

SITOK IAS
DEEP DIVE

Great Nicobar

STRATEGIC FRONTIER
• ECOLOGICAL FAULTLINE •

AT THE GATEWAY OF
THE INDO-PACIFIC

6°45' N



SITOK IAS

Less Noise. more Retention.

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The **Great Nicobar Island (GNI) Project** is a ₹72,000–92,000 crore "Holistic Development" plan aimed at transforming India's southernmost territory into a global maritime powerhouse. Led by **ANIIDCO**, the project focuses on an International Container Transshipment Terminal at Galathea Bay, a dual-use airport, a 450 MVA power plant, and a modern "Smart City." By utilizing

the island's location near the **Strait of Malacca**, India seeks to rival global hubs like Singapore and Colombo. This strategic move aims to internalize transshipment revenues and strengthen the nation's military presence in the Indo-Pacific.

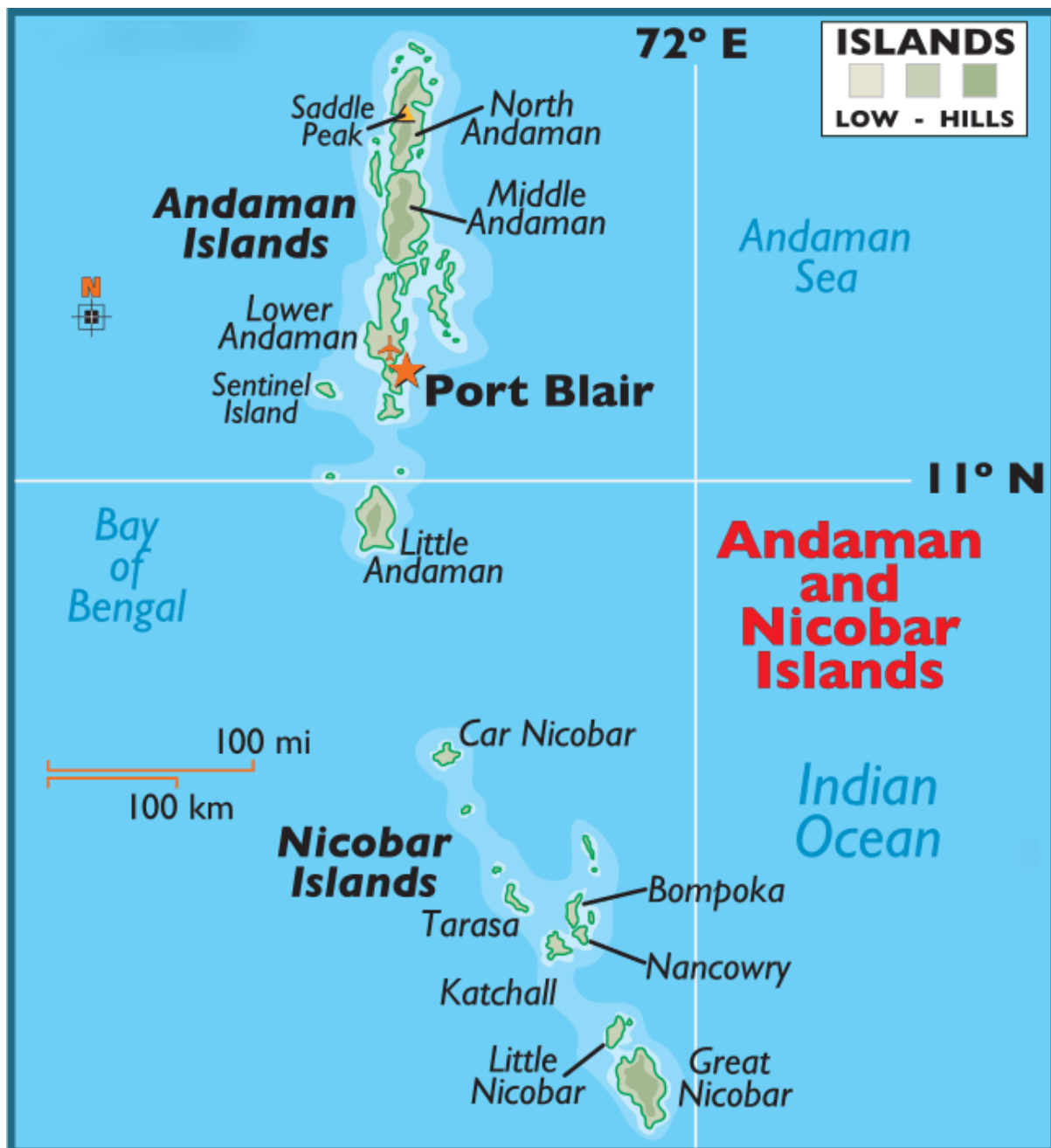
However, the project faces intense debate due to its impact on a pristine tropical rainforest and its indigenous inhabitants. The plan requires the diversion of 130 sq. km of forest land and the felling of nearly **one million trees** in a Global Biodiversity Hotspot. Concerns have been raised regarding the nesting grounds of the Giant Leatherback Turtle and the disruption of ancestral lands belonging to the **Shompen and Nicobarese** tribes. This tension between strategic development and ecological preservation has led to significant legal challenges under the framework of **Article 21** of the Constitution.



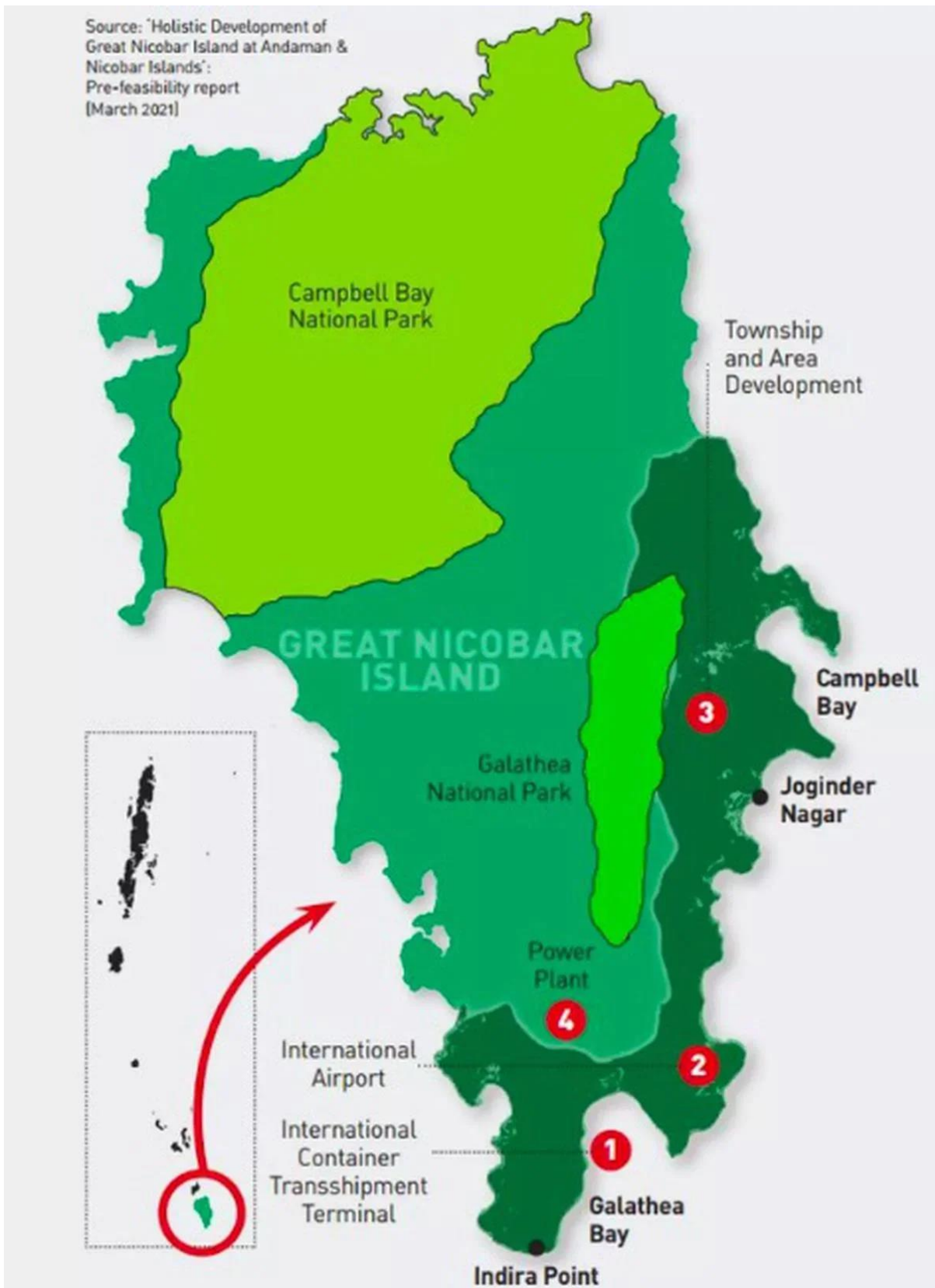
Geographical Profile of Great Nicobar

The following points summarize the essential geographical facts about Great Nicobar Island, which serve as foundational knowledge for identifying its ecological and strategic uniqueness.

- **Southernmost Extremity:** Great Nicobar is the largest and southernmost of the Nicobar group of islands. It is home to **Indira Point** (formerly Pygmalion Point), which is the southernmost point of Indian territory, located at approximately 6°45' N latitude.



- **Proximity to International Neighbors:** The island is strategically closer to Southeast Asian neighbors than to the Indian mainland. It is located just **80 nautical miles** (about 150 km) from the tip of Sumatra in Indonesia and is roughly 1,200 km away from Chennai and Vizag.
- **Topography and Drainage:** The island's terrain is largely mountainous with the highest peak being **Mount Thullier** (642 meters above sea level). It is the only island in the Andaman and Nicobar chain that possesses five perennial rivers: the Galathea, Alexandra, Amrit Kaur, Dogmar, and Jubile.
- **Biodiversity Designation:** The island was declared a **UNESCO Man and Biosphere (MAB) Reserve** in 2013. It includes two major National Parks: **Campbell Bay National Park** and **Galathea National Park**, both of which host a high percentage of endemic species (species found nowhere else).



- **Climate and Vegetation:** GNI falls within the tropical equatorial climate zone, characterized by high humidity and heavy rainfall from both the Southwest and Northeast monsoons. The island is covered by **Evergreen Tropical Rainforests**, which are part of the Andaman and Nicobar Islands' rain forests ecoregion.
- **Seismic Sensitivity:** The island is situated in **Seismic Zone V** (the highest risk zone) and lies close to the "Andaman-Sumatra Subduction Zone." During the 2004 Tsunami, the

island underwent significant tectonic changes, including a permanent subsidence (sinking) of about 15 feet in several coastal areas.

- **The Six-Degree Channel:** To the south of the island lies the **Six-Degree Channel**, a major deep-sea shipping lane that serves as the primary route for vessels traveling between the Persian Gulf and the Pacific Ocean via the Strait of Malacca.
- **Unique Fauna:** Great Nicobar is the primary nesting ground for the **Giant Leatherback Sea Turtle** (the world's largest turtle). Other notable endemic species include the **Nicobar Megapode** (a bird that builds large mound nests), the Nicobar Macaque, and the Reticulated Python.
- **The Great Nicobar Biosphere Reserve:** This reserve covers about 85% of the island's area and acts as a massive carbon sink. It is unique because it represents a transitional ecosystem between the biota of South Asia and Southeast Asia (the **Indo-Malayan realm**).
- **Tribal Demographics:** The island is the only home to the **Shompen** tribe, a hunter-gatherer community classified as a Particularly Vulnerable Tribal Group (PVTG). They live primarily in the interior hills, while the **Nicobarese** (a Scheduled Tribe) traditionally live in the coastal regions.

Why Focus on Great Nicobar?

- **Geopolitical Advantage:** GNI sits at the mouth of the **Strait of Malacca**, the world's primary energy highway. Controlling this point allows India to monitor 30% of global trade and secure its position in the Indo-Pacific.
- **Transshipment Potential:** Its 20-meter natural depth is rare and essential for ultra-large ships. Currently, India loses millions in revenue to ports like Colombo; GNI allows India to "reclaim" this maritime business.
- **National Security:** As an "unsinkable aircraft carrier," the island provides a forward military base 1,200 km from the mainland, essential for countering foreign naval expansion in the Indian Ocean.
- **Blue Economy Growth:** The project serves as a pilot for India's "**Blue Economy Policy**," aiming to create a self-sustaining maritime hub that combines trade, energy, and high-end tourism.

Core Components of the Project

The Great Nicobar Project is built on four massive pillars that work together to create an integrated ecosystem. Each component is designed to be world-class, ensuring that the island can support a sudden influx of population and industrial activity.

- **International Container Transshipment Terminal (ICTT):** Located at **Galathea Bay**, this ₹35,000 crore terminal is the project's heart. It aims to handle 14.2 million TEUs annually. With its natural deep-water draft, it can host the world's largest "Triple-E" class vessels, making India a central hub for global shipping lines.
- **Greenfield International Airport:** This airport will be developed to handle both civilian and military traffic. It is projected to handle 4,000 passengers during peak hours initially. The airport is critical for making the island accessible to global tourists and providing a strategic runway for long-range maritime surveillance aircraft.
- **Integrated Smart City:** Spanning 149 sq. km, this township will house roughly 6.5 lakh people by 2050. It will include residential zones, hospitals, and educational institutions. The city is designed to be "smart," meaning it will use digital technology to manage water, waste, and traffic efficiently for the new settlers.
- **450 MVA Power Plant:** To ensure the city and port never face a blackout, a dedicated power plant is being built. It will use a hybrid of **Gas and Solar power**. This aligns with the **National Green Hydrogen Mission**, aiming to reduce the project's overall carbon footprint while providing 24/7 industrial-grade electricity.
- **Strategic Bunkering Facility:** "Bunkering" is the process of refueling ships. Because GNI is so close to the international shipping lane, it will offer refueling services. This creates a massive secondary revenue stream, as thousands of ships pass this point every month and currently refuel in Singapore.
- **Multi-Modal Logistics Hub:** The project includes large warehouses and cold-storage facilities near the port. This allows goods to be stored and processed on the island before being sent to their final destinations, improving India's ranking in the **World Bank's Logistics Performance Index (LPI)**.
- **Coastal Tourism Circuit:** The township includes a dedicated zone for high-end eco-tourism. By building resorts and cruise terminals, the government hopes to attract international travelers, turning Great Nicobar into a destination similar to the Maldives or the Andaman's Havelock Island.
- **Dual-Use Infrastructure:** Every major component—from the port to the airport—is designed for "dual-use." Under the **Andaman and Nicobar Command (ANC)**, these facilities can be quickly converted or utilized for military logistics, refueling warships, and launching search-and-rescue missions during regional crises.

Significance of the Great Nicobar Project

The following points outline why the project is considered a matter of "Paramount National Importance," combining security, trade, and regional influence.

- **Maritime Strategic Depth:** Great Nicobar provides India with a forward-operating base 1,200 km from the mainland. This "Strategic Outpost" enables the Indian Navy to monitor the **Six-Degree Channel** and the entry to the **Strait of Malacca**, effectively countering the "String of Pearls" influence.
- **Economic Sovereignty and Revenue:** By creating a world-class Transshipment Terminal, India aims to capture the **\$200-220 million** annually lost to foreign ports like Singapore and Colombo. This internalizes maritime trade profits and boosts the national GDP.
- **The "Malacca Dilemma" Counter:** Nearly 30% of global trade passes through the nearby straits. Control over this region gives India a "veto power" or surveillance advantage over the energy supply lines of rival powers in the Indo-Pacific.
- **Integrated Defense Capabilities:** The dual-use airport and deep-draft port enhance the **Andaman and Nicobar Command (ANC)**, India's only tri-service command. This allows for rapid deployment of fighter jets, surveillance aircraft (P-8I), and heavy warships.
- **Blue Economy Pilot:** The project serves as a flagship for India's **Blue Economy Policy**, showcasing how ocean resources can be harnessed for port-led development, green energy (solar-gas hybrid), and high-end eco-tourism.
- **Regional Influence (Act East Policy):** As the southernmost point of India, Great Nicobar is a bridge to ASEAN. Developing it strengthens ties with neighbours like Indonesia and Vietnam, positioning India as a "Net Security Provider" in the region.
- **Infrastructure Gap Bridging:** The project brings modern infrastructure—high-speed internet, 24/7 power, and healthcare—to a remote frontier, ensuring that the "last mile" of Indian territory is integrated with the mainland's growth.
- **Job Creation:** NITI Aayog estimates thousands of direct and indirect jobs in shipping, logistics, and hospitality. This will attract a skilled workforce, turning a sparsely populated island into a vibrant economic hub by 2050.
- **Anti-Poaching and Resource Security:** A permanent administrative and military presence will curb illegal poaching of corals and valuable fish species by foreign trawlers, protecting India's **Exclusive Economic Zone (EEZ)**.
- **Global Logistics Hub:** By improving "turnaround time" for ships, Great Nicobar will enhance India's ranking in the **World Bank's Logistics Performance Index (LPI)**, making the country a preferred destination for global supply chains.
- **Constitutional and Statutory Backing:** The project's significance is recognized under **Article 297** (Union's rights over offshore resources) and the **Disaster Management Act**, ensuring it has the full legal and fiscal support of the Central Government.

Risks and Challenges Associated with the Project

Despite its significance, the project faces multi-dimensional risks that have sparked a national debate over the "Ecological and Anthropological carrying capacity" of the island.

- **Massive Deforestation:** The project involves the diversion of **130.75 sq. km** of forest. Official estimates from May 2026 suggest felling **9.64 lakh trees**, leading to a massive loss of a unique carbon sink and primary tropical rainforest.
- **Nesting Grounds of Giant Leatherback Turtles:** **Galathea Bay**, the site of the mega-port, is a primary nesting site for these "vulnerable" turtles. Critics argue that dredging, artificial lighting, and ship noise will permanently disrupt their breeding cycles.
- **Threat to Endemic Fauna:** The island is home to species found nowhere else, such as the **Nicobar Megapode** and the **Nicobar Macaque**. Habitat fragmentation could lead to the extinction of these "ecological sentinels."
- **Impact on Particularly Vulnerable Tribal Groups (PVTGs):** The **Shompen** tribe, who are hunter-gatherers, face a "demographic shock." An influx of 6.5 lakh people could introduce diseases and disrupt the "Policy of Isolation" that has protected them for millennia.
- **Tribal Reserve De-notification:** Approximately **84 sq. km** of the project overlaps with the Tribal Reserve. De-notifying this land is seen by activists as a violation of the **Andaman and Nicobar (Protection of Aboriginal Tribes) Regulation, 1956**.
- **Environmental Clearance (EC) Controversy:** In May 2026, the project was criticized for using "single-season" baseline data (winter only) for its **EIA (Environmental Impact Assessment)**. Critics like Jairam Ramesh argue this makes a "mockery of science" by ignoring seasonal variations.
- **High Seismic Risk:** Great Nicobar is in **Seismic Zone V**. The 2004 Tsunami caused the island to sink by 15 feet. Building massive concrete infrastructure on a sinking, earthquake-prone island poses a long-term safety risk.
- **Compensatory Afforestation Critique:** Planting trees in **Haryana** to "compensate" for a tropical rainforest in Nicobar is biologically mismatched. A dry forest in the mainland cannot replace the complex biodiversity of a 100-million-year-old island ecosystem.
- **The "HPC" Transparency Issue:** A **High-Powered Committee (HPC)** was formed by the NGT to review the project. However, the government has kept the HPC report **confidential**, citing "National Security," which has led to a lack of public trust and transparency.
- **Loss of Coral Reefs:** Dredging for the port will lead to "sedimentation" that chokes coral reefs. While translocation is planned, scientists warn that survival rates for moved corals are extremely low.

- **Social and Cultural Erosion:** The sudden transition from an island of 8,500 people to a city of 6.5 lakh will irreversibly alter the social fabric, potentially leading to the marginalization of the indigenous **Nicobarese** community.

Way Forward

- **Multi-Season EIA Studies:** The government should conduct comprehensive, multi-season Environmental Impact Assessments to fill the gaps in baseline data and ensure a scientifically sound management plan.
- **Public Disclosure of the HPC Report:** To build public trust, the non-sensitive portions of the High-Powered Committee report should be made public, allowing for an informed debate on ecological safeguards.
- **Strict "No-Go" Buffer Zones:** Establishing permanent, legally protected buffer zones around the Galathea Bay nesting sites and Shompen territories is essential to ensure that construction does not cross ecological "tipping points."
- **Adoption of "Green Port" Technology:** The ICTT should be built as a zero-emission facility using electric cranes, solar power, and mandatory "Green Bunkering" for visiting ships to minimize local pollution.
- **Inclusive Tribal Governance:** Ensuring the active participation of the **Tribal Council** in decision-making, rather than just "notifying" them, will protect the rights granted under the **Forest Rights Act (FRA), 2006**.
- **Climate-Resilient Engineering:** Given the seismic nature of the island, all infrastructure must follow "Flexible Engineering" standards to withstand earthquakes and sea-level rise caused by climate change.
- **Local Skill Integration:** Developing maritime and logistics training centers for the local islanders will ensure they are the primary beneficiaries of the new "Blue Economy" jobs.

Conclusion

The **Great Nicobar Project** stands as a testament to India's aspiration to be a global maritime leader, yet it remains a profound constitutional and ethical challenge. In 2026, the project is no longer just about building a port or an airport; it is about defining the **"Ecological and Social Limits"** of development. While the strategic and economic gains are immense, they must not come at the cost of the permanent extinction of endemic species or the erosion of the rights of the Shompen and Nicobarese. As the project proceeds under the watchful eye of the **Calcutta High Court** and the NGT, the success of Great Nicobar will depend on India's ability to prove that

"National Security" and "Environmental Stewardship" can, and must, go hand in hand. True progress will be achieved only if the modern smart city of the future can thrive without silencing the ancient forests of the past.



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