



COMMAND



The Journal Of
The Company of Master Mariners of India

Digitalization and COLLABORATIVE Learning The Way Head





No. 85 / September 2021

COMMAND

CONTENTS

1. Committee Details	3
2. From The Editor	6
3. From Master's Desk	7
4. Co-opted Wardens 2020	8
5. Election of the Wardens of the Court for the term 2021-23	9
6. PAN India CMMI Vaccination Drive	11
7. Problem-based Learning Approach to Maritime Education and Training	14
8. With digitalization and de-carbonization push – is safety being compromised in this transformation?	15
9. Cyber Security in Maritime – A Reality Check CMMI Webinar held on 11 September 2021	18
10. 'COLLABORATIVE LEARNING'	21
11. "CMMI's Mentorship programme gains traction"	23
12. 75 th Independence <i>Ultra Run by Capt. Robert Vaz</i>	25
13. <i>Diversity in the Indian Maritime Industry: Hiring more women for profitable businesses</i>	26
14. "OPERATION SANKALP" by Capt. K.K.Joshi	30
15. Webinar by CMMI Chandigarh Chapter Day of the Seafarer – What rights do I have?	31
16. The blue economy in general and the ocean energy aspect	33

Published by:

The Company of Master Mariners of India

K. Raheja Prime, 5th Floor, Sag Baug Road, Marol Industrial Estate, Off Andheri Kurla Road, Marol, Andheri (East), Mumbai - 400059

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Produced by:



10, Hammersmith Industrial Premises, S. T. Road, Mahim West, Mumbai - 400016.

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Website : <https://bhandarkarpublications.com> | **Office Email:** news@bhandarkarpub.com

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List of elected Office bearers & wardens for the term 2019-2021 w.e.f 6th September 2019 is as under:



Capt. B. K. Jha
Master



Capt. K. V. Pradhan
Deputy Master



Capt. M. P. Bhasin
Secretary General



Capt. T. A. Almeida
Treasurer

Name	Designation
Capt. B. K. Jha.....	Master
Capt. K. V. Pradhan	Deputy Master
Capt. M. P. Bhasin.....	Secretary General
Capt. T. A. Almeida.....	Treasurer
Capt. H. J. Treasuryvala....	Warden
Capt. V. N. Aindley.....	Warden
Capt. N. A. Hiranandani ...	Warden
Capt. M. V. Naik	Warden
Capt. S. M. Halbe.....	Warden
Capt. Philip Mathews.....	Warden
Capt. Harjit Singh.....	Warden
Capt. Girish Phadnis.....	Warden

Name	Designation
Capt. V. K. Bhandarkar....	Warden
Dr. (Capt.) S. Bhardwaj....	Warden
Capt. M. K. Patankar.....	Warden
Capt. Kamal Chadha.....	Warden
Capt. Rajesh Tandon.....	Warden
Capt. C. L. Dubey.....	Warden
Capt. K. N. Deboo	Warden
Capt. S. V. Subhedar.....	Warden
Capt. Radhika Menon.....	Warden
Capt. Prabhat Nigam.....	Warden
Capt. Nazir Upadhye.....	Warden
Capt. Sanjay Prashar.....	Warden

COMMITTEE DETAILS

Various committees of CMMI

Training committee.

Capt. B. K. Jha - Chairman
Capt. C.L.Dubey
Capt. M. V. Naik
Capt. K. N. Deboo
Capt. Y. Sharma
Capt. M. C.Yadav
Capt. S. Bhardwaj
Capt. G. K. George
Capt. Prabhat Nigam
Capt. Pankaj Sarin
Capt. D. N. Goswami

Seminar/ Events committee

Capt. S.M. Halbe – Chairman
Capt. K.V Pradhan
Capt. T Almeida
Capt. Nazir. Upadhye
Capt.V K Bhandarkar
Capt. Kamal Chadha
Capt. Sunil Nangia
Capt. Albe Zacharia

Annual Dinner committee

Capt. K.V Pradhan-Chairman.
Capt. M.P Bhasin.
Capt. T. A Almeida
Capt. Prabhat Nigam
Capt. Nazir Upadhye
Capt. Albe Zacharia

Business / Project Development / R & D committee.

Capt. B. K. Jha - Chairman
Capt. S. M. Halbe
Capt. Philip Mathews
Capt. Harjit Singh
Capt. Girish Phadnis
Capt. Vivek Bhandarkar
Capt. Prabhat Nigam.
Capt. Sanjay Prashar
Capt. Harish Khatri
Capt. Gajanan Karanjikar
Capt. Pawan Gupta

Corporate Social Responsibility (CSR) committee.

Capt. Nand A. Hiranandani – Chairman
Capt. V. N. Aindley
Capt. S. M. Halbe
Capt. Mohan Naik
Capt. Rajesh Tandon

Membership Committee

Capt. K. V. Pradhan - Chairman
Capt. Harjit Singh
Capt. Suneha Gadpande
All Chapter Chairman

Compliance/Legal Advisory Committee

Capt. M. V. Naik - Chairman
Capt.V.N.Aindley
Capt. K. D. Bahl
Capt. Milind Patankar
Capt. Pankaj Kapoor

Lifetime Achievement Award and Sailing Master Exemplary Action Award Committee

Capt. V. N. Aindley - Chairman
Capt. M. P. Bhasin
Capt. S. M. Halbe
Capt. Philip Mathews
Capt. Milind Patankar
Capt. H. J. Treasuryvala

Grievance Redressal Committee

Capt. C. L. Dubey- Chairman
Capt. Phillip Mathew
Capt. Nazir Upadhye
Capt. Radhika Menon

Election Committee

Capt. M. P. Bhasin - Chairman
Capt. V. N. Aindley
Capt. K. D. Bahl
Capt. M. V. Naik
Capt. V. K. Bhandarkar
Capt. Nazir Upadhye
Capt. Gyanendra Singh

Social / Media Policy Committee

Capt. B. K. Jha - Chairman
Capt. Philip Mathew
Capt. M.P. Bhasin
Capt. Sanjay Prashar
Capt. Kamal Chadha

Library Committee

Capt. K.D. Bahl – Chairman
Capt. S.Y. Limaye
Capt. Ashok Raghavan

CMMI representation on various Technical Committees / organizations

Technical committee of IRS

Capt. S. V. Subhedar

Formal Investigation - Grounding of MV Vishwa Amber - Court case No.4399/s/2000-Marine Inquiry

Capt. Kapil Dev Bahl
Capt. V. N. Aindley

Other Committees Boards

Maritime Museum Dufferin (MMD) Trust Committee

Capt. B. K. Jha - Trustee / Signatory
Adhoc Advisory
Capt. N. A. Hiranandani
Capt. V. N. Aindley
Capt. S. M. Halbe

Command Editorial Board

Capt. Tescelin Almeida- Chairman
Capt. Kamal Chadha
Capt. V. K. Bhandarkar
Capt. Girish Phadnis
Capt. Kaustav Dutta
Capt. Ajay Gangadharan
Capt. Rajesh Nambiar

"Vetting Team" for review of books and publications

Capt. S. Y. Limaye
Capt. Ashok Raghavan
Capt. K. D. Bahl

Founders Award committee

Capt. B. K. Jha - Master
Capt. M. P. Bhasin - Secretary General
Capt. N. A. Hiranandani - Warden
Capt. S. M. Halbe – Warden

Screening Committee for Elevation of a Member to "Fellow"

Capt. N. A. Hiranandani	- Chairman
Capt. M. P. Bhasin	- Secretary General
Capt. C. L. Dubey	- Warden
Capt. S. Bhardawaj	- Warden
Capt. Prashant Rangnekar	- Fellow
Capt. Pankaj Sarin	- Fellow

Change in nominations to the BES Trust Nominees of CMMI as Trustees on Board

Capt. B. K. Jha (Master)
Capt. K. V. Pradhan (Deputy Master)
Capt. M. P. Bhasin (Secretary General)
Capt. Pankaj Sarin (Chapter Chairman -Delhi)





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The Company of Master Mariners of India

A professional body of Master Mariners and Nautical Offices, certified under ISO 9001-2015.

- Has membership base of over 3500 members; growing.
- Has 15 Chapters Nationwide & 3 overseas Branches at Dubai, Singapore and Hong Kong.
- Huge 'think-tank' with abilities to provide legal assistance, evaluate and resolve any marine issue.
- Has representation on various governmental and technical committees.
- Assists the administration in formulating policies.
- Promotes all round development of marine professionals by imparting and enhancing high level of technical knowledge
- Represents India at the IMO.
- Conducts technical seminars/ webinars on various subjects & speakers from PAN India & overseas.
- Launched Mentoring Scheme
- Conferring Founder Awards.
- Holds periodical lecture meetings
- Conducts coaching for oral/competency examinations for aspiring deck officers.
- Holds 'MASTER CLASS' sessions periodically, covering a wide spectrum of marine subjects, conducted by top class professionals from the Industry.
- Publishes an informative journal "COMMAND" Quarterly.
- Conduct on-line classes for EXTRA MASTER's
- Publishes TAR books for B.S.C Nautical Science cadets.
- Holds annual get-togethers bringing the entire Marine Industry together. Conferring "Life Time Achievement Award" and "Exemplary Action Award by Seagoing Master" at the annual get together
- Is the co-founder and trustee of the "Board of Examination for Seafarers" trust, conducting Examinations for seafarers and publish related learning material on behalf of the administration
- Maintains a library with a collection of wide range of nautical publications.



THE COMPANY OF MASTER MARINERS OF INDIA

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From The Editor

Capt. Tescelin Almeida

Dear Readers,

We are nearing completion of the Wardens' term and elections for the new term 2021-2023 has already been completed and I have printed the entire results with the number of votes obtained by each of the candidates. We are very proud that we have successfully completed this task and for the first time CMMI has done it online and some by paper ballot as desired by our members.

Very soon we will be conducting the AGM and thereafter the new team will take over. I wish the new team great success and may CMMI soar to new heights. I regret that due to health and other commitments I was not able to stand for election. I take this opportunity to thank you for the great number of innings that I have served as a Warden and for having me as your Treasurer for the last term 2019-2021.

The lockdown protocols are still with us and I thank the Almighty that we have survived. In the literal sense of the statement, yes we have been spared by the Virus though some of our members and other mariners have succumbed to the dreaded Covid-19 and have gone to their rest. May their Souls Rest in Peace.

CMMI is proud to have played an active role in its large endeavour to vaccinate seafarers and has managed to keep the ball rolling across most of its chapters.

The Shipping Industry is still reeling from the many hurdles we are facing, particularly in the crewing and repatriation of seafarers.

In this issue I have captured some of the webinars that have been held. I have also included articles on Collaborative Learning and Problem Based Learning. You have some very good insights into Diversity in the Indian Maritime Industry by Ms. Sanjam Sahi Gupta and a small writeup on CMMI's Mentor Programme.

I thank all the writers who have contributed to this issue and yet again request all members to send in articles, either your own or other interesting articles that you feel will benefit our fraternity.

Let our resilience prove that:

"There's always a new horizon for every seafarer"

"There's always a silver lining beyond every dark cloud"

"There's always success where there is passion".

All the very best and God Speed!! Until the next issue.

Capt. Tescelin Almeida
The Editor





From Master's Desk

Capt. B. K. Jha

MASTER

Since its inception technology is always looking for the next boom. Its impact is massive and we all feel it in our daily work and lifestyle. But before we pat our backs on how we have adopted to it we must realise that we have a long way to go even to catch up to existing technology. The most common tech debate we hear is how Artificial intelligence will take over human jobs, but in my opinion this is the most naive view of technology advancement. The debate should be on improving data labeling with human in loop, bias, and how data/cyber protection can be improved. The journey had started long back and we all have contributed to it. We started from moving non digital content from physical files to our computers. This is called digitization. When these silo human based and document bound processes were integrated to a system which could be operated on computer we took our step towards digitalization. The digital systems however were complex and costly.

But with Cloud we have moved towards Digital Transformation, where business efficiency and practices is improved with smart decision making and strategy development capability. Adding to it the latest innovation is now affordable and accessible to every business. Today we are moving to cloud based affordable ERP systems. But the real power has come as business is enabled to develop their own unique business specific smart integrated systems which do not conform to any pre defined restrictive processes. It's capability is limitless and we are ready to take the plunge. Technology is evolving and we are adopting to it. Now we have the chance to not just be reactive but be proactive and enable the next digital boom which is customized for maritime industry and our specific business. I envision CMMI to be at the helm of next big boom.



Co-opted Wardens 2020

1. **Capt. Ajay Gangaadharan,
Chapter Chairman - Chennai**
2. **Capt. Rahul Bhargava
Chapter Chairman - Navi Mumbai**
3. **Capt. Kaustuv Dutta
Chapter Chairman – Kolkata**
4. **Capt. Georgie K. George
Chapter Chairman - Kochi**
5. **Capt. Pankaj Sarin
Chapter Chairman - Delhi**
6. **Capt. Suneha Gadpande
Sailing Master**

Election of the Wardens of the Court for the term 2021-23

CMMI election of the Wardens of the Court for the term 2021-23 was held on 29th April, 2021. Capt. S. Y. Limaye was appointed as an Election Returning Officer on 7th January, 2021.

CMMI appreciated the efforts of Capt. S.Y.Limaye for having conducted the proceedings in a smooth and efficient manner.

CMMI Election schedule for the term 2021-2023 was uploaded on the website and also e-mailed to members on 5th March, 2021. Same was also widely circulated in all the maritime magazines, website and newspapers.

Election schedule, voting procedure including voting option was also e-mailed to the 2215 members whose e-mail id are available with us. Last date for receiving the voting option was on 29th April, 2021.

1384 Members opted for E-voting whilst 1887 Members for Manual Voting Election notice was posted to all members on 30th April, 2021 for receiving nominations by 5th June, 2021. 1384 members who opted for e voting details were submitted to "National Securities Depository Limited" (NSDL) to ensure free and fair elections.

47 Nominations were received and same were finalized on 8th June, 2021.

Postal Ballot Papers were dispatched to members on 22nd June, 2021 and last date of 5th August, 2021 was set for the return of the ballot papers.

E-voting portal for was open on 21st July 2021 at 0900 hrs (IST) and closed on 5th August, 2021 at 1700 hrs (IST). On 5th August 2021 (Counting day) 103 Ballots was considered valid for counting.

Ballot votes and the summary of votes received from NSDL were added. After consolidation of physical votes and e-votes received from NSDL (377 members voted), the ranking in descending order of number of votes received by individual candidates was prepared.

Counting of Postal Ballot / E-voting was completed and results were handed over by Capt. S. Y. Limaye, Election Returning Officer to Capt. B. K. Jha, Master on 6th August, 2021

Results were declared on 7th August, 2021 during the 229th Court Meeting of CMMI. The Election results

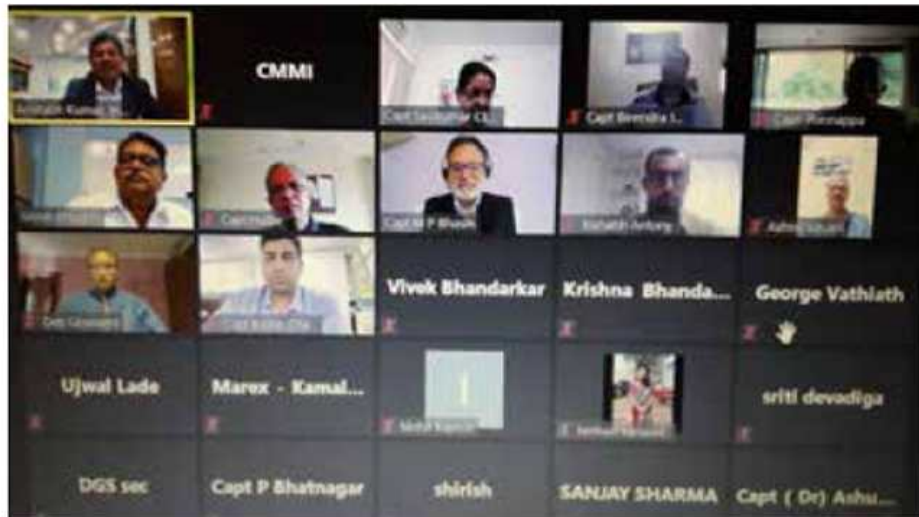


are posted below and the same will also be announced in the upcoming AGM of CMMI scheduled on 22nd September, 2021.

Rank by Number of Votes	CANDIDATE'S NAME
1	Capt. BhasirMahendra Pal
2	Capt. Naik Mohan Vasant
3	Capt. Bhandarkar Vivek K.
4	Dr. (Capt.) Bhardwaj Suresh
5	Capt. Halbe Shivanandan M.
6	Capt. Tandon Rajesh
7	Capt. Jha Birendra Kumar
8	Capt. Chadha Kamal Harcharandas
9	Capt. Karanjikar Gajanan Bhalchandra
10	Capt. RangnekarPrashant Sadanand
11	Capt. Subramaniam Harihar
12	Capt. Aindley Virendra Nath
13	Capt. Dubey Chhote Lal
14	Capt. Pradhan Kaustubh Vasant
15	Capt. Gadpande Suneha
16	Capt. Dutta Kaustuv
17	Capt. Nambiar R. V. Rajesh
18	Capt. Gangaadharan Ajay
19	Capt. Gyanendra Singh
20	Capt. Bhargava Rahul
21	Capt. Harjit Singh
22	Capt. Gupta Pawan Kumar
23	Capt. Patankar Milind Kashinath
24	Capt. Varma Rahul



PAN India CMMI Vaccination Drive



Over 4000 vaccinations.

- 1) 450 Kolkatta
- 2) 550 Haldia
- 3) 1950 Paradip
- 4) Mumbai / N. Mumbai 300
- 5) Kochi 300
- 6) 300 Kandla
- 7) Sonepat 500



kolkata

his assistance to shorten the webinar while Capt. Sashu Kumar, CEO gave the vote of thanks.



Mumbai



Haldia



Haldia



Mumbai



Kolkata



Mumbai



Mumbai



Mumbai



Mumbai



Mumbai



Kolkata





Maersk Avon ship at Kochi



Kandla Port



JNPT Port

The world recognized the importance of shipping in keeping the Global supply chain open. In continuation the Government of India promulgated the Essential Services Maintenance Act. Thus, with a proactive stance, the government recognized the role played by Seafarers in world trade and global commerce and declared them as Key Workers. This was in line with IMO circular date 05th Feb 2021. CMMI took the cue and the Master expressed desire to help those who were losing their Seafarers jobs to foreign nationals due to lack of Vaccinations. Thus started the largest pan India drive to vaccinate Seafarers, Marine professionals and their family. CMMI's vaccination drive was inaugurated on 11th June, 2021 by **Shri Amitabh Kumar, IRS Director General of shipping** who played a significant role in this regard. Speaking on the occasion Mr. Amitabh Kumar, IAS thanked CMMI for giving him the opportunity. The Director General of Shipping stated that for almost one and a half years the industry and especially the seafarers have been facing tremendous challenges. Even though small and manageable when problems are numerous they create a big problem. So far, the Indian industry has been managing the affairs very well compared to other countries. The second wave of Covid19 has been causing a huge impact especially on seafarers whose livelihood is at stake. Somehow industry got together and coordinated and found a way of providing alternate means of transport to expedite the seafarers. Logistics and requirements for the second phase of Covid19 were very different from the first phase. Notably not only transportation of seafarers but also the safety of the crew members itself was in danger. Capt. Jha, in his address mentioned "both in the short and long run, the only solution was vaccination of seafarers and the shipping industry. The industry had floated a lot of ideas and solutions for the same. But, the availability of vaccines was so limited that none of the incentives would actually take off as long as by and large vaccines remain elusive. It was only when the whole industry got together to solve the problem that we now see the light at the end of the tunnel. He averred "The drive by CMMI would be a lifesaver for the seafarers physically and figuratively. I hope everyone ashore utilizes the facilities." The DGS offered his assistance to shorten the days between two doses of the vaccination for the Seafarers wanting to join

the ships at the earliest so as to not lose their employment, which would also add more jobs to Indian seafarers. He further thanked CMMI and everyone involved for human service. CMMI carried out vaccination on board a Maersk Line vessel, Maersk Avon for Indian Seafarers as per the clarion call of Capt. B.K. Jha, Master, CMMI. With this CMMI has conducted over 4000 vaccinations as a single association at Eight locations pan India and has vaccinated the largest number of Seafarers, Shipping personnel and their families including crew on board at some ports. The vaccinations were conducted Kolkatta, Haldia, Paradip, Mumbai, Navi Mumbai, Kochi, Kandla and Sonapat.

Several Shipping companies benefitted from this Drive. This entire exercise started when there was a shortage of Oxygen bottles. That is when CMMI got into action and tied up with Shushrusha Hospital in Mumbai, which has a complete setup to deal with any emergency arising among Covid patients. CMMI ensured that beds were available at all times for COVID emergencies for CMMI members and their families. This situation changed rapidly. CMMI is the only maritime association in India to have been pro-active towards seafarers, Marine professionals and their families. Also not to forget economically backward personnel who were provided free vaccinations at some of the locations where it was feasible. To achieve this herculean task CMMI had to face stiff resistance from locals at some locations. Capt. B.K. Jha Master of CMMI expressed his gratitude to Shri Amitabh Kumar for taking remarkable initiative, for the welfare and safety of seafarers. The Master appreciated the initiative of Capt. Vivek Bhandarkar, Capt. Girish Phadnis and CMMI member Capt. Kedar Choudhury. Organisers of the CMMI's vaccination drive expressed gratitude to all those who silently supported this massive drive including Capt. Radhika Menon, CMMI Warden, Capt. George, Kochi, Chapter Chairman, Capt. Verghese, Capt. Kastuv, Kolkatta, CMMI Chapter Chairman, Capt. B.S. Rao, Chairman, Bangaluru Chapter, CMMI, Dr. Shamili, PHO, Kochi Port, Shri. Gouri Prasad Biswal, Dy Conservator, Kochi Port, Dr. Beena, Amrita Hospital and their very cooperative staff, Bengal Tiger Lines, Samsara Group, JMBaxi.



DICT Sonipat



Problem-based Learning Approach to Maritime Education and Training

---By Capt. Suneel Sule

The 'Sputnik Shock'

In the year 1957 when the U.S.S.R. won the space race and launched the world's first artificial satellite Sputnik-1, America was made to realize that it was lagging behind the Soviet Union in preparing scientists, and also citizens from whom future intellectual leaders would emerge. This incident has gone down in history of education as the famous 'Sputnik Shock'. The shock felt by the Maritime Training Industry of India, as a major supplier of seafaring manpower, may not be as loud and jarring, but the feeling is similar. Are other nationalities winning over us in the race to supply world-class seafaring professionals?

The Industry, its Product and the Clients: If "Maritime Training" is to be considered an industry by itself, its product is the trained seafarer and client is the ship-owner who employs the seafarer. The typical Indian seafarer is viewed by the foreign ship-owners as 'possessing good scholastic abilities and sound theoretical knowledge'. This is no surprise, having been chosen mostly on the basis of academic performance. The downside is the attitude: 'dishonest, resentful of authority and unwilling to work with own hands'. We, as their trainers and mentors, must not contest this perception, nor can we afford to ignore it; if that is going to decide the employability of the Indian youth in a highly competitive international job market.

The Evil of Rote-learning: Much as we may want to deny it, our education system has not risen above rote-learning. For majority of teachers and students, the ability to reproduce the text from 'the' text book is the ultimate aim of education. 'Facts' learnt this way may remain with the learner but are not applied in real-life situation. A very common example of this phenomenon is, a navigating officer who knows the rule of the road by heart, takes an action based on 'gut feeling' and ends up in a collision; or an engineer who overhauls a sophisticated piece of machinery, not by reading the manual but on the basis of 'past experience of similar stuff', and destroys it. During incident investigation both will exhibit their familiarity with the underpinning knowledge, but what is missing is the attitude. Such incidents are typically followed by questioning the trainers about the training being imparted, scrutiny of the training material and some addition to it, often a knee-jerk reaction! The cycle goes on. What is missed out is the gap between knowledge and its application.

Bloom and the levels of learning:

Benjamin Bloom professed six levels of learning. In that hierarchy, knowledge (read 'remembering facts') is at the lowest level. For a professional to perform effectively, s/he has to ascend at least two more rungs of this proverbial ladder and those are 'Comprehension' (understanding) and 'Application' (using). To achieve this, the teaching methodology as well as the assessment system has to undergo a sea-change.



Capt. S. V. Sule,

Extra Master, FCMMI,

Principal of Anglo Eastern Maritime Academy.

With digitalization and de-carbonization push – is safety being compromised in this transformation?

---Dr. (Capt) Suresh Bhardwaj, fics,fni,fcmmi

Introduction

Shipping industry is invariable heading towards digitally smart and carbon-neutral future. It is imperative that in grappling with the transformations, robust risk management systems are put in place that ensures resilience while continually improving. Digitalization catalyses wider use of data, data-driven models, and remote services in shipping, leading to improvements in efficiency and productivity. The industry is also dedicated to finding a pathway towards de-carbonization. Digital transformation enables innovation in de-carbonization as well, as digital technologies are leveraged to meet sustainability goals. Efforts to apply innovative digital solutions and reach de-carbonization goals reflects commitment to UN Sustainable Development Goals. These efforts showcase maritime stakeholder ambitions to put themselves in competitive positions, with vessels that are 'smarter' than ever before.

However, we also need to make the new and more complex risk picture, emerging with innovation and transformation, more explicit so that we can better manage it and put proper risk controls in place. Focusing on the complexity of innovative technology is central, but insufficient in isolation to achieve and maintain transformations towards smarter and decarbonized shipping. The success of these transformations also depends on people. Therefore, we must understand what people require to be able to exercise their creative, constructive, and problem-solving abilities, which are necessary to safeguard maritime operations throughout these transformations.

Safety concerns in Digital Transformation

A system is considered to be a set of human, organizational, and/or technical elements that can achieve things together that each component part cannot accomplish alone, and whose Safety is greater than the sum of its parts.

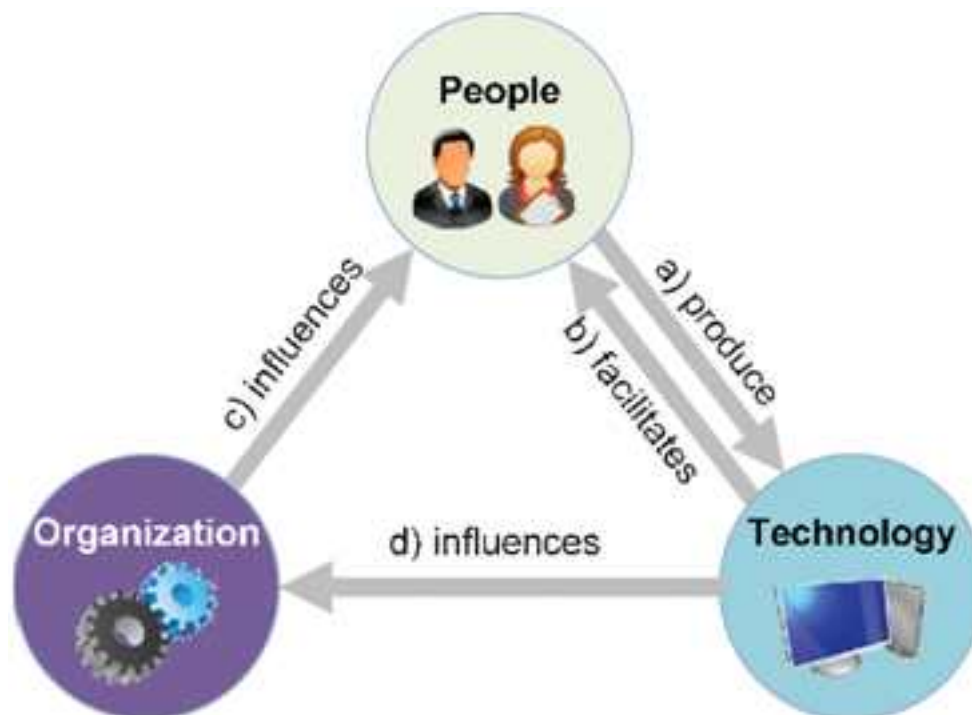


Figure1: Integrated systems

While digitalization can replace manual tasks with technology, it also creates more distance between a person and the operation. This influences people's ability to understand, monitor, and predict the system's performance. At the same time, interconnected software, sensors, and machines with control systems dependent on algorithms, can be susceptible to interrupted communication and underperformance, and may also exhibit sub-standard human-machine interfaces. Systems become more vulnerable to new failure modes that result from more complex interactions between digital technologies and between such technologies, people, and organizations. Cyber security threats add another layer of risk to safety. The maritime industry uses many industrial platforms that have limited standardized interfaces. The responsibility for the integrated software systems is spread across vendors and sub-suppliers. This lack of system integration, and the general lack of a holistic risk understanding, make it a struggle to manage the design, construction, operation and maintenance of a software-controlled vessel. It also makes it more difficult to re-use digital models and apply them more broadly for diagnostics, prediction, and assurance.

The maritime industry currently has no formal method or toolset for including system complexity in the overall risk picture in a rational way. At the same time, safety regulations are starting to lag behind the accelerating digital developments. Consequently, new technologies and systems may be introduced without relevant standards for verification and testing in place to prove equivalent safety.

Verification methods for future systems should be based on a 'systemic' perspective on safety. A systemic perspective appreciates that, to understand systems, we must realize that they consist of people, organizations, and technology that are all related to each other and their environment. This means that safety emerges from the interaction between the human and technical elements, and organizational processes, and not from the behaviour of just one of these elements. In order to address each of these elements properly and consistently through a system's life cycle, it is essential that they are included as early in the design and engineering phases as possible. Close collaboration throughout the entire life cycle will also facilitate system integration.

Safety assessments should generate evidence for safety through product and process verification. Simulations can help to test and verify the safety levels of a system without creating risk to life, property, and the environment. One way to conduct product and process verifications is by using digital twins. These virtual images of an asset are based on all information available about the asset, including dynamic updates on condition and operational parameters. The use of digital twins is a cost-effective approach to support the design and operations of future maritime systems.



Figure 2: Digital Twins

Safety hurdles in De-carbonization

Most systems and technologies today rely on increasingly integrated automation and control systems. Systems that were traditionally separated and operated independently from others are becoming more interconnected. This creates an overarching risk that needs addressing for innovative vessel designs and new technologies. A holistic understanding of risk is as important during non-routine operations, such as maintenance, as during regular operations.

Non-technical controls – e.g. risk competence, safety culture, and regulatory measures – are as relevant to the design of equipment and materials for handling alternative fuels as they are for designing infrastructure that will facilitate the safe widespread production, distribution, and bunkering of alternative fuels. In other words, although transformations in de-carbonization require state-of-the-art technology, their sustained success depends on how, and in what context, this technology is applied. A robust approach to safety therefore requires a 'systemic perspective' focusing on the complex interaction between human, organizational, and technical factors that influence carbon-neutral operations.

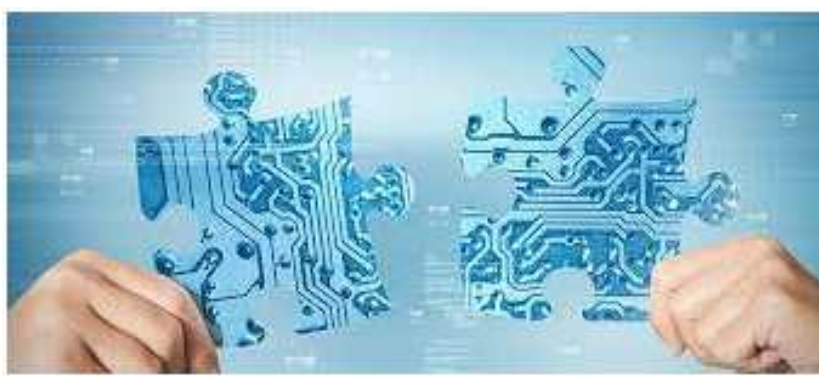


Figure 3: System integrator

There is a need to appoint a system integrator as 'a spider in the web', responsible for integrating, optimizing, and communicating between stakeholders throughout the design process. A system integrator can be a valuable contribution to ensuring safe operations throughout the transition to carbon-neutral shipping. A system integrator can be appointed as the responsible party for establishing and maintaining a holistic risk picture throughout the design, development, implementation, and maintenance of new, complex systems. Such a system integrator could facilitate the process and keep a bird's-eye view on risk management while the suppliers and other stakeholders can focus on the risks and learnings that are associated with their specific areas of expertise. This lays the foundation for a holistic understanding of risk to support system robustness.

Manage risk for new fuels and abatement technology

New fuels and abatement technologies pose new safety-related challenges and require additional risk controls to ensure acceptable levels of safety. Ammonia engines and fuel systems are presently relatively immature compared with LNG and battery systems, and significant technical and safety challenges still need to be solved for ammonia alone. Also, little experience and few existing rules are available to cover the use of hydrogen as fuel. At the same time, hybrid solutions or those that can run on two or more fuels are under development. These parallel developments increase the complexity of design and operations and make it even more difficult for stakeholders to understand the risks and to perform operations at equivalent (or better) levels of safety.

International regulations are key to getting the technical barriers in place. However, there is typically a delay between the introduction of new alternative fuels and the implementation of new international rules and regulations. Be that as it may, risk assessments as early as possible in the design process – e.g. hazard identification studies (HAZIDs), hazard and operability studies (HAZOPs) – to close the gap between existing requirements and current practice, are needed to facilitate the resilience of new and alternative technologies.

In Conclusion

Digital transformation calls for system integration and new ways of managing risks associated with complex systems, while the transformation to carbon-neutral shipping requires that we collaborate to increase transparency, establish a strong regulatory framework, and create a culture of continuous learning. Consequently, technological advancement should be complemented with efforts to keep people in the loop. As such, to reap the benefits of this era of transformations in digitalization and de-carbonization, industry stakeholders need to collaborate from the beginning to the end of a ship's life cycle. The aim should be to create a shared focus on design and operations that support people's performance.

Ultimately, innovative technology, designed, maintained and operated by optimally performing people in organizations that embrace holistic risk management, is what will put the industry in the best position to transform itself through digitalization and de-carbonization.



Dr. (Capt) Suresh Bhardwaj, fics,fni,fcmmi

Cyber Security in Maritime – A Reality Check

CMMI Webinar held on 11 September 2021

The Company of Master Mariners of India organized their bi-monthly Webinar on 11th September 2021 on the above topic with single panelist **Ms Anu Khurmi, Managing Director – Global Services at the Templar Executives, London, UK.**

Welcoming the gathering **Master of CMMI Capt B K Jha** enumerated the importance of the topic, while **Capt Bhasin**, Secretary General of CMMI welcomed the Speaker and handed over to **Capt Tescelin Almeida**, Treasurer of CMMI to convene the session, who then invited **Dr (Capt) S Bhardwaj**, Warden CMMI, to moderate the panel discussion.

Dr Bhardwaj set the theme by pointing out that we are now 9 months down the line since Cyber Security has been mandated for the shipping companies. But, as circumstances would have it, it comes at a time when the industry is grappling with issues of the global pandemic causing unprecedented disruption and hardships. In this milieu of critical issues like crew changeovers and repatriation of seafarers also willy-nilly lies the increased use of social media and acceleration in digital adoption!!

It is indeed time to take a Realty check on the very real threat of Cyber Security this industry faces.

We couldn't have anybody better than Ms Anu Khurmi, Managing Director – Global Services at Templar Executives, which is an expert contributor to industry including the very popular - Bimco's Guidelines on Cyber Security Onboard Ships.

Anu leads on the Maritime Cyber Response Team (**MCERT**), a collaborative platform for global information threat sharing, cyber incident reporting and emergency response; also on consultancy including Maritime Cyber Risk Assessments (**MCRA**) aligned to IMO 2021; and the Templar Cyber Academy for Maritime (**T-CAM**), which provides certified training courses to further Cyber resilience capability and awareness across the Maritime ecosystem.

Prior to joining Templar Executives, Anu was a senior executive in IBM for over 20 years.

Interestingly, she is also Founder and Chair of Cyber Champions, a not for profit launched in 2011, promoting best practices in cyber skills and digital literacy for schools and communities across the UK and in March 2017 was awarded the 'Power of Women' Awards for Cyber Security.

An impeccable professional record and truly celebrated personality – we are indeed proud to have you Anu on this webinar all the way from London. Thank you very much.

Dr Bhardwaj: So, first things first – Can you give us some more insights into your company's involvements in the Maritime sector?

Anu: Templar Executives provides a portal for anonymous or direct reporting of Cyber incidents; Provides emergency response support and triage; Collects/analyses intelligence feeds to provide a rich intelligence picture including threat alerts and daily reports; Offers an industry forum for information exchange and collaboration; Offers a collaborative global Supplier Framework; Offers training and education courses from the Templar Cyber Academy for Maritime (T-CAM).

World Economic Forum pointed out that in 2020, Cyber Attacks on critical infrastructure of Shipping was the 5th top risk in the world. Cybercrime is 600% up due to Covid 19. There are 230,000 new malware samples produced every day. Reasons has been varied, from Ransomware to State sponsored, Data breach, innocent and insiders, Malware and Virus, Terrorism, Espionage.

IMO defines Maritime Cyber Security Risk as A measure of extent to which a technology asset is threatened by a potential circumstance or event, which may result in a shipping related operational safety or security failure as a consequence of information or systems being corrupted, lost or compromised.,

It further affirms that safety management system should take into account cyber risk management in accordance with the ISM Code.



So Risk assessment of key threats and vulnerabilities is the main requirement. This (a) establishes the baseline capability and what you care about the most (b) It helps inform aspirational capability and cost of achieving this capability (c) Inputs to risk appetite discussion (d) It can be a critical input to strategy and plan to optimise return on investment and (e) provides a means of monitoring and reporting of progress.

Dr Bhardwaj: This industry is only driven by regulations. No amount of guidance or best practices make a difference. Either it has to be regulations or customer pressure. The methodology prescribed is integrating it with ISM. Very noble in perspective – idea being like Safety – do you evolving Risk and Vulnerability assessment and be prepared. Involve everybody—not just the IT guy's baby - Also Can't be a Technical standard because of the rapid changing technologies....and threats! remember the hackers are 2 steps ahead always!

BUT ISM is largely perceived as a paper exercise and Cyber security is seen going down the same way, do some documentation and carry on business as usual. What are your views on this?

Anu: IMO 2021 is expecting the Flag States to impose the Best Practices. Yes the journey starts with integrating with ISM but that would be a catalyst for companies to evolve and make IT as a significant enabler of our commercial activities. It is an investment in business and one has to see the return on investment and the coverage of risk. It has to be looked at from a different mind-set, not as an issue or a challenge but as an enabler for business functions.

Dr Bhardwaj: As has been mentioned in your presentation, there are many sources of cyber attacks including state sponsored, organised crime groups and insider threats. As far as shipping is concerned where do you see the greatest threats emanating from and is there any collective action the industry might consider to reduce the threat?

Anu: Ransomware is the biggest area and that is growing, 50% of attacks account for this. This emanates from humans and we are also the best defence for it, provided we understand that. 80% can be avoided if human factors is addressed. Social media is the easiest way and we need to lock away ordinary information systems and be very careful about it.

Dr Bhardwaj: Whatever one may say, people see cyber-attack as a black swan event...may happen to others not to us. Do you have some cases to share, and can you establish the real threat landscape so that it can be looked at more seriously?

Anu: To give you a non-shipping example, which could happen to anyone really, last week we got a call from a CEO of a company in Ireland who was being blackmailed. That was a result of some stuff he put on social media. So a big company like Maersk may have the wherewithal to mitigate a cyber attack, but a small company may not, and every penny counts for them as well. Also, solutions need not be expensive, there are cost-effective solutions also available like training up your people. One has to look at smart solutions and they are there.

Dr Bhardwaj: From a legal perspective too, there is a 'seaworthiness' issue if cyber-attack takes place. Yes there could be legal consequences – owners' responsibility towards 'degree of fitness' goes beyond hull and machinery...ability & preparedness to deal with expected cyber emergencies. So what kind of Risk mitigation measures are there? The Response & Recovery as is said.

Anu: Well, beyond the HR, there is also the supply-chain integrity that must be looked at, deal with only those companies that assure a degree of cyber security. The last thing is business continuity. You need to be able to respond to an attack, make sure everybody understands that and you practice that.

CMMI then administered a poll among the audience on questions designed by Ms Anu.

Q: To what extent are you concerned about cyber attacks in our sector?

Poll result: 78% - very much; Rest of them – moderately.

Q: Do you believe Cyber security is high priority for your organization?

Poll result: 90% - YES

Q: Does your organization have enough contingency plans in the event of cyber incident?

Poll Result: 63% - already have. 37% - say No

Q: Do you believe you know enough about cyber security and how it affects you, through the trainings provided by your organization?

Poll Result: 43% - YES, 49% - Not adequate, 8% - no training provided.



Secretary General CMMI, Capt Bhasin then took up the Questions from the audience.

Audience: There is a new malware every 39 seconds, I don't think we have the Anti-virus to deal with such latest evolving viruses?

Anu: Well, cyber security is much more complex and anti-virus is a just a small baseline part of it and a basic hygiene that has to be there. Ethically I do not wish to talk in public fora about how criminals and hackers work, but we certainly are equipped to deal with all those and have a powerful intelligence system on detecting imminent cyber-attacks, as technology emerges on how to deal with evolving threats, like deception technologies and thinking from the minds of attacker. They sit in your systems and on an imminent threat they warn you so that you can take mitigation measures.

Capt Almeida: What are the motives for cyber-attacks on innocent ships at sea?

Anu: Financial of course! They obviously cannot steal the ship away. Also note that only so many are publicized but many go under the radar. There is terrorism, piracy resulting from cyber information compromise, kidnapping for ransomware....so there is a big concern. What happens if there is an impact on the scale of Suez canal blockage that happened recently. Not far fetched at all!

Audience: While we exercise discretion on ships data, but there are many popular websites that exhibit ships data worldwide?

Anu: Firstly, data is only a miniscule issue, there are a lot more impacts, but I do agree while we need to have the data on ships like AIS in order to protect them, but in light of what is happening, it does need to be looked at. Industry needs to get together on this review. So it is a much bigger question than what I can answer myself.

Audience: We don't even have a non-networked PC on board for use by outsiders like Agents and Draft Surveyors.

Anu: Yes, shipping is a very traditional industry and things can't change overnight. But like I said, it is time to look at it as a Supply-chain and get these people to fall in line.

Capt Daniel Joseph: With autonomous ships making way rapidly, do you see STCW mandating Cyber competencies in the next revision?

Anu: Yes, I do think this has to be a core part of the competency now and it can't be a separate agenda. But also there are organizations like IACS and BIMCO that are mandating Security at design stage in Autonomous ships where the segregation between OT & IT systems are rather blurred.

The session then came to end with the customary Vote of Thanks by CEO of CMMI Capt Sasikumar.



'COLLABORATIVE LEARNING'



“The most valuable tool which teachers can use for teaching is the student”

- **Capt. Shoukat Mukherjee**



Capt. Shoukat Mukherjee is the Founder and CEO of The Naval Connection (TNC) with a vision of 'Building Value for the Future'. He is a certified life coach and learning expert. He has helped numerous organisations and thousands of professionals and students

upskill themselves through various innovative skill development tools and interventions. He is the author of the Leadership and Team Building book 'Mind Over Water'

Imagine there is a chapter 9 in a geography text book. Imagine that this chapter talks about Ocean Currents. The teacher first reads out and explains the contents of the chapter to the class and then asks the class to take the questions given at the end of the chapter. The students diligently follow. Since they have studied the contents of the chapter well, the students are all

able to answer the summative assessment at the end of the chapter; so learning happens. We are all used to this type of conventional learning – studying from text books, isn't it? Its the traditional way in which all of us have learn our lessons in school and did our homework. Most of our children are doing the same thing in school right now – they are told to open a text book, refer to a page or a chapter and then study a particular subject after which they as asked to take the questions at the end to check their understanding. Now again, on the contrary, imagine this scenario. The teacher gives a project to the class; the same project on 'Ocean Currents'. Each student is required to write an article on ocean currents in their own words. They can refer books, articles, visit the library for their research and do whatever possible to write a complete article on ocean currents. SO once all the students have done so, each article or write up is shared with all others in the class, so that each member gets to see what the other student has written. It will be astounding to note here that each student would have written different forms of the same article.

While the chapter heading remains the same, the ideas will vary and so will the content. While one student would write on the various types of ocean currents, some other student would have written about the magnitude and origin of these currents and their properties and strength. Someone else would have carried out a research on the causes of currents and their effects and amazing facts concerning ocean current. Did you know: - that ocean currents are a natural effort to bring about a horizontal heat balance? Or that warm currents bring rain to coastal areas because they supply moisture to the winds? Or that cold polar currents bring large ice-bergs which are a source of fresh water?

Such amazing facts got unearthed because of the research that the students did on the Ocean Currents project. So what happened next?

The teacher shared the contents of all the research documents with everyone in the class and then the teacher asked each one of them to write chapter 9 in their own words. Let's analyse the two scenarios described above. The first one had a pre conceived idea of ocean current which had been carefully thought out by the author and which was written in a text book and delivered to the students by the teacher and then the questions were asked based on that content. This is the traditional form of learning from the text book. What changed in the second scenario?

Here, the students researched on the topic without reading about it - they used their research technique, went online

assimilated content from the internet, books and from various sources available online. They then compared and analysed each other's notes and wrote a single piece of document which contained the consolidated research of all the students. What we see here is a mammoth change in the way learning is transferred from the teacher to the class. While in the first case the students are **CONSUMERS** of knowledge, in the second they become **PRODUCERS**. When we transform students from just mere consumers of knowledge to something deeper – producers of knowledge, we embed learning into their system like never before. This is what I call '**Collaborative Learning**' (CA). This uses the tool of '**Peer Group**' CA happens best when we entrust students with the freedom to generate content on their own. In present times, data is so much readily available to all. With the click on a mouse we have the whole world available to us on a single screen. A single text book can only give us the reference we require for further learning. Teachers should make it clear that text books are not the 'be all and the end all' of education. In fact, I look forward to the day when we graduate from text books to more inclusive modes of learning in schools and colleges. Where sharing and exchange of ideas become more important than reading out a few lines in a chapter and answering a few questions from the back. I urge everyone to think about this, You can write to me with your thoughts at' shoukat1971@gmail.com'

“CMMI's Mentorship programme gains traction”

CMMI conducted its **First Mentors' Forum** online on 22nd May 2021, with the objective of reviewing the progress of its Mentorship programme which was launched early this year, and charting the way forward.



The Forum was attended by most of the 40+ CMMI members who have volunteered to be Mentors to Deck Cadets undergoing their apprenticeship, as well as CMMI Office-bearers and Wardens. Prior conducting the Forum, feedback was collected from the Mentors on the progress of their Mentees and general comments on the mentoring process. A statistical analysis of the Mentors' feedback was made and presented in the Forum. The feedback analysis formed the basis for the hour-long open forum.

From the deliberations during the Forum, it could be concluded that the Mentor-Mentee relationship was developing satisfactorily in general. The Mentors narrated numerous positive interchanges with their Mentees. However, two key issues that were highlighted were:

1. There have been inordinate delays in placement of the Mentees onboard Vessels. Covid-induced travel restriction was the obvious cause for the same, but its impact on the spirits of the Mentees awaiting on-boarding was a challenge being ably handled by the Mentors.

2. Once they were onboard, there was a considerable slowdown in communication from the Mentees. It was generally felt that the hectic daily routines that Cadets had on board may have hindered their ability to communicate frequently. The limited access to communication facilities on board may also be a contributing factor.

A 'Statement of Outcomes' was prepared and circulated to all Mentors, containing action points for follow-up by the Mentors as well as the CMMI Programme administrators. It is hoped that this will help the mentorship process to become more effective and efficient, going forward.

As stated during the Forum, the Mentorship Programme is now moving from the 'Initiation Stage' onto the 'Cultivation stage', and will hopefully bring the desired benefits to the 75+ volunteer Mentees currently enrolled in the Programme. The invaluable contribution of all the Mentors is gratefully acknowledged.



75th Independence

Ultra Run by Capt. Robert Vaz

This 75th Independence day is truly special, as we celebrate the spirit of the Indian freedom struggle and reflect on the sacrifice of all the freedom fighters and martyrs.

Recently the greatest sporting event the Tokyo Olympics ended. I'm sure the gritty performance by the Indian contingent has boosted the entire nation. Especially seeing our Indian flag flying and the national anthem being played at the various venues in Tokyo.

I've been running since 2010 and took part in several marathons; half marathons, full marathons and even Ultra races, however for the last couple of years due to the pandemic most of these races are not being held.

With all the above sentiments combined, on this 75th Independence Day we did something special. I decided to do an Intercity Ultra run in Goa, I ran 75km from Mapusa – Panjim - Vasco and back to Mapusa. My son Shaydon decided to cycle along with me, he helped me with pacing, hydration and company, he not only did 75km on his cycle but did a little more and notched up another century ride.

We both trained for this as a team and on 15th August early morning we commenced our run/ride. We were motivated and pumped up as passerby's waved out, the people in passing vehicles cheered for us. I saw a few of our CMMI members, all wearing the CMMI waiting and cheering for us enroute, it was a very nostalgic moment to see our CMMI members especially senior members like Capt. Kulkarni and Capt. Kovoov. The enthusiasm of our chairman Capt. Manish Dixit, Capt. Lincoln Viegas along with his entire family and Capt. Ravi Dixit surely lifted our spirits, and helped Shaydon and me continue on a very hot and humid day. It got difficult especially towards the last few kilometers due to the hot sun, but we completed our endeavor safe and sound.

The feeling of completing this Independence run is priceless, the emotions of holding the flag can't be expressed in words.

I recommend all my fellow mariners to please start running or walking on a daily basis there are several benefits;

Running adds years to your life and life to your years, you will surely feel a lot fitter. Running improves your immunity, reduces risk of many cancers, improves mental health, and reduces depression, improves glucose regulation, and lowers risk of diabetes and pre-diabetes, lowers your blood pressure these are few of the benefits of running, the list goes on.

The best part is running doesn't require Hi Fi equipment's, if you've got shoes, shorts, tee shirt and most importantly the will to run you are ready to go. Running has picked up in a big way all over India, do look out for a running

community in your neighborhood and give it a try, I assure you, you'll love it..

I would like to say a big thank you to CMMI Goa Chapter and CMMI India for all their support.



Diversity in the Indian Maritime Industry: Hiring more women for profitable businesses



First published as Article No.76 UNCTAD Transport & Trade Facilitation Newsletter No.90 - 2nd Quarter 2021

Although the maritime and oceans industry offers a variety of career opportunities at land and at sea, and despite a dearth of appropriate reports, and statistics about women employment and challenges, there is no doubt that women are under-represented in the maritime industry in India.

This article summarises findings from surveys, in-depth interviews with CEOs and HR heads from

maritime companies and research conducted in India between 2019 and 2020 aimed at understanding better this problematique, with the aim to find possible avenues to overcome it.

Representation of women in shipping: An Indian perspective

A first baseline survey was conducted in India in 2019, with the support of the Director General of Shipping,

- Identify challenges of women working onshore and offshore
- Evaluate the ground reality of gender bias and inequality in the maritime industry
- Examine the status of women in the top 3 levels of management in the industry
- Make recommendations to organizations and government to include women employees in every segment of the industry

This survey encompassed 205 companies employing over 100,000 people across all verticals[i]. It found that women are underrepresented in the maritime industry in India, particularly in decision-making positions, (Figure 1). Even from the 20% women working within organisations, most of the women were in “supporting positions” rather than key management functions .

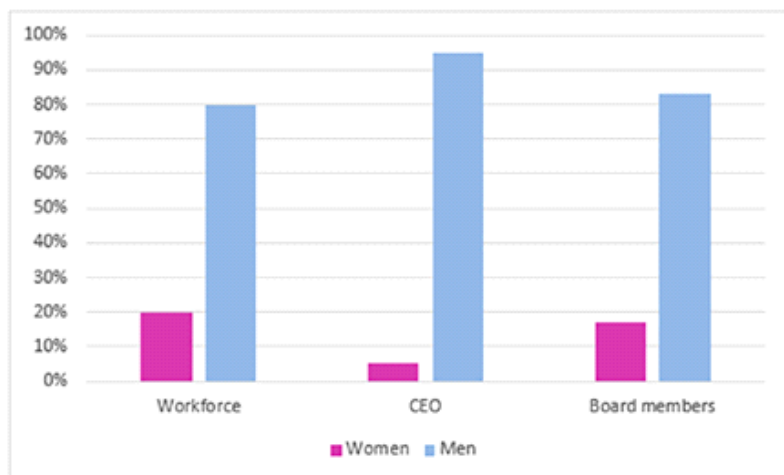


Figure 1: Representation of women, as share of the workforce, CEOs, and Board members of maritime companies in 2019

Source: Sandvik (2019). Survey on Gender Equality in the *Hurdles in hiring and retaining women in the Indian maritime industry*

The 2019 survey suggests that companies are not creating an environment that supports hiring and retaining of women. 90% of the companies

stated that they received very poor applications from women during recruitment. In fact, we often hear companies complain that they want to hire women but were not able to find these women. The survey results suggests that companies are not looking hard enough.

In fact, a lot of companies had an “unwritten” policy not to hire women, especially onboard ships. We found that although maritime training institutions offer a waiver of up to 50% on their fee for female candidates, they were often turned down when they approached companies for placements to complete their sea time. There should be policy measures in place deterring companies that openly discriminate. However, in cases where an “unwritten policy” existed, women's applications were accepted but their applications were not considered. To curb this, a mandatory course for gender sensitisation / managing unconscious bias was recommended for manning and ship owning companies.

However, implementing such initiatives was challenging and received a lukewarm response. Two additional surveys were conducted to understand the issues faced by women at sea and onshore. These were answered by 781 women working at shore and 112 women working at sea. Findings from these surveys painted the ground realities with 71% women seafarers and 63% women working ashore stating that they had difficulties in finding a job and they did not feel safe nor secure in their working environment. The respondents also revealed reasons that companies cited for rejecting them (Figure 2), which they stated were incorrect.

Indian Maritime Industry

Figure 2: Reasons cited by companies to reject women's applications

Source: Sandvik (2019). Survey on Gender Equality in the Indian Maritime Industry

Companies stated that retaining women was also an important hurdle. The reasons for this were made abundantly clear by the fact that, despite 86% of companies reporting they had a Gender Equality policy and 80% stating their jobs were gender-neutral, very few had policies supporting women and their retention. As shown in Table 1, which summarizes findings from the 2019 survey, not one of the companies offered any on-site childcare, had a special regulatory body, or had defined a share for women in top management recruitment and positions.

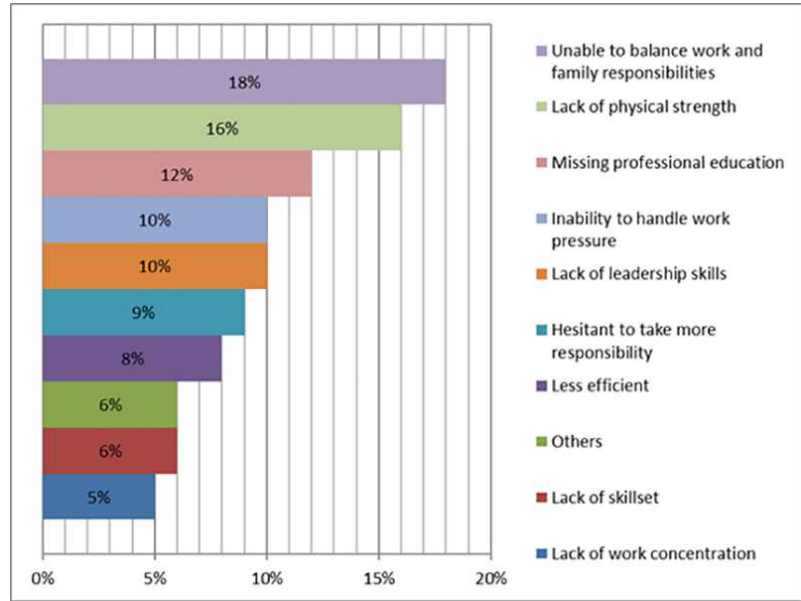


Table 1: Percentage of companies participating in the 2019 survey with special policies aimed at retaining women in the workforce

In the absence of support mechanisms and clearly defined goals, it is not surprising that recruitment and retention of women is deemed problematic. The surveys also revealed that all women (at shore and seafarers) believed the following measures should

Special Policies Designed for Women	
Defined share of in top management recruitment	0%
Defined share of in top management positions	0%
On-site childcare	0%
Special regulatory body	0%
Room for wellness	1-5%
Flexible working hours	1-5%
Special allowances and benefits	1-5%
Training, mentoring, and leadership programmes	5-15%
Food & Transportation	5-15%
Health & Insurance Policies	5-15%
Maternity Benefits	15-25%
Safety & Security	15-25%
Sexual Harassment	15-25%

Source: Sandvik (2019). Survey on Gender Equality in the Indian Maritime Industry

be further incentivized at the Government and employer level to improve working conditions and retention of women in the maritime workforce: flexible working hours; maternity benefits, improving safety and security, regular training programs, stringent action in case of sexual harassment, on-site childcare, and room for wellness.^[ii]

The need to overcome biases to leverage diversity as a driver for innovation and business

The findings of the above report led to the conclusion that our industry lacks inclusivity. What was disturbing though was, at times, employers perceived “women” as being the problem rather than the actual issue on hand. It is easier to include people who we think would look and think like the majority because creating a culture or environment conducive to diversity would need some changes and efforts on behalf of the management. For instance, costs would go up by offering onsite childcare and other facilities and, in absence of data showing a positive relation between increased diversity, companies do not wish to go the extra mile to set goals. Simply put, with our own internalized biases, we have chosen to go for comfort over inclusivity.

But there is a business case to boost female expertise in the industry. Our in-depth interviews with CEOs and HR heads led to the conclusion that an improved gender balance contributes to more diverse workplaces, with positive effects both internally and externally. Moreover, it positively influences the attractiveness of jobs and the competitiveness of the sector.

Most industry stakeholders want a more prosperous industry with higher profits. But there is a contradiction between maritime industry concerns about the lack of talent or labour pool available and having women who want to work, with the right motivation and education that are not given equal opportunities.

Today, we are missing out on 50% of the talent, 50% of the new ideas, 50% of the potential progress this industry could be making. And probably quite a lot of profit too. Not letting women work is a crime against economics and common sense. If we want to make our industry better, we need to let women participate more actively.

Unpacking the linkages between workforce diversity, company performance and work culture

While companies look at diversity as a moral issue -the “right thing to do”- they do not always recognise that diversity also makes good business sense. In 2020, we sought to understand the business case for diversity in the Indian maritime Industry and conducted research to understand linkages between workforce diversity, company performance and work culture, covering 104 companies representing over 65,000 employees.

The first challenge was understanding if companies had data that connected diversity to business performance. We spoke to 5 HR heads and 5 CEOs and experts across all verticals and gathered information on their processes for recruitment, promotions and performance measurement. In most cases we found that companies did not measure this in financial terms or were not able to share hard data (e.g., an increase in women led to an increase in X% sales or profits).

Based on these in-depth interviews with 10 experts we created a questionnaire which companies would answer based on their data without sharing any confidential information about sales or profits. We also interviewed 5 women achievers to understand what set these women's career paths apart from others -what did these women do differently or what were the conducive environments that made them achieve their positions.

To the question “Has increased gender diversity / participation of women in your organisation helped enhance your business outcomes?” a whopping 67% provided a positive reply. Qualitative individual feedback suggested that there is a wide belief that diversity leads to better business operations. However, we were unable to support this with hard figures given the absence of measurement systems. To get actual figures, companies would have to link diversity measures to performance drivers in all parts of the organization and ultimately to organizational overall performance. However, our survey did reveal interesting results:

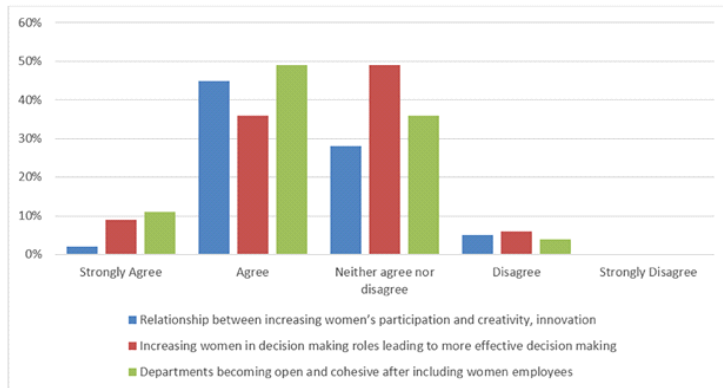
- 45% of the respondents agreed that “By increasing women's participation in the organisation, there was a greater level of creativity and innovation at work as diverse teams generate more ideas” (Figure 3)*
- 49% of the respondents believed that “By increasing women's participation in the organisation,*

departments have become more cohesive and open” (Figure 3)

- 36% of the respondents agreed there is more effective decision-making by increasing women in decision making roles and 49% were neutral (Figure 3)

Figure 3 Responses to questions assessing the perception of companies regarding the impact of diversity on selected issues related to company performance and work culture

Source: MaritimeSheEO and NLNetherlands (2020). The business case for Gender Diversity in the Indian Maritime Industry



- 49% of the companies agreed that increasing women's participation in the organisation led to a positive impact on the company's image and brand, potentially impacting sales and retention
- A substantial proportion of the sample (83%) responded that it was not a challenge for the company to retain women employees. This suggests that the general assumption that organisations are unable to retain women employees due to their perceived inability to balance work and home responsibilities might

be false.

Although 37% of the respondents confirmed their company adopted a Diversity and Inclusion Policy:

- 19% skipped the question about benefits offered to the women employees (from which we can infer that they do not offer any benefits)
- 42% offer maternity benefits for the female employees but only 2% of them said a creche facility was available
- 17% granted flexible working hours
- Committees with mandates against sexual harassment were only available in 13% of the respondents' companies.

It is evident from these survey results that gender issues have been taken seriously by some of the respondents. Some companies believe in diversity for diversity's sake and those cynical enough not to certainly pay attention to it, as it improves their bottom-line. The employees and management are aware that business productivity, company image and overall performance are linked to a gender inclusive workplace.

As the quantitative and qualitative evidence grows for a gender inclusive workplace, the next step would be designing a measurement system. It is important to mention that a few companies indicated they had tools in place but did not share them due to company policies. Companies need a measurement system to measure the gender dimension in connection from a performance perspective. Only once measured, companies will understand that diversity improves performance and profits and thus promoting it will be viewed as a key competitive strategy. From a social perspective and from a human resource perspective, a company that devises policies using the tenets of inclusivity and diversity principles would reap the benefits of goodwill and returns in the market. A strong customer base, dynamic work conditions and optimally managed human resources would undoubtedly make a huge impact. Having women participate in the maritime industry would be beneficial to companies but also to India and will enable us to achieve excellence in the global maritime industry.

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“OPERATION SANKALP” by Capt. K.K.Joshi

An exhilarating experience during the days when the Indian Naval Fleet escorted merchant ships across the Strait of Hormuz.

It was mid of 2019. There had been some blasts on the tankers off Fujairah and off Omani waters under mysterious circumstances. The safety of merchant vessels and the entire trade was at stake. Cargo carriage had to be done at all costs but without hampering the safety and security.

But the show must go on. After all, we, the mariners are second line of defence for our country.

It was a tough time for all the merchant ships passing through the Strait of Hormuz.

We were uncertain about how the vessels, especially large tankers, would negotiate the Iranian Navy, Iranian revolutionary guards, “Sapan Navy” through the congested waters around the Iranian coast, which all these years, was considered a well-planned route peaceful and was undertaken by hundreds of ships everyday.

Proactively Indian Navy commenced “Operation Sankalp” escorting Indian merchant ships in The Persian Gulf.

Various Indian naval ships were on the duty across the Gulf in international waters, very closely monitoring, like hawks and keeping their eyes and ears open for the safety of our merchant ships. The INS would rendezvous as per the designated coordinates with a minimum of diversion and at a reasonably good steaming speed whereby the delays were minimised and board the ships swiftly by the rubber zodiacs after carrying out the pre-boarding mandatory hull inspections.

The team would typically comprise of an officer and two commandos with their arms and ammunition. The conditions were very tough, temperatures were soaring towards 45-50 deg Celsius in those months. Wearing all those PPEs and carrying those loads on those strong shoulders was indeed a very tough task but for the commandos, it's part of their everyday routine. Brave are the hearts of those who venture on the seas.

Their presence itself was so imposing that it would enthuse confidence in the entire ship's complement and gave the boost to ship security. We could concentrate on our main goal of transporting goods and transforming lives.

The IN team would then carry out a brief introduction and a security briefing and in turn ship's staff would give them a location familiarisation. The security cover would make us feel that there is someone caring for us. Our own people and their wellbeing is, indeed a national priority amidst the chaos which had created a threat to the merchant ships.

We mostly carried two million barrels of crude oil every voyage from the Persian Gulf ports to various ports around the Indian coasts. The refineries kept cracking the crude oils without any disruption and the Indian transportation system right from Aviation industry to road transport was running smoothly without any disruptions.

Our ship Desh Vaibhav did several voyages under Operation Sankalp without any worries and performed the allocated tasks with utmost safety.

The cooperation and vigil provided by the Indian Navy with their motto “Sham-No-Varunah ” (“ ”) was very commendable throughout the passages through the entire Persian Gulf.

The Commanding Officer of one of those INS sent me a token of Appreciation which made me feel proud of our unflinching service to our motherland by the transportation of crude oil for fellow citizens in our country.

Capt Srinivas Maddula, Commanding Officer of INS TRIKAND sent me a personal note and a few mementos which I shall treasure for years to come. We are blessed with those Moments of Sipping hot piping coffee in the peaceful mornings just because our Navy guards our oceans and coasts and the Armies protect our arduous borders and the IAF scans our aerial sovereignty with a constant gaze 24x7 all throughout the year, year after year.

I salute these brave personnel in uniform and would express my gratitude to them with a big thanks.

Jai Hind.

Capt. Kiran Krishnaji Joshi

Master Mariner

Sailed mostly on VLCCs of The SCI, who has recently superannuated after a tenure of 41 years at sea. Loves traveling, reading, writing. He is involved in environmental awareness in his leisure time.

Webinar by CMMI Chandigarh Chapter Day of the Seafarer – What rights do I have?



Have you ever been dumped by your ship-owner? ,or technically abandoned, no this is not the same as an “abandon ship” command ?

Actually these two abandonments are completely opposite in their intent as far as the well being of the seafarer is concerned. Have you been taken into captivity by pirates? Or any untoward behaviour by your RPSL ?... I didn't think so! Friends, Count your blessings , because not all our brethren have been so lucky. Those of us who did suffer these stress full experiences were scarred physically and mentally for life, not to mention the collateral damage it did in other areas of life, and this is putting it mildly. More importantly how do you navigate when in these situations? what are the tools, instruments available to you ? what are your legitimate rights ? what are the recourses available to your entitlements?, were some of the questions, ricocheting in the mind of our Chairman Capt Arjun Singh Kalra , who has been the victim of ship abandonment , and figured there was an urgent need to address these issues pragmatically. This more or less laid the foundation of our webinar with its title “Day of the Seafarer – What rights do I have? “.

More questions foraged in...., Is the seafarer really familiar with his rights ? ... well I definitely am not and I am a seasoned sailor, and that translates to 42 years of sailing and 24 years in command. After the stories I have heard I just consider myself lucky. Also I have a feeling that there are possibly many folks out there like me , who have been lucky /fortunate whatever, and were spared the bashing by serving in good companies and by Gods grace all went well , but let's face it ,not all our brothers have been that lucky in this respect , even more shocking is the fact that it can happen while serving with A-grade companies. The thing is that lack of this knowledge can put the seaman at a

disadvantage and bring upon him burden of woes of traumatic levels., and all this could actually have been minimised if one had paid attention to getting to know his rights and knowing that he is on the right track. Here's another area we kind of bombed – all of us read the texts and are not lacking any literary skills or intellect, but it's in our inherent nature to trust everything , take everything on face value that kind of lets us down. We are so naive that we don't want to believe that things are taking a turn for the worse even when there are clear indicators. Trust and good faith are great qualities to have and we can say that the whole industry is running on this. But guys,



please bear in mind that every business has its vulnerabilities and that manifestation, at times can filter down to the seafarer and others in the loop. So folks, there is bevy of undesirable situations out there. The main discussion of the the webinar “Abandonment and piracy” are on top of this list among others like human trafficking , slavery and child labour . MLC was specifically conceived by IMO to protect the seafarer against the injustices, malpractices, and abuse being meted out by many fly –by- night operators ,in some cases some well established operators, who took advantage of the seafarer's vulnerabilities during the course of their employment .Whatever the compulsions or exigencies upon the operator , whether bankruptcy or mismanagement or incompetence on their part, in the end it was the seafarers who was left in the lurch without any empathy . Gory picture for us indeed.

To address this conglomerate of undesirable situations faced by our brothers, it was indeed an honor and privilege to have our distinguished guest speakers Capt. Sanjeev Sehgal , Capt.Prabhat Nigam and Capt.Rahul Singhal, who graced the event and enlightened us with their in-depth knowledge on the topic of discussion.



//Unfortunately due to paucity of space//

The discussion began - Capt Sanjeev explained the fundamental rights and principle of MLC ,and apprised the audience of safe guards put in place by the convention which the seafarer should be aware of, namely the SEC and CBA, wages are paid on intervals not greater than a month, joining and repatriation costs are borne by the company, payment of compensation where the company is unable to deliver as per the SEC/CBA. He emphasized that any departure from the conditions stated in the MLC /SEC would be violation of your rights and becomes an early indicator or sign of abandonment , enabling the seafarer to take corrective measures well before the situation escalates.

He further iterated that MLC articulated through a recent amendment ,that if a seafarer was under captivity by pirates ,his full wages would continue to accrue through the whole period of captivity, until repatriation. This definitely is alleviating.

Another safeguard put in place by MLC , is an obligation on the shipowner to have a financial security certificate . This is normally invoked by PNI when the shipowner has done the disappearing act.

Capt. Prabhat Nigam continued the discussion ,by elaborating on the role of the RPSL and its responsibilities in the Indian context, which is under the aegis of DG Shipping. DG Shipping have laid down ground rules and the network for a smooth operation . There are counter checks on RPSL by way of mandatory reporting on the status of the seafarers and in addition other procedure to verify that they are always in compliance with the rules. E-migration and Indos further enhances the system in decreasing the risk of foul play. There is a mandatory obligation on RPSL to ensure that Shipowner/Manager have a financial security in place to respond to situations due to violation of the seafarers rights . Another reference made to the financial security certificate.

All in all MLC has laid the ground work for fair treatment to the seafarer. Although we are pointed in the right direction, there is still a lot of sea to be covered before we can say with conviction that malpractices are entirely eradicated, however the prudent seafarer is now in a better position than his predecessors to exercise diligence before signing on the dotted line.

The discussion continues and more light is shed upon the subject from PNI perspective by Capt.Rahul Singhal . More insights are revealed ,e.g, PNI who cover the shipowners and not the seafarer, but by default also become protectors of the seafarer in the scenario of an abandonment.Again reference is made to the financial security certificate which was required to be in place by the shipowner as per MLC. This financial security comes in the domain of the PNI clubs, and will be invoked by the PNI clubs to bail out

seafarer. Also advised that Prevention is better than cure ,by exercising due diligence when joining a ship.,take a little trouble in the beginning to find out credentials of the shipowner , and save yourself big trouble in the end. The subject is too deep and complex and pages are limited ,so let me try to capture the essence of the discussion ,tete-a- tete with/by our speakers topic in bullets:

PRIOR JOINING

= Join thru RPSL who are licensed .Check DG shipping site for approved RPSLs. =Check if RPSL have a Financial Security certificate as required by MLC. = Check with RPSL the MLC certificate of the ship you are joining.

=Read and understand the SEC/CBA ,especially the paragraphs under compensation specifically in case of abandonment and captivity/hostage by pirates = Suspect trouble ,if you are asked to pay for your joining or repatriation or for your visas by your RPSL

AFTER JOINING

=Suspect abandonment ,if salaries cease to be paid on monthly basis. =Suspect abandonment, if important requisition are not being sent. =Suspect abandonment, if communication is unanswered , avoided . =Suspect abandonment, if the ship is unemployed for prolonged period. =Suspect abandonment, if anyone under the age of 16 is employed. =Suspect

abandonment, if water and food are not being supplied.

=Suspect abandonment ,if vessel is arrested .

IF ABANDONED

=Contact authorities/PNI at the earliest. = Maintain atmosphere of harmony .

= Remain truthful and state facts only. =Have Faith that situation will be resolved ,because it will be.

Friends, I hope that this write-up has been beneficial and thought provoking to some extent . We do pray and hope that you remain safe and blessed at all times and none of the above manifests itself at anytime during your sailings, and that it remains as printed matter only within the covers of your files ,on the shelves of your office.

Credits: Media House: Marex

Speakers:

Capt.Sanjeev Sehgal, Chairman, Aquarius Services ,Dubai

Capt.Prabhat Nigam ,Director ,School of Maritime Studies ,Chitkara University, India

Capt. Rahul Singhal , PNI GARD , Singapore

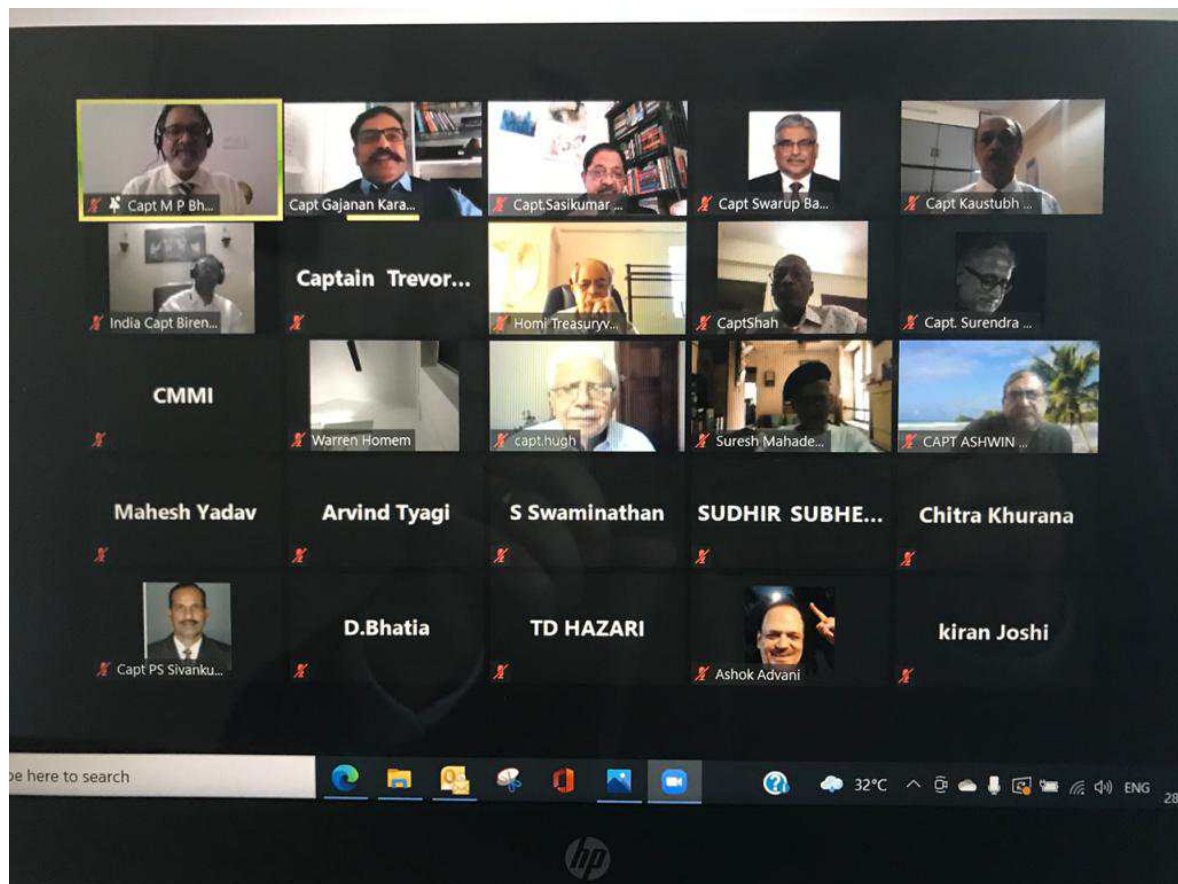
CMMI Chandigarh Executives :

Capt.Arjun Singh,Chairman ,CMMI Chandigarh Chapter

Capt.Jagdeep Singh,Vice- Chairman ,CMMI Chandigarh Chapter Capt.Amarjit Thakur, General Secretary ,CMMI Chandigarh Chapter

Capt .Hemant Kambhoj, Treasurer ,CMMI Chandigarh Chapter

The blue economy in general and the ocean energy aspect



The Company of Master Mariners of India (CMMI) arranged lecture on BLUE ECONOMY- OCEAN ENERGY on Zoom Meeting , the Friday 28th May 2021. The speaker was **Capt. Gajanan Karanjikar, Member CMMI, President AIMPA, Visiting Faculty- IIM, Blue economy- Social activist, Member- Advisory council- Harvard Business Review.**

Capt. Gajanan presented an insightful and detailed presentation on the future of the blue economy in general and the ocean energy aspect in particular.

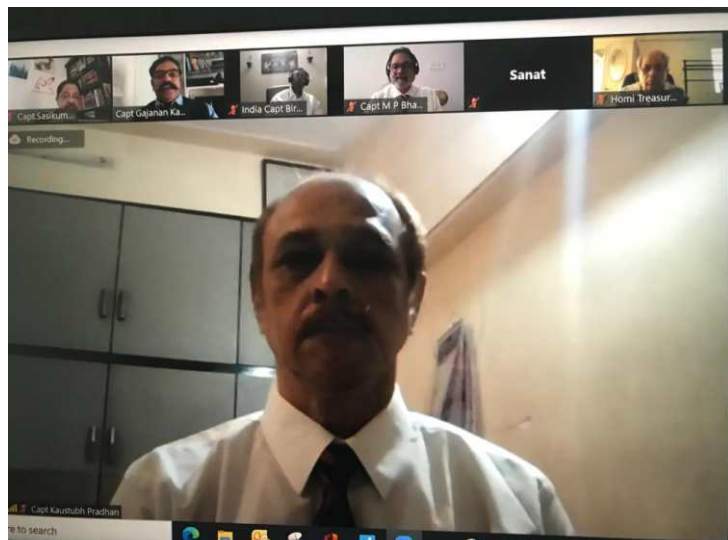
The presentation started with Capt. Gajanan, explaining the ocean's energy potential by dissecting the oceans into various sub levels. He put special attention to Pycnocline which is a stable region and acts as a barrier for vertical water movement and preventing the surface current to mix with the deep waters. He stressed that due to the current pollution it is this pycnocline that is getting dissolved, thus is causing unrest among the ocean currents leading to an increase in ocean-related disasters.

Having delivered a general idea about the ocean,

Capt Gajanan now focussed his attention on India's potential in tapping these resources. India has the potential of providing over 42% of the world's tidal energy, if properly tapped and efficiently transported, and utilized.

Ocean Energy can be divided into various types, based on their mode of tapping, and location. Capt. Gajanan went into detail about explaining each one of them. A few sources that were discussed were tidal energy, Current energy (using ocean's current), OTEC (Ocean Thermal Energy Conversion).

Capt Gajanan was especially enthusiastic about OTEC, as he went in length discussing its potential. He even discussed the concept of closed-cycle and hybrid cycle, which will be instrumental in water conservation and installation of OTEC plants. The advantages and disadvantages of OTEC plants were discussed in the brief and potential hazards and shortcomings were also presented. The largest realistic challenge to this ambitious project as Capt. Gajanan pointed out, is the high capital for initial installations, bio fuelling, and proper disposal of the by-products of OTEC.



Concluding his address, Capt. Gajanan said that whilst there are a lot of initiatives taken by the central government, it is the maritime professionals in general and master mariners in specific that need to take up this issue and develop it to make it one of the best alternative sources of energy.

Post the address, the floor was opened to questions, and a barrage of question ranging a wide variety was asked by the audience, notable among them were-

Capt. Sudhir expressed his gratitude to Capt. Gajanan and said that he was very optimistic about the future of the blue economy.

Capt. M.P Bhasin asked about the sustainability and future scope of these methods in India.

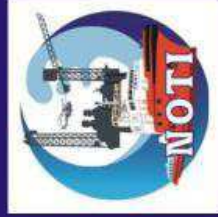
Capt. Shekhar presented a very realistic view of the current scenario and compared this technology with when solar energy was a nascent idea and stressed the fact that just like solar energy was trusted and brought into the commercial market, which is paying

huge dividends, similarly, OTEC should be trusted and plans should be devised to make it more commercially viable.

Capt. Pankaj asked about the various steps taken by the government in this regard.

All these questions were answered to the tiniest detail by Capt. Gajanan, who stressed the commercial potential of these technologies, calling it the energy of the future. He put forward the idea of developing special Marine Economic zones (MEZs) which can provide the required incubation for the technologies to develop to their full potential.

The meeting was moderated by **Capt Sasikumar, CEO- CMMI** and **Capt K. Pradhan, Dy Master CMMI** and concluded with **Capt. M.P. Bhasin, Secretary General CMMI** giving the **Vote Of Thanks** and taking this opportunity wishing **Capt Gajanan Karanjikar a belated happy birthday with a virtual Cake.**



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