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IFSMA NEWSLETTER

The Shipmasters' International Voice

IMO new sulphur emission limits enter into effect in the Mediterranean.

See story on page 3.

UNITY FOR SAFETY AT SEA
IFSMA

International Federation of Shipmasters' Associations (IFSMA)

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Secretary General's Message

Thankfully, it has been a quiet month afloat in the Black Sea, although the Russian attacks on mainland Ukraine have not abated and in some areas have intensified. Let us all hope for a ceasefire to enable sincere peace talks to begin. The Red Sea has been quiet for some months now so let's hope this lasts as trade starts to return to these waters and transits through the Suez Canal into Europe increase. it has been a quiet month at the IMO although the secretariat has had a busy time. (is this what he means?)

At the IMO, the Navigation, Communications and SAR Sub-Committee (NCSR12) took place and as in recent gatherings much of the meeting was taken up with the technical aspects of communications. The important issue of the implications of the SAR requirement for MASS was not discussed and have been delayed until after the adoption and implementation of the developing voluntary MASS Code. IFSMA's view is that this is not helpful for the industry and needs to be addressed. I expect there to be a discussion on this at the Maritime Safety Committee (MSC110) later this month.

The Secretary General, Mr Arsenio Dominguez, continues his strong leadership of the IMO with his biannual briefs to all the national delegations, IGOs and NGOs.

His key points are:

- He emphasised the intention for proposals to better regulation against the operations of the 'Dark or Shadow Fleet' or as he prefers to call it, 'Sub-standard Shipping'.
- He is very concerned with the increased numbers of cases of abandonment and fraudulent registration of ships around the world and the significant effect that this has on our seafarers.
- Further, he highlighted the much-increased incidence of criminalisation of seafarers and thanked all those helping to draw attention to this terrible problem.
- He continues to be personally involved at the diplomatic level on a number of recent criminalisation cases and is determined to do whatever he can to help seafarers. He highlighted the IMO/ILO/ITF/ICS Seminar on the topic to be held on 16th June to which a number of our Federations have asked to attend.
- As in many parts of the world, the United Nations is reporting financial shortfalls and is looking to make 20% savings in all agencies apart from those smaller and more efficient agencies. The IMO has done well in this regard and is exempt although it must do better and reduce unnecessary paperwork and reduce the size, but increase the quality, of papers for discussion at meetings.
- There is a need to increase multi-culturalism by the use of AI to provide addition interpretation/ translation of six languages in all meetings.

- Finally, he highlighted the worrying use of the IMO logo in fake e-mails and asked us to be vigilant in this area and to report anything of concern to the IMO Secretariat, through the members.

My last point is to again draw your attention to the IFSMA BGA in August. It will be hosted by the Faroe Islands and you need to book your flights and accommodation now to be able to guarantee your attendance.

Jim Scorer
Secretary General

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 ©

New sulphur emission limits: Mediterranean

According to news from IMO the Mediterranean Sea officially became an Emission Control Area (Med SOx ECA) under MARPOL Annex VI on 1 May 2025. Sulphur content in fuel oil for ships operating in the area is now limited to 0.1%, significantly reducing air pollution and delivering major benefits to both human health and the marine environment.

Mandatory measures

Ships operating in Emission Control Areas for Sulphur Oxides and Particulate Matter, such as the Mediterranean Sea, are now subject to strict mandatory measures to prevent, reduce, and control air pollution. This new ECA must comply with stricter sulphur content limits than those set by the global standard (0.10% mass by mass (m/m), compared with 0.50% m/m allowed outside SOx ECAs).

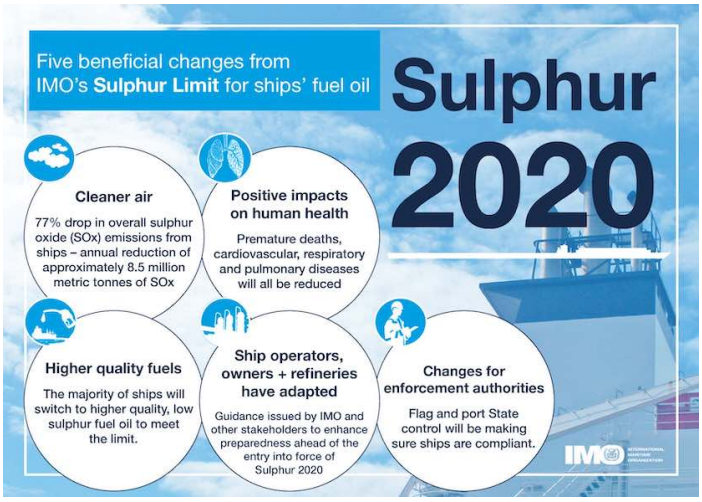
Haze reduction

Decreasing SOx emissions from shipping improves human health by lowering rates of lung cancer, cardiovascular disease, strokes, and childhood asthma. The environment also benefits significantly, as reduced acidification helps protect crops, forests, and aquatic species. Finally, this measure is expected to reduce haze caused by ships, increasing visibility and decreasing the risk of maritime accidents.

Of seaborne trade 20% is Med bound

The Mediterranean Sea is home to some of the busiest maritime routes in the world, supporting 20% of seaborne trade. It is estimated that more than 17% of worldwide cruises and 24% of the world fleet navigate the Mediterranean Sea.

The Med SOx ECA is the fifth designated Emission Control Area under MARPOL Annex VI, alongside the Baltic Sea area; the North Sea area; the North American area (covering designated coastal areas off the United States and Canada); and the United States Caribbean Sea ECA (around Puerto Rico and the United States Virgin Islands). In 2024, IMO designated two further ECAs: the Canadian Arctic and the Norwegian Sea*. In April 2025, MEPC 83 approved a proposal to designate the North-East Atlantic as an Emission Control Area.



On 1 January 2020, new limits on sulphur content in fuel oil** led to a 70% reduction in total sulphur oxide emissions from shipping by setting a maximum sulphur content of 0.5% outside the emission control areas.

* https://tinyurl.com/546rv6f7
** https://tinyurl.com/vm3xsvxc

Mauritius: Interagency cooperation

Enhanced maritime security

Senior government officials in Mauritius are working to enhance maritime security governance and national-level decision-making, with IMO support. This was reported on 5 May.

A tabletop exercise and National Maritime Security Committee (NMSC) workshop held in Port Louis from 28 to 30 April aimed to strengthen interagency cooperation among participating government departments, ministries and agencies, and to reinforce the structure of the NMSC.

This enhanced structure is expected to support more inclusive and coordinated decision-making, ultimately contributing to improved maritime safety and security, regional stability and sustainable development.

Commitment

During the opening ceremony, Hon Dr Arvin Boolell, GOSK, Minister for Agro-Industry, Food Security, Blue Economy, and Fisheries, reaffirmed Mauritius' commitment to maritime security and ocean governance. He proclaimed the country's bold vision to transition from a Small Island Developing State to a Big Ocean State.

Comment

He stated: '*This vision underlines Mauritius' determination to harness the full potential of its vast Exclusive Economic Zone, ensuring that the seas are not just a space of vulnerability, but a domain of opportunity and prosperity. A safer, well-governed maritime space is essential to achieving a thriving blue economy.*'

IMO's Mr Kiruja Micheni added: '*Inter-agency collaboration and information sharing are not optional, but essential to effectively counter the dynamic and transnational nature of maritime threats Mauritius' commitment to institutionalizing a whole-of-government approach sets a strong example for the region*.'

This strategic ambition reflects a growing understanding of the critical link between maritime security and sustainable economic growth.

EU-funded project

A total of twenty-seven participants took part in the workshop, which forms part of a series of activities under the European Union-funded project on Port Security and Safety of Navigation in Eastern and Southern Africa and the Indian Ocean (Port Security Project)*****. The project, implemented jointly by IMO, INTERPOL and UNODC, benefits nine participating countries including Mauritius.

Broad representation

This event was attended by senior officials from the Ministry of Agro-Industry, Food Security, Blue Economy & Fisheries, including Junior Minister Hon Gilles Fabrice David, Permanent Secretary Mrs Devina Ramma; and Secretary for Shipping Development Dr Kiran Shamloll, as well as representatives from a range of national agencies and authorities involved in maritime security.

* https://tinyurl.com/2p8bk47n

Red Sea oil spill response

Countries in the Red Sea region are taking steps to improve their preparedness and response systems for major marine pollution incidents involving oil and hazardous and noxious substances (HNS) spills.

Egyptian workshop

A sub-regional workshop held in Hurghada, Egypt from 5–8 May, brought together eighteen officials from Djibouti, Egypt, Eritrea, Jordan, Saudi Arabia, Somalia and Yemen to build technical skills, enhance coordination mechanisms, and reinforce contingency planning for such spills.

A critical sealane

As one of the world's most critical shipping lanes, the Red Sea area continues to face maritime security risks related to wider geopolitical tensions, which have led to some maritime incidents. The focus was on equipping officials and responders with the skills and knowledge needed to manage and mitigate major marine pollution incidents, while emphasizing the importance of collaboration, communication and a coordinated regional approach among States, UN bodies and international partners.

Experts led in-depth sessions on oil spill prevention, emergency response strategy and inter-agency coordination.

Exercises and case studies

Delegates took part in table-top exercises and reviewed real-life case studies involving the motor vessels *Rubymar*, *Sounion* and *ASL Bauhinia*, which all occurred in the Red Sea. These cases illustrated the complex challenges posed by ship-related pollution incidents in a geopolitically tense environment.

This workshop was hosted by the Red Sea Emergency Mutual Aid Centre for the Red Sea and Gulf of Aden (EMARSGA) and delivered with support from to the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA)[1], through IMO's Integrated Technical Cooperation Programme (ITCP).

Improving inter-agency coordination

Activity here is expected to improve inter-agency coordination, advance robust regional contingency plans for oil and HNS spills, and enhance overall preparedness and response capabilities for countries bordering the Red Sea.

[1] **https://persga.org**

IMO and port security drills

Madagascar

Port security personnel in Madagascar have completed a full-scale exercise and specialized training in Mahajanga to boost the safety and security of the country's major ports.

Held from 5 to 9 May, the workshop was led by IMO as part of the EU-funded Port Security Project[1]. It focused on strengthening port security through drills and exercises aligned with the International Ship and Port Facility Security (ISPS) Code[2].

Broad attendance

Twenty-four participants took part, including Port Facility Security Officers (PFSOs) from key ports, and representatives from the Port and Maritime Agency (APMF), the *Gendarmerie Nationale* and the National Police.

The training combined theoretical instruction with hands-on sessions to enhance skills in planning, conducting and evaluating security drills. The curriculum followed the APEC Manual of Maritime Security Drills and Exercises for Port Facilities, with emphasis on ISPS Code Part A requirements.

Participants designed and carried out a full-scale exercise at the port of Mahajanga, involving all stakeholders as well as Customs and local firefighting services. The exercise tested coordination, implementation of port facility security plans, and operational readiness.

Compliance with international standards

The workshop supports Madagascar's ongoing efforts to comply with international standards, while strengthening port security infrastructure across the region.

[1] https://tinyurl.com/2p8bk47n
[2] https://tinyurl.com/266u8c9x

Maritime security

Kenya's legal framework

Kenya is taking steps to strengthen its legal framework in line with key international instruments on maritime security, with technical support from IMO.

A legal review workshop was held in Mombasa from 12 -16 May focusing on the legislative drafting process for the domestication of measures in the International Convention on Safety of Life at Sea (SOLAS Chapter XI-2), which includes the International Ship and Port Facility Security (ISPS) Code[1]. This includes provisions related to control and compliance measures.

Broad representation

Seventeen participants representing a cross-section of national maritime agencies engaged in discussions on the obligations of flag, port, and coastal States under the ISPS Code. The workshop also covered IMO's guidance for the development of national maritime security legislation (MSC.1/Circ.1525)[2].

The agencies represented at the workshops were: Kenya Coast Guard Service, Kenya Maritime Authority, Kenya Navy, Kenya Ports Authority, and key officers from the Attorney General and Director of Public Prosecutions.

Comment

Major (Ret'd) George Okong'o, Head of Marine Casualty Investigations and Security, speaking on behalf of the Principal Secretary at the State Department for Shipping and Maritime within the Ministry of Mining, Blue Economy and Maritime Affairs indicated: '*Kenya has made significant strides in enhancing maritime security by establishing a robust maritime security governance framework, with invaluable support from the IMO. This progress has strengthened national coordination, improved response capabilities, and positioned Kenya as a key leader in promoting maritime safety and security in the region.*'

IMO's Kiruja Micheni added: '*We are confident that by working together, we can build a solid legal and institutional foundation to support long-term improvements in maritime safety and security. In this regard, IMO is pleased to support the Government of Kenya in the development of its National Maritime Security Strategy - a vital initiative that is set to commence shortly.*'

A strong legal framework aligned with IMO instruments (such as SOLAS Chapter XI-2 and the ISPS Code)[3] provides the necessary legal basis for the development and implementation of Kenya's National Maritime Security Strategy.

EU-funded project

This workshop is a follow up to the first legal workshop held on 31 October – 3 November 2023[4] and is part of the EU-funded project on Port Security and Safety of Navigation in Eastern and Southern Africa and the Indian Ocean (Port Security Project)[5].

Not forgetting the 2050 Africa Integrated Maritime Strategy

Through the project, IMO supports nine participating countries, Kenya included, in advancing maritime security and safety in line with the aspirations of the 2050 Africa Integrated Maritime Strategy.

This initiative is delivered in close collaboration with strategic partners such as the Indian Ocean Commission (IOC), INTERPOL, and the United Nations Office on Drugs and Crime (UNODC).

[1] https://tinyurl.com/266u8c9x
[2] https://tinyurl.com/yc8k3xch
[3] https://tinyurl.com/266u8c9x
[4] https://tinyurl.com/3za6vpvj
[5] https://tinyurl.com/2p8bk47n

Guinea Bissau

IMO support for shipping digitalization

Establishment of the Maritime Single Window

A needs assessment mission carried out in Guinea Bissau has laid the groundwork for the country to set up a maritime single window (MSW) system in the Port of Bissau.

The MSW is a one-stop digital platform for information exchange among different stakeholders and agencies involved in clearing the arrival, stay and departure of ships. Having a single window for information exchange streamlines procedures and saves time and costs.

Mandatory requirement

Since 1 January 2024[1], it has been mandatory for all IMO Member States to establish MSW systems in ports to enhance the efficiency of shipping worldwide.

Broad participation

This needs assessment mission took place from 5 to 6 May. It was conducted by IMO consultants in collaboration with the Port of Bissau, relevant Ministries, public agencies including customs and border agencies, and other stakeholders. The mission concluded with a meeting with all stakeholders to validate the findings.

A report and progress by further action

A detailed report from the mission will serve as the basis for further actions in the development of the maritime single window in Guinea Bissau. This includes findings and analyses carried out for the deployment of a maritime single window, according with IMO principles and guidance, as well as the

development of related IT tools which interact with the maritime single window.

It is understood that the report will include recommendations resulting from the analysis by the IMO consultants, and a pre- and post-activity survey to evaluate the stakeholder awareness on the technical and operational requirements of the MSW.

Delivery through IMO's ITCP

This activity was delivered through IMO's Integrated Technical Cooperation Programme (ITCP)[2] with the collaboration of the *Instituto Marítimo e Portuário da Guiné-Bissau*.

[1] https://tinyurl.com/bdxdcrwk
[2] https://tinyurl.com/5n8acu9w

Karin Orsel receives IMO Gender Equality Award

Maritime entrepreneur recognised for her work to advance gender equality and empower women in the industry

Netherlands shipowner and entrepreneur Ms Karin Orsel* was presented with the IMO's Gender Equality Award by Secretary-General Arsenio Dominguez on Friday, 16 May.

Each year the winner of the Award is selected by a high-level panel and endorsed by the IMO Council, in recognition of their outstanding contributions to advancing gender equality in the maritime sector.

Receiving her award at a ceremony in London, ahead of the International Day for Women in Maritime (18 May), Ms Orsel called for stronger support networks for women, especially those just entering the industry: '*I am passionate about people in this industry and about mentorship and trying to pass it forward. I really hope that every one of you will do the same and think about how was it to be starting in this industry, who supported you and what you can do for someone else*.'

A successful career

Ms Orsel began her career in shipping aged 18, and by 23 she had co-founded MF Shipping Group. The group began with six vessels and now counts over 55, employing more than 1,000 crew and 80 office staff.

As CEO for over 20 years, she has focused on building a more inclusive workplace, by recruiting diverse talent, mentoring new entrants and backing initiatives to broaden women's access to the sector.

New potential opportunities ahead

While women have remained a minority in the industry, Ms Orsel highlighted new potential opportunities to come with the drive to decarbonize shipping. IMO's commitment to reach net-zero emissions by 2050 is expected to trigger a shift to innovative technologies and new alternative fuels which will require re-training and reforming the maritime workforce.

She added: '*The energy transition will give us the opportunity because we need new skills set in our industry and who will fill that better than the people in this audience*.'

S-G IMO's reflection

Secretary-General Arsenio Dominguez applauded her as a role model for women and young people in the industry: He commented: '*[Karin Orsel] is changing the face of the maritime sector, one ship and one person at a time. Throughout her 30-year career, she has not only broken many glass ceilings, she has then enthusiastically opened the door for others to follow in her footsteps*.'

Ms Orsel currently serves as President of the European Community Shipowners' Association (ECSA) and Chair of the International Seafarers' Welfare and Assistance Network (ISWAN), and on the boards of several major industry bodies, including the International Chamber of Shipping, INTERTANKO, and the Royal Association of Netherlands Shipowners. She was formerly President of the Women's International Shipping & Trading Association (WISTA International) and its Netherlands chapter.

See the links

Readers are invited to watch the livestream recording of IMO's 2025 International Day for Women in Maritime Women celebrations at 4:25:40 here: https://tinyurl.com/6t5daf3h

More on the IMO Women in Maritime programme is available here: https://tinyurl.com/59dc6sw9

**Ms Orsel is a member of Nautilus International (Netherlands Branch) who are in turn IFSMA members.*

IMO and barriers for women in maritime

Industry leaders have acknowledged the imbalance of women in maritime and called for increased awareness and inclusivity to effect change. The International Day for Women in Maritime was celebrated at IMO HQ in London with a symposium on 16 May, under the theme: *An Ocean of Opportunities for Women*.

IMO Secretary-General Arsenio Dominguez opened the event, highlighting the need to continue to push for diversity in maritime and to match commitments with action.

He said: '*The reality is that I am worried* [about the IMO-WISTA Women in Maritime Survey 2025 metrics and results]. *In some areas we are stagnating, and in others, we are regressing*'.

Live Podcast: Challenges and opportunities for women

A live podcast, addressing visibility and the evolving experiences of women in the maritime sector, was moderated by Mr Karanvir Singh Nayyar, naval officer and filmmaker, and included Captain Josephine Clark, President of the Australasian Marine Pilots' Institute and Ms Mariam Al Shaikh, Deck Cadet, Bahri, Saudi Arabia.

Captain Josephine Clark highlighted some of her experiences when she first joined the maritime sector in 1989 as the third woman to be hired by her company. In her words: '*I had relatively few unpleasant experiences*.' However she highlighted that with: '*At that time, there was a lot of alcohol on board ships too*,' which she felt ultimately threatened her personal safety and fostered a lack of respect.

Ms Mariam Al Shaikh, Deck Cadet with Bahri Ship Management, shared a positive perspective, expressing her satisfaction with the support and treatment she received as a newcomer to the industry, joining her ship in February 2024. She commented: '*I am lucky that I did not face any challenges or problems. My company implemented policies and provided privacy for me before I joined, preparing everything to make me comfortable. That is why I sailed for ten months continuously*.'

Both speakers highlighted the efforts the maritime industry is implementing to create a more inclusive and supportive environment for women at sea. Whether policy changes to enhance onboard conditions or increased visibility of the maritime industry; both emphasized the importance of continued awareness, mentorship, and representation to ensure future generations of women feel empowered to pursue maritime careers.

Panel 1: Inclusion in ocean science and policy

The panellists discussed the need to include voices that are often left out of environmental decision making. Alannah Vellacott, Marine Ecologist, Science Communicator and Ocean Advocate, reflected: '*Combining women, youth, and indigenous knowledge from underrepresented countries together with sound science is the way forward and how we can protect our ocean and how we can protect our planet for future generations*'.

Addressing both representation and retention, the panel emphasized that real climate solutions must be built on inclusive foundations.

Professor Richard Thompson, Director of the Marine Institute School of Biological and Marine Sciences at the University of Plymouth, added: '*The problem to me isn't about the female scientists coming in, it's actually about the retention*.'

Dr Renis Auma Ojwala, Post-doctoral Research Associate at the World Maritime University, agreed and highlighted that she studied up to the Masters' level in natural science, but after that she was unable to get a job. In her words: '*Even if we have the degree and have the knowledge, we are not accepted in these fields just because of preconceptions. We need to have gender transformative policies that take into account the current systemic barriers that are hindering women from being accepted in these sectors*.'

The panel included Ms Alannah Vellacott, Professor Richard Thompson, and Dr Renis Auma Ojwala. The discussion was moderated by Ms Karen McVeigh, Senior Reporter at the London-based newspaper, *The Guardian*.

Panel 2: Increasing and maintaining female involvement in maritime

The second panel emphasized the importance of not only accepting more women into the sector, but also creating the necessary structures needed to ensure they have the ability to thrive and lead.

Michelle Bentubo, Chief Operating Officer at Virgin Voyages, commented: '*We have to create an*

environment that creates those hiring pipelines and talent development first. We have the platforms, we have the resources, and we have the desire to be able to put those programs in place.'

The conversation turned to the need for not only welcoming women into maritime careers but supporting them throughout. Nicole Fisher, Senior Lecturer on Deck Cadet Education at Warsash Maritime School, reminded women aspiring to pursue a career in maritime added: '*Just your presence on board is driving that change that we want to see*.'

This panel, also moderated by Ms McVeigh, included Ms Nicole Fisher, Ms Michelle Bentubo and Mr Dominic Pattinson, Executive Secretary, OSPAR Commission*.

IMO-WISTA Women in Maritime survey

As part of the programme, Ms Louise Proctor, Deputy Director, Technical Cooperation and Implementation Division (IMO) and Mrs Elpi Petraki, President of the Women's International Shipping and Trading Association (WISTA International), presented the 2024 Women in Maritime Survey results**.

2025 IMO Gender Equality Award

Following the panel discussions, IMO Secretary-General Arsenio Dominguez presented Ms Karin Orsel, nominated by the Kingdom of the Netherlands, with the 2025 IMO Gender Equality Award. (**See item on page 7 this edition of IFSMA Newsletter**).

Proceedings

The **complete proceedings at 4:25:00 are available on You Tube here: https://tinyurl.com/6t5daf3h**

*OSPAR is the mechanism by which fifteen Governments and the European Union cooperate to protect the marine environment of the North-East Atlantic.

OSPAR started in 1972 with the Oslo Convention against dumping and was broadened to cover land-based sources of marine pollution and the offshore industry by the Paris Convention of 1974. These two conventions were unified, up-dated and extended by the 1992 OSPAR Convention.

The fifteen Governments are Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

OSPAR is so named because of the original Oslo and Paris Conventions ('OS' for Oslo and 'PAR' for Paris).

** https://tinyurl.com/mwnzy2vx

Tackling underwater noise

Support for IMO Member States

Workshops led by IMO in Trinidad and Tobago and Costa Rica have helped raise awareness about the threat of underwater noise from ships, and how it can be addressed by governments and industry stakeholders.

The series of workshops were hosted by the University of Trinidad and Tobago in the Port of Spain (29 April) and by Costa Rica's Ministry of Public Works and Transport in San José (2 May). They were part of the GloNoise Partnership[1], implemented by IMO in collaboration with GEF and UNDP.

The events highlighted how underwater noise from shipping can overlap with the sound used by marine animals, interfering with their biological functions such as communication, reproduction and navigation, placing them under stress. Effects of URN range from subtle changes in behaviour to death at very high exposure.

Participants explored strategies to tackle these challenges, including through the implementation of the revised IMO Guidelines for the Reduction of Underwater Noise from Commercial Shipping (MEPC.1/Circ.906/Rev.1)[2].

Need for baseline research, training

In Trinidad and Tobago, representatives from government, industry and academia shared insights on the impact of URN on marine life, its relation to ship energy efficiency and strategies for mitigation based on the IMO Revised Guidelines.

Participants agreed to a set of actions, including:

- Establishing a National Task Force with cross-sectoral participation.
- Developing baseline studies through hydrophone deployment and scientific research.
- Drafting policy options and reviewing legal frameworks to integrate URN into national maritime legislation.

- Supporting capacity-building and training for seafarers and local communities.
- Engaging with Caribbean partners for regional collaboration and resource mobilization.
- Contributing findings to the IMO's Experience-Building Phase on URN.

Costa Rica – a regional hub for ocean governance

In Costa Rica, the workshop engaged representatives from government agencies, port authorities, universities and other stakeholders. They acknowledged Costa Rica's rich marine biodiversity and the country's role as a regional data hub and policy leader, fostering collaboration with neighbours like Panama, Colombia and Ecuador.

Participants outlined next steps for action:
- Update the work of the national task force to coordinate URN mitigation, with scientific leadership from academia.
- Build on initiatives such as ONDAS, a remote underwater acoustic surveillance network that records the soundscape of several marine communities.
- Leverage existing tools like HearMyShip and Innocena to boost public engagement and inform real-time action.
- Strengthen marine governance via platforms such as the National Marine Commission, enabling coordinated, multisectoral implementation.
- Raise awareness and develop capacity of seafarers, fishers and industry actors to drive inclusive change.

About the GloNoise Partnership

The GloNoise Partnership[3] aims to reduce underwater noise from shipping and mitigate its negative effects on marine ecosystems and their living resources. The project assists developing countries in building capacity to implement the revised IMO Guidelines for the Reduction of Underwater Noise from Commercial Shipping (MEPC.1/Circ.906/Rev.1), gather more data to support IMO's policy dialogue, and develop an online toolkit for national-level implementation by experts.

[1] https://glonoise.imo.org/
[2] https://tinyurl.com/yffda5ve
[3] https://tinyurl.com/yxr3amzm

Mexico decarbonisation

Mexico's National Action Plan

The development of Mexico's National Action Plan (NAP) for maritime decarbonisation is officially underway, setting the course for a greener and more resilient shipping future.

GreenVoyage2050 Programme

Spearheaded by the Mexican Secretariat of the Navy (SEMAR), with technical support from the IMO's GreenVoyage2050 Programme[1], the process was formally launched at a national stakeholder workshop held in Mexico City on 21 May.

This event brought together key institutions including SEMAR, the Ministry of Environment (SEMARNAT), Ministry of Energy (SENER), Ministry of Foreign Affairs (SRE), and representatives from national ports (ASIPONAs), academia, industry, and civil society.

Identifying national priorities

Participants engaged in breakout discussions to identify national priorities and opportunities for reducing GHG emissions across the shipping and port sectors. These included adopting cleaner fuels, upgrading port infrastructure, enhancing regulatory coordination, and investing in innovation and workforce development. Discussions also focused on the integration of port decarbonisation with national climate goals and international cooperation on green shipping corridors.

Comment

Rear Admiral Javier Mendoza Rosales, Deputy Director General for Liaison, Implementation, Regulations, Marine Accidents and Casualties, Port Captaincies and Maritime Affairs Unit (UNICAPAM), emphasized the importance of seizing the moment. He commented: '*Mexico has a real opportunity to take advantage of global momentum on maritime decarbonisation. Through this collaboration with the IMO, we can strengthen our regulatory frameworks and build a forward-looking maritime sector that supports both economic growth and environmental sustainability*.'

The workshop also underscored the strategic role of ports in this transition. Actuary Diana Elena Portilla, Executive Director of Maritime-Port Strategic Planning, General Coordination of Ports and Merchant Marine, noted: '*Our ports are pillars of national economic development and their transformation is essential to respond to today's challenges. Through the National Action Plan process, it is possible to align port operations with the country's energy and climate priorities, thus laying the foundations for a greener, more efficient and competitive port system*.'

Recognizing Mexico's vast potential, Subaskar Sitsabeshan, Programme Officer at IMO's GreenVoyage2050 Programme, highlighted the country's strengths and leadership with: '*Mexico's extensive coastline and network of over 100 ports offer a unique opportunity to drive sustainable growth in the maritime sector.*

'*With strong national ambition and cross-sector engagement, GreenVoyage2050 is pleased to collaborate on this important initiative in Mexico – bringing together actors from shipping, ports, and energy to co-create an ambitious, yet practical National Action Plan for maritime decarbonisation*.'

Enhancing national capacity

A strong focus was placed on enhancing national capacity to develop low- and zero-carbon solutions for

ships and ports, including exploring Mexico's potential in hydrogen, ammonia, and electrification. The dialogue highlighted the need for targeted financing, pilot projects, and regional cooperation to unlock long-term opportunities.

As a next step, Mexico will undertake a baseline assessment of GHG emissions from its maritime sector to guide the development of the plan.

GreenVoyage2050 Programme

GreenVoyage2050 is a major technical cooperation programme initiated by the IMO to assist developing countries in reducing GHG emissions from shipping, aligning with the 2023 IMO GHG Strategy.

Phase I of GreenVoyage2050 (2020–2023) supported partnering countries in developing policy frameworks and pilot projects to reduce GHG emissions from ships.

Phase II (2024–2030) continues and expands this support, leveraging funding from the Governments of Denmark, Finland, France, Germany, the Netherlands, and Norway.

[1] https://greenvoyage2050.imo.org/

Cameroon decarbonisation

A national plan

It was reported on 29 May that maritime officials in Cameroon have received essential training to develop a national action plan for cutting greenhouse gas (GHG) emissions from shipping.

Well-represented workshop

A workshop led by IMO in Douala, Cameroon held on 22 and 23 May brought together representatives from the national port authority, government ministries and other stakeholders to focus on aspects of the MARPOL Annex VI treaty, which sets legally binding international regulations to limit air pollution from ships.

Crafting a National Action Plan

The training enhanced participants' understanding of maritime decarbonisation strategies, including the use of alternative fuels and green technologies. It lays the groundwork for crafting of a National Action Plan aligned with the 2023 IMO Strategy on the Reduction of GHG Emissions from Ships*.

MARPOL ratification encouraged

The initiative aims to encourage Cameroon to ratify MARPOL Annex VI, taking into consideration the findings from Cameroon's IMO Member State audit. Annex VI is one of six annexes under the International Convention for the Prevention of Pollution from Ships (MARPOL)**, which is the main global framework for preventing pollution from maritime activities.

Gender inclusivity

Of the 58 participants, 21 were women, reflecting continuing efforts by IMO to promote gender inclusivity in maritime policy development.

Cameroon: a strategic position

Strategically positioned along the Gulf of Guinea, Cameroon serves as a critical hub for international trade. The ports of Douala and Kribi are essential gateways for cargo in central Africa, and their proximity to key shipping lanes underscores their role in global maritime trade. The training is expected to align maritime practices in Cameroon with international climate goals, aiming for net-zero emissions by the end of 2050 while sustaining economic growth.

IMO's ITCP delivery

The training was delivered through IMO's Integrated Technical Cooperation Programme (ITCP) in close collaboration with the Ministry of Transport of Cameroon.

* https://tinyurl.com/2xcxr2x2
** https://tinyurl.com/3xdkuwpv

Port of Freetown, Sierra Leone

Introducing the MSW

A needs assessment mission carried out in Sierra Leone from 26-30 May paved the way for implementing a Maritime Single Window (MSW) system in the Port of Freetown.

The MSW is a one-stop digital platform for information exchange among different stakeholders and agencies involved in processing ship arrivals, port stays and departures. This centralized system simplifies formalities and procedures, reducing both time and operational costs.

Since 1 January 2024*, all IMO Member States are required to implement maritime single window systems in ports to enhance global shipping efficiency.

Needs assessment mission

The needs assessment mission in Sierra Leone was conducted by IMO consultants in collaboration with the Port of Freetown, key government Ministries, public agencies including customs and border control, and other stakeholders. It concluded with a stakeholder meeting to review and validate the findings.

MSW Report in hand

A comprehensive report from the mission will provide the basis for further development of the MSW in the country, in line with IMO principles and guidance, as well as the development of compatible IT tools.

It is expected that the report will include key recommendations as well as a pre- and post-activity survey to evaluate the stakeholder awareness on the technical and operational requirements of the MSW.

IMO's ITCP

This activity was delivered through IMO's Integrated Technical Cooperation Programme (ITCP) with the collaboration of Sierra Leone Maritime Administration.

* https://tinyurl.com/bdxdcrwk

Treating key workers better

By Michael Grey, IFSMA Honorary Member

The evolution of the Maritime Labour Convention over its relatively short existence might be thought of as one of a series of steps, punctuated by the frightfulness of COVID. Its implementation, effective in some administrations, hesitant in others and hopeless in some more useless states, was always bound to be patchy. Let us be frank, some maritime administrations could not be trusted to run a bath, let alone supervise ships and those employed on them. Others have found it difficult to match their ambitions and publicity with actions and things have gone on much as before under their slow-moving aegis.

But despite the general awfulness of the pandemic, when the treatment of seafarers was, with a few exceptions, generally appalling, the implementation of the MLC has been mostly positive. It is, after all, a living convention, with an obligation for review and improvement as and where it is found necessary. There was another positive step in April, with the conclusion of a fifth meeting of the Special Tripartite Committee of the MLC and the adoption of a range of useful measures and improvements. One of the most significant amendments is the recognition of seafarers as "key workers", in respect of whole range of measures such as their safe travel, repatriation, crew changes etc.

This is a step that has been advocated for years, but with its need demonstrated in harsh perspectives with the pandemic, when seafarers were expected to feed and fuel the world, but could not get home, join their ships, or get ashore. That awful period might have been an exception, (or so it was explained), but both before and since seafarers have often been required to jump through all sorts of nonsensical and bureaucratic hoops over their simple need to travel to and from their places of employment. Visa hurdles, immigration restrictions, unnecessary fees and duties, and a bloody-minded refusal to recognise the requirements of international seafarers as in any way special, have all been the lot of members of this workforce.

The MLC has sought to address these problems and the implementation of these latest moves, if people get round to positive action, will be an important part of this improvement of the seafarers' lot. Other accepted amendments take in the important issues around repatriation, access to medical care, and fair treatment. This last item hopefully strengthens the requirement for seafarers caught up in the aftermath of marine casualty, or involved in alleged crimes, to be decently treated. And, goodness knows, there have been enough awful cases where the immediate reaction of the authorities has been to throw casualty survivors into gaol, or treat senior officers of ships where narcotics have been discovered as automatically responsible and condemn them to disgraceful treatment and to ridiculous and cruel gaol sentences.

So, there has been some progress, although its significance will depend very much on implementation, which will surely be incremental and probably too slow for the seafaring "customers" of all this important activity. Authorities which are currently oblivious to the special needs of international seafarers will need to be persuaded, cajoled or perhaps shamed into changing their attitudes, whether or not seafarers turn up announcing their status as key workers. Will ports and terminals which would much rather seafarers were confined to their ships change their unco-operative stance, and facilitate shore leave? Will ship owners and managers recognise that all work and no play make Jack (and Jill) dull and probably be reluctant to sign on again? As always, the good will see the light, while the rest need

to be dragged out of the darkness. And there are some heroes in this hopeful change for the better, in the participants from both the ITF and the maritime employers who have been able to reach consensus and recognise that good working practices are to everyone's advantage.

A special mention must go to the observer organisation Seafarers' Rights International and its indefatigable CEO Deirdre Fitzpatrick, who, over the years, has never given up on the legal and social rights of this over-the-horizon workforce. She points out that there remains plenty more to do, seeing that the MLC, in terms of its enforcement is currently only 65% effective, and that states must "meaningfully implement and enforce these amendments". Which, of course, in our contrasting industry of "good, the bad and the ugly" applies to the MLC in its entirety

This article was first published in The Maritime Advocate Online No 881 of 2 May 2025 and appears here by kind permission of the author and of the editor.

Michael Grey is former editor of Lloyd's List.

Eastern Car Liner Co

Fuel optimisation by Telegraph Agent™ and Cassandra

From Tokyo on 24 April motion control technology company Nabtesco Corporation announced that it had achieved a breakthrough in marine fuel efficiency optimisation. This followed deployment of its new Telegraph Agent™ automatic speed control system on the car carrier *Malaysia Grace*, owned by Eastern Car Liner Co Ltd (ECL).

It is understood that the system was combined with group company DeepSea Technologies' AI-driven optimisation tool Cassandra, delivering a 3.4% reduction in fuel consumption* by automatically controlling vessel speed across key trade routes in Asia, the Middle East and Oceania.

Following this successful deployment, ECL has committed to installing the combined system on its entire fleet.

Comment

N Murakami, CEO of ECL Ship Management Co Ltd, said: '*As the first company in Japan to adopt this technology, we sincerely look forward to further collaboration between Cassandra and Telegraph Agent™. Embracing new approaches is in our company's blood, and the reduction in emissions this project has brought will be hugely valued by our clients*.'

Launched last year (2024), Telegraph Agent™ empowers vessel owners to automatically control main engine output to match an RPM, power or speed specified by the crew.

Correlation between speed and fuel consumption

In tandem, Cassandra provides a highly accurate understanding of the correlation between speed and fuel consumption under a wide range of weather and oceanic conditions. By continuously analysing operational data in real time, Cassandra is said to enable safer and more precise decision-making, identifying fuel-saving opportunities and unlocking the full potential of Telegraph Agent™ to enhance operational awareness across fleets.

The ECL-owned car carrier Malaysia Grace.

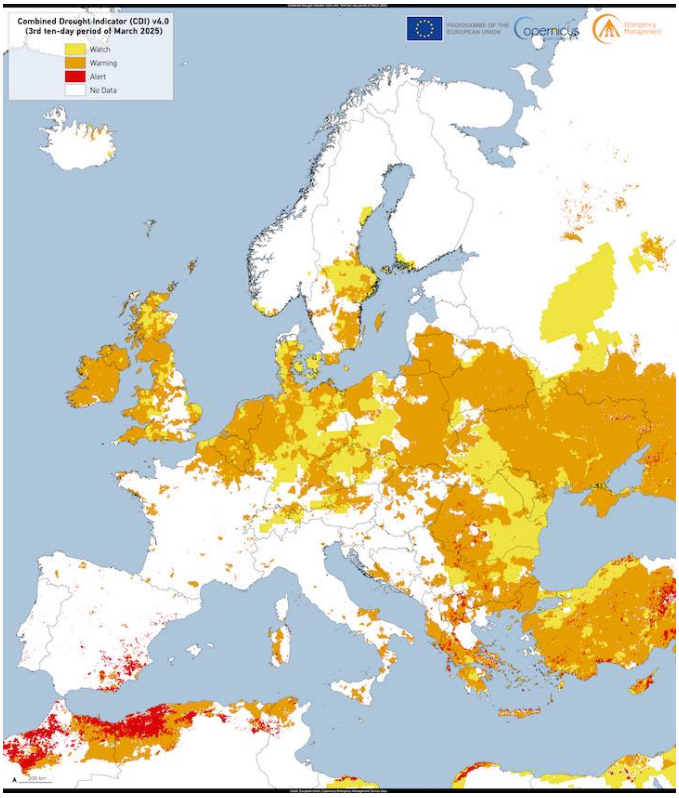
*The 3.4% fuel efficiency gain was validated through a structured ten-day test, alternating Telegraph Agent™ between 'on' and 'off' every three hours.

Analysis confirmed that the average operational speed (17.0 knots) was consistent in both cases. However, when Telegraph Agent™ was active, there was significantly less fluctuation in speed and fuel consumption, clearly demonstrating its effectiveness in optimising engine performance.

ECL corporate video

The Eastern Car Liner Company video is available here: https://tinyurl.com/2r83wjjz

Europe: worsening drought



Drought in Europe map
Credit: European Union, Copernicus Emergency Management Service data. EU ©.

Warmer-than-average temperatures and little rainfall since the beginning of the year are worsening the impacts of drought across Europe, a new *Drought in Europe – April 2025* report* from the European Drought Observatory of the Copernicus Emergency Management Service suggests.

Drought in Europe publication
Published by the Publications Office of the European Union.

EU©.

The latest data have shown decreased river flows and worsening drought conditions across parts of the continent. This can affect local farming, energy production, transportation, and ecosystems.

This data visualisation of the European continent, created with data from the Copernicus Emergency Management Service, shows the Combined Drought Indicator (CDI) for the third ten-day period of March 2025. It shows that some parts of Europe, including areas on the Iberian Peninsula and in southern Europe, were under alert drought conditions. It further shows that much of the continent, especially eastern Europe and the UK and Ireland, were on watch or warning levels for drought conditions during that time period.

Copernicus data plays a crucial role in supporting early warning systems for droughts and in monitoring their impacts across the world.

The 20-page document *Drought in Europe – April 2025* isavailable with the link here:
https://tinyurl.com/m3ryutdz

Maritime Technologies Forum report

Safe Carriage of Electric Vehicles

Addressing safety concerns in maritime transport of electric vehicles

On 10 March from Houston the Maritime Technologies Forum (MTF) announced that it was publishing a comprehensive report with the title *Safe Carriage of Electric Vehicles*, addressing the critical issue of transporting electric vehicles (EVs) on Pure Car and Truck Carrier (PCTC) vessels.

With the increasing number of EVs being transported on vessels and rising safety concerns regarding onboard EV fires, the industry needs to be better prepared to detect, prevent and react to fires on board. It is understood that currently, there are no international regulations specifically dedicated to the safe carriage of EVs.

It is reported that while some national and regional governmental organizations have issued their own guidelines, the IMO is still in the process of developing mandatory regulations for the transportation of new energy vehicles, including EVs, with a target completion year of 2027.

This latest report offers detailed insights into the characteristics of EV fires and provides a framework for considerations necessary to supplement the safe carriage of EVs. The report further highlights the necessity of measures such as those related to early detection, prevention of fire spread, firefighting, evacuation, training, and drills.

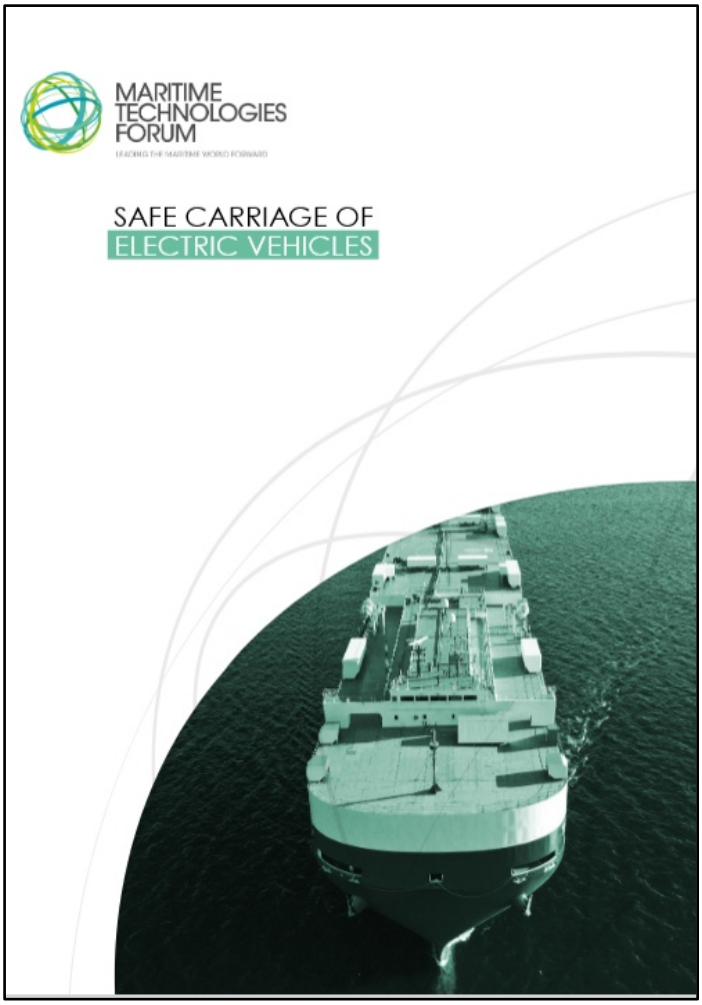
Key Takeaways from the report:

- **Early Detection:** The importance of detecting heated EV batteries (EVBs) early, potentially through a Battery Management System (BMS) on each vehicle that can release alarms and send alerts to the ship's systems.
- **Prevention of Explosion:** Addressing the release of flammable gases during thermal runaway and the need for explosion-proof electrical equipment on the upper deck.
- **Fire Protection and Prevention of Fire Spread:** Emphasizing the isolation of fires, cooling of EVs, and the need for enhanced structural fire protection to ensure safe evacuation of the crew
- **Manual Firefighting:** Portable firefighting equipment should be deployed in the early stages of a fire and removing excess water during operations will be important to maintain vessel stability.
- **Fixed Firefighting Systems:** The comparative review of the characteristics of fixed fire extinguishing systems in vehicle space, as required by SOLAS II-2/Reg.20, was made in an impartial manner, as they each have various advantages and disadvantages.
- **Safety of Crew During Firefighting:** Highlighting the importance of understanding fire

characteristics and car deck obstructions to proceed with manual firefighting and ensure crew safety during firefighting operations.

- **Safety Management System – Training and Drill:** The Safety Management System (SMS) for PCTCs carrying EVs should be strengthened to address characteristics of EVs and EV fires.

In the words of Lars Lippuner, Director of UK Customer Maritime Services at the UK Maritime and Coastguard Agency (MCA): '*This report is a significant step toward safer transportation of electric vehicles. Our goal with this report is to provide the industry with the necessary information to develop effective regulations and safety measures*.'



Hiroaki Sakashita, President & CEO, ClassNK, added: '*By addressing the unique challenges posed by EV fires, we aim to enhance the safety of maritime operations and protect crews, ships and cargoes. This report serves as a starting point for the development of safe carriage practices for EVs and aims to provide valuable information to regulators and industry stakeholders for further development*.'

To view the full report readers are invited to use the link here: https://tinyurl.com/mphvc6uy

About the Maritime Technologies Forum (MTF)

MTF is a forum of Flag States and Classification Societies, established to provide technical and regulatory expertise to benefit the maritime industry. The role of the Forum is to work together on research that it publishes to the maritime industry and draw on regulatory expertise to be able to offer unbiased advice to the shipping sector. It seeks to give guidance on the use of alternative fuels and increased levels of automation in the industry.

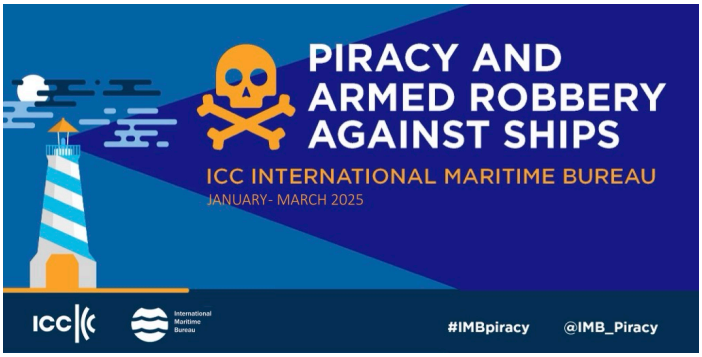
Furthermore, it allows for the safe testing and adoption of new technologies and it helps shape world-leading regulation.

The Flag State administrations include Maritime Bureau, Ministry of Land, Infrastructure, Transport and Tourism, Japan; the Norwegian Maritime Authority; the Maritime and Coastguard Agency, United Kingdom; and the Maritime and Port Authority of Singapore (MPA). Classification Society members are ABS, DNV, LR and ClassNK.

Global piracy and armed robbery

Pronounced spike in low-level crimes in Singapore Straits

The ICC International Maritime Bureau (IMB) has revealed a rise in global piracy and armed robbery in the first quarter of 2025 – driven by a spike of incidents in the Singapore Straits.



A total of 45 cases of piracy and armed robbery against ships were recorded in the first three months of 2025 – an almost 35% increase compared to the same period in 2024.

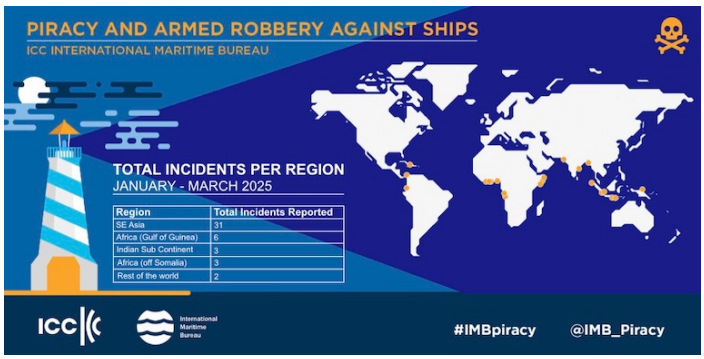
Of the incidents reported, 37 vessels were boarded, four were hijacked and four had attempted attacks. The threat to crew safety remains high with 37 crew members taken hostage, 13 kidnapped, two threatened and one injured.

Rise of incidents in Singapore Straits

The Q1 report highlights a spike in recorded incidents in the Singapore Straits as 27 incidents were reported from vessels transiting these waters compared to seven for the same period in 2024.

While most incidents were considered low-level opportunistic crimes, crew members were at great risk with guns reported in 14 incidents. For the whole of 2024, guns were reported in 26 incidents globally. Ten crew members were taken hostage in six separate incidents, two were threatened and one was reported injured.

Ninety-two percent of all vessels targeted in the Singapore Straits were successfully boarded, including nine bulk carriers and tankers over 100,000 deadweight tonnage in size.



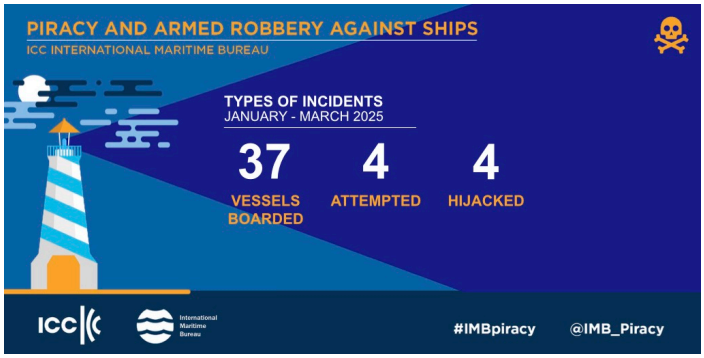
IMB Director Michael Howlett said: '*The reported rise of incidents in the Singapore Straits is concerning, highlighting the urgent need to protect the safety of seafarers navigating these waters.*

Ensuring the security of these vital routes is essential and all necessary measures must be taken to safeguard crew members.'

Caution advised in the Gulf of Guinea

Although the number of reported incidents within the Gulf of Guinea waters and adjoining littoral states continues to be at its lowest in nearly two decades, the IMB urges continued caution as crew members remain at risk.

All 13 kidnapped crew were reported in these waters in two separate attacks – with a total of six incidents reported in the first quarter of the year. In March, pirates hijacked a bitumen tanker southeast of Santo Antonio, in Sao Tome and Principe, kidnapping 10 crew members – while a fishing vessel south of Accra, Ghana, was boarded by armed pirates who kidnapped three crew members.



Howlett added: '*While we welcome the reduction of incidents, the safety of crew members in the Gulf of Guinea remains at greater risk. It is essential to maintain a strong regional and international naval presence to address these incidents and ensure the protection of seafarers*.'

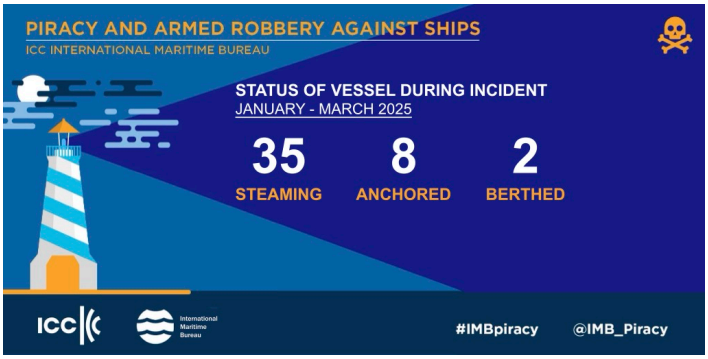
Somali piracy threat remains

Between 7 February and 16 March 2025, two fishing vessels and a dhow were hijacked off the coast of Somalia. In these incidents, 26 crew members were taken hostage, demonstrating the continued capabilities of Somali pirates. Reports indicate all crew have been released along with the vessels.

The IMB advises ships navigating these waters to exercise caution and to strictly follow the latest version of the Industry Best Management Practice (BMP).

About the IMB Piracy Reporting Centre

Since its founding in 1991, IMB's Piracy Reporting Centre has served 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.

The report

To request a copy of the publication *Piracy and Armed Robbery against ships for the period 1 January – 31 March 2025* readers are invited to use the link here: https://icc-ccs.org/

ABS publishes ammonia fuel guide

Insights for ammonia as a marine fuel

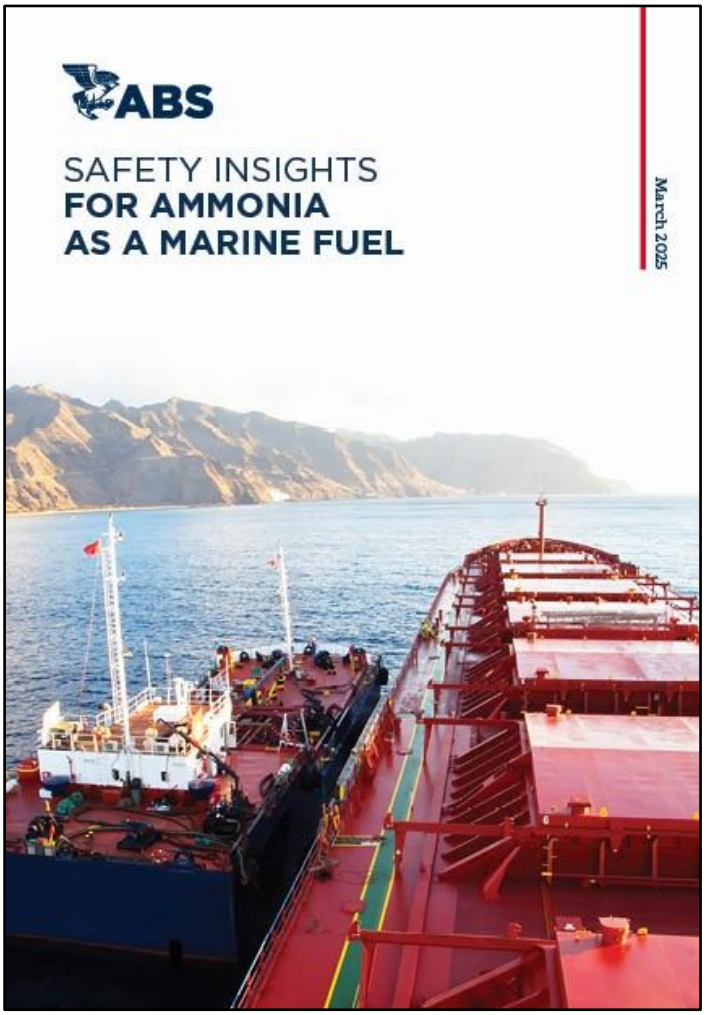
In a statement issued from Houston on 15 May American Bureau of |Shipping (ABS) asked: '*How does ammonia behave when it leaks in an engine room? How does a cloud of escaped ammonia disperse during bunkering operations?*'

These and many other critical safety questions that must be understood if ammonia is to become widely adopted as a marine fuel are addressed in the latest industry-leading ABS research.

Safety Insights for Ammonia as a Marine Fuel brings together the findings of advanced ABS research into the performance of ammonia on board.

Simulations to assess risk

ABS performed computational fluid dynamics (CFD) simulations using advanced tools to quantitatively assess the risks associated with ammonia dispersion in accidental leakage scenarios.



ABS engineers examined realistic bunkering situations such as ship-to-ship, terminal-to-ship and truck-to-ship, as well as ammonia dispersion from the vessel due to a leakage incident in the engine room.

Comment

In the words of Vassilios Kroustallis, ABS Senior Vice President, Global Business Development: '*This publication provides a comprehensive report of ABS' efforts to address the challenges and opportunities presented by ammonia as a marine fuel.*

'*Through detailed analysis of ammonia dispersion studies and emergency evacuation protocols, ABS is contributing to the discourse on safe and supportable maritime fuel alternatives, fostering a culture of preparedness and resilience*.'

Latest industry best practices

In addition to CFD simulation analysis, ABS leveraged the latest industry best practices and advancements in software and hardware – including acoustic cameras for detecting and visualizing ammonia leakage – to provide a thorough, three-part framework for owners and operators evaluating ammonia as a cleaner fuel source:

- Proactive regulatory engagement and risk anticipation.
- Development and implementation of a multifaceted safety framework, combining qualitative and quantitative risk assessments.
- Real-time monitoring and optimized emergency response.

To download a copy of the ABS publication *Safety Insights for Ammonia as a Marine Fuel* readers are invited to use the link here:
https://tinyurl.com/3zeet74h

About ABS

ABS, a global leader in classification services, is focused on delivering a safer, cleaner future for the marine and offshore industries.

For over 160 years, ABS has been setting standards for safety and excellence and continues to innovate in the fields of clean technology, digitalisation and artificial intelligence, providing industry-leading technical advisory services.

With a global network of surveyors, engineers, technology specialists and support staff, ABS works with industry leaders including its members and clients around the world to improve safety in operational performance and efficiency with innovative solutions for the complete life cycle of marine and offshore assets.

Maritime Technologies Forum

2024 Annual Report

The Annual Report 2024 from the Maritime Technologies Forum (MTF) provides an overview of recent reports and events in support of accelerating the safe decarbonisation of the maritime industry.

Released on 14 May this, the first MTF annual report, provides an easily accessible overview of recent

publications and events aimed at promoting the safe decarbonisation of the maritime industry.

Offering expertise

Since its establishment in 2021, MTF members have collaborated to offer technical expertise, regulatory insight, and impartial advice to the maritime industry. MTF has steadily increased its activities, resulting in a growing number of publications, submissions, and events that present insights and explore their implications.

The MTF Annual Report is available for download with the link here: https://tinyurl.com/2wj797s9

Comment

In the words of Lars Lippuner, Director of UK Customer Maritime Services at the Maritime and Coastguard Agency (MCA), and Chair of the MTF Executive Committee: '*Our recent focus has been on operational safety management and the safety implications of emerging decarbonisation technologies*.

He continues by saying that: '*As the pace of change accelerates, MTF will continue to offer guidance on safety management systems, technologies, and associated procedures that enable a safe and sustainable maritime transition, focusing on both decarbonisation and automation as key challenges facing the maritime industry*.'

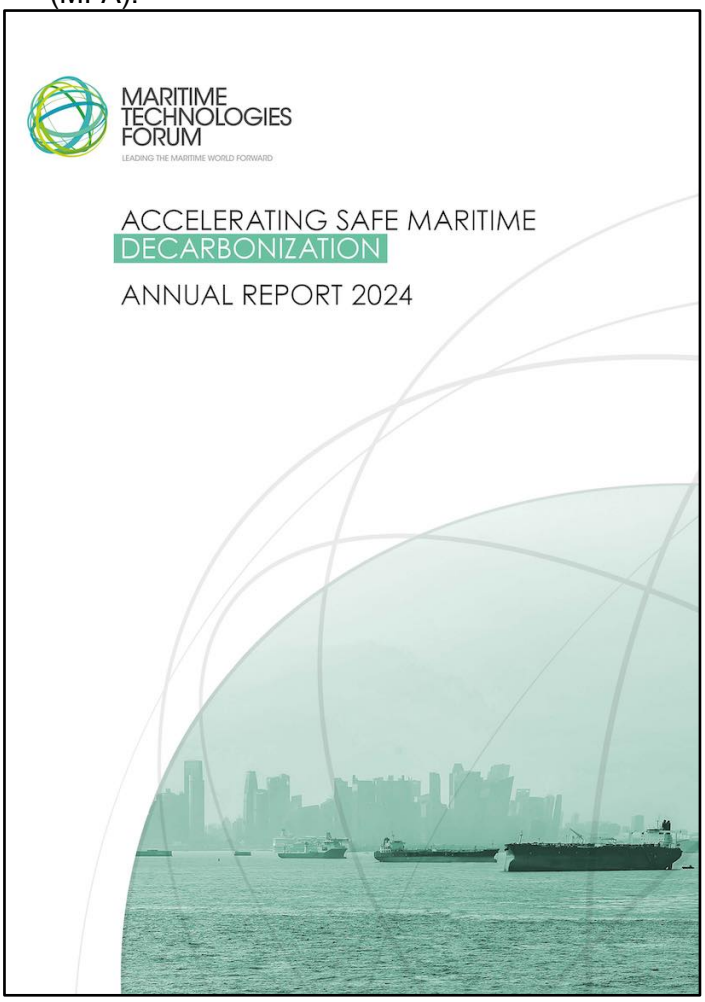
About MTF

MTF is a forum of Flag States and Classification Societies, established to provide technical and regulatory expertise to benefit the maritime industry. The role of the Forum is to work together on research that it publishes to the maritime industry and draw on regulatory expertise to be able to offer unbiased advice to the shipping sector. It seeks to give guidance on the use of alternative fuels and increased levels of automation in the industry.

Furthermore, it allows for the safe testing and adoption of new technologies and it helps shape world-leading regulation.

Flag State administrations include:

- The Maritime Bureau, Ministry of Land, Infrastructure, Transport and Tourism, Japan.
- The Norwegian Maritime Authority.
- The Maritime and Coastguard Agency (MCA), United Kingdom.
- The Maritime and Port Authority of Singapore (MPA).



Class

Classification Society members are ABS, DNV, LR and ClassNK.

Contact of bulk carrier *American Mariner*

Munuscong Channel Junction light

St Mary's River, Michigan

On 28 March 2024, about 0018 local time, while transiting upbound in the St Marys River, about 25 miles south of Sault Ste Marie, Michigan, the bulk carrier *American Mariner* experienced a steering failure and struck the Munuscong Channel Junction Light, a 31-foot-diameter cylindrical concrete structure with an aid to navigation on top.

The vessel began taking on water; pumps stabilized the flooding. None of the 18 crewmembers on board were injured, and no pollution was reported. Damage to the vessel was estimated at $800,750, and damage to the Munuscong Channel Junction Light was estimated at $1.25 million for repairs.

The 730ft loa US-flagged *American Mariner* (Class ABS;15,396gt), a self-unloading bulk carrier

constructed of welded steel, was built by Bay Shipbuilding Company in Sturgeon Bay, Wisconsin, in 1980. Propulsion was provided by two 3,500-hp diesel engines driving a single controllable pitch propeller rated at 7,000 hp. For manoeuvring, the vessel was equipped with an electrically driven bow and stern thruster, each rated at 1,000 hp. The vessel was owned by American Steamship Company and operated by Grand River Navigation, Inc. Grand River Navigation began chartering the *American Mariner* in 2021. The vessel operated in the Great Lakes, typically transporting bulk products such as iron ore, grain, and limestone.

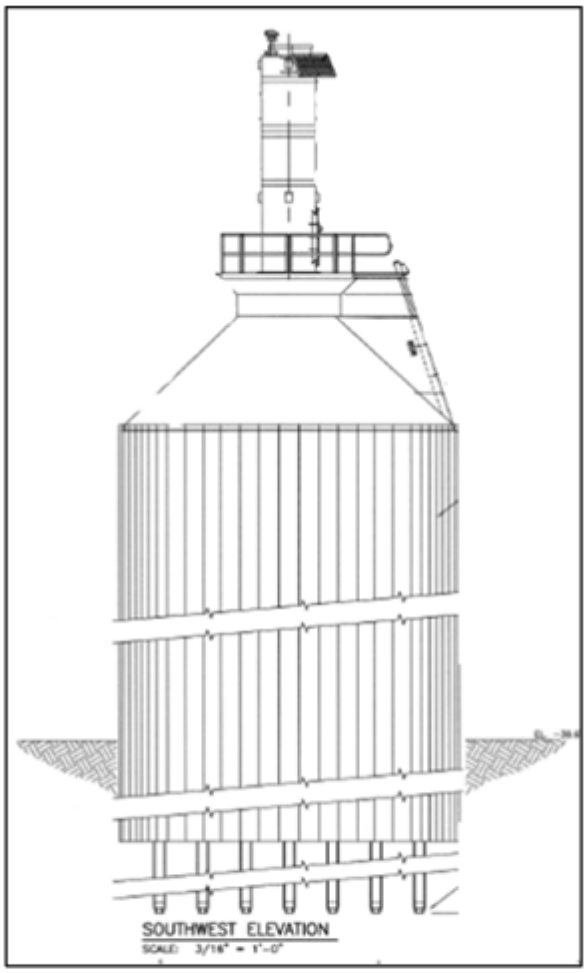


Figure 3. Munuscong Channel Junction Light. (Source: Coast Guard)

The Munuscong Channel Junction Light was an aid to navigation comprised of a navigational light and signal mounted on a fixed structure, located in the St Marys River in Munuscong Lake. It was constructed in 2010 and marked the separation between the upbound Munuscong Channel to the east and the downbound West Neebish Channel to the west.

The structure was a 31-foot diameter cylindrical concrete structure wrapped in sheet pile, bored into the seabed with a lighted navigation aid affixed on top. The lighted navigation aid was a green light, with a flash pattern of two flashes followed by one flash. It was not operational on the evening of the casualty; it was reported to be extinguished on 9 January 2024. The US Coast Guard Local Notice to Mariners contained information about the extinguished light and advised that the ATON's automated identification system was inoperable.

Analysis

The vessel was on its first voyage of the season following its winter layup period, during which hydraulic technicians performed annual preventative maintenance on the ship's steering gear hydraulic system and electronic technicians installed a new steering electronic control system stand on the bridge. Coast Guard inspections and class society surveys, which included testing and inspection of the new steering control system, were completed. Before departing on 26 March the crew completed predeparture functional steering tests.

Figure 7. Upper portion of the Munuscong Channel Junction Light after being struck by the *American Mariner*. (Source: Coast Guard)

Alarms sounded

During the voyage leading up to the contact, alarms for the vessel's steering system sounded intermittently on the bridge while the crew was operating in hand steering and running both steering pumps. Crewmembers investigated the alarms but could not determine the cause, and the rudder appeared to properly respond to input commands. Additionally, the steering hydraulic system was found to be hunting between left and right positions while the two pumps were running. Once electronic technicians recalibrated the steering control system after the casualty, the steering alarms and hunting conditions no longer occurred—indicating likely issues with the newly installed control system's calibration of parameters.

Steering system failed

Immediately after the casualty, crewmembers inspected the steering system and determined that the No 1 control motor (which controlled the stroke of the main hydraulic pump) within the vessel's steering system had failed. The motor was dissembled, and a piece of black, pliable debris was found to be lodged in between the rotating gears of the control motor, preventing it from rotating properly. Once seized, the control motor's corresponding linkages to the main steering pump remained stationary, preventing the main steering pump from changing output pressure and locking the rudder in its last ordered position at 20° left. Once a replacement control motor was

installed, the steering system responded properly to steering commands from the bridge.

Debris in the ship's hydraulics

During a post-casualty inspection of the hydraulic sump, technicians noted a '*fair amount of contamination of unknown materials, both ferrous and non*' within the hydraulic oil. The suction filters were rated at 125 microns, meaning that particles larger than 0.125 millimetres (0.005 inches) would be captured in the mesh of the suction filter elements. Debris found inside the No 1 control motor ranged from about 2–4 millimetres (0.08–0.16 inches) in length. Therefore, since the debris was larger than the mesh size of the filter and would have been captured, the debris likely did not originate from within the hydraulic sump of the steering system.

Extensive analysis

A FTIR analysis found that the two black pieces of debris from the steering system's No 1 control motor and an exemplar O-ring (replaced on the directional valve during the winter layup period the month before the casualty) were PVDF*; however, results from another type of analysis, EDS, differed. Additionally, the colours of the materials differed: the debris found in the No 1 control motor was black and the exemplar O-ring was brown. Because the debris was not an exact match to the exemplar O-rings, it is possible that a similar type of PVDF O-ring used previously within the hydraulic system or a material from another component in the system downstream of the suction filters could have been dislodged during operation.

Figure 1. *American Mariner* underway before the contact. (Source: US Coast Guard)

Therefore, the origin of the debris found in the No 1 control motor could not be positively identified, which indicates that the debris likely came from another hydraulic system component that was circulating through the unfiltered portion of the hydraulic control system.

It cannot be determined whether conditions that triggered the alarms from the newly installed control system and/or the hunting condition contributed to debris that caused the failure of the No 1 control motor. The additional heat generated by, and material wear on, the steering system as it constantly hunted for position while running on two pumps in an attempt to adjust to ordered steering commands could have been potential factors.

Within twenty seconds of noticing the steering gear locked at 20° left, deck crewmembers brought the engine from full ahead to full astern and dropped anchors. The bow thrusters and stern thrusters were not online during the river transit, nor were they required to be. However, even if running, with the vessel's speed about 13 mph (11.3kt), the thrusters would not have effectively changed the vessel's heading. Although the deck crewmembers quickly used all available means to avoid striking the Munuscong Channel Junction Light, they could not stop the vessel or make any corrective course changes.

Conclusions: Probable cause

The National Transportation Safety Board determined that the probable cause the contact of the bulk carrier American Mariner with the Munuscong Channel Junction Light was O-ring-type material debris in the steering gear system's hydraulic oil becoming lodged within a control motor, which caused it to seize, resulting in the rudder locking at its last ordered position.

NTSB report

The full NTSB report *Contact of Bulk Carrier American Mariner with Munuscong Channel Junction Light* is available by the link here:
https://tinyurl.com/u6kwh74c

*PVDF = polyvinylidene fluoride.

Editor's note

This article is based on material kindly provided by the National Transportation Safety Board ©

IMO and WISTA report

Women in Maritime

Lack of gender diversity in maritime

New data

On 16 May *the 2024 IMO-WISTA Women in Maritime Survey* indicated ongoing gender disparity in the maritime sector, sparking renewed calls for action.

The second Women in Maritime survey, jointly published by the IMO and the Women's International Shipping & Trading Association (WISTA), provided new insights into gender diversity within the industry.

This report presented data on the proportion and distribution of women working in the maritime sector from IMO Member States and the private sector.

Results have been based on an analysis of a larger number of women working in maritime across the public and private sectors: 176,820 women in 2024 compared to 151,979 in 2021.

More states participating

In particular, there was a substantial increase in the number of Member States participating. However, the

latest dataset shows that women account for just under 19% of the total workforce sampled, compared to a share of 26% in the catchment group reported in 2021.

Women remain vastly underrepresented

Of the sample group, women account for 19% of the workforce of national maritime authorities in Member States, and only 16% of the surveyed private sector workforce (excluding seafarers). At sea, women remain vastly underrepresented, accounting for just 1% of the total number of seafarers employed by surveyed organisations.

Comment

Arsenio Dominguez, Secretary-General, IMO, said: '*The second IMO-WISTA Women in Maritime Survey provides valuable insights into the sector's progress since the baseline dataset gathered in the 2021 survey. Greater participation in the survey from Member States and industry is a welcome indication of growing engagement with gender matters.*

'*However, there is some way to go. Female representation is still disproportionately low, and women represent a small fraction of the seagoing workforce, highlighting the urgent need for continued commitment and action. We must redouble our efforts to foster a truly diverse and inclusive maritime industry*.'

Elpi Petraki, President, WISTA International, added: '*The Women in Maritime Survey was designed to deliver real data on the state of gender diversity in maritime and offer guidance on the areas that require more attention. The intention is to inspire change and act as a collective call to action.*

'*Attracting, retaining and promoting women - both on land and at sea - remains a priority moving forward. However, the new data also shows how opportunities across the industry continue to be limited for women due to barriers such as gender stereotyping, workplace safety concerns, a lack of family friendly policies and the ongoing gender pay gap*.'

Broad insights

Providing insights into leadership, workforce participation, policies and education in both the public and private sectors, the report highlights significant variances between activities. Greater female representation was found in emerging sectors such as Environmental, Social and Governance (ESG) and decarbonisation services, while others, such as bunkering and legal services, recorded a decline.

The report provides detailed recommendations on how Member States and industry can contribute to improving gender diversity in maritime, by enhancing recruitment and retention initiatives, expanding mentorship and leadership development programmes, strengthening policy implementation and guaranteeing safe and supportive working environments.

Commitment

As part of the commitment from the IMO and WISTA International to enhance gender diversity within the maritime sector, the survey and its findings contribute to the implementation of the fifth United Nation's Sustainable Development Goal (UNSDG5) – to achieve gender quality and empower all women and girls – by providing comparable data to support the development of programmes and policies to encourage female participation within the maritime industry.

The report

To download the full report: *2024 IMO-WISTA Women in Maritime Survey* readers are invited to use the link here: https://tinyurl.com/bdd8pedb

About WISTA International

Formed in 1974, the Women's International Shipping & Trading Association (WISTA International) is a global organisation connecting executives and decision-makers around the world. WISTA International serves as a connector for its network of more than 6,000 professionals from all sectors of the maritime industry.

Today, National WISTA Associations (NWAs) are active in 62 countries, providing in-country and regional networking, business and skill-building opportunities, corporate visibility, and facilitating relationships within the industry.

Each NWA is a member of WISTA International, which guides and cooperates with national associations on upholding the values and aims, and achieving the objectives agreed at the international association's AGM.

Resilience required

By Michael Grey, IFSMA Honorary Member

"You should," advised my financial adviser the other day, "be sure that you keep plenty of cash available." Not, he explained, in accessible accounts in the bank, where one may not be able to get hold of it should their systems "go down" because of various forms of electronic attack, but in legal currency, despite how unfashionable cash has become. It might offer, he suggests "short-term resilience." And it seems good advice, as hackers range freely around the world, whether state sponsored or merely criminally inspired,

with the forces of law and order apparently unable to intervene to protect everything from supermarkets to ships at sea. And on the rare occasions they do manage to catch one of these blighters, they will turn out to have some rare neurological condition that will protect them from the significant sentences they deserve.

“Resilience” is a word which is being employed increasingly in these troubled times, when we are enjoined to equip ourselves with wind-up radios, torches and several days supply of bottled water and tinned goods, just in case. And it is not just malevolent hackers and solar storms we have to be concerned about. In an era where we have become accustomed to smoothly operating logistic chains, with minimum amounts of what the Americans call “inventories” our vulnerability has become multifarious. A notably spectacular illustration of this was the effect upon trans-Pacific trade of the outbreak of the tariff war between the US and China, with one of the world’s great flows of goods coming to a screeching halt within days.

Quite what this was going to mean to the average US consumer was graphically spelt out by the CEO of the port of Los Angeles, who looking out at his almost empty berths, itemised the imminent shortages that people would be soon suffering because of this curious form of diplomacy, the length and breadth of the country. He urged people to get their vehicles in good condition, because in a few days there would be no spares or tyres available, while those contemplating purchases of almost anything from furniture to white goods, mobiles to every other form of device, were advised to hurry to the stores while inventories last, because there would be nothing with which the shelves, once empty, could be re-stocked.

A positive consequence of such a pandemonium as President Trump has unleashed on the world might be that businesses live rather less hand to mouth, although, even if the trans Pacific dust-up concludes, or as seems more likely, simmers down a bit, there will surely be more chaos to come. It might also be that people realise their present complete dependence on the smooth transit of merchant shipping, although that argument could be rather lost in the nonsensical debate about how maritime America can be made great again by somehow building enormous numbers of US-flag commercial ships to replace those constructed efficiently and economically in Chinese yards, subjected to huge taxes if they stray into US waters.

But the demand for greater resilience in a dangerous world comes in so many different forms, from the fragility of our communications, electronic networks and vulnerable energy supply to the need to build everything to anticipate and mitigate natural disasters. It will take more than a torch and a supply of tinned goods, to properly harden our defences against what realistically might confront us in the short or medium term. It might be suggested, from the briefest of glimpses of the geo-political situation worldwide, that we have been given plenty of plain warnings. Just consider how the abilities of a gang of Yemeni pirates to dislocate trade have demonstrated our vulnerability. Look at the potential damage from a few dragged anchors. And many more historical analogies are readily available, should anyone care to dig a little deeper.

Resilience, if we thought about it rather more, would mean the availability of alternatives, for the possible interruption of services that the public depend upon. It is about being prepared for the worst, forgetting about the weasel words of the number crunchers who point out the cost of mitigation, and who tell us that carrying spares and inventories are an unnecessary luxury. It is more than the availability of cash and having tins on the shelf. Access to a locally stationed small nuclear reactor, adequate defences and proper plans by realistic governments surely makes more sense

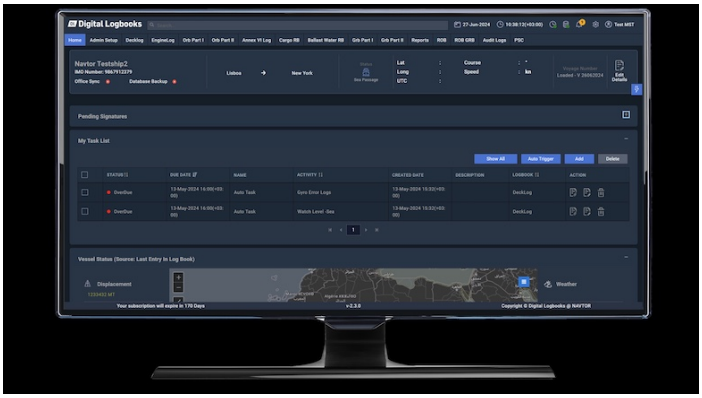
This article was first published in The Maritime Advocate Online No 882 of 16 May 2025 and appears here by kind permission of the author and of the editor.

Michael Grey is former editor of Lloyd’s List.

NAVTOR digital logbooks

Japan-flag approval

NAVTOR continues to build momentum for its digital logbook revolution, with the news that Japan’s Ministry of Land, Infrastructure, Transport and Tourism (MLIT) has awarded full flag state approval for the innovative equipment.



The digital logbook revolution hits Japan with full flag state approval.

Japan joins other shipping nations such as Panama, Liberia, Marshall Islands, Malta, Cyprus and Singapore in endorsing the IMO-compliant offering for registered vessels.

Amitabh Sankranti, Shipping Analytics Director, NAVTOR, calls the development: ‘*a major step forward in the acceptance, and awareness, of the huge advantages of moving log-keeping into the digital age*.’

Transforming tasks

NAVTOR’s offering transforms what many see as an old-fashioned and inefficient practice. Instead of busy crewmembers having to handwrite submissions into books – a time-consuming and error-prone process –

shipping companies can take advantage of seamlessly connected digital logs (both on ship and shore), empowering data-driven decision making, easier compliance and powerful business efficiencies. Crewmembers, meanwhile, make entries with ease, using the secure solution on phones, tablets and computers.

This is reported as a proper approach that has now been installed in more than 1,000 vessels worldwide. Sankranti says approval from Japan will further accelerate adoption.

A new wave of efficiency

Sankranti added: '*Our customers in Japan and across Asia have been eagerly awaiting this flag approval, giving them the go ahead to embrace a revolution in log-keeping*.

'*Choosing pixels over paper takes an unloved format and transforms it into a powerful source of accurate, instant and integrated data, informing decisions that drive operational and business efficiency...*'

Sankranti conclude by saying: '*I'd also like to note that this approval wouldn't have been possible without the dedication of our Japan-based team, who worked closely with authorities to demonstrate complete regulatory compliance, while showcasing the practical benefits of using our digital logbooks onboard. They're now looking forward to sharing the same insights with our valued customers in the region*.'

Early adoption

On that note, NAVTOR reported towards the end of May that it had already reached agreement with major customer NYK Shipmanagement (NYKSM) to transition its Japan-flagged vessels over to digital logbooks.

Speaking about the move, Anubhav Garg, Managing Director & COO at NYKSM reflected: '*We've been watching the development of digital logbooks for some time. The benefits are compelling and dovetail perfectly with our drive to enhance efficiency, ease compliance, build sustainability and provide optimal value for all our business stakeholders. We're delighted that flag state approval has been forthcoming and look forward to realising the anticipated benefits across our advanced vessel fleet*.'

Alongside digital logbooks, NAVTOR offers a range of e-navigation and performance monitoring and enhanced products and services of benefit in connecting vessel and shore-based teams.

Wartime Baltic mine discovery

NATO marks first find of Operation Open Spirit 25

NATO Maritime Command (MARCOM) public affairs reported from Lithuania on 16 May that the French warship FS*Andromede* had successfully located an historic wartime mine in the Baltic Sea, the first to be discovered during the current Operation Open Spirit 25.

This explosive device was found about 38 nautical miles from the Klaipėda port gate, Lithuania, by the French warship, which was at the time sailing with Standing NATO Mine Countermeasures Group 1 (SNMCG 1). The device was destroyed at sea in due course, when a safe moment presented itself.

Destruction of wartime munitions.

Open Spirit is a regular naval operation in the Baltic Sea, led by Estonia, Latvia and Lithuania on a rotational basis since 1997. During this time more than 200 mines, bombs, torpedoes, the remains of 17 sunken ships and two aircraft have been discovered in Lithuanian waters alone.

Open Spirit was created to clear historical sea mines and other live ordnance on the seafloor left over from the First and Second World Wars. The operation also serves as an opportunity for nations to work together, building interoperability and mine countermeasures expertise in a challenging environment

This 2025 version of Open Spirit took place in Lithuania's territorial waters and exclusive economic zone between 9 and 23 May.

Two elements of SNMCG1.

Illustrations per NATO MARCOM ©

Twelve warships as well as divers, minesweepers and underwater teams from thirteen NATO countries took part. The aim has been to continue clearing the seabed of mines and other ordnance left over from the two world wars, reducing the risk to maritime navigation, fishing and the environment.

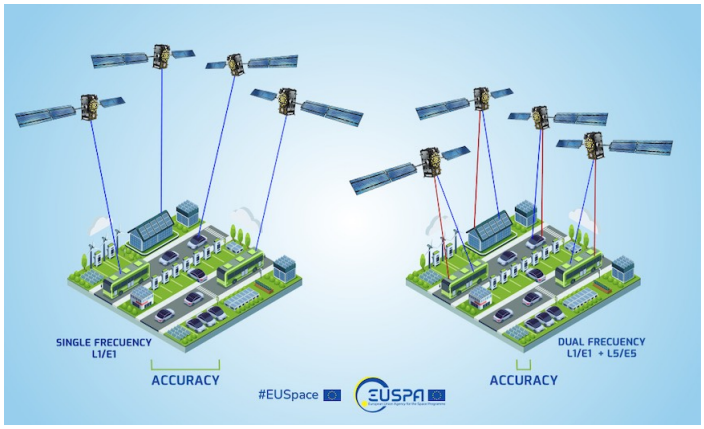
The Galileo Constellation

Testing devices' satellite navigation performance

In an advisory note of 23 May the European Union's Agency for the Space Programme (EUSPA) indicated: '*Having a Galileo-enabled phone provides the advantage of more satellite signals for calculating your position.*

'*With the Galileo constellation now having a significant number of operational satellites (in particular, 27 satellites are operational and contributing to service provision) along with GPS and other GNSS, your device can achieve better location accuracy and faster fixes, especially in challenging urban environments where signals can be obstructed.*'

The advice continued: '*As Galileo is integrated directly into the smartphone hardware, your phone needs a chip that can track Galileo signals to be compatible. Fortunately, most modern smartphone chips support multiple Global Navigation Satellite Systems (GNSS), meaning they can use data from various constellations. The key is to know which constellations your phone is actually using. Manufacturers like Broadcom, Qualcomm, Intel, and Mediatek continue to integrate Galileo into their chips, which are used in many leading smartphones.*



Having a Galileo-enabled phone provides the advantage of more satellite signals for calculating your position.

'*Android users have a range of applications, many of them free, to determine if their phone is currently utilizing Galileo, GPS, or GLONASS satellites for positioning. Here is a list of apps that will help you to check GNSS performance:*

There then followed a series of sub-sections to illustrate test tools

GPSTest: This open-source app displays real-time information about the satellites users' devices are communicating with, including GPS (indicated by the American flag), Galileo (EU flag), GLONASS (Russian flag), and BeiDou (Chinese flag), as well as regional systems such as QZSS (Japanese flag) and others. If a Galileo satellite has a 'U' next to it on the status screen, the user's device is actively using it for positioning. It can be downloaded from the Google Play Store here: https://tinyurl.com/mtj3xpeu

Or downloaded from F-Droid:
https://tinyurl.com/yzzhs6es

GNSS Logger: This is a tool designed to record raw GNSS measurements from Android devices. Essentially, it allows developers and researchers to collect detailed data (navigation message, pseudo-ranges, carrier phase...), directly from the phone's GPS, Galileo, GLONASS, BeiDou, and other satellite receivers. The app itself primarily focuses on the collection of this detailed GNSS data for later analysis with other tools, such as the GNSS Analysis app (it reads the GNSS raw measurements collected and uses them to analyse the GNSS receiver behaviour; more information on this app can be found here). Users can download it from the Google Play Store.

GNSS Status (GPS Test): This app provides comprehensive information about all GNSS supported by your device, including GPS, GLONASS, Galileo, and BeiDou. It shows satellite locations, signal strength, and can display GPX files with various map services. Again, it can be downloaded from the Google Play Store.

GalileoPVT: Developed as an unofficial project by engineers at the European Space Agency, this app visualizes Galileo satellite navigation signals. For compatible devices, it uses raw signals from Galileo satellites to calculate position independently and compares it with GPS and the internal Android location. It also features an augmented reality view to see where Galileo satellites are in the sky. It can be downloaded from the Google Play Store.

GNSSTest: This professional app, designed for testers, supports various constellations, including GPS (L1/L5), Glonass, QZSS (L1/L5), BeiDou, Galileo (E1/E5), and NavIC (L5). It offers features for functional and performance testing, NMEA and raw data recording, and CEP (Circular Error Probability) calculation. This app can be downloaded from Aptoide:

https://gnss-test.es.aptoide.com/app

GNSS Viewer: This app essentially lets the user see and understand the satellites that the mobile phone (or other GNSS-enabled device) uses to determine its location. It shows where the GPS, GLONASS, Galileo, BeiDou and QZSS satellites are in the sky right now (or at a specific time). In addition, it tells users which specific satellites the device is currently using, it gives information about the accuracy of the device location based on the positions of these satellites and allows users to filter which satellites they want to see (e.g., only GPS satellites). It can be download from the Google Play Store.

It has to be noted that iOS apps do not offer a public library for developers to create their own apps and

read the raw data coming from GNSS. On iOS, it is not possible to know where the position comes from or how it is calculated. An APP available and trustworthy both for IOS and Apple is the following:

GNSS view: The GNSS View app allows users to visualize the Quasi-Zenith Satellite System (QZSS) and other positioning satellites like GPS in the sky at a specific time and location. It offers a Position Radar screen and an AR Display screen to view satellites, allowing users to specify satellites, signals, and elevation mask angles. The app does not collect any user data. It can be downloaded from the App Store. It is also available for Android, from the Google Play Store. The Android version of GNSS View provides a radar view and an augmented reality view of positioning satellites such as QZSS, GPS, GLONASS, BeiDou, Galileo, and SBAS at a specified time and location. The satellite positions are calculated based on publicly released orbit information, not directly from the phone's receiver. Users are able to specify which satellite systems and signals to view.

One final word of advice from EUSPA: '*Keep exploring these apps to observe how Galileo improves your phone's location accuracy*'.

About Galileo

Galileo, the EU's Global Navigation Satellite System (GNSS), provides improved navigation, positioning and timing information. More than 4 billion users are already benefitting from Galileo.

The Galileo Programme is owned by the EU. The European Commission, as the Programme Manager, oversees the implementation of all activities.

EUSPA is responsible for the operational management of the services, ensuring that they are delivered with the defined performance and without interruption.

Galileo's system design and system evolution are entrusted by EUSPA to ESA.

More valuable information is available at the EUSPA website here: https://www.euspa.europa.eu/

Editorial note:

The material here is based on material kindly provided by the European Union Agency for the Space Programme (EUSPA) hereby acknowledged as the source.

Galileo Service Performance reports

Q4 2024

On 23 May the EUSPA reported that the Galileo Open Service (OS), the Galileo High Accuracy Service (HAS) and the Full Operational Capability Search and Rescue (SAR) Service Performance Reports for Q4 2024 had been published.

These reports for Q4 2024 are available on the EUSPA website in the Performance Reports section, providing the status of the Galileo constellation and the achieved performance.

Readers may wish to use the link here:
https://tinyurl.com/z3uz5xnk

These quarterly reports provide users with the latest performance statistics on the Galileo OS, HAS and SAR/Galileo, measured against their Minimum Performance Levels (MPLs) as outlined in their respective Galileo Service Definition Documents: OS-SDD, HAS-SDD and SAR-SDD. All SDDs can be found here.

The quarterly reports provide information to users on parameters such as:

Galileo OS: Ranging Performance, Galileo UTC and Galileo-GPS Time Offset (GGTO) Dissemination and Determination Performance, Galileo Positioning Performance, the Timely Publication of NAGUs (Notice Advisory to Galileo Users).

Galileo HAS: Accuracy and Availability of the HAS corrections, and Service Coverage.

SAR/Galileo Full Operational Services: Forward Link Service, Detection and Location Performance, Return Link Service, Return Link Message (RLM) Delivery Latency and Reception Probability Performance, European MEOLUT and Space Segment Availability Performance.

Highlights from Q4-2024 Public Performance Reports:

During the reporting period, the measured Galileo OS, HAS and SAR performance figures exceeded their MPL thresholds, specified in the OS-SDD, HAS-SDD and SAR-SDD.

Key highlights:

Open Service - Galileo Open Service Ranging Performance:

Per-slot **Availability of Healthy Signal in Space** for each Galileo operational satellite: average monthly values at least equal to 99.63% for every Single-Frequency and Dual-Frequency combination, above the MPL threshold (92%);

Galileo Signal in Space Ranging Accuracy for individual space vehicles: monthly accuracy between 0.14 [m] and 0.50 [m] for Dual-Frequency combinations. For Single-Frequency observables, the accuracy was in the range of 0.33 [m] to 1.61 [m]. Compliance with the MPL target (threshold is 7 [m]) was achieved with considerable margin by all satellites of the Galileo constellation;

Worst-satellite ranging accuracy, Global Average at 99.9% confidence level: values between 0.28 [m] to 1.03 [m] on Dual-Frequency combinations. For Single Frequency observables, values are between 0.69 [m]

and 2.22 [m]. Since December 2023, such ranging accuracy at high confidence level is subject to MPL targets: as Global Average: < 10 m (SF, DF) and for Worst User Location: < 20 m (SF, DF). Compliance with the MPL target was achieved with significant margins;

Average Ranging Accuracy at constellation level (over "All Satellites"): figures "per signal" better than or equal to 0.20 [m] for Dual-Frequency signal combinations 0.75 [m] for Single-Frequency signals. Achieved results at least one order of magnitude better than the MPL threshold (2 [m]).

Galileo UTC and GGTO Dissemination and Determination Performance: achieved good values for the UTC Time Dissemination Service Accuracy, the UTC Frequency Dissemination Service Accuracy, and the GGTO Determination Accuracy.

Galileo Positioning Performance: met both Position Dilution of Precision (PDOP) and Positioning Service availability target values by a significant margin;

Timely Publication of NAGUs for the OS: issued 7 NAGUs during the quarter, meeting timeliness requirements (target to issue a NAGU at least 48 hours before the start of a scheduled event, as well as not more than 30 hours after the occurrence of an unscheduled one). The most recent OS-SDD in force, applicable since December 2023, foresees 15 hours of maximum delay in the notification of unplanned NAGUs related to service recovery).

High Accuracy Service:

Accuracy of the HAS Corrections provided via terrestrial dissemination (IDD) and via SIS for:

Orbit was better than or equal to 0.15 [m] for Galileo and 0.19 [m] for GPS satisfying the MPL thresholds (0.20 [m] for Galileo and 0.33 [m] for GPS);

Clock offset was equal to 0.07 [m] for Galileo and 0.10 [m] for GPS in compliance with the MPL targets (0.12 [m] for Galileo and 0.15 [m] for GPS);

Code bias was better than or equal to 0.31 [m] for Galileo and 0.35 [m] for GPS. Compliance with the MPL target (threshold is 50 [m] for both Galileo and GPS) was achieved with considerable margins.

Availability of the HAS Corrections provided via terrestrial dissemination and SIS exceeded 94.55% for Galileo-only corrections (above defined MPL target of 87 %) and not lower than 98.75% for Galileo + GPS corrections;

Service coverage: Service coverage was 100% over the whole reporting period considering HAS corrections dissemination both via SIS and using IDD;

Timely publication of NAGUs for the HAS: during the quarter, 3 NAGUs were issued.

Full Operational SAR/Galileo Service:

Availability of SAR/Galileo:

Forward Link Service: achieved 99% MPL target throughout the reporting period, with a yearly normalised value of 99.97%;

MEOLUT facilities in "Nominal" mode: the availability figures for all EU MEOLUT facilities met the required MPL target in "Nominal" mode achieving values above or equal to 98.3% (MPL threshold being 95%);

Return Link Service: was above 99.81% every month of the reported period (MPL set to 95%);

SAR Transponders: the Availability of the SART achieved excellent levels of performance: short-term (monthly) figures achieved 100% for all the other transponders, over the whole quarter. Due to the normalisation over 12 months foreseen by MPL definition, over the reporting period we still have to declare a non-compliance for the availability of SART on-board of GSAT0201 (92.60%) and of GSAT0202 (87.45%), given that MPL target is set to 95%.

Performance of:

Detection Service: is in line with requirements in the ECA(see section 3.1 Figure 3 in the SAR SDD), with monthly values of a valid message detection probability after a single transmitted burst equal to at least 99.9% for all the REFBEs, while the MPL target is 99%. On the other hand, within IOCA the MPL measurement slightly drops below the common target: in November being equal to 98.6% at La Réunion, while in December achieving 98.3% at both La Réunion and Kerguelen;

Location Probability: meets the MPL in both the ECA and the IOCA (see section 3.1 Figure 3 and Figure 4 respectively in the SAR SDD): above or equal to 95.6% for single-burst for all REFBEs, where the MPL target is 90%, and above or equal to 99.0% after twelve transmitted bursts (multi-burst) for all REFBEs, where the MPL target is 98%;

Location Accuracy within 5 km: exceeds the MPL in the ECA, with monthly values above or equal to 95.9% for single-burst and above or equal to 99.0% for multi-burst transmission, while the MPL targets are respectively 90% and 95%. Same targets apply for the IOCA, where La Réunion is marginally below multi-burst target in December, achieving 94.8%, while both La Réunion and Kerguelen fail to achieve target for single-burst during the whole quarter: monthly values in October, November, December are respectively 87.4%, 87.0%, 84.7% for La Réunion, and 87.1%, 88.3%, 85.6% for Kerguelen.

Return Link Service:

Delivery Latency within 15 minutes: above or equal to 99.88% and an average of 99.93%, for an MPL target set to 99%;

Reception Probability: above 99.93% in every month of the reported period and an average value of 99.97% (MPL set to 99%).

For more information

For the most up-to-date information on the Galileo system and constellation, visit the European Union GSC website (**https://www.gsc-europa.eu/**)in particular, the Galileo constellation status section to be found here: https://tinyurl.com/6ptndwmr

Readers wishing to receive NAGUs and notifications about new Galileo publications, readers are invited to register on the GSC web portal and subscribe to the newsletters using the link here:
https://tinyurl.com/ycvm39r5

Editorial note:

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First of its kind liquified CO_2 barge

ABS approves for US operation

On 22 May ABS announced from Houston that it had awarded approval in principle (AIP) to Overseas Shipholding Group, Inc. (OSG), the parent company of Aptamus Carbon Solutions, for its preliminary design of a liquefied carbon dioxide (LCO2) barge.

Development of the barge design is a core component of the Tampa Regional Intermodal Carbon Hub (T-RICH) project to receive, store and process emissions from Florida industries for transport to regional sequestration sites.

The articulated tug and barge unit (ATB) is a first-of-its-kind to service carbon capture projects in the US The cargo handling system design is based on medium pressure LCO2 Type-C tanks and is capable of transporting 20,000 mt of cargo. Maximum operating pressure has been determined by track record studies and market trends, and with consideration of loading capacity and holding time.

ABS completed design reviews based on class requirements, specifically including the latest ABS demands for building and classing liquefied gas tank barges.

Rendering of the liquefied carbon dioxide (LCO2) barge.

Illustration courtesy Aptamus ©

Gareth Burton, ABS Senior Vice President, Global Engineering, commented: '*The safe transportation of CO2 plays a vital role in the carbon value chain, and ABS is proud to use our expertise as the world's leading classification society for gas carriers to support this milestone project for U.S. operations*.

'*This AiP represents another historic milestone in Aptamus' journey to lead the development of CO2 storage and marine transportation in the United States," said Jeffrey Ross Williams, Aptamus President. This ABS AiP is another big step in our journey to lead the US maritime industry in designing the technology required for success in our nation's emission reduction goals and in pursuing new and expanding business opportunities in the global energy transition*'.

Kent Merrill, Aptamus Vice President of Marine Projects, added: '*Aptamus is proud to have developed the first known LCO2 vessel specifically designed for operation in the coastal waters of the United States*.

'*Articulated tugs and barges (ATBs) are popular and effective in the US for the carriage of petroleum products for several reasons, and those advantages hold true for LCO2 vessels as well.*

'*We look forward to the continued detailed development of the design, including designing the tug to utilize green methanol or other green fuels and technologies.*

'*We thank ABS for their valued partnership on this project, as well as other engineering contributors like Corban Energy Group and Herbert Engineering Corporation*.'

Technip's *Deep Blue*

Repair and renewal in Gibraltar

At the end of May it was announced from Gibraltar that Gibdock has completed a significant assignment in the offshore market, after Technip entrusted the Gibraltar yard with the repair and renewal of *Deep Blue* – the flagship in its specialised pipelay and subsea construction fleet.

Technip relocated *Deep Blue* from the US Gulf for the works, also redeploying the asset outside Europe following completion of works.

A well-known participant in ultra-deepwater field developments, *Deep Blue* carries an array of reel-lay, J-lay, and flexi-lay technologies. Featuring twin 2,800 MT capacity reels, the vessel lays pipes and cables at depths of up to 3,000metres (9,842 feet).

In the scheduled drydocking, Gibdock undertook steel and piping renewal works, hull and tank surface blasting and recoating, and the machinery overhauls to ensure *Deep Blue* remains in peak condition for the coming five years.

To quote John Taylor, Managing Director, Gibdock: '*We are proud to have welcomed Deep Blue and once again work with Technip on a significant project*'.

As part of the project, *Deep Blue* was raised 3.7m to rest on 428 blocks in Dock No1, to enable removal and overhaul of the ship's eight thrusters. Continuing round the clock, seven days per week, works engaged around 600 personnel overall.

John Barnard, Commercial Director at Gibdock, added: '*This was a highly successful project and an excellent example of the benefits of close collaboration with the client on planning and open dialogue throughout*.

'*We look forward to future opportunities to work with Technip by meeting the service excellence such a prestigious client requires*.'

Completion continues a steady stream of work for Gibdock with leading offshore clients that showcases the yard's efficiency. Despite an exceptionally busy period for the yard that has been heightened by strong demand for seasonal ferry work, Deep Blue was immediately followed into dock by a pipe layer from another returning offshore owner. Gibdock is also overhauling a jack-up platform bound for Australian waters.

Barnard added: '*Our strategic location at the gateway to the Mediterranean, our experienced team, and our commitment to excellence ensure that we are regularly preferred for offshore vessel maintenance and repairs.*

'*Alongside our work with owners of container ships, LNG carriers, bulk carriers, ferries, cruise ships, yachts and our defence vessels, we deal with offshore customers all over the world. Our experience is that once these highly discerning clients use Gibdock, they choose us again as opportunities arise*.'

Gibdock is ideally positioned to serve offshore vessels transiting between Europe, Africa, and the Americas. Its deepwater access, modern drydock facilities, and skilled workforce make it a preferred choice when asset owners require top-tier maintenance and repair services with minimal downtime.

Technip's corporate video is available here: https://www.technipfmc.com/

Emergency response to incidents at sea is vulnerable

Dutch Safety Board report

According to a report issued on 22 May the system for responding to incidents in the North Sea needs to be put in order as soon as possible. That will require improved communication and information sharing between the Netherlands Coastguard Centre and its cooperating organisations on shore.

This was the conclusion of the Dutch Safety Board in its investigation of the emergency response to the fire that broke out on board the car carrier *Fremantle Highway* during the night of 25 / 26 July 2023.

Problems in the emergency response system are not prioritised, because they do not seem serious enough when considered on their own. Vulnerability of the system only becomes apparent when there is a complex request for assistance that demands coordinated action on the part of multiple coordinating organisations in the emergency response chain, both at sea and on shore.

Mandated director

Erica Bakkum (Dutch Safety Board member) had this to say: '*The Dutch Safety Board has repeatedly pointed out in recent years that the Coastguard Centre is insufficiently capable of assuming control when it needs to collaborate with other parties.*

'*It does not help that several ministries share administrative responsibility for the Coastguard. That setup makes it harder to take rapid action. We therefore advocate the appointment of a mandated director who can coordinate the necessary improvements in the response to emergencies.*'

For too long, the focus was on firefighting, rather than on a search and rescue operation

In the case of the *Fremantle Highway* incident, the emergency response focused for a long time on fighting the fire rather than rescuing those on board. In the meantime, seven people jumped overboard and were seriously injured; one of them eventually died. The remaining sixteen people on board were ultimately airlifted off by helicopters.

The initial focus on firefighting and the limitations in sharing information meant that the Security Regions were not sufficiently prepared for the arrival of the sixteen casualties from the helicopters, who also required medical care. There was therefore a delay in transporting them to hospitals in the region.

Recommendations

If it is to be properly prepared for future incidents at sea, the emergency response

system must be put in order as quickly as possible, the Board said. That will require various improvements, as

regards both the Coastguard and the relevant safety regions.

To prevent current and future problems from continuing the Dutch Safety Board made the following recommendation.

To the Minister of Infrastructure and Water Management, the Minister of Defence, and the Minister of Justice and Security

1. Commit collectively to putting the emergency response system in order as quickly as possible and ensure that it remains so, in preparation for future incidents at sea.

Appoint a specific, mandated director to coordinate the necessary improvements.

Make improvements as regards at least the following points:

a. The digital exchange of information between the Coastguard Coordination Centre and the relevant partners in the emergency response chain, for example by linking it to the Integrated Communication and Information System for Emergency Communications Centres.

b. The Coastguard Coordination Centre's assessment and decision-making processes, training and exercises, by having them link up with and, where appropriate, conform with the onshore crisis management system.

c. The way a picture is acquired of incidents at sea, at least by properly requesting information when an incident is reported and by enabling faster perception based on first-hand observation of incidents.

d. The preparedness of relevant safety regions for receiving a large number of casualties from an incident at sea.

In the Board's investigation it was found that it is unclear which scenarios actually require deployment of the maritime firefighting team. The investigation also showed that the emergency response in the *Fremantle Highway* situation involved an undesirable degree of interference between the tasks of maritime firefighting and rescue.

With a view to preventing unwanted interference between different tasks in the future, the Board made the following further recommendation:

To the Minister of Infrastructure and Water Management

2. Develop an approach for preventing and dealing with undesirable interference between the provision of assistance at sea and other (Coastguard) tasks.

Apply that approach in any case so as to clarify which scenarios actually require deployment of the maritime firefighting team and to address the issue of possible interference between the team's deployment and the rescue of persons on board in the context of those scenarios.

The report

To view a summary on the investigation: *Emergency assistance Fremantle Highway* readers are invited to see here at fourteen pages:
https://tinyurl.com/yc4euhbs

Dozing to disaster

By Michael Grey, IFSMA Honorary Member

As a story in the general press, it all seemed a bit of a laugh. The deep-sleeping Norwegian in his pretty cabin on the Trondheim Fjord, oblivious to a "huge" ship running ashore a few feet from his bedroom. He required an urgent call from his neighbour to alert him to the fact that the 886 teu feeder containership *NCL Salten* had come to call and was probably going to stay for a while. It produced some excellent photographs to brighten up the weekend. Nobody was hurt and there was no pollution.

You might suggest it was almost a "good news" story. Except that it really is not funny, as this sort of accident is happening far too often and while this one resulted in a lot of bent steel and the second mate being arrested by the police and confessed to nodding off at a crucial navigational juncture, others have far worse consequences. You have to wonder, how many hurrying feeder ships in the frantic European distribution network there are, being driven, in dawn's early light, with a tired officer of the watch fighting off sleep. Each, impressed by the need to maintain the schedule, but some just unable to remain alert, saved by the fact that at the crucial moment, there was no traffic, shoal or an alter-course position coming up.

We had a horrible reminder of this a couple of months ago off the mouth of the Humber with the *Solong* crashing into the anchored *Stena Immaculate* to wreck both and kill one of the containership's seafarers. But you do not have to probe the records for long to find plenty of other groundings and collisions where a lone watchkeeper, exhausted, distracted or asleep, has failed to keep the ship safe. There has been no shortage of clever ideas to keep watchkeepers awake and alert; from movement alarms to marine versions of the "dead-man's handle," but people annoyed or bored by the inhumanity of a device that treats a sentient human like a battery chicken, just turn them off. And there is no getting away from the fact that the odds are stacked against tired people preventing their minds wandering, or just surrendering to the circumstances.

A warm wheelhouse, all sealed against the outside environment to protect the fragile electronics against the sea air. The comforting hum of the machinery, the hypnotic scan of the radars, the thrum of the diesel and the rocking of the sea. Good grief; if you are a

person who suffers from sleeplessness, this is the perfect recipe for sending you off. And above all, the design of the modern bridge, where the brief seems to have been to make a watchkeeper's life less of a challenge, requiring less skill and, just like life ashore, fixated by screens. Crammed with consoles and instruments, with insufficient space to pace up and down, dominated by that "posture-perfect" chair, situated just where a sensible person might wish to stand and examine the bearing of a light or judge a collision risk. To people of a certain vintage, who kept watch entirely on their feet, and knew that to sit down in the pilot chair or chart-room settee was to risk the sack, the presence of such chairs in the modern wheelhouse is an anachronism.

How can any watchkeeper stay awake if they sit on that? But then, we are told by sincere and well-meaning operational managers – people today just will not tolerate having to stand for their watch. And to do them justice, a six-hour watch, with a sleep pattern interrupted by port calls ad infinitum, with accommodation that is probably vibrating and noisy, is not what would be recommended for either a long life or a satisfying career. Watchkeeping masters, not enough support on board, ferocious and unforgiving schedules all combine, we are told, to many people being almost zombies by the time their tour ends. But can anything be done other than more fancy instruments and equipment to make the lives of these hard-pressed people less intense? Probably not in a hurry, with Trump-induced congestion all around Europe and the feeders going like the clappers to shift the logistic logjam, while the long-haul tonnage waits at anchorages for a berth. Just make sure the logbook records your rest periods, not counting those in the wheelhouse chair.

Mission statement

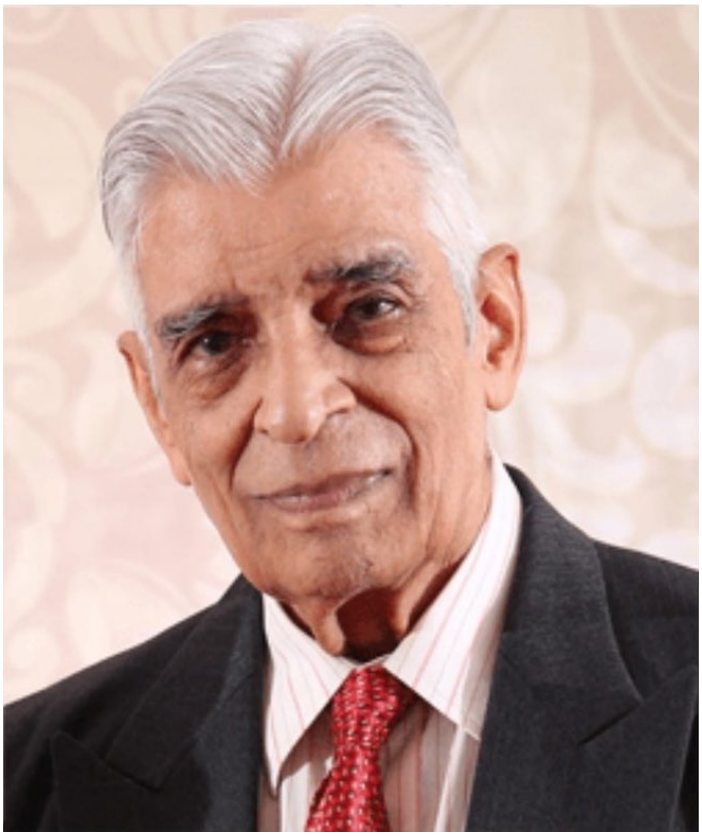
A little card arrives in the post from the Mission to Seafarers summarising what this estimable organisation did in 2024 in over 200 ports across 50 countries, 365 days a year. 48,686 ship visits, encountering 340,802 seafarers. 5,278 SIM cards provided. Transport services provided for 154,436 seafarers.148,243 visits to the seafarers' centres. 2 metric tonnes of knitting distributed. 11,300 shopping trips for seafarers with an estimated value of goods bought of US$917,200 and 879 port-based justice, welfare and medical cases. And on the reverse – a summary of support for seafarers and their families in such places as the Philippines, Myanmar and India, with education, networking events and justice and welfare support. As a concise and very effective explanation of the MtS activities, it makes you breathless just to read it.

This article was first published in The Maritime Advocate Online No 883 of 30 May 2025 and appears here by kind permission of the author and of the editor.

Michael Grey is former editor of Lloyd's List.

Obituary: Captain A. K. Bansal

Capt Ashok Kumar Bansal 1930-2025 passed away peacefully in Chennai India on 2 May 2025.



He will be sadly missed as one of the earliest IFSMA individual members.

The youngest Master to take command at the age of 25. ,He he obtained his LLB (Hons) degree at University College, London, Lincoln's Inn Bar.

He established a good relationship with the corporate world, carrying out arbitration in Singapore, Dubai and Turkey. He established a successful water proofing company with fellow mariners; He was fellow of Company of Master Mariners (CMMI), India, and an active participant in Indian shipping debates. He authored an historical treatise on Indian shipping covering the last 2,500 years.

In the business of CMMI I had worked closely with him in early Y2K for which he was recognized for a lifetime achievement award in 2022.

Information kindly provided by Captain Sudhir Subhedar, IFSMA Individual Member.