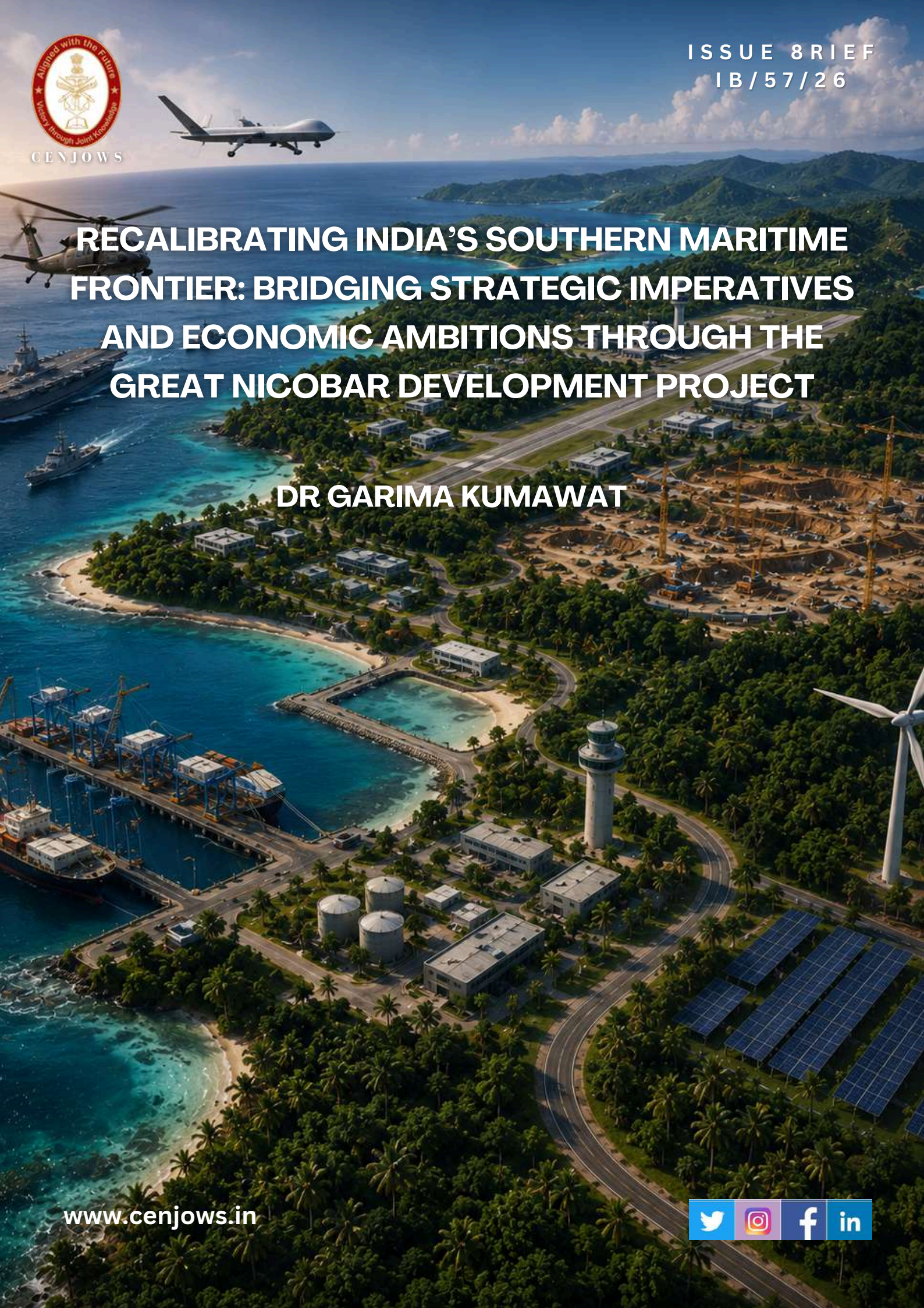

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RECALIBRATING INDIA'S SOUTHERN MARITIME FRONTIER: BRIDGING STRATEGIC IMPERATIVES AND ECONOMIC AMBITIONS THROUGH THE GREAT NICOBAR DEVELOPMENT PROJECT

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Recalibrating India's Southern Maritime Frontier: Bridging Strategic Imperatives and Economic Ambitions through the Great Nicobar Development Project

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Introduction

The spatial significance of any region is neither fixed nor inherent but is continually reconfigured through temporal changes in political, economic, and strategic circumstances. The Andaman and Nicobar Islands (ANI) illustrate this transformation driven by the islands' critical geographic proximity to the Strait of Malacca, one of the world's most vital maritime chokepoints for trade. Incorporating the island into India's economic and security framework would significantly enhance its engagement with Southeast Asian nations and the broader Indo-Pacific region, paving the way for deeper and more comprehensive economic and defence cooperation. By identifying the long-standing yet often overlooked geostrategic significance of the Great Nicobar Island (GNI), India aims to enhance its preparedness, vigilance, and operational posture, ensuring it is better positioned to respond effectively to any contingency or disruption on the eastern front. The proposed Holistic Development Project at Great Nicobar, centred on the International Container Transhipment Terminal (ICTT), a greenfield airport, power plant, and township, embodies this shift by repositioning the island from a marginal frontier to a strategic hub within India's broader developmental and security interests.

This paper examines the geographical and historical importance of the ANI, analyses the evolution of their strategic role, and provides a rationale for the timely Galathea Bay project, which seeks to position India more assertively in the Indo-Pacific region. However, its implementation also raises critical questions regarding environmental sustainability, ecological fragility, and the impact on indigenous communities, along with its location in one of the most tectonically vulnerable zones. Thus, the paper evaluates the project's economic and strategic viability and critically assesses the associated challenges and risks associated with it.

Geostrategic and Historical Overview of the Andaman & Nicobar Islands

- **Geographical Context**

  The Andaman and Nicobar Islands (ANI) are an archipelago of 836 islands and islets, encompassing an area of 8,249 square kilometres and extending approximately 700 km from North to South in the Eastern reaches of the Bay of Bengal.[1] They are divided into two main groups: the Andamans and the Nicobar Islands, separated by the Ten Degree Channel, which is around 144 km wide and 600-800 m deep.[2] The Andaman group of islands in the north is subdivided into North Andaman, Middle Andaman, and South Andaman (administrative and political division), and Little Andaman. These islands are separated by several narrow straits:

  - The Austin Strait separates North Andaman from Middle Andaman.
  - The Humphrey Strait separates Middle Andaman from Baratang Island.
  - The Middle Andaman Strait lies between South Andaman and Baratang.
  - The Macpherson Strait separates South Andaman from Rutland Island.
  - The Duncan Passage divides Rutland from Little Andaman.

  Similarly, the Nicobar Islands are subdivided into 3 subdivisions: Car Nicobar, Nancowry (natural harbour), and Great Nicobar. These islands account for about 1/3rd of India's total Exclusive Economic Zone (EEZ) and share its EEZ boundary with Myanmar, Thailand, and Indonesia on the Eastern side. The Northernmost point of the Andaman group, at Landfall Island, is located 35 km from Myanmar's Coco Island and is separated by the Coco Channel. Between North Andaman and the Myanmar coast lies the Preparis Channel. In contrast, Indira Point in the Southern Nicobar Islands lies approximately 150

km from Banda Aceh in Indonesia. The Great Channel, or Six-Degree Channel, with a depth of 1200-1500 m, separates Great Nicobar from Indonesia.

- **Historical Maritime Importance: From Early Travellers to Colonial Powers**

  These geographical attributes of the islands have endowed them with exceptional maritime potential and shaped their enduring strategic significance throughout history. The written accounts of travellers, explorers, imperialist powers, and traders from South and Southeast Asia highlight their roles in Indian Ocean navigation, colonial expansion, and wartime strategy. One of the earliest references to ANI can be found during the Ramayana era, where the island was known as 'Handuman'. Later, in the 9th century, the Arab explorers Abu Ziad Hasan and Sulaiman mentioned an island 'Najabalus' in their writings, which was similar to the characteristics of ANI. Subsequently, Marco Polo referred to it as 'Angamanian' in his writings in 1290 AD.[3] Historical records reveal that the Chola dynasty seized the islands from 1014 to 1042 to use them as a vital naval base for launching a maritime campaign against the Sriwijaya empire of Sumatra.[4] Later in the 17th century, to achieve naval dominance in the region, Admiral Kanhoji Angre established a temporary base for Maratha vessels on these islands.[5]

  Later, from 1755 to 1869, the Danish East India Company governed the Nicobar Islands and conducted scientific surveys there.[6] Later, the British seized the Andaman archipelago in 1789 but abandoned it temporarily in 1796 due to the inhospitable climate. Three distinct survey expeditions were conducted by the British in the Bay of Bengal (BoB), recommending the colonisation of the island as piracy incidents and threats to ships and crew on this route increased. Lieutenant Blair in 1788 was directed to locate a suitable harbour, as mentioned in the following excerpt.

"….the primary view of the research being, as already stated, the acquisition of the harbour where the fleets in times of war can refit by any means, on leaving the coast of Coromandel upon the approach of stormy monsoon, or to which any part of the whole may retire in the event of disastrous conflict with an enemy and so obtain a

central position in the bay whence the ship may return to the scene of action, as soon as possible."[7]

It was suggested to explore the Eastern or Southern edges of the island instead of the Western shore, as it was unfit for port construction. Later, the Sepoy Mutiny of 1857 led to the establishment of a penal colony on the island, enabling the British to reassert control in 1858. After the fall of Singapore in the Pacific War, the Japanese navy moved further to the Indian Ocean, leading to the occupation of ANI from 1942 to 1945. In 1947, Britishers were reluctant to relinquish control of the island, fearing that the Russians might exploit the power vacuum created by their departure. During wartime, in case the Indian routes remained unavailable for its aircraft for maintaining British air and sea communications with Malaya, Australia, and the Far East, new routes could be created by using Seychelles, Diego Garcia, Ceylon, the Cocos Islands, and the Andamans as bases for alternative air networks.[8] Jinnah too claimed the island, fearing that Indian control would enable India to block overland military movements between West and East Pakistan, making sea routes via the Andamans essential for Pakistan.[9] Britain, having set aside its own strategic interests, ultimately recognised India's rightful claim and saw no justification for violating principles of justice in Pakistan's favour.

- **Post-Independence Strategic Consolidation and Military Development**

  A renewed impetus was given to India's naval strategic thinking in the work of KM Panikkar, who acknowledged the strategic significance of these islands by mentioning in his book that,

"*A challenge may come more easily from the East than from the West….The possession of the Andamans and the Nicobars gives to India strategic bases which if fully utilised in co-ordination with air power can convert the Bay of Bengal into a secure area,*"[10]

highlighting the importance of an advanced island base for defending India's eastern coast. However, the newly formed navy lacked the resources to develop them immediately. Gradually, New Delhi implemented proactive measures to strengthen 'integration' of the islands with the mainland through

socio-cultural and infrastructural interventions.[11] The first permanent naval establishment, INS Jarawa, was established in 1964, equipped with amphibious vessels, to monitor the heavy concentration of merchant shipping and to protect India's maritime interests.[12] To restrict the activities of poachers from Indonesia, Myanmar and Thailand in the vicinity of the Bay of Bengal, India decided to provide facilities like air support to the navy to preserve the rich mineral resources of these islands. During the 1971 war, these islands served as a forward refuelling base while INS Vikrant was stationed off the islands to impose a stringent blockade to prevent Pakistani submarines from getting close to Indian Waters.[13] In 1981, it was redesignated as Fortress Andaman (FORTRAN), followed by the establishment of a Naval Air Station INS Utkrosh in 1985, close to INS Jarawa.[14] Post-1990s, India felt the need for naval modernisation and strengthening the navy for robust defence of the IOR and the international shipping routes transiting close to the island. Extra-regional powers like China had already started marking their presence near the Andaman Sea, evident by a radar station, an airstrip and other military structures that China built in 1994 at Myanmar's Coco Island.[15] After the Kargil war, a transformation in the security framework of the ANI transpired with the establishment of the tri-service command at Port Blair in 2001, which maintains a formidable security posture for India's 600,000 sq. km of EEZ in this area. In 2012, another naval air station, INS Baaz, was commissioned close to the six-degree channel, near Campbell Bay. In 2001, NAS Shibpur was developed near the Coco Islands of Myanmar, as a forward operating air base for surveillance, which was later upgraded and renamed as INS Kohassa in 2019.[16] Building on this momentum, the Indian government in 2020 unveiled its flagship development initiative in the GNI; this development aligns with the archipelago's strategic importance as it experiences rapid military augmentation and is transforming into an indispensable security asset.

Socio-Economic Baseline and Developmental Constraints of the Islands

Despite the island's historical and present geostrategic importance, the economy has remained small in size. With an approximate population of about 4.4 lakh[17], it has a GDP of Rs 12499 crore, which is largely service-led, with manufacturing and

agriculture playing limited roles.[18] Tourism significantly contributes to its economy, alongside fisheries with an annual production of 0.47 lakh MT against a potential of over 2.43 lakh tonnes.[19] Forestry and agriculture are regulated due to over 92% forest cover, with coconut cultivation on 17,903 hectares as the main crop alongside limited spices and fruits.[20] The secondary sector is dominated by small-scale food processing, contributing up to 7.93%[21], and infrastructure remains skewed due to the limited grid connectivity and high dependence on imported diesel from mainland India, leading to an increase in transportation and logistics costs and reduced competitiveness in this region.

Being the most energy-expensive UT, the government is exploring the Andaman-Nicobar basin for crude oil and hydrocarbon resources based on the 2017 Indian Hydrocarbon Resource Assessment Study (HRAS), which estimates 371 million Metric Tonnes of Oil Equivalent (MMTOE).[22] The AN basin is part of the Bengal-Arakan sedimentary system, and the tectonic configuration at the junction of the Indian and Burmese plates has generated multiple stratigraphic traps favourable for hydrocarbon accumulation.[23] The basin's geological potential is enhanced by its closeness to proven petroleum fields in North Sumatra and Myanmar. Recently, in June 2026, India announced the presence of natural gas near Sri Vijayapuram, off the coast of Andaman.[24] Also, in 2024, the Ministry of Mines in India allocated seven blocks located on the West Sewell Ridge, approximately 7° N, 94° E, east of GNI, for the extraction of polymetallic nodules and crusts- deep-sea mineral deposits rich in essential metals crucial for modern industries and clean energy technologies.[25] Chromite, diatomaceous earth, gold, limestone, selenite, and sulphur deposits have also been documented on these islands.[26]

However, despite being rich in resources, the island faces structural challenges. As it is isolated and more than 1200 km from mainland India, it depends heavily on imports of essential goods such as food, fuel, construction materials, consumer goods, and much more, via maritime and air connectivity. Also, stringent regulatory restrictions are imposed on developmental initiatives, as it is located in seismic zone V, coupled with frequent cyclonic disturbances, further exacerbating environmental fragility. Therefore, due to limited economic diversification, the island's economy relies on government expenditure. The challenges of insularity, ecological sensitivity,

skilled workforce shortages, and underutilised economic potential in a complex security environment highlight the urgent need for proactive government intervention.

An overview of the Great Nicobar Holistic Development Project

The increasing strategic salience of ANI has prompted India to adopt a proactive policy aimed at transforming it not only into a centre of its defence and security strategy but also into an economic hub. Therefore, a holistic development initiative for the ANI has been spearheaded under NITI Aayog's Island Development Plans. It is integrated with Maritime India Vision 2030 and Amrit Kaal Vision 2047, representing critical policy measures to address structural constraints and unlock the islands' strategic and economic potential.[27] There are four projects proposed under this development initiative at Galathea Bay in GNI: an International Container Transhipment Terminal, an international airport, a dedicated township, and a power plant.

- **International Container Transhipment Terminal (ICTT)**
  India is constructing its first dedicated deep-sea port at Galathea Bay, situated in the southernmost region of the GNI, approximately 40 nautical miles from the Malacca Strait. The project is estimated to cost between ₹44,000 and ₹48,000 crore. Its natural depth exceeding 20 meters will facilitate the handling of ultra-large container vessels (ULCVs) and support an overall container throughput of 20.4 mn Twenty-foot Equivalent Units (TEUs).[28] The port features two breakwaters, 2.53 km long East and 1.37 km long West, respectively; a navigational channel of 400 meter width with a turning circle of 400 m diameter on reclaimed land; and 2.3 km of container berths.[29] Additionally, it will include onshore utilities, two liquid cargo berths for bunkering, ship repair, and warehousing zones. Designated as a major port in September 2024, the port will have its terminal operations managed through a Public-Private Partnership (PPP). Due to its strategic location, the project will be developed and operated via a Joint Venture (JV) with Viability Gap Funding (VGF), where an Indian-controlled private sector entity will hold a 55% stake, and Select Major Ports (SMPs), including Kamarajar Port Limited (KPL), will jointly hold the remaining 45%, as mandated by the Ministry of Home Affairs to ensure Indian majority control.[30] Given geographical and

logistical constraints, deep-water berths capable of accommodating large inter-continental vessels with drafts over 15 meters have not been developed along India's east and west coasts. This proposed port will address a critical infrastructure gap where India requires expansion.

- **A Greenfield International Airport**

  The planned airport will be established as a dual-use facility for both military and civilian purposes, with an estimated cost of approximately INR 13,000 crore.[31] It would significantly improve the connectivity of the islands and stimulate economic growth by augmenting tourism, particularly given its proximity to the international airports of Southeast Asian countries. Additionally, the length of the runway determines the types of aircraft which could operate at the airport. The proposed length and width of the runway are 4000 x 45m, which, as per the ICAO Aerodrome Reference Code, falls under 4F, meaning it can accommodate heavy-duty strategic military aircraft like the C-17 Globemaster and Boeing P-8I maritime patrol aircraft, as well as wide-body commercial jets in certain circumstances.[32] There were five alternate sites recommended for the airport, of which the site near Galathea Bay was the most suitable location. It is anticipated to be completed in 5 years, capable of not only handling a peak-hour capacity of 4000 passengers, but also enabling swift deployment of larger military platforms, and minimising response times for defence aircraft operating near the shipping route.

- **Power plant**

  Currently, Diesel Generating (DG) sets are the primary energy sources on the islands. The proposed power plant will serve as supporting energy infrastructure, capable of meeting a demand of 450 MVA, ensuring reliable and continuous electrical power for the entire project. In the initial phase, electricity will be supplied by DG sets generating 68 MVA, followed by 337 MVA by the gas power plant and 45 MVA by solar power.[33] The system is engineered to sustain power supply even in the event of a single component failure. Of the three sites considered for the power plants, the one near the port was selected after considering key factors such as earthwork economics,

environmental impact, fuel transportation costs, and power generation and distribution expenses. As outlined in the Detailed Project Report (DPR), the anticipated social costs are negligible, as there are currently no inhabitants on the proposed site, thereby eliminating the need for resettlement or rehabilitation.

- **Township**

  Covering an area of approximately 149 sq. km, the designated township is designed to accommodate the institutional, commercial, and residential needs for the workers and service providers along with other related economic activity generated by the port-led development. The township is envisioned as a mixed-use development area that connects and integrates key infrastructure facilities, making them part of a cohesive urban system. The project, however, requires resettlement, which entails obtaining private land.[34] Given that much of the GNI is covered by forest land, it was unavoidable that some of this land would be utilised for future urban development.

Rationale for Development at Galathea Bay

Galathea Bay stood out as the most viable option for the transhipment terminal firstly due to its proximity to the equatorial east-west shipping line, which extends from the Gulf and Red Sea to the South-East China Sea, and secondly because the seabed near the site exhibits steep gradients. The 20 m isobath lies 2.3 km from the shoreline, and the 30 m isobath is situated 3.6 km offshore, which could be optimally utilised for the development of a deep-water terminal.[35] Also, the site was selected due to its superior location advantage, significantly lower capital costs, reduced technical challenges (dredging & breakwaters), and better alignment with the broader development vision. The other sites—Casuarina, Anderson, and Pemanya Bay—were ruled out primarily due to environmental considerations, mostly due to falling under ICRZ Zone 1A; higher costs; greater technical difficulties; and poorer integration of the plan.[36]

Developmental Imperatives of the Great Nicobar Project

- **Transhipment Economics and Maritime Connectivity**

The economic significance of this project for India stems from its geoeconomic ambition to overcome existing maritime constraints, bridge key infrastructure gaps, and position itself firmly within a rapidly evolving global transhipment landscape. It would transform Nicobar into an economic and strategic maritime hub, given its location between existing transhipment terminals such as Colombo, Klang, and Singapore, and regional feeder ports. Currently, the lack of a deep-water port forces India to depend extensively on foreign transhipment hubs like Colombo and Singapore for handling much of its container traffic. According to one report, over half of India's transhipped cargo passes through Colombo, and more than 75% is handled outside the nation, adding up to 20 per cent in extra costs. It has the potential not only to reduce India's dependence on foreign transhipment ports but also to save roughly ₹1, 700–1,900 crore each year. It would be able to handle transhipment cargo from Indian East Coast ports, Myanmar, and Bangladesh, along with large mother ships heading to Europe and East Asia. If India develops a modern transhipment hub there with sufficient depth and infrastructure, global shipping lines could directly offload and redistribute cargo through an Indian-controlled facility rather than relying on foreign hubs.

Country	**Port**	**Type**	**Approx. TEU Throughput in 2025**	**Strategic Role**
Singapore	Port of Singapore	Mega Transhipment Hub	44.66 MTEU[37]	World’s Top Maritime Centre
Malaysia	Port Klang	Transhipment	14 MTEU[38]	ASEAN Maritime Hub
Malaysia	Tanjung Pelepas Port	Transshipment	14 MTEUs [39]	A direct competitor to the Singapore port
Sri Lanka	Colombo Port	Transshipment	8.29 MTEU[40]	South Asia’s key hub

India	Mundra Port	Commercial Port	7.4 MTEU[41]	India's largest commercial port
India	Jawaharlal Nehru Port (JNPT)	Major Container Gateway	7.94 MTEU[42]	India's largest dedicated container port
Pakistan	Gwadar Port	Strategic Deep-Water Port	Minimal Container Throughput	China-linked CPEC port
China (IOR influence)	Kyaukpyu Port (Myanmar)	Strategic Deep-Water Port	Low TEU (developing)	China's Bay of Bengal access

Table 1: Comparative container throughput of ports in the IOR **Source**: Author's Own

Concurrently, the regional maritime domain is witnessing pronounced investment in transhipment hubs, with countries like China, Myanmar, and Sri Lanka already building deep-water facilities and upgrading infrastructure to lure shipping lines and capture this trade. The structural disparity becomes even more apparent when comparing India's container throughput, which is approximately 23.9 MTEUs in 2024, against China's staggering 299.7 MTEUs. This vast gap highlights a substantial infrastructural deficit that impedes India's ability to capture greater shares of global shipping flows. Even as India aspires to become a manufacturing and export powerhouse, its logistics backbone has lagged. China's rise as a manufacturing and export superpower was underpinned by the development of world-class ports such as Shanghai, with 55.06 MTEU, and Ningbo-Zhoushan, with 44.87 MTEU throughput capacity.[43] In a comparable vein, this proposed transhipment terminal is expected to add approximately 20.4 MTEU to India's total container throughput capacity, representing a substantial step towards strengthening the country's maritime infrastructure and global trade competitiveness. India's failure to develop comparable facilities risks marginalisation as maritime trade routes shift towards these emerging hubs. Also, dependence on external hubs

leaves India's trade flows exposed to foreign regulatory decisions, port disruptions, geopolitical tensions, congestion, or conflict in third countries.

Another major advantage for India would be its capacity to generate revenue from the operations of transhipment due to dual handling of containers (unloading from the mother vessel and then reloading onto the feeder vessel) through terminal handling charges, storage fees, crane operations, ship repair, and associated logistics services and industrial activity. Also, access to line-haul services can reduce transportation time and improve the competitiveness and cost of exports and imports. This would increase India's supply-chain resilience and strengthen its maritime autonomy.

In order to maintain the competitiveness of the proposed port, a comprehensive tariff benchmarking analysis was conducted in comparison with major transhipment ports during the DPR phase. In the financial year 2025-26, the terminal handling charges averaged USD 65-70 per TEU at the Port of Singapore, along with USD 45-55 per TEU at the ports of Colombo and Port Klang.[44] Consequently, a competitive tariff has been established inside the project, bolstered by an efficient port environment that is essential for attracting and maintaining transhipment volumes.[45] Also, Southeast Asia will prefer to use an Indian facility that is closer and more secure than depending on Singapore, which is under heavy Chinese economic influence.

In recognition of this, the development of this port on the eastern seaboard, complemented by the Vizhinjam Deepwater International Seaport in Kerala on the western coast, establishes a strategic dual-port framework representing a vital bid to close the structural gap and enhance maritime logistics capabilities in the Bay of Bengal and Arabian Sea, respectively. Moreover, connecting these two principal transhipment ports within another timely framework of the India-Middle East Economic Corridor (IMEEC)—envisioned to strengthen India's connectivity with Europe, the Middle East, and Southeast Asia and circumventing high-risk chokepoints like the Strait of Hormuz and the Suez Canal will diversify cargo flows. The development forms part of a larger strategy to establish India as a competitive transhipment hub in the Indo-

Pacific, reducing dependency on foreign ports and capturing more value within domestic waters.

- **Strategic Significance for India**

  The strategic importance of this project is multifaceted and pivotal to India's maritime ambitions and regional security. In 2025, over 102,500 merchant ships passed through the nearby Malacca Strait, carrying a substantial portion of 30 to 40 per cent of global trade and about one-third of the world's maritime oil annually.[46] The complete operationalisation of this project would enhance India's ability to monitor vital chokepoints - the Malacca, Sunda, Lombok, and Ombai-Wetar Straits - and the east-west SLOCs transiting this area. Surveillance would improve dramatically with radars and patrol aircraft like the Boeing P-8I Poseidon based right there and, if needed, control access to this critical waterway. New facilities will let Indian Navy ships and aircraft operate from a forward base with excellent natural depth and shelter. The islands further function as key operational and replenishment bases, offering strategic platforms for shore-based air, surface, and sub-surface sensors and targeting systems, complemented by dispersed and sheltered harbours.[47]

  Another emerging insecurity for India is China's growing economic and strategic interests in the IOR, evident through the consistent augmentation of its naval assets, including ships, submarines, and underwater drones, facilitated by ongoing naval deployments, arms deals, establishment of bases and access points, intensified military diplomacy with coastal nations, and provision of developmental financing to further its strategic objectives and sustained operations in the area. For instance, its strategic investments include Bangladesh's Payra port, Chittagong ports and BNS Pekua; in Myanmar's Kyaukpyu port, the transfer of a Type 035B (Ming-class) operating at Thit Poke Taung Navy Base, along with a listening post at the Coco Islands, which is merely 55 km away from ANI,[48] to surveil Indian naval activities.

  This poses a direct threat to India's economy and security, and having a counter to this has become an imperative need for India. An extra-regional force is capitalising on the sluggish pace of infrastructural installation by India,

silently penetrating the Bay of Bengal. India could still leverage China's growing vulnerability and dependency on the Malacca Strait. Chinese naval analyst Zhang Ming asserts that ANI could function as a 'metal chain' to obstruct the western entrance of the Malacca Strait, characterising India as potentially China's most pragmatic strategic rival that would expand its influence eastward upon achieving dominance in the Indian Ocean.[49] China is keen to develop an alternative to its 'Malacca dilemma'; however, any alternative route transiting the Bay of Bengal will still have to transit the ANI, and thus, the dual-use port at GNI is poised to serve as a critical strategic outpost for India, enhancing its maritime reach and operational capabilities.

The project further aligns with India's multilateral security approach, reinforcing the vision of a free and open Indo-Pacific with increased frequency of its collaborations with its key partners - Australia, Japan, and the United States. It would further strengthen India's collaboration with Southeast Asian Nations, contributing to regional stability by upholding a rules-based maritime order and fostering cooperative security frameworks. It would not only expand India's naval presence to maximise its outreach and visibility but would also help in formulating trends and identifying challenges to better inform policy and military choices. The upgraded Indian maritime doctrine in 2025 distinctly marks this shift by explicitly identifying the Indo-Pacific region as part of its maritime interest and its strategic calculus.[50] Such a shift makes ANI a critical node, where the proposed project aims to enhance infrastructure, operational capabilities, and interoperability, which not only aligns with the doctrine's objective but also complements its focus on joint operations, network-centric warfare and India's power projection.

The region continues to be susceptible to various non-traditional threats, including drug trafficking, illegal fishing, and maritime infiltration. This is illustrated by documented cases of illegal poachers from Myanmar being apprehended for the destruction of the marine resources and the extraction of valuable fish in the Andaman Sea.[51] The project's infrastructure thus fulfils India's need for robust maritime domain awareness, security and governance.

The Ministry of Defence has also notified the ICTT project as a strategic project on 18th August, 2025, which would not only enhance economic resilience but also strengthen India's maritime posture in a region marked by maritime threats, regional connectivity and intensifying strategic competition.[52] This project serves as a calculated strategic tool amid broader geopolitical tensions and a naval blockade in the Strait of Hormuz, underscoring the critical vulnerability of India's trade and energy security to disruptions at maritime chokepoints. India is determined not to face a Strait of Hormuz-type strategic vulnerability on its Eastern flank. In this context, this project embodies India's move from strategic restraint towards assertive regional influence. It can serve dual functions, supporting both commercial and defence vessels, and in times of regional tensions or humanitarian crises, India could support allies, protect its own trade, or apply pressure on any adversary trying to dominate the region. It gives India diplomatic leverage, being viewed as a preferred and reliable partner that can help keep sea lanes open and free. Armed with sea-denial assets that prevent adversarial use of nearby seas, India can better dictate terms in the littoral environment. It also demonstrates to Beijing that India can create pressure in the maritime domain, even while land border tensions continue. The project can also act as a safeguard against unchecked power, reckless ambitions that may lead to major conflicts, and the use of smaller nations as tools in big-power struggles.

Socio-Ecological and Environmental Implications

GNI encompasses a diverse array of ecosystems, providing a home to Shompens (around 230) and Great Nicobarese (around 1000), the particularly vulnerable tribal groups (PVTGs) inhabiting this island. UNESCO Biosphere Reserve, Galathea Bay Wildlife Sanctuary, Galathea National Park, Campbell National Park, and a tribal reserve cover the major part of the island. Given its ecologically fragile and protected status, the project was quickly met with numerous criticisms from environmentalists, civil society organisations, and others.

Nevertheless, the environmental clearance for the project was obtained in 2022 following the submission of a comprehensive Environmental Impact Assessment (EIA) Report, accompanied by an Environmental Management Plan (EMP). In 2022,

stage-1 approval was granted for the diversion of a total of 130.75 square kilometres of forest land, with compensatory afforestation for planting 1:10 trees to replace 8.19 lakh trees removed in the project area.[53] In Haryana, 97.30 sq km of land are set aside for afforestation as compensation for the Phase I diversion of 48.65 sq. km of forest.[54] Ecologists argue that the act of planting saplings in the arid, barren scrubland of North India cannot adequately substitute for the intricate ecological functions provided by a tropical evergreen rainforest on Nicobar Island, including the endemic habitat network, nutrient cycling, and hydrological regulation. The project also overlaps habitats of megapodes, salt crocodiles, and leatherback turtles, threatening their existence. This would have long-term implications, including the introduction of invasive species, wildlife corridor fragmentation, permanent urban ecological pressure, and much more.

Some reports highlight the threats posed to the coral reefs by those affected by the project's construction and operational activities, as they are highly sensitive to turbidity, temperature fluctuations, and acoustic disturbances.[55] However, a coral conservation plan would be prepared by the Zoological Survey of India (ZSI), addressing both the conservation strategies for scattered coral colonies around GNI as well as translocation strategies for impacted corals.[56]

Another issue raised by the tribal council representing Great Nicobar is with respect to the lack of transparency in transactions involving tribal reserve lands, as well as the flawed process used to secure consent from the tribal communities by the authorities, leading to the revocation of the No Objection Certificate (NOC) for the project. [57] Also, a few anthropologists have noted that the proposed influx of around 300,000 outsiders, along with construction activities, could restrict the tribes to smaller areas of land, while the Shompen community, lacking immunity to many common diseases, may face heightened health risks due to increased interaction with construction workers and tourists.[58] However, the project envisages that there would be no disturbance to the tribal habitations, and hence, for their safety and protection, an arrangement for geo-fencing cum surveillance towers has been provided.

Further, the project was criticised for being developed in Seismic Zone V, located at the junction of two major faults, that is, the West Andaman fault and the Aceh strand

of the Sumatran fault system. The 2004 tsunami, caused by an earthquake of 9.1 to 9.3 Mw (Moment magnitude scale), severely hit GNI due to its proximity to the epicentre and its relatively flat topography,[59] leading to subsidence of approximately 3 meters. According to a study published in Nature, some tectonic plates are very old and converge very slowly, and it roughly takes 4-7 centuries to accumulate enough strain energy to produce another giant rupture like the 2004 tsunami.[60] The government has conducted a comprehensive risk assessment of the project and proposed a disaster management plan in 2022 to ensure that the project is safe and viable.

The project has received environmental clearance, subject to compliance with disaster-resilient infrastructure standards and disaster risk reduction protocols.[61] Though tectonic vulnerability is a serious consideration, it is not an absolute barrier to development. Several major infrastructure projects across the world are located in high-disaster-risk regions. For instance, Japan's approach to infrastructure development in the seismic zone provides a relevant model for this project. Located along the Pacific Ring of Fire, Japan has integrated a multilayered approach like base isolation, energy dissipation systems and much more, acting as a 'safety valve' to prevent structural damage, with a robust early warning system and strict safety code to enhance resilience. Taking cognisance of such existing precedence, India must strive to serve as a benchmark for integrating seismic resilience into large-scale coastal infrastructure planning.

Conclusion

The proposed project in GNI is likely to emerge as one of India's most consequential frontier initiatives, with complex policy challenges involving economic aspirations, strategic opportunity, security interests, ecological preservation and tribal welfare. Its eventual success will depend less on the scale of construction and more on its quality of implementation. From a security standpoint, the Indo-Pacific is swiftly becoming the focal point of global power competition. India will prioritise addressing the disruptions caused by China's incursions into the Indian Ocean and South Asia, as well as its aggressive actions along the borders. Currently, the region is a contested space in which China is endeavouring to redefine its position in the global order by attempting to reduce U.S. influence through economic and military

pressure. This has implications for the region's capacity to establish a secure, prosperous, and multipolar Asia. In such an environment, strengthening ANI is not an option but a necessity.

Economically, the project would not only result in improving connectivity, increasing investment, generating employment and enhancing India's transhipment capacity but also would lead to improved trade efficiency and regional integration. However, ecological fragility and environmental degradation pose the potential of becoming a security risk by increasing vulnerability to natural disasters and weakening local resilience. Therefore, there is a need to evaluate it through an integrated framework that seeks to harmonise these competing yet equally legitimate national priorities. If ecological mitigation remains merely procedural, the project could face legal, reputational, and operational setbacks. Conversely, with rigorous, transparent and scientific environmental governance, it could emerge as a model of strategic island development. This project must not be viewed merely as a new port but as a long-overdue strategic and economic re-engagement with an archipelago whose importance has been recognised for over a millennium. It represents a corrective measure taken to bridge these decades of infrastructure neglect and integrate remote territories into the national economy. The location of the island provides India with a unique strategic advantage that cannot be replicated elsewhere, either on the mainland or in other island regions of India.

Declaration

I declare that this manuscript is being submitted exclusively to CENJOWS for publication consideration, is original, and has not been published or submitted elsewhere. I further certify that it contains no classified, restricted, or sensitive information and is based entirely on open-source material suitable for publication in the public domain.

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