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FSM 5.0 Global Conference: Navigating the Future of Seafarer Training

By Pallavi Sehgal

Goa witnessed a significant milestone in the maritime industry with the Future Skills Maritime (FSM) 5.0 Global Conference, held on March 7th & 8th, 2025, at Bogmallo Beach Resort. The two-day event marked five years of FSM's commitment to upskilling and reskilling seafarers, bringing together key industry stakeholders, government officials, shipowners, training institutions, and seafarers themselves to discuss the future of maritime education and employment.

SEAFARERS AT THE HELM OF CHANGE

Since its inception, FSM has been the leading forum for maritime skill development, ensuring that seafarers remain equipped to navigate the evolving tides of the shipping industry. Organized by The Naval Connection (TNC), FSM has consistently championed collaboration between policymakers, industry leaders, and seafarers, strengthening the maritime workforce through innovation and training. This year was particularly momentous as TNC celebrated its 5th anniversary, reflecting on its journey from a pioneering initiative to a transformative force in maritime talent development.

A STRATEGIC MEETING WITH GOA'S LEADERSHIP

A significant highlight of FSM 5.0 was an exclusive closed-door meeting between Goa's Chief Minister, Dr. Pramod Sawant, and top maritime decision-makers. Facilitated by Capt. Venzy Viegas (Hon. MLA, Benaulim Constituency) and Capt. Shoukat Mukherjee (Founder & CEO, The Naval Connection), the meeting focused on creating new avenues for seafarer upskilling, maritime infrastructure development, and investment opportunities in Goa.

Industry leaders from FOSMA, MASSA, MUI, and major shipping firms participated in the dialogue, reinforcing their commitment to


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enhancing training facilities and employment opportunities. Dr. Sawant assured full government support in providing land and infrastructure for world-class maritime training facilities, positioning Goa as a maritime skill hub.

DAY 1: SETTING SAIL WITH KEY DISCUSSIONS

FSM 5.0 kicked off with an inaugural ceremony led by Dr. Pramod Sawant, joined by esteemed maritime leaders. A pre-event strategic dialogue explored Goa's potential as a global center for maritime skill development, emphasizing the need for Indian seafarers to stay ahead in an era of technological advancements.

Following the lamp-lighting ceremony, Dr. Sunita Karad (Dean, Engineering & Management, MIT ADT University) delivered a keynote address, highlighting the importance of holistic maritime education.

Key discussions included:

Industry-Academia Collaboration – Strengthening maritime training through real-world applications

Re-Skilling Senior Seafarers – Ensuring seasoned mariners remain competitive in a tech-driven industry

Crew Retention & Mental Well-being – Addressing mental resilience and work-life balance at sea

The day also featured an exclusive B2B session with Maharashtra Academy of Naval Education and Training (MANET), Pune, and a commitment showcase by Qatar Airways, highlighting its role in maritime crew mobility.

The most engaging session was "Sawal Jawab: Lehron ka Rang", a humorous yet thought-provoking generational debate between senior and junior maritime professionals, led by Capt. Shoukat Mukherjee.

DAY 2: HANDS-ON LEARNING AND SEAFARER NETWORKING

Day two began with a unique beachside networking activity, "Samundar Mein Nahake", allowing seafarers to exchange experiences in an informal setting.

Key sessions included:

IMEC's Cadet Programme – Expanding career opportunities for young seafarers

Technical Discussions – Covering Biofuel B30, Marine Simulation Training, and emerging maritime technologies

Seafarers' Connect Open Forum – A direct dialogue between seafarers, maritime students, and industry leaders on career progression and training gaps

HONORING EXCELLENCE: THE SAGAR RATNA AWARDS

A major highlight of FSM 5.0 was the Sagar Ratna Awards, presented by Dr. Pramod Sawant to individuals who made outstanding contributions to maritime leadership and seafarer skill development:

Capt. Venzy Viegas – Master Mariner & Hon. MLA, Benaulim Constituency

Ms. Nita Jha – Director, Group Learning & Organizational Development, MSC Shipmanagement Ltd.

Dr. Sanjay Bhavnani – Director & COO, MMS Maritime India

CHARTING THE COURSE FOR FUTURE SKILL DEVELOPMENT

FSM 5.0 concluded with a grand beachside engagement dinner, fostering camaraderie among seafarers, industry leaders, and training professionals. With over 150+ maritime leaders, 200+ seafarers, and students from top institutions, FSM 5.0 set a new benchmark for maritime skill development.

Key outcomes of FSM 5.0 include an MOU between the Government of Goa and maritime industry associations, ensuring Goa's development as a leading maritime training hub.

Looking forward, FSM 2026 is set to expand its impact with greater innovation and strategic collaborations. As Capt. Shoukat Mukherjee aptly stated:

There are numerous maritime conferences, but FSM stands apart by driving tangible outcomes. It's not just about discussions; it's about building meaningful industry connections and delivering real change for seafarers. Our engagement with the Hon. Chief Minister is proof of FSM's vision—bridging gaps and creating long-term value for the maritime sector.

With FSM leading the charge, the future of seafarer training and employment looks brighter than ever.

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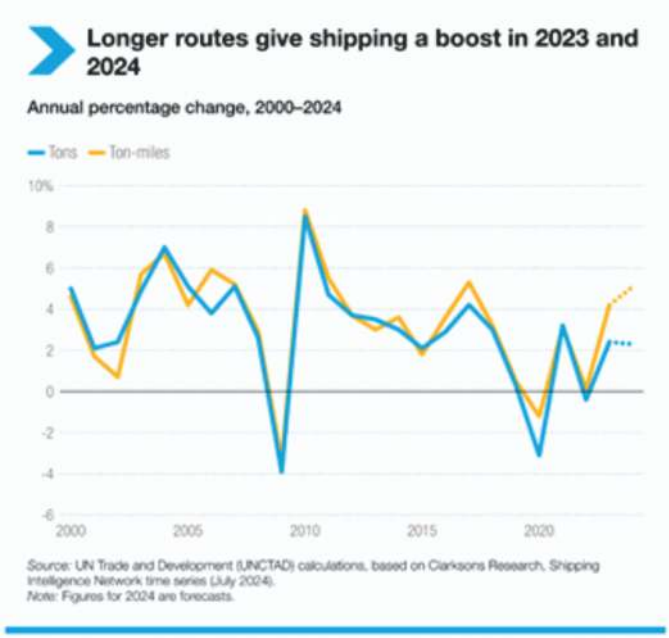
Geopolitical Fault Lines and the Reshaping of Maritime Trade:

Lessons from the Suez Canal Blockage

Capt Ramji S Krishnan
Sloan Fellow, London Business School

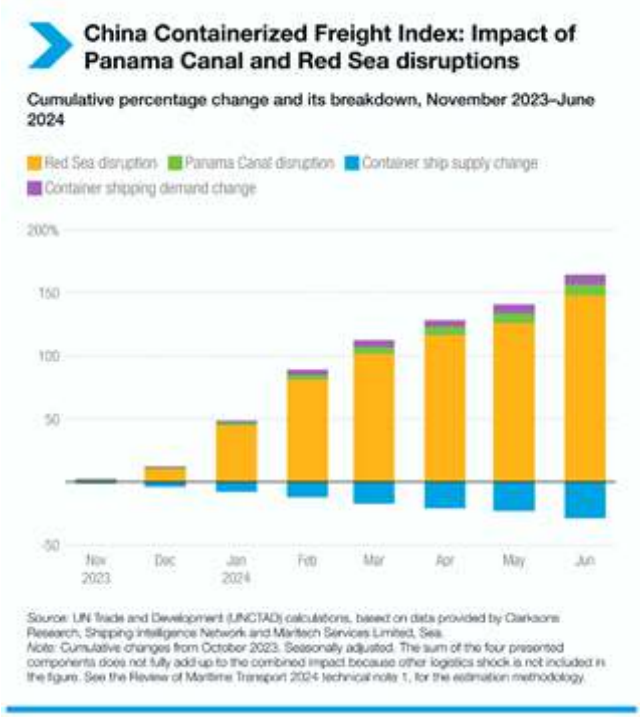
INTRODUCTION: NAVIGATING A WORLD IN FLUX

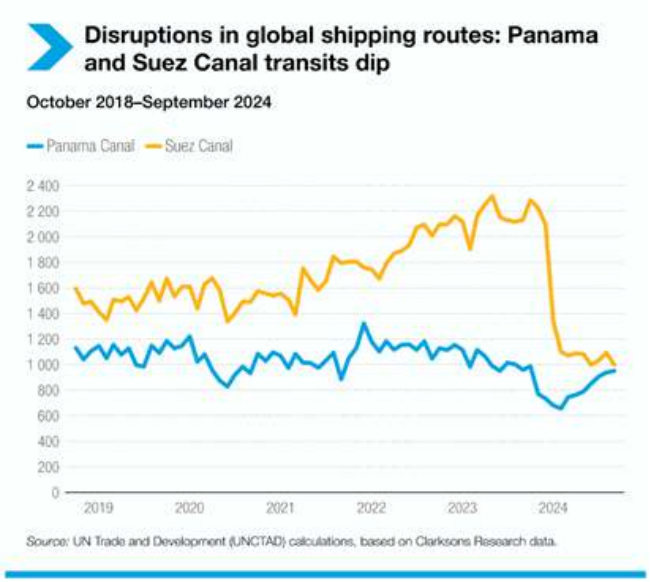
The image of a cargo vessel charting a course through increasingly perilous waters serves as a potent metaphor for the current state of global maritime trade. Shipping lanes, the very foundation of international commerce, are being profoundly reshaped by a confluence of geopolitical tensions. From the spectre of missile attacks forcing costly detours to the ripple effects of economic sanctions and the fragile equilibrium in critical waterways, the established order of maritime transport is under significant strain. The interconnectedness of the global system is laid bare, revealing vulnerabilities in supply chains, escalating operational costs, and mounting environmental concerns. The fragility of this system was brought into sharp focus in March 2021 when the container ship 'Ever Given' got grounded in



GLOBAL IMPACT: A TANGLED WEB OF DISRUPTION WITH NO GORDIAN KNOT TO CUT

the Suez Canal, halting traffic for six days and underscoring the profound impact that disruptions at key maritime chokepoints can have on global commerce. This analysis will explore the key geopolitical forces at play and their far-





reaching implications for the world's oceans and the economies they connect, drawing valuable lessons from the Suez Canal crisis.

The map of global trade is being redrawn with each geopolitical tremor. The disruption in the Red Sea, triggered by regional instability, has had a cascading effect on the Suez Canal, a vital artery linking East and West. The forced diversion of vessels around the Cape of Good Hope has not only doubled transit distances but has also precipitated a significant surge in freight rates between Asia and Europe. The ramifications extend beyond mere logistical inconvenience, directly impacting the cost of essential goods and contributing to inflationary pressures worldwide. The vulnerability inherent in relying on such critical chokepoints was dramatically illustrated by the "Ever Given" incident. This single event caused a backlog of 422 ships, disrupting supply chains across numerous sectors, from foodservice to manufacturing. Research into the incident estimated that the blockage cost Maersk Line alone nearly $89 million, with a staggering $76.29 million attributed to inventory-carrying costs, highlighting the immense financial implications of even brief disruptions.

Moreover, the extended voyages amplify the environmental footprint of shipping, increasing emissions and posing a greater risk to delicate marine ecosystems, particularly in regions like the Red Sea. The "Ever Given" study quantified this, estimating an additional 44,574 tonnes of CO2 emissions for Maersk's fleet due to rerouting and delays. For nations heavily reliant on Suez Canal revenues, such as Egypt, the economic consequences of reduced traffic, estimated to be $5.86 m by SCA from Maersk alone during the blockage, are substantial. This poses a big threat to their financial stability and overall resilience. The loss in revenue to SCA due to Houthis imbroglio is supposed to much larger at over $ 9 B.

Parallelly, the imposition of sanctions has created intricate challenges in the transportation of key commodities. While a

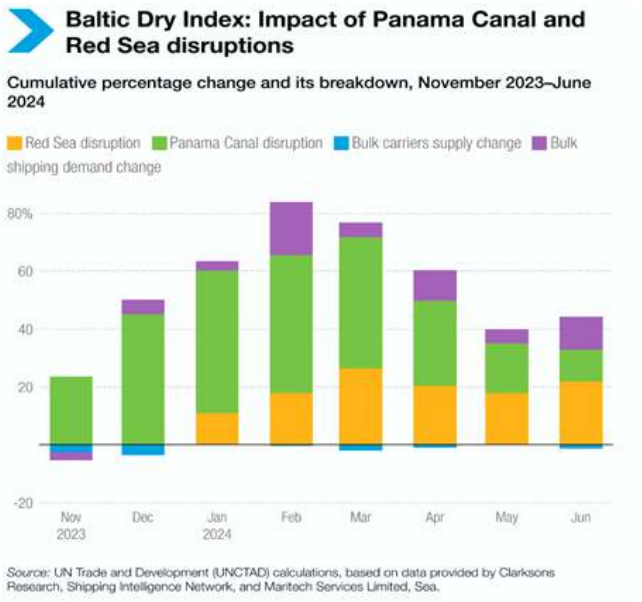
tentative agreement has brought a degree of stability to the Black Sea, the persistent volatility in the Red Sea continues to fragment established supply chains connecting major global ports. These disruptions translate into delays, higher operational costs, and ultimately, increased prices for consumers across the globe. In response to these mounting uncertainties, businesses are increasingly re-evaluating their sourcing strategies, exploring regional alternatives to mitigate the risks associated with long-distance maritime transport, a trend likely accelerated by the stark lessons of the Suez Canal blockage. The interconnected nature of the global economy means that geopolitical instability in one region, or a seemingly isolated incident at a critical transit point, can rapidly manifest as tangible economic consequences in distant markets.

AFRICA'S PIVOTAL MOMENT: OPPORTUNITY AMIDST CRISIS

The current upheaval in global shipping presents Africa with a unique confluence of crisis and opportunity. The diversion of maritime traffic around traditional chokepoints has led to a surge in activity at African ports. For nations heavily dependent on the Suez Canal for their exports, this disruption poses immediate economic challenges. However, this period also offers a potential catalyst for the continent's maritime sector. The current instability could serve as Africa's maritime awakening, providing an impetus to transform its ports into strategic hubs connecting Asia with Europe's southern flank. The "Ever Given" incident served as a stark reminder of the risks associated with over-reliance on single, vulnerable transit routes, potentially making the development of alternative pathways through Africa more attractive to global shippers. The development of key ports into efficient trade pivots could unlock significant economic growth and position Africa as a more central player in global commerce. Realizing this potential, however, hinges on substantial and timely investment in infrastructure and logistical capabilities to avoid the emergence of new bottlenecks and ensure that Africa can effectively capitalize on this evolving global trade landscape, offering a more diversified and resilient network for global commerce.

INDIA'S STRATEGIC ADAPTATION: NAVIGATING SHIFTING CURRENTS

As a major force in global trade, India is demonstrating remarkable agility and nimbleness in navigating the current geopolitical complexities. The imposition of sanctions affecting traditional oil suppliers has necessitated a strategic diversification

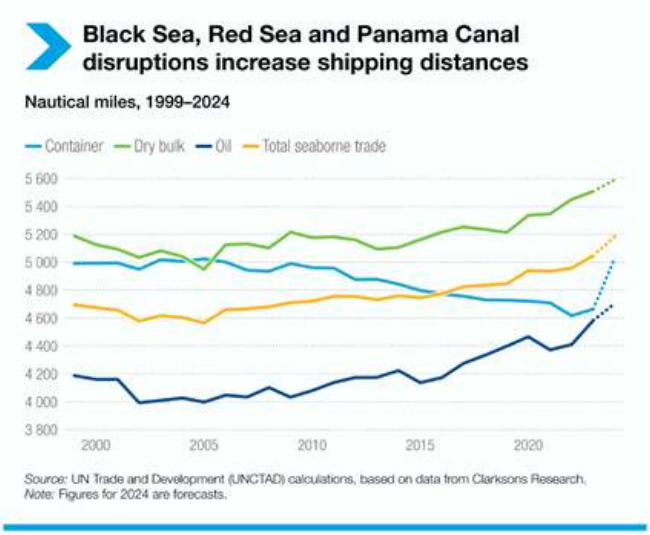


of India's energy sourcing, with a growing reliance on partners in the United States and the Middle East. While established trade routes face new challenges, India's proactive adaptation underscores its strategic foresight in a rapidly changing global environment. The Suez Canal blockage, a vivid example of the fragility of established routes, likely reinforces the importance of such diversification and the development of more flexible supply chains.

Beyond immediate adjustments to energy imports, India is making significant investments in its maritime infrastructure under ambitious initiatives aimed at bolstering its coastal trade and connectivity. This long-term vision extends beyond simply reacting to current disruptions, positioning India as a crucial nexus between the East and the West. The resilience and adaptability demonstrated by India offer valuable insights for other nations navigating similar challenges, although the sheer scale of global trade necessitates ongoing strategic adjustments and international cooperation. While a more stable Black Sea offers a degree of relief, the persistent uncertainties in the Red Sea, alongside the lessons from the Suez Canal, remain critical factors in assessing the long-term efficacy of these strategies and the need for a multi-faceted approach to maritime security and trade resilience.

INDIA'S ENERGY SECURITY: A CALCULATED REBALANCING

India's pursuit of energy security in the current geopolitical climate represents a carefully orchestrated rebalancing of its supply chains. As traditional sources of oil face constraints, the nation is actively exploring and securing alternative supplies to fuel its burgeoning economy. This proactive approach is not merely a response to immediate needs but a strategic imperative to enhance its energy independence and global influence. The Suez Canal blockage, by highlighting the potential for disruptions in established energy trade routes, likely underscores the importance of this diversification strategy for ensuring India's long-term energy security and economic stability. By diversifying its oil import portfolio, India strengthens its diplomatic leverage in an international arena where energy resources are increasingly intertwined with geopolitical considerations.



AFRICA'S INVESTMENT IMPERATIVE: BRIDGING THE FUNDING GAP

The realization of Africa's potential as a major maritime player is inextricably linked to its ability to attract substantial investment. While the vision of modern, efficient ports exists, the current reality is

that the necessary financial resources to transform this vision into tangible infrastructure are often lacking. As highlighted by the African Development Bank, bridging this funding gap is critical to unlocking Africa's maritime potential. The Suez Canal blockage served as a potent reminder of the economic costs associated with bottlenecks in global trade. Investing in African ports to create alternative routes and enhance global network resilience could be seen as a strategic imperative for the broader international community, not just for African nations themselves. Without significant public and private sector engagement, the opportunity to develop key ports into competitive global hubs risks being missed, leaving Africa's trade ambitions adrift and hindering its broader economic development, while also perpetuating vulnerabilities in the global maritime system.

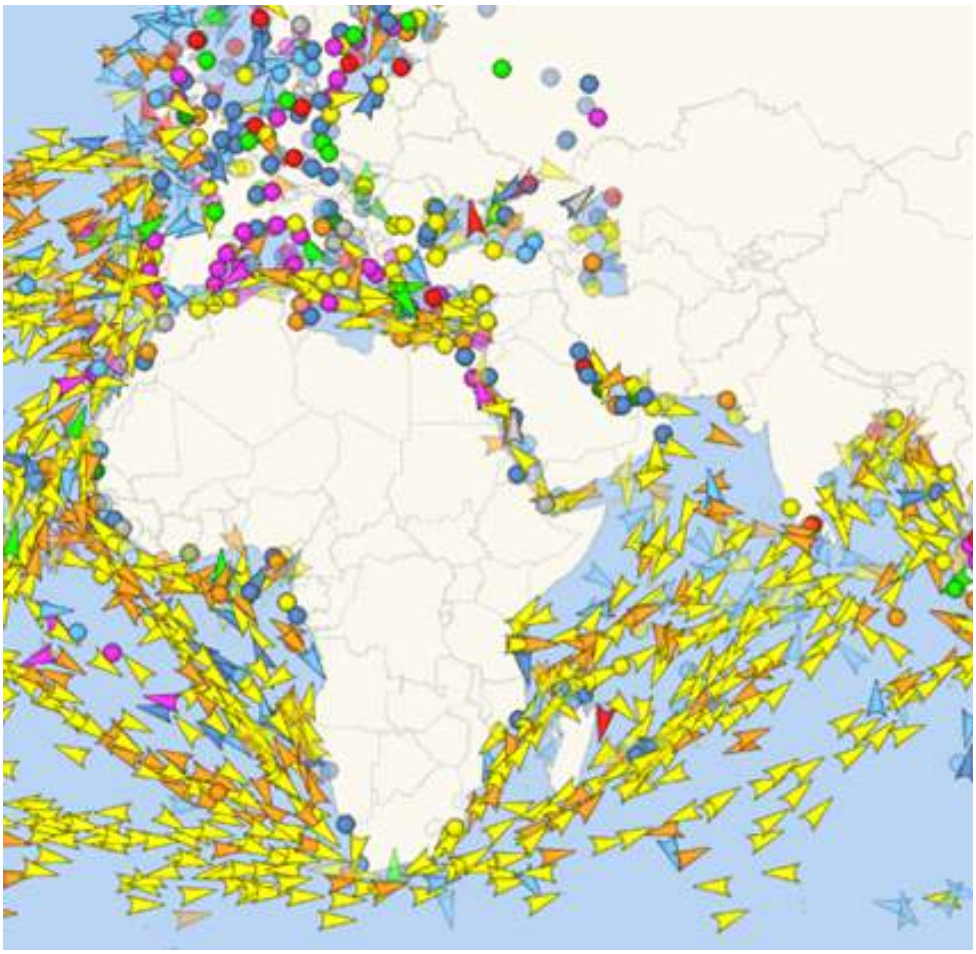
BLACK SEA STABILITY: A TENTATIVE RESPITE FOR TRADE

The prospect of a more stable environment in the Black Sea offers a welcome reprieve for global merchant shipping. The potential for normalized relations in this critical region would facilitate the unhindered movement of bulk carriers transporting essential commodities such as grain and oil. The reduction in risks associated with navigating these waters would likely lead to lower insurance premiums and reduced operational costs for shippers. Increased grain exports from the region could alleviate pressure on global food supplies and ease existing trade restrictions. Similarly, the stabilization of oil flows would contribute to greater predictability in energy markets. While container shipping might experience a less direct impact, the overall stability in these key bulk trade routes would have a positive ripple effect across the global economy. However, the long-term sustainability of this stability remains contingent on broader geopolitical factors and the absence of renewed tensions, especially considering the lessons learned from the sudden and impactful disruption of the Suez Canal.

THE RESURGENCE OF TARIFFS: NAVIGATING PROTECTIONIST HEADWINDS

The renewed implementation of significant tariffs represents a powerful disruptive force in the global shipping landscape. The imposition of tariffs on major trading partners is already triggering shifts in established trade patterns and driving up transportation costs. The anticipation of further tariff measures can lead to short-term spikes in shipping demand as importers attempt to accelerate shipments before duties take effect. However, the sustained application of tariffs has the potential to significantly reduce overall trade volumes as consumers face higher prices and businesses adjust their sourcing and production strategies. Certain sectors, particularly those vulnerable to retaliatory tariffs, face significant economic headwinds. While specific areas, such as U.S. energy exports, might experience increased activity, the overarching impact of widespread tariffs is likely to be increased shipping costs, greater uncertainty, and a potential contraction in global trade, potentially exacerbating the

vulnerabilities exposed by events like the Suez Canal blockage by further complicating global supply chains. Temporary delays in tariff implementation



may offer brief periods of respite, but the underlying threat of escalating trade tensions will continue to cast a shadow over the shipping industry.

RED SEA DE-ESCALATION: REOPENING A VITAL SEAWAY

A potential reduction in Houthi-related disruptions in the Red Sea would provide significant relief to global maritime trade. The Suez Canal, a crucial artery for international commerce directly impacted by Red Sea security, would once again become a more secure and efficient transit route. The container shipping sector, which relies heavily on the Suez Canal, would experience the most immediate benefits, with the potential for reduced transit times and a significant decrease in freight rates. This would also have a positive impact on the economies of countries that depend on Suez Canal revenues. While the energy shipping sector might see a more moderate impact, the overall decrease in risk and disruption would contribute to greater stability in global supply chains and potentially ease inflationary pressures on essential goods. However, the possibility of renewed instability underscores the ongoing need for vigilance and diplomatic efforts to ensure the long-term security of this and other vital chokepoints.

THE SHIFTING SANDS OF ENERGY POLICY: UNLEASHING U.S. EXPORTS

Policy changes aimed at liberalizing U.S. oil and gas exports are poised to reshape global energy flows. By easing restrictions and expediting the approval process for export permits, the U.S. could significantly increase its crude oil exports. This surge in supply would primarily influence trade routes in the Atlantic and Pacific basins, bolstering the U.S.'s position as a major

energy provider. While the direct impact on certain regions might be limited, the increased availability of U.S. crude oil could influence global benchmark prices, potentially prompting adjustments in investment decisions within the energy sector. Nations seeking to diversify their energy portfolios, a strategy likely reinforced by the vulnerabilities exposed in other key energy transit routes, could also benefit from increased access to U.S. supplies.

CONCLUSION: CHARTING A COURSE THROUGH UNCERTAINTY

The future of maritime trade will be defined by its ability to adapt to a dynamic and often unpredictable geopolitical landscape. The Suez Canal blockage served as a powerful reminder of the fragility inherent in a system reliant on critical chokepoints and the significant economic consequences of disruptions. While the potential for stability in certain regions offers glimmers of hope, the broader trends of geopolitical tension and shifting policy priorities continue to generate significant uncertainty. The growing interest in regionalizing supply chains and the ongoing development of more sustainable shipping technologies represent potential long-term shifts in the industry. Africa stands at a critical juncture, with its ability to attract investment being paramount to realizing its maritime potential and contributing to a more resilient global network. India's proactive and adaptive strategies offer valuable lessons for navigating these turbulent times. Although short-term fluctuations in fuel prices and trade volumes are likely, the fundamental imperative remains: to forge a resilient and adaptable global maritime network capable of navigating the complex and interconnected forces of trade, geopolitics, and environmental sustainability, learning from both regional instabilities and singular events that can send ripples across the entire global trading system.

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BY CAPT. PANKAJ KUMAR,
Master Mariner, Visiting Faculty, Partner, The Code India

CYBER OUTLOOK IN THE MARITIME INDUSTRY:

The rapid advancement of technology in providing affordable internet access at sea, particularly following the introduction of Starlink and similar low-earth orbit satellite communications, has significantly enhanced connectivity.

The growing adoption of digital solutions for operational optimisation, cost reduction, sustainability, and effective communication among servers, information technology (IT) systems, and operational technology (OT) systems has increased dependence on these innovations. However, this heightened reliance simultaneously escalates potential cyber risks. Consequently, there is an urgent need for comprehensive cyber risk assessments to identify and mitigate these potential threats.

In recent years, a series of significant cyber incidents have prompted the International Maritime Organization (IMO), maritime administrations, ship owners, and other stakeholders to adopt effective cyber risk management strategies. The IMO has enacted resolution MSC.428(98), which underscores the importance of integrating cyber risk considerations into Safety Management Systems (SMS). Furthermore, the U.S. National Institute of Standards and Technology (NIST) has developed guidelines to assist organizations in establishing robust cyber risk management practices.

CYBERSECURITY FRAMEWORK AND FUNCTIONS FOR IT / OT SYSTEMS:

The distinct areas of Information Technology (IT) and Operational Technology (OT) are increasingly integrating due to advancements in the internet that facilitate their connection. OT encompasses hardware and software

systems that must operate independently to monitor, control, and process physical equipment effectively. In contrast, IT systems primarily focus on data management and supporting business functions.

There is a growing trend toward integrating OT systems with IT systems for purposes such as performance monitoring and remote support, collectively known as the Industrial Internet of Things (IIoT). Disruptions in either domain can significantly impact safety. For example, unauthorized access to the Electronic Chart Display and Information System (ECDIS) can create navigational risks for a vessel.

Moreover, IT managers often have a limited understanding of the cyber risks associated with shipboard OT systems. Updating OT software requires comprehensive knowledge and compatibility assessments, including approval from relevant classification societies, while IT software updates are typically performed on a routine basis.

To enhance security, it is crucial to protect the interface between IT and OT with firewalls and other appropriate security measures. Since maintaining an optimal patch level for OT systems may not always be feasible, it is essential to identify vulnerabilities within OT systems to ensure they are not unnecessarily exposed to risks from the IT environment.

MORE ABOUT CYBER THREATS:

It is essential to recognize that new cyber threats will continuously emerge and cannot be eliminated; instead, they must be managed effectively. The cyber black market has the potential to be more lucrative than the illegal drug trade, as it offers direct connections to end users, facilitates global distribution through electronic means, and operates with minimal requirements.

Cyber-attacks are not solely a technological issue; they involve the complex interplay between technical and human systems. Therefore, a comprehensive and holistic approach is necessary for effective cyber protection.

Technical	People	Organization
Hardware	Social Activities	Corporation
Software	Criminals	Transport
Application	Policy makers	Electric org
Autonomous	Corporates Executive	Nuclear plants

TYPES OF CYBER ATTACKS:

1) Malware: Malicious software

designed to access or damage a computer network or system.

Types of Malware attacks: Ransomware, Bot, Botnet, Trojan, Viruses, Spyware.

2) DDoS attacks: Distributed denial of service attacks aim to overload a network by sending a huge number of data to crash or slow down significantly.

3) Social Engineering: The vulnerable person in the network is tricked into gaining unauthorized access to data.

Types of Social Engineering attacks: Phishing, Pop-up Ads (Adware), Browser Hijacker, Spear phishing, Spoofing, Password stuffing, Key loggers, Man-in-the-middle, Password guessing, Dictionary attack, Brute force.

The After Effects of Cyber Attacks:

1) Stealing data,

2) Generating a disruption to Service / Process,

3) Direct Impact,

4) Cascade impact,

5) Physical impact,

6) Society at large

The cyber effects can be described in 4Ds , Disrupt, Distort, Destruct, and Disclosure.

ONBOARD CYBERSECURITY PLAN:

According to section 8 of the International Ship and Port Facility Security (ISPS) Code, a Ship Security Assessment (SSA) is essential

for identifying and evaluating potential security threats. Furthermore, part B, paragraph 8.3.5 of the ISPS Code stipulates that the SSA must encompass the examination of radio and telecommunication systems, as well as computer systems and networks. Consequently, the risk assessment should effectively identify cyber risks and delineate appropriate mitigations as outlined in the Safety Management System (SMS).

ONBOARD CYBER RISK MANAGEMENT:

The risk assessment delineates five essential steps for the identification, detection, and mitigation of cyber risks:

1) Identify, 2) Protect, 3) Detect, 4) Respond, 5) Recover.

Additionally, the National Institute of Standards and Technology (NIST) cybersecurity framework is structured into six distinct functions applicable to both IT and operational technology (OT) systems:

1) Govern, 2) Identify, 3) Protect, 4) Detect, 5) Respond, 6) Recover.

1) GOVERN:

The cyber-SOP will establish a clear strategy, policy, expectations, and robust monitoring arrangements. To accomplish this, we must:

a) Foster a strong awareness of cyber security needs,

b) Conduct a thorough cyber risk assessment,

c) Develop comprehensive Cyber Policies and Procedures,

d) Clearly define Cybersecurity roles and responsibilities.

2) IDENTIFY:

The following considerations should be addressed:

a) An inventory of vessel assets, including software components, must be identified.

b) The identification of critical business processes is essential.

c) An assessment of threats, vulnerabilities, and associated risks should be conducted.

d) Documenting information flow, along with the maintenance of accurate records, is imperative.

3) PROTECT:

To ensure the protection of cyber equipment, the following considerations must be addressed:

a) Implementing restrictions and controls on user accounts, both physically and digitally.

b) Regular training for all crew members and shore personnel to enhance cyber security awareness.

c) Conducting regular software updates to maintain system integrity.

d) Establishing protection and monitoring measures for devices, including endpoint protection and oversight of data flow.

e) Safeguarding sensitive data to prevent unauthorized access.

f) Performing regular backups to secure information assets.

g) Protecting against unauthorized remote access and mitigating risks associated with untrusted networks.

4) DETECT

To identify and analyze potential cybersecurity attacks and compromises, it is essential to consider the following key points:

a) Monitoring Networks and Systems for Threats: ** It is imperative to establish thorough processes and procedures for detecting cybersecurity incidents. Regular assessments and testing of systems and networks should be conducted to enhance threat detection capabilities.

b) Evaluating Scope and Impact: A comprehensive evaluation of the potential scope and impact of any detected incidents is crucial for understanding the implications and informing response strategies.

c) Incident Response Notification: If a threat is identified, it is vital to promptly notify the relevant personnel to ensure that incident response measures are effectively implemented.

5) RESPOND

In the event of a detected cybersecurity incident, the following actions should be undertaken:

a) Execute the incident response plan, which encompasses the delineation of individual roles and responsibilities, coordination with relevant third parties, and the completion of necessary regulatory reporting.

b) Conduct a systematic categorization and prioritization of incidents, assessing the nature of the occurrence, identifying the underlying causes, and determining which issues necessitate immediate attention.

c) Ensure the thorough collection and preservation of relevant data about the incident.

d) Provide timely notifications to both internal and external stakeholders regarding the incident.

e) Implement measures to mitigate the threat and minimize the potential for further damage.

6) RECOVER

Assets and operations affected by a cybersecurity incident must be restored expeditiously. The restoration process should encompass the following considerations:

a) Development of a comprehensive recovery plan.

b) Identification of individuals who have access to the recovery plan and clarification of their responsibilities in its execution.

c) Verification that backup procedures and policies are effectively implemented and subject to regular assessment and updates, as necessary.

d) Communication with both internal and external stakeholders: In the event of a cyber incident, it is essential to determine the nature, method, and extent of the information to be shared with various parties. This process should include disseminating lessons learned to the ship's crew and providing requisite training. Furthermore, it should

involve the review and updating of cybersecurity policies and procedures as required.

THE CENTER FOR INTERNET SECURITY (CIS) CRITICAL SECURITY CONTROLS.

The Center for Internet Security (CIS) provides essential security controls for effective cyber defence. It presents a comprehensive set of 18 recommended tactics designed to mitigate the most prevalent forms of cyber attacks, as outlined in https://www.cisecurity.org/controls.

These are

1) Inventory and control of Enterprise assets.
2) Inventory and Control of software assets,
3) Data protection,
4) Secure configuration of Enterprise assets and software,
5) Account management,
6) Access control management,
7) Continuous vulnerability management,
8) Audit log management,
9) Email and web protections,
10) Malware defences,
11) Data recovery,
12) Network infrastructure management,
13) Network monitoring and defences,
14) Security awareness and skills training,
15) Service provider management,
16) Application software security,
17) Incident response management,
18) Penetration testing

CONCLUSION: SAFEGUARDING SMART SHIPS - THE PATH FORWARD

As the maritime industry increasingly embraces digitalization, the critical importance of robust cybersecurity risk management cannot be overemphasized. The integration of information technology (IT) and operational technology (OT) systems has created new vulnerabilities, rendering vessels more susceptible to cyber threats. The ramifications of cyber incidents, which may include data breaches, malware infections, and disruptions to essential onboard operations, can be severe, adversely affecting not only business continuity but also the safety of vessels and environmental integrity.

To effectively mitigate these risks, it is imperative to establish a comprehensive and adaptive cybersecurity framework. The adoption of industry-recognized standards, such as the Centre for Internet Security (CIS) Critical Security Controls, facilitates the implementation of a layered defence strategy. Furthermore, the conduct of proactive risk assessments, the provision of regular training for crew members, and the formulation of incident response protocols will enable shipowners and operators to strengthen their resilience against evolving threats.

In conclusion, the safeguarding of smart ships necessitates ongoing vigilance, collaboration, and investment in state-of-the-art security measures. By prioritizing cybersecurity as an integral aspect of maritime operations, the industry can navigate the complexities of the digital maritime landscape with confidence, thereby ensuring safer voyages and a more secure future.

Preamble: This series of articles from Navguide Solutions, one every month, will focus on Rightship Inspection requirements, eventually going deeper into the subject and helping the industry phase into the RISQ regime.

RISQ Series | Article 15 | March 2025

THOSE WERE THE DAYS, MY FRIEND.

Author: Capt. Robert Vaz, Chief Operating Officer, Navguide Solutions

Most of you must have heard the 60's classic song "Those were the days, my friend" Mary Hopkin. Those were the days, my friend, We thought they'd never end, We'd sing and dance forever and a day, We'd live the life we chose ...

At some point in your career, you must have heard your seniors talking about life at sea, say from the 1970s to the 1990s and how they cherished those good times. They were never put under severe stress by managers, vetting/PSC inspections, criminalization of seafarers, restriction on shore leave, or stringent regulations in some instances that could even land us in prison; no Whatsapp or Mobile, just telex Sat-C. Undoubtedly, the sailors in those days had their challenges but were happy-go-lucky and portrayed to the world that seafarers are a chilled bunch of men. Some of us must have witnessed when our seniors got a bit irritated with juniors, or generally, they would moan about how they were made to dance to the tune of managers and how, these days, some of them felt like puppets, remotely controlled by managers they could be heard saying: those were the days, " Boats were made of wood and men were made of steel" but now it's different.

Surely, both eras had their own set of challenges. In this article, I want to focus on mentoring; I still remember when I joined as a cadet in the late 80s, most of my seniors would share and help. They had their unique way of teaching; many used a couple of swear words, etc, but at the end of the day, many of my friends and I learnt from our seniors. These sailors were dedicated, experienced and happy to share knowledge. None of them attended any Train the Trainer programs or got any special certification to be recognised as trainers.

Nowadays, we dwell so much on certification; some only attend the course for certification, to get a job ashore in an institute or to join the training department of a company; they are some certified trainers who have no dedication, no enthusiasm, no patience, nothing, they just did the certification for a job ashore. Now, they are armed with a certificate that is required by the marine industry. Is certification the only criterion to be a trainer? What about the passion, the drive, the zest for teaching and sharing? I feel all of us have to introspect if we want to make it count.

Having said that, I also feel there are many youngsters who decide to come out to sea but fall prey to misleading advertisements on social media. The posts are made so flowery to entice these young boys from villages that they catch the bait and enrol into MTIs. Upon completion of the course, there are several young aspiring seafarers jobless; some manage to pay some scrupulous agents and get on board. They join the ship but with no real intention to learn, so they don't ask questions, are not interested in learning the job, and lack motivation. They are fed up, frustrated, and depressed for most of their contract.

But let's focus on the young ratings and officers who actually want to learn. Some of them have stopped thinking or analysing; they don't use their brains; they depend wholly on a checklist. For most procedures, there are checklists, and some of these youngsters blindly follow them. There is no harm in using a checklist, but what if important points are missed, something is wrong, not updated, or confusing? Some of these young officers never challenge the SMS and blindly follow it.

But wait. In this digital age, some young seafarers, in case of doubt, go directly to Google or get an AI-generated answer, and most of the time, they are confused as some answers make no sense, most information is not verified or reliable, and some just take the information as is, and it could backfire.

Even worse is if they ask some senior a doubt, and even though the senior doesn't know, he/she confidently gives him some bull sh@$ answer, and the young seafarer thinks that the correct answer as his/her senior gave it.

Some dedicated senior officers make it a point to mentor and guide juniors and share what they know. Mentoring must come from within; it's a passion. However, on ships, due to her trading pattern or, at times, the attitude and mindset of the seniors, cultural or language barriers, mentoring doesn't happen. At times, the reasoning is, "We are not paid to teach these guys; you have passed exams and are qualified and responsible. It's the responsibility of the hiring company. If they

are no good, we just get another seafarer.

Personally, I feel the best way to learn is on-site, during shipboard operations, from experienced seafarers who have done the job several times.

I draw a lot of pointers for mentoring from our ancient Gurukul system, which is the cornerstone of ancient Indian education. The word "Gurukul" is derived from two Sanskrit words: "Guru", meaning teacher, and "Kul", meaning family or home. Here, the students lived with the guru in the ashram. The students learnt through direct

interaction, and the relationship was based on mutual respect and trust. Similarly, mentorship on board by a senior officer on site is one of the best ways to teach the young seafarers on job training, far more effective than doing a training class or a simulator training ashore; the workplace is one of the best classrooms

As a senior officer at sea and later as an onboard trainer for around 15 years, I ensured that after my safety inspection or onboard training, during the evenings or Sunday afternoons at sea, I spent time with the junior officers and ratings, depending

on availability, just listening to them and clearing their doubts, be it regarding the SMS, shipboard operations, or inspections in general.

OVER THE YEARS, HERE ARE SOME TIPS THAT I USED DURING MY INFORMAL TEACHING, AND IT PROVED EFFECTIVE:

- It starts with building a bond and earning the trust of the mentees. Once this is established, I feel the path is much easier; they are much more switched on and receptive.
- We need to ensure we are updated with the latest technology, regulations and industry best practices. For example, during your time, you may be an expert in taking sights, be it Long by Chron or Mer passage; if you don't know how to use the ECDIS and plot an LOP, etc, it won't really intrigue the seafarers. Hence, we have to be abreast of the latest equipment and requirements.
- Avoid judging and making blanket statements, such as "Oh, yeah, most of the seafarers from this region are poor in English" or "Most of the graduates from this institute have very poor skills." Such statements demotivate and break trust.
- Reverse mentoring is also an excellent tool, we must never underestimate the knowledge and capabilities of Gen Z. You will be amazed to see the results

Well, I'm sure we all want to mentor if time permits; however, some of us can't due to genuine issues.

At Navguide Solutions, we have developed a "Guide2inspections app" that functions as an innovative, 24/7 trainer and mentor on board.

The app is curated in such a way that safety inspections, PSC inspections, Rightship inspections, Sire 2.0 inspections, Flag state inspections, and ISM audits are all taken care of. Even company internal audit checklists or superintendent's checklists could be incorporated and be made bespoke to that company

The main question is broken down into several sub-questions, leaving nothing to chance.

In case you don't understand a question, there are three levels of guidance: a note explaining the question, a photograph, and, if you are still in doubt, a small video is included, making it much more straightforward to the user.

You could actually watch a short micro-learning video before performing your job e.g. before going to inspect the forecastle store, before inspecting the lifeboats or life rafts or before testing the emergency generator. We have around 100+ videos in our library

Conclusion: Many of us want to give back to our marine community and share what we have learnt over the past 20-30 years at sea. What better way than mentoring? We could provide that confidence and boost what the young seafarers are looking for.

We could help our young seafarers set goals and achieve them, and most importantly, we could provide constructive feedback. In this way, we not only pass down valuable information and expertise but also ensure the job gets done safely and we keep improving constantly.

With all this in mind, we at Navguide Solutions launched the guide2inspection app and are delighted to see the value it brings to shipowners, managers and seafarers. If you have not used this app, feel free to download it from the google play store or App store.

ST Engineering Marine Ltd., Singapore, selects Kongsberg Maritime design and equipment for new walk-to-work OSV

Kongsberg Maritime will supply the design and integrated equipment package for a new walk-to-work offshore service vessel (OSV), to be built by ST Engineering Marine in Singapore for a leading oil & gas company.

The 97-metre vessel of Kongsberg Maritime UT 5520 design will accommodate 106 people and features a motion-compensated gangway to enable safe transfer of personnel between to and from offshore installations.

The new design is a further development of Kongsberg Maritime's extensive range of vessel types for the offshore energy market. It builds on recent experience with the successful UT5519DE CSOVs (commissioning service operation vessel), which are deployed on offshore wind projects in the North Sea.

It is designed for oil and gas operations and will have a greater endurance of up to nine weeks away from shore, compared to a CSOV industry standard of four weeks.

Per Kristian Furø, Sales Director - Ship Design, Kongsberg Maritime, said: "We are delighted to have been chosen by ST Engineering Marine to supply our latest UT5520 vessel design and an extensive range of Kongsberg Maritime technology for this new vessel.

"Our design teams have drawn on our extensive know-how from decades of offshore operations, to provide a vessel that is optimised for long-distance offshore operations, where efficiency, operational reliability, safety and crew comfort are key considerations."

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Applications are open for both Male & Female Candidates.

Registration starts 12th March 2025
Registration ends 14th April 2025

Exam Dates – 21st / 22nd / 23rd / 24th / 25th / 26th / 27th /28th April 2025

12th PCM marks NOT LESS than 65% & in English 50%.
Both eye sight 6/6 without visual aids (For Deck Cadet) No colour blindness
Candidates awaiting 12th result can apply

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