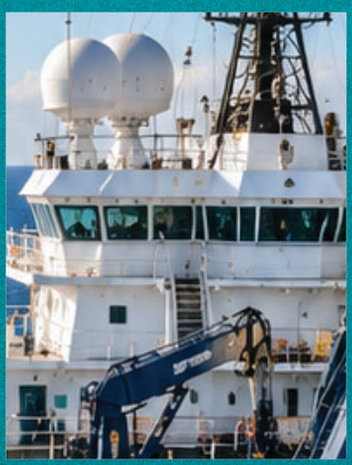
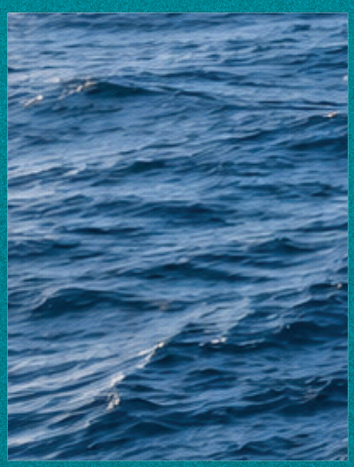
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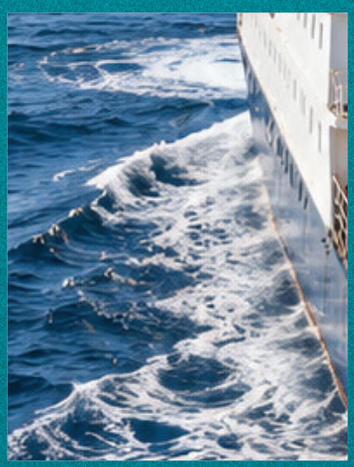
WHERE SCIENCE MEETS SEAMANSHIP

A look inside research vessels and the professionals who make them work







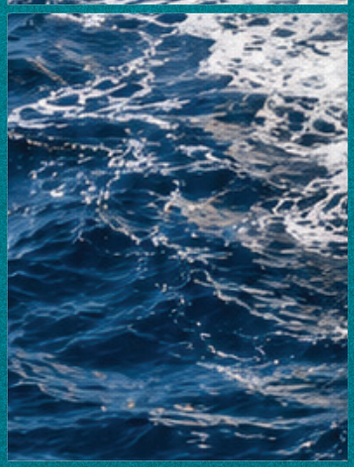


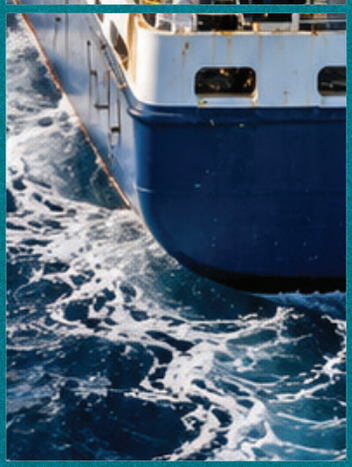


A YEAR ADRIFT:

Lessons from the Arctic Ice

5 Key Contributions by India's Research Fleet







September Edition 2026

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Floating Laboratories: Inside India's Ocean Research Fleet

Research vessels are some of the most demanding ships afloat. They hold position over a single point in deep water, launch and recover sensitive equipment in open seas, and keep scientists and crew working safely for weeks at a time.

These floating laboratories map the ocean floor, study monsoon and climate systems, assess marine ecosystems, and evaluate seabed mineral wealth. The discoveries they deliver depend on the same foundation that drives any successful vessel operation: sound technical management, rigorous safety systems, and skilled maritime professionals.

This month, we look at India's ocean research fleet, the missions it supports, and what it takes to operate ships at the frontier of ocean science.

India's Research Fleet at a Glance

India operates a state-backed fleet of roughly 10 to 12 research vessels across coastal and deep-sea domains. The effort is led by the Ministry of Earth Sciences (MoES), with support from the Ministry of Mines and the Ministry of Agriculture & Farmers Welfare. Each flagship is managed by a specialist institution with a distinct scientific mandate.

Vessel	Managed by	Commissioned	Primary role
ORV Sagar Kanya	National Centre for Polar and Ocean Research (NCPOR), Goa	1983 (Germany)	Multidisciplinary oceanography; monsoon and air-sea interaction studies
ORV Sagar Nidhi	The National Institute of Ocean Technology (NIOT), Chennai	2007 (Italy)	Technology demonstration; mother ship for deep-sea vehicles; ice-classed hull with DP-2
CRV Sagar Tara, CRV Sagar Anveshika & CRV Sagar Manjusha	The National Institute of Ocean Technology(NIOT) / Coastal Research	2019–2020 (India)	Coastal research, pollution monitoring, and water-quality profiling

The fleet also includes the buoy tender ORV Sagar Manjusha and GSI's nearshore survey vessels, RV Samudra Kaustubh and RV Samudra Shaudhikama. Notably, the two newest coastal research vessels were built indigenously in Kolkata.



ORV Sagar Nidhi

Operating a Ship That Is Also a Laboratory

Research vessels operate very differently from merchant ships. Their voyages are built around scientific objectives rather than cargo schedules, and every expedition follows a structured cycle.



Scientists submit cruise proposals to institutions such as the National Centre for Polar and Ocean Research or the National Institute of Ocean Technology, specifying target coordinates, sampling depths, and equipment needs. From there, the ship command and technical teams turn a scientific plan into a safe, executable voyage.

FUN FACTS!



The voyage that started ocean science

HMS Challenger sailed from 1872 to 1876 on the first global oceanographic expedition, covering about 68,890 nautical miles and identifying roughly 4,700 new species. In 1875, its crew recorded a sounding of 8,184 m in the western Pacific, the deepest reliably measured depth at the time. The spot, in what is now the Mariana Trench, was later named Challenger Deep in honor of this expedition and HMS Challenger II, whose 1951 survey established its record depth, and modern surveys put its depth at about 10,900–11,000 m.

Several operational capabilities set these vessels apart:

- **Dynamic Positioning (DP):** Thrusters and GPS-linked control systems hold the ship over an exact point in deep water, despite wind and current. DP operations demand certified, experienced officers and disciplined procedures.
- **Deployment systems:** A-frames, oceanographic winches, and side cranes launch and recover CTD rosettes, gravity corers, autonomous underwater vehicles (AUVs), and remotely operated vehicles (ROVs). Each launch and recovery is a planned, safety-critical operation.
- **Modular laboratories:** Wet labs handle fresh biological and sediment samples, dry labs house sensors and computing, and clean rooms protect contamination-sensitive work.

For ship managers, this is a clear example of how vessel performance depends on the connection between systems and people. The most advanced dynamic positioning system or winch delivers results only when it is well-maintained and operated by a competent crew.

The Deep Ocean Mission and MATSYA 6000

India's Deep Ocean Mission (DOM), budgeted at ₹4,077 crore over five years and managed by MoES, aims to explore deep-sea mineral resources and strengthen India's role in the Blue Economy. Its flagship project, Samudrayaan, is India's first crewed deep-ocean exploration mission.

At the center of Samudrayaan is MATSYA 6000, a self-propelled submersible designed to carry three aquanauts to 6,000 meters. At that depth, it will face pressures of nearly 600 bar.

The mission targets the Central Indian Ocean Basin and the Andaman Sea. Scientific priorities include polymetallic nodules rich in nickel, copper, cobalt, and manganese, hydrothermal sulphide deposits, deep-sea biodiversity, and long-term ocean climate monitoring.

Where the program stands: MATSYA 6000 completed harbor wet trials at L&T's Kattupalli Shipyard near Chennai in early 2025. The next step, a 500-meter shallow-water dive, was rescheduled while a specialized syntactic foam component was sourced; MoES told Parliament in March 2026 that the dive would follow integration and testing later this year. Full 6,000-meter crewed dives are targeted for around 2027. When complete, India will join the US, Russia, France, Japan, and China as nations with crewed deep-ocean capability.

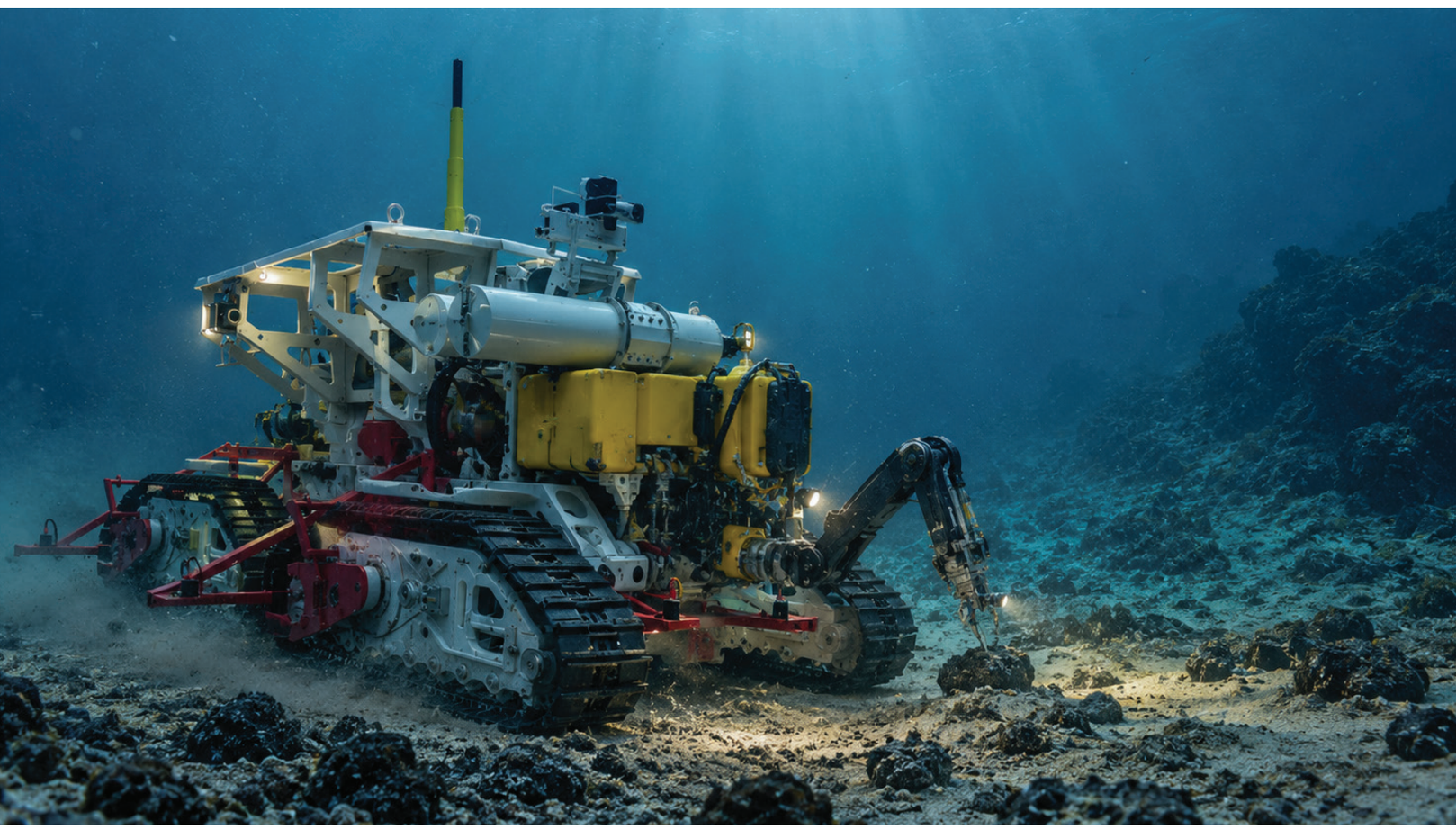
The program also shows how seriously human safety is treated at depth. Emergency endurance, redundant escape systems, and continuous monitoring reflect the same safety-first principles that guide well-run vessel operations.

Feature	Specification
Crew	3 aquanauts
Design depth	6,000 m (approx. 20,000 ft)
Personnel sphere	2.1 m internal diameter; 80 mm titanium alloy, electron-beam welded with ISRO
Endurance	12 hours standard; up to 96 hours emergency life support
Safety systems	Drop-weight emergency ballast, acoustic communications, digital-twin monitoring
Mother ship	ORV Sagar Nidhi, with dynamic positioning and deep-water winches

Engineering for the Seabed: The Varaha Crawlers

To collect polymetallic nodules from soft abyssal sediments, NIOT has developed tracked, remotely controlled seabed crawlers known as the Varaha series.

- **Varaha-1:** A 12-tonnes electro-hydraulic crawler tested to 5,270 meters in the Central Indian Ocean Basin, with ORV Sagar Nidhi as its surface mother ship. It serves as a prototype for testing seabed trafficability, in-situ nodule crushing, and navigation and control systems.
- **Varaha-3:** A lighter crawler, weighing roughly 6 to 7 tons underwater, designed for rocky terrain in the Andaman Sea. It uses a comb-type hydraulic collector to pick up nodules between 60 mm and 120 mm.



Bringing nodules to the surface is its own engineering challenge. Crushed nodules are mixed with seawater into a slurry, pumped through flexible hoses to an intermediate pump station, and lifted up a vertical riser to the ship.

Two challenges stand out. First, the seabed clay is extremely soft, so crawler weight must be carefully balanced between sinking and losing traction; NIOT uses in-situ soil testers to measure shear strength before deployment. Second, environmental stewardship is a priority. Research is focused on low-impact collection methods, and separated water must be returned below the Oxygen Minimum Zone to avoid disturbing mid-water marine life.

DISCOVERIES THAT MATTER

5 Key Contributions by India's Research Fleet

India's research vessels have helped map the country's **2.02 million sq km** Exclusive Economic Zone, secure deep-sea mineral rights, and improve monsoon forecasting. Several results stand out.

Focus areas & works - Geo-scientific & Oceanographic studies, Southern Ocean & Antarctic Expeditions, Deep-sea mining & gas hydrates, Submersible & Robotic Deployment, Air-sea interactions & Meteorology, Blue economy & Tsunami monitoring.

01

Monsoon science (ORV Sagar Kanya)

During the Bay of Bengal and Arabian Sea monsoon experiments (BOBMEX and ARMEX), Sagar Kanya recorded continuous air-sea flux data. It showed that air over the northern Indian Ocean is warmer at the same sea surface temperatures than over the Pacific, a finding that improved how the Indian Summer Monsoon is modeled.

02

Seabed rights (ORV Sagar Kanya)

Survey data from the Central Indian Ocean Basin helped India become the first country registered under the UN Convention on the Law of the Sea in 1987. India holds exclusive exploration rights over 75,000 sq km of seabed. The vessel also mapped the Sagar Kanya Seamount (1986) and the Panikkar Seamount (1992).

03

Antarctic Expedition (CRV Sagar Tara, Anveshika & Manjusha)

Features laboratories, drop-keel configuration, multibeam echosounders, and specialized machinery tailored for shallow-water and offshore bathymetric surveys and environmental indexing, designed for shallow-water operations.

04

Frontier operations (ORV Sagar Nidhi)

Sagar Nidhi has also undertaken expeditions to Antarctic waters. It also maintains the moored buoy network in the Bay of Bengal and Arabian Sea that feeds real-time data to INCOIS in Hyderabad for cyclone and tsunami warnings.

05

Antarctic Expedition (ORV Sagar Nidhi)

It was the first Indian flagged research ship to reach the 66°S latitude (Antarctic waters). The vessel is ice-strengthened and capable of cutting through thin ice depths of up to 40 cm, enabling crucial sub-polar and Southern Ocean deployments. Gathering critical climate, geo-scientific, and meteorological data from the Indian and Southern Oceans.

Together, these results turn ocean science into national value: stronger economic security through critical minerals, better climate resilience through improved forecasting, and new foundations for marine biotechnology.


ORV Sagar Tara


ORV Sagar Anveshika


ORV Sagar Manjusha

Field work of CRV Sagar Tara, Anveshika & Manjusha

- Surface water quality monitoring
- Marine pollution tracking
- Coral reef conservation
- Bathymetric mapping of coastal zones
- Supports coastal research
- Marine instrumentation deployment
- Coastal surveillance system
- Dynamics of Air-sea CO2 Flux in the Coastal and Offshore Waters in the Bay of Bengal from Chennai to Tuticorin
- Establishing Shelf-Mounted Ocean Thermal Energy Conversion (OTEC) Plant
- Coastal Water Quality Buoy Validation and sea-floor sampling missions

The Global Picture

The international community of research vessels that has reshaped Earth science.

Vessel	Country/institution	Notable contribution
RV Polarstern	Germany (Alfred Wegener Institute)	Froze into the Arctic ice pack for the 2019–2020 MOSAiC expedition, the largest Arctic climate expedition to date
R/V Atlantis	USA (Woods Hole Oceanographic Institution)	Current support ship for the crewed submersible Alvin, whose 1977 dives revealed hydrothermal vent ecosystems powered by chemosynthesis
JOIDES Resolution	International Ocean Discovery Program	Scientific drilling ship (1985–2024) whose cores transformed understanding of Earth's climate history and ocean crust
RRS James Cook & RRS Discovery	UK (National Oceanography Centre)	Global physical, chemical, and biological oceanography
Schmidt Ocean Institute vessels	Global / USA	Open-access research, including mapping a 500-meter-all detached coral reef on the Great Barrier Reef

What unites these programs is operational discipline. Long, remote deployments and complex over-side operations depend on well-maintained vessels, strong safety management systems, and experienced crews.

People and Performance at Sea

Research vessels may carry scientists, submersibles, and seabed crawlers, but their success rests on familiar fundamentals. Safe ships require competent crews. Complex operations depend on sound technical management. Compliance is achieved through both systems and people.



The skills these missions demand are the skills that define excellence across every vessel type:

- **Technical management** that keeps DP systems, winches, thrusters, and lifting equipment reliable
- **Safety management systems** that turn high-risk launch and recovery operations into routine, controlled procedures
- **Qualified, well-trained crews,** from Masters and DP officers to engineers and ratings, working under the Standards of Training, Certification and Watchkeeping for Seafarers (STCW) and supported by strong welfare practices
- **Regulatory compliance** with flag state, port state, and international requirements, including environmental obligations

Ocean research is a powerful reminder that vessel performance begins with strong management and the professionals who make it possible. As India's maritime and Blue Economy ambitions grow, so will the need for well-managed vessels and skilled seafarers ready to support them.



Lessons from the Ice

What the MOSAiC expedition teaches us about operating at the edge

For one full year, a research icebreaker let the Arctic sea ice carry it across the top of the world. The MOSAiC expedition (Multidisciplinary drifting Observatory for the Study of Arctic Climate) ran from September 2019 to October 2020. Led by Germany's Alfred Wegener Institute (AWI), it brought together hundreds of researchers from 20 nations. MOSAiC is best known as the largest Central Arctic research mission ever attempted.

Freezing in on Purpose: An Operational Feat

The Central Arctic Ocean is largely inaccessible in winter, even to capable icebreakers. MOSAiC's answer was to work with the ice rather than against it, using the Transpolar Drift, the natural current that moves sea ice from the Siberian side of the Arctic toward the Atlantic.

- **Selecting the floe:** In September 2019, the German research icebreaker RV Polarstern sailed deep into the Siberian Arctic. The team surveyed candidate floes and selected one roughly 2.5 km wide and 3.5 km long.
- **Letting the ice take hold:** With propulsion shut down, the sea ice was allowed to freeze solidly around the hull. Polarstern's rounded hull form is designed so that lateral ice pressure lifts the vessel slightly rather than crushing it.
- **Building a camp on the ice:** Around the ship, scientists set up a network of research sites, including "Ocean City," "Met City," and "ROV City," connected by power cables and marked routes.
- **Drifting with the ice:** Over the following months, the ship drifted passively with the ice toward the Fram Strait between Greenland and Svalbard, coming within 156 kilometers of the North Pole.

The approach demanded careful planning of fuel, provisions, power generation, maintenance, and emergency response for a vessel that could not simply steam to port.

What the Year in the Ice Revealed

The Arctic is warming nearly four times as fast as the global average, and MOSAiC captured a full annual cycle of data there for the first time. Several findings stand out.

Faster, thinner, more dynamic ice: The ice pack drifted considerably faster than models had predicted, driven by strong winds and thinner ice. The floe was also more fractured than expected, repeatedly opening into leads and building pressure ridges that constantly threatened the science camps.

Heat from below: Researchers measured heat moving up from warmer, deeper ocean layers toward the surface. This ocean heat limits how thick sea ice can grow in winter and contributes to ice loss from underneath.

Storms and clouds: Arctic cyclones passing over the camp brought pulses of warm, moist air, slowing ice growth and contributing to earlier surface melt. Researchers also found that salty blowing snow is a significant source of sea salt particles in the winter atmosphere, which influence cloud formation and the Arctic heat balance.

A changing ecosystem: As thick multi-year ice gives way to thinner seasonal ice, light reaches the water earlier in spring. This shifts the timing of plankton blooms and changes how carbon moves through the Arctic Ocean.

These datasets are now feeding into global climate models, helping refine projections for Arctic warming, jet stream behavior, and extreme weather across the Northern Hemisphere.

What It Means for Vessel Operations

Few commercial vessels will ever freeze into the ice deliberately. Yet MOSAiC's findings are directly relevant to anyone managing vessels in or near polar waters, and to anyone planning around changing weather patterns.

Ice conditions are becoming less predictable.
Thinner, faster-moving, more fractured ice changes how voyages near the ice edge are planned. Up-to-date ice information, conservative routing, and clear operational limits remain essential.

The Polar Code provides the framework.
The IMO's International Code for Ships Operating in Polar Waters sets requirements for ship design, equipment, operational procedures, and crew training. A Polar Ship Certificate and a vessel-specific Polar Water Operational Manual (PWOM) are central to compliant polar operations.

Vessel suitability matters. Polarstern's hull was built for sustained ice pressure. For commercial tonnage, ice class, winterization, and machinery readiness must match the conditions a vessel is expected to meet.

Planning covers the whole voyage.
Fuel, spares, provisions, medical support, and emergency response all need to account for remoteness and limited outside assistance.

The People Behind the Performance

MOSAiC succeeded because of the people aboard as much as the ship itself. Polarstern's Masters, officers, engineers, and ratings kept the vessel operating safely through months of darkness, extreme cold, and shifting ice, while supporting a science program that never stopped.

Crew and research teams rotated in stages throughout the year, supported by other icebreakers and supply vessels. When the COVID-19 pandemic disrupted travel in 2020, the rotation plan had to be rebuilt at short notice, with Polarstern temporarily leaving the floe to exchange personnel near Svalbard before returning to continue the mission.

MOSAiC shows what becomes possible when a well-designed vessel, disciplined operational planning, and skilled maritime professionals work together. The same combination underpins safe, efficient, and compliant operations on every vessel, in every ocean.



Expert Speaks

Keeping Ships Moving

Cdr OP Sheoran on building India's ship repair capability

Nautilus' Asst. Vice President of Repairs & Refit shares lessons from a career spanning naval engineering, dockyard leadership, and maritime administration.



Cdr OP Sheoran
Asst. Vice President - Repairs & Refit

1. Tell us a little about yourself, your journey in the maritime world, the roles that shaped you, and what brought you to where you are today as Asst. Vice President of Repairs & Refit

I started my career as a Marine Engineer in the Indian Navy, where the fundamentals of discipline, engineering excellence, and operational readiness were ingrained early. Those initial years at sea taught me something invaluable: machinery doesn't fail randomly. There's always a pattern and a story behind it. Understanding that pattern is what defines a good engineer. For example, machinery could fail due to a lack of diligence in following the preventive maintenance schedule.

Over the years, as my service progressed, my roles evolved—from hands-on ship operations to overseeing shipbuilding and, eventually, to leading large maritime organizations. One of the defining chapters, which also provided valuable personal experience, was when I headed a government dockyard responsible for maintaining a 56-vessel fleet in the Andaman & Nicobar Islands. Operating in a remote, logistics-constrained environment forces you to think differently. You learn to innovate, adapt, and build self-reliance into your systems.

Later, my experience in maritime administration added another dimension: policy, regulation, and safety governance. It helped me see the industry not just from the point of view of the operator or maintainer, but also from the regulator's perspective.

Today, in the repairs and refit space, I see my role as bringing all these experiences together: technical depth, operational insight, and strategic thinking,—to build solutions that are practical, efficient, and future-ready.

2. India is positioning itself as a global maritime powerhouse. From a repairs & refit perspective, where do you see the biggest gap between ambition and on-ground capability today?

India is at an interesting inflection point. The intent is strong, the coastline is vast, and the opportunity is undeniable. But when it comes to repairs and refit, the gap, in my view, lies in capacity building and execution consistency.

From my experience, three areas stand out.

01 First, although infrastructure-building is definitely on an upward curve and is constantly improving, the pace of development and the uniformity of the capacity building are perhaps not at the desired level. We have pockets of excellence, but not a widespread, dependable ecosystem that can effectively handle diverse vessel categories.

02 Second, repairs are a specialized discipline. It's not just about engineering. Rather, it's about diagnostics, speed, and decision-making under pressure. We still need to invest more in developing this niche skill set.

03 And third, the ecosystem itself, including vendors and logistics, needs to become more responsive. In repairs, time is money, and delays in even a single component can cascade into significant downtime.

At Nautilus, our focus is not just on executing repairs, but on redefining how repairs are planned and delivered. A more integrated, agile, and technology-enabled approach can bridge this gap and position India as a serious global contender in the ship repairs arena.

3. Shipowners are constantly balancing cost and quality. Where do most repair strategies fall short today, and what needs to change?

This is a classic dilemma, and I have seen it play out countless times.

Too often, repair strategies are driven by short-term cost pressures. The focus becomes "fix it quickly and cheaply" rather than "fix it right." But ships have long memories, and temporary fixes almost always come back as bigger problems.

Another gap is the lack of structured planning. Repairs are frequently reactive instead of being based on condition monitoring or predictive insights. This limits efficiency and often leads to avoidable breakdowns.

What needs to change is the mindset.

We need to move towards value-driven and well-planned repairs, where decisions are based on lifecycle performance rather than thinking of short-term cost gains. This means better planning, closer collaboration between shipowners, OEMs, and repair teams, and increased use of available technologies and data to guide decisions.

At its core, quality repairs are not an expense; they are an investment in reliability, safety, and operational continuity.

4. In your experience, what are the most common causes of extended vessel downtime during repairs, and how can they be avoided?

If you ask anyone in the industry, delays in repairs are seen as practically inevitable, but they shouldn't be.

In my experience, the biggest culprits are lack of Planned Preventive Maintenance, incomplete problem definition, and improper planning of repairs and refittings. If you don't correctly diagnose and understand the defect at the start, surprises will emerge midway, and that's where timelines slip.

The next issue is spares. Even today, non-availability of critical components can bring work to a standstill, especially in remote or island locations.

And then there's coordination. Repairs involve multiple stakeholders: ship staff, yard teams, vendors, and regulators. If they are not aligned, even simple tasks can get complicated and delayed.

The solution lies in better preparation.

Detailed pre-refit inspections, spares planning, and clear scope definition can eliminate most uncertainties. Add to that digital tracking tools and real-time coordination, and you significantly improve predictability.

This is where Nautilus' approach of combining technical expertise with structured execution makes a tangible difference. Reducing downtime is not just about working faster but about working smarter from the start.

5. What would you say to a young maritime engineer who wants to build a career in repairs and refit in India?

Repairs and refits are where engineering truly comes alive.

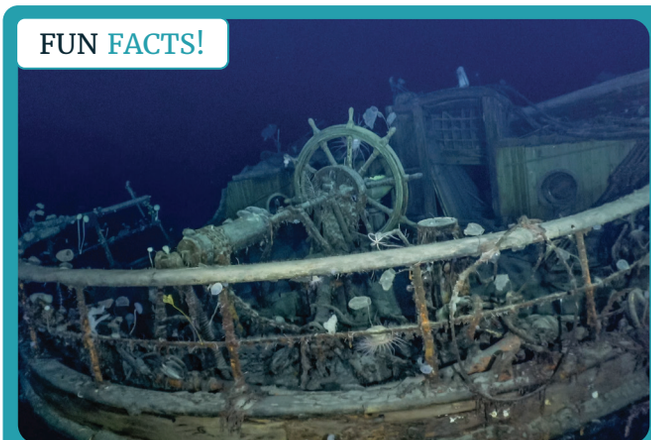
Every vessel, every defect, every situation is different. You're constantly solving problems, often under time pressure, and that builds both confidence and capability very quickly.

My advice would be simple:

- Stay aware and curious. Don't just fix a problem. Instead, understand why it happened.
- Don't be afraid to get your hands dirty. The shop floor and the engine room are your best classrooms.
- Keep learning. The industry is rapidly evolving with digital tools, green technologies, and newer systems. Ensure you stay ahead of the curve.
- And most importantly, develop the ability to work as a team. Repair is never a solo effort. It's about teamwork, coordination, and leadership.

India's maritime sector is growing rapidly, and the repairs space will play a critical role in that journey in the coming years. For young engineers, this is not just a career, but a chance to be part of something much larger.

FUN FACTS!



Shackleton's ship found after more than a century

Sir Ernest Shackleton's Endurance sank in Antarctica's Weddell Sea in 1915 and was located on March 5, 2022, by the Endurance22 expedition aboard the South African icebreaker S.A. Agulhas II. Resting at a depth of 3,008 m, the wreck is remarkably well preserved, with its name still clearly visible on the stern.

Stories From the Sea

Experiencing the Magic of the Sea

My name is Capt. Raja Jawahar. I am 61 years old and from Chennai, Tamil Nadu. I am currently in command of CRV Sagar Tara, a coastal research vessel operated by the National Institute of Ocean Technology (NIOT) under India's Ministry of Earth Sciences.



Capt. Raja Jawahar

I began sailing in 1989 as a junior officer. Rising through the ranks at sea is a structured process. Each step requires sea time, professional courses, and written and oral examinations before the next certificate of competency is issued. I went through each of these stages, and in 2017 I qualified as Master. Since then, I have commanded many types of vessels, including bulk carriers, container ships, and passenger vessels, each with its own operational demands.

Commanding a research vessel is very different from sailing on a commercial ship. On a commercial vessel, the main goal is commercial efficiency and cargo delivery. On a research vessel, the main goal is scientific discovery. That means collecting data and samples and completing the project or mission the scientists on board have planned.

Sagar Tara was built at the Titagarh Wagons shipyard in Kolkata and was designed as a floating laboratory. Her role is to measure oceanographic and atmospheric data within India's Exclusive Economic Zone. She also carries out shallow water work such as surface water quality monitoring, testing of underwater technology, and bathymetry surveys. She is powered by twin-screw engines and an Azimuth/ Tubular Bow Thruster for better manoeuvring capabilities.

On a research mission, much of the day revolves around station keeping. During CTD operations, an instrument is lowered through the water column to measure conductivity, temperature, and depth. Together, these readings tell scientists about the salinity and structure of the water. We also collect sediment samples from the seabed and water samples at various depths.

My most memorable experience at sea came in 2020 on the Hooghly River at Kolkata. I found myself at the center of a storm, holding on for dear life for nearly 48 hours. The Hooghly is a tidal river known for its strong currents, and those 48 hours remain the most intense of my career.

What I enjoy most is simply being at sea. Apart from the rich natural surroundings, the unpredictable nature of the sea has always fascinated me. It is a pure feeling that cannot be described in words. Whenever I look out at the distant horizon beyond the limitless waters, as it so appears, my heart fills with serenity and peace. That feeling makes me want to return to the sea again and again. The sea is sheer magic to me, and I will always enjoy being out there.

The sea is sheer magic to me, and I will always enjoy being out there.

CAPT. RAJA JAWAHAR / CRV SAGAR TARA

DISTRESS AT SEA

She Chose to Stay

How MT Morning Glory became our voice at sea



There are moments at sea that you prepare for in your drills, but hope will never become a reality. For our crew, that moment came when our vessel lost all propulsion and electrical power at sea. We were left drifting without the ability to communicate through VHF or MF/HF. Meanwhile, the weather conditions continued to make the situation increasingly dangerous.

Abandoning ship was no longer something written on a muster list. It was becoming a reality.

The First Rescue Attempt

In the morning, MV HUA RONG 26 responded to our distress and came to assist. The sea state was approximately Beaufort force 5, making any attempt to abandon the vessel extremely hazardous.

We began preparing to launch our lifeboat. Two of our officers were already inside the lifeboat while preparations were being made for the remaining crew to board.



Piyush Mainwal
Chief Officer



Then we noticed something that changed everything. The lifeboat had been damaged. Water was entering the boat, and we realized that it was beginning to sink. With two officers already inside, the situation was becoming dangerous. Putting more people into that lifeboat could turn an already desperate situation into a tragedy.

We had no choice. We abandoned the lifeboat, losing it to the sea.

And with it, we lost something else for a moment — our confidence that we could safely launch another one. The thought of lowering the remaining lifeboat in those conditions became terrifying. We had just watched one lifeboat become unsafe in front of us. The sea had shown us how quickly a rescue plan could go wrong.

The MT Morning Glory

Later that evening, another vessel responded to our distress: the MT Morning Glory. What she did afterwards is something I will never forget. The MT Morning Glory could have seen our distress and continued on her voyage. Instead, she chose to stay.

She remained in the area and drifted around our vessel, protecting us from approaching maritime traffic. She warned other vessels of our situation and guided them away from the danger of our drifting vessel.

Our vessel had no power, so our VHF and MF/HF communication systems were unavailable. But MT Morning Glory could communicate. She became our voice. Her crew communicated with the MRCC and the Sri Lanka Navy, relaying information andcoordinating the rescue while remaining with us.

For a crew trapped on a powerless drifting vessel, surrounded by darkness, rough seas, and uncertainty, that presence meant more than words can explain. The MT Morning Glory was not simply another vessel responding to a distress call. She stayed with us. She became our eyes when we could not see what was approaching. She became our voice when we could not communicate. And, for those hours, she became a guiding light of hope.

The Rescue

Eventually, the Sri Lanka Navy arrived, and the rescue operation could proceed. But I will always remember that before the Navy reached us, there was a merchant vessel already standing by, a vessel that chose to remain with a distressed ship and its crew rather than merely answering the call and leaving.

That experience changed the way I understand the word ‘seafarer’. At sea nationality, company, rank, and flag disappear very quickly when another vessel is in distress. You become one community, one crew helping another. And sometimes, the most courageous thing a seafarer can do is stay.

For us, MT Morning Glory was that presence. When we had lost power, communication, a lifeboat, and a moment, much of our confidence, she remained there. She stood like a guiding light of hope in a very dark situation.

I will carry this experience with me for the rest of my career.



World Maritime Day 2026

From Policy to Practice

What the theme means for vessel operations

Regulations make shipping safer only when they are put into practice on board, in ports, and across fleets. That is the message at the heart of World Maritime Day 2026, marked on September 24.

This year's observance comes at a difficult moment for the industry. Merchant vessels have come under attack in several conflict zones, from the Strait of Hormuz to the Black Sea and the Sea of Azov. Seafarers have lost their lives, and global trade and supply chains have been disrupted.

In response, the International Maritime Organization (IMO) is calling on the maritime community to uphold and implement the international regulatory framework that keeps shipping safe, secure, and efficient, and that protects the people who work at sea. For vessel owners, operators, and ship managers, that call is a practical one.

A Two-Year Focus on Implementation

The theme for 2026 and 2027 is "From Policy to Practice: Powering Maritime Excellence." It gives IMO Member States and industry partners two years to concentrate on turning global policy decisions into results that can be seen and measured.

In practice, this means translating IMO regulations into national legislation, strengthening enforcement, and improving training.

In his official message for the day, IMO Secretary-General Arsenio Dominguez noted that regulations deliver safer, more resilient, and cleaner shipping only when they are applied worldwide. He was equally clear about who implementation must serve first: the people working at sea. In his words, "Seafarers come first. Always."



Closing the Implementation Gap

This year, IMO completed the first full audit cycle under the IMO Member State Audit Scheme (IMSAS). Since the scheme became mandatory in 2016, 168 Member States, or 94% of the membership, have been audited on how effectively they meet their obligations under key IMO instruments.

The findings show that many countries still find it difficult to translate IMO rules into national law. The main challenges identified were:

- Shortages of technical expertise
- Gaps in infrastructure
- Weak oversight of ships

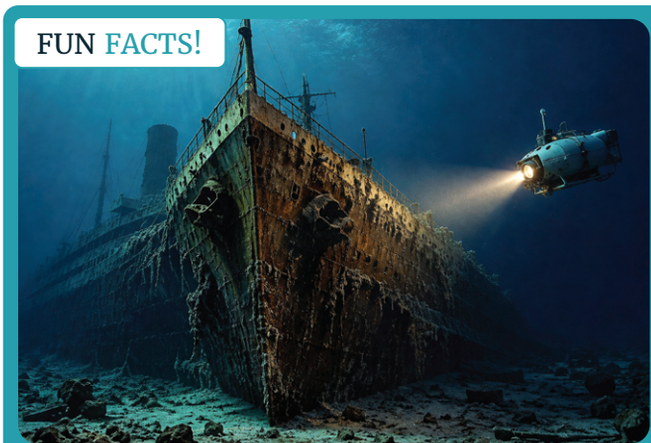
IMO will use these findings to direct technical assistance where it is needed most, including in Least Developed Countries and Small Island Developing States. Its support covers help with drafting and updating national legislation, training programs for administrations, ports, and seafarers delivered through regional centers, and peer learning through IMO projects and global networks.

"Seafarers come first. Always."

What this means for vessel operations

Regulations are adopted globally, but they reach a ship through its flag state, the ports it calls at, and the systems of the company that manages it. Differences in how rules are implemented across jurisdictions shape what vessels encounter during flag state surveys and Port State Control inspections. Consistent, well-documented compliance on board, supported by a strong Safety Management System, helps vessels meet requirements wherever they trade.

FUN FACTS!



The Titanic was found by a research ship

The wreck of RMS Titanic was discovered on September 1, 1985, by a joint US–French team led by Robert Ballard and Jean-Louis Michel, using the research vessels R/V Knorr (Woods Hole Oceanographic Institution) and Le Suroît (IFREMER). The first human dives to the wreck came a year later, in 1986, aboard the deep-diving submersible Alvin.

Six Areas Where Policy Meets Practice

The theme focuses on practical implementation across six areas of IMO's work. Each one connects directly to how vessels are managed and crewed day to day.

Focus area	Where it shows up in vessel management
Safety and new technologies	Updating procedures, risk assessments, and crew training as new equipment and systems come on board
Preparing shipping for decarbonization	Planning for evolving environmental requirements through energy efficiency, fuel management, and performance monitoring
Tackling fraudulent ship registration and maritime fraud	Verifying registration, certification, and documentation across the fleet
Facilitation, digitalization, and resilience	Using digital tools for reporting, port clearance, and continuity of operations
Cyber security and maritime security	Building cyber risk management into the Safety Management System and preparing crews for security threats
Marine environment protection beyond carbon	Managing ballast water, waste, discharges, and other environmental obligations on board

World Maritime Day 2026 reminds us that regulations only make shipping safer when they become part of how vessels are managed, crewed, and operated every day. For vessel owners and operators, implementation depends on more than policy. It requires sound Safety Management Systems, consistent documentation, well-maintained ships, and competent, well-trained crews who understand the requirements they work under.

FUN FACTS!



We have better maps of Mars than of our own seafloor

Only about 27–29% of the global seafloor has been mapped to modern high-resolution standards. Orbiting spacecraft can map planetary surfaces globally, so large areas of Mars and the Moon are known in more detail than most of Earth's ocean floor, which must be surveyed mainly by ships using specialized sonar.



The Pledge

Swachh Sagar, Surakshit Sagar

India's 11,098 km coastline supports fishing communities, ports, tourism, and the seaborne trade that moves most of the country's goods. A healthy sea is part of daily life, even far inland.

Much marine litter starts on land. Plastic and waste carried through city drains and rivers reach the coast, which is why simple household choices matter as much as beach clean-ups.

Swachh Sagar, Surakshit Sagar ("Clean Sea, Safe Sea") is a national citizen-led campaign to keep India's coastline clean and its marine ecosystems healthy. It began in 2022 as a 75-day drive. Led by the Ministry of Earth Sciences, the campaign has since become an annual movement.

The pledge turns a large goal into small yet achievable personal commitments: keep beaches and water bodies clean, avoid single-use plastics, dispose of waste responsibly, respect marine life, and encourage others to do the same.





Celebrating

Independence Day Across the Nautilus Fleet

On August 15th, our crews marked Independence Day wherever they were: at sea, at anchor, or alongside in port. Across the Nautilus fleet, Masters, officers, ratings, and cadets gathered on deck to hoist the tricolor, sing the national anthem, and share a moment of pride far from home.













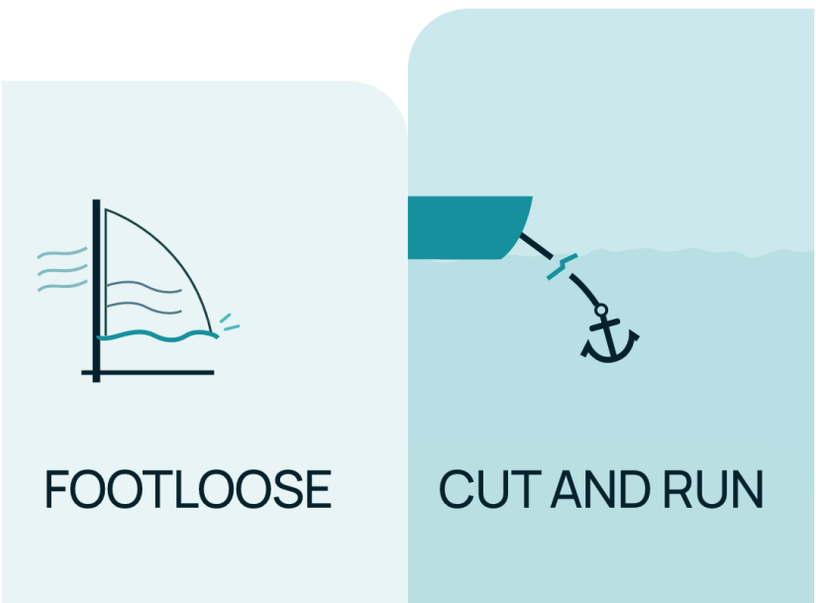
Do you recognize any of these?

Many English idioms are commonly associated with seafaring, though historians don't always agree on their origins. Do any of these ring a bell?

As the Crow Flies

When lost or unsure of their position in coastal waters, ships would release a caged crow. The crow would fly straight towards the nearest land, giving the vessel a navigational aid. The tallest lookout platform on a ship came to be known as the crow's nest.





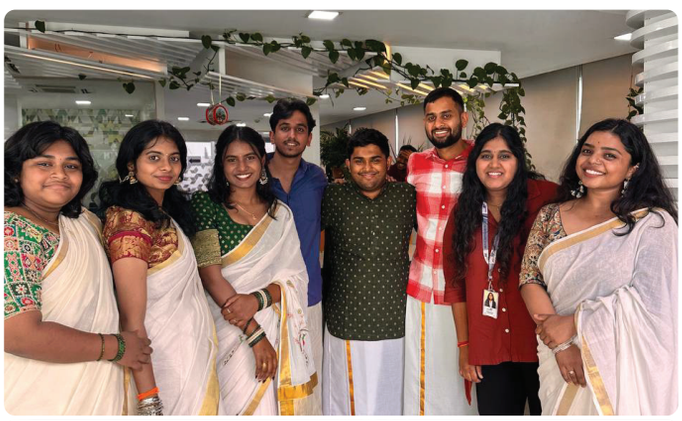
Footloose

The bottom portion of a sail is called the foot. If it is not secured, it is ‘footloose’, and dances randomly in the wind.

Cut and Run

If a captain of a smaller ship encountered a larger enemy vessel, he might decide that discretion is the better part of valor, and so order the crew to cut the lashings on all the sails and turn away.

Photos From Ashore



From celebrating traditions to sharing meals and creating memories, our offices across Chennai, Bangalore and Mumbai came together to celebrate Onam, Ganesh Chaturthi and team lunches.

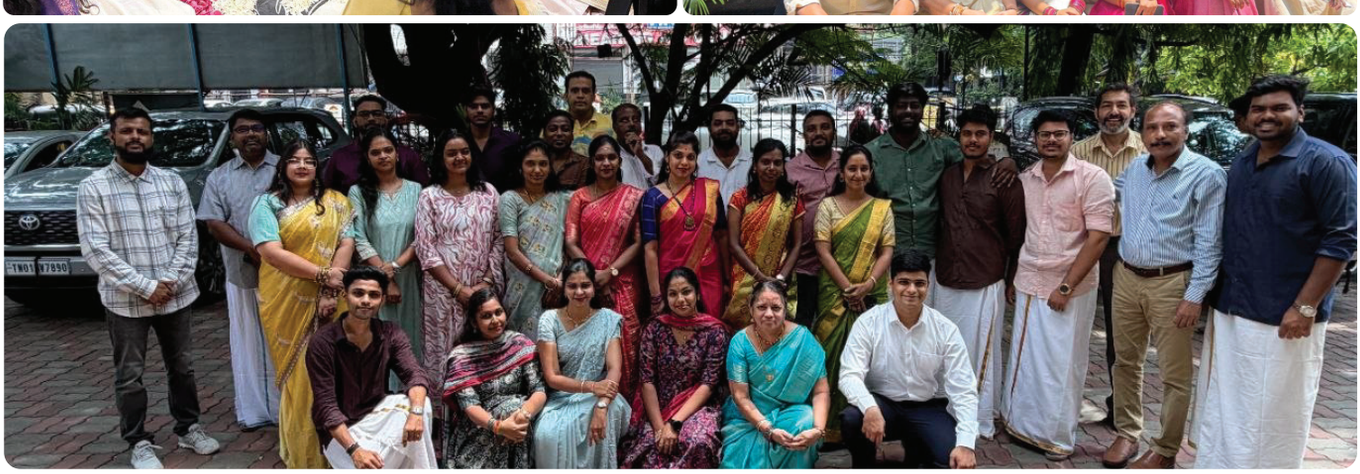
These moments go beyond the festivities. They reflect the camaraderie, shared experiences and connections that make Nautilus more than just a workplace.











Fleet & shore

Naavik Sangam

Naavik, seafarer. Sangam, a coming together.



On August 7, Nautilus Shipping and Transworld marked the first year of their partnership not with a press release, but with an evening dedicated to the seafarers at the heart of both companies' operations. Held at Vivanta Navi Mumbai, the event was called Naavik Sangam: naavik meaning seafarer, sangam meaning a coming together. The name captured the intent well. This was less a corporate function than a homecoming for the officers and engineers who keep vessels running safely at sea.

What set the evening apart was the presence of seafarers' families alongside their colleagues. The keynote address was delivered by a decorated military veteran whose own career, shaped by long separations and quiet endurance, drew a natural parallel to life at sea. His words resonated with an audience that spends months away from home, working in conditions few outside the industry fully appreciate.

At the center of the evening was a certificate ceremony that spanned the deck, engine room, and galley. On the deck side, Masters Prateek Mishra, Arul Murgan Subramanian, and Joseph Johnson were honored, along with Chief Officers Raj Sekhar Gudia, Nibu Mathew, and Satyendra Kumar. From the engine department, Chief Engineers Prabhakaran Murugesh, Ganapathi Vedulla, and Mayur Borkar were recognized alongside Second Engineers Kamalakannan Krishnamurthy, Murli Manohar, and Subrata Halder.

CERTIFICATES AWARDED

MASTERS
Prateek Mishra, Arul Murgan Subramanian, Joseph Johnson

CHIEF OFFICERS
Raj Sekhar Gudia, Nibu Mathew, Satyendra Kumar

CHIEF ENGINEERS
Prabhakaran Murugesh, Ganapathi Vedulla, Mayur Borkar

SECOND ENGINEERS
Kamalakannan Krishnamurthy, Murli Manohar, Subrata Halder

ELECTRO-TECHNICAL OFFICERS
Ashwani Kumar Singh, Nayendra Vishnu Shirke, Simson Jebakumar Ananda Pandian

CHIEF COOK
Meen Bahadur Dharam Singh

Electro-Technical Officers Ashwani Kumar Singh, Nayendra Vishnu Shirke, and Simson Jebakumar Ananda Pandian also received certificates, as did Chief Cook Meen Bahadur Dharam Singh, a reminder that every role on board contributes to a vessel's performance.

For Nautilus Shipping, the event reflected a conviction that has shaped its approach to ship management from the start: safe, well-run vessels depend on the competence and commitment of the people who operate them. Naavik Sangam gave that conviction a tangible form, treating recognition not as a formality but as something worth building an entire evening around.

Ultimately, Naavik Sangam was an opportunity for two partner companies to meet the people behind their operations, for families to be thanked publicly for sacrifices that often go unrecognized, and for seafarers to be celebrated as the skilled professionals they are.

CAREER JOURNEY

From Learning the Ropes to Taking the Lead



Sabitha
Crewing Officer

When I joined Nautilus Shipping in 2024 as a Marine Personnel Executive, I was entering an industry that was practically new to me. I had completed my MBA, but maritime crewing was a different world altogether. I understood people, processes, and logistics, but I had never imagined how much responsibility lay behind the movement of a vessel and its crew.

I started with the mindset of a learner, ready to understand the industry from the ground up.

Learning an Industry from Scratch

In the beginning, every term, process, and situation was a learning opportunity. Crewing is not simply about filling a vacancy; it is about understanding people, vessel requirements, experience, documentation, schedules, and availability, along with the responsibility that comes with placing the right person on the right vessel.

Over time, I understood that the maritime industry operates at a completely different pace. A decision ashore can directly affect someone on board, the vessel's operation, and an entire schedule. Plans change, emergencies arise, and situations often need to be handled immediately.

This environment pushed me to become more adaptable, organized, and confident in making decisions. Today, after completing two years with Nautilus Shipping, I can see how much that initial learning curve has shaped me.

What Does a Day in My Role Look Like?

As a Crewing Officer, no two days are the same. I currently handle foreign-going container vessels and bulk carriers independently, managing around six vessels. My responsibilities involve coordinating with stakeholders, monitoring crew requirements, planning movements, and ensuring that the right actions are taken at the right time.

One of the biggest responsibilities I have taken on is independently handling takeover vessels, including both Indian and foreign-flag vessels. During one major transition, we took on 16 vessels at a stretch, requiring close coordination, continuous follow-up, and attention to every detail. Being entrusted with this responsibility was a significant milestone in my journey.

More recently, I have also become involved in two more foreign-going container takeovers under different flags, giving me an opportunity to understand the process from another perspective and take greater ownership of the work.

These experiences have taught me that taking responsibility is not just about completing a task; it is about being accountable for the outcome.

The People Behind Every Vessel

Behind every crew movement is a person with a family waiting at home. Behind every joining is a seafarer preparing to leave home and take on months of responsibility at sea. Behind every delay or change in plan, there can be someone whose travel, leave, or family plans are affected.

This is one of the aspects of crewing that has stayed with me the most.

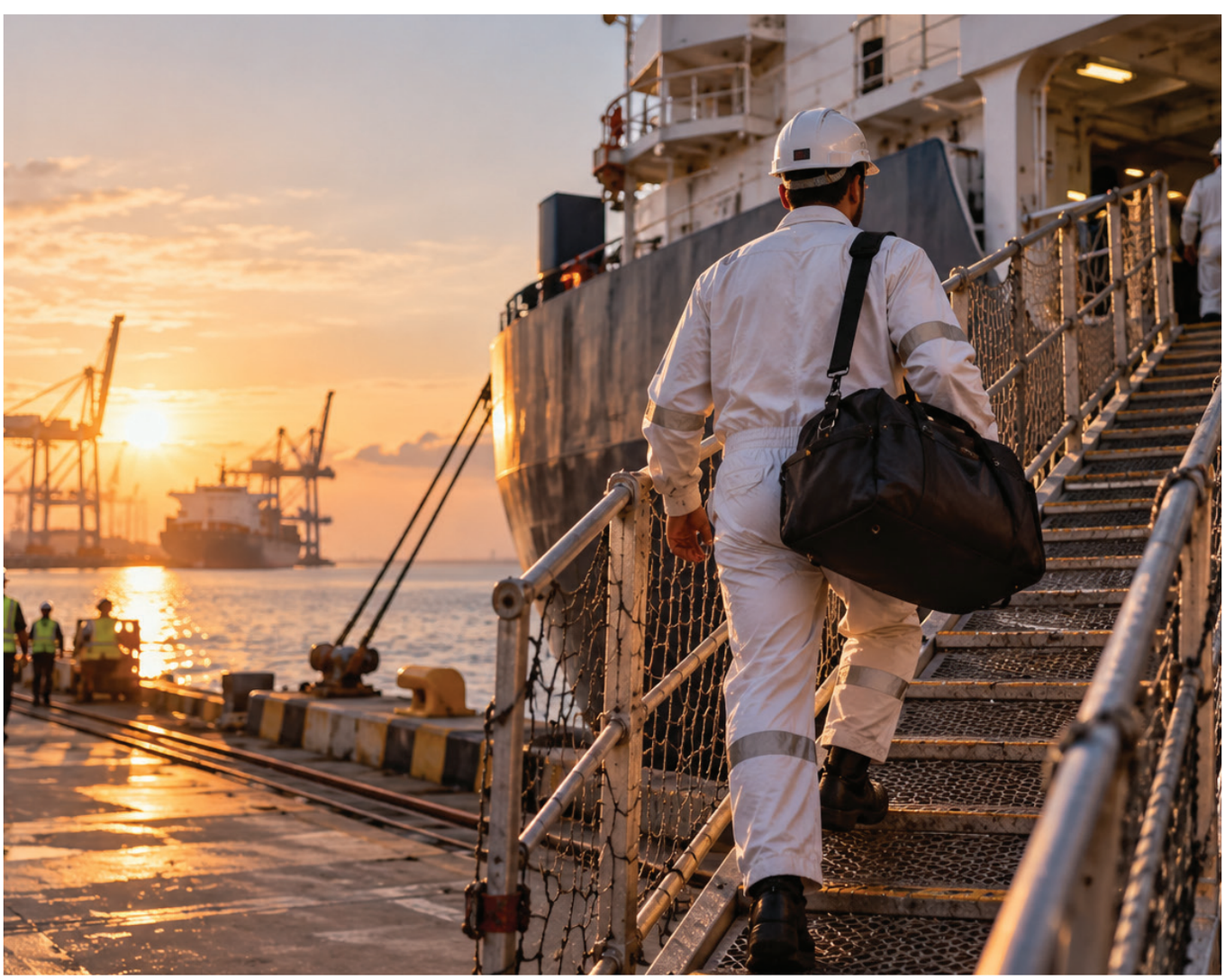
There have been many situations where a simple conversation, timely coordination, or quick follow-up could make a meaningful difference to someone. These moments may not always appear as major achievements on paper, but they are reminders of why the work matters.

Growing Into Responsibility

My journey at Nautilus has been more than a change in designation from Marine Personnel Executive to Crewing Officer. It has been a journey towards greater independence, taking ownership, and trusting my own abilities.

For me, being a capable woman at work does not mean having everything figured out from the beginning. It means having the courage to enter unfamiliar territory, the willingness to learn, the confidence to take responsibility, and the resilience to keep moving forward when things become difficult.

My journey is continuing, and I believe that is the most exciting part. The sea may be where the vessels operate, but the journey of growth often begins ashore.



Sailors' Society Crisis Response Network (CRN) Helpline

Supporting Seafarers Before a Crisis Becomes a Headline

The ongoing conflict in the Gulf continues to disrupt voyages, separate crews from their families, and place extraordinary pressure on the men and women working at sea. International maritime organizations have highlighted the humanitarian impact on the thousands of seafarers affected.

Safe, efficient vessel operations depend on crews who are well supported, at sea and ashore. Sailors' Society's 24/7 Helpline offers confidential support to seafarers dealing with anxiety and stress, family emergencies, bereavement, isolation and loneliness, or any personal or professional difficulty.

We encourage vessel owners, operators, and crewing teams to share this resource with their seafarers so support is in place before it is needed.

Helpline details

Call: +1 938 222 8181

Instant Chat:
sailors-society.org/helpline

Email:
crisis@sailors-society.org



News & Insights

01

India Commits $8.8bn to Offshore Exploration

India has approved a ₹840.84bn ($8.8bn) National Offshore Exploration Scheme that runs to 2030/31. It aims to add more than 600 million tonnes of oil equivalent to the country's reserves. The money will go to seismic surveys, deepwater drilling, shared offshore infrastructure and a new oil and gas services zone. India imports about 90% of its crude, so the push is about energy security.

02

Container Shipping Braces for a 2027 Crunch

BIMCO warns that the container market's strong run may be ending. More than 14 million TEU is on order, about 42% of the current fleet. BIMCO expects the fleet to grow about 9% in 2027, and effective supply 5 to 6%, while demand may grow only 0.5 to 4.5%. Carriers are also slowly returning to the Suez Canal. Shorter voyages would free up capacity that the long route around the Cape currently absorbs, and little scrapping is expected to offset it.

03

Panama Slips to Third in Global Flag Rankings

Panama is no longer one of the top two ship registries. As of 1 September 2026, Liberia leads with 317.4m gt, followed by the Marshall Islands with 212.7m gt and Panama with 196m gt. Panama's tonnage has fallen 15% this year, while Liberia and the Marshall Islands have each grown 8.7%. Part of the decline is Panama's own doing. To distance itself from shadow fleet operations, it now refuses tankers and bulkers older than 15 years. China has also increased scrutiny of Panama-flagged ships, and some Chinese lessors have asked owners to reflag. Panama's fleet averages 19.5 years, the oldest of the top five flags.

04

India's Exports Hold Firm Despite West Asia Disruption

India's merchandise exports grew 17% from April to July of FY2026-27, and services exports rose 8.8%. Telecom equipment led the growth, and the US remained India's largest export market. Trade with Gulf markets such as Iran, Iraq, Kuwait and Qatar fell sharply because of the conflict. India responded by buying more crude from Oman, Brazil and Venezuela and more LPG and LNG from the US. GDP grew 7.8% in the first quarter, keeping India the fastest-growing major economy.



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