September 2022 www.nautinst.org

Seaways

The International Journal of The Nautical Institute

The new fuels maze

What do seafarers need to know? **p05**

The Nautical Institute

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Captain John Lloyd FNI Chief Executive

Focus

Recognising excellence

> Our commitment to DP excellence underlines the importance of everyone on board being properly equipped with the skills necessary and pledging themselves to Continuing Professional Development

Preparations for the next tranche of 50th Anniversary technical events and celebrations are well underway. Singapore kicks off September for us and we look forward to an outstanding range of speakers on their theme: *Navigating through a digital age: Towards a Green Future.* At one of the key maritime centres of commerce and influence the event promises to highlight key issues facing industry and mariners. Join us at Temasek Boulevard, Suntec City, Singapore on 1 September.

Next in line will be our event in Perth, Western Australia on Friday 16 September at The ANZAC Club, 28 St Georges Tce Perth. The event there is especially important in the context of the Western Australia maritime economy: *Maritime Leadership in a Changing World – meeting energy challenges of tomorrow/future fuels for shipping.* I am pleased the event has attracted outstanding speakers including a former Senator and a representative from the national regulator, the Australian Maritime Safety Authority.

In Lisbon, our Iberia branch has worked tirelessly to organise their event on their subject: *Over the Horizon – What challenges does the future hold and who will lead us through them?*

The event will include a tour of European Maritime Safety Agency (EMSA) facilities, while the main conference on 21 September will be hosted at the outstanding venue Sociedade Histórica da Independência de Portugal and dinner that evening will include a river cruise on an historical vessel offering wonderful views and dining.

My thanks to all in the branch teams who have put so much effort into developing programmes of great interest to their local communities and that highlight the great work and leadership of The Nautical Institute.

The Ludekke student prize

We are also pleased to recognise individual excellence in maritime studies and the 'Ludekke Prize' seeks to do just that. With a generous cash award and free membership, this is a great opportunity for us to recognise personal commitment while in training.

The award has been refreshed for 2022 and 2023 and will enable The Nautical Institute to recognise up to two students per year who have achieved excellence in their maritime studies while at the same time making a real contribution to other aspects of college or university life.

Both components are key to the award and nominations must be supported by a 'Head of School' or equivalent. The competition is open to learners at any one of the IAMI or GlobalMET institutions, the World Maritime University or enrolled in The Nautical Institute's Command diploma. Further details can be found at: https://www.nautinst.org/membership/the-nautical-institute-ludekke-prize.html

Dynamic Positioning CPD

The Nautical Institute is the most significant provider of certification to Dynamic Positioning Operators and so has an important role to play in helping to maintain professional standards. In Houston, during October, I am pleased to be chairing a session on 'Competency and Lessons Learned' at the annual Dynamic Positioning Conference. Leading experts will share how they ensure competency and safety in their DP operations and support Continuing Professional Development of their mariners.

Offshore qualifications for technical staff

For many years now, The Nautical Institute has actively engaged with centres approved to deliver Dynamic Positioning Training as part of our global and world-leading training and certification scheme for DPOs. More recently we have given additional attention to recognising the experience and qualifications of other technical staff in the offshore energy sector through our Dynamic Positioning Vessel Maintainers scheme (DPVM).

This work provides for a harmonisation and international recognition of the special experience and training the technical teams bring to Dynamic Positioning vessels. Our commitment underlines the importance of everyone on board these vessels being properly equipped with the skills necessary and pledging themselves to Continuing Professional Development. Our DPVM is leading the way in this regard and I am delighted it is already becoming the industry standard for marine engineers and electrotechnical officers in the offshore community.

Ukraine shipment

In closing, I wish to acknowledge the challenges that are being faced by the crews of ships leaving Ukraine with essential grain supplies to the world's food markets. In any conflict area there is always additional risk to the mariner illustrated by the fact special knowledge is needed to guide these ships through the mine fields. We recognise that without their professionalism and commitment these supplies would remain stuck on shore. We wish them safe passage and send our thanks and best wishes.

Reginaldo Pantoja Maritime Pilot, Rio Grande/Brazil

Pilot's column

Time is not enough

Pilotage is an essential service. It requires high-value-added technical expertise, constant training, and teamwork. A high-performance pilotage team ensures safety, efficiency and productivity, and significantly contributes to harmonising maritime trade interests and protecting the sensitive environment of ports.

Specialist operations require skilled and well-trained professionals to perform them. Operating as a high-performance team, whether in pilotage or elsewhere, requires a considerable investment in time and practice, and the use of a defined methodology to reach a level of excellence compatible with the demands of the sector.

According to many training experts, including Malcolm Gladwell in his book *Outliers: Story of Success,* ten thousand hours is the point at which a standard professional acquires the qualities necessary to perform any work with 'master' skill. Let's assume that marine pilots need approximately ten thousand manoeuvres to reach an equivalent level. After reaching this point, the professional should have adequate knowledge to manage any new situations with the competence learned in the last phase. Right?

As an instructor of refresher courses for pilots, I take part in the analysis of accidents where the captains and pilots are professionals, with more than 10,000 manoeuvres experience (10K+).

The size of ships is increasing; so too are the number of port calls and the amount of marine traffic. More challenges are occurring in the marine area near ports. We must be concerned about any maritime accident in pilotage districts, regardless of how many manoeuvres the professional has to their credit.

How to construct an accident ('Just relax')

In any field, some professionals will develop their own style as time passes, sometimes with rather too much flexibility compared to what is demanded in the regulations.

Generally, accidents result from professionals who are operating well within their own comfort zone, using their own style in the belief that they 'know what they are doing'. This reliance on their own skill leads some of these professionals to take an overly relaxed attitude to the procedures recommended in norms/resolutions. Over time, this relaxed methodology increases the margin of error and reduces the possibility for efficient risk management.

As an experienced professional, it can be all too easy to operate in this comfort zone, without paying too much attention to the tools required, which the 10K+ pilot may feel they no longer need. But the 'relaxed' methodology does not consider the stumbles and warnings of near misses. It does not address essential details in time to avoid a future accident. Lessons learned are assimilated more by fright than as part of an established, mandatory process.

Piloting styles that do not adopt the ballast of norms/resolutions impede the development of the essential reflexes necessary to take immediate actions in the event of an error chain. If pilots get into the habit of operating outside the proper methods, then, even with 10,000 operations behind them, they may not be in a position to identify or break an error chain. If they have been operating for many years on 'autopilot', even if they recognise the onset of a problem they may not have the exhaustive training that is needed to react in time.

The more we delve into the analysis of pilotage incidents, the more we find that we can avoid a significant percentage just by applying the simple tools recommended in IMO Resolution A.960 (23), such as the use of 'an information card, form, checklist or other memory aid to ensure that essential items are covered during the information exchange'.

Methodology and risk management

In an analysis of a limited number of accidents involving 10k+ professionals carried out by our organisation, the absence of a checklist and a standard operating procedure stood out among the contributing factors.

It is impossible to apply a standard operational procedure without proper methodology and methodical training, including training in responding to a contingency in time.

In the case of marine pilots, the ability to perform manoeuvres safely is based on the continuous repetition of the technical methodology recommended in norms/resolutions. IMO resolution A.960 (23) must be followed and practised in full on a daily basis by all professionals to whom it applies if it is to have the intended effect of increasing safety and reducing accidents in pilotage practice. It is the master guide for shiphandlers.

Marine pilot refresher courses should prioritise checklists and standard operating procedures. They are essential tools for risk management.

To add safety value to the process, ship handling specialists need proper training and follow-up to help them reach the 10K+ phase with the competence that those operating in congested maritime port traffic expect from them, without succumbing to the risks of complacency. One of the strengths of high-performance teams is that their training is focused on the skills needed to perform the job safely and quickly.

10K+ shiphandlers at their best

The sight of a white-haired 10k+ shiphandler on the bridge can be reassuring. The captains trust them, and their fellow shiphandlers see them as role models.

To make sure that trust is merited, they need to train, adjust, create, share and navigate with the safety mindset of those who know that the game of manoeuvres requires competence to finish successfully.

Manoeuvre after manoeuvre, marine pilots should take the route that turns them into old, experienced and very professional pilots.

Otherwise, as time goes on, they will only be old pilots.

An ocean of change

The Nautical Institute and the GREEN Curriculum

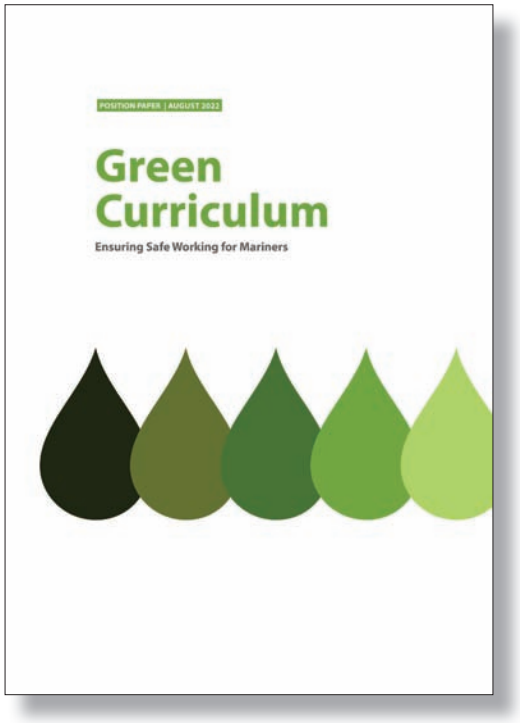
Captain Jeffrey Parfitt FNI
Head of Safety and the Environment, The Nautical Institute

The increasing focus on zero emission shipping is likely to have a considerable impact on maritime operations in the very near future. The shipping industry finds itself in something of a dilemma, with the imminent introduction of 'green' fuel policies leaving most, if not all, shipowners in a 'catch-up' situation in order to meet new requirements – and, perhaps just as importantly, new stakeholder expectations.

On one hand there can be little sympathy for an industry that has remained until recently stubbornly resistant to change. On the other, there is some mitigation given the overall uncertainty surrounding the correct choice of green fuel; a decision that involves huge capital investment and risk.

For a shipowner, selecting the wrong green fuel could prove catastrophic to the business and there is no safety net. A wrong choice could simply result in a termination of business. Further, international leadership has been lacking. There has been no emergence of a singular dominant solution, no easy fix. On the contrary, there has been hesitation and delay, a 'not on my watch' philosophy. The clock is ticking, *'tempus fugit'*, as it invariably does, and the time available to find a solution is becoming ever less.

However, it's not all doom and gloom and there is some good news. It would be fair to say that the lack of guidance has spurred some enterprising ship-owners to grasp the hand lead-line and sound out a safe channel of their own. In previous articles, I have mentioned the likes of Maersk investing in their own dual fuel methanol container vessels and Fortescue Metals Group converting their super-sized bulkers to ammonia fuelled engines. Many more owners are now entering the race, and those already involved are upping the stakes. In the case of Maersk, the company is even investing in its own methanol production facilities to ensure a private fuel supply.



But these initiatives are in isolation. Whilst encouraging, we are only seeing a trickle of change. We need it to become a sea.

Those fortunate enough to attend our AGM will have been able to follow other presentations on a similar theme. I was particularly interested in the position of the UK Maritime and Coastguard Agency (MCA) which, I am pleased to report, is closely aligned to that of The Nautical Institute. But as usual, I felt there was one aspect that was missing and that was the focus on seafarer training for the 'green' fuels.

Perhaps I should clarify. There was great emphasis on seafarer training, but not enough focus on the upskilling requirements for seafarers to handle the proposed yet hazardous 'green' fuels. I have even received dismissive comments that it will be 'alright on the night', and that everything will be covered by STCW and the IGC Code. I have seen no empirical evidence to support this theory.

Among these comments is the argument that the industry does not require specific training for specific fuels, and that a generic provision will cover everything. This of course, is the default position of many shipowner/operators who believe that a continuation of today's ineffectual but cheap training will suffice. Unfortunately, it seems likely that this will result in yet another tick box attendance exercise resulting in yet another piece of paper – without any real increase in safety at all.

Why we need specific training

It is true that all the proposed 'green' fuels are presently carried in bulk around the world, and in nearly all cases very safely and without incident. This is largely due to the expertise of the specialised carriers involved; the LNG and oil tanker operators, the product and multi-parcel chemical operators. But these operators are well trained; it is their business to be experts in the carriage of these products and the responsible officers must all attend specific product courses in order to work on such vessels. Even then it takes years to progress through the ranks to senior positions of authority – it is no tick box exercise. Further, those handling the cargo are predominantly deck officers and the product is bulk cargo, in transit and in storage for the duration of the voyage.

So far, the LNG bulk shipping industry has proven remarkably safe, but it makes up a tiny percentage of global shipping with available figures showing 175 LNG fuelled vessels and over 600 tankers. There are approximately 55,000 IMO registered vessels trading internationally.

We are now entering a different realm, where previously it was taken for granted that bunkering was a low hazard operation (save for pollution) and the use of the fuel was relatively low risk to the engineering department. All that is about to change. Now we are talking of using cryogenic fuels (LNG at -165°C and liquid hydrogen at -253°C) where there needs to be a constant high level of attention to

the fuelling mechanism and maintenance of the plant. Hydrogen is the smallest known molecule in the universe and if there is a leak it will find it.

How do you fight fires and abandon ship with these green fuels? Our traditional fallback training of throwing water around will not work. On the contrary; in many instances, throwing water around exacerbates the situation. How many seafarers know how to stop an LNG spill or how to fight an LNG fire – bearing in mind LNG has a radiant heat nearly twice that of marine diesel oil, greatly increasing the risk of secondary fires? What medium is used to fight such a rapid fire, and is that scenario even plausible? Methanol burns with barely a flame. In a lighted space such as an engine room, a methanol fire is virtually undetectable with the naked eye, requiring sophisticated sensors. Ammonia poses even greater issues, being hugely toxic and requiring specialist PPE to handle. A loss of containment of ammonia would be instantly devastating to the immediate surround.

And what of life-saving appliances? Is a rubber life-raft any good in a loss of containment of LNG? Is a lifeboat any good in cryogenic temperatures? Where is SOLAS now? These fundamental questions require fundamental answers and not an ill-considered dismissal with a wave of the hand by someone who has never had to do it and therefore cannot empathise. To put it into context, even with my brief explanation of potential scenarios – and we haven't even looked at long term exposure to health issues – a generic solution for crew training simply will not work. Seafarers need specialist individual skills if there is to be any hope of successful containment or even survival.

Recently, I read an article by a shipping journalist who described the ship-owning industry as 'dangerous'. However, I believe the author was referring to risk rather than danger. Ship-owning may be risky, but going to sea is dangerous – and going to sea without the knowledge required to manage your own safety and that of the ship even more so.

The Green Curriculum

The Nautical Institute along with its partners are asking these questions and it is becoming apparent, at least in some quarters, that there requires to be a more weighty approach to this issue. Surely it is incumbent upon us as the world's leading organisation of maritime professionals, to investigate this issue and to establish what we consider to be the minimum level of competencies required for seafarers to handle these green fuels safely? It is our contention, given the history of implementation of global ship safety standards, that the existing process will not be able to deliver effective solutions within the known time-frames.

From this starting position, The Nautical Institute and its partners have agreed that there is a clear need for a 'Green Curriculum' setting out what seafarers need to know and what skills they will need to develop to operate safely with the new fuels. It is this position paper that we are now introducing to our membership.

What is the 'Green Curriculum'?

This initiative has brought together influential and respected organisations that collectively represent the seafarer in the global arena. Each of them brings a unique expertise to the table that collectively can bring about global change that will enhance seafarer standards.

Such collective expertise should demonstrate leadership in international standards that are designed to be used globally in order to avoid a fragmented approach, in particular with regards to safe handling by vessel crews of the proposed but hazardous green fuels.

STCW has been the backbone of seafarer competency since inception. While there are discussions in progress on future skills and the revision of STCW, this is unlikely to be achieved before 2030. The revised legislation and training provision and certification will take many years to accomplish. This potentially leaves us without a common standard in the interim, making it difficult to establish a consistent baseline of knowledge and skills required for safe operations. Moreover, without a clear universally agreed standard there is a danger of fragmentation as different operators and training providers adopt their own criteria, making it difficult for seafarers to transition between companies and be mobilised quickly.

The key focus of the Group will be on safety and people issues rather than construction and design – that is, on what our seafarers need to learn and what skills will they need to develop to operate safely with new fuels.

The work of this Group will aim towards developing a curriculum rather than a delivery solution. It will evaluate the competencies required for safe operation of green fuels and deliver a verifiable professional standard for training schemes, certification and accreditation.

This may involve:

- New aspects of specific fire-fighting techniques;
- The application of sophisticated PPE;
- Monitoring and maintenance;
- Bunkering requirements.

A global standard

We aim to develop a global standard for international education, enabling a harmonised independent certification solution delivered through The Nautical Institute. This must be distinctly separate from the current perceived minimum standards.

This standard will provide consistency, ensure quality and provide confidence to ship operators and related stakeholders.

This will be achieved by establishing a core working group of representatives from leading and respected organisations supplemented by advisors from other supporting bodies.

The group will seek to align and cooperate with relevant initiatives across the industry. For example, as part of the UN Global Compact and Shipping industry Just Transition Task force, DNV has been commissioned to develop a work stream which will identify new fuels issues, predict when new vessels will likely come on stream, when in what numbers and the volume of seafarers that will be impacted ie the number that will require new skills training. ICS, ITF and OTG will participate in this work and keep the group appraised of developments throughout this year. The initial scope was drawn up in April, and we expect delivery circa November 2022.

We cannot underestimate the challenge that awaits us in the transition to green fuels. Knowledge and skills development will be required at scale and we have a short window in which to put in place training and assessment provision. Moreover, there is need for this to be done to a common standard that ship operators, charterers, ports and terminals can rely on. This will require consultation and collaboration with multiple stakeholders as well as a good deal of combined effort to achieve.

In forming the Green Curriculum Working Group, we have begun to get this work underway.

Security and access

Establishing the basis for the Green Curriculum has not proven easy, and the process has been met with some obstruction, some predictable and some not. As work continues, we have identified another aspect to the new fuels that is not yet fully acknowledged, but which may prove the deciding factor in creating a recognition of the need for the Green Curriculum. That aspect is state security.

Many of you will recall 9/11 and the repercussions in the maritime sector in the shape of the rapid introduction of the International Ship and Port Security Code (ISPS Code). The Code was drawn up in haste and the IMO adopted it in record time. On the face of it, this was an insignificant small document, but it changed the way global shipping operated virtually overnight. The key point here is that the United States refused to accept any vessel into their country that did not comply with this Code.

Fast forward to the green fuels. All of the proposed green alternatives are more hazardous than existing marine fuel oils. Not only are they more hazardous to the crew, but importantly, for the first time they can pose a genuine security threat to the port locale and in particular the resident civilian population. This may get state attention in a way that the danger to crew does not – after all, up to this point, seafarer safety has been given scant regard.

I have heard various arguments on ways to mitigate the risk of the new fuels, including bunkering in remote locations as a possible solution. But the ship still has to come in to port carrying a much larger quantity of fuel than before (most of the new fuels have around 2.5 times the equivalent volume of traditional fuels, although liquid hydrogen requires five times as much space).

LNG has been safely carried for many years – so what's new?

There are already concerns being voiced in various government circles on how best to tackle this issue. Even with the best training available, how can the risk to the civilian population be reduced to as low as is reasonably practicable? Is it permissible to risk the population of an insignificant city, as opposed to the centre of a capital city? Exactly what level of risk is acceptable?

These are real and legitimate issues that must be confronted and resolved in order for international ship-owner/operators to meet the zero emission targets. The human element may be the determining factor in meeting this challenge; and having higher skilled crew may prove decisive.

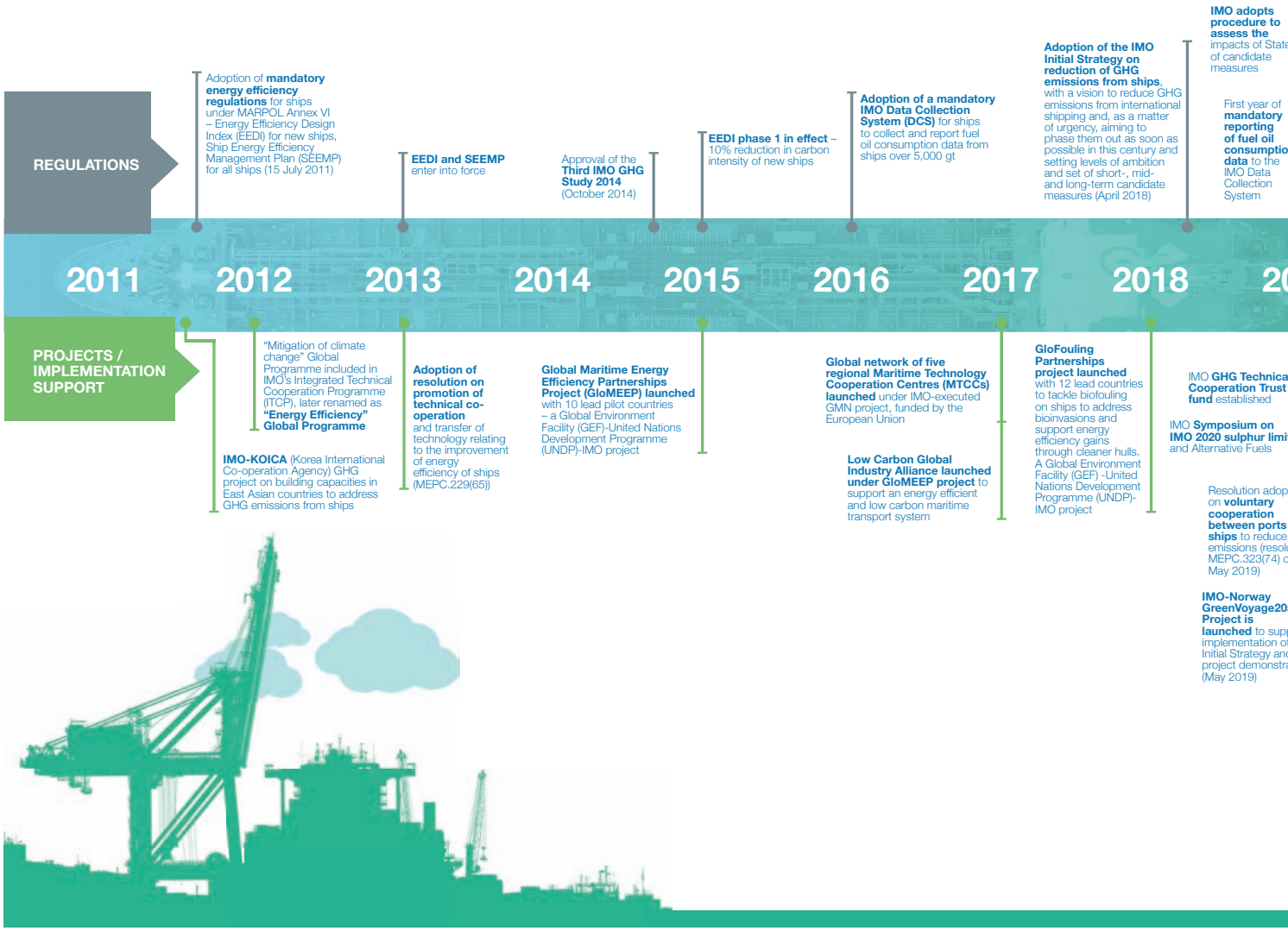
Our 'Green Curriculum' can be downloaded at: https://www.nautinst.org/green-curriculum

LNG bunkering

IMO Update – Marine Environment Protection Committee (MEPC)

Addressing climate change

A decade of action to cut GHG emissions from s



Captain Robert McCabe
FNI, Chair, IMO Committee

The 78th meeting of the Marine Environment Protection Committee was held remotely from 6 to 10 June 2022. The meeting was chaired by Mr Harry Conway (Liberia).

Topics covered included:

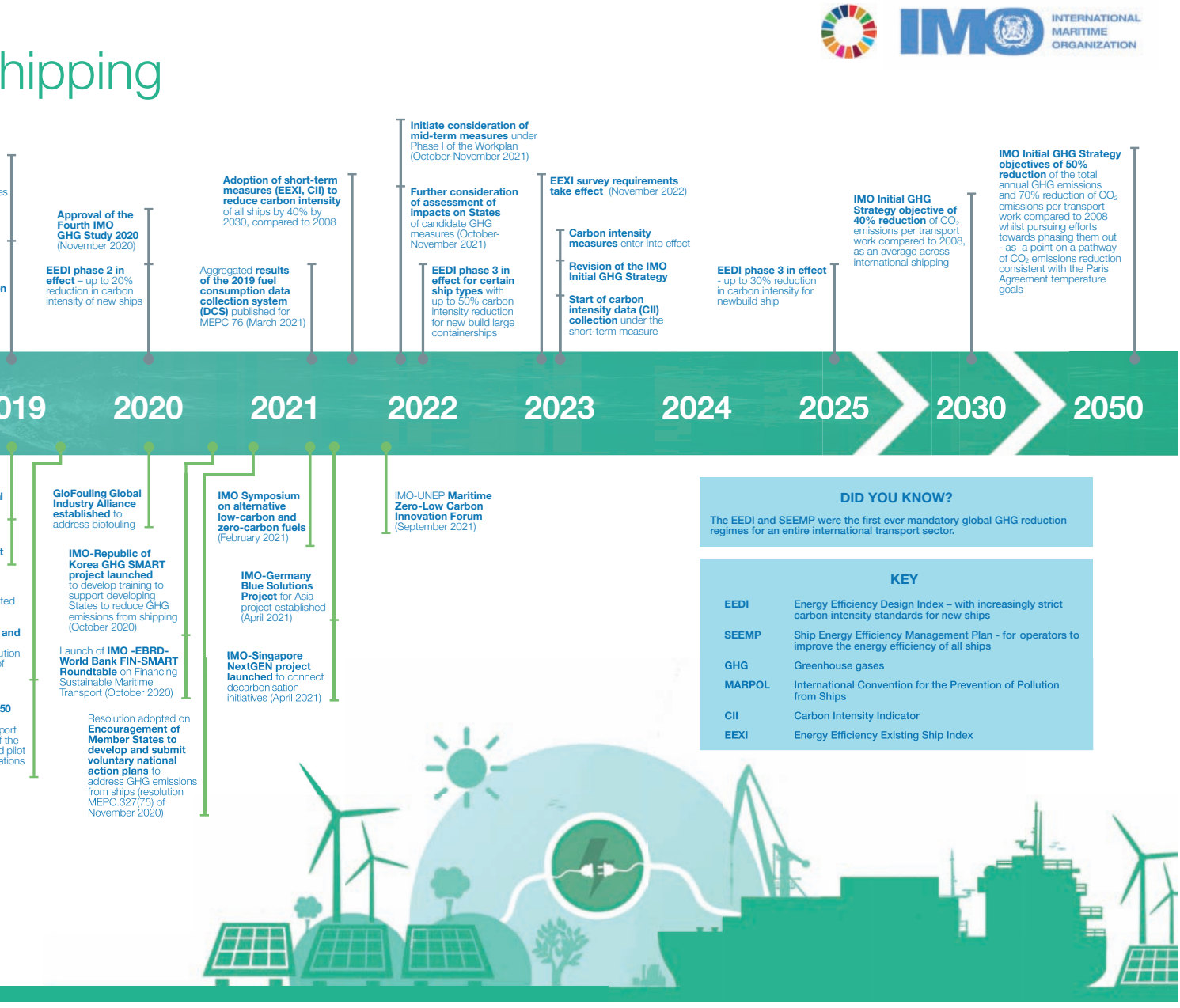
- Situation in Ukraine;
- IMO greenhouse gas (GHG) strategy;
- Safe use of fuel oil;
- Ballast water management;
- Air pollution prevention;
- Pollution prevention and response;
- Mediterranean sulphur emissions control area.

IMO GHG Strategy

This is one of the most important issues being decided at IMO at this time. The initial strategy was adopted in 2018. The ambition at that time was for:

- Carbon intensity of ships to decline through implementation of the Energy Efficiency Design Index (EEDI);
- Reduce average CO_2 emissions by at least 40% by 2030 (compared to 2008), pursuing efforts towards 70% reduction by 2050;
- Reach peak greenhouse gas (GHG) emissions as soon as possible;
- Reduce such emissions by 50% by 2050 whilst pursuing efforts towards phasing them out altogether.

The initial strategy is scheduled for revision in spring 2023. However, the IMO recognises that it is urgent for all sectors to accelerate their efforts to reduce GHG emissions. The outputs from the Intergovernmental Panel on Climate Change IPCC3 reports and the Glasgow Climate Pact have underlined the need to strengthen the ambition of the Initial Strategy during this review.



The key issues under consideration are the vision and level of ambition, achieving a fair and just transition, and meeting the MEPC80 deadline. There was extensive and constructive discussion on all aspects of these issues from over 70 delegations. The IMO Secretary General also participated, encouraging the Committee to continue its spirit of cooperation and collaboration, while recognising the needs of developing States, and keeping ambitions in line with those of the international community. He called on delegations to take concrete action at this session, and stressed that all delegations shared the same goal to upgrade ambitions for 2050.

The Committee reiterated its commitment to strengthen the ambition of the initial Strategy and to complete the revision of MEPC 80. Between sessions of the Committee, very significant work on these topics is completed by the Intersessional Working Group on Reduction of GHG Emissions from Ships (ISWG), and the Committee agreed to recommend an intersessional meeting before MEPC 79, to establish a working group during MEPC 79 and to hold two further intersessional meetings between MEPC 79 and MEPC 80.

The Committee was provided with a range of inputs in relation to national action plans to address GHG emissions, reports from the United Nations Climate Change Conference (COP 26), guidelines for national action plans, IACS guidelines on the use of computational fluid dynamics (CFD) for deriving Energy Efficiency Existing Ship Index (EEXI) Reference Speed, test beds for eco-friendly ship fuel, and methane slip measurement.

Guideline updates

The Committee also considered issues related to guidelines on the IMO Ship Fuel Oil Consumption Database (DCS guidelines), EEXI and Carbon Intensity Indicators (CII) and adopted the following:

- 2022 Guidelines for administration verification of ship fuel oil consumption data and operational carbon intensity
- 2022 Guidelines for the development and management of the IMO Ship Fuel Oil Consumption Database
- Guidance for submission of data to the IMO data collection system of fuel oil consumption of ships from a state not party to MARPOL Annex VI.
- 2022 Guidelines on the method of calculation of the attained Energy Efficiency Existing Ship Index (EEXI).
- 2022 Guidelines on survey and certification of the attained Energy Efficiency Existing Ship Index (EEXI).
- Guidance on methods, procedures and verification of in-service performance measurements.
- 2022 Guidelines on operational carbon intensity indicators and the calculation methods (CII Guidelines, G1).
- 2022 Guidelines on the reference lines for use with operational carbon intensity indicators (CII Reference Lines Guidelines, G2).
- 2022 Guidelines on the operational carbon intensity rating of ships (CII Rating Guidelines, G4).
- 2022 Interim guidelines on correction factors and voyage adjustments for CII Calculations (CII Guidelines, G5).

A correspondence group was established, under the coordination of China, Japan and the European Commission, to develop 'well to wake' guidance on marine fuel lifecycle GHG analysis.

Amendments to Mandatory Instruments

Following consideration by a drafting group the Committee approved amendments to a number of mandatory instruments:

MARPOL Annex I and IBC Code – amended provisions in relation to definition of final waterline and openings through which progressive flooding may take place when considering subdivision and damage stability. The MARPOL amendments will enter into force on 1 January 2024 and the IBC Code on 1 July 2024.

MARPOL Annex II GESAMP Hazard Evaluation Procedure Guidelines for the categorisation of noxious liquid substances. These amendments will enter into force on 1 November 2023. (GESAMP is the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection).

Ballast Water Management

Following consideration by a Ballast Water Review Group, the Committee approved several actions in relation to Ballast Water Management (BWM) including:

- Agreement in principle to develop a BWM Convention Review Plan (CRP) to take a systematic and evidence-based approach to developing amendments to the Convention. This draft plan will be finalised between sessions by the BWM Correspondence Group, coordinated by the UK.
- Approval of unified interpretation of Appendix I to the BWM Convention in relation to ballast water management methods.
- Approval of draft guidelines for re-evaluation where a BWM system has undergone modification.
- Invitation for proposals on guidance on the temporary storage of treated sewage and grey water in ballast tanks; fundamental issues regarding ports with challenging water quality identification; amendments to the form of the Ballast Water Record Book.

Air Pollution Prevention

The Committee agreed updates to MEPC Circulars detailing unified interpretation of the Nitrogen Oxide (NOx) Technical Code and MARPOL. The updates relate to engine groups where some of the parameters may not be common to all engines, and the use of biofuel blended fuel oil.

Amendments to the Bunker Delivery Note to require details of flash point were also agreed.

The Committee approved two new guidance documents on dealing with output from Exhaust Gas Cleaning Systems (EGCS) – also known as scrubbers – which will be issued as MEPC Circulars:

- 2022 Guidelines for risk and impact assessments of the discharge water from Exhaust Gas Cleaning Systems (EGCS).
- 2022 Guidance for the delivery of EGCS residues to port reception racilities.

Pollution Prevention and Response

The Committee adopted the following updated guidelines:

- 2022 Guidelines for brief sampling of anti-fouling systems on ships.
- 2022 Guidelines for inspection of anti-fouling systems on ships.
- Guidelines for survey and certification of anti-fouling systems on ships.

It instructed the Implementation of IMO Instruments (III) Sub-Committee to review the 2022 Guidelines for inspection of anti-fouling systems on ships, with a view to adding them as a new appendix to a future version of the Procedures for Port State Control.

A number of amendments to MARPOL and associated guidelines to allow States with ports in the Arctic region to enter into regional arrangements for port reception facilities were considered and approved.

Mediterranean Sea Emission Control Area

The MEPC agreed to designate the entire Mediterranean Sea as an emission control area, meaning that ships will – from 2025 – have to comply with more stringent controls on sulphur oxide (SOx) emissions.

There are currently four designated SOx-ECAs worldwide: 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 area, covering the waters around Puerto Rico and the United States Virgin Islands.

Forthcoming IMO Meetings

The next meeting of the MEPC (MEPC 79) has been scheduled to take place from 12 to 16 December 2022, and MEPC 80 from 3 to 7 July 2023. Forthcoming meetings in the near future include:

19 Sept	Sub-Committee on Carriage of Cargo and Containers (CCC 8)
3 October	London Convention 1972 and London Protocol 1996
31 October	Maritime Safety Committee (MSC 106)
28 November	Council (C 128)
12 December	Marine Environment Protection Committee (MEPC 79)

This report can only provide a summary of the detailed papers and discussions which took place during the meeting. Members who require further information on these topics should contact Nautical Institute HQ.

Situation in Ukraine

The situation in Ukraine is considered at all IMO Committees and Sub-Committees. It is important to understand that IMO bodies can only consider matters such as these to the extent that they impact on the responsibility of the Committee/ Sub-Committee involved.

The Committee expressed concern about the consequences of the Russian Federation's attacks directed at peaceful commercial vessels and stressed the critical importance of protecting the environment and compliance with obligations under international humanitarian law. It urged the Russian Federation to refrain from attacks aimed at commercial ships and critical port infrastructure. The MEPC will keep this matter under review and invites Member States concerned to provide relevant reports to the Committee.

SIRE 2.0: a sea change for tanker safety

OCIMF's digitalised tanker inspection regime will leverage technology to deliver a risk-based approach to assessing the safety of vessels and their crew

The Oil Companies International Marine Forum (OCIMF) is a voluntary membership organisation that exists to promote the highest standards of safety and best practice in the maritime industry and to provide a forum for the continuous advancement of knowledge amongst industry peers. As a membership organisation of oil and energy companies, OCIMF's remit is focused specifically on the promotion of safe and environmentally responsible transportation of crude oil, oil products, petrochemicals and gas, and to drive the same values in the management of related offshore marine operations.

The organisation does this by developing best practices in the design, construction and safe operation of tankers, barges and offshore vessels and their interfaces with terminals. More recently, the forum has focused on integrating understanding of human factors into all of its work, as understanding of the discipline – and its influence on safety onboard and on shore – has advanced.

Alongside an extensive library of publications, OCIMF provides a portfolio of tools and inspection programmes used by vessel owners, operators, managers and charterers worldwide to enhance the safety of their operations. This includes the Ship Inspection Report (SIRE) Programme, Offshore Vessel Inspection Database (OVID) and the Marine Terminal Information System (MTIS).

with Aaron Cooper
OCIMF

Any crew member who has served onboard a tanker will be familiar with OCIMF's SIRE inspections. Since the inspection programme was launched in 1993 it has governed over 180,000 inspection reports and has become a crucial tool for vetting vessel quality and safety. It is a comprehensive regime, with specially trained and accredited SIRE inspectors conducting paper-based reports worldwide which assess the safety and condition of a vessel against a Vessel Inspection Questionnaire (VIQ).

The programme has always evolved to meet significant developments in industry regulation, understandings of best practice and changing ways of working, both on board and ashore. The SIRE VIQ is currently on its 7th iteration, known as VIQ7. However, it is still a paper-based process, and updating the documentation and processes to meet changing requirements and evolving risks has becoming increasingly difficult as the industry evolves at ever faster speed.

Aaron Cooper, Programmes Director at OCIMF, explains: 'SIRE has proven to be a vital tool for industry, but OCIMF and its membership recognised that the only way to keep pace was to digitalise the regime so that it can be more readily adapted and made more intuitive. Moving to tablet-based inspections means SIRE 2.0 is risk-based, targeted to individual vessels and capable of making much more holistic, all-encompassing assessments of the condition of a vessel and its crew on an ongoing basis.

'Perhaps most significantly, under SIRE 2.0 no two inspections will be exactly the same. Vessel owners, operators, managers or crew will not be able to anticipate exactly which questions will be raised during their inspection. As such, preparedness under SIRE 2.0 will require adherence to all applicable regulations and best practice at all times. This will, by extension, raise standards across the board. The net result will be an inspection process that delivers insight to tangibly improve safety and will make the lives of vessel owners, operators, managers, charterers and crew – as well as SIRE inspectors – safer and more efficient.

'It is absolutely crucial that mariners and responsible parties onshore are prepared for the new approach as we transition into SIRE 2.0 in the 4th quarter of 2022.'

Moving from static to a dynamic assessment

How this works is largely down to the significant enhancements being made to the software that underpins the inspection process.

SIRE 2.0 inspections will still last for approximately eight hours and will be carried out by OCIMF-accredited inspectors who have been trained in the SIRE 2.0 regime. However, the paper questionnaires and clipboards carried by inspectors will be replaced with intrinsically safe tablet devices loaded with specially developed software that can be used to conduct inspections in real time. Paper format questionnaires will only be used under SIRE 2.0 as a contingency where a tablet cannot be used for any approved reasons.

Under the existing SIRE programme, inspections are conducted using a standardised questionnaire in paper format, with assessments made in terms of 'yes' or 'no' responses, with negative observations reported in text. Under SIRE 2.0, accredited SIRE inspectors will instead complete a Compiled Vessel Inspection Questionnaire (CVIQ) using the tablet device. The CVIQ is compiled using significantly upgraded SIRE 2.0 software which uses an algorithm to select questions from a SIRE 2.0 question library based on the type of vessel, its outfitting and operational history to create a bespoke risk-based inspection questionnaire.

The expanded question divides questions into four classes:

- **Core** – questions asked during every inspection and focused on risks that may directly lead to severe or catastrophic risk events;

- **Rotational** – ad-hoc questions focused on risks that may indirectly lead to severe or catastrophic risk events;
- **Conditional** – questions unique to vessel, operator or ship type;
- **Campaign** – focusing on a target area of concern for OCIMF members.

'It sounds complicated, but when you see it in action, it's really very intuitive and given that we are all so used to working with smart software now, we are confident SIRE 2.0 will make life a lot easier for all programme participants. Vessel operators will be much more involved in the process – submitting documentation in advance which can be verified and integrated before the inspector even gets onboard. This will alleviate some of the pressure on crew during the inspection, which usually takes place when they are calling at a port or terminal and have so many competing priorities. Report recipients will benefit from the far richer marine assurance data available to them so they can make more accurate assessments of vessels,' says Cooper.

Integrating human factors as a central element

Crucially, the majority of questions on the CVIQ require the inspector to provide responses based on hardware, processes and human factors. Observations are graded from 'not as expected' through to 'exceeds expectation'. Free text responses and use of images (where permitted) can support the inspector's observations, to give more context and clarity to what are often complex assessments. The focus on human factors in particular is a marked change that will provide a defined process for uncovering the systemic issues which might lead to a critical activity not protecting the environment, crew or ship.

'The focus on human factors is a significant and very positive change for the industry. While there is widespread recognition that the human element is a key risk as well as a key risk mitigator across all aspects of operations, there is still much work to be done in terms of addressing human risk factors. By integrating human factors across the entire inspection process, SIRE 2.0 will significantly aid industry understanding of human factors issues and, we believe, tangibly improve support for crew and transform safety in the marine industry,' Cooper adds.

Implementation

OCIMF has been conducting a trial inspection programme for the past year and delivering a programme of SIRE 2.0 Inspector Transition Training to ensure inspectors are prepared in the lead-up to the launch of SIRE 2.0 from Q4 2022. Recently, familiarisation materials have also been provided for all users of the SIRE 2.0 programme. Specific materials are available for each user group: inspectors, programme recipients, vessel operators and crew.

> "Under SIRE 2.0, no two inspections will be exactly the same. Vessel owners, operators, managers or crew will not be able to anticipate exactly which questions will be raised during their inspection."

In addition to documentation on policies and procedures, a full set of videos covering all aspects of the SIRE 2.0 programme, ranging from tablet functionality to the submission of a report, will be provided for inspectors during Phase 2 training, which is now underway. Submitting companies, programme recipients and operators will have the benefit of pre-recorded presentations and covering issues such as human factors, and the layout and structure of the questions. These pre-recorded presentations may be used for any in-house training.

'This is in no doubt a significant change for industry and therefore it is imperative that vessel operators and crew continue to access the OCIMF website and SIRE 2.0 associated material, continue to become familiar with the content and more importantly that ship and shore collaborate internally to fully accustom themselves with the new inspection regime,' Cooper advises.

Additional information about SIRE 2.0, including the full SIRE 2.0 Question Library and supporting guidance materials, is available on OCIMF's website, at www.ocimf.org/ programmes/sire2-0

	SIRE VIQ7	SIRE 2.0
What questions are included in the inspection?	The template is fixed to the vessel type and variants selected	A CVIQ is compiled according to the Harmonised Vessel Particulars Questionnaire (HVPQ) and pre-inspection questionnaire (PIQ). Questions are included according to OCIMF risk rating. 'Core' questions are related to significant risk. 'Rotational' questions are not related to significant risk
How are the questions structured?	A simple Yes/No response, with supplementary options for N/A or Not Seen	Multiple categories of response covering hardware, processes and human factors
How does the inspector answer the questions?	Binary: positive or negative	A graded scale of responses from 'not as expected' to 'exceeds expectation'.
What are the contents of a negative observation?	Free text observation contents	One or more negative observations identifying a codified subject and nature of concern supplemented with free text
What forms of media can be added by the inspector	Not supported	Photographs can be taken to support responses and negative observations
What data is provided by the vessel operator to support the inspection?	HVPQ, crew matrix, Port State Control (PSC) reports and incident data	A pre-inspection questionnaire and vessel standard photography, plus HVPQ, crew matrix, PSC reports and incident data

Harmonising safety standards

Closing the gap between OCIMF and SIGTTO around the vapour manifold

Captain Gaga Lomouri AFNI

The strong safety records of the oil and gas sectors in the shipping industry are due to reasons that include, but are not limited, to:

- A strong, overarching safety philosophy;
- Robust design of equipment and systems;
- Good operational and maintenance procedures;
- An ability to share lessons learnt and to develop best practice as an industry through the industry body.

Among the leading industry bodies for oil and gas carriers respectively are the Oil Companies International Marine Forum (OCIMF), representing carriers and terminals in the oil sector, and the Society of International Gas Tanker and Terminal Operators (SIGTTO).

The main aim of both groups is to ensure operational safety for oil and gas transport respectively, shaping safety matters, establishing best management practice, taking an in-depth approach to safety precautions and improving/implementing safety culture.

Both organisations produce a series of well-respected publications providing technical guidance on tanker and terminal operation. For example, *The International Safety Guide for Oil Tankers and Terminals* (ISGOTT), produced by ICS and OCIMF, with additional input from the International Association of Ports and Harbours (IAPH) continues to provide the best technical guidance on oil tanker and terminal operation.

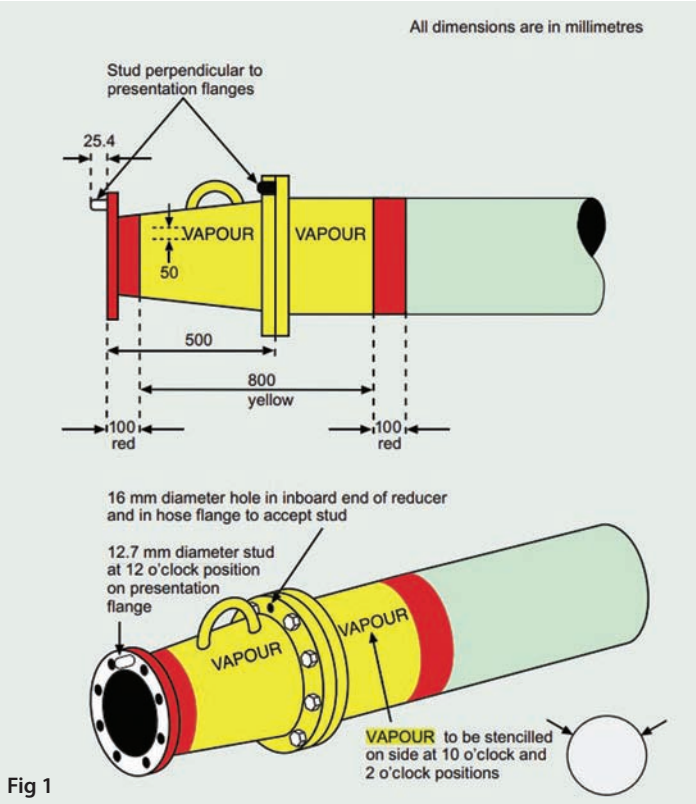


Fig 1

It is interesting to note that there is still a gap between the safety standards between the oil tanker fleet and the gas tanker fleet that is worth looking into in more detail.

Ship's Vapour Manifold

According to the standards set out in ISGOTT, the ship's vapour manifold must be totally visually distinguishable from other manifold lines. This is to guard against any possible misconnection of the ship's vapour manifold to a terminal liquid loading line. The vapour connection should be clearly identified by:

- Painting the outboard one metre section with yellow and red bands;
- Stencilling the word 'VAPOUR' on it in black letters.

In addition to these visual distinguishing requirements there is an additional mechanical difference, intended to prevent the connection of standard liquid transfer cargo arm/hoses. A cylindrical stud should be permanently attached to each vapour presentation flange face at the 12 o'clock position on the flange bolt circle. The stud should project 25.4 mm (1 inch) perpendicular to the flange face, as shown in Fig 1.

There have been numerous cases where vessels have been detained by Port State Control because the cylindrical stud on the vapour line was detachable instead of permanently attached. The same applies to vapour manifold reducers.

As a further precaution against possible misconnection, ISGOTT requires that the vapour manifold lines on oil tankers are located on the outmost parts of the ship's manifold area (see Fig 2).

These requirements are intended to prevent any accidental introduction of liquid into the vapour line. This is important, as it can lead to:

- Leakage of vapour/inert gas (IG) pipeline;
- Pressure/Vacuum (P/V) breaker overflow and overflow of oil on deck (at the initial low rate);
- Fire/ignition hazard;
- Possible entry of oil into the engine room (unlikely in reality, given the non-return valve and deck seal).

These are all serious matters – and the risk can be relatively easily reduced by adopting the list of requirements set out above to minimise the human factor in misconnecting the lines.

By contrast, SIGTTO's recommendations for vapour manifolds on gas tankers do not contain any recommendation on physical means to highlight or distinguish the vapour line from the liquid line. The only recommendation is the stencilling and colour band. The location of the vapour line manifold may be directly next to the liquid manifold, as shown in Figure 3.

Other than the colour and stencilling, the only difference is the presentation flange size of manifold and reducers. These are ANSI/150 for vapour and ANSI/300 for liquid. However, in some terminals the ANSI /manifold size can be the same for both vapour and liquid, requiring the use of convertible reducers – and completely removing any safety advantage of different sized manifolds.

Misconnecting the gas tanker vapour manifold to a terminal liquid loading line may result in:

Fig 2: Oil tanker manifold – note vapour line at outer end

- Increased pressure in tanks;
- Opening of the Maximum Allowable Relief Valve (MARV), releasing the gas to the open air;
- Fire/ignition hazard;
- Toxicity;
- Possible breakdown/shutdown/malfunction of gas compressor plant.

If liquid gets into the inlet, it is unlikely the knock-out drum will operate.

In conclusion, given that studies of maritime accidents persistently identify that human error is the primary contributing cause for up to 80% of the accidents, it is worrying to see that we still have two very different approaches to safety management in two of the most tightly regulated sectors in the industry.

One might perhaps ask whether there is any record of accidents that would suggest the reason for this revision in the gas fleet – but do we need to wait for an accident before we make the change?

Fig 3: Gas tanker manifold – note central vapour manifolds surrounded by liquid manifolds

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Mariners' Alerting and Reporting Scheme

MARS Report No 359 September 2022

MARS 202237

Hold access fatality/lack of oxygen

As edited from the Marshall Islands' Maritime Administrator report issued 6 January 2020

➔ A bulk carrier loaded with coal was at berth and crew were preparing to discharge. The bosun, fitter, and deck cadet were to open all the cargo hold hatch covers. After the hatch cover for cargo hold 1 was opened, the fitter told the bosun that he needed to enter the access way to hold 1 to retrieve an air nozzle which he had dropped while clearing the hatch coaming at the previous port.

The bosun and fitter opened the aft access hatch to cargo hold 1 but the bosun told the fitter to wait at least 20 minutes before entering. Some time later, the deck cadet walked by the cargo hold and looked into the open hatch. He saw the fitter lying motionless below on the coal close to the access ladder. He immediately notified the bosun using his portable radio. The bosun quickly arrived on scene and, without raising the alarm, went directly down the access ladder in an attempt to rescue the fitter. Shortly after entering the cargo hold, the bosun lost consciousness.

The Chief Officer heard the deck cadet's radio transmission and went to the access hatch. He immediately recognised the need to carry out an enclosed space rescue. The alarm was raised and crewmembers assembled and donned breathing gear. The two victims were extricated; the bosun regained consciousness after being brought on deck but the fitter was not breathing and had no pulse. Despite resuscitation efforts the fitter was pronounced deceased at a local hospital.

Among other things, the investigation found that:
The Company's enclosed space entry procedures were not followed. In particular, the ship's officers had not been notified of the need or intention to enter the hold. The first, failed, attempt to rescue the fitter without initiating enclosed space rescue procedures was a grave error that not only delayed the recovery of the fitter but put the bosun's own life in danger.

There was a distinct lack of awareness on the part of certain crewmembers on the hazards of entering a cargo hold containing coal without first complying with the Company's enclosed space entry procedures.

Initiatives taken after the investigation:

Locking devices were fitted to the access hatches for all cargo holds and other enclosed spaces on board the vessel.

The Company's SMS was updated to require permanent signs at the entrance to enclosed spaces warning of the risk of asphyxiation if entered without taking proper precautions.

A training initiative was implemented to increase awareness of the hazards of entering enclosed spaces without taking proper precautions.

Lessons learned

- Identifying all enclosed spaces on a vessel and posting a reminder at the entrance to each space can be considered a best practice.
- Signs are not enough! Many vessels now routinely have signage posted at the cargo hold access hatches that prohibit entry unless the enclosed space entry procedure is followed. Yet, year after year, crew are still dying in cargo holds with less than adequate oxygen or the presence of other gases that do not support life.
- Locking devices on cargo hold access hatches are one way to mitigate risks of unauthorised entry but the best protection is training and awareness of the risks. A cargo hold and its associated access ways are enclosed spaces.

MARS 202238

Offshore supply vessel collides twice in 45 minutes

As edited from NTSB (USA) report MIR 22-04

➔ A Coast Guard buoy tender was working in a restricted river waterway to service buoys that were shifted or missing due to a recent hurricane. The bridge team consisted of, among others, two officers and the Master. It was full daylight and visibility was good. The tender, displaying day-shapes for a vessel restricted in her ability to manoeuvre, was working near the edge of the navigable channel with the ebb current astern.

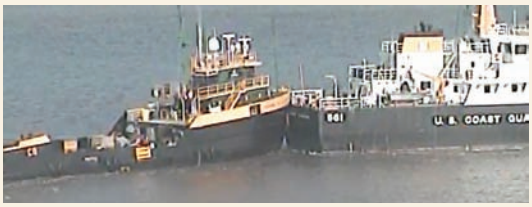
An outbound offshore supply (OSS) vessel left berth upstream of the buoy tender. Around this time, the buoy tender crew had secured a large buoy on deck; the crew were heaving in the chain while an officer on the bridge used the DP system to position-check the deadweight anchor.

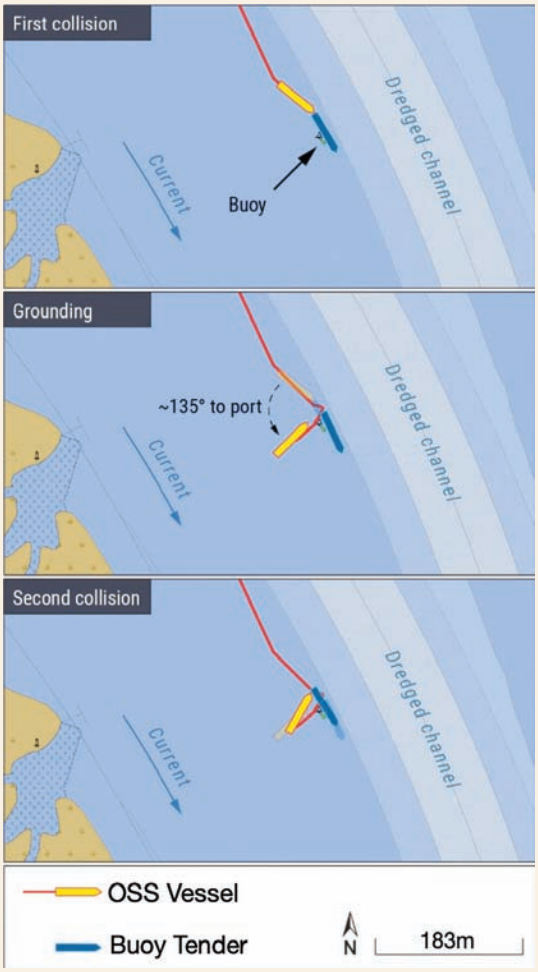
As they approached, the Master of the OSS vessel contacted the buoy tender via VHF radio to request a 'one-whistle' passing arrangement; that is, the OSS vessel would overtake (pass) the tender on their starboard side – outside the channel. The request was unusual, but the bridge team of the buoy tender assumed the OSS vessel bridge team knew what they were doing and did not query it. On board the OSS vessel, the Master had assumed – without consulting his electronic chart system (ECS) – that the buoy tender (and buoy) were 'off-station' and that there was enough water on the starboard side.

At 1542, the OSS vessel made a slight course change to starboard in preparation for passing the buoy tender on their starboard side. Up to that point, the OSS vessel had been making about 13 knots. As the OSS vessel approached the buoy tender, the reading on its depth sounder dropped quickly, so the Master aborted his attempt to pass starboard of the buoy tender. Now faced with the imminent danger of collision, he then reversed the OSS vessel's engines and used the bow thruster and rudder to turn to port to try to avoid hitting the buoy tender.

A safety officer on the deck of the buoy tender radioed the bridge about the impending collision. The commanding officer made a ship-wide announcement to prepare the crew for collision while the conning officer sounded five short blasts on the ship's whistle.

At 1544, the bow of the OSS vessel collided with the stern of the stationary buoy tender while making 6 knots. The OSS vessel then pivoted and slid down the tender's starboard side and grounded on the mud banks to the starboard of the buoy tender. Some 45 minutes later, with the buoy tender still in the same position, the OSS vessel re-floated. The Master of the OSS vessel attempted to manoeuvre around the stern of the buoy tender but the ebb current set it onto the stationary Coast Guard vessel. Recognising that a second collision was imminent, the buoy tender's Master made another ship-wide announcement warning the crew to brace for impact. The offshore supply vessel's starboard bow struck the tender's starboard quarter.





The investigation found, among other things, that:
The OSS vessel's Master had assumed that the stationary buoy tender's position was not at the edge of the channel. This led to his decision to pass the buoy tender on its starboard side. Last minute manoeuvres, initially to avoid grounding and then to avoid collision with the buoy tender were unsuccessful. Another factor contributing to the collision was that the buoy tender crew did not question the passing arrangement proposed by the OSS vessel's Master.

The buoy tender remained connected to the heavy buoy anchor on the sea bottom and was therefore unable to manoeuvre and evade the OSS vessel. If the crews had communicated more fully with each other, they might have agreed for the OSS vessel to wait until the buoy tender could move on.

Lessons learned

- Too many assumptions and too little communication can lead to bad outcomes.

MARS 202239

Hot bitumen burn

Routine inspection and cleaning maintenance was to be undertaken on a vessel's fuel pump strainer. In preparation for this task, the secondary heating unit (SHU) had been started the day before to melt the bitumen inside the strainer. Two engine crew were assigned the job, and the SHU was stopped before they began work on the pump strainer.

To begin, one crewmember used a spanner to loosen the vent nut on the strainer. As the nut came loose, hot liquid bitumen was ejected from the vent. The bitumen hit the crewman's right hand causing burns; the crewmember was not wearing work gloves. He was immediately brought to the accommodation and given first aid. After consulting the company doctor, he was started on a course of antibiotics as a precautionary measure.

Lessons learned

- Wearing proper personal protective equipment (PPE) is a minimum precaution in any work space.
- Over and above wearing proper PPE, risk assessments, even if ever so cursory (what could happen?), should be done to prior to executing a task. In this instance, given the preheating of the bitumen, it would seem common sense to assume that hot bitumen would excrete from the loosened vent nut.

Visit www.nautinst.org/MARS for online database

MARS 202240

Contact with a buoy and near collision

A VLCC in ballast was approaching port for anchoring. The pilot was confirmed for 10:00. Weather conditions were good with a northerly wind of about 10 knots, good visibility and slight sea conditions. A tidal stream was running WSW at about 1.8 knots. The engine was put to dead slow ahead to drop off speed and adjust the vessel's arrival at the pilot boarding area for the agreed time.

At 09:37, the Master asked the OOW if he had established a visual contact with the pilot boat. The OOW responded positively. The bridge team was confident that the pilot boat would be at the designated position before their vessel, so no action to further slow or stop the vessel was taken. Several minutes later, with the vessel steering 300 degrees and with a speed of 5.8 knots, the remaining distance to the pilot station was about 1.2nm.

At 09:50, the vessel was heading 315 degrees at a speed of about 5.3 knots. The distance from the pilot station was now only about 0.7nm. The Master stopped the engine. The vessel continued to slow and the heading now increased slowly to starboard. The vessel was closing on a buoy. At 10:00 the speed was about 4 knots and the pilot boat had not yet arrived. The Master ordered hard starboard and set the main engine to dead slow ahead in order to avoid the buoy but to no avail; they struck the buoy about four minutes later on the port side near midships. The buoy slid down the vessel's port side and cleared the stern with only minor damage.

The vessel was now drifting with a Speed Over Ground (SOG) of 3.4 knots, on a trajectory towards a nearby anchored vessel. The Master attempted to stop the vessel, but the distance to the anchored vessel was now only 0.5 nm. The Master quickly concluded that it was not feasible to stop the vessel. Instead, by putting 'Full Ahead' on the engine in combination with a succession of wheel alterations (hard to starboard and then hard to port) they managed to avoid contact with the anchored vessel (images 1-4, below). About 20 minutes later, the pilot boarded and subsequently safely anchored the vessel in the anchorage area.

The company report found, among others, that:

- The passage plan lacked the appropriate precautions and contingency arrangements. Specifically, the speed of approach and the waiting area for the approach were not adequately planned.
- The large drift angle and the proximity of navigational hazards was not determined at an early stage.
- The effect of the current on the vessel's drift was not effectively monitored and assessed. As a result, the bridge team did not adjust the vessel's course and speed in a timely manner when approaching the pilot boarding station.
- Bridge Resource Management (BRM) was less than adequate. The Master did not explicitly inform the ship's bridge team about his intentions related to approaching and manoeuvring. As the ship progressed, the OOW's comprehension of the situation did not trigger any actions for clarification or corrective action.
- The OOW did not provide sufficient information related to the pilot boat approaching. Instead, he confirmed that the pilot boat was approaching without informing the Master of the actual distance from the vessel and the time needed to arrive alongside. As a result, the Master wrongly assumed that the pilot boat was closer than it actually was, so he continued on instead of stopping.

Lessons learned

- Effective BRM should be a working culture – a safety habit that is embraced and practised by all navigating officers. Closed-loop communications should always be used to eliminate any doubt or ambiguity.

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The digital seafarer

Creating technology that supports and enhances seafarer abilities starts with understanding seafarer needs

Thetius/Inmarsat Research Programme

A central benefit to digitalisation at sea is its ability to support and promote human performance. In this context, 'performance management' is about creating a working environment and providing a set of tools that support seafarers to operate and maintain a vessel efficiently and effectively.

Digital technologies are available that aim to improve both the working environment and provide the tools that help seafarers reduce cognitive burdens to help them focus on performing safety- and mission-critical tasks; or support job functions by improving the ergonomics and usability of the working environment.

The IMO's e-Navigation concept gives us a framework for understanding the importance of the digital-human interface as it relates to bridge procedures and navigation. The strategy is worth consideration as it defines the high level direction of travel that regulators are taking to ensure that user needs predominate as humans and machines become more integrated at sea.

The IMO adopted standards in electronic charting back in the 1990s, which brought about an evolution in 'primary source' chart information on the bridge from paper charts to electronic, with Electronic Chart Display and Information Systems (ECDIS) becoming mandatory on merchant vessels in 2011. Arguably, the announcement of the e-navigation concept by the IMO in 2006 formed the nucleus for digital transformation underway in shipping today. If we consider this framework a governing principle, then the IMO has set out the rules of the game. The extract below is from the 85th session of the Marine Safety Committee, which describes the development and implementation strategy for e-Navigation within three governing principles:

1. Ensure that the technological developments adopted are conducive to enhancing maritime safety, security and protection of the environment, and take into account the need for their global application;

2. Ensure the proper application of information technology within the Organisation and to provide enhanced access to that information for the shipping industry and others; and

3. Ensure that new equipment for use on board ships is designed and manufactured with the needs, skills and abilities of all users in mind.

The message here is clear: Digital technology must be developed to enhance the human seafarer, without assuming that digital technologies will displace them. It is therefore vital for the needs of seafarers to be fully considered in digital transformation strategies. Let's look at those needs in more detail:

Seafarer needs

The first objective of the IMO's e-Navigation strategy implementation plan is 'improved, harmonised and user-friendly bridge design'. The list of user needs that the IMO has used to anchor its regulatory approach to e-Navigation provides an excellent overview of the problems faced by seafaring navigators and the wider maritime sector. A comprehensive list of shipboard user needs and priorities is given in annex 3 of the IMO's e-navigation strategy implementation plan30. These are:

Improved ergonomics – seafarers have expressed a desire for bridge layouts, equipment and systems to be better designed from an ergonomics and user-friendliness perspective.

Standard interfacing – seafarers want greater standardisation of functionality for navigation displays (human-machine interface or 'HMI').

Familiarisation requirements – seafarers need all safety-related equipment to be provided with familiarisation material specific to the model and installation.

User-selectable presentation of information received via satellite communication equipment – seafarers want to be able to present user-selectable information received via communications equipment on their navigation displays (ship in distress, wind speed / direction, AtoN status, restricted areas etc.) and to be able to filter the information received to make it more relevant.

Maritime Safety Information (MSI) – seafarers want to see, sort, and action MSI more effectively. For example, integrating NAVTEX information into the navigation display instead of the standalone device.

Alert management – bridge alerts including emergency alarms, warnings, and cautions etc. need to be coordinated, weighted, and support decision making without undue distraction. The IMO states that it is not uncommon for bridges to have in excess of 500 separate alarm sources including navigation, propulsion, cargo, and communications systems. Providing decision support to sort, prioritise, and make recommendations on appropriate actions is important to seafarers.

Indication of data reliability – officers are concerned with certainty values on the information they are given. For example, ECDIS displays the vessel's position as an absolute, leaving the watchkeeper to determine the accuracy of the position indicated. Seafarers want systems to assess the accuracy and integrity of hydrographic data, position fixes, radar, and other sensors and return a geographical indication of the assessment. An example might be rendering a margin of uncertainty around the fix, or restricting zoom areas to the limit of the certainty factor.

Improved system reliability – in 2018, seafarers reported concerns over the reliability of their e-Navigation equipment. Failures and errors were reported as commonplace. Issues such as poor radar performance, ENC faults, incorrect AIS data, or loss of position can cause major disruption for the watchkeeper. Even an uptime of 99% means that 1 in 100 voyages will encounter a failure of critical bridge equipment. Thetius believes this picture is improving, but still causes a significant issue.

Standardised and automated reporting and the reduction of administrative burdens – seafarers want to reduce the administrative burden on them in order to focus more on the mission critical aspects of voyage execution. In particular, the repeated reporting of static and dynamic information such as cargo information, persons onboard, bunker 'remaining onboard' figures and position, to shore based authorities causes frustration.

Improved target detection – seafarers need extra support with the

identification of small targets at sea, such as fishing vessels, pleasure craft, pirates, and flotsam/jetsam.

Guard zones – seafarers want the dynamic and realtime rendering of guard zones to alert watchkeepers to hazards such as grounding that takes into account real time under keel clearance (UKC) information, or a developing risk of collision with another vessel or fixed structure.

Automated updating of baseline data and documentation – charts, voyage planning publications, and other data sources are updated frequently, causing seafarers an administrative burden and increasing the possibility of human error resulting in outdated information being used for decision making. Automating updates to these information sources would remove this human error factor.

Effective and robust connectivity between ship and shore – seafarers want communications with the shore at sea to be as easy and accessible as terrestrial services.

A list of user needs are also identified for shore based users and search and rescue (SAR) authorities. These reflect similar patterns around greater sharing of information and simplification of data processing and decision support. Since international convention requires digital technology to be user-centric, the technologies that address these needs of the user are likely to be the most influential. Work is well underway in the public and private sectors to address these issues and find technological, regulatory, and policy solutions to them. One example is the work in the Sub-Committee on Navigation, Communications, Search and Rescue (NCSR) at the IMO, which aims to address position accuracy by developing performance standards for Satellite-Based Augmentation Systems (SBAS) to complement GPS31. Current augmentation systems such as radio beacon Differential GPS (DGPS) are analogue technology and will eventually be phased out. SBAS will use geostationary satellites to provide a correctional vector to GPS positions on a global scale, rather than just in coastal waters.

Maritime cybernetics

Cybernetics is the study of feedback and control systems in humans and machines. While it might be alien to many in the maritime industry, the term actually has seafaring origins. Cybernetics is derived from the Greek word 'kybernetikos' which referred to the art of good helmsmanship. In the days of voyaging under sail, helming required the seamless flow of information from the sea surface through the hull and rudder, and from the wind through the rigging to the helmsperson, who would make the control inputs necessary to keep the vessel on course and sailing efficiently. Maritime cybernetics can be thought of in a similar way: the collaborative flow of data between human and machine that results in the desired outcome – in this case, the safe and efficient operation of a modern ship.

The maritime industry is a good example of what academics refer to as a 'complex socio-technical system'. From a human element perspective, this means that the interactions between human and machine are evolving and it is vital that operators realise the implications.

Complex socio-technical systems like those created aboard a ship require an effective appreciation of 'cybernetic interaction' or the symbiotic relationship between human and machine. The traditional scenario where a human monitors individual machines with narrow outputs and makes autonomous decisions based on the information provided is rapidly becoming outdated. The emerging picture is one where each digital system communicates with one or more other systems, significantly enhancing the sophistication of the end result. Where the human was once the end user of digital information, increasingly, we will become a component of a much larger and more powerful decision-making ecosystem.

It's important to understand some of the ways that seafaring crew may increasingly become an integral part of a larger digital system; interacting and contributing to digital decision systems at sea, rather than simply using digital data to make a more informed decision themselves. Here we take a look at some of the ways digital technology can be used to maximise the value of human skills such as reasoning and morality while moving more binary and mundane tasks to the digital domain:

Seeing the big picture

Technology empowers humans to work smarter when relevant information is accessible, and easy to grasp. Informed decisions help balance operational safety with efficiency. Many of the digital products or solutions available to ship operators today have one of three primary functions: quantifying risk, managing errors, and promoting efficiency. There is a range of tools available to assess and manage risks, asset health and compliance. For example, IBM's Maximo is an example of a management solution that streamlines processes in detail, bringing thousands of information strands together to form a coherent picture of a businesses' socio-technical structure. Kongsberg's Kognifai offers a similar capability, with a slew of other marine applications. As stand-alone technologies, these offer only a static overall view. To make data more visible, add-on systems are required. This means that there is still a need for other solutions which help move information from single sources – after all, it is only actionable information that can deliver increases in human performance at sea.

Human-system relationships

Technology can excel in tasks the human mind is less suited to. The speed and precision of digital processing today ensures output information is timely and reliable. However, there are still many cases where computer-generated information needs human verification. It took a period of acquaintance for ships to get comfortable making ECDIS the primary method of navigation, starting from a place where trust in a human with a pencil and a ruler exceeded that of the system of satellites and printed circuitry. It took time for the technology to prove itself repeatedly.

Even today, general attitudes to digital technology place humans in governance over machines. We still place the responsibility on officers and crew for the success or failure of digital outputs, hence the mantra 'poor data in, poor data out'. The need to understand what relevant and correct input information is, forms a large part of the human workload. Being able to recognise system information which is wrong is just as important.

Sometimes the way this information is displayed is hard for a human to process. Intuition, foresight, creative thinking and sense-making are areas where people win out over computers. So while AI proves itself, technology needs to retain a human-centred approach to empower seafarers to conduct their executive role in the operation.

So long as it is the human that holds responsibility, it is the human that is at risk of being the limiting factor. In the US, NASA based their approach to performance on well-established theories: Situational Awareness, the Model of Internal Human Malfunction, the Model of Unsafe Acts, and the Information Processing Model. This understanding of humans as components of a complex technological system has only increased in relevance for the ships of today. Solutions which aid understanding, heighten situational awareness, and prevent mistakes can improve human performance and empower humans to shoulder their responsibility in receipt of the full facts.

Vision, situation awareness and mental model

Most ships still operate with limited bandwidth for external communications. This has been a barrier to unlocking new ways for people on ships to stay in touch with the outside world, and can have a negative impact on crew wellbeing and performance. Distraction, crew fatigue, and confusion are human limitations that can lead to mistakes or accidents.

Ships in transit are at risk of navigation hazards that are hard to see by normal means. Targets without an automatic identification system (AIS), obstacles not detected by radar, or difficult environmental conditions make safe navigation even more difficult. These latent risks in routine operations are issues that technology could minimise or engineer out completely.

Collision and obstacle avoidance

Sea Machines is one company that aims to solve some of the challenges navigators face at sea. AI-powered vessel vision combines real-time data from sensors to produce intelligent decision support systems and something the company calls 'collaborative autonomy'. There is a rapidly growing space for solutions that combine AI, vision tools, and sensor information to create an enhanced view for the benefit of the watchkeeper.

Another company using sensor fusion technology is Luminbird. Using laser scanners and advanced software tools, their products make object recognition easier and quicker for a navigator to process. LiDAR stands for light detection and ranging. It is a remote sensing method which scans the earth's surface and builds highly accurate digital representations. The OPAL™ LiDAR works well with RADAR, camera, AIS and electronic charts. Compared to maritime RADAR, OPAL shows reduced clutter and greater precision. This technology also outperforms standard equipment when gauging distances.

Onboard Connected Safety

The internet of things (IoT) is like the connecting tissue for complex socio-technical ecosystems. These systems work like communities, with things interacting with one another within a focussed environment. Onboard a ship, crew with different responsibilities operate in different locations at different times and for different reasons. What IoT makes possible is understanding the way the crew interact with equipment during this multitude of system actions. The potential to get intelligent insights with IoT is virtually limitless. Almost any data point can be connected to the system through smart devices. What IoT does is build a comprehensive picture of a ship and its connected machinery, rendering a high-resolution picture of ecosystem health and performance.

There are other use cases where IoT tech improves links between humans and digital/mechanical systems. Routine work requires a basic overview of resource utilisation and risk. It is important to know where people are to keep people safe on the job. A control point for work on ships means someone has a general overview of crew whereabouts. It also offers opportunities for crew to be informed of work going on around them.

Thinking of seafaring crew as a part of a complex socio-technical system, harnessing new digital technologies to facilitate and manage that relationship means that risks that were previously accepted can now be improved on, while enhancing human performance.

This article is an extract from *Seafarers in the Digital Age: Prioritising the Human Element In Maritime Digital Transformation*, a report sponsored by the Inmarsat Research Programme, and appears here with permission. The full report is available for download at https://bit.ly/3PAo9Kt

Is all training effective?

Over-reliance on a single form of training and 'unnecessary' courses can put seafarers off training altogether. Is it time for a rethink?

James Edwards MNI
Member, YMC

Most seafarers would agree that the amount of training they complete is going up. This can only be a good thing; it shows that there is a commitment from regulators, flag states and ship owners to keep ships safe, and thereby the crew and environment. It has resulted in more experts in more maritime fields being asked to create, teach and assess officers and crew and ultimately pass on their knowledge and skills to the current generation of seafarers.

However, are all training courses equally beneficial? Can some actually be *detrimental* – and if so, is there more that could be done to make them more useful?

'Traditional' training

The 'traditional' training course usually takes between 3-5 days and is taught by one or more experts who have real world experiences and knowledge that they pass onto their students, initially in the classroom. The theoretical knowledge is then supported by practical exercises carried out in safe and controlled conditions to test skills and give feedback. With both parts combined the students gets a much better appreciation of the reality for which they are training – what fighting a fire actually feels like, or the difficulties of righting a life raft. This understanding means they have a better chance of reacting positively in real situations at sea. If the course involves modern simulators the students can be placed in very realistic conditions to push them out of their comfort zone without the consequences of 'real life'.

The main drawback is cost. It can be very capital-intensive to build training centres and create courses. The upkeep and running costs are also comparatively higher when compared to other methods of training. From the seafarer's perspective, it also requires physical attendance during their hard-earned leave.

Fleet trainers

Fleet trainers are normally hired by the company to give training on board, usually to refresh the skills and knowledge learnt during the traditional courses. The biggest advantage of this type of training is that the trainers can see an entire ship's company in action, especially during drills, and can offer immediate remedies to make them more effective. They can also give practical demonstrations of how to operate equipment properly. This is especially useful for equipment rarely used or for back up equipment that is only used in case of failure of primary equipment.

From a company perspective, this can be cheaper than sending crew to a training centre, as you can train more crew more quickly and if certified can issue certificates onboard. A good example is Personal Survival Craft and Rescue Boat (PSCRB) training or pallet truck training. For the seafarer, this is less disruptive than training in shore centre, and is normally considered part of their working hours.

The downside to this training is that it is costly. It requires commitment from the company to pay for full time trainers and their travel costs. Training must also be scheduled around the ship's operational requirements, which can be difficult during busy voyages.

Onboard familiarisation training

When a crew member joins, they should expect a brief introduction and a familiarisation with the emergency signals, emergency duties and muster station clearly outlined. This is provided by crew already on board, as opposed to the specialist fleet trainers outlined above. As the crew member becomes more settled they should then receive any additional training such as watertight door familiarisation etc.

From a company's perspective there is little way of telling whether this training has actually been done without testing the competence of the crew. Unscrupulous crew can sign a sheet to say that they have received the training, whether they have done so or not. From a crew member's perspective it is difficult to know if they've been trained correctly. It is likely that the trainer received their training themselves onboard, and any mistakes may be passed down from trainer to trainer without being questioned.

Computer Based Training (CBT)

CBT or Video on Demand (VOD) training takes place via a ship's computer or crew member's device. In most cases, it is either a video or a presentation which the crew member watches, with comparatively little interaction. Their knowledge is then tested with a multiple-choice quiz. A digital certificate is issued on successful completion of the training. Larger companies may choose to produce their own training material, whereas smaller organisations can outsource this to specialist companies that charge flat fees or through subscription services.

The main advantage of this is cost and an overview of which courses have been completed by whom. The training need only be created once and updated as required and it is infinitely scalable. The company can also see, and show to auditors, the percentage of completed courses and any missed deadlines. Any non-conformities can be raised with the appropriate chief officer/engineer or head of department.

The drawback for the crew is engagement. If the course subject is uninteresting or poorly presented it can be difficult to maintain the level of engagement required to learn and understand it. We've all heard the phrase 'death by PowerPoint'.

Training and perception

Covid-19 has had an interesting effect on crew training. Exemptions and extensions were issued by flag states due to traditional courses being closed due to local government regulations. Difficulties in accessing physical training courses, combined with better access to internet onboard, has resulted in an increase of demand for CBT. Whereas CBT courses were previously seen primarily as supplementary to physical training courses, they have now started replacing them entirely. For example, the 'STCW basic security awareness course' can now be completed digitally with a certificate issued at the end.

The advantage of a relatively small cost and infinite scalability has resulted in the creation of hundreds of online training courses. These cover a wide range of topics from firefighting techniques through to preventing computer-based injuries and repetitive strain injuries. The quality of the courses and their usefulness to seafarers and their role onboard varies considerably.

It is very easy for a company to show that their crew are trained to a high standard through their training completion records. However, the assessment model matters. If there is only limited monitoring of crewmembers during their training, it is difficult to gauge the true level of their understanding, particularly if they are able to repeat a multiple choice exam until success. In the event of an incident, there is a risk that any injuries or damage could be labelled as crew negligence or human error instead of a lack or training, regardless of the actual reason.

From the seafarer's perspective, those who may have found that the number of crew onboard has decreased and their workload has increased are now presented with vast numbers of training courses that must be completed. For watchkeepers, this means less rest or less time ashore, which is already a rarity. For 'day-workers' and the Chief Engineer/officer it means less man-hours available to operate or maintain the ship.

This has resulted in training in general, and CBT in particular, often being viewed negatively, as something to be 'got out of the way'. Most crew, after finishing their day's work and deciding between completing CBT or going ashore/resting, are unlikely to take their time on the former. This is hardly conducive to a good learning mentality.

This negative view of training may also affect personal development during leave. If you already have such a negative view of CBT, why would you do more than the bare minimum required during your precious leave?

CBT could be a powerful tool that keeps crews refreshed and complements their physical training – but it needs to be done right, as part of a wider training mix.

From cost to benefit

The whole mentality around training needs to change; both on the part of the companies and the crew.

Instead of being seen as a cost, training should be seen as an investment. Participants need to understand that, far from being an afterthought or a tick box exercise, it is a beneficial step towards becoming a better officer or crew.

Companies should consider including training time in their calculations of required crewing levels and working hours. They should reduce the amount of training material that is 'common sense' to trained professionals, who usually see it as belittling or patronising and which dilutes the benefits of more targeted training. As restrictions are lifted, they should employ/re-employ fleet trainers and continue, or resume, running physical training courses which are generally viewed as useful and interesting by those participants.

The downside of this is an increase in cost, management and time. But if companies do truly care for the skill and knowledge of their crew and thereby the safe and efficient operation of ships and the protection of the environment then it is a worthwhile investment.

This is not just hearsay. I am fortunate to work for a company that has created a state of the art training centre that hosts interesting and engaging physical and remote courses taught by knowledgeable and enthusiastic teachers. The creation of a dedicated training centre is out of the reach of all but the largest companies - but they do exist. These courses are open to other companies and are testament to what can be done when training is prioritised.

Safety starts on deck

The Nautical Institute's enclosed space safety competition – the winners

In December 2021, The Nautical Institute launched a competition outlining the events leading up to an enclosed space incident. This one was fictional, but entry into hazardous spaces is and remains a recurring problem in the maritime industry (see MARS, 202237, on p17 for one recent example). We invited readers to propose methods of preventing these incidents – by raising awareness; by technical solutions; by organisational change. Any and all suggestions were welcome.

Competition entries were reviewed by our panel of experts, and we are delighted to announce the winners in each category.

TECHNOLOGY

Martyn James, MNI
Marine Pilot, Associated British Ports

Martyn's entry describes a combined air mask and gas detector worn by those entering into enclosed spaces. The device enables an automatic release of air into the mask when oxygen deficiency is detected, allowing immediate and safe evacuation.

POSTERS

Captain Russ Garbutt, FNI
Retired: Previously worked as ships master with P&O Ferries

Awarded First Prize in the Poster Category for his attention-grabbing posters.

COMPANY SUBMISSIONS

Sören Scheid
NanoVapor Product Manager, Ecochlor (company entry)

Soren's entry highlights a tool to facilitate enclosed space ventilation that introduces a liquid in droplet form to suppress the evaporation of any volatile organic carbons that may remain in a ventilated space.

PROCEDURES

Jonathan Charles Rushton, AFNI
Retired: previously worked for Global Marine Specialist, Talisman Energy and Shell Tankers

Jonathan proposes to establish an expert panel with the sole purpose of reviewing enclosed space deaths from existing sources of information. The experts should be drawn from a wider community than the maritime sector alone. The resulting conclusions would shine a spotlight on the leading factors contributing to deaths in enclosed spaces.

LEADERSHIP

Mr Lloyd Swindell
Deputy General Manager/QSHE, K Line LNG Shipping UK Ltd

First prize in the Leadership category for his active encouragement of submissions from across the K-Line LNG UK fleet resulting in higher levels of awareness and a number of recommendations for further improvements.

Ideas included the creation of laminated sheets with detailed diagrams of the space entered. The standby person keeps a plot of personnel in the space, minimising search time in the case rescue is needed, among other benefits.

In a related letter, Kevin Slade writes:
I just thought I would bring to your attention a IMarEST webinar https://youtu.be/YLrVS43bK1o posted on You Tube, entitled 'Oxygen depletion in enclosed spaces' and which features research carried out by Donal Burke.

It struck me that general awareness of the three major areas of concern – actual speed of oxygen depletion, effect of ambient temperature and the risk in adjacent spaces is very poor and needs to be promulgated more widely. I would recommend it to all NI members, and in particular anyone involved in training courses on entry into enclosed spaces.

Safety drill competition

The Seafarers' Charity Announces Maritime Safety Week Competition Winners

The Nautical Institute's enclosed safety competition, opposite, invited individual and company responses to a familiar problem; on the basis that we can only solve safety issues if we get everyone in the industry involved. A competition launched by The Seafarers' Charity to mark Maritime Safety Week (4-8 July), took a similar approach, but headed in a slightly different direction, inviting everyone who works at sea to practise and improve their crew muster safety drill.

The competition saw crews from fishing vessels to chemical tankers, and even the Border Force, submitting photographs and videos of their safety drills. Many of the crews found that through practice they were able to improve their drill time, which in a real emergency at sea, could help save lives.

The competition judges, Robert Greenwood, Director of The Safety Folder and Captain Jeff Parfitt FNI, Head of Safety & Environment at The Nautical Institute, reviewed all entries submitted and were delighted to choose four winners based on speed, technique, and style of each crew.

First prize was won by the crew of the *Karima*, a 26-metre fishing trawler. The crew produced a brilliant video of their drill while out in the North Sea.

By taking part in the competition, the *Karima* crew halved their drill time to two minutes and 27 seconds after practising for two weeks, which is very impressive considering the amount of safety gear and survival equipment they donned, including pyrotechnics and Search and Rescue Transponders (SARTs). The crew reported that practising this drill together was also very helpful for those crew members who had recently joined the vessel.

The *Ardmore Cherokee* is a 159-metre tanker. The crew's muster drill really impressed the judges, as they demonstrated their lifeboat launching drill as well.

Here are some top tips from the crew:

- The 'secret' is just the proper implementation of requirements and carrying out drills in a very realistic manner.
- Briefing and debriefing sessions are very important while looking to make the crew more responsible.
- Always look for inexperienced crew and help them to get better instead of keeping them away from the action.

The *Benaiah IV* is a 20-metre fishing trawler also fishing in the North Sea. By taking part in the competition, the *Benaiah IV* crew had significantly improved their drill times too and the judges were impressed with the additional survival equipment brought to the muster point as well. Their safety drill demonstrates that survival at sea in an emergency is all about working together as a team.

The *Ardmore Encounter*, a 183-metre tanker crew's muster drill was also judged as very competent by the judges. The crew produced a great video while improving their safety drill time.

Regular drills were carried out ahead of the competition and helped the crew improve its speed.

Robert Greenwood said, 'We wanted to highlight the best fishing vessel entry in the Safety Drill Time competition, but in the end, it was just too difficult to choose between the quality entries from *Karima* and the *Benaiah IV* and we decided they are both very worthy winners. Well done to both crews.'

The other two winners were both Ardmore Shipping tankers, who demonstrated a great level of skill and teamwork.

Congratulations to all winners and a huge thank you to all participants for taking part.

The Seafarers' Charity is planning to run the competition again in 2023 – so there is plenty of time to begin practising for next year.

David Patraiko FNI rounds up the latest news, releases and events affecting the maritime professional throughout the world

Social Interaction Matters

Social interaction on board facilitates a mental reset and improves rest, according to the second stage of a report from the International Seafarers Welfare and Assistance Network (ISWAN). The report goes on to look at ways of promoting stronger relationships between crewmates, including appointing voluntary 'social ambassadors' on board. It includes a set of actionable guidance and recommendations for shipping and ship management companies, seafarers and other maritime stakeholders to improve opportunities for crew to socially interact. These are designed to help promote a varied programme of social events, tailored to different crew needs and diversities, and different voyage plans and vessel specifications.

Stewart Bankier, SIM Ambassador and Head of Fleet Personnel Development & Compliance at Bernhard Schulte Shipmanagement says: 'Any industry CEO who wishes to attract the next generation of seafarers should put this guidance front and centre of crewing strategy and implement the recommendations as far as possible.'

The project recommends the appointment of a voluntary Social Ambassador on board every vessel to help convene social activities and promote crew engagement. The Ambassador should:

- Reflect and respond to the crew's preferences.
- Encourage a variety of social activities to provide a healthy balance of mental and physical stimulation.
- Plan social events proactively in response to varying workloads and, where possible, advertise them in advance.
- Initiate ice-breaker activities for newly joined crew.
- Consider the safety of activities and the ongoing maintenance of associated facilities and equipment.

The research concludes that leadership support ashore and on board is vital to realising the benefits of these actions.

The guidance and recommendations can be downloaded from www.seafarerswelfare.org

Seafarer Happiness

The most recent Seafarers Happiness Index suggests a welcome rise in optimism with a significant increase in the overall rating of 7.21/10, up from 5.85 in the previous quarter.

Amendments to the Maritime Labour Convention (MLC), and the prospect of universal connectivity, has given rise to optimism and timely crew changes have had a massive impact on positivity. When seafarers know how long they will be on board and that they will be home on time, they can deal with the challenges faced at sea with a far better resolve and disposition. A rmove to find real solutions to these problems has finally begun to lift morale.

However, whilst the data does suggest that we are seeing improvements, there is no room for complacency. Seafarers continue to share many experiences which are at times frustrating, and at others hugely detrimental to mental health.

This report paints a picture of some important positive progress and will allow the industry a collective wiping of the brow but it is not mission accomplished and there is still much to be done.

The report can be found at www.happyatsea.org

Roll Risk Eliminator

The Maritime Research Institute of the Netherlands (MARIN) has developed a 'roll risk estimator' as part of its 'Top Tier' project looking at container losses at sea, with a particular focus on ultra large ships.

Following a series of incidents with exceptional container losses during the winter season 2020-2021, the 'Top Tier' Joint Industry Project (JIP) was initiated to address the loss of containers, with active participation of major stakeholders, to find ways to avoid similar incidents in the future. Initial results show that parametric rolling in following seas was especially hazardous. This document describes how container vessel crew and operational staff can plan, recognise and act to prevent parametric rolling in following seas. More explicit guidance on the hazard of parametric rolling in following seas is work in progress.

The roll risk estimator indicates combinations of speed, heading and wave period that result in unfavourable tuning of roll motions that should be avoided. It does not give indication of the maximum roll motion, and at which wave height the vessel is vulnerable to adverse rolling must be judged by the master's experience. It does not address other dangerous ship behaviour eg large vertical accelerations, shipping green water and slamming.

The present TopTier project is a follow-up of the Lashing@Sea JIP to address safety concerns in container transport with a wide consortium to aim for a safer and a level playing field. It has been approved by a cross-section of industry, academic and government interests. MARIN will produce a report of its findings including recommendations in due course. It is envisaged that the recommendations will eventually lead to operational and technical improvements that should mitigate the risk and underlying causes of container losses at sea.

An initial version of the roll risk estimator and a video explaining how to use it is available for free download at www.marin.nl/en/jips/toptier

Green Sea Corridor

The ports of Singapore and Rotterdam have signed a memorandum of understanding (MoU) to establish the world's longest 'green and digital corridor' to enable low and zero carbon shipping. Among other things, the MoU establishes a framework raise investment confidence, attract green financing, and kickstart joint bunkering pilots and trials for digitalisation and the use of low- and zero-carbon fuels along the route.

This agreement is particularly significant as Singapore and Rotterdam are among the largest bunkering ports in the world – and are showing their commitment to making alternative and sustainable fuels more readily available. This might include biofuels, including biogases, and other alternatives such as synthetic methane, hydrogen, and hydrogen-based fuels including ammonia and methanol.

The two port authorities agreed to bring together a broad coalition of shippers, fuel suppliers and other companies to collectively work on potential solutions to the problems posed by the introduction of new fuels.

Beyond alternative fuels, the MoU also aims to optimise maritime efficiency, safety, and the transparent flow of goods by creating a digital trade lane where relevant data, electronic documentation and standards are shared. This will facilitate the seamless movement of vessels and cargo, and optimise just-in-time arrival of vessels from port to port.

Introducing the Youth Forum

Making maritime expertise accessible – at all levels

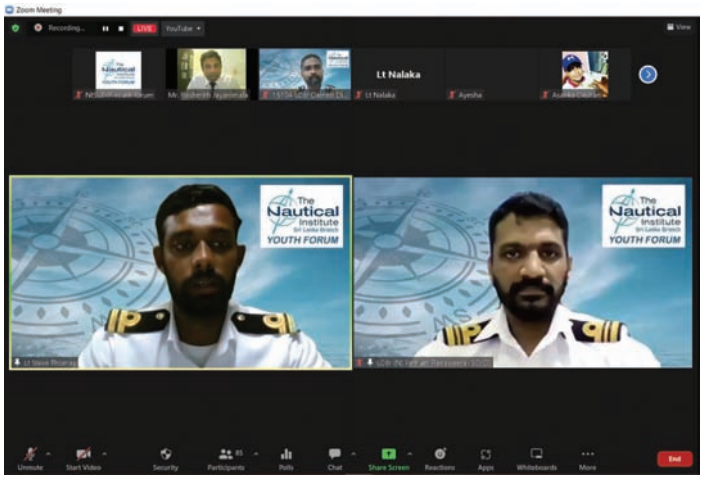
Mario De Silva MNI
Lead Team Member NISLB Youth Forum

The concept of a Youth Forum was brought in as a simple solution to a recurring problem encountered by young seafarers all over the world. Sri Lanka, being a nation with a strong seafaring community, has a notable amount of maritime expertise and knowledge in its top tier maritime professionals. Yet most of the time that wealth of knowledge is not accessible to the young seafarer, due to the limited opportunities for networking across the hierarchy. As many of these experts are NI members, the younger committee members of the Sri Lanka branch took the initiative to establish those links themselves. They formulated a base concept to establish a Forum for young seafarers, and proposed it to the Branch committee during the 2021 September meeting.

Things took off from there, with a dedicated subcommittee working to develop the plan. The name of the body, main platform of communication, guidelines and code of conduct and the structuring of the system were considered in depth. After a lot of consideration, the name was settled as NI Sri Lanka Branch Youth Forum. Approval for the initiative was obtained from NIHQ, and the Branch Executive secretary was appointed as the point of contact between the NI Sri Lanka branch and the Youth Forum.

The Youth Forum has been established as a free of charge group for Sri Lankan young seafarers of 35 and under, open to those in both the merchant navy and the Sri Lanka Navy. Its main purpose and goals are to:

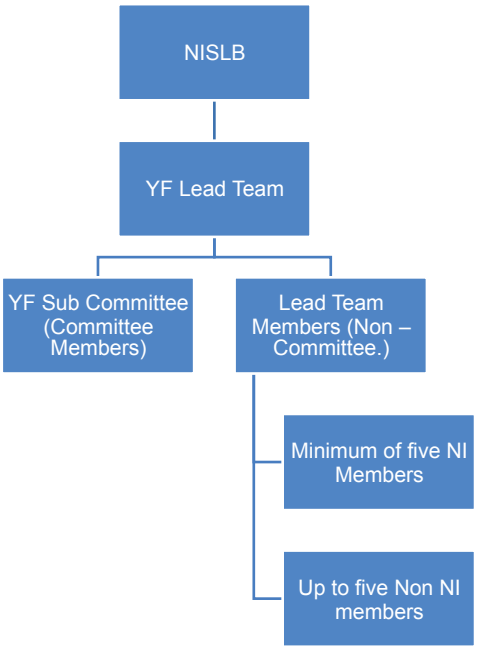
- Improve networking opportunities;
- Uplift the personality and soft skills of young seafarers;
- Help career development under the umbrella of Nautical Institute.



The forum is based around social media platforms frequented by young professionals, with the main forum being a dedicated WhatsApp group to enable ease of communicating while at sea and land.

Activities include online discussions, an open platform to ask for assistance in onboard matters, exam discussions, sharing of knowledge, updates on maritime news, networking opportunities with the senior sailors in the country and training sessions via of webinars/ seminars. The Youth Forum is operated and managed by a team of young Nautical Institute members under the guidance and regulation of the Sri Lanka branch committee.

YF Administrative Structure



Launch and initial activities

After a lot of preparation, hard work and management, the NI SLB Youth Forum was launched on 15 January 2022. Due to the prevailing Covid-19 restrictions, this was a virtual event. The inaugural webinar was on a much demanded topic; 'Ensuring Job Security and Career Development for Young Sri Lankan Seafarers', with speakers representing employers, top ranks in the Navy and maritime academic experts. The webinar was very well received, answering many questions and providing clear guidelines on how to improve and meet the demands placed on young seafarers today.

From that point on, the Youth Forum has been conducting a series of mini webinars catering to the needs of the young seafarers. Over 20 top experts are invited to discuss the topic at hand, and the structure is designed to best suit fast-paced, multi focused young minds. The webinars are held on a midweek evening, where everyone is at home and easily able to access the forum. They are kept to a strict one

hour timeframe, focusing on a single topic, to ensure that content is delivered with minimum distraction. Each webinar has a 50/50 ratio of presentations to Q&A session.

The forums are focused on helping youngsters clear up any doubts surrounding the discussion topic, and also on enhancing their soft skills in speech and assertiveness. A key aspect of the webinars is that they are organised, managed and moderated entirely by young members themselves. This has been an excellent opportunity for young seafarers to demonstrate their leadership skills to the maritime community at these public events and to improve their soft skills set.

In the six months following its inauguration, the Youth Forum has held webinars on:

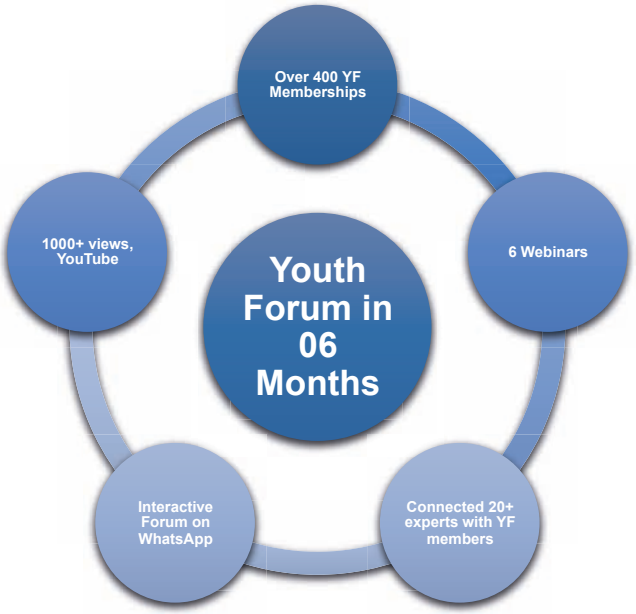
- How to support the Master on the bridge: When and how to speak up;
- Enclosed spaces can be deadly – Think before you enter...!
- Basic ship handling – The Pivot Point;
- Role and functions of MRCC;
- The examiner and the candidate – Orals preparation.

Growth and development

In addition to the webinar programme, the WhatsApp forum is active and interactive on a day to day basis. The lead team maintains the flow and keeps the content regulated while encouraging industry experts to connect and join in with the discussion.

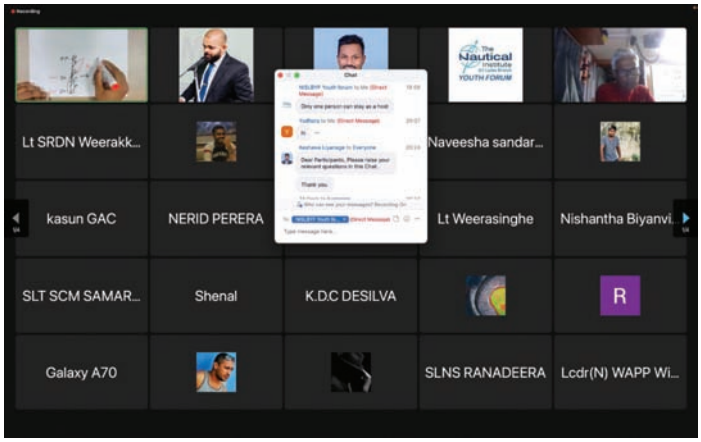
Seafarers apply to join the Youth Forum via a Google application form, which has been made widely available within the maritime community by sharing a QR code. Successful applicants are given access to the WhatsApp forum, while webinars are open to all – however, priority is given to YF members. All virtual events and training records are shared on the Sri Lanka branch YouTube channel and maintained as a reference library.

Active youth membership has grown, now passing 400 in numbers, and many youngsters have moved on to reap the benefit of full NI membership.



The Youth Forum has successfully managed to bring young seafarers together in a professional forum and address their needs while focusing on development of the future generation of seafaring. This may be a way forward for other NI branches to reach out to younger seafarers and engage them in professional development activities.

The Sri Lanka branch Youth forum is willing to extend its support to any other branches building up their own young seafarer outreach programs, and help benefit the young maritime professionals.



What has the Youth Forum done for us?

The Youth Forum is the best place to exchange our knowledge and clear our doubts as a beginner seafarer.
Deck Cadet Kasun Withanapathirana

The Youth Forum is the best opportunity to voice our opinions, share ideas and valuable experiences and think together about what we can do to achieve our goals.
Engine Cadet Mohammed Munseeth AMNIS

When it comes to professionalism, the Youth Forum has provided me with professionals across the field to overcome those challenges to be an active and a vibrant member.
2nd Officer Harsha De Silva MNI

The Youth Forum is important to me as the members on the forum constantly share latest navigation related rules and regulation etc. Not only that, but the personal experiences of the members in terms of port information and other things is very useful. Whenever I'm in doubt about something I can ask – and get a lot of valuable input to clear out the doubt.
Piyushan Halpita MNI

The Youth Forum gave me the opportunity to engage with senior navy officers, merchant navy personnel and to enhance my naval knowledge.
Lt Steve Thomas

The Youth Forum opens a new window for me to improve my awareness of the Merchant Marine and common navigation aspects.
LCdr(C) Amila Wickramanayake

It's okay not to know everything in your field, each and everyone has different talents in their own ways. But you can still find answers and you can find help in one place. For me, that's The Nautical Institute Youth Forum.
Veena Saraph

Visit the Youtube Channel
https://www.youtube.com/channel/UCLjG9e2W4S26UB1ITx8KavQ
Email: srilanka.branch@nautinst.org / nislbyf@gmail.com

A round-up of news and events from NI branches across the world. Send your updates to **branches@nautinst.org**

NEW ZEALAND BRANCH

Coastal shipping seminar

➔ To coincide with the 50th Anniversary of The Nautical Institute – and to celebrate our relaunch in person after a lengthy hiatus – the NZ Branch organised a seminar looking at changing perspectives on New Zealand coastal shipping, in particular the potential revival of sea trade.

While the changes in the Covid-19 restrictions after more than two years have enabled us to enjoy some relative freedoms, the ever-present threat of Covid is still in evidence around us. Keeping in touch with fellow Institute members via various internet mediums may have been good in one sense, however there is certainly nothing to replace human contact.

Taking advantage of the opening up of restrictions around gatherings, the local committee organised a seminar for 21 July on the topic of New Zealand coastal shipping. Our guest presenter was Brodie Stevens, Country Manager for Swire Shipping, an important arm of China Navigation Co of Hong Kong. Coincidentally, while the Institute is celebrating its 50th birthday, CNCo / Swire is celebrating its 150th.

The seminar, held in the NZ Maritime College rooms in Auckland, was well-attended by more than 20 members and friends, including those from the Institute of Chartered Shipbrokers, Master Mariners and several other maritime trade-related companies. Several other NI members from around the country attended via video link.

Mr Stevens made full use of the on screen facilities to give us an eye opening and enthralling presentation.

His introduction took us back to the early days of New Zealand's coastal shipping, which played a key role in the development of the country from the early 1800s. There were few roads and even fewer rail connections, so sea transport was the only viable option. The sector was dominated by companies now long gone such as the Union Steam Ship Company (aka the 'Southern Octopus'), the Northern Steamship Co, Richardsons of Napier and many more.

The coming of the container led to massive change during the late 1960s and into the 1970s. Within a very short period of time the many 'conventional' coastal ships disappeared to be replaced, firstly by ro-ro vessels and then in an even shorter period, by full container operations serving fewer coastal ports. Along with the ships, nearly all the previously numerous shipping companies also disappeared.

By the 1990s, coastal shipping had been replaced to a large extent by road and rail, with overseas container lines dropping export cargoes at four designated container ports. One or two small operators filled in some of the gaps, feeding into other ports using ro-ro and the rail ferries operating between Wellington and Picton (South Island).

Back to the future

Over the last few years there has been a growing call for a return to coastal shipping using dedicated carriers. With global warming and emissions / CO_2 reduction being the major issues of the day, the sea has taken on a new importance as far as transport is concerned.

So to the Swire initiative.

Swire has had a long association with the South Pacific region, and New Zealand in particular, going back to 1883, when a lovely little steamer named *Hoihow* was running to New Zealand from China, carrying tea and, no doubt, gold prospectors.

While the Maersk empire has to some extent got a head start on the action by introducing two 'dedicated' coastal container ships, Swire is stepping up to the plate. Swire Shipping purchased Pacifica Shipping from Skeggs Group in 2015. Part of its investment in Pacifica was the introduction of the *Moana Chief*, a 1,700 TEU vessel operating a weekly service between Auckland, Lyttelton, Nelson and Tauranga. A second Swire ship has since been designated for the coastal trade, a 1,300 TEU vessel. This ship will also continue to service regional New Zealand ports. So we can expect to see a change in the trade patterns as far as New Zealand is concerned.

Hurdles to overcome

There are a few hurdles on the way ahead, in respect to manning, setting up of the trading circuits, port rotations, guaranteed berthage and labour etc.

Manning with New Zealand crews, while certainly a popular move, may be one of the biggest and more immediate problems. So much of the NZ labour force moved offshore years ago and those who have been through the local navigation schools have progressed to overseas shipping companies. On top of this, over the past couple of years, due to Covid restrictions, there have been so very few trainees going through the maritime colleges. Restrictions on immigration have also prevented potential crew coming to NZ. However, there is some hope on the near horizon with promised support from the NZ Government Trade and Industry minister.

The shipping companies have enjoyed some buoyant trading years and while shipping goes through highs and lows, it is hoped that with sufficient support, coastal shipping will again find a place in the ever-changing and growing needs of this nation.

We in New Zealand are at the end of a long supply chain, both for imports and exports and this has become ever so evident over the past few years. With ever larger container ships wishing to call at ever fewer ports, coastal feeder services will be a real necessity. Certainly this will involve more cooperation with our cousins in Australia.

Mr Steven's presentation was followed by a lengthy Q and A session. There were indeed more questions than answers so we can be assured of watching developments with interest in the near future.

R J (Bob) Hawkins FNI, FICS

Swire Shipping's 1,700 TEU *'Moana Chief'* at Auckland, NZ.

UKRAINE BRANCH

New challenges at a testing time

➔ Since Russia's invasion of Ukraine on February 24 2022, scenes of devastation and attacks on civilians have rocked the world. The impact of the war in Ukraine has been far-reaching, not only in terms of international outrage, but across multiple aspects of today's interconnected global community. From the first day of the invasion, Ukrainian seafarers and their families have faced many new challenges and difficulties living their lives, both in Ukraine and abroad.

The international maritime industry has coordinated its efforts to help and support Ukrainian seafarers and their families in different ways from the beginning. We very much appreciated a message of support from The Nautical Institute CEO, Captain John Lloyd FNI and President, Ms Jillian Carson-Jackson FNI (see below).

Despite operating under war conditions for the last five months, members of the NI of Ukraine have continued their activities and have done everything possible to support and assist Ukrainian seafarers in this testing period. Together with NIHQ, the NI of Ukraine has held three online engagement forums. These forums allowed professionals based in Ukraine to share their concerns, and their views and expectations with regard to possible support / assistance from The Nautical Institute and the maritime industry as a whole during this difficult time.

Among the many concerns raised were:

- The implications of repatriation for Ukrainian seafarers on board ship, and whether provision can be made for their safe return to neutral countries;
- The possibility that seafarers returning on leave from their ships will not be allowed to leave Ukraine due to national defence obligations. Ukrainian mariners are a key part of the global maritime workforce, and contribute significantly to the domestic finances of Ukraine. Will mariners returning home on leave be regarded as key workers (and subsequently allowed to return to sea)?
- Arrangements for renewing and/or extending the validity of Ukrainian Certificates of Competency, as well as those for other essential licences, tickets and qualifications;
- The availability of support if these processes have to be completed in a third country;
- Help securing seagoing training berths for Ukrainian cadets;
- Support for Ukrainian junior officers and cadets in the early stages of their shoreside training;
- Support for experienced Ukrainian seafarers revalidating their Certificate of Competency and any other essential tickets and licences;
- Support for residential course training and, where appropriate, accommodation of family members in approved third countries.

Moving forward

As a result of these discussions, The NI has formally written to the Ukraine Delegation to the IMO, the Company Secretary of the International Association of Maritime Institutions (IAMI) and the Chairman of GlobalMET to better understand what is currently being done, what remains to be explored, and how it can play a constructive role:

The latest news is that the Cabinet of Ministers of Ukraine has agreed on a bill on the possibility of Ukrainian sailors traveling abroad during martial law. The document has been approved by the Ministry of Infrastructure, the Ministry of Finance and the Ministry of Defense of Ukraine. Further steps to get approval will follow at the next meeting of the Committee on National Security, Defense and Intelligence. We hope this will take place as soon as possible.

Resources

A dedicated portal for supporting links and materials for Ukrainian seafarers and shoreside professionals can be accessed at https://www.nautinst.org/resource-library/welfare-and-support/ukraine.html , or by clicking the small Ukrainian flag/heart icon at the top of the homepage. These resources are also available via the Ukraine Branch web page https://www.nautinst.org/branch/ukraine.html)

Those affected by the conflict are strongly encouraged to refer to trusted sources of information and support and to get in touch directly through the NI Ukrainian Branch (torskiy@telnet.ua) or at branches@nautinst.org.

The NI Ukrainian branch has been working as usual despite the difficult circumstances. The NIU International Maritime Journal *Sea Review* has been published and committee meetings and the Branch AGM have been held on line.

We watched the NI AGM 2022 in Plymouth online and welcome Captain André LeGoubin MNM MA FNI as the Institute's new President. He takes over the presidency from Jillian Carson-Jackson FNI who has been at the helm for the past two years and has very close contacts with the NI Ukrainian branch.

Vladimir Torskiy FNI
Andriy Boyko MNI

As a non-governmental organisation with consultative status at the IMO, The Nautical Institute was able to join the Emergency Session of the IMO Council as observers in its meeting of March 2022.

We do not take a political view in our decisions, but we fully support and endorse the decision in which:

'The [IMO] Council agreed to encourage the establishment, as a provisional and urgent measure, of a blue safe maritime corridor to allow the safe evacuation of seafarers and ships from the high-risk and affected areas in the Black Sea and the Sea of Azov.'

and offer our support to the IMO Council in their statement which:

'Strongly condemned the Russian Federation's violation of the territorial integrity and the sovereignty of a United Nations Member State, extending to its territorial waters, which was inconsistent with the principles of the Charter of the United Nations and the purposes of IMO as set forth in Article 1 of the Convention, and represents a grave danger to life and serious risk to safety of navigation and the marine environment;'

The Nautical Institute is shocked and saddened by the human suffering that is the result of actions of war in Ukraine.

The ongoing invasion of Ukraine has led the United Nations to adopt a Resolution which demands that Russia immediately ends its military operations in Ukraine. The resolution, among other aspects, deplores in the strongest terms the aggression by the Russian Federation against Ukraine and condemns all violations of international humanitarian law and violations and abuses of human rights. We join the UN in condemning the ongoing aggression and add our voice to a call for an end to conflict.

The maritime industry is still working to overcome the challenges of Covid, particularly in terms of crew change and shore leave. The invasion of Ukraine poses a further challenge for many seafarers, with fear for family and friends at home. We call on all shipowners, ship managers, flags and port states to continue to support seafarers and provide guidance and support to ensure seafarers' rights are respected and they remain safe from harm.

John Lloyd FNI and Jillian Carson-Jackson FNI

NORTH WEST ENGLAND & NORTH WALES BRANCH

Seminar on maritime leadership

➔ Around 120 deck, engine and ETO cadets and early-career officers came together with over 40 experienced maritime leaders for a seminar on maritime leadership at Fleetwood Nautical Campus in late May. Attendees came from across the UK's North West and beyond, representing multiple sectors and disciplines, including: command; pilotage; salvage; drydock, repair and construction; ship owners and ship management; law, insurance and P&I; harbour operations, dredging, SOVs; MCA, flag state administrations and IMO; wet trades; dry trades; container; gas; ferries, passenger and super yachts; charities and maritime support; maritime education and training; The Nautical Institute; offshore, DP; ice navigation; the Royal Navy, and the UK's Border Force and Coast Guard.

In lively 'carousel' and 'reverse-mentoring' sessions the participants enthusiastically swopped their experiences, knowledge, and wisdom. The cadets were pleased to interact with experienced leaders and explore facets of maritime leadership from different perspectives. They gained new insights into leadership – transferable into their behaviours at work – while the experts, for their part, learned much about the experiences and aspirations of the upcoming generation of seafarers. The seminar confirmed the importance of professional networking, CPD and the important role of The Nautical Institute.

The seminar included an informal panel Q&A session and offered an unprecedented opportunity to meet, talk to, and learn from, current practitioners at the very cutting edge of our industry. Cadets were invited to submit their experiences in the form of a report, with a small prize for the best.

Congratulations to our winners, Katie Walmsley and Zeta Rutherford, whose report appears below. Katie is a phase 4 cadet in HNC Nautical Science, sponsored by Princess Cruises. Zeta is a phase 3 deck cadet sponsored by the RFA. Congratulations to both our winners!

Leadership seminar – cadets' report

In the maritime industry, good leadership is vital to running a safe and successful ship. When speaking to maritime leaders at the seminar, one of the questions that we posed was, 'Do you ever struggle with isolation due to your leadership position? If so, how do you cope with this?' The common theme found in their answers was that isolation was more prominent as they went up the ranks and into more leadership-oriented roles. As a junior officer, asking questions and socialising is appropriate; however, as you reach levels of leadership and authority, you must take more of a step back. The number of questions that can be asked decreases and many more decisions must be made alone.

Throughout our studies, we have learned that good leadership cannot be carried out alone; it is a team effort. This was another recurring theme; that leadership is not something that only comes from the top, but is rather a two-way system. Being successful in a leadership role requires approachability, allowing the possibility of correction if the leaders are wrong. One example discussed at the seminar was a Master blowing the fog whistle without informing those standing directly below. The next day, after a discussion on the situation, he radioed down before sounding the whistle. This shows that although the Master may be one of the most experienced personnel on board, there are still situations they can learn from, if it is brought to their attention.

The maritime leaders highlighted that more courses were now being offered for those in leadership roles on board ships. Furthermore, many companies are now bringing in professionals such as psychologists to enable their leaders to acquire 'soft' leadership and management skills. This could support leaders in understanding the various personality types, and how different people and situations may need to be approached. This may also provide an opportunity for them to reflect on their own leadership style.

One of the leaders who spoke during the panel at the seminar commented that being a leader isn't always about being the one at the front; it is also about supporting individuals and 'giving them the tools to achieve what they want. Through doing this, you are reaching a shared goal.' This creates an atmosphere on ship that people may learn from. Having a leader who encourages goals and achievements is a great environment to enable personnel to carry out their own personal development without being afraid of making mistakes or asking questions.

Another comment which could influence our jobs in the future was that we can regard even bad leaders as an opportunity to learn. 'We can use our own mistakes to learn from; however, learning from another person's mistakes makes you the richer person. Not all mistakes are to be battled; many can be seen as an opportunity to learn.' Going forward from this seminar, we will be more conscious in how we can learn from situations, gaining support from peers and other leaders.

Another important topic discussed at the seminar was dealing with toxic leadership. The leaders discussed how you can become more beneficial to the ship, and the leadership on board if you get to know the ship as quickly as possible and keep asking questions. Understanding the leader's situation may help you become one step closer to breaking down the toxicity. It was said that sometimes the toxicity may come from hidden insecurities, and having the support of an experienced crew, may help to resolve the toxicity and help the leader learn from this situation.

Thank you to The Nautical Institute for putting on this informative seminar. It was an afternoon with a great atmosphere and enjoyed by all. We are looking forward to attending another Nautical Institute event in the future. The variety of maritime areas represented at the seminar provided something for everyone to learn from and included a vast range of experience.

We would love to see leaders from a greater variety of the different routes into maritime leadership roles, such as engineering and electro-technical, to provide a more rounded view of maritime leaders and provide a point of inspiration for all cadets attending.

Katie Walmsley and Zeta Rutherford

Representing The Nautical Institute to the maritime industry and beyond

Posidonia 2022

The Nautical Institute was honoured to exhibit at Posidonia this year as part of its 50th Anniversary celebrations.

The internationally acclaimed trade fair was held from 6-10 June at the Metropolitan Expo just outside of Athens, and was reassuringly well attended by visitors and exhibitors from around the world – including sizeable delegations from the UK, Japan and South Korea.

We are very grateful to all those that came to see us, and to those with whom our team spoke throughout the week for their interest and support. These include old and new members alike, as well as our valued Nautical Affiliates, sponsors and supporters (past, present and future) – and of course our very active Hellenic Branch.

During the event, The Nautical Institute signed a new five-year Memorandum of Understanding (MoU) with the Hellenic Marine Environment Protection Association (HELMEPA).

The MoU outlines areas of common interest and promises to explore synergies that foster:

- Marine environment protection;
- Maritime safety and wellness;
- Seafarers' training;
- Awareness raising in the context of sustainable development;
- The possibility of collaboration.

Nautical Institute's CEO, Captain John Lloyd, said: '"I am delighted that we have signed this new Memorandum of Understanding with HELMEPA as our interests are aligned in a number of ways. Protecting the marine environment as well as promoting the highest standards of safety and wellness among seafarers, including the provision of excellent training, all contribute to the overall sustainability of the maritime sector. We look forward to a close relationship between our two organisations.'

A mentoring session with cadets

NI staff at the UK Ambassador's reception

James Luetchford (l) meets Capt Prasant Saxena AFNI on the stand

Signing the HELMEPA MoU

John Lloyd FNI (centre) with Branch committee members

Recruitment recognition

Mirian Shavishvili MNI, one of our members in Georgia, writes: 'I am a second officer currently working in the tanker sector and also a lecturer in the seafarers' training domain. Becoming a member of The Nautical Institute has allowed me to find a wide-opened doorway toward professionalism that hones my skills at all levels of my maritime career.'

Members joining in the last year have cited Mirian's recommendation as their reason for joining. We extend our warmest thanks to him and wish him all the best in his developing career.

Welcome to our new members

The Nominations Committee has nominated the following for election by Council:

Associate Fellow

Baharom M K B Captain/ Marine Operation Superintendent (Singapore)
Bernaerts C Captain/ Master (Belgium)
Blonk C Mr/ Secretary of Labour Affairs (Netherlands)
Bunton B A Captain/ Fleet Operations Superintendent (South Africa)
Cardno D A Mr/ Director (UK/North Scotland)
Goswami P Captain/ Managing Director (India (West))
Gurunathan G Captain/ Master (India (South))
Hoon A Mr/ CEO/Director (India (North))
Howie D S Captain/ (UK/Central Scotland)
Jardine B Mr/ Chief Innovation Officer (US Gulf (Houston))
Johnston J Mr/ Master (UK/Central Scotland)
Keijer H J Captain/ Marine Expert (US Gulf (Florida))
Kurisinkal A H J Captain/ Master (India (South))
Le Roux M Captain/ Master (South Africa)
Mylonopoulos G Captain/ Master (US Gulf (Florida))
Seklejev A Mr/ SDPO (Lithuania)
Sioulas E Captain/ Nautical Instructor (Greece)
Window S Mr/ Head of Qualifications (UK/Solent)

Upgrade to AFNI

Bozhinov M Y Captain/ Manager (CAN/St. Lawrence)
Di Lieto A Captain/ Manager Simulation Studies (Netherlands)
Gainer H R D Mr/ Master (UK/ Humber)
Hawkins J Dr/ Managing Director (Australia - WA)
Irfan M Mr/ (Australia - WA)
Kaighin J C Mr/ Head of Marine (Australia - WA)
Lal P Mr/ Chief Engineer (India (West))
Pirc B Mr/ Master (Croatia)
Smits E Mr/ SDPO (Baltic States)
Varkey A C Captain/ QHSE & OPS Manager (Germany)

Member

Abdelhamed Hussien M M Mr/ 2nd Officer (Egypt)
Abrokwah E Mr/ 2nd Officer (Ghana)
Abubokhe E Mr/ 2nd Officer (Nigeria)
Alvim G B D M Mr/ 3rd Officer (Brazil)
Anderson S G Mr/ Chief Officer (Australia - WA)
Andriansyah E Mr/ Chief Officer (Indonesia)
Aniñon J Y Mr/ 2nd Officer (Philippines)
Ariyanto A Mr/ 2nd Officer (Indonesia)
Auguscik J G Mr/ Chief Mate/SDPO (Poland)
Awang Jamari M N I Mr/ 2nd Officer (Brunei)
Baron A R G Mr/ 2nd Officer (Philippines)
Baroutsakis C Mr/ Vetting Officer (U.S. Gulf (Houston))
Bielan M D Mr/ SDPO (Poland)
Bin Basri A K Captain/ Master (Singapore)
Bin Zainuddin D A Mr/ 2nd Officer (Malaysia)
Bitantos J D Mr/ (Philippines)
Boothe C R Captain/ Master/DPO (US Gulf (Houston))
Brown B R Captain/ Master (Trinidad & Tobago)
Bucktrout C G Lt/ Navigating Officer (UK/London)
Cardno S W Mr/ 2nd Officer (UK/ North Scotland)
Castro C L O Mr/ Master (Brazil)
Chernoshtan S Mr/ DPO (Georgia)
Chikkala S Captain/ Head of Crew Operations (Singapore)
Darwish A M S Captain/ 2nd Officer (Egypt)
de Graaf N Mr/ 2nd Officer (Netherlands)
De La Garza I Mr/ Master (US Gulf (Houston))
de Silva J Y H Mr/ 2nd Officer (Sri Lanka)
Dong H Mr/ Master (China PR (Mainland))
Dooley B J Mr/ Chief Officer (UK/ Central Scotland)
Dsouza M B Captain/ Master (India (West))
El Shamy M A M A Captain/ 2nd Officer (Egypt)
Ewing J E Ms/ 2nd Officer (US Gulf (Florida))
Febriansyah F Mr/ Master (Indonesia)
Floyd J R Captain/ Master (US Gulf (Florida))
Georgescu E Mr/ Master (Romania)
Georgiev A E Mr/ OOW (Bulgaria)
Gill J S Mr/ 2nd Officer (Malaysia)
Graybill K Captain/ Fleet Safety Officer (U.S. Gulf (Florida))
Gregorio R J P Mr/ 2nd Officer (Philippines)
Hobotovs V Mr/ 2nd Officer (Latvia)
Howcroft R Mr/ Navigator (Australia - WA)
Iqbal F M Mr/ Chief Officer (Indonesia)
Kanagaraju P Captain/ Marine Superintendent (Singapore)
Lambeck K C Mr/ 2nd Officer (Netherlands)
Lastimado P R C Mr/ 2nd Officer (Philippines)
Layerle C R Mr/ 3rd Officer (US Gulf (Houston))
Li X Mr/ Chief Officer (China PR (Mainland))
Liou S Ms/ 2nd Officer (Taiwan)
Litterick D J Mr/ Marine Pilot (New Zealand)
Lourenço L D M Mr/ Chief Officer (Brazil)
Mac-Utah A N Mr/ Electro Technical Officer (Ghana)
Maggo A K Captain/ Master (India (West))
Marshall K I Ms/ 2nd Officer (Australia - WA)
Martins A J Capt Master (Brazil)
Miklusz B Mr/ Watch Officer (Poland)
Minchukov A Mr/ Chief Officer (US West Coast)
Mishra S Mrs/ Director (Bangladesh (Dhaka))
Monnot V Mr/ OOW (France)
Montemayor A L Mr/ Chief Officer (Philippines)
Mord J Mr/ Deck Officer (Estonia)
Munir K Mr/ Marine Officer (Pakistan)
Mykytyuk M Mr/ Master (UK/ London)
Nava Gonzalez A Mr/ (Mexico)
Nizhelskiy M Captain/ Master (UK/ London)
Novikov S Mr/ 2nd Officer (Lithuania)
Nowotko D K Mr/ 2nd Officer (Poland)
Nur F Mr/ Deck Officer (Indonesia)
O'Grady P A Mr/ Chief Officer (Australia - QLD)
Orlandini D Mr/ SDPO (Croatia)
Orona Altamirano O J Mr/ Chief Officer (Mexico)
Osuna Wong M A Mr/ Master/SDPO (Mexico)
Othman M N I B Mr/ Seaferer (Malaysia)
Ozacar O Mr/ Chief Officer (Turkey)
Paes M A Mr/ 3rd Officer (Brazil)
Paguada Ortiz I G Mr/ Chief Officer (Honduras)
Pathania R S Mr/ DPO (India (West))
Petrov R G Mr/ DPO (Bulgaria)
Phillip K J M Ms/ (Trinidad & Tobago)
Ponte D A Mr/ 2nd Officer (Philippines)
Pretorius H P N Mr/ Ships Agency Manager (South Africa)
Qudrah H M Mr/ 2nd Officer (Saudi Arabia)
Rathore P S Mr/ DPO (India (West))
Robinson R C Captain/ Navigation Instructor (CAN/Maritime Provinces)
Rosyidi W Y Mr/ 2nd Officer (Indonesia)
Salahuddin G M Captain/ Sr Marine Superintendent (Singapore)
Sanchez A Mr/ Chief Officer (Uruguay)
Santana Souza Filho F B Mr/ Captain/ (Brazil)
Santillan R M Mr/ Chief Officer (Philippines)
Santos G D S Mr/ Coastal Bosun (Brazil)
Sarabia Martinez G A Captain/ Master (Mexico)
Satrio M R Mr/ 2nd Officer (Indonesia)
Schaab P S Mr/ 2nd Officer (New Zealand)
Seth R Captain/ Vetting Superintendent (US Gulf (Houston))
Silva Torres I Mr/ Mate (Mexico)
Smeby C T Captain/ Deck and aviation test lead (US Gulf (Florida))
Sonmez A Mr/ OOW (Turkey)
Strazzabosco D Mr/ SDPO (Croatia)
Tawiah M N Mr/ 2nd Officer (Ghana)
Tetteh J A Lt Watch Keeping Officer (Ghana)
Tomczyk K Mr/ Master/Chief Mate/ DPO (Poland)
Tudo E Mr/ Chief Officer (Indonesia)
Varghese N Mr/ 2nd Officer (India (South))
Vatsa A Captain/ Founder / Director (Singapore)
Vázquez Ciprian R A Mr/ 2nd Officer (Mexico)
Waraksa A Mr/ Chief Officer (Poland)
Wetang R Mr/ Deck Officer (Indonesia)
Zapata R P Mr/ Master (US Gulf (Florida))
Zolotarenko O Mr/ 1st Officer/DPO (Germany)

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Cox-Palmer-White F C D Mr/ 3rd Officer (UK/London)

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Havery W J A Mr/ Deck Cadet (UK/ North Scotland)
Mahmudov R Mr/ (Ukraine)
Munseeth M Mr/ (Sri Lanka)
Saimin M S Mr/ Marine Surveyor (Indonesia)
Tan S T J Mr/ Deck Cadet (Singapore)
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