to welcome SNMG1 to Sweden.'*

*'The port visit to Stockholm and a now Allied country is very strong statement, which even more enhances the new role Sweden will play within the Alliance. We are ready to contribute to the Standing NATO Maritime Groups when the appropriate time and place occurs.'*

MARCOM is the central command of all NATO maritime forces and the MARCOM Commander is the primary maritime advisor to the Alliance.

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## Bad day at the office

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**By Michael Grey IFSMA Honorary Member**

Once upon a time, your accidents did not present themselves to a global audience, even before the wreckage had been cleared away. But that was before the onset of CCTV and mobile phones made everyone into voyeurs, able to comment on the mishaps of others, possibly even selling the footage to the highest bidder.

This thought occurred, when watching the slow-motion demolition of half the Turkish port of Evyap by the containership YM Witness, with the forward flare wrecking three of the port's container ship-loading cranes. Investigations, we are told are continuing, which is something of a statement of the obvious, although it appeared to be an accident that may not be quite so easily explained.

The miracle, amid the spectacle of crashing steelwork, with one crane falling bodily along the quay, one collapsing as only a container crane does and the middle device falling onto the ship's foredeck, was that only one person was reportedly injured. Some alert person had made sure that the mooring gangs were not exposed on the quay as the ship approached, or at least encouraged them to depart with alacrity, before all that tonnage of overhead steel tumbled among them. The jib, which crashed down and straddled the ship, even managed to push some of its stacked boxes into the harbour.

We have seen too many of these crane-strike incidents for them to be in any way remarkable, although this was notable for the extent of the

damage. It was some years ago that I met a specialist who spent his whole life jetting around the world investigating the circumstances for insurance purposes of crane loss and damage and he told me that his life was increasingly busy. What surprised me was his assertion that weather did far more damage than out-of-control ships, as stevedores often seemed to forget to lash down their huge structures with a storm approaching. Then the loose cranes were blown, one into another, and sometimes collapsed into unrepairable mounds of scrap.

The Turkish devastation would appear to be due to either some mechanical failure or misjudgement, with the ship canting towards the quay, with headway, at the worst possible moment. It otherwise did not appear to be a difficult approach, in an unobstructed harbour, in daylight, with a quay uncluttered by other ships. A slow approach, to lie parallel to the quay, before using the tug and bow thruster to push the vessel alongside, would have been the desired strategy for docking.

The ship's VDR will surely provide the investigators with a blow-by-blow account of the incident. Perhaps the engine refused to go astern, or perhaps an astern engine movement caused the bow to swing to port. Maybe the thruster refused to thrust when it was needed. A 14000teu ship may be no monster these days, but it is no minnow and it might be asked (perhaps with unfair hindsight), whether more tugs might have been employed both to shove the ship alongside and to act as a controlling brake. But tugs cost money and cheaper options are often demanded in this close-quarters risk business, without their comforting insurance.

I am constantly amazed that pilots seem able to manoeuvre bigger and bigger ships into smaller and smaller berths, with the safety envelopes around them shrinking. It would be, in my opinion, perfectly excusable to tell the port authority, or shipping company owner of some gigantic new monster that the ship is just too big and the port will need to be expanded or the turning circle dredged afresh. But they never do, (or we never hear about it) and the ships, ever larger, keep coming.

They might have the facility of brilliant simulators to hone their handling of these ships, but there is just no denying the levels of skill (and nerve) that are required. And that in an unforgiving era, where the greens are shrieking about emissions and the need for less powerful engines, everyone is yelling for tighter schedules and faster port turn-rounds and the Houthi pirates are wrecking the supply-chains. The amazing thing is that more cranes don't end up as scrap.

It was interesting to read in the latest UKMPA Pilot magazine that a trial with the then biggest containership in the world demonstrated that a boarding pilot took some eight minutes between the boat arriving alongside and an appearance on the bridge. Some interesting implications there, in a busy roadstead, if you think about it. You wonder whether the designers of these fancy new containerships, with the bridge perched on the forecastle head, have

thought of that one. But the drivers will be worryingly close to the action, if they get too near to a crane.

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Michael Grey is former editor of Lloyd's List

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## Autonomous minehunting operations

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### One year in the Persian Gulf

The team responsible for introducing autonomous minehunting into front-line operations in the Gulf has successfully completed its first twelve months.

The Mine and Threat Exploitation Group's Operational Evaluation Unit has spent the past year in the Middle East testing a series of uncrewed and remote-piloted systems which will one day be the future of minehunting in the Royal Navy.

Working with Royal Navy Motor Boat *Harrier* and based on RFA *Cardigan Bay*, the team have put various pieces of equipment and technology through their paces to see how they operate and react to the climate of the Gulf and the complex missions current minehunting units carry out.



*RNMB Harrier alongside an unnamed Mine Counter Measures vessel, believed to be of the Hunt Class, secured outboard of RFA Cardigan Bay.*

*Photo: Ministry of Defence Crown Copyright 2024©*

*Harrier* is capable of operating both autonomously (pre-programmed to conduct a mission) or remotely from a ship or shore-based remote-control centre. She tows a side-scan sonar behind her to look for mines on the seabed, alerting units ashore or at sea of their whereabouts.

As part of the trials she has also been working with remotely-operated underwater vehicles and a minesweeping system.

In a fruitful first year for the Operational Evaluation Unit, the team has integrated and deployed *Harrier* from *Cardigan Bay*, a shore control base at the UK Naval Support Facility in Bahrain and Sandown and Hunt-class minehunters.

Lieutenant Alex Gibby, MTXG Group Engineering Officer, said: *'We have gained valuable experience in the deployment and operation of Harrier to provide*

*lessons ahead of the main roll-out of Mine Hunting Capability Block 1 systems.*

*'We have also begun to establish the infrastructure and logistical support required to operate autonomous minehunting systems at reach.*

*'These will increase our agility and flexibility to contribute to MCM operations, and X-Ray Squadron is suitably excited to begin employing these new systems.'*

RNMB *Harrier* has spent a year in the Gulf trialling autonomous and remote-piloted minehunting systems

### Future use

The trials and tests held by MTXG will pave the way for the use of autonomous and uncrewed systems on operations in the Gulf. Using the systems in theatre gives better protection to Royal Navy personnel, who can remain a safe distance from any possible explosives and also gives more options on how to deal with potential threats.

With the success of *Harrier*, the team can now look to operating other autonomous submersibles and remotely-operated vehicles which can survey, ID and neutralise threats.

### Scope for more

The next milestone will be the receipt of new medium autonomous underwater vehicles, Arcims-class uncrewed surface vessels, and Remus 300 robot underwater vehicles offering a wider profile as the UK moves to an in-service operational unit in MTXG this year.

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## International Maritime Bureau

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### Concern raised on continued piracy

The ICC International Maritime Bureau (IMB) raised concern on the continued acts of maritime piracy off the coast of Somalia in its first quarter report for 2024, released on 10 April.

A total of thirty-three incidents of piracy and armed robbery against ships were recorded in the first three months of 2024, an increase from twenty-seven incidents for the same period in 2023.

Of the thirty-three incidents reported, twenty-four vessels were boarded, six had attempted attacks, two were hijacked and one was fired upon. Violence towards crew continues with thirty-five crew members taken hostage, nine kidnapped and one threatened.

### Worrying rise in Somali pirate activity

The Q1 report highlights the continued threat of Somali piracy incidents with two reported hijackings. In addition, one vessel each was fired upon, boarded and reported an attempted approach. These incidents were attributed to Somali pirates who demonstrate

mounting capabilities, targeting vessels at great distances, from the Somali coast.

A Bangladesh flagged bulk carrier was hijacked on 12 March and its twenty-three crew were taken hostage by over twenty Somali pirates. The vessel was underway approximately 550 nautical miles from Mogadishu while enroute from Mozambique to the United Arab Emirates.

The IMB is aware of several reported hijacked dhows and fishing vessels, which are ideal mother ships to launch attacks at distances from the Somali coastline.

ICC Secretary General John W.H. Denton said: *'The resurgence of Somali pirate activity is worrying, and now more than ever it is crucial to protect trade, safeguard routes, and the safety of seafarers who keep commerce moving. All measures to ensure the uninterrupted free flow of goods throughout international supply chains must be taken.'*

IMB has commended the timely and positive actions from authorities ensuring the release and safety of the crew.

A forty-hour operation by the Indian Navy in the Indian Ocean on 15 March culminated in the capture of thirty-five Somali pirates and the release of a previously hijacked vessel and its seventeen crew.

A bulk carrier boarded by pirates on 4 January over 450 nm off the east coast of Somalia was rendered safe along with its twenty-one crew members by an Indian naval vessel.

In late January, the Seychelles Coast Guard intervened to safeguard a hijacked fishing vessel and its six crew. Three suspected Somali pirates were apprehended in this operation.

IMB Director Michael Howlett added: *'We reiterate our ongoing concern on the Somali piracy incidents and urge vessel owners and Masters to follow all recommended guidelines in the latest version of the Best Management Practices (BMP 5). We also commend the actions of the Indian navy and Seychelles coast guard for intercepting hijacked vessels, safeguarding crews and capturing pirates.'*

### **Caution urged in the Gulf of Guinea**

Incidents within the Gulf of Guinea waters continue to be at a reduced level. Six incidents were reported in Q1 2024 compared to five in the same period of 2023.

The IMB urges continued caution as nine crew were kidnapped from a product tanker on 1 January 2024 around 45nm south of Bioko, Equatorial Guinea.

Said Howlett: *'While we welcome the reduction of incidents, piracy and armed robbery in the Gulf of Guinea remains a threat. Continued and robust regional and international naval presence to respond to these incidents and to safeguard life at sea is crucial.'*

### **Rising risks in Bangladesh and Singapore Straits**

There has been a noticeable increase in reported low-level opportunistic crimes in Bangladeshi waters in 2024 with seven reported incidents received – six from vessels at anchorage in Chattogram—compared to one report for the whole of 2023.

The Singapore Straits recorded five incidents against four large bulk carriers and a general cargo vessel, considered low-level opportunistic incidents. But the threat for crew safety remains high as five crew were taken hostage in three separate incidents in January.

### **To request a copy of the Report**

In order to request a copy of the Q1 2024 Piracy and Armed Robbery Against Ships report readers are invited to see here: <https://tinyurl.com/44n98cu3>

### **About IMB Piracy Reporting Centre**

Since its founding in 1991, IMB's Piracy Reporting Centre serves as a crucial, 24-hour point of contact to report crimes of piracy and lend support to ships under threat. Quick reactions and a focus on coordinating with response agencies, sending out warning broadcasts and email alerts to ships have all helped bolster security on the high seas. The data gathered by the Centre also provides key insights on the nature and state of modern piracy.

IMB encourages all shipmasters and owners to report all actual, attempted and suspected global piracy and armed robbery incidents to the Piracy Reporting Centre as a vital first step to ensuring adequate resources are allocated by authorities to tackle maritime piracy.

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### **Reduction of underwater radiated noise from shipping**

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In recent weeks the Australian Maritime Safety Authority (AMSA) has issued a marine notice on the reduction of underwater radiated noise from shipping,

Marine notice 2024/01 *Reduction of underwater radiated noise (URN) from shipping* is the document.

The purpose of this marine notice is to draw attention to the IMO's non-mandatory Revised guidelines for the reduction of underwater radiated noise from shipping to address adverse impacts on marine life, which were released on 1 October 2023.

### **Background**

Due to increasing concerns with the impacts of underwater radiated noise (URN) from commercial shipping on marine life, the Marine Environment Protection Committee (MEPC) has released a revised version of the guidelines for the reduction of URN from shipping, following a comprehensive review.

The revised guidelines provide updated design, technical, operational and maintenance guidance to reduce URN, which are applicable to shipbuilders,

designers and operators. They are intended to be applied to new and existing ships, taking into account the ship's design and construction, as well as its operations.



The revised guidelines also include updated international measurement standards, recommendations and classification society rules for the evaluation and monitoring of URN, which will assist in assessing the effectiveness of efforts to reduce URN.

### URN management planning

The revised guidelines contain a new section on URN management planning, which should be considered at the earliest stages of design for new builds, and as far as reasonably practicable for existing ships. This includes the development of a URN management plan, intended to be a flexible tool that allows a customised approach. The management plan may include establishing a baseline URN, setting URN targets, and evaluating various technological, operational, and maintenance approaches to reduce URN. Model templates in the revised guidelines help shipowners and designers in this process.

### Energy efficiency and URN

Recognising efforts to achieve increased energy efficiency in ships may also result in a reduction in URN, a dedicated section has been included in the revised guidelines on positive synergies with climate policies. This section notes however that URN measures should not come at the expense of efforts to reduce GHG emissions from ships or other IMO measures associated with ship safety.

### Incentive schemes

Incentive schemes are encouraged to support URN reduction efforts and monitoring. Such schemes could be linked to URN ship class notations, recognition of URN management plans, URN reduction targets, innovative ship and engine technologies and maintenance practices, ship speed optimisation programmes, and voluntary sustainability certifications, which include evidence of URN reduction. Examples include discounts on port dues, fairway fees, extra services, or promotional benefits.

### Further information

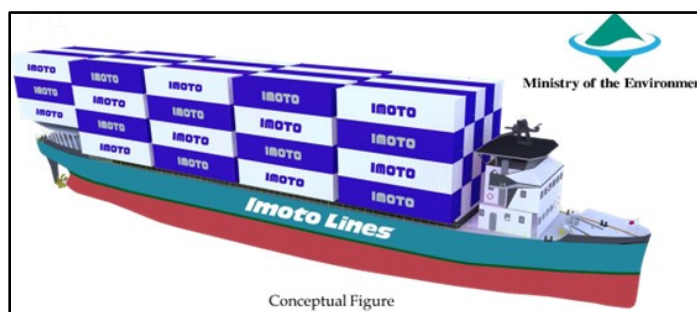
A copy of the twenty-one page MEPC.1/Circ.906 setting out these revised guidelines can be obtained from the IMO website here: <https://tinyurl.com/324zsz2b>

Please note the above circular revokes IMO document MEPC.1/Circ.833.

## Imoto Lines and Marindows

### Next-generation zero-emission container ship project

On 19 April it was reported by Imoto Lines and Marindows that, as a first step in transforming the future of domestic shipping, they will build the next generation of zero-emission domestic container ships capable of hybrid operation.



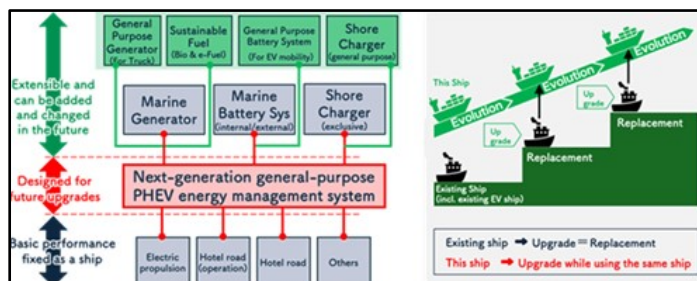
The project will make use of Japan's first exchangeable container batteries, alongside onboard batteries, and generators, and conduct demonstration experiments on the Kobe-Hiroshima service.

This project is regarded as a challenge towards a sustainable future for domestic shipping, aimed at fundamentally solving the three major challenges the industry faces: decarbonisation, crew shortage, and safe navigation.

It was reported that the Ministry of the Environment, Government of Japan has recognized the project's value and adopted it as a three-year scheme for the FY2024 Carbon Neutral Technology Research and Development Programme.

### Background and objectives

The aim is to achieve complete zero-emission CO<sub>2</sub> output over the entire lifecycle from fuel mining and manufacturing to usage, not just during operation.



For shippers operating globally, reducing CO<sub>2</sub> emissions in the supply chain is directly linked to international competitiveness, but the use of renewable energy in ships is just beginning to be developed.

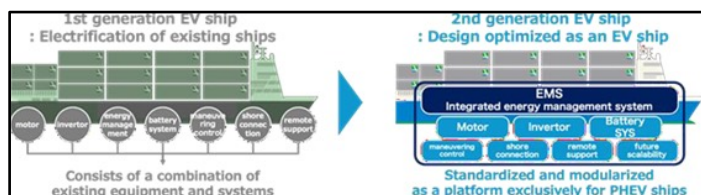
This ship is expected to achieve complete zero-emission from fuel mining and manufacturing to

usage, by being propelled by renewable energy charged in container batteries.

With planning and construction lasting from April 2024 to March 2027 the vessel will be a 499 gt container ship with a capacity of approximately 200TEU. Length overall 81m, breadth 13.5m, speed 12.5kt. Range is expected to be 2,700nm.

### Fundamental resolution to the industry's biggest issue: crew shortage

The domestic shipping industry needs a fundamental solution to the dual shortage of crew numbers and skills.



This ship will achieve safe and efficient navigation with fewer people and less skill/experience required through electrification, thorough standardization and modularization, and land-based support assuming standardization.

### Cost reduction and value enhancement of next-generation advanced vessels

This ship will significantly, it is claimed, reduce operating costs through thorough standardization, modularization, and mass production, aiming to achieve total operating costs, including construction, that are approximately 30% higher than existing ships, but comparable when overall costs are considered.

It also adopts a design that can be flexibly upgraded with the introduction of new technologies and systems, minimizing the risk of technology obsolescence, and in turn, ship obsolescence.

An introduction to Imoto Lines with its 31-vessel domestic fleet, is to be found here: <https://tinyurl.com/ypmjarf7> and to Marindows here: <https://marindows.com/company/>

## Beware: Increase in cases of broken mooring lines

### By Valentin Klivnoy, Gard

Gard ([www.gard.no](http://www.gard.no)) has recently registered several incidents of broken mooring lines having occurred during strong wind gusts. Most incidents involve cruise vessels but also other large vessels are at particular risk.

In the recent cases reported to Gard, wind speeds were over 80km/h, i.e. wind force 8+ Beaufort scale, and the majority of the vessels involved were large cruise vessels. Luckily no severe damages or personal injuries were reported, but the incidents still

serve as an important reminder of how important it is to ensure safe mooring operations.

Broken mooring lines often cause hull damages involving one or more vessels and can also lead to severe port structure damages. Moreover, failure of mooring lines can lead to pollution or other severe accidents, including loss of life. In fact, from 2016 to 2021, IG clubs received reports on 858 injuries and 31 fatalities related to mooring operations.

### Why mooring lines break

Gard analysis of mooring lines accidents have shown that they often could have been prevented by proper inspection and maintenance as well as by improved preparedness for critical situations.

Of critical importance is the officers and crew being aware of the environmental loads their equipment is designed for. Often, we see that environmental risk factors, such as strength of winds and currents, together with water depth, played a significant role in the incident. Tidal effects leading to decrease of under keel clearance are sometimes not considered, even though this can significantly increase the forces affecting the mooring lines. We should also bear in mind the interaction with other ships together with weather related effects, such as waves/swell and ice.

### Vessels particularly at risk

The bigger the vessel, the bigger the windage area, and hence the more pressure and risk on the mooring lines. Cruise ships have increased considerably in size over recent years, and larger loads are therefore applied on the mooring lines. This naturally puts these vessels at higher risk, and additional safety precautions may be required.

The same goes for other vessel types with large windage areas, such as container vessels, ferries, ro-ro vessels, and car carriers.

### New requirements

Recent amendments to SOLAS Reg. II-1/3-8, which became mandatory on 1 January 2024, introduce new requirements for all elements used in mooring operations. While Circ.1175/Rev.1 and Circ.1619 (which provide updated standards for the design and construction of shipboard fittings and supporting hull structures) only apply to ships built on or after 1 Jan 2024, Circ.1620 applies to all ships. It provides guidance for maintenance and inspections of mooring equipment, criteria for identifying worn-out lines and tails, and criteria for selection of replacements.

As a result of the amendments, the following procedures must be reflected and implemented in the vessel's Safety Management System no later than the first ship safety construction survey after 1 January 2024:

### Before and during mooring operations

1. Prior to commencing mooring operations, a thorough assessment of environmental conditions,

including wind, tide, and swell, should be conducted to anticipate potential challenges.

2. Adequate communication and coordination among crew members involved in the mooring operations are paramount to minimize the risk of accidents.
3. Proper techniques and equipment should be used for securing mooring lines to bollards, cleats, or other designated points on the vessel and ashore.
4. Continuous monitoring of mooring lines during and after the mooring operations is essential to detect signs of wear, tear, or malfunction.

### **Identification and control of mooring lines**

1. Each mooring line should be clearly identified, labeled, and logged to facilitate easy tracking and monitoring.
2. Regular inspections should be conducted to assess the condition of the mooring lines, including any presence of fraying, abrasions, or weakening.
3. If any defects or abnormalities are identified, immediate measures should be taken to mitigate risks, such as replacing damaged lines or adjusting mooring configurations.

### **Inspection and maintenance**

1. Mooring equipment should be subjected to regular inspections as part of the vessel's onboard maintenance plan.
2. Inspections should be conducted by trained personnel who are capable of identifying potential issues or defects.
3. Inspections should encompass visual assessments, physical examinations, and, if necessary, non-destructive testing techniques to assess the structural integrity of the mooring lines.
4. The full findings from the inspection should be documented, including any recommendations for repairs, replacements, or adjustments to the mooring arrangement plan.

### **Replacing mooring lines**

1. Mooring lines should be replaced as needed based on their condition, usage, and the manufacturer's recommended lifespan.
2. Replacement procedures should be clearly outlined, specifying the steps for safely removing and disposing of old lines.
3. Newly installed mooring lines should undergo rigorous testing and inspection before being put into service.

### **Recommendations**

It is strongly recommended that the Master conducts a thorough risk assessment tailored to the specific mooring conditions and loadings, taking into account the characteristics of the vessel and the location, under both normal and adverse weather conditions. Historical information concerning local weather phenomena, such as catabatic winds or irregular tidal effects, should be included in risk assessment. The Master should take a proactive approach by actively seeking information from port authorities, pilots, and

agents to understand how warnings will be communicated and to stay informed about changing conditions.

If deteriorated weather is expected, the Master should make prompt decisions to ensure the vessel is prepared for immediate action. This includes ensuring the vessel is fully manned, appropriately ballasted, and has engines ready for maneuvering. Close communication with terminal and port authorities is crucial to coordinate timing and availability for necessary actions such as halting cargo operations, deploying additional storm moorings, and arranging for tug assistance and pilotage.

The Master must also evaluate whether it is safer to remain alongside the berth or to depart for the open sea or a safe anchorage, considering the risks associated with staying moored during adverse conditions. It is important to note that even with additional precautions like extra mooring lines, there is no guarantee that a ship will not break free from her moorings in severe weather.

It is also essential to recognize that mooring stations can become hazardous environments during bad weather conditions. Therefore, delaying departure from the berth until the weather conditions become dangerous should be avoided at all costs.

Safety should always be the top priority when making decisions regarding mooring operations.

**This item first appeared in Gard's News and Insights.**

**Published on 11 April 2024 here: [www.gard.no](http://www.gard.no)  
Extracted with kind permission from Gard**

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## **One Ocean Expedition 2025-2026**

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HRH Crown Prince Haakon of Norway has agreed to become a goodwill ambassador for *Statsraad Lehmkuhl's* next major expedition, the One Ocean Expedition 2025-2026.

The One Ocean Expedition is a voyage around the world by the Norwegian tall ship *Statsraad Lehmkuhl*. Kongsberg, one of the main partners, supports the trip and will equip the ship with advanced technology from Kongsberg Discovery, transforming it into a floating training vessel.

### **A royal with a passion for the ocean**

The expedition's goal is to create awareness and share knowledge about the essential role of the ocean in sustainable development worldwide. His Royal Highness is passionate about preserving life in the ocean and hopes that the One Ocean Expedition 2025-2026 will contribute to a significant international commitment to improving the ocean's health.

The Crown Prince commented: '*Human life and the future of the planet depend on us taking care of the ocean. I hope the One Ocean Expedition 2025-2026 will contribute to a major international commitment to improving the ocean's health.*'

Haakon Vatlé, expedition leader, and CEO of the Statsraad Lemkuhl Foundation, expressed his gratitude towards Crown Prince Haakon, stating that his support is a strong motivator for their work and helps them spread their message to a global audience.

### Sailing for a sustainable ocean

The One Ocean Expedition, which is a recognized part of the UN Decade of Ocean Science for Sustainable Development, will visit twenty ports in Europe, the USA, Central, and South America.



SV Statsraad Lemkuhl's

The 98-metre loa ship is a floating university and training vessel combined, bringing students, scientists, trainees, and professionals together on different legs. Everyone onboard works together to sail the ship and gain experience and knowledge about the ocean and each other. During port visits, the ship is used for conferences, diplomacy, high-level meetings, and corporate hospitality.

### Activity plans

The One Ocean Expedition sets sail from Bergen in April 2025. There will be different activities scheduled at some of the ports where the tall ship calls. A working group within Kongsberg Discovery has started planning some initial ideas.

Martin Wien Fjell, President, Kongsberg Discovery, looking forward to being part of the next voyage commented: *'Common challenges such as climate change and ocean acidification affect all parts of the ocean. That is why the idea of traversing the global 'One Ocean' with a vessel that invites and demands participants to work together, seemed like a fitting way to showcase the essence of the sustainability challenge and the role of the ocean in overall global sustainability.'*

### Equipped as a modern research vessel

During the first global One Ocean Expedition, 2021-2023, the vessel was equipped with scientific instruments from many project partners. Wave and other meteorological instruments were mounted to the bow and mast. Water quality and chemical sensors continuously monitored global water quality and a

range of acoustic instruments, both hydrophones and echosounders, monitored marine biology. Measurements were constantly captured and reported back to shore in real-time, using Blue Insight and Vessel Insight, both to raise public awareness and for scientific purposes.

Fjell added: *'For the next expedition, the ship will be equipped with even more advanced technology. Among other things, our latest ADCP (acoustic Doppler current profiler) measures the speed of ocean currents using sound pulses. That is, it emits a ping and listens for return signals in specific time intervals.'*

*'We hope that Statsraad Lemkuhl's expedition and advanced technology will inspire and educate new generations of seafarers and marine scientists.'*

The list of new equipment also includes an additional echo sounder, hull-mounted hydrophones, and the Seapath motion and positioning system from Kongsberg Discovery. As well as new technology such as AI solutions from Blue Insight.

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## UK presents hydrographic award to Nigeria

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On 17 April the UK Hydrographic Office (UKHO) presented Chukwuemeka Ebenezer Okafor, Rear Admiral and former Hydrographer of the Nigerian Navy, with the 2023 Alexander Dalrymple Award for services to international hydrography.

The presentation was led by UK National Hydrographer, Rear Admiral Angus Essenhigh, at the IMO HQ in London.

The Alexander Dalrymple Award committee acknowledged Rear Admiral Okafor's advancements and contributions to the Nigerian Navy Hydrographic Office (NNHO) during his tenure as Hydrographer of the Nigerian Navy. Under Rear Admiral Okafor's leadership, the NNHO has become the first West African Hydrographic Office to support and operate its own hydrographic survey fleet.

The accomplishments of Rear Admiral Okafor for the NNHO have heightened the strategic importance of hydrography in Nigeria. This foundation will deliver profound economic and social advantages, not only nationally but also throughout the region, positioning Nigeria as an example for other West African countries to emulate.

Commenting on the award, Rear Admiral Angus Essenhigh, UK National Hydrographer, UKHO, said: *'It is with great pleasure we present this award to Rear Admiral Okafor, for his lasting contributions to hydrography. We recognise his enduring influence on the Nigerian Navy through his leadership as Nigeria's National Hydrographer for 32 years. He becomes the latest recipient in a long and illustrious list of some of the world's most influential hydrographers.'*

Rear Admiral Chukwuemeka Ebenezer Okafor, Former National Hydrographer of the Nigerian Navy added: *'I'm honoured to accept this award from the UK*

*Hydrographic Office. The UKHO's efforts are paramount to ensuring the safety of maritime operations and preserving the dynamic marine ecosystems upon which we depend.*

*'With 32 years of service in the Nigerian Navy, I have always believed passionately in Nigeria's commitment to hydrography and charting. I have seen first-hand how powerful hydrographic information can be if it is placed in the right hands. I am convinced that sustainability of the current level of hydrographic development in Nigeria will unlock her Blue Economy potential for the common good of all its citizens.'*

### **Nigeria's electronic charts**

Alongside improved data collection capability, led by Rear Admiral Okafor, the NNHO has also started to produce Electronic Navigational Charts (ENC) and paper chart coverage of Nigerian waters, meeting stringent international standards to earn recognition as an INT chart producer – a globally recognised mark of competency. This started by producing charts in the Lagos Harbour Area and is now expanding to other parts of Nigerian waters.

With this impressive charting capability and the recent issue of two nautical publications, Nigeria is well placed to provide accurate and up-to-date hydrographic services across its waters. Notably, this encompasses a significant project to survey and chart the Lower River Niger from Lokoja to Burutu.

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## **Always seaworthy?**

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### **By Michael Grey IFSMA Honorary Member**

A modern ship is a complex creature, packed with different systems, machinery and equipment and at any one time it is inconceivable that they will all be operating without any fault. You might argue that ships have always been like that and the essence of seamanship and good marine engineering is to have the skills necessary to "work around" any temporary deficiencies until they can be made good. With the ship at sea, such dependence on alternatives; the "jury rig," or auxiliary power sources, may be essential to keep the ship operational, or on schedule.

In the modern ship, alarms, we are told, are sounding with "alarming" frequency, set off by vibration or a myriad of other causes and the judgement of the contemporary marine engineer is required to assess whether these need further action, or merely to cancel the nuisance. But, as a very experienced Chief Engineer said recently, there is no ship afloat with something that doesn't need fixing. But how serious is serious – that is the question?

These thoughts came to the fore upon reading that agents of the US Federal Bureau of Investigation are now poring over the records aboard the Dali as she lies still pinned by the wreckage of the Baltimore bridge on her foredeck. While the investigators of the National Transportation Safety Board will be analysing the circumstances of the accident in what might be considered a holistic fashion, the role of the "Feds" will be to ascertain whether any Federal regulations

appertaining to the operation of the ship might have been breached.

One might suggest that they will be looking exceptionally closely at any previous technical faults that might have a bearing on the temporary blackout which seems to have been responsible for the crash. Who, in the operational chain that leads from the ship to its technical management ashore, charterers and ultimate ownership, knew about what? And was any of this relevant to the circumstances of the accident?

All of this is to be expected in any major accident today, especially when the costs of the calamity will be so staggeringly high. The questions of liability, which will resound long after the ship has been released from the wreckage, will surely come to the fore as the regulators and lawyers assume a more prominent role. Matters of seaworthiness will almost certainly be the source of forensic analysis, as experts weigh up whether any of those faults which might have been registered by the ship's staff in the months (or even years) prior to the accident had any important bearing to the subsequent events. Ultimately, there may well be an attempt to circumscribe the efforts of the owners to limit their liabilities, based on the conclusions of the Federal authorities.

Accidents happen, it is often said in a placatory fashion, but these days it will be a rare incident in which blame does not adhere to one party or another. There used to be a wonderful word used extensively in English law – "reasonable" – but it is heard rather less in an era where blame is rather more important. Was it reasonable for the ship to sail, bearing in mind what was on the lists of faults (if any) that had been previously logged by her on-board staff and technical management?

But, we might also ask whether it was reasonable for the authorities responsible for the bridge in Baltimore not to have taken a more precautionary approach, as they saw the size and dimensions of ships more than quadruple in the fifty years since the structure was erected. Did nobody in authority foresee a ship coming down on the ebb "losing it" close to the bridge? They could, with hindsight, have spent some money on properly armouring the columns on either side of the deep-water channel, or at the least mandated the requirement for tugs to remain attached to large passing ships. Any possible liabilities here?

It is possible to erect formidable defences against a ship strike, as evidenced by other casualties. If this is in any doubt, there was quite amazing photographic evidence of an incident in January, when a large bulk carrier went out of control in the Parana River in South America. The vessel rammed into the concrete protection, which appeared completely unscathed, as did the bridge itself. By contrast, three compartments on the vessel's port bow were ripped open.

**This article was first published in *The Maritime Advocate Online* No 854 of 19 April 2024 and appears here by kind permission of the author and of the editor.**

**Michael Grey is former editor of Lloyd's List**



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## UK MAIB Safety Digest issued

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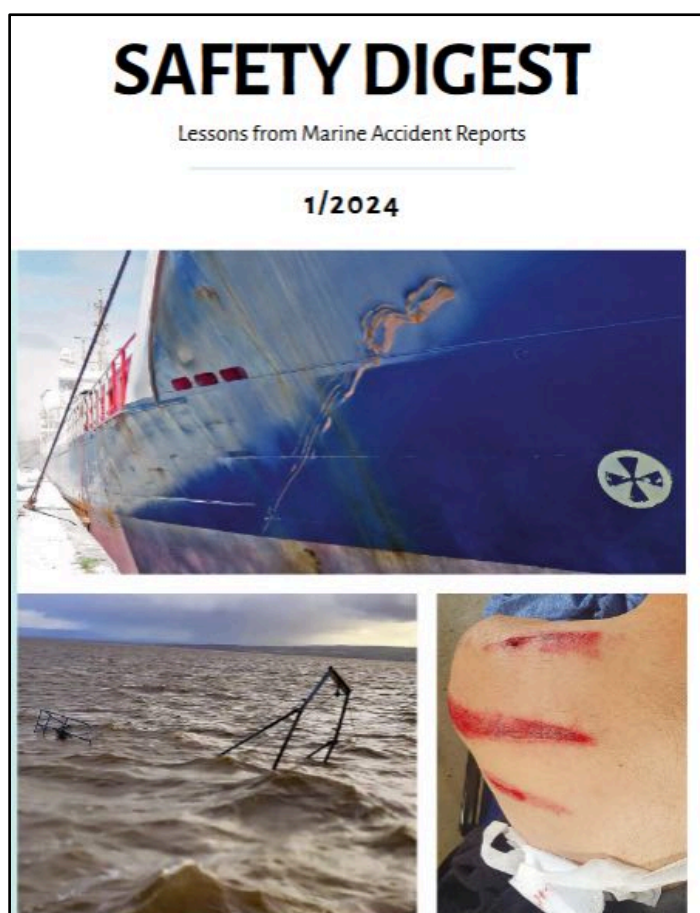
In the UK the Marine Accident Investigation Branch (MAIB) examines and investigates all types of marine accidents to, or on board, UK vessels worldwide, and other vessels in UK territorial waters.

Located in offices in Southampton, the MAIB is an independent branch within the Department for Transport (DfT). The head of the MAIB, the Chief

Inspector of Marine Accidents, reports directly to the Secretary of State for Transport.

### Broad base of material

On 2 April the Marine Accident Investigation Branch published a new collection of cases (Volume 1 of 2024) detailing accidents involving vessels from the merchant, fishing, and recreational sectors.



In this edition, the Chief Inspector of Marine Accidents, Andrew Moll, acknowledges Captain Hywel Pugh, Dmitrijs Skripcevs, and Mark Todd for their valuable insights on improving safety and stresses the role of precautionary thought in minimising accidents.

### Free to download

The 36-page document is available here to download: <https://tinyurl.com/2s4anyvp>

This safety digest draws the attention of the marine community to some of the lessons arising from investigations into recent accidents and incidents. It contains information that has been determined up to the time of issue.

### Desire to inform

This information is published to inform the merchant fleets, the fishing industry, the recreational craft community and the public of the general circumstances of marine accidents and to draw out the lessons to be learned.

The sole purpose of the safety digest is to prevent similar accidents happening again.

The content must be regarded as tentative and subject to alteration or correction if additional evidence becomes available. The articles do not assign fault or blame nor do they determine liability. The lessons often extend beyond the events of the incidents themselves to ensure the maximum value can be achieved.

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## Coral bleaching

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### Great Barrier Reef

The 2023-2024 Southern Hemisphere summer has seen substantial climate-driven impacts across the Great Barrier Reef, with widespread coral bleaching, two cyclones and several severe flood events. This was indicated in a news item received on 17 April from the Commonwealth Scientific and Industrial Research Organisation (CSIRO)

*The Reef Snapshot 2023–24*, released that day by the Reef Authority<sup>1</sup>, Australian Institute of Marine Science (AIMS)<sup>2</sup> and the CSIRO, confirms the cumulative impacts experienced across the Reef this summer have been higher than previous summers. This also includes outbreaks of the coral-eating crown-of-thorns starfish.

*The Reef Snapshot* applies the Coral Reef Bleaching Framework developed by AIMS, James Cook University and the Reef Authority. This describes bleaching events in a clear and consistent way.

### Continual monitoring

Monitoring coral condition is continuing as the Reef's fifth widespread bleaching event since 2016 unfolds.

Aerial surveys were conducted over 1000 reefs spanning the Great Barrier Reef Marine Park and Torres Strait. Coral bleaching was observed on 73% of surveyed reefs within the Marine Park and 6% in the Torres Strait.

Reefs in the far north of the Marine Park and in the Torres Strait recorded lower levels of coral bleaching.

The Snapshot shows the highest levels of coral bleaching were found across the southern region and parts of the central and northern regions, where in some areas, corals were exposed to record levels of heat stress. Parts of the central and northern regions also experienced the highest levels of coral bleaching.

## Fifty-three countries' experience

The Great Barrier Reef is but one of many coral reef systems across 53 countries that have experienced widespread coral bleaching in the last twelve months, prompting the USA's National Oceanic and Atmospheric Administration (NOAA) to announce a fourth global bleaching event.

## Comments

The Reef Authority's Chief Scientist Dr Roger Beeden said monitoring and responding to the conditions on the Marine Park over summer is vital.

Beeden said: *'Climate change is the greatest threat to the Great Barrier Reef, and coral reefs globally. The Great Barrier Reef is an incredible ecosystem, and while it has shown its resilience time and time again, this summer has been particularly challenging.'*



Coral bleaching on Eyrie Reef, March 2024.

Photo: George Roff, CSIRO, ©.

*'The management work we do 365-days a year is all focused on protecting the resilience of the Reef. Work to control coral predators such as crown-of-thorns starfish, compliance with the Marine Park rules to protect the Reef's precious biodiversity and heritage values, coupled with conservation actions undertaken with partners such as the tourism industry, are all vital to support Reef recovery following periods of stress.'*

The Reef Authority is continuing to work with the Australian Institute of Marine Science, the Reef Joint Field Management Program, crown-of-thorns starfish control Program, Tourism Operators, and researchers on further in-water surveys.

In water surveys complement aerial surveys by providing data on fine-scale impacts of heat stress, such as the severity of coral colony responses, the prevalence of bleaching in different habitats and depths, and any coral mortality at the time.

## Tourism aid

Tourism operators as always have helped with heavy lifting, conducting 15,450 reef health surveys and taken, 65,000 images at 272 high value tourism sites and submitting this data into the Eye on the Reef system.

The data from these surveys give a greater overview of the severity of bleaching among different coral types, habitats, and depths over the coming months.

Dr David Wachenfeld, Research Program Director at Australian Institute of Marine Science said mortality

from the bleaching event has already been observed by AIMS research divers in each region of the Reef.

He commented: *'AIMS long-term monitoring of the condition of reefs over the next 12 months will help us understand the ultimate balance between loss and survival of coral bleaching, cyclones, floods and starfish over the last few months.'*

*'While these results are still to come, the extent of the heat stress, and the result of the aerial surveys indicate this is one of the most extensive bleaching events the Reef has experienced in AIMS' nearly 40 years of monitoring.'*

*'The Great Barrier Reef has seen increases in coral cover to high levels in recent years, indicating it is still a resilient system. But this resilience has its limits.'*

CSIRO Executive Director Environment, Energy and Resources Dr Peter Mayfield said research partnerships were critical to tackling the range of pressures on the Reef.

He reflected: *'Modelling, monitoring and innovation has a critical role to play in better understanding the impacts of climate change on the Reef, not just now but into the future. This includes looking at how we can scale up ecosystem repair and adaptation, both on land and in coastal and marine areas.'*

## For further information

In order to view a copy of the Reef Snapshot 2023-24 readers are invited to see here:

<https://tinyurl.com/yc72db5c> and to stay up-to-date with the latest Reef health information here: <https://tinyurl.com/r85n35dn>

<sup>1</sup><https://www2.qbrmpa.gov.au/>

<sup>2</sup><https://www.aims.gov.au/>

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## \$20M initiative to reduce maritime emissions

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### Australia and Singapore partnership

CSIRO announced on 17 April that Australia and the world's busiest transshipment hub, Singapore, have partnered in a AUS\$20 million initiative to help reduce emissions in the maritime sector.

The Australia-Singapore Initiative on Low Emissions Technologies (ASLET) for maritime and port operations will be jointly delivered by CSIRO, Australia's national science agency, and the Maritime and Port Authority of Singapore (MPA).

### Green and Digital Shipping Corridor

ASLET intends to support the outcomes of the Singapore and Australia Green and Digital Shipping Corridor (GDSC), which will help decarbonise and digitise shipping routes between Singapore and Australia.

The Governments of Australia and Singapore signed a memorandum of understanding to formally collaborate on establishing the GDSC, which was welcomed at the 9<sup>th</sup> Annual Leaders' Meeting in March 2024.

### Acceleration of initiatives

ASLET is expected to unlock new fuel solutions and accelerate the deployment and uptake of zero or near-zero greenhouse gas (GHG) emission technologies at scale, and will explore cooperation opportunities between Australia and Singapore in green shipping and port infrastructure initiatives.



Illustration per CSIRO.

CSIRO ©.

The initiative presents a significant opportunity for both countries, given Singapore's position as the world's largest bunkering and busiest transshipment hub port and Australia's potential to be a leading producer and exporter of low-emissions fuels.

MPA Chief Executive, Mr Teo Eng Dih said: *'ASLET has the potential to translate research outcomes from the scientific community from both countries, and to use these technologies to help scale up the production and deployment of low-emissions fuels and technologies at scale.'*

*'Given Australia's natural advantage for renewable energy production and Singapore's hub status, MPA looks forward to making this partnership deliver value to the Singapore-Australia GDSC and to the wider international shipping and port communities.'*

CSIRO Chief Executive Dr Doug Hilton said the collaboration addresses the key industry challenges faced when adopting low emission fuels.

Dr Hilton commented: *'In order to reach net-zero greenhouse gas emissions from international shipping close to 2050, we need to find reliable, trusted scientific solutions for the industry.'*

*'We need to focus on transitioning to low-emissions fuels such as ammonia and hydrogen by developing accessible technology and infrastructure at ports that supports a range of vessels.'*

*'Collaborating with MPA and also industry partners from both countries, we aim to accelerate the decarbonisation of the supply chain and help revolutionise the industry.'*

### Singapore Maritime Week

The first ASLET Steering Committee meeting, led by representatives from MPA, CSIRO and Singapore's Agency for Science, Technology and Research (A\*STAR), convened during the Singapore Maritime Week 2024.

### Steering Committee

The Steering Committee, established as part of a joint collaboration agreement, aims to provide strategic direction and evaluate and approve projects on low emission technology projects for maritime and port operations.

### Attracting industry co-funding?

The Steering Committee intends to issue a grant call to develop a pipeline of projects consistent with its focus areas and accelerate joint efforts between both countries in maritime decarbonisation. As part of ASLET, both Singapore and Australia will commit up to AUS\$10 million each in their respective currencies to deliver projects under the initiative. It is expected that the program will also attract industry co-funding.

The initiative will facilitate the research, demonstration, and commercialisation of zero and near-zero greenhouse gas emission technologies, fuels and energy sources for use in maritime shipping and port operations.

### About the Maritime and Port Authority of Singapore (MPA)

MPA was established on 2 February 1996 with the mission to develop Singapore as a premier global hub port and international maritime centre, and to advance and safeguard Singapore's strategic maritime interests. MPA is the driving force behind Singapore's port and maritime development, taking on the roles of port authority, maritime and port regulator and planner, international maritime centre champion, national maritime representative and a champion of digitalisation and decarbonisation efforts at regional and international fora such as at the IMO.

MPA partners industry, research community and other agencies to enhance safety, security and environmental protection in our waters, facilitate maritime and port operations and growth, expand the cluster of maritime ancillary services, and develops maritime digitalisation and decarbonisation policies and plans, R&D and manpower development.

MPA is responsible for the overall development and growth of the maritime domain and Port of Singapore.

In 2023, Singapore's annual vessel arrival tonnage crossed 3 billion Gross Tonnage and remains the

world's busiest transshipment hub, with a total container throughput of 39.0 million TEU.

For more information on MPA Singapore readers are invited to see here: <https://www.mpa.gov.sg/home>

**The Australian Government's *communiqué* on the topic of the Singapore-Australia Green Shipping Corridor is to be found here:**  
<https://tinyurl.com/yck6x2xa>

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## Domestic Commercial Vessels

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### Navigation and anchor watch

#### AMSA guidance

The Australian Maritime Safety Authority (AMSA) has issued guidance on ensuring appropriate crewing for safe navigation in domestic commercial vessels.

Owners must ensure appropriate crewing including consideration for navigational watches to ensure safe vessel operation.

The vessel's safety management system must contain a record of the appropriate crewing evaluation to safely conduct all vessel operations.

Recent online advice considers the following:

- Safety management systems
- Domestic Commercial Vessels (DCV) crewing guidance
- Crewing evaluations
- Managing crew fatigue

To download a pdf version of this guidance readers are invited to see here: <https://tinyurl.com/4vxxea2w>

#### Navigational watch

Marine Order 505 (Certificates of competency—national law) 2022 provides flexibility about who can be in charge of a navigational watch, including providing for appropriately certificated crew to do so on larger vessels.

Marine Order 505 is available here:  
<https://tinyurl.com/2s3fssef>

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## Leading Maritime Cities Report 2024:

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### Amid a sea of change, Singapore retains top spot

Singapore has retained its title as the leading maritime city in the world, followed by Rotterdam and London, according to the *2024 Leading Maritime Cities (LMC)* report from DNV and Menon Economics.

The city-state, with its large owned and managed vessel fleets, strategic geographic advantages, pro-business policies and its position as a leader in the maritime energy transition, is expected to hold this position for the next five years, the analysis determines.

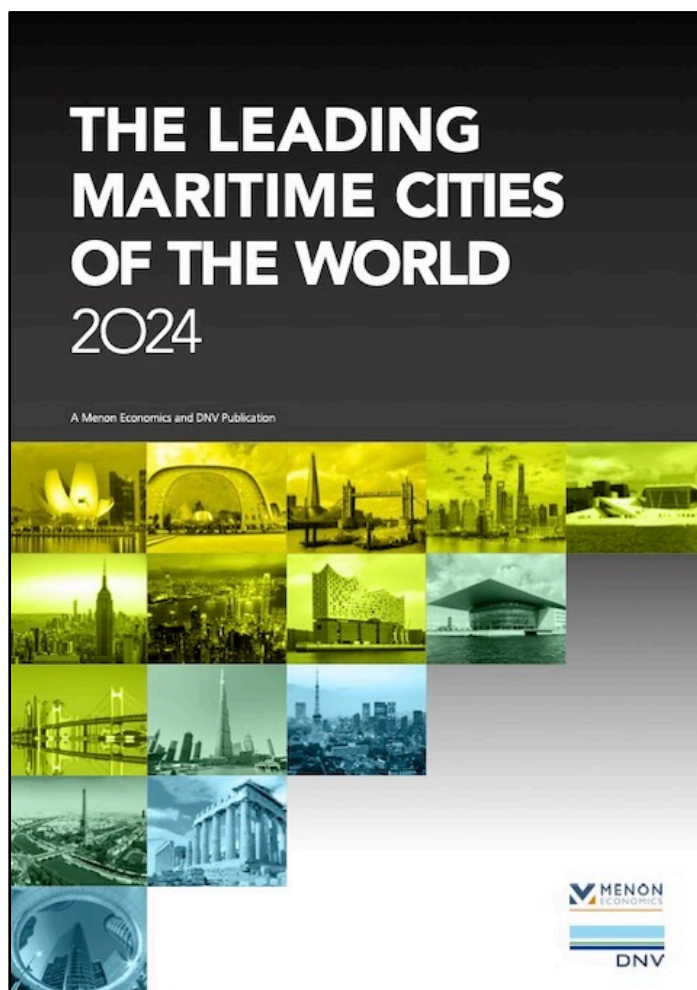
## New insights

Compiled in cooperation between classification society DNV and Menon Economics, the LMC report offers new insights into the maritime cities that offer the best policy measures, initiatives, and support. These cities excel in both soft and hard infrastructure, and boast elite talent to enable maritime companies and individuals to connect and prosper.

## Five benchmark pillars

Similar to previous iterations, the study benchmarks each maritime city on five pillars – Shipping Centres, Maritime Finance and Law, Maritime Technology, Ports and Logistics and Attractiveness and Competitiveness.

Knut Ørbeck-Nilssen, CEO Maritime at DNV, said: *'Cities are major hubs for knowledge, skills, and innovation. Across various sectors, particularly in the maritime industry, they are competing to attract the best talent, the brightest minds, and the most promising business start-ups. As such, cities that succeed in these challenges will steer the green transition and become the leading maritime hubs in the world.'*



*'Since the last edition of the Leading Maritime Cities report was published in 2022, global tensions have reverberated throughout the maritime industry. Despite this, shipping as a whole has shown a remarkable resilience.'*

Singapore hit the top spot in three out of five pillars, retaining its position as leader in Attractiveness and Competitiveness and overtaking Athens and Shanghai in Shipping Centres and Ports and Logistics, respectively.

Dr Shahrin Osman, Business Development Director, Maritime Advisory and co-author of the report added: *'Singapore is undoubtedly the world-leading hub at the forefront of the maritime industry. It appears unaffected by the many changes currently sweeping the sector and is expected to maintain its top spot for the next five years through its implementation of a consistent strategy for innovation and its investment into green transformation and digital technologies.'*

*'It is encouraging to see new cities elevating their standing in the list this year. In a notable shift, Busan, South Korea, surpassed Singapore to become the world-leader for Maritime Technology, adding \$9.22 billion to its export volume in the first half of 2023. Similarly, London claimed the pole position in Maritime Finance and Law from New York, with the report recognizing the city as a home to world-leading maritime law-related and marine insurance institutions.'*

Fourth and fifth place overall went to Shanghai and Oslo, meaning that three of the five leading cities are in Europe, with the remainder in Asia. Shanghai is also predicted to grow in importance across the next half-decade and become the second most prominent maritime city.

Dr Erik Jakobsen, Partner and Chair of Menon Economics, reflected: *'Beyond the top five cities, we see a lot of dynamics happening. Hong Kong, which held 4th position in 2019, has now fallen to 12th place. On the other hand, despite war and turmoil in the Middle Eastern region, Abu Dhabi has strengthened its position considerably. The city made the most remarkable jump, moving up 10 places from 32 to 22.'*

The analysis for the 2024 edition of the report saw the introduction of more subjective indicators, revealing the perceptions and evaluations of 190 invited business executives – mostly shipowners and managers – from around the world. Combined with objective data, this has been instrumental in addressing the transformative effect of decarbonization and digital revolution on the shipping industry. The impact of both key factors can be felt throughout all the pillars the maritime cities are benchmarked against.

### Cities best prepared for digital transformation

In addition to the LMC ranking, the maritime experts viewed Singapore, Oslo, Shanghai, and Rotterdam as the cities best prepared for digital transformation. Singapore's investment and focus on maritime decarbonization has also further cemented its position as the world's leading centre for green technologies and solutions, followed by Oslo and Rotterdam.

### To download

The LMC 2024 report is available on application for download at no charge here: <https://tinyurl.com/3ruzd43b>

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## Cold-ironing buoy technology

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### Kirkwall, Orkney, anchorage

Orcades Marine Management Consultants Ltd is leading an effort to reduce emissions from cruise ships at Bay of Kirkwall through the development of a Cold-Ironing Buoy Technology, which can be replicated in anchorages elsewhere in the world. This was reported early in March by the Kirkwall, Orkney-based company.

In collaboration with the Orkney Islands Council (OIC) Harbour Authority, GAC UK, Schneider Electric and Aquatera, the team will be completing a Front-End Engineering Design (FEED), along with a comprehensive feasibility study which looks at the technical, economic and social impacts of the technology.

### Increased demand for cold-ironing

With the pressure to reduce emissions in the maritime industry, there has been an increase in demand over the past years for ports and harbours to provide cold-ironing services so that vessels can stop running their shipboard engines for auxiliary hotel loads when at berth. This can have significant impact on cruise liners' overall carbon footprint, given that cruise ships require up to 20% of their usual power consumption even at port for their hotel loads.



GAC UK Commercial Head of Shipping, Charlotte Bruce commented: *'GAC UK is committed to delivering solutions to all our stakeholders on their decarbonisation journey, and we're thrilled to be a part of this cold-ironing buoy technology study. We look forward to working with all the partners over the next year, driving change towards net zero for the cruise and wider maritime industry.'*

### A unique approach

While cold-ironing for ships at berth is easily achievable with existing technologies, no existing provisions exist to provide cold-ironing for ships at anchorages. The Cold-Ironing Buoy will address this gap by bringing Onshore Power Supply (OPS) through a subsea cable to the anchorage for vessels to plug into.

Schneider Electric's United Kingdom Seaport Segment Lead, Shaun Faulkner added: *Schneider is delighted to play a part of the Cold-Ironing Buoy project. As an organisation, our purpose is to make*

*sustainability accessible to all, and to empower everyone to make the most of our energy and resources. There is an increasingly clear need for cleaner and more sustainable processes and guidance in the ports and maritime leisure industry. This project will be a positive step forward in terms of fulfilling that need and demonstrating what a more sustainable future could look like.'*

Kirkwall Bay anchorage, which is located in the Orkney Islands (N Scotland), makes for the perfect site for study and testing the technology.

Since 2013, Orkney has generated over 100% of their electricity demand from renewable sources, and this rose to 128% by 2020.

New renewable projects, such as the tidal energy planned for Westray Firth, will continue to generate excess green power at the islands, allow expansion of clean energy usage at Orkney and even power export.

OIC Harbour Authority Business Development Manager, Paul Olvhoj reflected: *'Orkney is the busiest transit call location in the UK with over 250 cruise vessels due in 2024 and a percentage of these due to stay at the Kirkwall. Vessels anchoring in Orkney are increasingly recognizing the environmental and sustainability benefits of utilizing shore power, reducing emissions and minimizing the environmental impact of their operations and to be able to do this at anchor would be step change for the industry.'*

Director of Aquatera, Ian Johnstone emphasised: *'Aquatera is delighted to be part of this project. We have been working on marine and onshore decarbonisation projects in Orkney and across the globe over the last ten years and this project is another step towards demonstrating how the maritime industry can move towards developing affordable zero carbon infrastructure.'*

Cruise ships utilising this technology can eliminate their emissions while at port at the same time improving air quality for population in the coastal communities nearby. A network of ports which such infrastructure support could possibly allow for a Green Cruise Corridor to be established in the region.

Managing Director of Orcades Marine, Captain David Thomson: *'I'm thrilled to announce our successful grant award from Innovate UK's CMDC. Our aim is clear – to eliminate carbon emissions from some of the largest ships within port limits. This project marks a significant step towards a cleaner, more sustainable maritime future, and we're committed to driving innovation and positive change in the industry.'*

### UK Department for Transport funding

This project is part of the Clean Maritime Demonstration Competition Round 4 (CMDC4), funded by the UK Department for Transport (DfT) and delivered by Innovate UK.

CMDC4 is part of the Department's UK Shipping Office for Reducing Emissions (UK SHORE) programme, a £206m initiative focused on developing

the technology necessary to decarbonise the UK domestic maritime sector.

### Editorial note

Illustration and information kindly provided by Orcades Marine Management Consultants Ltd. Picture credit: Bruce Flett ©

## Making Waves

### The Green and Digital Shipping Corridor:

#### Singapore-Los Angeles-Long Beach

One year after the signing of the Memorandum of Understanding (MoU) to establish a Green and Digital Shipping Corridor (GDSC), the Maritime and Port Authority of Singapore (MPA), Port of Los Angeles and Port of Long Beach have completed a comprehensive baselining study.

The study can be found at: <https://c40.me/3xF60Yw>

This document forecasts more green jobs, health improvements for local communities and economic benefits for participating countries, emphasising the future demand for zero and near-zero emission fuels and the benefits from decarbonising the shipping routes between the States.

### ABS involvement

The study, commissioned by C40 (<https://www.c40.org/about-c40/>) and the ports, and conducted by the American Bureau of Shipping, analysed maritime trade flows between Singapore, Los Angeles and Long Beach, and provided a baseline of activities and energy demand requirements for vessels operating on the corridor through to 2050.

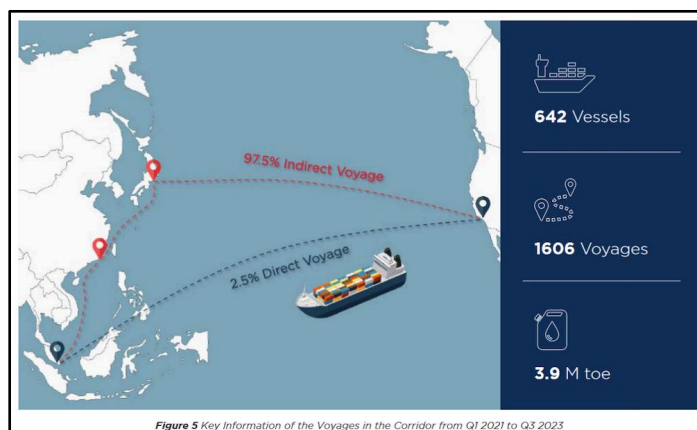


Figure 5 Key Information of the Voyages in the Corridor from Q1 2021 to Q3 2023

The conclusion of the study follows the successful unveiling of the corridor's Partnership Strategy at the 28<sup>th</sup> United Nations Climate Change Conference (COP28/CMP18/CMA5) in December 2023, which outlined the corridor's goals, partnership structure and governance mechanism.

Furthermore, the study estimates the quantity of near-zero and zero-emission fuels required for this traffic by modelling the adoption of zero and near-zero carbon

alternative fuels by vessels operating on the corridor through to 2050, considering various parameters such as fuel production costs and fuel availability, and in view of the targets in the 2023 IMO Strategy on Reduction of Greenhouse Gas Emissions from Ships<sup>1</sup>.

### Potential socio-economic benefits

On a practical level, the study highlights the potential socio-economic impact of transitioning to zero and near-zero emission fuels and leveraging on digital solutions. Based on the study's estimates, the corridor at full implementation could create over 700 new job opportunities in zero and near-zero emission fuel production and improve local air quality. These estimates support findings by C40 and other organisations that activities undertaken through green shipping corridors can catalyse wider decarbonisation across the maritime industry and unlock health benefits for local communities and green economy opportunities for participating countries.

### Three global ports

As leading global ports, Singapore, Los Angeles and Long Beach are vital nodes on the trans-Pacific shipping lane and are key stakeholders in the maritime sector's green and digital transition. Alongside 20 leading ports and port cities, MPA, POLA, and POLB are members of C40's Green Ports Forum, a prominent global platform for collaborative climate action that actively champions ambitious green shipping corridors, acknowledging their central role in the ports and shipping sectors' green transition.

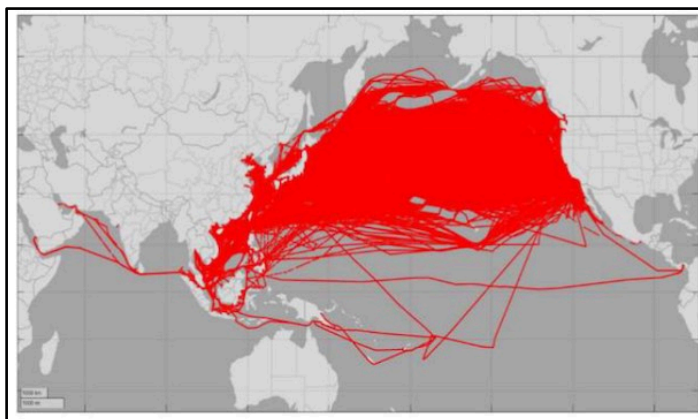


Figure 4 Vessel Routes of all 642 vessels from Q1 2021 to Q3 2023

The corridor partners underscore their dedication to a data-driven decision-making approach through the study, utilising its insights to guide their actions in pursuing the partnership's decarbonisation objectives and aligning with the decarbonisation goals of the shipping sector.

Key findings of the study include:

- Vessels operating on the corridor represent 7% of the world's container trade, which is about 1% of Singapore's, 14.5% of Port of Long Beach's, and 20% of Port of Los Angeles' traffic.
- The projected annual energy demand of vessels on the corridor is estimated to be approximately 60,000 terajoules (TJ), equivalent to approximately two months of Singapore's national

electricity generation.

- Shipping demand on the corridor is estimated to be around 850,000 tons of methanol and 160,000 tons of ammonia annually by 2030, displacing the equivalent GHG emissions from almost 320,000 cars annually.
- The transition to zero and near-zero emission fuels could potentially create approximately 700 jobs in the production and supply chain of such fuels by 2030.

### Singapore Maritime Week 2024

The partnership convened the first in-person stakeholder meeting of the corridor together with industry value-chain representatives, as a prelude to onboarding stakeholders to the corridor. The meeting was held during Singapore Maritime Week (SMW) 2024 on 18 April.

The meeting and subsequent working groups will focus on developing green and digital solutions to address the following focus areas within the corridor:

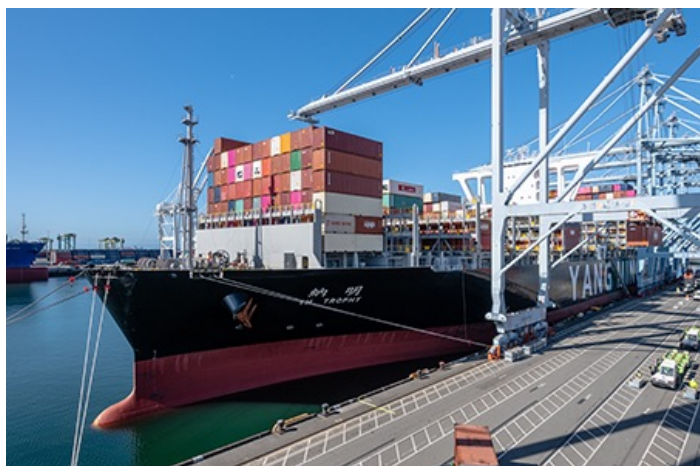
- Enable the supply and adoption of zero and near-zero emissions fuels (e.g. green ammonia, green methanol) at scale, including safety, emergency response, mitigation and standards-setting.
- Develop and scale-up the adoption of energy efficiency solutions, including through digital tools (for example route optimisation, remote monitoring) and technologies that reduce fuel consumption (wind-assisted propulsion).
- Develop and encourage the adoption of digital technologies to support the monitoring, reporting and verification of GHG emissions along the corridor.

Mr Teo Eng Dih, Chief Executive of MPA, commented: *'Shipping is a new pillar in the multi-faceted partnership with the US. The GDSC with the Ports of Los Angeles and Long Beach highlights the importance of working with industry, researchers, government and society through innovation and capacity building. With traffic along the GDSC accounting for 7% of the world's container trade, the initiatives by GDSC partners and stakeholders will help generate growth and new opportunities for maritime professionals.'*

Port of Los Angeles Executive Director Gene Seroka added: *'This study provides a sense of scale and scope to inform our implementation of the Green and Digital Shipping Corridor. Achieving the reductions of greenhouse gas emissions required will take coordination and commitment from public and private stakeholders across the maritime and goods movement industries. We're proud to be collaborating with industry partners to make this corridor a reality.'*

From Port of Long Beach CEO Mario Cordero reflected: *'The Port of Long Beach and its partners have been very successful reducing emissions from cargo-handling equipment, trucks and other mobile sources moving cargo in our harbour. One of the most important parts of this partnership is it allows us to better understand and target a source of emissions*

that is hard for us to control as a local seaport authority – shipborne emissions. This work, vital to our net zero-emission quest, will result in economic and health benefits all along the trans-Pacific trade corridor.’



C40 Executive Director, Mark Watts explained: ‘Accelerating efforts to decarbonise the shipping sector is urgent if we are to limit global heating to 1.5°C. C40 is proud to support this first-mover initiative which has the potential not only to support the development and uptake of low- and zero-carbon fuels and vessels, but also create good green jobs and health benefits for local communities by doing so.’

<sup>1</sup> The Revised Strategy commits Member States to peak greenhouse gas (GHG) emissions from international shipping as soon as possible and reach net-zero by or around, i.e. close to 2050, taking into account different national circumstances whilst pursuing efforts to phase them out.

The Revised Strategy further included targets to reduce GHG emissions from international shipping by at least 20%, striving for 30% by 2030, and by 70%, striving for 80%, by 2040.

Picture credit

*Illustrations per: An initial Baseline Study to Support the Development of the Los Angeles / Long Beach to Singapore Green and Digital Corridor. ©*

*Reproduced with media material extracted with grateful thanks from the website version here: <https://c40.me/3xF60Yw>*

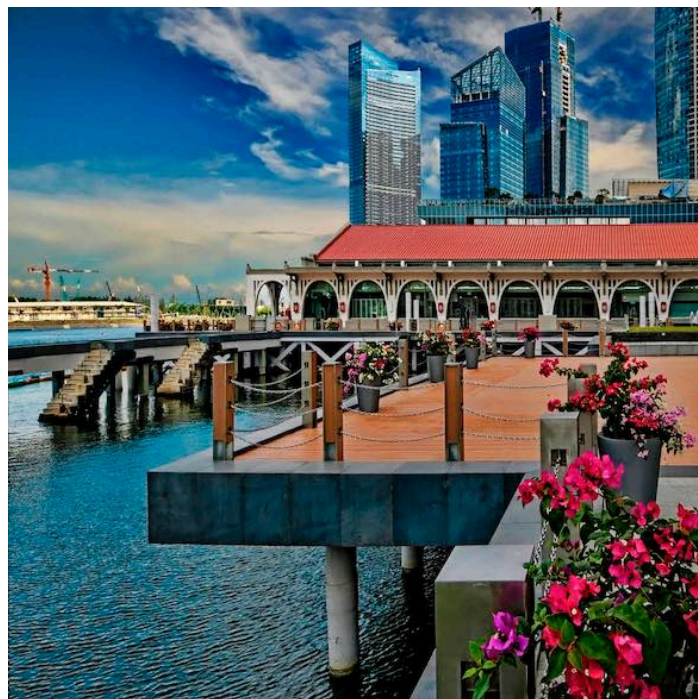
## Maritime Services Leaders’ Forum (MSLF)

### Singapore Maritime Week (SMW) 2024

This event was held on 18 April, during Singapore Maritime Week (SMW) 2024. Organised by the Maritime and Port Authority of Singapore (MPA), the MSLF saw over 200 global industry leaders gathered in Singapore to discuss the role of maritime services in advancing the digital and green transformation.

In his opening address at the MSLF, Mr Teo Eng Dih, Chief Executive of MPA, said: ‘As the maritime sector

transforms, the maritime services cluster will need to evolve its understanding of what is needed to support the sector. This includes examining the implications of emerging issues and new developments, such as the adoption of alternative fuels, on legal clauses and obligations in shipping forms and contracts.’



Clifford Pier, Singapore.

Photo per [www.mpa.gov.sg](http://www.mpa.gov.sg)

Mr Teo also said that the SCMA will be forming various working groups to study the implications of these issues for the maritime sector.

### ISO keynote speaker

A Distinguished Speaker Series (DSS) was also organised by the Singapore Chamber of Maritime Arbitration (SCMA)<sup>1</sup> on 17 April, as a SMW co-located event, to discuss the business and legal opportunities from the commercial use of alternative fuels. Mr Sergio Mujica, Secretary-General of the International Organization for Standardization, was the keynote speaker at the SCMA DSS 2024, and shared how Singapore, as a leading maritime and bunkering hub, has also been developing national standards in this domain, which could contribute to ISO standards in the future.

### Singapore Grows as an International Maritime Services Cluster

Singapore continues to grow as an International Maritime Centre, with more than 180 international shipping groups based in Singapore. These shipping groups are supported by over 30 leading international shipbroking firms, some 30 law firms with maritime practice, and over 20 financial institutions with shipping portfolios. 10 of the 12 International Group of P&I clubs<sup>2</sup> are also present in Singapore.

### Shipbroking

Leading shipbroking firms such as SSY, Fearnleys and Braemar have also expanded into financial



advisory services in Singapore to better serve their regional and global clients.

## Legal hub

Facilitated by the strong support from the government and judiciary, rule of law, and established frameworks for effective cross-border recognition and enforcement of arbitral awards and mediated settlement agreements, Singapore continues to grow as an international legal hub that offers a comprehensive suite of dispute resolution services, including arbitration. Together with the Singapore International Commercial Court (SICC), SCMA introduced the SICC Jurisdiction Model Clause in November 2023 where parties can designate the SICC as the supervisory court to hear applications relating to the Singapore International Arbitration Act 1994 (IAA). Parties bringing IAA proceedings before the SICC may avail themselves to the SICC's highly-specialised Bench that includes leading jurists from foreign jurisdictions – several of whom have been admitted to the SCMA Panel of Arbitrators, representation by registered foreign lawyers, and third-party funding<sup>3</sup>. With the SICC Jurisdiction Model Clause, a harmonised suite of services is now offered to users of the SCMA arbitration rules that are specially tailored for the shipping and international trade sectors.

## International Maritime Law Arbitration Moot (IMLAM)

In January 2024, SCMA was appointed as the Main Sponsor and Secretariat for the prestigious International Maritime Law Arbitration Moot (IMLAM), assisting the IMLAM Organising Committee with the organisation of the leading moot in its field. Venues for the competition rotate between the Asia-Pacific and Europe every year<sup>4</sup>. IMLAM enables opportunities for law students to gain quality experiences in maritime law and arbitration and supports talent development for the maritime legal services.



Raffles Lighthouse on Pulau Satumu.

Photo per [www.mpa.gov.sg](http://www.mpa.gov.sg)  
MPA Singapore ©.

SCMA was also appointed as the host partner organising the International Congress of Maritime Arbitrators (ICMA) XXIII, which will take place in Singapore from 22 to 27 March 2026. ICMA is a global

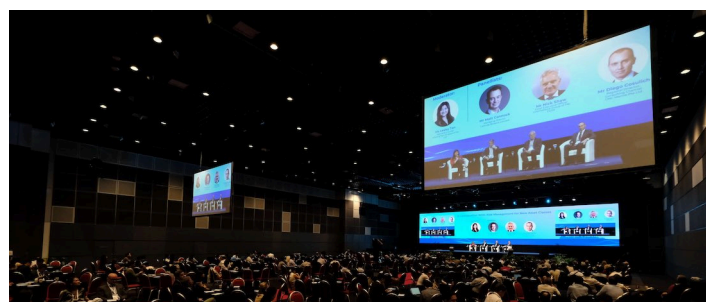
flagship event for maritime and commercial arbitrators, legal experts and the shipping community.

## IUMI to meet in 2025

Singapore will be hosting the International Union of Marine Insurance (IUMI)'s annual conference from 15 to 18 September 2025, a global platform for marine insurers to discuss key issues for the sector. The IUMI annual conference brings together key decision-makers from the international marine insurance and reinsurance markets.

## National standards on methanol and ammonia bunkering

MPA and Enterprise Singapore (EnterpriseSG), through Singapore Standards Council (SSC), are developing national standards on methanol and also ammonia bunkering. The standards aim to ensure the safe operations and handling of these fuels and will support the maritime industry's transition to sustainable alternative fuels. They span areas including custody transfer requirements, operational and safety requirements for the delivery of methanol and ammonia from a bunker tanker to receiving vessels, as well as crew training and competencies. The standards will accelerate the maritime industry's green transition, and drive innovation and investments into new green fuel-related maritime services such as legal contracting, financing and risk management.



## DNV's Leading Maritime Cities of the World report

In the latest *Leading Maritime Cities of the World* report by DNV and Menon Economics, Singapore continues to be the leading maritime hub securing the top position for the sixth consecutive time. This achievement underscores the commitment of Singapore as a maritime services cluster and its strong partnership with industry.

<sup>1</sup> The Singapore Chamber of Maritime Arbitration is a specialist arbitration institution which provides a neutral, cost-effective and flexible framework for maritime and international trade arbitrations.

<sup>2</sup> Protection and Indemnity (P&I) clubs provide protection and indemnity insurance to shipowners against third party liabilities and expenses. These can include cargo loss, cargo damage, loss of life and injury to crew and passengers, amongst others.

<sup>3</sup> More details on the SICC Jurisdiction Model Clause can be found at: <https://tinyurl.com/45dvw3pz>

<sup>4</sup> The 2024 edition of IMLAM will be held at Hillary Rodham Clinton School of Law, Swansea University in July 2024.

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## A snapshot of life at sea

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**By Simon Grainge, Chief Executive, ISWAN\***

In February 2024, MF Shipping Group very kindly arranged for me to spend some time on one of their vessels to experience life on board. After 2.5 years as the Chief Executive of a maritime welfare organisation, I feel that I owe it to seafarers to better understand their working environment, albeit only for a week.

At the outset, I wish to thank everyone involved for their support in making my trip a success. I felt genuinely welcomed and am particularly grateful for the generosity of everyone on board in taking time to educate me on the life of a seafarer. This is an account of my experience together with a few reflections along the way.

### Over the gangway

The shore team were very helpful in getting my trip set up and on a wet Sunday morning, I set off to the far west of Wales with a bag of what I hoped would be useful things for life on board. I was due to board the MT *Thun London* at Pembroke Dock later in the day and was advised that it was best to join the vessel in daylight. However, as every Brit knows, Sunday is not a good day for travelling in the UK. My 4-hour train journey turned into an 8-hour journey but fortunately I could see on [vesselfinder.com](https://www.vesselfinder.com) that my ship was also much delayed getting to its berth.

I eventually got to the security office at the port and did the necessary paperwork before being driven for what seemed like miles down a country lane lit by the lights of the adjoining refinery. It felt like I was going to the end of the world and I tried to envisage what it would be like for a seafarer having travelled halfway across the world to end up on a jetty in the middle of nowhere on a wet, cold UK winter night. I stumbled my way over the gangway to be met by a member of the crew who took me straight to the bridge. There, I met the Captain and Chief Officer who welcomed me and I was shown my cabin and then taken to the galley for something to eat and drink. I could sense immediately that I was amongst professionals and this was going to be a good trip. I was introduced to the cook who quickly produced a meal with a broad Filipino smile and a few questions about whether my cabin had everything I needed.

After eating, I went back to the bridge where I spent a pleasant hour with the Captain, Chief Officer and Chief Engineer drinking coffee and getting to understand what to expect from my time on-board. I've met many seafarers before but never in their workplace so I was already able to start piecing together how the vessel worked and everybody seemed happy to answer my naïve questions.

By now, it was getting late so I went back to my cabin which was better than many hotel rooms I have stayed in over the years although as the Pilot's cabin, I'm told it is bigger than many on board. The main difference I noticed was the noise and vibration that is ever present. I had been given a pair of ear plugs and after spending a while trying to get to sleep, I decided I would use them.

### Setting off

The next day, I woke early and made my way to the galley for breakfast where I met more of the crew. Then I was given coveralls, jacket and helmet and given a tour of the ship by the third officer. It was fascinating to see the equipment and machinery that a modern tanker needs and to understand how it all works. I was particularly struck by the emphasis on the safety of crew, cargo and the local environment but it had been made very clear by the Captain that the safety of his crew was always his primary concern.

I was then given a tour of the engine room which was arguably the highlight of the day. Over 40 years ago, I stripped down the engine of my first car and rebuilt it following a manual and whilst I wouldn't know where to start on a modern car, I am still fascinated by all things mechanical, so to see the inner workings of the vessel was a real thrill. The Chief Engineer kindly indulged my enthusiasm and I think if I had the opportunity to be young again, I would have chosen to do his job.

By 22:00hrs the loading of kerosene, gasoline and diesel was complete, the bunkering barge had done its work and we were ready to set off for Belfast. I heard and felt the main engine start and remained on the darkened bridge to see the entire operation until we were out into the open ocean. For me, it's always a pleasure to watch people who are good at what they do and this was no exception. I was in the privileged position of seeing professionals working together calmly, patiently and collaboratively.

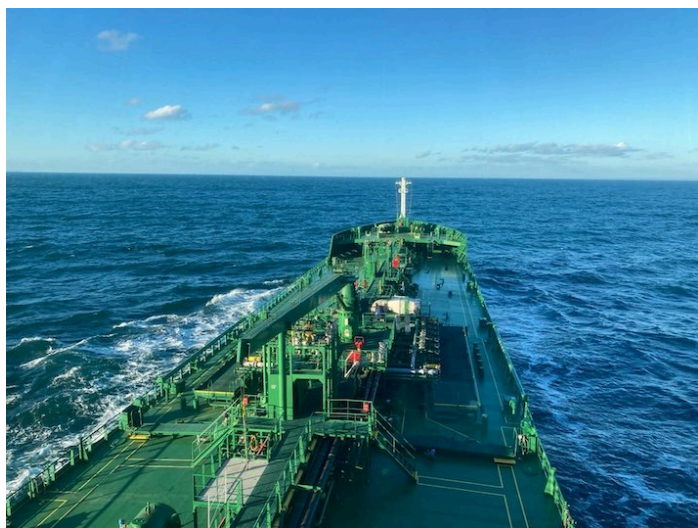
I was rocked to sleep by the gentle swell and woke early so caught up with some work before breakfast. I then spent the morning either on the bridge or on deck watching the Chief Officer and his team checking the condition of the ballast tanks. Everything was carried out methodically and carefully making full use of the equipment provided and everybody understood what they should be doing. The sky was blue, there was just a gentle swell and I could see dolphins running alongside the bow. I couldn't have my phone on me for safety reasons and unlike my colleagues, I didn't have work to do so it was a perfect moment.

We had a whole day of sailing in front of us so I was able to observe the rhythm of the ship and its crew. It was also an opportunity to speak to people and find out what being a seafarer was like for them. One crew member was only 10 days from coming to the end of his contract and feeling really good about it; another was only two weeks into his and stoically getting on with it. Some had young families to be thinking about, others didn't. Some were content with being a seafarer and would continue for as long as they were able, others were thinking about something else in the

future. For someone who is used to living on land and getting around as much as I want, the ship was already feeling small. As a novice, everything was interesting but I could see how the relentless cycle of work and the fact that you live and work in the same place could take its toll.

## Shore leave

In the late evening we arrived outside Belfast Harbour and I watched the pilot board to guide us in. I was able to see the whole procedure of entering the harbour and berthing the vessel and saw how it involved the majority of the crew. It's impressive to see a huge chunk of metal being floated so gently into place with no drama or fuss. Pipes were attached and the discharge of cargo commenced. I could see tanker lorries queuing up nearby; there was to be no pause in the supply chain. I was struck by how everything about the vessel has to happen in slow time but never actually stops. Others still had work to do but I was able to go to bed so I took advantage of it.



The next day was spent unloading so I caught up on my own work and in the afternoon decided to take some 'shore leave'. It was easy getting off the vessel and out of the secure area but then I had to walk a considerable distance past warehouses and wasteland before getting to see anything of the city. Even though I was still in my home country, it was an unusual experience arriving in a city by unconventional means and then venturing into it like some alien creature. I did some shopping for the Chief Engineer and then the invisible umbilical cord stretching back to the ship started to pull me back. I tried to imagine what shore leave would feel like if I was in a foreign country and I hadn't been ashore for several weeks or months and the pleasure of seeing something other than steel and water.

In the evening, we had to move to another berth so I was given the opportunity to see what happens in the engine room when getting ready to get underway. I was able to experience the noise and vibration and was glad of the ear defenders to protect what little hearing ability I have left. It was also a chance to see the contrast between the bridge and engine room and

the people who inhabit them. I saw no divide, just a healthy mutual respect and relaxed banter.

## No job for the impatient

The next day I woke to the smell of a cooked breakfast. There is something about the location of my cabin that I can smell every meal whilst it is being cooked and I found myself thinking about food much more than is good for me. The cook provides three meals a day for every day of his six-month contract, seemingly without complaint. When I asked him about it, he said: 'It's my life'. He goes above and beyond expectations, baking bread and cakes and varying the menu. He is an essential ingredient of a happy ship and I was personally really pleased he was there.

We left Belfast and this time I could see the whole process in daylight and I now have a greater appreciation of what is meant when people say 'the view from the bridge'. The coordination between Captain, Pilot, tug and crew looked seamless to me and it's hard not to be impressed if you know nothing about it. The Chief Officer then invited me to spend some time with him on some inspection tasks and I gladly accepted the invitation. He spent time explaining things to me and answering questions as we went; nothing seemed to be too much trouble.

The rest of the day passed slowly and I was beginning to adjust to a new rhythm where I wasn't constantly thinking about emails and meetings; I had time to look at the horizon and feel the sun and wind on my face. In shipping, there is no point in rushing anywhere because there are so many things out of your control. The weather can change, a pilot may be delayed or a berth may not be available; this is no job for the impatient.

By now, I was beginning to get a sense of the dynamics on board the vessel. In a previous role, I lived for four years in an all-male closed community where people lived and worked together and it was a very intense way of life. I recognised a lot of my own experience during my time on board and was very comfortable with it but I also know how delicate the balance is between a happy community and one where you begin to hate everybody. A community like this is constantly changing and needs to be constantly nurtured; ignore things and it can go badly wrong. I can imagine it would be a fascinating laboratory for anyone interested in human psychology. A random group of people in a confined space for months on end, what could possibly go wrong?

I was particularly interested in seafarer perceptions of bullying and harassment which is a hot topic these days. Such terms mean different things to all of us depending on our cultural background and life experience. I have not been subjected to bullying since my school days and I have worked for the majority of my life in primarily male environments where I have not had to fight for my place so am perhaps not the best person to judge what constitutes bullying. I saw a relaxed, respectful and calm environment and I could not imagine anything else being tolerated on board this particular vessel but it was not hard to envisage it being otherwise with a

different group of people. I can see that the impact of any bullying or harassment would be magnified enormously in such an environment so the issue has to be taken seriously. I could also see that any interventions to prevent bullying and harassment need to be well considered if they are to have an impact in this unique environment.

## Lessons and reflections

The rest of the voyage to Pembroke took place through the night with the vessel rolling a lot more than I had previously experienced. I had to learn a new way of walking, eating and drinking and I regretted the decision to take a shower in such conditions! I went up to the bridge expecting us to be preparing to anchor for 24 hours but the plan had changed and we were to go straight into our berth. I had mixed feelings about this as I was not ready to leave the ship but also wanted to get home. Once we had berthed, I had reconciled myself to leaving and had my bags packed only to discover that there would be no gangplank for another three hours. I had heard from crew members about the challenges of getting to and from vessels and it was not hard to imagine the frustration of waiting another three hours when you have been at sea for six months or more. Whilst waiting, I reflected on the week and what I had seen.

At ISWAN, our work is to promote and support the welfare of seafarers and so we get to hear many grim stories from around the world of exploitation, bullying, abandonment, piracy and the criminalisation of seafarers. We run projects and programmes to encourage the good health and wellbeing of seafarers, provide helplines for seafarers who are struggling and emergency funds for when a crisis hits them, so inevitably our focus is on what is wrong in the maritime sector. I learnt very little about these issues on this trip because the vessel was expertly managed, well maintained and properly supported with a huge emphasis on safety. Seafarers were not exhausted, hungry, being bullied or exploited, they had good quality equipment, supportive management and internet connectivity. The big lesson for me was that all these things are possible if the will is there. With all the privations associated with seafaring, does it not make sense to do what you can to support your workforce? As a former Police officer, I've led people into some very difficult and dangerous situations and when I've asked them to do it, they've complied without question because they knew I would support them.

I'm very conscious of the fact that I have only seen a limited snapshot of life at sea and that what I have seen is not comparable with the experience of most seafarers but it will be very valuable in my work nonetheless. The experience will stay with me for a long time and has given me much to reflect on. I can see that in many ways it's an unnatural and tough way of life – living and working in the same space, long hours, danger, no time ashore, disrupted sleep, at the mercy of the weather, schedules and shore based operations, missing family and friends and yet despite all that, when I stood leaning on a rail looking out to see in the fading light of day, the deck swaying

beneath me and the wind in my face, I felt something else. Perhaps it's the same something that has drawn seafarers to the sea for thousands of years?

\*International Seafarers' Welfare and Assistance Network.

To learn more readers are invited to see here: [www.seafarerswelfare.org](http://www.seafarerswelfare.org)

## Editorial Note

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## China Maritime Safety Administration (MSA)

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### Special Safety Inspection Period –

### Mechanical and Electrical Equipment (April-October 2024)

News has been received from a number of sources by way of a warning to

shipowners, operators, and masters of a recently issued Notice by the China MSA.

Vessels calling at ports in the People's Republic of China were reminded that from 3 April 2024, China MSA announced a nationwide campaign of enhanced inspection of the vessel's machinery and electrical equipment, which was due to start later that month and continue until 31 October 2024.

### Applied to all vessels

It was learnt that forthcoming inspections will apply to all vessels calling any China ports, regardless of type, sizes, or flags of the vessels.

Given that many vessels have encountered machinery/equipment failure during port operations and posed hazards to port facilities and other vessels recently, the inspection principally focuses on operational states and maintenance of major propulsion machinery, generators, boilers, steering gear, anchoring devices, MARPOL-related equipment and so forth.

### As part of PSC

Inspections will be included as part of routine Port State Control (PSC) inspections or conducted as detailed inspections in response to identified and/or reported failures of electromechanical equipment.

Vessels with a history of such equipment failures will be a priority for PSC inspections.

### Detention

In addition to the machinery and equipment, the crew's operational competence will be also a key aspect of the inspection, crew members might be requested by PSC officers to demonstrate proper

operational ability on all machines and equipment onboard, crew unfamiliar with electro-mechanical equipment operation requirements could result in detention of the vessel.

## Actions

The Liberian Administration, for example, strongly recommends shipowners, operators, and masters to implement self-inspection protocols and to report all concerns to relevant parties.

Prior to arrival in ports of the People's Republic of China, crews

should verify proper operation of electro-mechanical equipment.

Items subject to inspection include, but are not limited to:

- Main propulsion, is it fully operational?
- Main propulsion security, remote monitoring, and ancillary equipment, are they fully operational?
- Ship's boiler(s) is / are they fully operational?
- Main & emergency power supplies, are they fully operational?
- Steering gear, is it fully operational?
- Are crew proficient in operation of electromechanical equipment within scope of duties?
- Are associated maintenance and servicing records in order?

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## Singapore Maritime Week 2024

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### Maritime International Advisory Panel

The Maritime International Advisory Panel (IAP) held its third annual meeting on 16 April 2024, during the Singapore Maritime Week 2024.

This year, the Maritime IAP held in-depth discussions on the key developments in the maritime sector, including decarbonisation, green financing, digitalisation and cybersecurity. It also welcomed five new members.

**(See below \* for list of members present).**

Established in 2022 by the Ministry of Transport (MOT) and the Maritime and Port Authority of Singapore (MPA), the Maritime IAP aims to seek international perspectives on key long-term trends and developments that will shape the maritime industry. It comprises global leaders from the maritime sector, adjacent industries and academia, and is chaired by Mr Chee Hong Tat, Singapore's Minister for Transport and Second Minister for Finance. Local industry and union leaders also joined the meeting to share their perspectives.

### Key Trends and Opportunities for the Maritime Sector

The Maritime IAP highlighted that despite geopolitical uncertainties and supply chain shifts, there were

significant opportunities for the global maritime sector in the following areas:

- Accelerating the green transition towards a low- and zero-carbon future, supported by important enablers such as financing for green shipping.
- Deepening the utilisation of technology and digitalisation while strengthening cyber resilience.
- Training and re-skilling the maritime workforce to take on the new job opportunities of the future.

The Maritime IAP emphasised that Singapore plays an important role in facilitating global trade flows, supporting global maritime decarbonisation, and advancing maritime digitalisation and cyber-resilience. Singapore's position as a trusted and established maritime eco-system could catalyse green financing solutions, unlock the benefits of deeper utilisation of technology and data, and position it as a training hub to develop the skills needed by the future maritime workforce.

### Strengthening Maritime Ecosystem Amid Global Shifts and Green Transition

Against the backdrop of global uncertainties, the Maritime IAP highlighted that Singapore could be an important trade and maritime intermediary, given its status as a neutral, trusted, and leading maritime hub. With growing trade to emerging regions as trade flows shifted, the panel believed Singapore would be an important conduit for new trades going forward. The panel further suggested for Singapore to become a trusted maritime technology hub for the development, installation, and accreditation of critical technologies, especially for those fitted onboard ships.

The Maritime IAP noted that amidst the ongoing green transition, there would be competing demands for various low- or zero-carbon fuels (e.g. hydrogen, ammonia, methanol) from other sectors.

The Maritime IAP highlighted the need to draw on a wide range of green financing instruments and investments to catalyse change, address hurdles and accelerate the sector's green transition. The panel also noted that financial institutions were willing to provide lending for suitable projects to support maritime decarbonisation with sufficient assurance that the default risks were managed. To address the financing needs of the sector, the panel suggested for maritime stakeholders to pool their needs, while demand aggregation would help smaller companies gain better access to suitable solutions and financing, and also allow financial institutions to better determine and manage the risks involved.

### Advancing Maritime Digitalisation and Cybersecurity

The Maritime IAP discussed the importance of further harnessing new technologies, such as Generative Artificial Intelligence (GenAI), in the maritime domain to reap greater productivity, efficiency, safety and sustainability. Clear use cases included autonomous shipping, vessel collision avoidance, ship-to-shore connectivity, and drone services. The Maritime IAP highlighted the significant potential to utilise data in the maritime domain for multiple uses and benefits,

including optimising vessel voyage planning and energy consumption, and for trade and offsetting uses in the carbon markets. Digital twins should be leveraged to anticipate future crisis and future-proof assets as well as develop preparedness and response capabilities.

The Maritime IAP stressed the necessity of cybersecurity and cyber-resilience as digitalisation of the maritime industry grew and maritime systems became more inter-linked. An eco-system approach was needed as incidents in the maritime sector could have regional and global implications; entities could not afford to work in silos. Beyond technical competencies, there was a need to encourage information-sharing between entities and inculcate a culture where high cyber standards and hygiene were ingrained at all levels. The Maritime IAP noted that cybersecurity resilience involved regular risk assessments, mapping of digital assets, and developing an inventory of all information technology and operational technology assets within each organisation.

The Maritime IAP recommended that Singapore as a maritime hub could forge regional and global partnerships in technology development and cyber-resilience, in the areas such as operations (e.g. information sharing about threats and mitigation measures), technology (e.g. test lab for solutions and inter-operability platforms), standardisation of relevant regulations and standards and development of cybersecurity talent pipeline.

### **Building a Strong and Resilient Maritime Workforce**

The Maritime IAP, as well as local industry and union representatives, underscored the importance of investing in attracting, developing, and retaining the talent pool in the maritime industry. As the industry pursued the green transition as well as digitalisation and automation, the Maritime IAP recommended establishing clear and regular communication with the maritime workforce on the need for upskilling, re-skilling and job redesign in advance. Governments and industry should also collaborate with academic institutions to ensure that curricula continued to be updated with the relevant skills required in the maritime sector for the workforce to be future-ready.

Mr Chee Hong Tat commented: *‘Singapore has a responsibility as a trusted hub port and leading international maritime centre to contribute to the digitalisation and decarbonisation of the global maritime industry. We will continue to work closely with our tripartite partners as well as international stakeholders to identify concrete ways to pilot new ideas, scale up workable solutions, and create new opportunities for our maritime companies.’*

### **Annex A: List of Maritime International Advisory Panel Members Present 16 April 2024**

- Mr Chee Hong Tat (Chairman), Minister for Transport and Second Minister for Finance.
- Mr Hiroaki Sakashita, President and CEO, ClassNK.
- Ms Merle Maigre, Programme Director of Cybersecurity, e-Governance Academy.

- Mr Jonathan Wright, Global Managing Partner, Global Finance and Supply Chain Transformation Service Line Leader, IBM.
- Professor Nigel Brandon, Dean, Faculty of Engineering, Imperial College London.
- Mr Stephen Fewster, Managing Director, Global Head, Shipping Finance, ING Bank.
- Mr Nick Brown, CEO, Lloyd’s Register.
- Mr Greg Wilson, Worldwide Public Sector Chief Technology Officer (Government), Microsoft.
- Mr Peter Voser, Group Chairman, PSA International.
- Mr Abhishek Pandey, Managing Director & Global Head, Transportation Finance, Standard Chartered Bank.
- Dr Arun Majumdar, Dean, Stanford Doerr School of Sustainability, Stanford University.

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## **Safe mooring: Navigating new IMO regulations with DNV**

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A recent paper in the DNV Industry Insights series has the title *Safe mooring: Navigating new IMO regulations with DNV*.

As we well know mooring is one of the most common daily tasks of seafarers.

It has been reported in recent years incidents related to mooring have become more frequent, often resulting in injuries. New IMO regulations aim to make mooring safer but place new demands on shipowners.

### **Per IMO MSC**

The Maritime Safety Committee (MSC 95) (3 to 12 June 2015) agreed to revise SOLAS regulation II-1/3-8 and associated guidelines (MSC.1/Circ.1175) and to develop new guidelines for safe mooring operations for all ships in order to prevent unsafe and unhealthy work situations during mooring operations.

This work led to the adoption of amended SOLAS regulation II-1/3-8 (resolution MSC.474(102)), which entered into force on 1 January 2024, and the approval of the Revised guidance on shipboard towing and mooring equipment (MSC.1/Circ.1175/Rev.1) for ships constructed on or after 1 January 2024, as well as the following:

- New MSC.1/Circ.1619 on *Guidelines on the design of mooring arrangements and the selection of appropriate mooring equipment and fittings for safe mooring*; and
- New MSC.1/Circ.1620 on *Guidelines for inspection and maintenance of mooring equipment including lines*.

### **For more information**

There is much advice on the topic at IMO here: <https://tinyurl.com/58jkzf8x>

This link provides some informative videos.

To read the DNV paper readers are invited to see here: <https://tinyurl.com/367m3cp9>