



Forum For Integrated National Security www.finsindia.org

Volume: 5 Issue-19 | Date: 1st May 2025

A Disease-free and Productive Nation: India by 2047 - Part - 4 By Uday Kumar Varma	01
Mutual Funds in India's Defence Sector By Prof. Anand Limaye and Harshada Deshpande	04
Yunus just offered Indian Ocean to China By Dr. Seshadri Chari	06
Before Pahalgam: By Vappala Balachandran	08
Why India needs to develop its deep-sea capabilities By Vice Admiral Biswajit Dasgupta (Retd)	10
India is Proud of: Havildar Mering Ao of Assam Rifles	13

Write to us at:

bulletin@finsindia.org

OFFICE: 4, Belle View, Lakhamsi Nappu Road, Dadar (East), MUMBAI – 400014 Phone 022 24127274, 98339 24371 **EDITORIAL BOARD**

Shri. Milind Bondale Col Ravindra Tripathi



Taking risks isn't enough. Optimising risks, weighing pros and cons, and reducing the probability of untoward occurrences, is what differentiates falling and flying in investing.

Strong processes and risk management help you achieve your goals steadily and sustainably.

An investor education and awareness initiative of Nippon India Mutual Fund

#EdgeOfKnowledge

 $Contact\ your\ Mutual\ Fund\ Distributor\ or\ Investment\ Advisor\ l\ Give\ us\ a\ missed\ call\ on\ 8000112244\ l\ Visit\ mf. nipponindiaim.com/EdgeOfKnowledge$

Helpful Information for Mutual Fund Investors: All Mutual Fund investors have to go through a one-time KYC (know your Customer) process. Investors should deal only with registered mutual funds, to be verified on SEBI website under 'Intermediaries/Market Infrastructure Institutions'. For redressal of your complaints, you may please visit www.scores.gov.in. For more info on KYC, change in various details and redressal of complaints, visit mf.nipponindiaim.com/InvestorEducation/what-to-know-when-investing

Mutual Fund investments are subject to market risks, read all scheme related documents carefully.

A Disease-Free and Productive Nation: India by 2047 Part - 4

By Uday Kumar Varma

Author is a former Secretary, Information and Broadcasting, GOI

VIII. Addressing Systemic Challenges

While the advantages of preventive healthcare are undeniable, systemic hurdles impede its widespread adoption. The healthcare economy, significantly influenced by vested commercial interests, often prioritizes curative treatments that yield higher profits over preventive measures that reduce long-term health expenditures. Hospitals, pharmaceutical companies, and diagnostic service providers may resist changes that threaten traditional revenue streams, complicating efforts to shift toward a prevention-focused model.

To dismantle these entrenched barriers, a multi-faceted approach is essential:

1. Policy Reforms for Transparency and Accountability:

Government intervention must focus on fostering transparency in healthcare practices. Policies should mandate clear communication regarding treatment costs, efficacy, and alternative options, particularly for lifestyle-related diseases. Strong oversight mechanisms can curb exploitative practices like unnecessary diagnostics and overprescription.

2. Economic Incentives for Preventive Care:

Aligning financial incentives with public health goals can drive behavioural change among both providers and patients. For instance, tax benefits for individuals who invest in fitness programs, gym memberships, or annual health screenings can encourage healthier lifestyles. Similarly, subsidizing the cost of nutritious food, vaccinations, and mental health support can make preventive health more accessible.

3. Harnessing Public-Private Partnerships (PPPs):

Collaborative ventures between the public and private sectors can create sustainable models that align profitability with public health objectives. Initiatives such as joint wellness programs, community health campaigns, and affordable diagnostic packages can enhance the reach and effectiveness of preventive measures.

4. Public Awareness and Empowerment:

Educating citizens about the tactics used by vested interests to influence health decisions is vital. Awareness campaigns should focus on enabling individuals to critically evaluate health information, adopt preventive measures, and advocate for better healthcare policies. A well-informed populace can act as a counterforce to commercial interests that prioritize profits over wellness.

5. Integration of Preventive Health into Healthcare Insurance:

Insurance schemes must be redesigned to cover preventive measures comprehensively, incentivizing individuals to seek regular check-ups, vaccinations, and screenings. By making preventive care an integral part of health coverage, insurers can reduce long-term costs associated with advanced-stage treatments.

6. Research and Evidence-Based Advocacy:

Governments, academia, and NGOs should invest in studies that demonstrate the cost-effectiveness of preventive care. By providing concrete evidence of the economic and social benefits, policymakers can build a stronger case for prioritizing prevention over treatment.

IX. Vision 2047: A Blueprint for a Healthy India

As India approaches its centenary of independence in 2047, the vision of a healthy, vibrant nation must not remain an aspiration—it must become an imperative. A disease-free, productive India is within reach, but achieving it demands a paradigm shift: from reactive, hospital-centric healthcare to a proactive, prevention-driven model. This transformation necessitates a collective commitment from the government, private sector, and citizens to build a system that prioritizes accessibility, affordability, ethics, and innovation over profit-driven expansion.

1. Policy Frameworks and Equity

Health must be recognized as a fundamental right, ensuring that every Indian, regardless of socio-economic status, has access to essential healthcare services. Public health infrastructure, particularly in rural and underserved areas, must be significantly strengthened, focusing on preventive care and early intervention. Regulation of healthcare pricing and ethical oversight of medical practices will be crucial to curbing exploitative commercialization that threatens the very sanctity of the medical profession.

2. Redefining the Role of Healthcare Providers

The rise of profit-driven healthcare, where financial incentives often overshadow patient welfare, must be addressed with urgency. The medical profession, once regarded as the noblest of callings, risks being reduced to a mere industry. Policies must reinforce ethical medical practice, ensuring that healthcare remains a service rather than a commodity. Stringent measures against unnecessary procedures, over-prescription, and inflated costs must be enforced, along with incentives for professionals committed to community-based and preventive healthcare.

3. Integration of Traditional and Modern Medicine

The establishment of district-level wellness hubs integrating Ayurveda, yoga, naturopathy, and modern medicine can redefine holistic healthcare. These hubs can serve as primary centres for preventive health, chronic disease management, and wellness promotion, positioning India as a global leader in integrative medicine.

4. Leveraging Technology for Access and Innovation

By 2047, healthcare must be revolutionized by AI-powered diagnostics, telemedicine platforms, and wearable health monitors, ensuring accessibility for even the remotest communities. Investments in health-tech startups and public-private collaborations will be instrumental in this transformation. However, technology alone cannot drive change—widespread digital literacy campaigns are necessary to ensure that every citizen benefits from these advancements.

5. Educational Initiatives for Lifelong Health

A national movement for health education—beginning in schools and extending into workplaces and communities—is crucial to fostering a culture of wellness. Mandatory fitness programs, nutrition awareness, and routine screenings should be woven into daily life. Employers must integrate health consciousness into corporate structures, incentivizing healthy lifestyles rather than merely providing medical benefits.

6. Restoring Trust: Ethical Healthcare for a Stronger Nation

The unchecked commercialization of healthcare has led to an erosion of trust between patients and providers. Restoring this trust requires transparent healthcare policies, strict regulatory frameworks, and active citizen participation in holding the system accountable. A shift in mindset is necessary hospitals should be seen as the last resort, not the first, with prevention forming the backbone of national health policy.

X. Conclusion: Rising to the Challenge

A healthier India is not merely a metric of national well-being; it is the foundation for economic growth, social stability, and global leadership. By prioritizing preventive care, ensuring ethical medical practices, and leveraging technology responsibly, India can create a healthcare model that the world looks up to.

As the nation celebrates its 100th year of independence in 2047, let this milestone also symbolize a triumph over health inequities and disease. Envision an India where hospitals are the last resort, not the first, where wellness is a shared societal responsibility, where the medical profession reclaims its ethical core. and where health is a universal asset. This journey will not be without challenges, but with collective resolve and strategic action, the vision of a disease-free, thriving India is not only possible—it is inevitable.

In this bold pursuit, India must rise to the challenge—not because it is a vision but because it is a necessity, an imperative. A Healthy India by 2047 is not just an aspiration; it is a mandate for the nation's survival and success. Let this be the defining legacy of our times—a nation where health is the cornerstone of prosperity, and where well-being is a shared responsibility that shapes our collective future.

Mutual Funds in India's Defence Sector

By Anand Limaye and Harshada Deshpande

Anand Limaye is a visiting faculty with various management institutes. He is a Honorary Fellow (Research) at Forum for Integrated National Security (FINS).

Harshada Deshpande is M.Sc. in Defence and Strategic studies from Pune University and Research intern at Forum for Integrated National Security (FINS)

India's defence sector has emerged as a key investment theme, driven by rising defence budgets, government initiatives like Atmanirbhar Bharat, and strong growth in defence exports. Mutual funds have significantly increased their exposure to defence stocks such as Hindustan Aeronautics Ltd. (HAL), Bharat Electronics Ltd. (BEL), Bharat Dynamics Ltd. (BDL), and Mazagon Dock Shipbuilders.

Leading asset management companies, including SBI Mutual Fund, HDFC Mutual Fund, ICICI Prudential Mutual Fund, and Nippon India Mutual Fund, have allocated substantial capital to defence-related stocks. HDFC Mutual Fund even launched a dedicated HDFC Defence Fund in 2023 to capitalize on this growing sector.

With India's ₹5.94 lakh crore defence budget (2023-24) and strong government support for domestic manufacturing, defence stocks continue to show high growth potential. Mutual funds focusing on defence, infrastructure, and manufacturing are expected to generate strong returns, making them a compelling long-term investment avenue.

Why Are Mutual Funds Investing in Defence?

1. Record Defence Budget Allocation

The Indian government has consistently increased defence spending, with a record ₹5.94 lakh crore allocated in the 2023-24 Union Budget, marking a 13% year-on-year increase. Out of this, ₹1.62 lakh crore is earmarked for domestic defence procurement, boosting Indian defence manufacturers and attracting institutional investments, including mutual funds.

2. Strong Stock Performance & Growth Potential

Indian defence companies such as Hindustan Aeronautics Ltd. (HAL), Bharat Electronics Ltd. (BEL), Bharat Dynamics Ltd. (BDL), and Mazagon Dock Shipbuilders have delivered 100-200% returns in the past three years. As India aims to become a major exporter of defence equipment, the sector presents strong long-term investment potential.

3. Rising Global Demand for Indian Defence Exports

India's defence exports have surged, crossing ₹16,000 crore in 2022-23, with a target of reaching ₹35,000 crore by 2025. Mutual funds investing in defence stocks benefit from this growth in international defence contracts, making the sector an attractive investment avenue.

Launch of Defence-Focused Mutual Funds

In 2023, HDFC Mutual Fund launched India's first Defence Fund, exclusively investing in defence and aerospace companies. Given the sector's strong government backing and rising stock valuations, more fund houses are likely to introduce similar schemes.

Future Growth Potential

With India aiming to become a global defence manufacturing hub, mutual funds investing in defence stocks are expected to deliver robust long-term returns. As the sector expands, both active and passive investment strategies will continue to fuel its growth. Future Outlook: Why Defence Mutual Funds Will Continue to Grow?

The defence sector presents long-term investment opportunities due to:

- India's Focus on Indigenous Defence Manufacturing ₹1.62 lakh crore dedicated to local procurement.
 - Expansion of Defence Exports Targeting ₹35,000 crore in exports by 2025.
- Strong Performance of Defence Stocks HAL, BEL, and BDL continue to generate high returns.
- Growing Mutual Fund Participation More fund houses may launch thematic defence funds in the coming years.

Conclusion

Mutual funds in India's defence sector are poised for strong long-term returns, making them an attractive choice for investors seeking high-growth opportunities in a government-backed sector. As India strengthens its position as a global defence powerhouse, mutual funds investing in this sector are expected to see sustained capital appreciation and increasing investor interest.

Yunus Just Offered Indian Ocean to China

By Dr. Seshadri Chari

The author is former editor of 'Organiser'. He is General Secretary of FINS.

India's 'neighbourhod first' policy seems to have gone awry with most immediate and distant neighbours tilting toward China, impacting the regional balance of power.

The foot-in-the-mouth statement by the Chief Advisor of the interim government in Bangladesh, Muhammad Yunus, will have, rather should have, serious consequences. Going by the timing, place, and context in which the statement was made, it appears that Yunus has invited trouble for himself and his country in sufficient measure.

During a high-level roundtable discussion on 'sustainable infrastructure and energy' at Beijing's The President Hotel last Friday, Yunus urged the Chinese government to establish an economic foothold in Bangladesh by leveraging the country's strategic position as the "only guardian of the ocean" for the "landlocked" northeastern region of India.

Explaining his stand, Yunus reportedly said, "The seven states of India, the eastern part of India, are called the Seven Sisters. They are a landlocked region of India. They have no way to reach out to the ocean."

"So this opens up a huge possibility. This could be an extension of the Chinese economy," he added.

This highly offensive statement is not only insensitive and undiplomatic, it is deliberate interference in the internal matters of India. Yunus does not hold an elected post in the interim government of Dhaka, nor is he competent to advise Beijing on how to conduct its economy in the region. His mandate, if any, is limited to the revival of the economy of Bangladesh and guiding it back on the path of democracy. The affairs in the country were derailed by an illegitimate uprising in 2024 by Islamic radicals under the guise of Islami Chhatra Shibir (ICS), the student wing of Jamaat-e-Islami, aided and abated by the ISI of Pakistan.

Enemies turn brothers

After the ouster of Sheikh Hasina, Yunus has had two meetings with Pakistan Prime Minister Shehbaz Sharif. He facilitated cultural exchanges like qawwali event by Rahat Fateh Ali in Dhaka and allowed Pakistan's cargo ships at Chittagong port, a first since the 1971 brutalities by the Pakistan army and navy. This relationship reset has paved the way for a more sinister game plan of Islamabad. It's military cooperation between the two former "estranged wings" West Pakistan and East Pakistan, now designated as "brotherly countries".

Principal Staff Officer of Bangladesh armed forces, Lieutenant General S.M. Kamrul Hassan visited General Headquarters (GHQ) in Rawalpindi in January this year. He met with Pakistan's military leadership, including Chief of Army Staff (COAS) General Syed Asim Munir and Chairman Joint Chiefs of Staff Committee (CJCSC) General Sahir Shamshad Mirza, clearly signalling a thaw and inking direct military cooperation agreements.

As part of its ongoing modernisation efforts under its "Forces Goal 2030" programme aimed at upgrading the country's military assets, Dhaka is also considering placing orders for CAC/PAC JF-17 Thunder Fighter Jets (FC-1 Xiaolong), a China-Pakistan partnership product, from Islamabad. The multi-utility JF-17 has been successfully tested in combat by Pakistan on its Western border with Afghanistan. The JF-17 will add to Dhaka's interception, ground attack, anti-ship, and aerial reconnaissance capabilities. It would be naïve to believe that these fighter jets will not be used against India. New Delhi has every reason to be alarmed by this development. It could potentially alter the security architecture in the subcontinent. Hence, India can initiate steps to derail this procurement.

Yunus' statement in Beijing is neither unintended nor made on the spur of the moment. It has to be seen in the context of the improving Dhaka-Islamabad-Beijing ties and military cooperation. It is a pre-meditated mischief seriously impacting India's security and economic programmes in the Northeast.

Warning bell for India

Beijing's reaction to the uncalled-for advice by Yunus is not yet known, but it would likely play it down for the time being. While exchanging greetings on the 75th anniversary of India-China bilateral relations, Xi Jinping, in a message to President Droupadi Murmu, called for a "dragon-elephant tango" to serve the fundamental interests of both countries. China cannot arm Pakistan and Bangladesh to the teeth and expect New Delhi to keep dancing with the dragon. Sooner than later, it should inform New Delhi that it distances itself from Yunus' statement.

India has a longer coastline and far more access to the Indian Ocean. Dhaka has assumed the chair of the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) at the Bangkok summit, where regional development is being discussed amid the tariff war unleashed by Trump. Considering Bangladesh's non-cooperative attitude and the ongoing political instability, India should seriously think of shifting BIMSTEC's headquarters out of Dhaka permanently. A China-Pakistan-Bangladesh axis will surely sabotage the BIMSTEC, as the Pakistan-China axis did to the South Asia Association for Regional Cooperation (SAARC).

India's 'neighbourhood first' policy seems to have gone awry with most immediate and distant neighbours tilting toward China, impacting the regional balance of power. The coup against Sheikh Hasina, a pogrom against Hindus and now this statement by Yunus has all come as a surprise to the government, suggesting an intelligence failure, to say the least. A course correction will be timely. As a strong military, air force, naval and economic power, India needs to respond to the shenanigans of neighbours both in the East and the West, swiftly and decisively, even if that means a 1971-like operation.

Read complete article on website theprint.in

Before Pahalgam: What Past Attacks Tell Us About the Convoluted Logic of Terror

By Vappala Balachandran

The writer is a former Special Secretary, Cabinet Secretariat

The 9/11 Commission's report, which shows how threats can be recognised, should be compulsory reading for all security professionals.

The US National Commission, which inquired into the 9/11 attacks, explained what it called "imagination" in Chapter 11 of its final report, titled "Foresight and Hindsight". This report, running into 589 pages, should be made compulsory reading for all our security professionals engaged in preventing terrorism.

In the Commission's opinion, the elements of strategic imagination should be "understanding the danger" and "institutionalising imagination" by reading and interpreting the danger, formulating policy to counter it, building up capability to prevent and suppress danger through overt or covert means, and finally operational and institutional management.

The Commission analysed 10 "operational opportunities" from January 2000 to August 2001 and concluded that the CIA and FBI failed to recognise danger to the US by way of multiple attacks on September 11, 2001. A similar methodology was adopted by our 26/11 high level enquiry committee of which I was the second member.

Did we fail to recognise the danger from Lashkar-e-Taiba (LeT) in Pahalgam after what seemed to be a notable victory for India with the extradition of Tahawwur Rana who arrived in India on April 10? Terrorists operate with a different logic than others. Dazzling attacks unify their cadres, raise their international profile and boost funding, as happened after 26/11. Also, they would be most reluctant to admit defeat on such an important operation as 26/11 over which they had spent so much time and money as the following history would indicate.

It is now well known that Tahawwur Hussain Rana was an important member of the ISI's conspiracy against India, outsourced to LeT. The Headley papers, as seen in the US courts and in the media, indicate how David Coleman Headley and Tahawwur Rana had performed a "valse a deux temps" throughout, culminating in the November 2008 Mumbai attacks and the October 2009 Denmark plots.

Rana's name appears 33 times in Headley's plea agreement at the United States District Court Northern District of Illinois Eastern Division for aiding abetting these conspiracies at different places, including India.

Since 2003, Headley had kept the LeT leadership informed of different stages of conspiracy like opening a "cover" immigration office in Mumbai owned by Rana, which he used for his trips to India to choose targets, fixing GPS coordinates, landing sites. Headley also used to personally and continuously brief Rana in Chicago on the selection of targets in Mumbai, like the Taj Mahal Hotel. In other words, Rana was as much a foot soldier of LeT as Headley.

How does Jammu and Kashmir come in this scheme? For this we need to read other Headley-Lashkar papers released in the public domain by intrepid writers like Stephen Tankel and Sebastian Rotella, which prove that wresting J&K from India was the basic aim of the Lashkar (and the ISI), long before Pakistan Army chief General Asim Munir described Kashmir as Islamabad's "jugular vein".

The 26/11 investigation papers had revealed that the Lashkar's aim was to bleed India by hitting Mumbai, its financial capital. According to its convoluted logic, India's financial power to hold on to Jammu and Kashmir came from Mumbai and a dazzling attack on that city would make India a less attractive investment destination.

Tankel, who had presented a composite history after interviewing American and Pakistani sources, says in his Storming the World Stage (2011) that Headley went to Lashkar in 2001 to join the "Kashmir jihad" but was given only surveillance duties by Sajid Mir, as he was too old. For Lashkar he was the ideal recruit as he possessed a US passport with which he could travel to India. At the same time, Headley was also in close contact with Abdur Rehman Syed, a retired army officer who was in and out of Lashkar.

Headley's association with ISI started in 2006, when he was detained after being seen with smuggling contacts. He was interrogated by one Major Samir Ali who introduced him to a Major Iqbal. It was Major Iqbal who funded his surveillance trip to India. This twin control by Sajid and Major Iqbal worked throughout, and Headley also gave separate reports including memory sticks of his surveillance separately to Lashkar and ISI.

By 2007, Headley was working for three handlers: Sajid Mir of the official Lashkar, Syed, a dissident Lashkar and Major Iqbal of the ISI! Each wanted to hit different targets. Sajid wanted to strike the Taj Palace hotel where a software professionals' meeting was going to be held, while Major Iqbal wanted him to visit targets in Pune's military installations. Syed wanted him to visit the National Defence College, New Delhi for surveillance.

According to Headley, Lashkar wanted to do an operation in India to divert the attention of its cadres when fierce ideological debates started erupting on whether they should target India on Kashmir or target Afghanistan to launch a global jihad. A meeting was held in Muzaffarabad in March 2008 where a maritime infiltration was decided upon. A naval "frogman" who was present asked Headley to avoid Indian naval ships before entering Indian waters. Sajid taught him how to plot locations on GPS.

In Lahore, he met Major Iqbal who knew about these plans. However, Iqbal asked him to survey the Bhabha Atomic Research Centre during his next trip to examine how to hit its residential colony as a target. This idea was given up in view of Indo-Pakistan bilateral agreement not to attack their nuclear installations. Still, in April 2008, Headley went around the installations on a hired boat and took videos of the Mumbai coast. In late June, Sajid asked him to return to Mumbai to visit Chabad House, which was locally known as Nariman House, as a Jewish target.

A Pakistan-based Western diplomat told Tankel that the 26/11 attack led to "a boost in the influx of money and men" for Lashkar. It raised the group's international profile, with copycat attacks elsewhere. Could the same thing happen after the Pahalgam attack?

Read complete article on website indianexpress.com

Why India Needs to Develop Its Deep-Sea Capabilities

By Vice Admiral Biswajit Dasgupta (Retd)

The Author is a former Commander-in-Chief of the Eastern Naval Command, Indian Navy

Operating in the depths of the ocean is a challenge that India must embrace to maximise its economic potential and protect its security interests. This is more so given that China is the world leader in the field.

Last month, India completed wet testing of its Matsya-6000 submersible, capable of diving up to 6 km below the surface to look for underwater minerals off the coast. The launch of the first deep-sea manned vehicle is planned for later this year — it will put India in a select group of nations with the capability to send humans to these depths.

Last week, China unveiled a compact deep-sea cable-cutting device that can be mounted on certain submersibles — and which is capable of severing the world's most fortified underwater communication or power lines. China reportedly operates the largest fleet of submersibles in the world.

Deep sea challenge

The intense oceanic activity around the world over the past two decades has focused on the Deep both for its economic resources and as the theatre of possible future conflicts.

According to the United Nations Convention on the Law of the Seas (UNCLOS), the Exclusive Economic Zone (EEZ) of a country extends from the baseline of its coast to 200 nautical miles (about 370 km) into the sea. A nation has exclusive rights to living and non-living resources in the waters and on the seabed within its EEZ.

Average depth in the Indian EEZ is 3,741 metres — this is more than four-and-a-half times the height of Burj Khalifa, the world's tallest building. But it is shallow compared to the deepest ocean — the bottom of the Challenger Deep in the Mariana Trench in the western Pacific lies more than 10 km under the surface, more than the cruising altitude of most aircraft.

Operating in the deep sea requires a distinct technology and extremely specific capabilities that are challenging and expensive to develop. Consider:

* While sound can travel long distances underwater, its propagation is seriously affected by hydrological conditions such as temperature, pressure, and salinity. Generally speaking, the lower the frequency of the sound wave, the better the propagation of sound underwater.

Very low frequency (VLF) and extremely low frequency (ELF) sound technologies represent the cutting edge of science and require deep research and enormous funding to develop.

* Pressure underwater increases by approximately one atmosphere (atm) for every 10 metres of ocean depth. One atm is roughly equivalent to the mean sea-level atmospheric pressure on Earth, or 101,325 Pascals. The pressure at the ocean bed in the Indian EEZ is upwards of 380 atm, or 380 times that on the surface of the Earth.

Vessels that descend to such depths need to be constructed using particular material and processes in order for them to operate safely. (Remember the OceanGate Titan submersible disaster of June 2023?)

Need for such technology

It is, however, imperative that India overcomes the challenge posed by the deep sea. To be able to ride on the blue economy in the future, India must have the technologies to harness the resources of the ocean and the seabed.

The ocean is a storehouse of resources, from fish, minerals, gas hydrates, oil and gas, and nutraceuticals to oceanographic data that may help in combating climate change and contribute to meteorological research. It is essential to harness these resources to maximise India's economic potential.

This will require the development of technologies for hydrographic research and exploration activity, as well as supporting capabilities such as diving, salvage, and submarine rescue.

Then there is the development of underwater infrastructure. Undersea cables crisscrossing the oceans are the backbone of modern communications technology. They are responsible for transmitting more than 95% of the intercontinental Internet traffic, seamlessly enabling activities from digital communication and transmission of video to banking transactions worth billions of dollars.

Developing the capability to lay and maintain these cables is critical to provide millions of Indians with digital connectivity, and to sustain an economy that increasingly relies on the same.

Apart from undersea cables, other deep-sea infrastructure can include oil pipelines, equipment for mining, and scientific research.

Beyond exploiting the oceans' resources, mapping of the deep sea and maintaining a high degree of underwater domain awareness is critical for safeguarding maritime and security interests.

Take for instance the deep-sea cable-cutter that China has announced. The development of complex underwater sensors and response mechanisms to act against any such disruption will be crucial to tackling any threats from hostile actors.

What India must do

As for every niche technology, the essential prerequisites for developing deep sea tech are financial strength, academic and research capabilities, and highly qualified and skilled human capital.

It is not surprising, therefore, that China, France, Japan, Norway, Russia, South Korea, and the US are far ahead of the rest of the world in this area. Chinese investments in deep sea science and engineering centres are paying rich dividends today.

In 2018, the Indian government launched the Deep Ocean Mission under the Ministry of Earth Sciences. The development of the Matsya-6000 submersible is a part of this mission. While this is welcome, the fact is India currently does not have even decent deep sea fishing capability — and needs to do much more.

The establishment of institutes of excellence in deep sea research will nurture academic excellence, expertise, and skill in the area. India also needs to incentivise every aspect of deep ocean science and engineering through generous funding and a strong, empowered body to drive this multi-dimensional mission forward at a faster-than-usual pace.

It is time to upgrade the Department of Ocean Development to a full-fledged ministry, led by a cabinet-rank minister, and make all departments and agencies responsible for ocean development accountable to this minister.

Well-funded, time-bound and result-oriented projects must be executed in "mission-mode", with quick approvals, ease of doing business, and high accountability of stakeholders. A "ten-year plan" will be helpful in this regard.

Lastly, India must remember that all these deep-sea technologies are inherently "dual use" — the very vessels and equipment developed for ocean research and exploitation could also have disruptive uses in conflict. This too needs active consideration in its deep ocean strategy.

Read complete article on website indianexpress.com

Disclaimer: The opinions expressed in this publication are those of the authors. They do not purport to reflect the opinions or views of the FINS or its members.

India is Proud of:

Warrior Havildar Mering Ao of Assam Rifles Fighting Second World War to Thwarting Naga Insurgents







The extraordinary life of Havildar Mering Ao continued even after his retirement. He worked tirelessly for the development of his village and remained the Gaon Budha (the village head) of his village for a very long period.

In a remarkable encounter, Lieutenant General PC Nair, Director General of Assam Rifles, had the privilege of meeting a true hero, Havildar Mering Ao, who not only fought valiantly in the Second World War but also played a crucial role in countering Naga insurgents, earning him a prestigious gallantry award. Lt Gen PC Nair recently visited 12 Assam Rifles in Mokokchung on December 3, 2023, where he had the opportunity to meet this living legend and gain insights into his extraordinary life.

Born in 1920 in Sungratsu village, Mokokchung district, Havildar Mering Ao had a childhood dream of donning the uniform, Lieutenant General PC Nair said in a Facebook post. His dream came true in 1940 when he was enlisted as a soldier in 3 Assam Rifles during a recruitment rally in Mokokchung. His battalion became part of the famed 'V' Force in Burma during World War-II, tasked with providing early warning, undertaking guerrilla activities, and operating behind Japanese lines.

"Hav Mering Ao's exemplary service saw him excel in intelligence work, with his platoon successfully carrying out reconnaissance of Japanese defensive locations in Burma," Lieutenant General PC Nair said on Facebook. His bravery continued in the Battle of Kohima alongside 1st Punjab Regiment, where his platoon inflicted heavy casualties on the Japanese. Apart from his military prowess, he was also an accomplished athlete, winning events at the Assam Rifles Meet in 1949 and participating in the National athletics competition.

Post World War-II, Havildar Mering Ao actively participated in operations against Naga militants in the 50s and 60s. His remarkable courage was showcased on August 12, 1956, during an anti-insurgency operation in Nagaland, where he played a pivotal role in neutralizing insurgents, earning him the Ashok Chakra (Class III), now known as 'Shaurya Chakra,' on April 21, 1960.

Retired since 1960, Havildar Mering Ao's contributions extended beyond the military. He served as the Gaon Budha (village head) for an extended period, working tirelessly for the development of his village. His sense of humor and unwavering spirit were evident when asked about his health in comparison to his 98-year-old wife, Senliyangla Ao. In a surprising turn of events, Lt Gen PC Nair discovered Havildar Mering Ao's love for singing Mohammad Rafi songs. On request, the war hero showcased his musical talent, singing with incredible passion and rhythm, defying his age.

Recognizing the need to preserve and share the first-hand accounts of this living legend, the Assam Rifles has decided to publish a comprehensive story on the Life and Times of Havildar Mering Ao. For them, he is not just a war hero but a legend, and it's time for the world to know about this remarkable individual whose accomplishments continue to inspire.