

BGA 47 ANNEX

Agenda Item 1 – Secretary General’s Report

Mr President, Deputy President, Vice Presidents and Delegates. It is now four years since we last got together in person at a BGA and I am delighted to be able to stand with you again without any restrictions. It is wonderful to see many old friends, but also to see so many new faces.

I am pleased to present my report to cover the period since I last spoke at our first ever virtual BGA from our office in London in October 2021 and I do not intend to repeat the words that our President spoke about on COVID, or the appalling suffering of our dear friends in Ukraine who are fighting for their lives and their country.

I reported at the last BGA from our new location at the ITF Headquarters where we have two desks and full use of their meeting facilities. This is proving very satisfactory financially where our overheads are significantly lower than in the past, and also benefit from easy access to people such as Seafarers Rights International, with whom we have a seat on their Board, and also ITF legal and seafarers’ welfare personnel. It is of note that we have managed to reduce our Office overheads by 75% over the last four years.

This is the final year of the current Strategic Plan “A Wind of Change” and my report will be linked to that so that you can see how the Strategic Plan drives what the Secretariat does on a daily basis in support of you, the Shipmasters. After my report I will then make a short introduction to you on the new Strategic Plan “Maintaining Course and Speed” which was distributed to you all for your consideration and approval today. Following that I will talk briefly on a few membership issues and proposed changes to the Statutes and Byelaws which again were distributed to you in advance of the BGA for your consideration and approval today.

IFSMA’s Vision is “*To be an independent, apolitical and financially viable organisation dedicated to representing the views and professional interests of the serving Shipmaster on the International Stage at the IMO and elsewhere, upholding the International Standards of Professional Competence for Seafarers.*” This vision drives my daily life primarily at the IMO where finally we have got back to almost normal. COVID caused considerable disruption with meetings having to be done on line and by correspondence causing an enormous backlog of work.

We were finally allowed back into face-to-face meetings in January this year with a full working day. At the same time, we were trialling a new Hybrid meeting system so that those who were unable to travel could still participate fully in all aspects of the meeting. This means that now our meetings in Plenary and two Working Groups are held in the full Hybrid mode in person and online, but any other Group meetings take place only online, albeit that if delegations are attending at IMO they can be in the meeting room but have to use their own computers to participate online. This system is working very well. Nevertheless, whilst business is working well and providing financial savings for IMO Delegations, particularly the smaller nations and non-London based NGOs, things are still taking longer to complete although the backlog of work is very small.

Our first key challenge is the Skills and Competence of Ships' Crews where we must learn from our membership where crews are lacking in practical skills and competence, influence STCW amendments and enable you to be more available to undertake training and mentoring responsibilities. This is an ongoing debate where we are involved in the comprehensive review

of STCW. This is an enormous piece of work and we are only just at the very beginning of this long journey.

Currently the work is focussed on the identification of the specific areas that need to be reviewed; and the preparation of a roadmap. I hope that this part of the review can be completed by a Working Group at the next meeting of the Human Element, Training and Watchkeeping Sub-Committee in February next year. This work was being coordinated by our colleagues of the Danish Maritime Officers. Sadly, the person leading has had to step down and we have not yet managed to find a replacement. So, if there are any volunteers to take on this demanding piece of work please let me know.

Our second challenge is that of Criminalisation which is an ongoing battle. There were a number of incidences over the last two years, but dominated by the arrest and detention of the VLCC *Heroic Idun* from August 2022 until February 2023 by Equatorial Guinea and Nigeria with the Crew under armed arrest on board and being charged with Piracy and attempting to steal oil from an offshore oil platform owned by Total. This was an outrageous international incident with the ship and crew effectively being held up for ransom and showed the corruption at the highest level in these two countries.

I have to commend the owners, charterers and their P&I Club GARD who paid 1.6 million Dollars to Equatorial Guinea in the belief that this was a full and final settlement, only for the ship to then be handed over to the Nigerians. At a meeting of the IMO Council that met in November 2022, I praised the efforts of the Flag State, Marshall Islands and the work and effort from ITF, OCIMF, INTERTANKO and ICS. I also condemned the actions of Equatorial Guinea and Nigeria and accused them of international extortion. After the meeting I was thanked by the IMO Director of Legal and a number of nations for my intervention. You should be aware that it is very unusual for an NGO to be able to make a statement or intervention during IMO Council Meetings, but because of our reputation both ITF and IFSMA were allowed to do so having sought approval before hand. Interestingly, ICS did not get approval. The Nigerian delegation were totally dismissive in their reply to the statements from ITF, IFSMA and Marshall Islands.

In the margins of the meeting, I held a discussion with the head of the delegation of the Marshall Islands to try and persuade them to coordinate a strategy with Nations that have direct interests in the region, and other organisations, to put more pressure on the Nigerian government to release the ship and crew. My strong recommendation to the Marshall Islands was that the only way an impact can be made is through national diplomatic channels at the highest level.

I also held discussions with UK and French Delegations, as it is those countries that co-sponsor much of the work being undertaken at the MDAT GoG, to put international pressure on the Nigerians as what they are doing is undermining much of the positive progress that has been made on reduction of Piracy in the region. I also pushed the point that this is corruption at the highest level of government and needs to be addressed by governments. The ship and crew were finally released in February 2023 after a further undisclosed sum was paid to Nigeria by the P&I Club GARD. It is of interest that having agreed to pay they were initially given the details of a Nigerian national with a bank account in the UK and only after this was refused was an official Nigerian Government Bank Account given for payment.

The ongoing problem with Criminalisation is the main reason I have been working so hard on trying to bring an affordable Legal Insurance for Shipmasters, Chief Engineers and Mates to the market for IFSMA. The product is now available and I am trying to get people interested, but it

is not easy. Firstly, I have to get a minimum of 300 people who will commit, but also I was not aware of the restrictions on selling Insurance products around the world. Under International rules each country has to have Insurance Treaties with other countries to sell each other's products. There are ways around this, but it is much more difficult to achieve. I am hoping that in the near future I will have sufficient numbers to be able to start the roll out and as soon as this is achieved, I will inform all of the Associations who are interested how this can be achieved. I am most frustrated this has taken so long, but I am not giving up.

When I first joined as your Secretary General all those years ago now, I tried to find useful guidance on International Law and how it affects Shipmasters. This proved impossible as either what had been written was very out of date or was written by lawyers for lawyers. Again, I was determined to push ahead with this as something that IFSMA should produce for its members, but my investigations showed that with our limited resources it was a project that we could not risk.

Three years ago, I approached the International Chamber of Shipping who immediately welcomed my idea and offered us a partnership deal. The end result "*The Masters Practical Guide on Maritime Law*" is being announced tomorrow and will be presented to you by Captain Martin Bjorkell from the Finnish Marine Officers' Association who was one of three IFSMA volunteer shipmasters who sat on the Working Group to ensure its relevance to us all. He will put two pre-sale books on the front desk for you to look through. We are very proud of the final product.

Moving onto the Operation of Ships of the Future, you rightly directed that IFSMA should influence the use and development of Ships of the Future, the Role of the Shipmaster, both onboard and ashore, the regulation of Ships of the Future at IMO and other International Bodies and also to influence the regulation of Standards of Competence for the Maritime Workforce of the future. This is an enormous task and IFSMA has been one of the lead NGOs on this topic over the last five years.

I have provided regular updates on this over the last five years and as we are now moving on to the development of a Code for MASS and we have chosen this BGA as the ideal time to give you a thorough update this afternoon during the Symposium. I am delighted that Professor Goto, the Chair of the IMO Joint MSC, LEG and FAL Working Group on MASS has agreed to come and join me to brief you.

Safety Management is next on the list and this is where I continually promote the removal of Shipmasters from the Watchkeeping Roster so that they are able to fulfil their responsibilities as Master, as required by International Legislation, and at the very least, influence removal of the Shipmaster from the Master/Mate 6 on/6 off roster by the implementation of improved Deck Officer Manning Levels in ships. We also have to raise awareness and reduce the Administrative Burden of the Shipmaster, and to bring to the attention of the shipping industry its responsibilities to meet the objectives of the ISM Code. This of course is linked, but not restricted, to our work in the Comprehensive Review of the STCW Convention and is very relevant to our work in both the Maritime Safety Committee and the Human Element, Training and Watchkeeping Sub-Committee.

As you have been briefed on frequently in the past, I have pushed this issue at all the various meetings I attend and lobby a number of nations who I know will be sympathetic to our cause. You will recall that there have been many studies over the years on Fatigue and the leading studies, Project Horizon and Martha, by Southampton University and others, sponsored by

INTERMANAGER, produced overwhelming evidence on the impact on safety caused by the two-watch 6 On/6 Off Watchkeeping Roster. Despite this, we could only get these into the IMO as information papers as we were unable to get a national sponsor. It was somewhat predictable, but sadly these Papers were ignored by the nations and they remain sitting on the shelf gathering dust, but we mustn't give up and we must continue to put pressure on in the hope that one day soon we will get their attention.

Paul and I have worked for the last six years with the World Maritime University on this topic but we continue to hit road blocks. Nevertheless, I am currently trying to push the WMU not to give up on this just because it has received a lot a negativity with many shrugging their shoulders and ignoring the evidence in front of them.

A small piece of good news on this front is that earlier this year Australia drew up some Fatigue guidelines based on the release of an Australian publication that focused on managing and reducing the risk of fatigue at sea. This was a good publication and clearly stated that working more than 70 hours a week puts a seafarer at high risk of fatigue, but as you know, Seafarers are allowed to work up to 95 hours a week.

It was agreed that there needs to be a more holistic approach to the Human Element and the MSC agreed to seek guidance from other committees on what their roles are on the Human Element. This is ongoing work, but delivering little as nations all talk about how important it is, but commit to nothing. Nevertheless, it was also agreed that the issue of fatigue should be discussed at a new joint tripartite IMO-ILO Working Group. When this will happen we do not know as it always seems that there are other more important issues to be discussed, but ITF and IFSMA will keep pressing on this.

Another thread being taken forward this year is a paper, led by Dominica, Saudi Arabia, Türkiye, BIMCO, ICS, IFSMA, IMarEST, InterManager, ITF, NI and the P & I Clubs who came up with a proposal at MSC for a new output for the development of an MSC circular to address time pressure and related organisational factors. Following consideration, it was agreed to include this as an output for the HTW Sub-Committee next year. I hope that this may lead to more debate on fatigue in general.

Currently Paul and I are involved with two more projects with the World Maritime University which are progressing into papers for IMO. SAFEMODE where we are part of a Working Group looking at how lessons learned on safety in the aircraft industry can perhaps be brought across into the maritime industry. In November 2022, I went to Greece for a workshop, paid for by EU funding I would hasten to add, which was the last meeting before we draw conclusions later this year. Nevertheless, we do have to be careful to ensure that what we are recommending is both practical and has a good chance of working and not just become a bureaucratic exercise for the sake of it. Secondly, we continue to develop the project on the culture of Adjustment of Working Hours and Rest. We received quite a battering at HTW earlier in the year, but encouragingly we have received support from both Spain and France who are helping to take this forward.

Our work on the Human Element International Group (HEIG) which I set up in 2018 continues, although I handed over as Chair to the Chief Executive of the Nautical Institute as it has much more resource in people and finance than we do. I remain very actively involved in the HEIG's activities with both Paul Owen and David Appleton of Nautilus International helping when necessary.

The HEIG is making a name for itself having developed new guidelines and a check list that is required to be completed to ensure that all new proposed IMO Outputs have thoroughly taken into account the human element before they can be considered. Following this success, we embarked on our latest project looking at Deaths in Enclosed Spaces. The biggest issue we had was trying to get a real understanding of how many deaths and incidents we had every year in the industry. Of course, as usual the people with all the real data are the P&I Clubs and as usual, they refuse to cooperate and give us the detail, hiding behind confidentiality.

Undeterred, the Secretary General of InterManager has had his team trawl through huge amounts of historical raw data on accidents involving Enclosed Spaces around the world and they have now developed a very credible data base that really shows the extent of the problem. His team has done an amazing job, as they also did with setting up a database on accidents involving Lifeboats and both of these databases are now available to all on the main IMO GSIS database. This has become a major project that has been developing over the last four years and the HEIG, led in this instance by InterManager, produced eleven papers for the IMO Sub-Committee of the Carriage of Cargos and Containers held last month. At the meeting, it was agreed to set up a Working Group to look at all of these papers and to draft amendments to an IMO Assembly Resolution on recommendations for entering enclosed spaces aboard ships.

Despite many experts across the industry taking part, the Working Group was unable to complete its work in the allotted time and this will now be taken forward by a Correspondence Group which will be reviewed at next year's Sub-Committee meeting.

As you can see from this report, trying to get the IMO nations to take the issue of the Human Element seriously is a difficult task, but we are slowly getting our message across and making small gains.

I have been working closely with the current Secretary General of the IMO, Mr Kitak Lim to try and make some headway. In the spring of this year, I was able to get a breakfast meeting with him and invited the main movers on the HEIG namely myself, and the heads of ITF, Nautical Institute, IMarEST and the Chair of the HTW Sub-Committee. He was extremely keen to make an impact on the Human Element before he has to retire in January next year. We informed him the HEIG believed that what was missing in IMO was a small Group of key nations who would be prepared to look at the key Human Element issues facing the industry that they would be prepared to get behind and work with the HEIG to develop a strategy to take it forward using the resources of the industry. The Secretary General agreed to take this forward but regrettably he has been unable to get any nations to take the initiative.

A major challenge for any organisation is that of Public Relations and Communications. At the outset of our Strategic Plan, we state that IFSMA should be seen as the go to organisation as the international voice of the Shipmaster. Over the last few years you will have seen that IFSMA has been approached to give a number of interviews for the Press, Radio and Television news on subjects as diverse as Mixed Mass Migration in the Mediterranean and elsewhere,

Terrorism at sea, Piracy, Armed Robbery, Kidnapping, Criminalization and the COVID Pandemic. The views of the Shipmaster are considered to be equally important alongside those of Shipowners and the Unions and IFSMA has once again established itself as the go-to organisation for our views. To this end, I would like to thank Paul Owen for his continued and

invaluable support that he puts into our website with new news items and of course our monthly Newsletter which is edited by both Paul and Mr Paul Ridgway who in the past has been editor of a number of maritime journals including at Trinity House London and for the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) – we are lucky to have him and I thank them both for their hard work.

All this effort means that there is never a day goes by when Paul Owen is not working on something as well as keeping the accounts and membership issues up to date. In addition to his normal busy admin life, Paul Owen has been part of an International Harbour Masters' Association project writing Guidelines for the Operation and use of Tugs in Ports and of course he is very much our lead providing guidance to the Working Group on the Masters Practical Guide to Maritime Law. Thank you also must go to Willi Wittig, our Deputy President and President of VDKS, the German Shipmasters' Association, for the huge effort he puts into putting such interesting articles on our Facebook page.

Finally, I need to highlight to you a few key people who give me so much help in my work. David Appleton from Nautilus International in London who attends most meetings with me at the IMO and is my shipmaster technical expert on many Working and Correspondence Groups. Captain Morten Kviem of the Norwegian Marine Officers' Association who provides me with significant technical advice and help and Mr Andrew Higgs, a well-known and connected International Maritime Lawyer who provides me with help and advice, in our work on MASS.

Most recently our representatives on the Working Group of Practical Guide on Maritime Law, Captain Martin Bjorkell, a Ro-Ro Sector specialist from the Finnish Marine Officers' Association, Captain Sanjiv Behl, a General Cargo specialist and currently the Senior QHSE Superintendent from Anglo-Eastern Ship Management Ltd and also Captain Stephen Gudgeon a Tanker Shipmaster who until last year sat on the Board of Nautilus International.

Last, but not least my huge thanks to Captain Peter Van de Kruit, an experienced and successful Shipmaster and International Maritime Lawyer of NVKK, our Netherlands Shipmasters' Association, who was the Technical Author of our book. I cannot conclude without thanking our President, Captain Hans Sande, Deputy President, Captain Willi Wittig and all the Vice Presidents of the Executive Committee who put their faith in me to deliver the IFSMA strategy on your behalf. They are all extremely busy people yet still find significant amounts of time to work on behalf of IFSMA. It is they that are your drivers of what we do on the International Stage, but it must not be forgotten that it is you, the Members, that provide the resource we need to remain viable and relevant as we have done for the last 49 years. Thank you.

That completes my report to you but I must add that what I have left out are the multiple presentations, briefings, meetings and social gatherings to which I am invited and need to attend on your behalf to enable me to get across the message of the role and the importance of the Shipmaster in today's maritime Industry. This also includes being invited to brief the Boards of our Member Associations on occasions to update them on what the secretariat is doing on behalf of IFSMA and how we use their membership fees.

The International Community needs to understand how pivotal you are in keeping trade flowing around the world and they owe a debt of gratitude to you and all our mariners. I believe I get that message across and that we are held in high regard by the National Delegations, IGOs, NGOs and many others associated with the Maritime Industry. Before I move onto my short brief on the

New Strategic Plan, Membership issues and changes to the Statutes and Bye-Laws, I am now happy to take any questions you may have.

Oleg Grygoriuk commented that he once had the opportunity to sit together with the IFSMA delegation on criminalisation, there are many cases. Our Secretary General had the chance to speak and he was brilliant and spoke clearly.

Agenda Item 1 (CONTD.)– Membership Issues

1. COUNCIL OF MASTER MARINERS OF INDIA (CMMI)

Discussions with CMMI at the Special General Assembly about their numbers of Shipmasters. Declared 35 but numbers on the website of foreign going members in excess of 3,500.

Culminated with CMMI withdrawing their membership in January 2022 and a refusal to pay anything other than the minimum fee

2. Indonesia

A small newly formed Association who joined in 2017 and attempted to form as a new Ships Officers Union. Unable gain sufficient members. President paid fees from his own pocket for a number of years and could no longer justify the cost personally. Withdrew their membership during 2022. No longer have contact.

3. Ukraine

Following the invasion by Russia and the devastating effect the War has had on Ukraine Seafarers and their families, The Maritime Transport Workers Trade Union of Ukraine had to seek funds to support its members and families. ICS, ITF and many other organisations are donating funds to support them. IFSMA has no spare resource but the Executive Council agreed to waive their membership fee until their financial situation allows. This will be reviewed by the Executive Council annually and the General Assembly kept informed on progress.

4. Chile

Nautilus Chile have been a member for many years and Captain Juan Gamper loyally attended General Assemblies with his wife. He became a Vice President on ExCo in 2019. For the last two years there have been internal disputes in the Association. Last year we were finally paid their membership fees, but at the time of the deadline for nominations for ExCo at this BGA they had not paid. Paul has not been able to contact their president and indeed nor has Juan been able to contact any of the senior members of the Association. They were not in good standing and so Juan has stated he cannot put his name forward. He has said that the Association is in a severe financial crisis. Hans will soon be in Chile for an ITF meeting and will try and make contact.

5. Pakistan (MMSP)

Paul and I have been trying to make contact with the officials and their President for the last two years. The last time we spoke he said they were unable to pay as no one was allowed to send money abroad. Most recently a member had paid the fees himself from Saudi. We have had no contact since and no emails answered. This summer I contacted the Pakistan Maritime Coordinator at the IMO, Captain Muhammad Shafique, who informed me he was a member and he would try to contact them. He contacted me by phone on 20th October to tell me the parlous state of Pakistan as a whole and that they were only saved from defaulting on their debt by a donation of \$2Bn from the US and Saudi Arabia. MMSP had a small office which he went to and was told that they had been evicted and the Secretary of MMSP was dead. They now have very

few seafarers in Pakistan as the majority have all moved abroad. He has managed to speak to the past President who we met in Helsinki who said that they had no funds and the only members they had left were twelve retired Shipmasters. He would like to regenerate their Association but do it differently with all officers and try and grow it from the bottom. He asked if IFSMA could help them financially to set up their website to try again. I told him we do not have any funds for that but we might be able to get another Member Association to help them try and set it up with advice. Capt Shafique has offered to remain the point of contact for them in hope of a better future, but they have withdrawn their membership as they have no money. This is a shame as they were loyal members for many year

Agenda Item 1 (CONTD.) – Strategic Plan 2024-2029

1.0 INTRODUCTION

IFSMA was formed in 1974 by eight National Shipmasters' Associations to unite the world's serving Shipmasters into a single professional co-ordinated body. It is a non-profit making, apolitical organisation dedicated solely to the interests of the serving Shipmaster and to uphold International Standards of Professional Competence of Seafarers commensurate with the need to ensure Safe Operational Practices, Preservation from Human Injury, Protection of the Marine Environment and Safety of Life and Property at Sea.

With its Headquarters in London, IFSMA's Secretariat is located close to the International Maritime Organization (IMO) where it was granted Consultative Status in 1975. This Consultative Status as a Non-Governmental Organisation (NGO) enables the Federation to represent the views and protect the interests of the serving Shipmaster, unfettered and unfiltered either by National Governments or by Shipping Companies. To enable IFSMA to function effectively at IMO, it is represented by the Secretary General and a team of members' representatives who attend the four main Committees, namely the Maritime Safety Committee; Maritime Environmental Protection Committee; The Legal Committee and the Facilitation Committee. This team is also active in the nine Sub-Committees of IMO, their Working and Drafting Groups as well as attending the Council Meetings and Assemblies. In February 1993, IFSMA was placed on the International Labour Office's (ILO) special list of Non-Governmental International Organisations with observer status.

IFSMA has a history of submitting relevant papers on various aspects to the Committees and Sub-Committees of IMO which often result in successful debates leading to MSC Circulars and improvements in various instruments. IFSMA is a strong supporter of IMO in its quest for safer shipping and cleaner oceans. It is the desire of The Federation to assist IMO in achieving a truly global implementation and rigorous enforcement of its International Treaties so that there is no need for any Country to resort to Regulatory Measures on either a National or a Regional basis.

IFSMA Members are provided with the facility to access the IMO Documents Website for research and information purposes and, with prior consultation may join the IFSMA delegation in Committee and Sub-Committee sessions. IFSMA frequently needs Subject Matter Experts to assist them in IMO Working, Drafting and Correspondence Groups and this, importantly, enables shipmasters to articulate and share their views and practical experience with the rule makers.

At the ILO, consisting of a tripartite of Governments, Shipowners and Trade Unions, IFSMA's best interests are led by the International Transport Workers Federation (ITF) and only attends relevant meetings when resources allow.

Generally, all Shipmasters who are in possession of an Internationally recognised Certificate of Competency, issued by the Government of an established maritime nation who are serving, or have previously served, in command of seagoing ships whether or not engaged upon International or Domestic Trade, are eligible for membership of IFSMA through a National Shipmasters' Association.

Exceptionally, where there is no National Shipmasters' Association, an individual shipmaster may be accepted for membership by the Executive Council if it considers that the individual would bring benefit to the Federation and would be prepared to try and form a new National Shipmasters' Association. Assistance in how this is best achieved, will be given by a current member association. The Federation now represents over 11,500 Shipmasters from more than 60 countries either through their National Associations or as Individual Members.

2.0 GOVERNANCE

The responsibility for the efficient running of IFSMA is vested in the Executive Council which comprises a President, a Deputy President and ten Vice Presidents, who are elected by the members. They shall hold office for a term of four years before being eligible for re-election with no limit on the number of terms held. The President is the Chief Executive of the Federation and shall be responsible for fulfilling its Aim and Purposes and shall coordinate and activate the work of the Federation.

The Secretariat, led by the Secretary General, is the core of IFSMA and is responsible for the day-to-day running and efficient management of the Federation.

3.0 MISSION STATEMENT

IFSMA's mission is: *"To be an independent, apolitical and financially viable organisation dedicated to representing the views and professional interests of the serving Shipmaster on the International Stage at the IMO and upholding the International Standards of Professional Competence for Seafarers."*

4.0 VISION STATEMENT

IFSMA's Vision is to represent the Shipmaster effectively on the International Stage at the IMO and to communicate with the Member Associations so that they are more actively involved in the day-to-day dealings of IFSMA at the IMO.

5.0 AIM

IFSMA's Aim is to represent in one professional body the Shipmasters of the World, to safeguard professional standards and interests in all maritime matters in order to enable Shipmasters to carry out their responsible duties in an acceptable and competent manner.

To achieve this, the Federation should:

- Provide a proactive input on all professional issues affecting its Members.
- Provide Members with information on all activities conducted on their behalf with regular updating on developments.
- Seek the views of Members and to encourage the sharing of information.
- Encourage Members' participation with the IFSMA delegation at IMO Meetings.
- Participate to the fullest extent in all relevant international fora where issues affecting Shipmasters are discussed.
- Provide a high quality, cost effective service to Members.
- Ensure, where possible, that Policies and Objectives determined by Members at the General Assembly and by the Executive Council are implemented.

- Cooperate with other like-minded organisations with a view to forging strategic links to expand the influence and support for IFSMA.
- Maintain the highest level of involvement with agencies on maritime issues relevant to the profession of Shipmasters.
- Maintain and enhance the high international standing of qualifications and training standards of Shipmasters.
- Provide assistance and support to Member Associations on professional matters
- Recruit and retain Member Associations.
- Seek additional sources of income to keep the cost to members to a minimum whilst resourcing the optimum number of secretariat staff.

6.0 KEY CHALLENGES

In formulating this Strategic Plan, the Executive Council identified Five Key Challenges that IFSMA has to face in the future. This was presented to and agreed by Members at the 2023 Biennial General Assembly.

These Challenges are relative to the following topics:

6.1

Skills and Competence of Ships' Crews.

- Learn from our membership where crews are lacking in practical skills and competence.
- Influence STCW amendments where necessary and be fully engaged with the Comprehensive review of STCW at the IMO.
- Enable Shipmasters to be more available to undertake their training and mentoring responsibilities.

6.2

Criminalisation of the Shipmaster.

- Influence International Regulations to reduce the incidence of Criminalisation of the Shipmaster.
- Encourage members' Shipmasters to purchase the newly issued Shipmasters' Legal Protection Insurance Scheme.

6.3

Operation of Ships of the Future.

- Influence the use and development of Ships of the Future.
- Influence the Role of the Shipmaster, both onboard and ashore.
- Influence the regulation of Ships of the Future and, in particular, the development of regulation of Maritime Autonomous Surface Ship(MASS) at IMO and other International Bodies.
- Influence the regulation of Standards of Competence for the Maritime Workforce of the future.

6.4

Safety Management.

- Promote the removal of Shipmasters from the Watchkeeping Roster so that they are able to fulfil their responsibilities as Master, as required by International Legislation and, at the very least, influence removal of the Shipmaster from the Master/Mate 6 on, 6 off roster by the implementation of improved Deck Officer Manning Levels in ships.

- Raise awareness and reduce the Administrative Burden of the Shipmaster.
- Bring to the attention of the shipping industry its responsibilities to meet the objectives of the ISM Code.

6.5

Public Relations and Communications

- IFSMA should be seen as the International Voice for Shipmasters.
- Encourage the sharing of information between Shipmasters.
- Represent the professional views of the Shipmaster at the IMO and other International Bodies, based on the practical and operational knowledge of our Shipmaster Members.

These five Key Challenges are multi-faceted. How IFSMA intends taking each one of these Challenges forward is outlined below.

7.0 Communications Strategy

The foundation of the sustainability of IFSMA into the future is very clearly the deep-rooted and current knowledge of our 11,500 Shipmaster Members both onboard and ashore.

To harness this knowledge in our rapidly changing maritime environment IFSMA must ensure it reaches out to its Members to share information and knowledge.

The sharing of information and knowledge shall become one of the core foundations of IFSMA so that best practice in every aspect of the Shipmasters' role can be shared between its Members and at the IMO and other International Bodies.

To achieve this IFSMA aims to:

- Regularly publish and distribute a Newsletter to its Members.
- Survey Members to obtain their views on specific topics.
- Set up Virtual Working Groups with a selected Shipmaster Association as Chair and Members from other Associations around the world to better represent Shipmaster issues at the IMO.
- Continually seek to improve the image of IFSMA with Members, external bodies and opinion formers.
- Proactively enhance the reputation of IFSMA as the premier source of information and informed comment on a wide range of maritime and related matters specific to Shipmasters.
- Maintain and enhance the IFSMA website.
- Initiate, develop and enhance IFSMA campaigns on issues of importance to Members.
- Represent Members at external bodies such as ILO, IMO, and EU to progress IFSMA policies and protect Members' interests which the available staff and financial resource allows
- Lobby International Organisations and Inter-Governmental Agencies to progress IFSMA policies and protect Members' interests.
- Organise campaigns amongst the membership and/or the public and/or other groups, to progress IFSMA policies and protect Members' interests.

8.0 Administration & Finances

- Seek to grow IFSMA through a proactive recruitment strategy aimed at maximising membership amongst Shipmaster Associations and expand the membership base,
- Ensure adequate numbers and quality of staff are employed and procedures put in place to maintain and provide an effective, efficient service to all Members, visitors and colleagues.
- Ensure Members' correspondence is answered expeditiously.
- Provide equipment, which will enable staff to produce work in an effective, efficient and professional manner to reflect the high standards of IFSMA.
- Ensure all staff are aware of their duties and responsibilities to Members, visitors and colleagues.
- Ensure that Health and Safety requirements in and around the Office are met and, when necessary, work place risk assessments undertaken.
- Ensure the financial strength of IFSMA is maintained and great care exercised to ensure that the decisions on financial matters (e.g. levels of subscriptions) are taken sufficiently far in advance to ensure that the financial base is not eroded.
- Maintain Reserves, as agreed by the Executive Council, which should be recalculated annually and protected from inflation.
- Maintain adequate financial resources to be made available for the timely replacement and upgrading of equipment, furniture and buildings.
- Recognise the effect of membership numbers both on the level of subscription income and on costs being kept under continuous close scrutiny.
- Seek additional sources of income to supplement membership income.

9.0 SUMMARY

Training and mentoring has never been more important as increasing technology is being used to drive the reduction in the numbers in ships' increasingly multi-national/multi-cultural crews.

This has led to continuously evolving complex shipboard systems, of varying degrees of autonomy, which vary from ship-to-ship, even within the same Shipping Company. This requires different training for similar systems and the default is frequently self-taught on-board/on-job training which can often be a major distraction as well as leading to dangerous practice.

Today's Shipmaster is often caught up in watchkeeping, overburdened with administration and therefore unable to fulfil the traditional Shipmaster's role of overseeing the training and mentoring of their crews and, in particular, the Shipmasters of the future.

IFSMA will strive to have the Shipmaster removed from watchkeeping duties particularly the 6-on/6-off Master Mate system to enable Shipmasters to carry out their Internationally legislated responsibilities in an acceptable and competent manner.

Mentoring is becoming a forgotten skill at sea and IFSMA will encourage National Shipmaster Associations to help reinvigorate what should be a routine aspect of shipboard life.

Nations are becoming increasingly litigious and there appears to be a trend to prosecute the first person in the firing line. There is a significant amount of focus on the maritime environment as it has an enormous impact on every aspect of our life.

Shipmasters are the frontline representative of the Shipowners and flag States and often, through no fault of their own, are criminalised for violation of regulations of which they have no control.

IFSMA will be unerring in its efforts to influence International Regulations to reduce the incidence of Criminalisation of the Shipmaster and must continue to work with the insurance industry to

provide a “Shipmasters’ Legal Protection Scheme” that is affordable and attractive to all Shipmasters and other key onboard Seafarers.

Agenda Item 1 (CONTD.) – Introduction to Faroe Islands

Presented by Annfinnur Garðalið

See <https://tinyurl.com/3s7vk9rh>

Agenda Item 1 (CONTD.) – Introduction to Korea Shipmasters Association

Presented by Gwee Bok Lee, Mun Kun Chang and Kyu Ho Bang

See <https://tinyurl.com/mpk67fre>

Agenda Item 2 – Seafarer Training

Presented by Pradeep Chawla

See <https://tinyurl.com/4c54ada9>

Agenda Item 3 – Student Maritime Cooperation

Presented by Willi Wittig

See <https://tinyurl.com/4c54ada9>

Agenda Item 4 – Student Cooperation Experience

Presented by Hans Sande

See <https://tinyurl.com/2mzyjuam>

Agenda Item 5 – Progress with MASS on IMO Working Group

Presented by Professor Gen Goto

See <https://tinyurl.com/mspjc2vs>

Agenda Item 6 – IFSMA’s Views on Maritime Autonomous Surface Ships (MASS)

Thank you to Professor Goto for his most interesting presentation on his role in the development of the MASS Code as Chair of the IMO Joint Working Group covering the joint issues of the MSC, LEG and FAL Committees.

What I intend to do is to give you a quick run through the history of MASS at the IMO and what has been the position taken by IFSMA, give you an insight on the timescales of the way ahead and then to just outline what is going to be in the new Code on MASS.

MASS has been very clearly defined as “a ship which, to a varying degree, can operate independent of human interaction if at least all or part of the navigation tasks are automated or remotely operated”.

To this end it was agreed that there will be four Degrees of Autonomy:

1. A Ship where seafarers are on board to operate and control shipboard systems and functions but with some automated processes and decision support. This is seen as a conventional ship with increased levels of automation.
2. Remotely controlled ship with seafarers on board.
3. Remotely controlled ship without seafarers on board.
4. Fully autonomous ship with an operating system able to make decisions and determine actions by itself.

The timelines for this project might seem to be extraordinarily long, but for the IMO this is quite speedy work. Discussions about MASS started in 2017. It was agreed that the IMO needed to find out exactly how MASS would affect all of its Codes, Conventions and Regulations and by 2018 the Maritime Safety Committee, agreed to include it in its agenda to conduct a "Regulatory scoping exercise for the use of MASS", with a target completion year of 2020 and determine the most appropriate way of addressing MASS operations, taking into account, the human element, technology, and operational factors.

However, because of the interruption caused by the COVID Pandemic this was not completed until 2021. Once completed, it was decided that this needed to be followed by the development of some regulations. So in 2021 it was agreed that there would be a new output for the "Development of a non-mandatory goal-based instrument for MASS", with a target completion year of 2025. This had to be done in two steps. Step 1, The development of the Code, should be structured in such a way that in Step 2 it would be an easy task to transition the Code too become a mandatory instrument for MASS operations.

This non-mandatory Code should be:

- A stand-alone document that is complementary to any of the IMO base instruments such as SOLAS, STCW etc and only address MASS Issues that are not adequately addressed across all of the base instruments.
- Goal-based and addressing matters at the functional level.
- Should initially cover cargo ships, that is while also assessing the application to passenger ships, with a view to considering detailed provisions for such ships at a later stage.
- Technology neutral, but taking note of industry practices and experience in the deployment of new technologies.

When IMO conducted the Regulatory Scoping Exercise, it covered all four Degrees of Autonomy which I have highlighted, but it was agreed that the new Code only needed to include level 2, 3 and 4 and that they should be redefined as Modes of Operation (MoO) with:

1. Remote Operated - with, or without, seafarers – This is the old Degrees of Autonomy 2&3.
2. Autonomous - the old Degree of Autonomy 4.

The old Degree of Autonomy 1 is seen as a conventional ship with increased levels of automation and is therefore not applicable to the new Code.

So where does IFSMA stand in all of this? Right from the very start we identified this as a key challenge and was included in our Strategic Plan in 2017 before it was discussed at the IMO. We

realised we had to find a way to support the work and I have been very lucky to have been supported in my work at the IMO by volunteers Mr David Appleton (Nautilus International) who has a deep knowledge of the IMO Instruments that affect seafarers and, in particular shipmasters, Captain Morten Kviem (Norwegian Marine Officers' Association) an experienced shipmaster and Mr Andrew Higgs, a well-respected International Maritime Lawyer with significant experience of IMO legal protocols and procedures.

Between us we wrote three major papers during the Regulatory Scoping Exercise and two at the start of the development of the Code although it is of note that two of our early papers were carried forward to this stage and I would be remiss not to point out that it was in our latest paper that we proposed the need for the Joint Working Group briefed to you by Professor Goto.

IFSMA articulated that the human element needed to be recognised as being of paramount importance in deliberations by both the LEG and Maritime Safety Committees and that it should be remembered that it is the shipmasters of conventionally manned ships who will have to interact with MASS on a daily basis at sea, in both territorial and international waters, and consistency of regulation in these domains is paramount. Therefore we suggested that the issue of shipmasters and ships are central to the IMO's future discussions on MASS. Any work on the subject should take into account the following six underlying assumptions.

United Nations Convention on the Law of the Sea, 1982 (UNCLOS)

The first key assumption for all nation State maritime administrations, as a matter of customary international law, is found in article 94 of UNCLOS on the duties of a flag State, which stipulates that *"every flag State shall effectively exercise its jurisdiction and control over ships flying its flag and take such measures for ships flying its flag as are necessary to ensure safety at sea with regard to the seaworthiness and manning of ships and that each ship is in the charge of a master and officers who possess appropriate qualifications, in particular in seamanship, navigation, communications and marine engineering, and that the crew is appropriate in qualifications and numbers for the type, size, machinery and equipment of the ship"*

The significance of this first assumption is that each and every ship (regardless of size or ship-type) requires a shipmaster to have "command and control" of that ship, or ships, and to be capable of being held accountable for that ship, or ships. This applies equally where the ship is a small ship.

The maritime domain and sea areas beyond national sovereignty (international waters)

The second assumption is that international waters are mirrors of international airspace under UNCLOS and customary international maritime (and aviation) law. The significance of this is that this sea area represents nearly 70% of the surface area of the planet.

Nautical nomenclature of "All Ships on All Voyages on All Seas for All Seafarers"

The third assumption is that from the human perspective of a shipmaster, all master mariners, and indeed all seafarers working in the maritime domain, the introduction of MASS requires consideration of "All Ships on All Voyages on All Seas for All Seafarers";

A fourth assumption would be that the maritime domain necessarily requires detailed consideration of both the COLREGs and also chapter V of SOLAS on the safety of navigation. In other words, a so-called "top down" approach is required.

Responsibilities of the shipmaster

The fifth assumption is that many key provisions on the safe operation of ships require the ship to be under the command and control of a shipmaster and a sentient human being (one who responds to human senses), who is capable of exercising discretion.

Key reasons for this are that it is understood that (a) there is no known algorithm that can reasonably predict human behaviour in a maritime domain, dominated for the foreseeable future by conventionally-manned ships, and that (b) the current regulatory framework of most civil, criminal and regulatory national and international legal regimes require a specific legal person to be capable of being identified, and to be held accountable for the actions and inactions of any ship.

SOLAS chapter V, regulation 34-1 clearly and expressly provides for the "master's discretion" as a sentient human being, since time immemorial, where the shipmaster's paramount responsibility is established: *"The owner, the charterer, the company operating the ship, as defined in regulation IX-1, or any other person shall not prevent or restrict the master of the ship from taking or executing any decision which, in the master's professional judgment, is necessary for safety of life at sea and protection of the marine environment."*

IFSMA suggests that this key SOLAS regulation not only applies to all large merchant ships, but also to "All Ships", including small ships (that is, of less than 100 GT or 24 metres length), on all voyages and on all seas. Article 98 of UNCLOS clearly and expressly also provides for a duty on the shipmaster to render assistance to persons in distress at sea, as a so-called "First Responder"; that is, in the absence of any other emergency service, such as ambulance, fire service, or police, which may be found ashore. SOLAS chapter V, regulation 33 on distress situations, reiterates this obligation on shipmasters.

Finally, both Rules 5 and 8 of COLREGs on look-out and action to avoid collision, following article 94 of UNCLOS, require the command and control of a shipmaster, and a sentient human being, capable of exercising both situational awareness and good seamanship. Therefore, the sixth assumption is that the key role of the shipmasters under UNCLOS, COLREGs and SOLAS cannot, or should not, be performed by a registered company or other corporate entity.

Key characteristics of all MASS

IFSMA therefore suggests that IMO, when considering the key human and sentient human being role of the shipmaster and all seafarers in the maritime domain, it may be appropriate to consider not only these six underlying assumptions, but also key characteristics of all MASS.

The rationale for this is that IFSMA believes it may assist to identify perhaps a significant potential gap in the current regulatory framework, which touches and concerns the role and responsibilities of the shipmaster ashore when (a) in command and control of one or more MASS, (b) on a voyage, whether domestic or international, (c) when that MASS is out of the line of sight of a shipmaster, who may have command and control of one or more MASS, on behalf of the owner and/or operator of a MASS (i.e. MASS master).

This necessarily assumes that a MASS is a "ship" (under UNCLOS, COLREGs and SOLAS chapter V), and is not merely "ship's equipment" as defined in the Convention on Facilitation of International Maritime Traffic. Furthermore, there should be a clear, contractual and documented link between the shipmaster and port State control, whether via a so-called "Designated Person Ashore (DPA)" in a shore-based control station, or otherwise.

The shipmaster and the DPA are two different and separate individuals under the International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code) and SOLAS chapter IX. Currently, the SOLAS chapter IX and the ISM Code only apply to large passenger ships (100 GT) or large cargo ships (+500GT); although it is capable of being applied to all ships.

Consideration of the role of the MASS master

1. In taking forward the work for the development of the Code for regulation of MASS, the IMO should: Consider defining the key attributes and characteristics of all MASS.
2. Define more clearly the role and responsibilities of the shipmaster, or MASS master, of one or more MASS, as the flag State's representative.
3. Require all and any such MASS masters to be contractually linked to a named port in order that port State control may be exercised, and MASS effectively regulated.

The Code that is now in Development consists of Three Parts.

Part 1 is the Introduction covering overarching matters to be considered in the application of the Code.

Part 2 articulates the main principles for MASS and MASS functions and contains those main principles that should be followed in the application, to a MASS or MASS functions, of the goals, functional requirements and provisions as laid out in Part 3 of the Code.

Part 3 covers the goals, functional requirements and provisions and each of the 17 chapters or sections contains the goal of the chapter, functional requirements to fulfil the goal and the provisions associated with those functional requirements.

As you can see from this slide, this is an enormous piece of work and the IMO has directed that it is to be completed by 2025. In order to try and achieve this there is an overall Director (Deputy Director of the Marshall Islands IMO Delegation) and Parts I and 2 and each of the 17 chapters of Part 3 are all the responsibility of an individual nation who are developing their pieces in isolation by the use of virtual meetings and correspondence groups.

The work is therefore dominated by those nations that have large maritime administrations. The smaller nations and NGOs have to contend themselves with only participating in just a few of these groups when they have sufficient resource. However, this is well understood at IMO and so the smaller nations and NGOs do have the opportunity to push their ideas and change perceptions by taking part in each of the IMO Committees in the main plenary session in general discussion and then the Working Groups as well as the Joint Working Group and once or twice each year we will hold an additional week long working group just before the start of the next MSC.

There is just too much work for IFSMA to follow any of this except for the Working Groups at the IMO and these we cover with some of the volunteers I highlighted earlier. In all of these areas, IFSMA has been recognised as one of the key contributors and some of the papers we have submitted are still being referred to.

We have been developing the Code for about nine months now and as we approach our next Intersessionary Working Group meeting next week at the IMO there are a number of key issues to focus on and I will just simplify these as:

1. Training, competence, certification (STCW, etc).
2. Application of the Code.
3. Environmental Instruments –and the MEPC has yet to even discuss MASS.
4. When does a ship become a ‘MASS’ and have a ‘MASS Label’ stuck on it?
5. The Remote Operations Centre for a remotely operated ship being in a country other than the country of the flag. Legal issues?
6. The general consistency (or inconsistency) of the currently drafted Code. Much work is needed to get to a consistent level and to exclude repetition of what is in the primary instruments such as SOLAS.

Delegates I think I have given you enough to provide you with a flavour of what we are working on with MASS. As I said at the beginning, the aim was to have this completed by 2025. My view is that the IMO has underestimated the amount of work to be completed and the most important thing is to get this important piece of work right. It must not be rushed through to achieve the deadline set, me and my Team of helpers will do everything in our power of influence to make sure that it is right. I am happy to try and answer any questions you may have.

For PowerPoint slides see <https://tinyurl.com/mv4hd7dx>

Agenda Item 7 – *Automatic Collision Avoidance System*

Proposal of Objective Criteria for Safety Certification (Evaluation) of Automatic Collision Avoidance Systems

Shinya Nakamura, President, Japan Captains’ Association

1 Introduction

In recent years, efforts to develop autonomous ships have been actively promoted in various countries. Japan's Ministry of Land, Infrastructure, Transport and Tourism has published a roadmap for the commercialization of autonomous ships, and clearly states that Phase II autonomous ships will be put into practical use by 2025. The target for practical use is coastal ships engaged in domestic shipping facing the problem of a shortage of seafarers.

Under these circumstances, it is presumed that the development of the automatic collision avoidance system, which is one of the main elemental functions of autonomous ships, is being promoted mainly by nautical instrument manufacturers. However, the details of when, how, and with what algorithm the avoidance action is performed have not been disclosed. It is a so-called black box.

In the near future, autonomous ships equipped with these black-box automatic collision avoidance systems will navigate in the same sea area as the ocean-going ships we board. When these systems are implemented in the future, there will be a strong demand for safety certification by ship classification societies.

The Japan Captains Association (JCA) has held COLREG study sessions for NK (Japan Classification Society) shipbuilding engineers and system engineers. In the study session, JCA proposed to NK the method shown in the figure 1 for the purpose of certification (safety evaluation) of the automatic collision avoidance system. In 2022, JCA received an order from

NK for large- scale experimental work for the purpose of formulating the evaluation area diagram for certification shown in the lower left of figure 1.

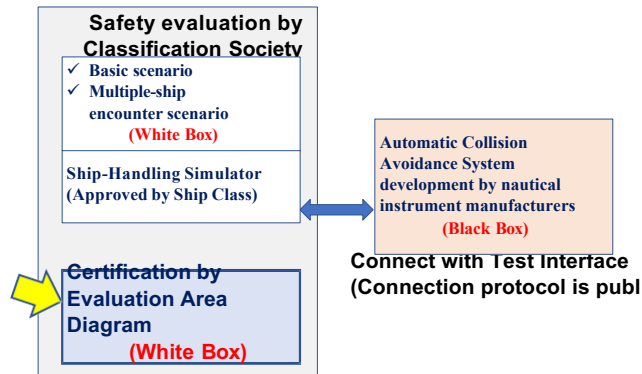


Figure 1. Flow of automatic collision avoidance system certification by ship classification societies

This report is an introduction of the evaluation area diagram formulated from the results of the large-scale experiment. The newly formulated evaluation area diagram is based on the results of evaluations by many shipmasters from the viewpoint that "a ship navigating with an automatic collision avoidance system does not give anxiety to other ships that she encounters."

2 Summary of evaluation area diagram formulating experiment

2.1 Experimental method

A verification experiment was conducted with the aim of formulating an evaluation area diagram that serves as a standard for certification of the "automatic collision avoidance system." This evaluation standard is based on the idea that "a ship navigating with an automatic collision avoidance system does not give anxiety to other ships that she encounters."

The verification experiment was conducted with the cooperation of NYK/JMS, MOL/MOLMEC, and K Line, which are shipping companies that own ship-handling simulators. In addition, shipmasters of three shipping companies (NYK, MOL, K Line) who are members of the Japan Captains' Association participated as evaluators in the experiment.

2.2 Evaluation by shipmasters

Data extracted from subjective evaluation by shipmasters was used to formulate the evaluation area diagram. In this subjective evaluation, the collision risk awareness of autonomous ships encountered (ships that are equipped with automatic collision avoidance system) is expressed and recorded in three stages: "Safe", "Caution", and "Danger". It is based on the three stages shown in Table 1 defined in the evaluation area diagram. In the experiment, the collision risk awareness of the autonomous ships encountered was recorded at the timing of transition from "safety" to "caution" and from "caution" to "danger". The analysis for drawing mainly used the relative distance to the autonomous ships at the time of transition and the rate of bearing change.

Table 1. Definition of each stage in subjective evaluation

Stages	Definition
Safety	Acceptable situation
Caution	A situation in which own ship commence to avoid collision or expects other ships to do so.
Danger	Unacceptable situation. The risk of collision is imminent, and the own ship immediately takes avoidance by using a large rudder angle, etc. or situations where other ships should avoid

2.3 Experiment scenario for the purpose of formulating an evaluation area diagram

The following items were taken into consideration when creating the experimental scenario for the purpose of formulating the evaluation area diagram.

- ✓ "Autonomous ships: ships navigating with an automatic collision avoidance system" are assumed to be coastal ships that are targeted for practical use in Japan, and ships with a length (LOA) of about 100m (some LOA: 333m VLCC is also implemented)
- ✓ Six types of "evaluation ships" that encounter "autonomous ships" are set, ranging from LOA 145m to 400m. (In order to make the applicability of the evaluation area diagram obtained as a result universal, regardless of ship type or size.)
- ✓ Test scenarios are classified into crossing, head-on, and same-way (overtaking) situation
- ✓ A total of 18 scenarios were created with relative crossing angles of 30 degrees, 90 degrees, and 120 degrees in the crossing situation scenario, with the difference of passing direction (the bow and the stern)
Total 27 scenarios were prepared by adding head-on and same-way (overtaking) scenarios for each size of evaluation ships
(Some facilities that own simulators had also run experiments with additional scenarios.) A total of 181 scenarios were run on the simulators at the three facilities
- ✓ Set a target bearing change rate for each experimental scenario, and reproduced the positional relationship that satisfies the bearing change rate at a certain relative distance (e.g., bearing change rate 5.0deg/min at a relative distance of 1.5NM)

2.4 Evaluation area diagram formulated

Evaluation area diagrams were formulated from the results of verification experiments (Total number of evaluators: 1,631, number of test scenarios: 181 cases). Figure 2 shows the formulated evaluation area diagrams. The "Safety area", "Caution area", and "Danger area" are displayed from the "relative distance", "bearing change rate" and "CPA distance".

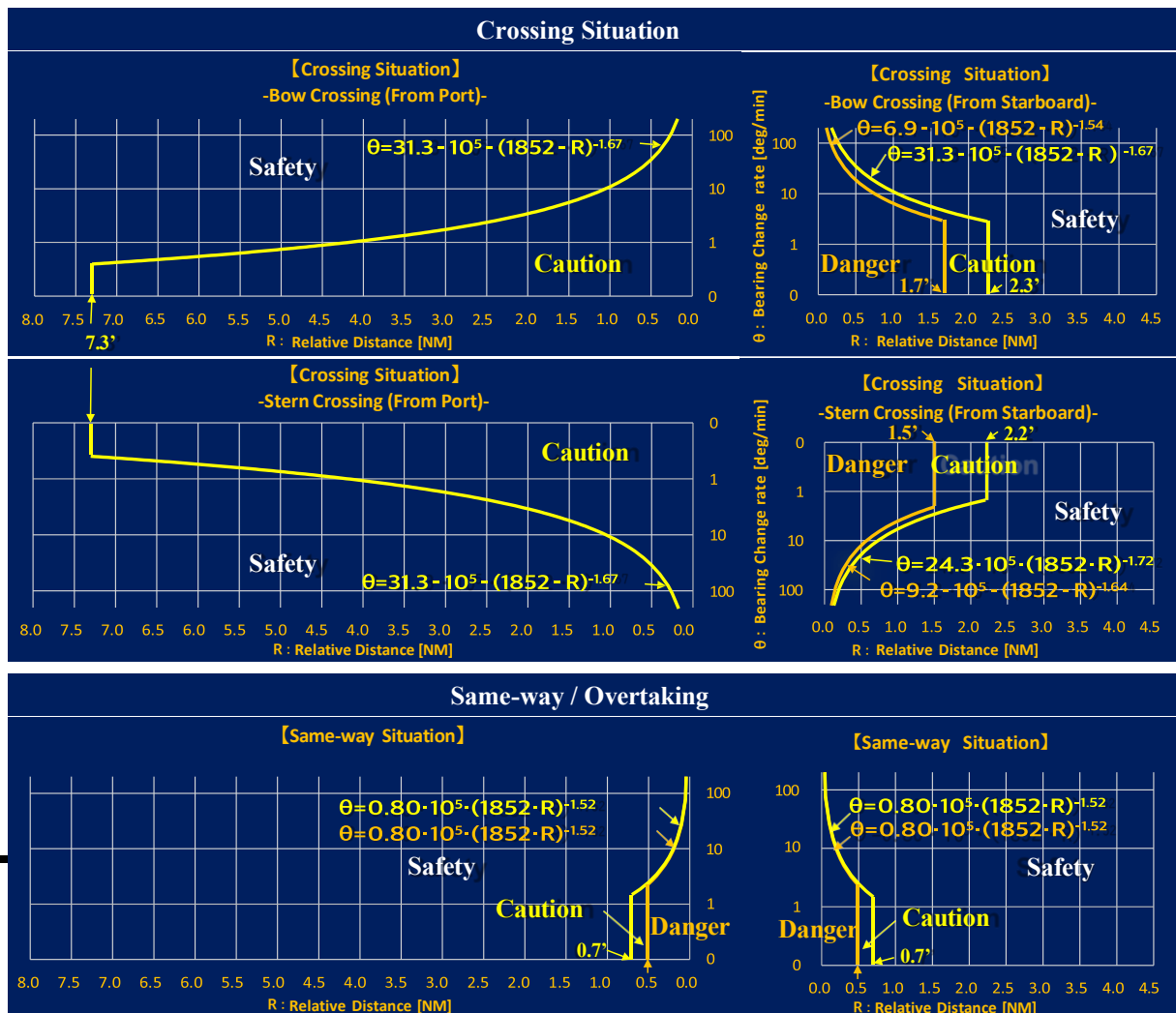
The regression curve showing the "Caution area" and the "Danger area" were created by plotting the bearing change rate, which was evaluated by 75% (3rd quartile) of the evaluators (Shipmasters) as "safe" to "caution" and "caution" to "dangerous" for each relative distance.

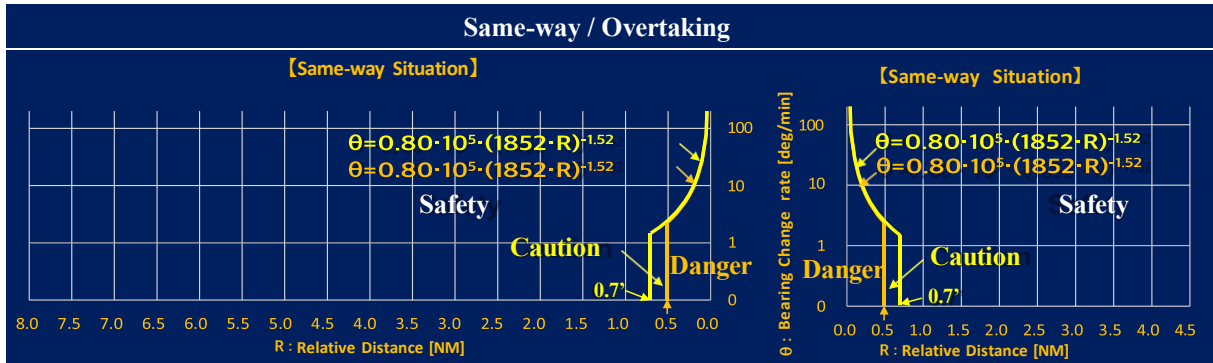
Figure 3 shows a regression curve and plotted points obtained by the risk awareness of 75% of evaluators (Shipmasters) for each relative distance. (See Figure 3)

As long as a ship navigating with an automatic collision avoidance system navigates in the "Safety area", it is evaluated as "not giving anxiety to other ships that she encounters", in other words, "it can be certified for safety".

The basic performance of the collision avoidance system will be confirmed from the basic scenario navigation of one ship to one ship with the automatic collision avoidance system using the simulator for certification. The multiple-ship encounter scenario is a scenario that assumes collision avoidance manoeuvres in congested waters. The point of evaluation is whether the automatic collision avoidance system can calculate the risk of collision with multiple ships and perform reasonable avoidance manoeuvres. Even if the avoidance manoeuvre is rational, it may be necessary to allow some degree of entry into the "Caution area" and "Danger area" of the evaluation area diagram depending on the degree of congestion and the the ship equipped with the automatic collision avoidance system.

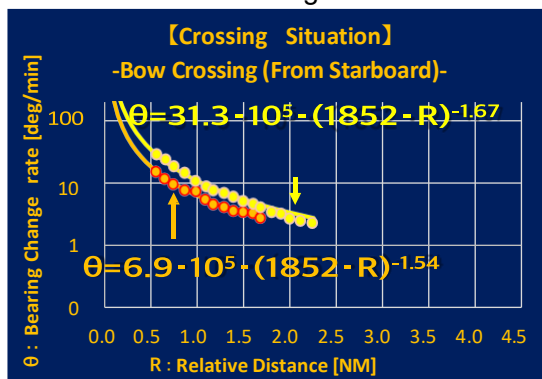
As a guideline for setting the degree of this tolerance, a method was proposed to set the certification criteria by comparing the points deducted by humans and the deducted points by the automatic collision avoidance system (deviation value). The deducted points are calculated based on the duration of stay in the "Caution area" or the "Danger area". "Danger area" are weighted twice as much as "Caution area".¹⁾





“Crossing situation from Port” is based on the results of a questionnaire survey of 523 Shipmaster in 12 countries.

Figure 2. The created Evaluation Area Diagrams



Each plot represents the boundary point of risk awareness for 75% of evaluators (: shipmasters)

Figure 3. Regression curve and plotted points obtained by risk awareness of 75% of evaluators

2.5 Collision avoidance manoeuvres entering “Caution area” and “Danger area”

Figure 6 shows an example of avoidance manoeuvres that enter the “Caution area” and the “Danger area” in the formulated evaluation area diagram. Although it does not lead to a collision, it is a ship manoeuvre that gives anxiety to the ships that she encounters, and is an example of an unfavourable automatic collision avoidance system.

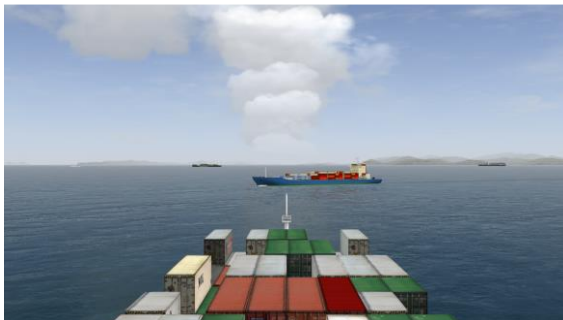
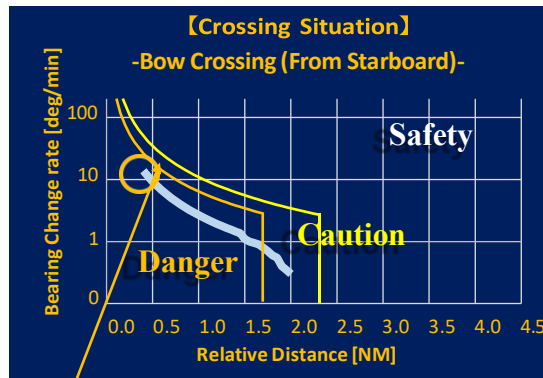


Figure 4. The situation when the bow crossing distance was 0.4 miles as a result of the collision avoidance manoeuvre (Manoeuvring using a simulator)



Figure 5.. The situation of seeing own ship from the other target ship at the same time. (Situation still shows own ship starboard side to the other target ship, at the distance is 0.4miles)



Relative Distance 0.4 miles, Bearing Change rate 13.8deg/min

Figure 6. Example of collision avoidance manoeuvre, Bow crossing 0.4miles

Figure 4 shows the view of other ships from the own ship (navigating with automatic collision avoidance system) at a bow distance of about 0.4 miles as a result of manoeuvring to avoid a crossing ship from starboard. In figure 5, although the distance is about 0.4 miles, the own ship is still showing her starboard side to other ship. Figure 6 shows an evaluation area diagram for the same situation. Nearly all of the plots fall into the “Caution area” and “Danger area”, although the bearing change rate increases with approach from a relative distance of two miles.

Even if there is a change in bearing and collision can be avoided, it can be said that it is a situation that give from the viewpoint anxiety to other ships (hold-on ship) operated by humans. This is not a favourable situation for an automatic collision avoidance system.

3 Conclusions and future issues

From the large-scale verification experiment, which is probably the first in the world, the "Evaluation area diagram" and "Verification scenarios" for practical automatic collision avoidance system certification (evaluation) were able to be formulated. The "Evaluation area diagram" formulated from this experiment is based on the viewpoint that a ship navigating with an automatic collision avoidance system does not cause anxiety to other ships that she encounters. Due to space limitations, "Verification scenarios" have been omitted here, but will be introduced in the lecture.

Although it is judged that it has reached the level of practical use, future issues are described below.

- ✓ Method of introduction (dissemination) to industry/related organizations (Evaluation area diagram, Verification scenarios, certification method)
- ✓ In multi-vessel encounter scenario, it is proposed to certify (evaluate) by comparing the deducted points with the result of human manoeuvring. An experiment is required in advance to calculate the deviation value.
- ✓ It has been confirmed that if the hull size of a ship navigating with an automatic collision avoidance system increases, the evaluation area map will expand. A sufficient number of data has not necessarily been obtained regarding the spread of the evaluation area diagram due to the size of the autonomous ship. This is an issue for the future.
- ✓ At the time of poor visibility, there was a tendency to expand the “dangerous area”. Quantitative understanding of the degree of expansion is an issue for

the future.

References

- 1) Nakamura S, et al. “Study on Automatic Collision Avoidance System and Method for Evaluating Collision Avoidance “Manoeuvring Results” MTEC/ICMASS 2019, Journal of Physics: Conference Series 1357(2019)012033

Acknowledgement

Would like to express deep gratitude to the people of NK, JMS/NYK, MOL/MOLMEC, and K Line for their cooperation.

Agenda 8 – “MEGURI2040” Fully Autonomous Ship Program

Presented by Tetsuya Kikyo, The Nippon Foundation

See <https://tinyurl.com/yc2tdju4>

Agenda 9a – Is the profession of Ship Captain Easier Today?

Presented by Dimitar Dimitrov, IFSMA Individual Member

The ship captain had been always a challenging profession. He has to take decisions in favour of the crew, the ship and the environment. That had been the case thousand years ago and that will be thousand years later. More or less each position of a manager of any activity requires taking decisions. The difference at sea is that the ship captain cannot rely on advices from the shore as the situation at sea is always unique never mind what kind of tools of exchange of information we have.

In the last fifty years life at sea changed enormously. Until the last quarter of the 20th century seamen did not have satellite systems on board. Average time of a position fix was from several minutes when the ship sailed in coastal waters to half an hour or more when doing astronavigation fix using several stars or planets. Meteorological information was mostly from measurements on board the ship and analyse of the master. The exchange of information with the shore staff took hours and sometimes in bad weather and poor radio transmission / reception days.

How is it now? We have 24/7 direct connection with the shore including video conference. The shore staff can see everything on board at any moment. The position fix is done continuously and is plotted on the electronic chart so the officers on watch and the masters can see it from their cabin. The master is able to monitor everything, he has access to weather information and he could receive advice from shore staff of the company or specialized services about the weather, the engine, the cargo or any equipment on board the ship.



Taking the height of the sun during apprenticeship on board in 1983 (own archive)



Monitoring the ship advance on the electronic chart today

And yet the ship master is always responsible and never mind what advise or order he will receive from the shore, from the general manager, from the owner, insurance or any other else he remains the person to do the job. Then what is the difference?

In general, if the master has more information his decision will be more accurate and clever. But the difference in the general situation on board and at sea makes taking decision not easier. Nowadays we have bigger ships with the hell more hazards. We have congested waters, busy traffic quite more navigational dangers like wind farms, oil rigs or any other complicated constructions spread at sea and in the oceans. And a lot of regulations.

One of the most difficult things to manage at sea is the administrative burden. The captains and crew are preoccupied by thousands of regulations and rules to comply with. In general, we could say that more and more from predominantly fiscal activities the masters are doing today monitoring, analysis, observations, risk assessment and especially exchange of information. Research of Danish Shipowners' Association few years ago concluded that the last three decades the shipmasters occupation from 70% navigation and 30%the rest of activities changed to 20%pure navigation and 80%administrative burden.

With a lot of equipment and necessity of review of information the master relies on his team of officers and crew. That changed fundamentally the skills and knowledge the masters have to get either in their education and during their continuous qualification and training. The actions on board of the crew and the ship masters before relied more on individual skills, knowledge and the final result was formed more on individual basis.

Today we are using any kind of equipment and we rely on information from shore and other crew members on board. The final result depends upon the team work of the bridge or engine team. Still the master is responsible and he takes the decisions but he needs reliable services and other crew to take the right decision.

The simple example makes the above clear. If the captain / deck officer makes astro-navigation fix using four stars he relies on himself to take the proper measurements with sextant and compass, then he calculates the position of the ship plotting it onto the chart. The same is with taking bearing and distances using sextant or radar and compass.

Nowadays the captain / deck officer is observing the GPS position on the electronic chart most of the time relying not on his own knowledge and skills but on equipment and other bridge team and engineers ashore. That creates entirely new environment with relations and behaviour

of the crew that requires ship masters and crew to interact closer one to the other and to trust each other for the success of the common venture.

On the other hand, the modern tools of communication, availability of internet on board and possibility each crew member to use the rest time in his cabin watching movies, communicating with the family and people ashore shortens the time when crew members stay together and in one way or another it alienates crew members on board. The availability of information makes people more suspicious thus motivating them to take away one from the other.

So, from one side we need crew members to work together and to rely on each other, from the other side we have the trend of alienation between crew members due to modern tools of communications and we could say due to the modern life style. Life on board the ships and work on board the ships is not easier today never mind all the tolls the masters and crew have in their hands.

The problems still exist but they are more and more in the psychological and mental level. The accident investigations very often show the root cause of accidents as overreliance on the equipment, lack of familiarization with the equipment or lack of knowledge and skills to use the equipment and distraction with different means of electronics, smart phone use during watch, manoeuvre or sailing in busy traffic.

One of the reasons for the lack of familiarization and difficulties in the use of equipment is the absence of standard design of electronic charts. In paper charts times all paper charts used the same symbols and even if the navigator had to use local paper chart with language not spoken by the user the latter was still able to understand most of the information due to the unification of symbols.

Today the symbols are also unified but in order to operate the chart – to plot position, to move the area, to zoom – the master / officer / pilot should be familiar with the exact equipment which is difficult even after imposition of compulsory training and familiarization before joining a ship and using the equipment. The problem arises with the advisers of the ship master as pilots. They are not able to be familiar with all the equipment on board the ships they are joining every day.

The short time for familiarizing with the bridge when joining a ship of the pilot gives no time to learn how to use the equipment and that creates problems in using all the means of control of the ship's movement in proper way. The problem is partly solved by portable pilot units but they are not with the same accuracy like the ship equipment and legally the matter is not yet clarified fully.

Maybe the most important reason for problems in navigation nowadays is the overreliance on the equipment. One can hardly find an officer of master looking at the radar or visually outside the window. The faces are usually concentrated on the screens of the electronic chart and the GPS and the AIS transceiver. The last two years in the Black Sea after start of the war in Ukraine confirmed the necessity of a backup for the GPS system as it was unreliable almost all the time. In busy traffic, war messages about war dangers, mines, etc. it is very important to know the exact position of the ship at any moment and to monitor it. That is why we have to maintain traditional methods of navigation in the curriculum of the next generation navigator education and training together with the modern ones. On the technological level the industry has to work on back up of the GPS system and cyber security in order to ensure reliable information about ship's movement at any moment.

Why the young generations of seafarers have different mentality that the old ones? Of course, the root is in general with the change of life, technological development and change of

mentality of people in general. People spent more time in front of their screens – computers, phones, TVs. They receive at any moment a lot of information, most of it not proven. At the same time the physical communication is becoming less.

On a psychological level the process changes the mentality of people and today's people behave in a different way, they have less sense of mutual life and they are lonelier. On board the ship that world trend is stronger and when connected with the other factors in the maritime industry it requires the modern navigators and ship masters to be educated and trained in team management and leadership in order to be adequate in the new challenging situations.

In conclusion we have to say that modern deck officers and ship masters have to have basic traditional knowledge in navigation, proficient knowledge in modern techniques, communication and information exchange knowledge and skills, sense of team work and many more knowledge and skills. The problem comes with the balance in education. New things are coming and as they are necessary, they are included in the curriculum but the time for education is the same. So, something should be either skipped from the program or the time for it should be decreased and the information should be compressed and studied in less time.

The profession of the modern ship master is not easier or more difficult now. The profession is just different and the nowadays officers and captains have to follow the trends, to get knowledge and skills every day about the technological developments in the industry in all aspects of navigation, cargo handling and stowage and control of operations and at the same time to remember that at any moment the situation could divert from the normal operation and the ultimate decision is with the captain. He has to follow the advises from shore but overriding authority is with him always and it will be in the future as he has the best knowledge on the reality on board. He is the ultimate decision maker.

Capt. Dimitar Dimitrov, PHD, FNI,
Master Mariner, Port pilot in the Port of Varna,
President of the Confederation of European Shipmasters Associations
September 19, 2023

Agenda 9b – The ENDORSEME Project

Presented by Dimitar Dimitrov, IFSMA Individual Member

Erasmus+ Project “Enabling Seafarers to Mutual Endorsement” (ENDORSEME)

The International Maritime Organization (IMO) developed the first standard for Vocational Education and Training (VET) programs for merchant navy officers in 1978. Seafarers are trained and certified by national administrations complying with the minimum standards set by International Convention on Standards of Training, Certification and Watch keeping for Seafarers (STCW). Despite these efforts there are no mechanisms for monitoring how these standards are being applied in various nations and yet there is an issue for seafarers to get their certificates accepted/endorsed when they are attempting to work from one flag state to another.

The European Maritime Safety Agency (EMSA) has started to monitor STCW compliance to contribute to safer operations, however, the issue for one seafarer having a certification from

one country flag not to be able to work in other country flag still exists as there are still many countries that do not have mutual recognition or endorsement in place. There have been several attempts in the past to unify the certifications and endorsements however it did not resolve the issue in full.

ENDORSEME project targets the development and provision of VET products and services such knowledge, skills and competence development to external factors such as students, companies and governments. It develops flexible and learner-centred VET programs, and contribute to closing existing gaps in the access to training for working age adults to successfully manage labour market transitions. It will also contribute to the development of continuing vocational training programmes designed to be adaptable to labour market, as well as programmes that facilitate the transfer, recognition and accumulation of learning outcomes leading to national qualifications. ENDORSEME project will ultimately facilitate recognition of certifications of seafarers, including ratings, throughout Europe and worldwide.

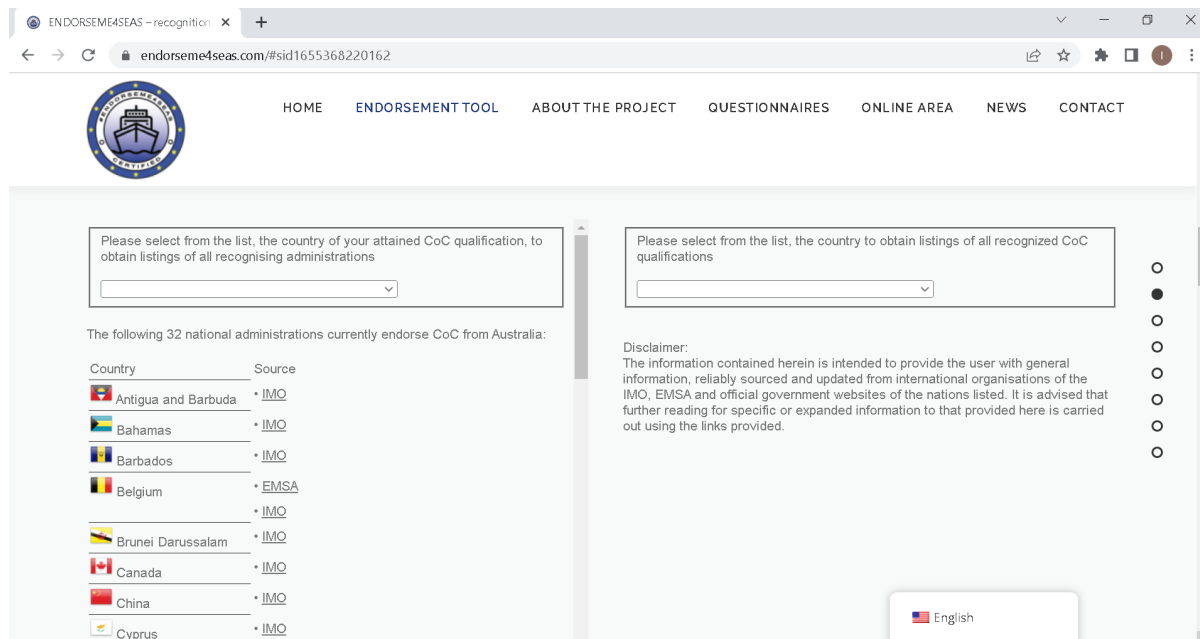
The integrated model that ENDORSEME project will utilize will bring together all of the seafaring qualifications such as Certification of Competence, ancillary STCW certificates and attempt to enable each certificate mutually accepted by the European countries at first and later in global scale in a reactive manner. The model will also allow for greater cohesion between international and local requirements in MET in member states providing a higher quality and more attractive long term VET programme.

This project develops a platform for various ranks of seafarers. The platform will have an option to investigate acceptance/endorsement of sea-going certificates. ENDORSEME project aims to:

- Identify the problems associated with recognition/endorsement of certificates in a questionnaire-based needs analysis and information based on the investigation of undiscovered areas.

- Develop a platform and complementary online tool for seafarers, shipping companies and MET institution to identify whether the certificates of seafarers are accepted/endorsed by one country to another.

ENDORSEME platform will cross-reference the certificates available to seafaring profession to provide a higher quality system that is suited to each individual member state. It will also enable MET programmes to be kept up to date with changes to requirements locally and internationally with minimum disruption to other core areas of the programme. The quality assurance system of ENDORSEME platform will enable the good practices to be seen and transferred to other member states as well as maintaining a high quality of education, training and assessment.



The screenshot shows the website endorsem4seas.com. The header includes a logo and navigation links: HOME, ENDORSEMENT TOOL, ABOUT THE PROJECT, QUESTIONNAIRES, ONLINE AREA, NEWS, CONTACT. The main content area has two dropdown menus for selecting a country. Below the first dropdown, it lists 32 national administrations endorsing CoC from Australia:

Country	Source
Antigua and Barbuda	• IMO
Bahamas	• IMO
Barbados	• IMO
Belgium	• EMSA
Brunei Darussalam	• IMO
Canada	• IMO
China	• IMO
Cyprus	• IMO

A disclaimer on the right states: "The information contained herein is intended to provide the user with general information, reliably sourced and updated from international organisations of the IMO, EMSA and official government websites of the nations listed. It is advised that further reading for specific or expanded information to that provided here is carried out using the links provided." A language selector at the bottom right shows "English".

ENDORSEME will enable authorities to monitor the success of different systems and requirements through developing a quality assurance and control system for the issue of such certificates. It will enable transfer of 'good practices' between member states and worldwide while ensuring high quality programmes.

The platform bringing all world authorities together will enable transfer of innovation to ensure ENDORSEME is of a high standard recognition model. ENDORSEME will support continuous personal development of seafarers in VET for all seafarers in the maritime sector across Europe. ENDORSEME will cross-reference the STCW requirements thereby allowing seafarers to be more mobile in any European country thus promoting the Citizenship programme. ENDORSEME will also incorporate the local and national requirements of each country therefore promoting action in Transparency and recognition of skills and qualifications between neighbouring and international countries

The partnership, working in collaboration with major awarding, accrediting and licensing bodies will cross-reference and include the international and local/national requirements into the with the aim of embedding the recognition tool initially into 5 partner maritime education and training (MET) systems across Europe. The ENDORSEME tool development is still in progress but once developed will facilitate all certifications received from one county to another to be endorsed in the partner countries and Europe, A quality assurance and control practice based on a well-respected system for the delivery of ENDORSEME will also be established to guarantee National Authorities continue to follow the requirements.

The ENDORSEME Project is developed by participation of six partners: Nikola Vaptsarov Naval Academy Bulgaria (managing partner), MARITIME INNOVATORS, Turkey, Munster Technological University, Ireland, SPINAKER, Slovenia, UNIVERSITATEA MARITIMA DIN CONSTANTA, Romania and UNIVERSITAT POLITECNICA DE CATALUNYA, Spain. Therefore, the platform is presented in the languages of all partners: Bulgarian, Turkish, English, Slovenian, Spanish and Romanian.

More information and the online tool can be found here: <https://endorseme4seas.com>

For PowerPoint slides see <https://tinyurl.com/3bssd9zx>

Agenda 10 – Report from Ukraine by MTWTU

See Agenda 1 in main BGA minutes.

Agenda 11 – Controlling Fires in Electric Vehicles

For PowerPoint slides see <https://tinyurl.com/2p8absj3>

Agenda 12 – Introduction to “The Master’s Practical Guide to Maritime Law”

See also Agenda 1 in main BGA minutes

For PowerPoint slides see <https://tinyurl.com/yc2uj8dm>

Agenda 14 – Visit to MOL “Safety Operation Supporting Center”

For PowerPoint slides see <https://tinyurl.com/yfnzjatn>

END OF ANNEX